



## 9.5 Village of Lindenhurst

This section presents the jurisdictional annex for the Village of Lindenhurst.

### 9.5.1 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
Douglas Madlon; Deputy Administrator Lindenhurst Village Hall, 430 South Wellwood Avenue, Lindenhurst, NY 11757 Phone: 631-957-7503 Email: <a href="mailto:volmayor@optonline.net">volmayor@optonline.net</a>	Ray Fais; Emergency Manager Lindenhurst Village Hall, 430 South Wellwood Avenue, Lindenhurst, NY 11757 Phone: 631-767-8117 Email: <a href="mailto:raymond.fais@gmail.com">raymond.fais@gmail.com</a>

### 9.5.2 Municipal Profile

This section provides a summary of the community. Additional community profiling information, including geographic area and data, general demographics, income and poverty, employment and housing may be found in the Village’s New York Rising Community Reconstruction Program Conceptual Plan available at: [http://stormrecovery.ny.gov/sites/default/files/crp/community/documents/lindenhurst\\_concept\\_plan\\_11-6-13\\_0.pdf](http://stormrecovery.ny.gov/sites/default/files/crp/community/documents/lindenhurst_concept_plan_11-6-13_0.pdf).

#### Population

According to the U.S. Census, the 2010 population for the Village of Lindenhurst was 27,253.

#### Location

The approximately 3.8 square-mile Village of Lindenhurst (the “Village”) is located along the South Shore of Suffolk County, Long Island, New York. The Village, which lies within the Town of Babylon, is bounded by Copiague to the west and West Babylon to the east. North Lindenhurst lies to the north with North Amityville to the northwest. The Village fronts the Great South Bay and features an extensive waterfront and canal system. As a result of its proximity to the water, the Village is characterized by water-dependent uses exemplified by a concentration of marina and marine industry support services especially south of Montauk Highway.

#### Brief History

Until the 1860s, the area which is now called the Village of Lindenhurst was primarily an agricultural community with an ample supply of developable land. The completion of a single-track to Babylon in 1867 by the South Side Rail Road (now LIRR) brought increased access and commercial development to the Village. By 1870, Thomas Welwood owned such vast tracts of land that the area’s railroad station was referenced as “Wellwood Station” in the railroad’s timetable. After the arrival of the railroad, a business district matured in the vicinity of the train station. This pattern of development is similar to other business districts in Suffolk County which initially expanded around a harbor or station.

Originally named “Breslau” after the Silesian town where Lindenhurst Village’s original settlers emigrated from, it was formally dedicated on June 6, 1870. Prior to the turn of the 20<sup>th</sup> century, business





and factories came to the Village, providing many local residents with employment. This growth facilitated the formation of a fire department, the Breslau Engine Company in 1877 and later the incorporation of the Village of Lindenhurst in 1923.

Lindenhurst Village continued to grow after World War II and became a bedroom community to New York City as a result of its access to both major roadways and the LIRR. These characteristics of the Village were attractive to both residents wanting to live in a suburban community but also to those requiring more urbanized access to points west including New York City.

### Governing Body Format

The Village of Lindenhurst Village Board of Trustees is comprised of five elected officials, the Mayor and four Trustees. There are also several boards appointed by the mayor and then are approved by the Village Board. The following is a member by member listing of the Village Board, Planning Board, Zoning Board and the Two Family Review Board.

### Growth/Development Trends

The following table summarizes major residential/commercial development and major infrastructure development that are identified for the next five (5) years in the municipality. Refer to the map in section 9.5.8 of this annex which illustrates the hazard areas along with the location of potential new development.

**Table 9.5-1. Growth and Development**

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

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

### 9.5.3 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.

**Table 9.5-2. Hazard Event History**

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
October 27-November 8, 2012	Hurricane Sandy	DR-4085	Yes – IA (Individual Assistance) and PA (Public Assistance)	South of the Montauk Highway, most roads flooded and up to 1,400 homes had some degree of flood damage. At least 180 homes suffered major damage or were destroyed. Flooding cut off access to the region’s main hospital. Structures were



Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
				<p>damaged by floating debris. Power and communications systems failed.</p> <p>Extensive damage to private property; to date nearly 20% of residences in the Village have not been able to return to their homes. Debris damage to village roads &amp; village trail system causing closure. Flood damage to 50 ft. foot bridge in trail system pending replacement.</p>
September 7-11, 2011	Remnants of Tropical Storm Lee	EM 3341 DR 4031	No	No damage reported
August 26 – September 5, 2011	Hurricane Irene	EM 3328 DR 4020	Yes – IA and PA	Extensive debris damage, loss of electrical and telephone to village hall and a large portion of the village peninsula for upwards of 10 days.
December 26-27, 2011	Severe Winter Storm and Snowstorm	DR 1957	Yes - PA	No damage reported.

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

### 9.5.4 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 Lindenhurst. 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 Lindenhurst.



Table 9.5-3. Hazard Risk/Vulnerability Risk Ranking

Hazard Ranking	Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard <sup>a, c, e</sup>	Probability of Occurrence <sup>b</sup>	Risk Ranking Score (Probability x Impact)
1	Coastal Erosion	RCV in CEHA: \$0	Occasional	12
1	Drought	Damage estimate not available	Occasional	24
2	Earthquake	500-Year MRP: \$75,419,706 2,500-Year MRP: \$1,332,846,454	Rare	24
3	Expansive Soils	Damage estimate not available	Rare	6
4	Flood	1% Annual Chance: \$97,645,341 0.2% Annual Chance: \$151,545,552	Frequent	18
4	Groundwater Contamination (natural)	Damage estimate not available	Frequent	18
5	Hurricane	Category 1 SLOSH: \$528,085,959 Category 2 SLOSH: \$1,969,970,555 Category 3 SLOSH: \$3,956,614,594 Category 4 SLOSH: \$5,894,987,453	Occasional	36
5	Infestation	No measurable impact to property	Rare	6
6	Nor'Easter	100-Year RCV: \$187,592,283 500-Year RCV: \$13,573,962,156	Frequent	48
6	Severe Storm	100-Year RCV: \$187,592,283 500-Year RCV: \$13,573,962,156	Occasional	32
7	Severe Winter Storm	1% of GBS: \$44,864,240 5% of GBS: \$224,321,201	Frequent	48
7	Shallow Groundwater Flooding	Damage estimate not available	Rare	6
7	Wildfire	Estimated RCV in Interface/Intermix: \$0	Occasional	12

- 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 9.5-4. 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)	# Policies in 500-Boundary (3)	# Policies Outside the 500-year Flood Hazard (3)
Village of Lindenhurst	1,465	2,730	\$90,459,135	334	74	1,058	53	354

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.

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

Note (3): The policies inside and outside of the flood zones is based on the latitude and longitude provided by FEMA Region 2 in the policy file. 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 9.5-5. 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 <sup>(2)</sup>	Percent Structure Damage	Percent Content Damage	Days to 100-Percent <sup>(2)</sup>
No critical facilities identified									

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

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

- The special Flood Hazard Area in the Village of Lindenhurst consists of approximately 200 acres in the extreme southern portion of the Village, essentially in the shape of a “W”. The left leg of the “W” corresponds to the area along and adjacent to Strong Creek, south of Montauk Highway. The right leg of the “W” corresponds to the area along Neguntatogue Creek, south of Montauk



Highway. The center leg of the “W” corresponds to the area along Little Neck Creek, south of Montauk Highway

- Within the special flood hazard area, the Village has identified the Lane Street Fire House and E.W. Bower School building critical to public safety during severe flooding events. The Lane Street Fire House does not currently house any ambulance. However, the station houses water rescue equipment. The equipment can be relocated to facilities north of Montauk Highway when a storm event is anticipated.
- There are more than 4000 buildings located in areas prone to flood damage, including commercial facilities and marinas. If these at-risk structures sustain average flood damages of \$5000.00, the total flood damages to buildings would be about \$20 million. In addition, the damages to critical infrastructure could also be several million dollars.
- It should also be noted, flooding can be caused by excessive precipitation, rapid snowmelt, ice jams, or high tides. Urban or street flooding can result from heavy precipitation, clogged storm sewers, or a ruptured water main. Slow –moving thunderstorms often produce flash floods, particularly during summer months. Remnants of tropical storm systems can produce both flash floods and stream flooding. Stream flooding, flash flooding or urban flooding does occur in the village almost every year.



### 9.5.5 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 9.5-6. 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		Village of Lindenhurst Building Department	As per Village of Lindenhurst Code §57-1, the Village has adopted in its code the New York State Uniform Fire Prevention and Building Code.
Zoning Ordinance	Y		Village of Lindenhurst Building Department/ Building Inspector	As per Village of Lindenhurst Code §177-21, it is the responsibility of the Building Inspector to enforce zoning ordinances.
Subdivision Ordinance	Y		Village of Lindenhurst Planning Board	As per Village of Lindenhurst Code §146-1, the Village of Lindenhurst Planning Board has the authority to enforce subdivision ordinances.
NFIP Flood Damage Prevention Ordinance	Y			Village of Lindenhurst Code §91
Cumulative Substantial Damages				
Freeboard	Y		NYS Mandated	State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other
Growth Management				
Floodplain Management / Basin Plan				
Stormwater Management Plan/Ordinance	Y		Cashin Associates	As per the Village of Lindenhurst Code Chapter 143, Stormwater Management is addressed in this chapter.
Comprehensive Plan / Master Plan/ General Plan	Y	County	Suffolk County Planning Commission	Suffolk County Comprehensive Plan 2035, August 2011
Comprehensive Plan / Master Plan/ General Plan	Y	Town	Town of Babylon Planning	A Plan for the Future of the Town of Babylon, Draft Comprehensive Plan, March 1998
Capital Improvements				



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.)
Plan				
Site Plan Review Requirements	Y		Village of Lindenhurst Planning Board	As per Village of Lindenhurst Code §140-1, the Village of Lindenhurst Planning Board has the authority to review and approve site plans.
Open Space Plan				
Stream Corridor Management Plan				
Watershed Management or Protection Plan				
Economic Development Plan				
Comprehensive Emergency Management Plan				
Emergency Response Plan	Y			ERP with all volunteer emergency agencies.
Post Disaster Recovery Plan				
Post Disaster Recovery Ordinance				
Real Estate Disclosure Requirement	Y		NYS Mandate	
Long Island South Shore Estuary Reserve Comprehensive Management Plan	Y	Local	Long Island South Shore Estuary Reserve Council, NYS Department of State	April 2001
Village of Lindenhurst: Downtown Business District Analysis	Y	Local		April 2000
Village of Lindenhurst Draft Local Waterfront Revitalization Program	Y	Local		January 2011

### Administrative and Technical Capability

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

**Table 9.5-7. 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	Y	Cashin Associates
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Cashin Associates
Planners or engineers with an understanding of natural hazards	Y	Cashin Associates



Staff/ Personnel Resources	Available (Y or N)	Department/Agency/Position
NFIP Floodplain Administrator	Y	Per Village of Lindenhurst Code §80-12, the Building Inspector is designated NFIP FPA; Currently served by Tom Maher.
Surveyor(s)	Y	Contracts
Personnel skilled or trained in “GIS” applications	Y	Cashin Associates
Scientist familiar with natural hazards in the municipality.	Y	Cashin Associates
Emergency Manager	Y	Michael Zaleski
Grant Writer(s)	Y	Village Board of Trustees (Barbara Lacy)
Staff with expertise or training in benefit/cost analysis	Y	Cashin Associates
Professionals trained in conducting damage assessments	Y	NFIP Floodplain Administrator

### Fiscal Capability

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

**Table 9.5-8. Fiscal Capabilities**

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

### Community Classifications

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



Table 9.5-9. Community Classifications

Program	Classification	Date Classified
Community Rating System (CRS)	NP	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	TBD	TBD
Public Protection	TBD	TBD
Storm Ready	NP	N/A
Firewise	NP	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:** Tom Maher, Building Inspector

**Program and Compliance History**

Village of Lindenhurst joined the NFIP on August 15, 1977, and is currently an active member of the NFIP. The current effective Flood Insurance Rate Maps are dated September 25, 2009. The community’s Flood Damage Prevention Ordinance (FDPO), found at Chapter 91 of the local code, was last updated on May 5, 2009.

As of January 31, 2014 there are 1,465 policies in force, insuring \$360,775,000 of property with total annual insurance premiums of \$2,092,069. Since January 31, 2014, 2,730 claims have been paid totaling \$90,459,134.75. As of January 31, 2014 there are 334 Repetitive Loss and 74 Severe Repetitive Loss properties in the community.



The community is currently in good standing in the NFIP and has no outstanding compliance issues. Village of Lindenhurst has completed Community Assistance Visits (CAV), with the most recent visit completed in late 2012 or early 2013.

### **Loss History and Mitigation**

Since January 31, 2014, 2,730 claims have been paid totaling \$90,459,134.75. As of January 31, 2014 there are 334 Repetitive Loss and 74 Severe Repetitive Loss properties in the community.

1,300 homes sustained flooding damage from Hurricane Sandy. Of those homes, 180 have been declared Substantially Damaged. The FEMA Substantial Damage Estimator software is used by the NFIP floodplain administrator to make the determinations. 53 elevation permits have been issued for homes interested in mitigation. The remaining 127 homes have not filed yet, but must to be compliant. Funding for mitigation projects has included: private funding, flood insurance, Increased Cost of Compliant (ICC), grant funding, and New York Rising.

### **Planning and Regulatory Capabilities**

The communities Flood Damage Prevention Ordinance (FDPO) was last updated on May 5, 2009, and is found at Chapter 91 of the local code.

FEMA floodplain management regulations/ordinances are exceeded by the Village enforcing BFE +2 feet. New York State requirements are met. The Zoning Board and Planning Board discuss floodplain requirements and implications of projects with the Floodplain Administrator prior to hearing an application.

### **Administrative and Technical Capabilities**

The community FDPO identifies the Building Inspector as the local NFIP Floodplain Administrator, currently Tom Maher, 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 the Village Deputy Administrator.

A list of flood-damaged homes is maintained by the Village. Information regarding a property owner's desire to mitigate is not maintained. The NY Rising program is aware of property owner's wishing to mitigate their properties.

Substantial Damage Estimates are made by the NFIP floodplain administrator using the FEMA Substantial Damage Estimator software. From Hurricane Sandy, 180 homes have received Substantial Damage determinations.

Duties and responsibilities of the Building Inspector/NFIP Administrator are permit review, inspections, damage assessments, and education and outreach.

Tom Maher feels he is adequately supported and trained to fulfill his responsibilities as the municipal floodplain administrator. Tom Maher is not certified in floodplain management, however attends regular continuing education programs for code enforcement.



### Public Education and Outreach

Duties and responsibilities of the Building Inspector/NFIP Administrator are permit review, inspections, damage assessments, and education and outreach.

In the Village of Lindenhurst, the following educational and/or outreach activities related to the NFIP: community forums and workshops. These events have been particularly helpful to residents in the aftermath of Hurricane Sandy.

### Actions to Strengthen the Program

No barriers were identified to running an effective floodplain management program. Receiving additional training on floodplain management is something of great interest. Village of Lindenhurst is not currently a CRS community. Joining would be something the NFIP floodplain administrator would discuss with the Village Board pursue.



## 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/ongoing programs and may be considered mitigation “capabilities”:

- **Continuity of Operations (COOP) Plan-** Set up a program under the direction of the Village Deputy Administrator to monitor the Village mobile fleet communication equipment to ensure all components are kept in working order and all technology is up to date.
- **Emergency Response Plan-** Review the Village’s Emergency Management Plan yearly and revise as necessary.
- **Code Enforcement and Site Plan Review:** While the Village has a 26’ maximum building height limit, the Village Zoning Board of Appeals takes this into account for properties in NFIP floodplains when granting variances. The Zoning Board considers the findings, vulnerabilities and recommendations within the HMP when conducting development and site plan reviews to assure appropriate land use.
- **New York Rising Community Redevelopment Program (NYRCRP):** The findings and recommendations of the 2008 HMP are being considered and included in the current and ongoing NYRCRP process. Specific findings and recommendations, including projects, have been incorporated in this plan update.

Previous actions that are now on-going programs and capabilities are described below. Refer to Table 9.5-10 presented later in this annex.

The Village of Lindenhurst has addressed three new mitigation measures and two current projects to include as a part of their annex in the Suffolk County Hazard Mitigation Plan.

The current projects include:

- Elevating two homes located at 49 Bayview Avenue West and 787 South 7<sup>th</sup> Street. Funding for these projects was awarded through NYS Office of Emergency Management HMGP-1957-1993-4020-4031 Hurricane Irene.
- A Community Capital Assistance Grant Fund was recently awarded to the Village of Lindenhurst for a roadway elevation and drainage improvement project. The project is on South Wellwood Avenue from Shore Road and continues south to the Village Marina.

Continue implementation of our original plan in order to insure that all residents located within these two zones will be able to conform to FEMA’s flood insurance requirements.

Current projects include:

- The Village is currently implementing two home elevation projects - 49 Bayview Avenue West, Lindenhurst and 787 South 7<sup>th</sup> Street, Lindenhurst - under NYS Office of Emergency Management HMGP-1957-1993-4020-4031 Hurricane Irene.
- The Village of Lindenhurst has received Community Capital Assistance Grant Funds to elevate the roadway along with drainage improvements on South Wellwood Avenue from Shore Road south to the Village Marina.



- For Hurricane Irene (DR-4020), 28 residential properties have been approved for elevations, 14 have been elevated to date, and 2 are in the process of being elevated. Private property owners have provided the 25% local match.

### 9.5.6 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 9.5-10. Past Mitigation Initiative Status**

Description	Status	Review Comments
LH-1: Investigate and propose a minimum freeboard height for all new and elevated homes located within the flood zone.	Discontinued	
LH-2: Recommend that the maximum building height above the centerline road grade, currently 26 feet, be relaxed.	Discontinued	
LH-3: Establish a minimum cap elevation for all new or replacement bulkheads in the Village Code.		
LH-4: Purchase the “Lazy Lake” property on Montauk Highway to be used for a new recharge basin.	No progress	
LH-5: Set up a program under the direction of the Village Deputy Administrator to monitor the Village mobile fleet communication equipment to ensure all components are kept in working order and all technology is up to date.	Continuous, ongoing	
LH-6: Purchase a new generator or investigate outside contracts for generator services for the Village Hall. The current generator has reached the end of its useful life.	Complete	
LH-7: Acquire a generator and electrical connection to power a portion of the Rainbow Center, two Highway Yard areas, and Fire Station 6. These locations will be used for staging or sheltering.	In progress (50%)	
LH-8: Acquire technology to electronically archive records in a secure, off-site location.	In progress (10%)	Birth and death records are now in cloud backup. Building department files are currently being scanned for backup, but available resources is the limiting factor.
LH-9: Require that all new building permit applications contain an electronic version of plans and applications.	No progress	Lacking resources.
LH-10: Continue to raise low-lying roads and improve drainage systems.	In progress (10%)	Resources (fiscal and technical) limit progress. Initiative is to be carried forward with specific road sections identified.



Description	Status	Review Comments
LH-11: Pursue grant money and encourage residents with first floor residents below base flood elevation to raise their homes.	Continuous/ongoing	14 complete, 2 in progress. Resources (staff and funding) limit progress.
LH-12: Perform a structural survey of Rainbow Center, Village Hall, Fire Department Buildings, Highway Department Buildings, and emergency management buildings to ensure that they are safe during at least a category F3 tornado or correlated wind storm events such as severe storm, hurricane, winter storm, etc.	Continuous/ongoing	Fire House – razed and being rebuilt. Rainbow Center being studied, structural issues being addressed. Village Hall – upgrading glazing. Highway Department buildings – structural issues being studied.
LH-13: Review current building codes and determine if more stringent wind resistant construction should be required throughout the Village or in higher wind risk areas.	Discontinued	
LH-14: Establish a yearly Outreach Program to the Special Flood Hazard Area and the entire community.	Continuous/ongoing	Numerous meetings held in light of Sandy and prior events. Outreach on flooding is extensive by virtue of the Village’s vulnerabilities. These have been sponsored by many agencies and groups including the Village, NYSEMO, Community Groups, LIPA.
LH-15: Set up monitoring sites.	Completed	NOAA set up a tide gauge at the Marina at end of South Wellwood. Additional gauging would provide further information on storm surge and tidal flooding.
LH-16: Update GIS data on a monthly basis.	In progress (25%) / ongoing	Lack of resources (staff and funding) limits progress. See LH-17 below.
LH-17: Identify at-risk properties.	Ongoing, continuous	All at risk properties have been identified in GIS, however inventory must be maintained.
LH-18: Identify privately owned critical facilities.	Discontinued	. No privately owned critical facilities in Village.
LH-19: Develop Outreach Program for the development of emergency plans for privately owned critical facilities.	Discontinued	
LH-20: Update list of resources on flood protection yearly.	Ongoing, continuous	To be folded in to enhanced public education and outreach initiative
LH-21: Send at least 2 inspectors to FEMA retrofitting classes yearly.	Ongoing, continuous	Building inspector and Fire Marshall receives regular training as available. Update initiative for all training and continuing education and certification.
LH-22: Seek funding on a yearly basis for the elevation and retrofitting of flood prone buildings and other retrofitting programs.	Ongoing, continuous	
LH-23: Revise Building Department procedures.	Complete	Building department procedures are revised as needed based on regulatory or other changes.
LH-24: Set up training display in Building Department as part of Outreach Program.	No progress	Lack of resources limited implementation.
LH-25: Identify all roads that are below base flood elevation.	Complete	
LH-26: Enter new elevations of raised streets into GIS system on a monthly basis.	No progress	Lack of resources (staff, equipment and funding). Village leverages Town of Babylon GIS resources.
LH-27: Seek funding on a yearly basis to raise low lying streets. Create theme on GIS which indicates the location of all drainage check valves.	Discontinue	
LH-28: Establish drainage check valve maintenance plan.	Complete	
LH-29: Seek funding on a yearly basis to install check valves at drainage structure	Discontinue	



Description	Status	Review Comments
located on South Wellwood Avenue, immediately north of the Village Marina.		
LH-30: Seek funding on a yearly basis to install check valves at drainage structures located on Shore Road at Orchard Street and Brown Place.	Discontinue	Check valves have generally proven to be inadequate in the long term. Roadway elevation is typically the preferred solution. Thus, LH-10 replaces LH-30 through LH-36.
LH-30: Seek funding on a yearly basis to install check valves at drainage structures at the dead end of South Fourth Street along Little Neck Creek.	Discontinue	
LH-30: Seek funding on a yearly basis to install check valves at drainage structures located at the dead end of South Fifth Street and Third Avenue.	Discontinue	
LH-30: Seek funding on a yearly basis to install check valves at drainage structures located at southern end of South Seventh Street, north of Third Avenue.	Discontinue	
LH-34: Seek funding on a yearly basis to install check valves at various drainage structures located on South Eighth Street from Montauk Highway south to dead end as determined by designated professional engineer.	Discontinue	
LH-35: Seek funding on a yearly basis to install check valves at various drainage structures located on South Ninth Street from Montauk Highway south to dead end as determined by designated professional engineer.	Discontinue	
LH-36: Seek funding on a yearly basis to install check valves at various drainage structures located on Pacific Street and Arctic Street from Shore Road south to the Bay.	Discontinue	
LH-37: Survey elevations of all drainage structures, determine area of impact, and establish GIS layer to store and analyze information.	In progress (25%)	Drainage structures surveyed is ongoing; GIS system does not exist.
LH-38: Investigate possible use of new bulkhead materials for future Village projects and establish test sites which can be monitored on a regular basis by the Village and other interested governmental agencies.	Complete	All future bulk heading will use modern materials.
LH-39: Set up Flood Summit Meeting with engineering divisions of various governmental agencies to discuss procedures, new methods, and standards.	In progress (25%)	Plan is to get together with local neighboring Villages and Town agencies (Amityville, Town and Village of Babylon), Highway Department, Town Department of Environmental Conservation.
LH-40: Acquire truck mounted generators.	Complete	
LH-41: Seek funding on a yearly basis for tree removal and replacement.	Complete	Funded through established memorial trust fund.
LH-42: Review the Village's Emergency Management Plan yearly and revise as necessary.	Ongoing, continuous	
LH-43: Prepare report for FEMA on the effectiveness of the Emergency Management Plan following disasters.		
LH-44: Study the need for an Emergency		



Description	Status	Review Comments
Operations Center.		
LH-45: Ensure consistency of all plans prior to adoption (Board of Trustees)		
LH-46: Coordinate inter-agency activities and seek funding (Board of Trustees)		

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

No additional mitigation initiatives have been identified by the municipality.

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

The Village of Lindenhurst 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 9.5-11 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 9.5-12 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.5-11. 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
LH-1 (Sandy HMGP LOI #1847)	Project to supply emergency power to the Lindenhurst Fire Department.	Existing	Hurricane, Nor'Easter, Severe Storm, Severe Winter Storm, Earthquake	2,3,15,16	See Action Worksheet (LH-1 – LOI 1847 – 032014)						
LH-2 (Sandy HMGP LOI #808)	Harding masonry window wall reconstruction.	Existing	All Hazards	2,16	See Action Worksheet (LH-2 – LOI 808 – 032014)						
LH-3 (Sandy HMGP LOI #2076)	Backup generator. Backup power generator for the middle school	Existing	Hurricane, Nor'Easter, Severe Storm, Severe Winter Storm, Earthquake	2,3,15,16	See Action Worksheet (LH-3- Pending)						
LH-4 (Sandy HMGP LOI #2079)	Hardening backup generator.	Existing	Hurricane, Nor'Easter, Severe Storm, Severe Winter Storm, Earthquake	2,3,15,16	See Action Worksheet (LH-4 – LOI 2079 – 032014)						
LH-5 (NEW)	Elevating two homes located at 49 Bayview Avenue West and 787 South 7 <sup>th</sup> Street.	Existing	Flood, Hurricane, Nor'Easter, Severe Storm	2, 9, 13, 14, 15, 16	Homeowners, Village, NYSOEM, FEMA	High	High	FEMA HMA, Local Share	Short - DOF	High	SIP
LH-6 (NEW)	Implement the roadway elevation and drainage improvement project on South Wellwood Avenue from Shore Road and continues south to the Village Marina.	Existing	Flood, Hurricane, Nor'Easter, Severe Storm	2, 9, 13, 14, 15, 16	Village, FEMA	High	High	FEMA HMA, Local Share	Short – DOF	High	SIP



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
LH-7 (former LH-3)	Establish a minimum cap elevation for all new or replacement bulkheads in the Village Code.	New and Existing	Flood, Hurricane, Nor'Easter, Severe Storm	2, 9, 13, 14, 15, 16	Village, FEMA	High	High	FEMA HMA, Local Share	Short – DOF	High	LPR
LH-8 (former LH-4)	Purchase the “Lazy Lake” property on Montauk Highway to be used for a new recharge basin. Acquire property as funding becomes available.	Existing	Flood, Hurricane, Nor'Easter, Severe Storm, Severe Winter Storm	5,6,7,15	Village, FEMA	High	High	FEMA HMA, Local Share	Short – DOF	Medium	SIP
LH-9 (NEW)	Continuously seeking out Federal or State funding for home elevation and road elevation projects. A particular emphasis would be on homes that have first floor elevations below the base flood elevation and those who have suffered repetitive losses.	Existing	Flood, Coastal Erosion, Hurricane, Nor'Easter, Severe Storm, Wildfire, Winter Storm	1,2,4,9,14	Town/Village Engineering via NFIP FPA) with NYSOEM, FEMA support	High	High	Federal and State Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing (outreach and specific project identification); Long term DOF (specific project application and implementation)	High	
LH-10 (NEW)	Create programs to improve roadway drainage systems. Projects would include raising roads and installing check valves on drainage outfalls.	Existing	Flood, Hurricane, Nor'Easter, Severe Storm	2,3, 9, 13, 14, 15, 16	Village, FEMA	High	High	FEMA HMA, Local Share	Short – DOF	High	SIP
LH-11 (NEW)	Collaborate with homeowners on projects that encourage raising driveways and other site appurtenances.	Existing and Future	Flood, Hurricane, Severe Storm, Nor'Easter, Severe Winter Storm	1,2,14	Homeowners, Village, NYSOEM, FEMA	High	High	FEMA HMA, Local Share	Short - DOF	High	EAP, SIP
LH-12	Set up a program under	N/A	All Hazards	13,14	Village	Medium	Low	Village	Short	High	SIP



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
(former LH-5)	the direction of the Village Deputy Administrator to monitor the Village mobile fleet communication equipment to ensure all components are kept in working order and all technology is up to date.										
LH-13 (former LH-7)	Acquire a generator and electrical connection to power a portion of the Rainbow Center, two Highway Yard areas, and Fire Station 6. These locations will be used for staging or sheltering.	Existing	Hurricane, Nor'Easter, Severe Storm, Severe Winter Storm, Earthquake	2,3,15,16	Village	High	Medium		DOF	High	SIP
LH-14 (former LH-10)	Continue to raise priority sections of low-lying roads and improve drainage systems. The following road sections are in the process of mitigation, or being investigated for mitigation: <ul style="list-style-type: none"> <li>South Wellwood from Shore Road South to Marina is currently grant funded through the NYS Community Capital Assistance Program (floods even on lunar high-tide cycles, resulting in</li> </ul>	Existing	Flood, Hurricane, Nor'Easter, Severe Storm	2, 9, 13, 14, 15, 16	Village	High	High	FEMA HMA		High	SIP



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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
	<p>blocked access to residents and businesses).</p> <ul style="list-style-type: none"> <li>• Shore Road, entire length</li> <li>• Bay View, East and West</li> <li>• South Bay</li> <li>• South 4<sup>th</sup></li> <li>• South 8<sup>th</sup></li> <li>• Section of South 9th</li> </ul> <p>Implement mitigation actions as funding becomes available.</p>										
LH-15 (former LH-12)	Perform a structural survey of Rainbow Center, Village Hall, Fire Department Buildings, Highway Department Buildings, and emergency management buildings to ensure that they are safe during at least a category F3 tornado or correlated wind storm events such as severe storm, hurricane, winter storm, etc.	Existing	All Hazards	2,3,14,16	Village	Medium	Low			Medium	LPR
LH-16 (NEW)	Research and develop options to increase flow and capacity of canals and waterfront on a regular basis to allow for navigation and flood control purposes.	NA	Nor'Easters; Hurricane; Flooding; Shallow Groundwater	2, 3, 5, 7, 9, 14, 15	SCDPW	High	Suffolk County	Long term		Medium	SIP
LH-17 (NEW)	Assess, prioritize and design or enhance existing municipal	New and Existing	Nor'Easters, Coastal Erosion, Hurricane,	2,5, 10, 11, 13, 15, 16	Village	Medium	Village; Possible PDM	Long Term	Long	High	LPR, SIP





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
	drainage systems to provide increased carrying capacity of the drainage system <sup>1</sup> to mitigate repetitive flooding. Implement prioritized improvements as funding becomes available.		Flooding, Severe Storms, Shallow Groundwater				application				
LH-18 (NEW)	Consider non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as repetitive loss, such as acquisition/relocation, or elevation depending on feasibility. The parameters for feasibility for this initiative would be: funding, benefits versus costs and willing participation of property owners.	Existing	Flood, Nor'Easter, Hurricane, Severe Weather	1, 2, 7, 9, 15	Village	High	General Fund, FEMA Hazard Mitigation Grant Funding	Long term, DOF	Short, OG	High	LPR, SIP
LH-19 (NEW)	Identify and require safe and resilient methods for the storage of on-site fuel oil/propane tanks and codify in Town/Village codes.	New & Existing	Flood, Nor'Easter, Hurricane, Severe Storm, Groundwater Contamination, Wildfire	1, 2, 3, 14, 15	Village	Low	General Fund	Short	Long	High	SIP
LH-20 (NEW)	Investigate and implement options to	NA	Flood, Nor'Easter,	4, 5, 15	Village/ NYSDEC	Low	General Fund	Short	Short	Medium	NRP, LPR

<sup>1</sup> See the Conceptual Plan's proposed strategies for the Infrastructure function for examples of enhancements to make to the drainage systems.





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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
	streamline environmental and local permitting processes related to shoreline stabilization.		Hurricane, Severe Storm, Coastal Erosion								
LH-21 (NEW)	Assess options and funding opportunities to provide a better and more accurate system of flood alerts and warnings. Implement as funding becomes available.	NA	Flood, Nor'Easter, Hurricane, Severe Storm	1, 3, 7, 12, 14, 15	County/Village	High	General Fund, FEMA Hazard Mitigation Grant Funding	Short	Short	High	LPR, EAP
LH-22 (NEW)	Develop an emergency evacuation roadway plan for key roads, especially south of Montauk Highway, that ensures that these facilities would remain passable during storm event. Identify key high and dry roadway evacuation routes between the bayfront and Village Center. Develop and implement as funding becomes available.	NA	Flood, Nor'Easter, Hurricane, Severe Storm	2, 12, 14, 15, 16	County/Village	Medium	General Fund	Short	Long	High	LPR
LH-23 (NEW)	Obtain funding sources to analyze, prioritize and improve emergency access (ingress and egress) to residential neighborhoods south of Montauk Highway.	NA	Flood, Nor'Easter, Hurricane, Severe Storm	14, 15, 16	Village	High	General Fund, FEMA Hazard Mitigation Grant Funding	DOF	Short	High	LPR, SIP
LH-24 (New York)	Comprehensive Drainage Infrastructure Master Plan and Phase I	See Action Worksheet (LH-24-AW NYR Comprehensive Drainage Infrastructure Master Plan and Phase I Improvements)									





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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
Rising Project #1)	Improvements										
LH-25 (New York Rising Project #2)	Lindenhurst Village South Storm Water Drainage System Phase II Improvements										
See Action Worksheet (LH-25-AW Lindenhurst Village south Storm Water Drainage System Phase II Improvements)											
LH-26 (New York Rising Project #3)	Neguntatogue Park Natural Systems Resiliency Improvements/Creek Habitat Walk										
See Action Worksheet (LH-26-AW Neguntatogue Park Natural Systems Resiliency Improvements Creek Habitat Walk)											
LH-27 (New York Rising Project #4)	Regional Canal Dredging and Waterfront Economic Management Program										
See Action Worksheet (LH-27-AW Regional Canal Dredging and Waterfront Economic Management Program)											
LH-28 (NEW)	Identify at-risk properties.	Existing	All Hazards	All Objectives	Village	Low	Low	Village		High	LPR
LH-29 (former LH-8)	Acquire technology to electronically archive records in a secure, off-site location	N/A	All Hazards	14	Village	Medium	Medium			High	LPR
LH-30 (former LH-9)	Require that all new building permit applications contain an electronic version of plans and applications.	N/A	All Hazards	4	Village			Village		High	LPR
LH-31 (former LH-11)	Pursue grant money and encourage residents with first floor residents below base flood elevation to raise their homes.	Existing	Flood, Hurricane, Nor'Easter, Severe Storm	2, 9, 13, 14, 15, 16	Village	High-Low	High-Low	Village, FEMA		High	LPR, SIP
LH-32	Establish a yearly	N/A	Flood, Hurricane,	1,4,14	Village	Low	Low	Village		High	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
(former LH-14)	Outreach Program to the Special Flood Hazard Area and the entire community.		Coastal Erosion, Severe Storm, Severe Winter Storm								
LH-33 (former LH-15)	Set up monitoring sites.	New and Existing	Coastal Erosion, Drought, Flood, Hurricane, Nor'Easter, Severe Storm, Winter Storm	1, 2,3,14	Village					Medium	SIP
LH-34 (former LH-26)	Update GIS data on a monthly basis.	New and Existing	Coastal Erosion, Drought, Flood, Hurricane, Nor'Easter, Severe Storm, Winter Storm	1, 2,3,14	Village	Low	Low	Village		High	LPR
LH-35 (former LH-20)	Update list of resources on flood protection yearly.	New and Existing	Coastal Erosion, Drought, Flood, Hurricane, Nor'Easter, Severe Storm, Winter Storm	1, 2,3,14	Village	Low	Low	Village		High	LPR
LH-36 (former LH-21)	Send at least 2 inspectors to FEMA retrofitting classes yearly.	N/A	Coastal Erosion, Earthquake, Expansive Soils, Flood, Hurricane, Infestation, Nor'Easter, Severe Storm, Shallow GW, Wildfire, Winter Storm	4, 14	Village	Low	Low	Village		High	LPR
LH-37 (former LH-22)	Seek funding on a yearly basis for the elevation and retrofitting of flood prone buildings and other retrofitting programs.	Existing	Flood, Hurricane, Nor'Easter, Severe Storm	2, 9, 13, 14, 15, 16	Village	High-Low	High-Low	Village; NYSOEM, FEMA HMA		High	LPR, SIP



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
LH-38 (former LH-24)	Set up training display in Building Department as part of Outreach Program.	N/A	Coastal Erosion, Earthquake, Expansive Soils, Flood, Hurricane, Infestation, Nor'Easter, Severe Storm, Shallow GW, Wildfire, Winter Storm	4, 14	Village	Low	Low	Village		High	LPR
LH-39 (former LH-26)	Enter new elevations of raised streets into GIS system on a monthly basis.	New and Existing	Coastal Erosion, Drought, Flood, Hurricane, Nor'Easter, Severe Storm, Winter Storm	1, 2,3,14	Village	Low	Low	Village		High	LPR
LH-40 (former LH-37)	Survey elevations of all drainage structures, determine area of impact, and establish GIS layer to store and analyze information.	Existing	Flood, Nor'Easter, Hurricane, Severe Storm	2, 7,13,14	Village	Medium	Medium	Village		High	LPR
LH-41 (former LH-38)	Investigate possible use of new bulkhead materials for future Village projects and establish test sites which can be monitored on a regular basis by the Village and other interested governmental agencies.	Existing	Hurricane, Nor'Easter, Severe Storm, Severe Winter Storm	2,16	Village	Low	Low	Village		High	LPR
LH-42 (NEW)	Participate in homeowner partnership program to maximize opportunities for participation in the House Elevation Program, for elevate	Existing	Nor'Easters, Coastal Erosion, Severe Storms, Hurricane, Flooding, Shallow Groundwater	1, 2, 3, 4, 7, 9	FEMA	High	Federal PDM funding; Homeowner Cost Share	Long term	Short	High	LPR



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
	vulnerable properties in high risk areas impacted by coastal storms, surface flooding, and/or shallow groundwater <sup>2</sup> .										
LH-43 (NEW)	Educate the public on the impacts in flood prone areas on life and property, insurance, ways to protect their property before and during natural events and what they can acquire to install appropriate property protection measures, evacuation areas, securing of property, safety	New and Existing	Nor'Easters; Coastal Erosion; Severe Winter Storms; Hurricane; Flooding; Severe Storms	1, 7, 9, 15	FEMA NFIS	Low	Village; partner with community organizations/businesses	Short Term	Short	High	EAP
LH-44 (NEW)	Identify and require resilient and hurricane proof construction techniques and materials for all new structures in high and extreme risk areas and codify requirements in Town/Village codes.	New & Existing	Hurricane, Severe Storm	3, 4, 14, 15, 16	Village	Low	General Fund	Short	Short	High	LPR, SIP
LH-45 (NEW)	Revise/update zoning ordinance, site plan ordinance and other pertinent codes or plans to incorporate storm resiliency protections,	New & Existing	Flood, Nor'Easter, Hurricane, Severe Storm	3, 4, 14, 15, 16	Village	Low	General Fund	Short	Short, OG	High	LPR

<sup>2</sup> This includes assisting property owners and small businesses in navigating the complexities of insurance requirements, public programs, permitting and other issues



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
	as recommended by the Committee.										
LH-46 (NEW)	Develop and implement a program to inspect shoreline conditions on a regular basis and enforce program requirements designed to ensure that regular necessary maintenance is being conducted.	NA	Flood, Nor'Easter, Hurricane, Severe Storm, Coastal Erosion	5, 15	Village	Low	General Fund	OG	Short	Medium	LPR
LH-47 (NEW)	Plan for, identify locations and secure necessary rights for the temporary storage of vehicles and other items during times of anticipated storms.	New	Flood, Nor'Easter, Hurricane, Severe Storm	7, 12, 15	County/Village	Medium	General Fund	Short	Long	High	LPR, SIP
LH-48 (NEW)	Assess need, develop programs and obtain funding to assist special needs populations before, during and after emergency events <sup>3</sup> .	NA	All Hazards	1, 3, 7, 12, 14, 15	County/Village	Medium	General Fund	OG	Short	Medium	LPR
LH-49 (NEW)	Obtain funding sources to analyze, prioritize and improve Montauk Highway at locations that flood frequently.	Existing	Flood, Nor'Easter, Hurricane, Severe Storm	2, 15, 16	County/Village	High	General Fund, FEMA Hazard Mitigation Grant Funding	Short, OG	Short, OG	High	LPR, SIP
LH-50 (NEW)	Review current codes and adopt amendments as needed to require hurricane strapping for	New	Nor'Easter, Hurricane, Severe Storm	4, 15, 16	Village	Low	General Fund	Short	Short	High	LPR

<sup>3</sup> See the Conceptual Plan's proposed strategies for the Health and Social Services function for examples of how to assist these populations.



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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
	all new structures within high-risk areas.										
LH-51 (NEW)	Work with the County and adjacent communities to create a program to improve public communications prior to, during and after storm events. Implement as funding becomes available.	NA	All Hazards	16	County/Village		Low	General Fund, FEMA	Short	High	LPR, EAP
LH-52 (NEW)	Analyze and assess options to update Fire Department communications system for a safer and better response during emergency events. Implement as funding becomes available.	NA	Flood, Nor'Easter, Hurricane, Severe Storm, Earthquake, Wildfire, Winter Storm	16	Village		High	General Fund, FEMA	Short	High	LPR
LH-53 (NEW)	Analyze and assess options available to improve Neguntatogue Park for storm surge and rainwater retention as well as recreational activities. Prioritize project solutions and implement as funding becomes available.	NA	Flood, Nor'Easter, Hurricane, Severe Storm, Coastal Erosion	5	Village/NYSDEC		Medium	General Fund, FEMA Hazard Mitigation Grant Funding	Long	Medium	LPR, SIP
LH-54 (NEW)	Research options and funding availability to continue to electronically archive all Village records (both current and historical) in a secure offsite location to ensure continued and reliable	N/A	Coastal Erosion, Earthquake, Expansive Soils, Flood, Hurricane, Infestation, Nor'Easter, Severe Storm, Shallow GW, Wildfire, Winter	4, 14	Village	Medium	Medium			High	LPR, SIP





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
	access during and post incidents. Implement as funding and staff time is available.		Storm								
LH-55 (NEW)	Work with the adjacent communities and County to set up a Flood Summit Meeting with engineering divisions of various governmental agencies to discuss procedures, new methods, and standards thereby benefitting from inter-agency collaboration. Develop a mutually beneficial program of regular collaboration.	Existing	Flood, Hurricane, Nor'Easter, Severe Storm	2,4,6,9,13, 14, 15, 16	Village, Adjacent Communities	Medium	Medium	Local		High	LPR
LH-56 (NEW)	Investigate and implement a program to enhance floodplain management capabilities through participation in some or all of the following activities: work with adjacent communities to institute a continuing education program for County and community staff to become certified in benefit cost analysis and floodplain management with the goal to become certified floodplain managers; establish and maintain a schedule of on-going	Existing	Flood, Hurricane, Nor'Easter, Severe Storm	2,4,6,9,13, 14, 15, 16	Village, Adjacent Communities	Medium	Medium	Local		High	LPR



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
	training classes to obtain and maintain these certifications; CRS program workshops and training; BCA training; elevation certificate training; etc.										
LH-57 (former LH-44)	Initiate a needs assessment for a Village Emergency Operations Center. Investigate funding options and implement identified improvements as funding becomes available.	New and Existing	All Hazards	2,13, 14, 16	Village	High-Low	High-Low			High	LPR
LH-58 (former LH-45)	Develop and implement a Village wide program that establishes procedures for the comprehensive review of all new and existing plans ensuring plan consistency prior to the Board of Trustees adoption.	New and Existing	All Hazards	3,4,14	Village	Low	Low			High	LPR

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 9.5-12. 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	Total	High / Medium / Low
LH-1 (Sandy HMGP LOI #1847)	Project to supply emergency power to the Lindenhurst Fire Department.	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
LH-2 (Sandy HMGP LOI #808)	Harding masonry window wall reconstruction.	1	1	0	1	0	0	0	1	0	1	1	1	0	0	7	Medium
LH-3 (Sandy HMGP LOI #2076)	Backup generator. Backup power generator for the middle school	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
LH-4 (Sandy HMGP LOI #2079)	Hardening backup generator.	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
LH-5 (NEW)	Elevating two homes located at 49 Bayview Avenue West and 787 South 7 <sup>th</sup> Street.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
LH-6 (NEW)	Implement the roadway elevation and drainage improvement project on South Wellwood Avenue from Shore Road and continues south to the Village Marina.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
LH-7 (former LH-3)	Establish a minimum cap elevation for all new or replacement bulkheads in the Village Code.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
LH-8 (former LH-4)	Purchase the “Lazy Lake” property on Montauk Highway to be used for a new recharge basin. Acquire property as funding becomes available.	1	1	1	0	0	1	0	1	0	0	1	1	0	1	8	Medium
LH-9 (NEW)	Continuously seeking out Federal or State funding for home elevation and road elevation projects. A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High



Section 9.5: Village of Lindenhurst

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	Total	High / Medium / Low
	particular emphasis would be on homes that have first floor elevations below the base flood elevation and those who have suffered repetitive losses.																
LH-10 (NEW)	Create programs to improve roadway drainage systems. Projects would include raising roads and installing check valves on drainage outfalls.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
LH-11 (NEW)	Collaborate with homeowners on projects that encourage raising driveways and other site appurtenances.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
LH-12 (former LH-5)	Set up a program under the direction of the Village Deputy Administrator to monitor the Village mobile fleet communication equipment to ensure all components are kept in working order and all technology is up to date.	1	1	1	1	1	1	1	0	1	0	1	1	0	1	11	High
LH-13 (former LH-7)	Acquire a generator and electrical connection to power a portion of the Rainbow Center, two Highway Yard areas, and Fire Station 6. These locations will be used for staging or sheltering.	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
LH-14 (former LH-10)	Continue to raise priority sections of low-lying roads and improve drainage systems.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	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	Total	High / Medium / Low
LH-15 (former LH-12)	Perform a structural survey of Rainbow Center, Village Hall, Fire Department Buildings, Highway Department Buildings, and emergency management buildings to ensure that they are safe during at least a category F3 tornado or correlated wind storm events such as severe storm, hurricane, winter storm, etc.	1	1	1	1	1	1	0	1	0	1	1	1	1	1	12	Medium
LH-16 (NEW)	Research and develop options to increase flow and capacity of canals and waterfront on a regular basis to allow for navigation and flood control purposes.	0	1	0	0	0	1	0	1	0	1	1	0	1	1	7	Medium
LH-17 (NEW)	Assess, prioritize and design or enhance existing municipal drainage systems to provide increased carrying capacity of the drainage system <sup>4</sup> to mitigate repetitive flooding. Implement prioritized improvements as funding becomes available.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
LH-18 (NEW)	Consider non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as repetitive loss, such as	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High

<sup>4</sup> See the Conceptual Plan's proposed strategies for the Infrastructure function for examples of enhancements to make to the drainage systems.



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	Total	High / Medium / Low
	acquisition/ relocation, or elevation depending on feasibility. The parameters for feasibility for this initiative would be: funding, benefits versus costs and willing participation of property owners.																
LH-19 (NEW)	Identify and require safe and resilient methods for the storage of on-site fuel oil/propane tanks and codify in Town/Village codes.	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
LH-20 (NEW)	Investigate and implement options to streamline environmental and local permitting processes related to shoreline stabilization.	0	1	0	0	0	1	0	1	0	1	1	0	1	1	7	Medium
LH-21 (NEW)	Assess options and funding opportunities to provide a better and more accurate system of flood alerts and warnings. Implement as funding becomes available.	1	1	1	1	1	1	1	0	1	0	1	1	0	1	11	High
LH-22 (NEW)	Develop an emergency evacuation roadway plan for key roads, especially south of Montauk Highway, that ensures that these facilities would remain passable during storm event. Identify key high and dry roadway evacuation routes between the bayfront and Village Center Develop and implement as	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	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	Total	High / Medium / Low
	funding becomes available.																
LH-23 (NEW)	Obtain funding sources to analyze, prioritize and improve emergency access (ingress and egress) to residential neighborhoods south of Montauk Highway.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
LH-24 (New York Rising Project #1)	Comprehensive Drainage Infrastructure Master Plan and Phase I Improvements	0	1	1	1	0	1	0	1	0	1	1	1	1	1	10	Medium
LH-25 (New York Rising Project #2)	Lindenhurst Village South Storm Water Drainage System Phase II Improvements	0	1	1	1	0	1	0	1	0	1	1	1	1	1	10	Medium
LH-26 (New York Rising Project #3)	Neguntatogue Park Natural Systems Resiliency Improvements/Creek Habitat Walk	0	1	1	1	0	1	0	1	0	1	1	1	1	1	10	Medium
LH-26 (New York Rising Project #4)	Regional Canal Dredging and Waterfront Economic Management Program	0	1	1	1	0	1	0	1	0	1	1	1	1	1	10	Medium
LH-27 (NEW)	Identify at-risk properties.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
LH-28 (former LH-8)	Acquire technology to electronically archive records in a secure, off-site location	1	1	1	1	1	1	1	0	1	0	1	1	0	1	11	High
LH-29 (former LH-9)	Require that all new building permit applications contain an electronic version of plans and applications.	1	1	1	1	1	1	1	0	1	0	1	1	0	1	11	High
LH-30 (former LH-11)	Pursue grant money and encourage residents with first floor residents below base flood elevation to raise their homes.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
LH-31 (former LH-	Establish a yearly Outreach	1	1	1	1	1	1	1	1	1	0	1	1	0	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	Total	High / Medium / Low
14)	Program to the Special Flood Hazard Area and the entire community.																
LH-32 (former LH-15)	Set up monitoring sites.	1	1	0	1	1	1	0	1	1	0	1	0	0	1	9	Medium
LH-33 (former LH-26)	Update GIS data on a monthly basis.	1	1	1	1	1	1	1	0	1	0	1	1	0	1	11	High
LH-34 (former LH-20)	Update list of resources on flood protection yearly.	1	1	1	1	1	1	1	0	1	0	1	1	0	1	11	High
LH-35 (former LH-21)	Send at least 2 inspectors to FEMA retrofitting classes yearly.	1	1	1	1	1	1	1	0	1	0	1	1	0	1	11	High
LH-36 (former LH-22)	Seek funding on a yearly basis for the elevation and retrofitting of flood prone buildings and other retrofitting programs.	1	1	1	1	1	1	1	0	1	0	1	1	0	1	11	High
LH-37 (former LH-24)	Set up training display in Building Department as part of Outreach Program.	1	1	1	1	1	1	1	0	1	0	1	1	0	1	11	High
LH-38 (former LH-26)	Enter new elevations of raised streets into GIS system on a monthly basis.	1	1	1	1	1	1	1	0	1	0	1	1	0	1	11	High
LH-39 (former LH-37)	Survey elevations of all drainage structures, determine area of impact, and establish GIS layer to store and analyze information.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
LH-40 (former LH-38)	Investigate possible use of new bulkhead materials for future Village projects and establish test sites which can be monitored on a regular basis by the Village and other interested governmental agencies.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	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	Total	High / Medium / Low
LH-41 (NEW)	Participate in homeowner partnership program to maximize opportunities for participation in the House Elevation Program, for elevate vulnerable properties in high risk areas impacted by coastal storms, surface flooding, and/or shallow groundwater <sup>5</sup> .	1	1	1	1	1	1	1	0	1	0	1	1	0	1	11	High
LH-42 (NEW)	Educate the public on the impacts in flood prone areas on life and property, insurance, ways to protect their property before and during natural events and what they can acquire to install appropriate property protection measures, evacuation areas, securing of property, safety	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
LH-43 (NEW)	Identify and require resilient and hurricane proof construction techniques and materials for all new structures in high and extreme risk areas and codify requirements in Town/Village codes.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
LH-44 (NEW)	Revise/update zoning ordinance, site plan ordinance and other pertinent codes or plans to	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High

<sup>5</sup> This includes assisting property owners and small businesses in navigating the complexities of insurance requirements, public programs, permitting and other issues



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	Total	High / Medium / Low
	incorporate storm resiliency protections, as recommended by the Committee.																
LH-45 (NEW)	Develop and implement a program to inspect shoreline conditions on a regular basis and enforce program requirements designed to ensure that regular necessary maintenance is being conducted.	1	0	1	1	0	0	0	0	1	0	1	1	0	1	7	Medium
LH-46 (NEW)	Plan for, identify locations and secure necessary rights for the temporary storage of vehicles and other items during times of anticipated storms.	1	1	1	1	1	1	1	0	1	0	1	1	0	1	11	High
LH-47 (NEW)	Assess need, develop programs and obtain funding to assist special needs populations before, during and after emergency events <sup>6</sup> .	1	0	1	1	0	0	0	0	1	0	1	1	0	1	7	Medium
LH-48 (NEW)	Obtain funding sources to analyze, prioritize and improve Montauk Highway at locations that flood frequently.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
LH-49 (NEW)	Review current codes and adopt amendments as needed to require hurricane strapping for all new	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High

<sup>6</sup> See the Conceptual Plan's proposed strategies for the Health and Social Services function for examples of how to assist these populations.



Section 9.5: Village of Lindenhurst

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	Total	High / Medium / Low
	structures within high-risk areas.																
LH-50 (NEW)	Work with the County and adjacent communities to create a program to improve public communications prior to, during and after storm events. Implement as funding becomes available.	1	1	1	1	0	1	1	0	1	0	1	0	0	1	9	High
LH-51 (NEW)	Analyze and assess options to update Fire Department communications system for a safer and better response during emergency events. Implement as funding becomes available.	1	1	1	1	1	1	1	0	1	0	1	1	0	1	11	High
LH-52 (NEW)	Analyze and assess options available to improve Neguntatogue Park for storm surge and rainwater retention as well as recreational activities. Prioritize project solutions and implement as funding becomes available.	1	0	1	1	0	0	0	0	1	0	1	1	0	1	7	Medium
LH-53 (NEW)	Research options and funding availability to continue to electronically archive all Village records (both current and historical) in a secure offsite location to ensure continued and reliable access during and post incidents. Implement as funding and staff time is available.	1	1	1	1	1	1	1	0	1	0	1	1	0	1	11	High
LH-54 (NEW)	Work with the adjacent communities and County to	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	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	Total	High / Medium / Low
	set up a Flood Summit Meeting with engineering divisions of various governmental agencies to discuss procedures, new methods, and standards thereby benefitting from inter-agency collaboration. Develop a mutually beneficial program of regular collaboration.																
LH-55 (NEW)	Investigate and implement a program to enhance floodplain management capabilities through participation in some or all of the following activities: work with adjacent communities to institute a continuing education program for County and community staff to become certified in benefit cost analysis and floodplain management with the goal to become certified floodplain managers; establish and maintain a schedule of on-going training classes to obtain and maintain these certifications; CRS program workshops and training; BCA training; elevation certificate training; etc.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
LH-56 (former LH-44)	Initiate a needs assessment for a Village Emergency	1	0	1	1	1	1	0	1	1	1	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	Total	High / Medium / Low
	Operations Center. Investigate funding options and implement identified improvements as funding becomes available.																
LH-57 (former LH-45)	Develop and implement a Village wide program that establishes procedures for the comprehensive review of all new and existing plans ensuring plan consistency prior to the Board of Trustees adoption.	1	1	1	1	0	1	0	1	1	0	1	1	0	1	10	High

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



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

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None identified at this time.

### **9.5.8 Hazard Area Extent and Location**

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

### **9.5.9 Additional Comments**

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None at this time.



Figure 9.5-1. Village of Lindenhurst Hazard Area Extent and Location Map 1

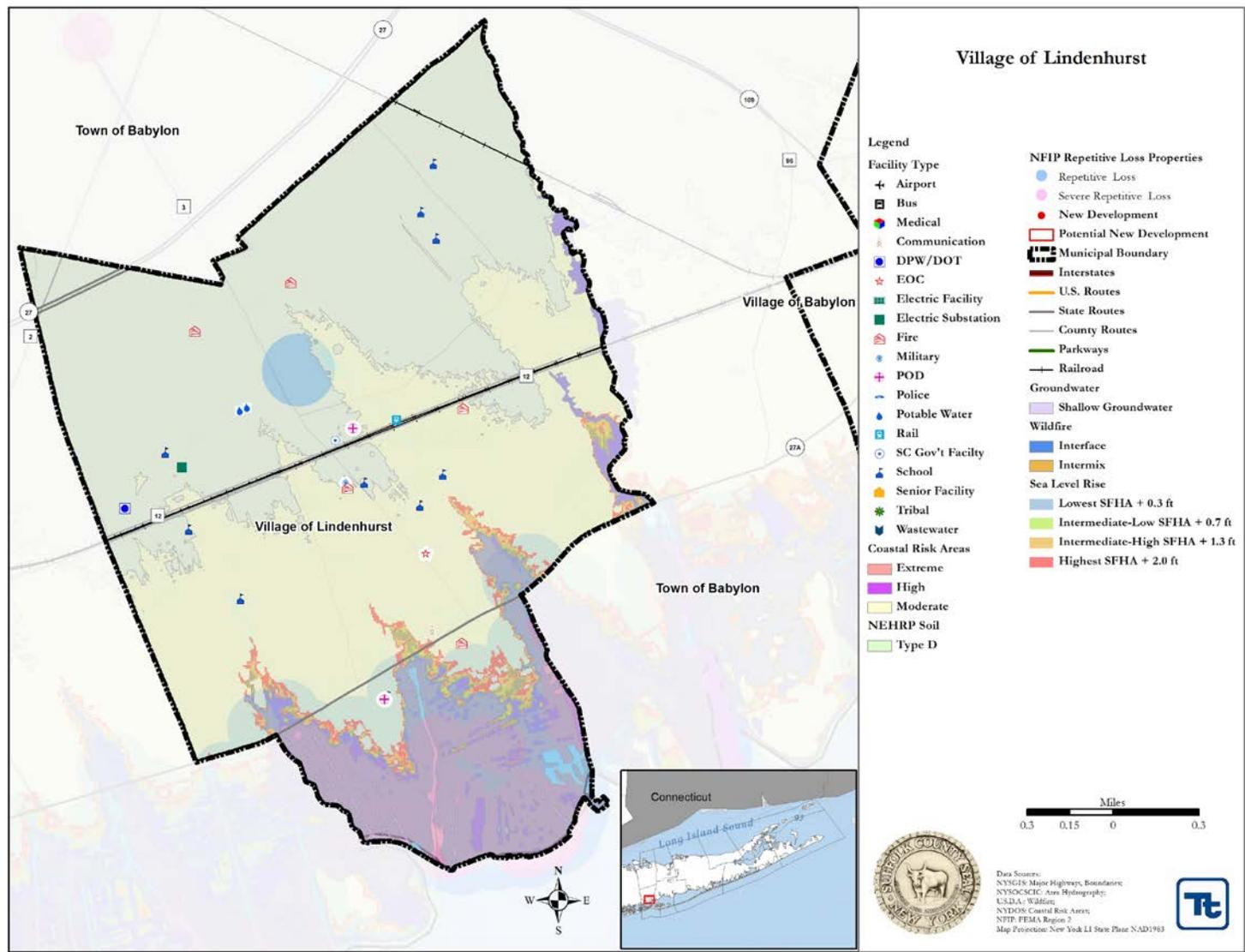
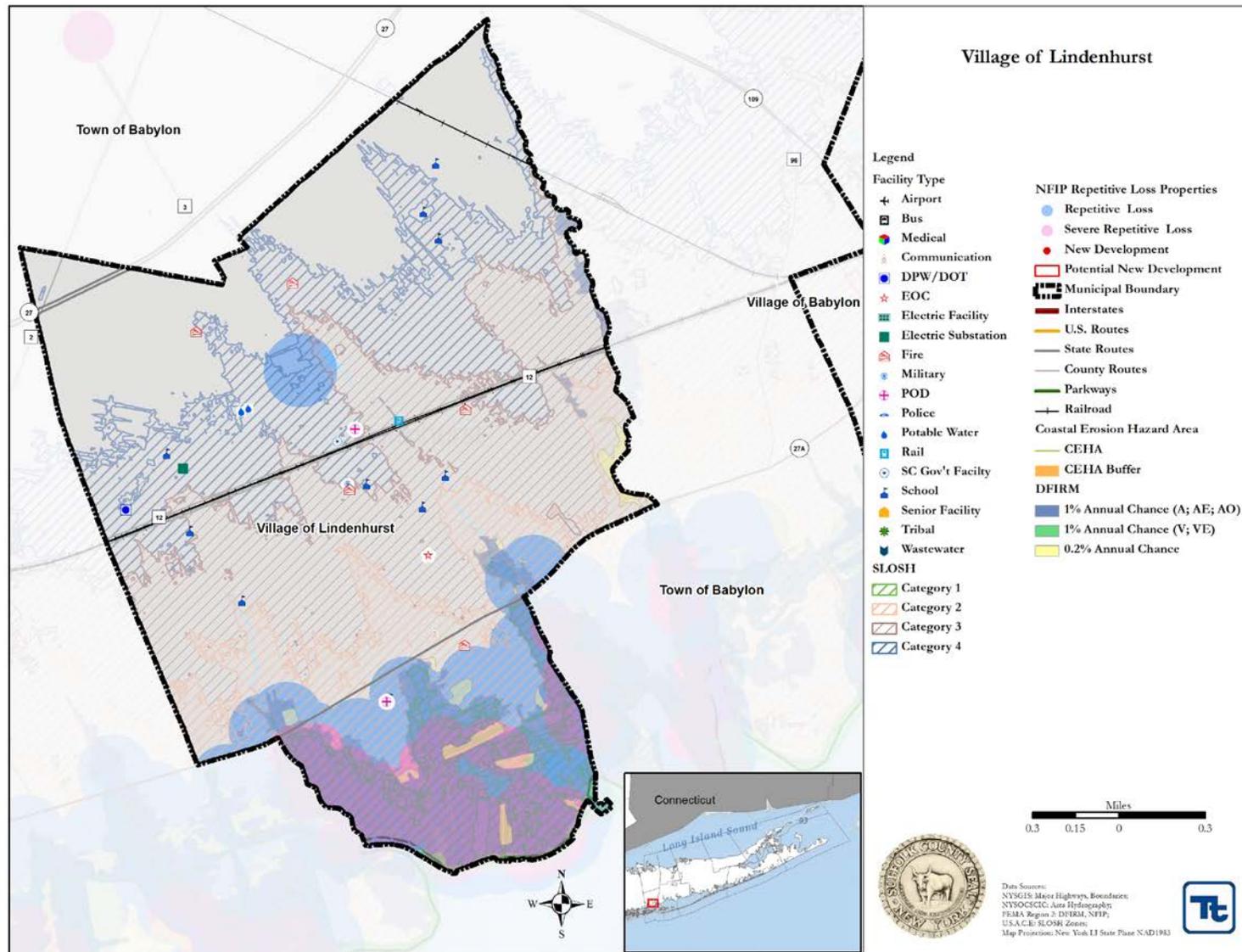




Figure 9.5-2. Village of Lindenhurst Hazard Area Extent and Location Map 2





# 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:** Lindenhurst Fire Department

**Number:** Sandy HMGP LOI #: 1847

**Mitigation Action/Initiative:** Project to supply emergency power to the Lindenhurst Fire Department

Assessing the Risk	
<b>Hazard(s) addressed:</b>	
<b>Specific problem being mitigated:</b>	This project will provide emergency power to the Lindenhurst Fire Department whose fire facilities were rendered incapacitated by Hurricane Sandy. Lindenhurst received the brunt of the storms wrath, its canals flooded, homes caught fire, and there was extensive damage to the community which to date has not fully recovered. The Lindenhurst fire department facility itself and it's ability to serve it's community would greatly improve with the addition of an emergency backup power source as it would provide uninterrupted service to it's bay doors, crew quarters and be able to charge our vehicles and portable radios. It would also provide power to DON and DOFF personnel equipment.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1.
	2.
	3.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	It is our intent to purchase two generators for two buildings, having these generators will allow us to become self reliant by way of power so we may be able to better serve our community and property in our area.
<b>Mitigation Action/Project Type</b>	
<b>Objectives Met</b>	
<b>Applies to existing structures/infrastructure, future, or not applicable</b>	
<b>Benefits (losses avoided)</b>	Recent Damages: \$5,000,000
<b>Estimated Cost</b>	\$250,000
<b>Priority*</b>	
Plan for Implementation	
<b>Responsible Organization</b>	Lindenhurst Fire Department: Heather Duffy, Grants Associate
<b>Local Planning Mechanism</b>	
<b>Potential Funding Sources</b>	HMGP; _____ for Local Match





<b>Timeline for Completion</b>	
<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)





## Prioritization

**Number:** Sandy HMGP LOI #: 1847  
**Mitigation Action/Initiative:** Project to supply emergency power to the Lindenhurst Fire Department

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
<b>Total</b>		
<b>Priority (High/Med/Low)</b>		





# 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:** Lindenhurst School District

**Number:** Sandy HMGP LOI #: 808

**Mitigation Action/Initiative:** harding masonry window wall reconstruction

Assessing the Risk	
<b>Hazard(s) addressed:</b>	
<b>Specific problem being mitigated:</b>	existing masonry window wall is in need of replacement due to water infiltration, corroded steel lintels, cracked masonry work.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1.
	2.
	3.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	replacing the corroded lintels, replacing the brick work and windows
<b>Mitigation Action/Project Type</b>	
<b>Objectives Met</b>	
<b>Applies to existing structures/infrastructure, future, or not applicable</b>	
<b>Benefits (losses avoided)</b>	Recent Damages: \$200,000
<b>Estimated Cost</b>	\$250,000
<b>Priority*</b>	
Plan for Implementation	
<b>Responsible Organization</b>	Lindenhurst School District: john marek, plant fac admin
<b>Local Planning Mechanism</b>	
<b>Potential Funding Sources</b>	HMGP; _____ for Local Match
<b>Timeline for Completion</b>	
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: Progress on Action/Project:

\* Refer to results of Prioritization (page 2)





## Prioritization

**Number:** Sandy HMGP LOI #: 808

**Mitigation Action/Initiative:** harding masonry window wall reconstruction

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
<b>Total</b>		
<b>Priority (High/Med/Low)</b>		





## 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:** Lindenhurst School District  
**Number:** Sandy HMGP LOI #: 2079  
**Mitigation Action/Initiative:** harding backup generator

Assessing the Risk	
<b>Hazard(s) addressed:</b>	
<b>Specific problem being mitigated:</b>	backup generator
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1.
	2.
	3.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	this will provide backup power for this building for a warming/staging center for the community
<b>Mitigation Action/Project Type</b>	
<b>Objectives Met</b>	
<b>Applies to existing structures/infrastructure, future, or not applicable</b>	
<b>Benefits (losses avoided)</b>	Recent Damages: \$0
<b>Estimated Cost</b>	\$300,000
<b>Priority*</b>	
Plan for Implementation	
<b>Responsible Organization</b>	Lindenhurst School District: john marek, plant fac admin
<b>Local Planning Mechanism</b>	
<b>Potential Funding Sources</b>	HMGP; _____ for Local Match
<b>Timeline for Completion</b>	
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: Progress on Action/Project:

\* Refer to results of Prioritization (page 2)





## Prioritization

**Number:** Sandy HMGP LOI #: 2079

**Mitigation Action/Initiative:** harding backup generator

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
<b>Total</b>		
<b>Priority (High/Med/Low)</b>		





# 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 Lindenhurst  
**Number:** New York Rising  
**Mitigation Action/Initiative:** Comprehensive Drainage Infrastructure Master Plan and Phase I Improvements

Assessing the Risk	
<b>Hazard(s) addressed:</b>	
<b>Specific problem being mitigated:</b>	At present, the Village’s infrastructure mapping is outdated and incomplete. A comprehensive drainage survey and Master Plan would help to clearly identify both existing infrastructure as well as to inventory and repair drainage components that are blocked, not operational or performing under capacity. This would also include an initial series of immediate upgrades and repairs that are most critical to the storm drainage system function. In the near-term, an immediate Master Plan for the upgrade and improvement of the storm sewer system south of Montauk Highway would be implemented in order to improve these highly-critical and at risk infrastructure components. After these initial short-term actions, a targeted or phased approach to upgrades could be identified based on the outcome of this study.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1. 2. 3.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	The effort would allow the Village to identify “hot spots” prone to flooding as well as to obtain a complete view of the state of their infrastructure (i.e., what is in a state of good repair, identification of blocked or functionally obsolete sewers/drains, etc.). At the completion of the survey, GIS-based data identifying structural components, problem areas, etc. could be provided to the Village. This data would allow the DPW a mechanism to track and/or implement Asset Management related to the sewer/drainage system. Moving forward, this survey would function as the basis for future drainage infrastructure improvements.
<b>Mitigation Action/Project Type</b>	
<b>Objectives Met</b>	
<b>Applies to existing structures/infrastructure,</b>	





<b>future, or not applicable</b>	
<b>Benefits (losses avoided)</b>	
<b>Estimated Cost</b>	
<b>Priority*</b>	
<b>Plan for Implementation</b>	
<b>Responsible Organization</b>	
<b>Local Planning Mechanism</b>	
<b>Potential Funding Sources</b>	HMGP; _____ for Local Match
<b>Timeline for Completion</b>	
<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)





## Prioritization

**Number:** New York Rising  
**Mitigation Action/Initiative:** Comprehensive Drainage Infrastructure Master Plan and Phase I Improvements

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
<b>Total</b>		
<b>Priority (High/Med/Low)</b>		





## 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 Lindenhurst  
**Number:** New York Rising  
**Mitigation Action/Initiative:** Lindenhurst Village South Storm Water Drainage System Phase II Improvements

Assessing the Risk	
<b>Hazard(s) addressed:</b>	
<b>Specific problem being mitigated:</b>	Develop plans/designs and implement improvements to the storm water drainage system south of Montauk Highway based on the results/recommendations of the Phase I study. This area experiences frequent and recurring flooding resulting from the backup of storm water drainage system facilities during storm events, high tides, and rainfall events.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1.
	2.
	3.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	
<b>Mitigation Action/Project Type</b>	
<b>Objectives Met</b>	
<b>Applies to existing structures/infrastructure, future, or not applicable</b>	
<b>Benefits (losses avoided)</b>	
<b>Estimated Cost</b>	
<b>Priority*</b>	
Plan for Implementation	
<b>Responsible Organization</b>	
<b>Local Planning Mechanism</b>	
<b>Potential Funding Sources</b>	HMGP; _____ for Local Match
<b>Timeline for Completion</b>	
Reporting on Progress	





**Date of Status Report/  
Report of Progress**

Date:  
Progress on Action/Project:

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





## Prioritization

**Number:** New York Rising  
**Mitigation Action/Initiative:** Lindenhurst Village South Storm Water Drainage System Phase II Improvements

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
<b>Total</b>		
<b>Priority (High/Med/Low)</b>		





## 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 Lindenhurst  
**Number:** New York Rising  
**Mitigation Action/Initiative:** Neguntatogue Park Natural Systems Resiliency Improvements/Creek Habitat Walk

Assessing the Risk	
<b>Hazard(s) addressed:</b>	
<b>Specific problem being mitigated:</b>	The Neguntatogue Creek drains upland areas of Lindenhurst as far north as Sunrise Highway. The creek has become silted in, overgrown and inaccessible. Improvements to Neguntatogue Park and Creek in a manner that emphasizes the natural environment and utilizes green infrastructure while accommodating for the attenuation of storm water are proposed. The stabilization of the creek, the enhancement of its ability to transport and detain storm water and the restoration of a healthy and sustainable plant community are critical to the community's resilient future.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1. 2. 3.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Improvements to Strong's and Neguntatogue Creeks could also help upland communities in terms of storm water attenuation and flooding.
<b>Mitigation Action/Project Type</b>	
<b>Objectives Met</b>	
<b>Applies to existing structures/infrastructure, future, or not applicable</b>	
<b>Benefits (losses avoided)</b>	Project benefits would include local flood control while potentially improving water quality as well as providing a new passive recreational space such as a nature walk on this section of Village-owned undeveloped parkland. Additionally, alleviating flooding along a crucial stretch of Montauk Highway would help to provide unimpeded access to Good Samaritan Hospital.
<b>Estimated Cost</b>	
<b>Priority*</b>	
Plan for Implementation	
<b>Responsible Organization</b>	
<b>Local Planning Mechanism</b>	





<b>Potential Funding Sources</b>	HMGP; _____ for Local Match
<b>Timeline for Completion</b>	
<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)





## Prioritization

**Number:** New York Rising  
**Mitigation Action/Initiative:** Neguntatogue Park Natural Systems Resiliency Improvements/Creek Habitat Walk

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
<b>Total</b>		
<b>Priority (High/Med/Low)</b>		





## 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 Lindenhurst  
**Number:** New York Rising  
**Mitigation Action/Initiative:** Regional Canal Dredging and Waterfront Economic Management Program

Assessing the Risk	
<b>Hazard(s) addressed:</b>	
<b>Specific problem being mitigated:</b>	Dredging program for the Village's 7 canals that run off the Great South Bay. These canals need to be cleared of Sandy-related debris as well as silt that has built up over a twenty to thirty year period. Homeowners with waterfront property generally pay higher taxes which creates a sizable tax base/revenue stream for the Village. Many residents are attracted to the water for its recreational use however an inability to fully utilize the canals would potential impact locational decisions of perspective buyers, home sales, and by association the residential waterfront tax base. Additionally, functional canals would help the water dependent/marine economy of Lindenhurst (public and private marinas, boat clubs, boat sales, Chateau La Mer, and other restaurants) remain viable and thriving.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1.
	2.
	3.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Dredging would improve navigation and provide additional drainage cross section during storm and rainfall events. While dredging impacts physical characteristics such as navigation/boating operations as well as drainage capacity, it is also intertwined with economy of Lindenhurst and its resiliency. More specifically, waterfront housing within the Village is typically more expensive than other upland properties. As a result, a well-planned and phased regional dredging program would help to improve the physical and economic resiliency of the Village and adjoining South Shore communities.
<b>Mitigation Action/Project Type</b>	
<b>Objectives Met</b>	





<b>Applies to existing structures/infrastructure, future, or not applicable</b>	
<b>Benefits (losses avoided)</b>	
<b>Estimated Cost</b>	
<b>Priority*</b>	
<b>Plan for Implementation</b>	
<b>Responsible Organization</b>	
<b>Local Planning Mechanism</b>	
<b>Potential Funding Sources</b>	HMGP; _____ for Local Match
<b>Timeline for Completion</b>	
<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)





# Prioritization

**Number:** New York Rising  
**Mitigation Action/Initiative:** Regional Canal Dredging and Waterfront Economic Management Program

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
<b>Total</b>		
<b>Priority (High/Med/Low)</b>		

