



## 9.15 Village of Shoreham

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

### 9.15.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact	Alternate Point of Contact
Len Emma P.O. Box 389, Shoreham, NY 11786 Phone: 631-821-0680 Email: lcemma@optonline.net	Roger Pijacki, Mayor P.O. Box 157, Shoreham, NY 11786 Phone: 631-744-0980 Email: rpjacki@switchtechnologies.com

### 9.15.2 Municipal Profile

#### Population

531 (2010 U.S. Census)

#### Location

The Village of Shoreham is located within the Town of Brookhaven. The Village has a total area of 0.4 square miles, all of it is land. The Village of Shoreham is located on the North Shore of Long Island, New York.

#### Climate

Long Island’s climate is similar to other coastal areas of the Northeast. Summers are typically warm, with an occasional thunderstorm. Sea breezes off the Atlantic Ocean temper the heat and limit the frequency and severity of thunderstorms. During the winter, temperatures are usually warmer than inland areas, sometimes bringing rain instead of snow. Measurable snow falls every winter, including Nor’Easters which produce blizzard conditions. These Nor’Easters can bring one to two feet of snow with near-hurricane force winds.

#### Brief History

The Village of Shoreham was developed in the early 1900s as a summer community and was incorporated in 1913. At this time, a system of streets was constructed to prevent road washouts. The Suffolk County Land Company had completed development of the “Estates”, which was a development of large homes along Briarcliff and Tower Hill Roads. The Shoreham Inn was in operation and achieved success. A power house with a pumping station and ice plant was built east of the Inn and water mains were laid throughout the Village. In 1915, electricity and telephone service was established. In 1951, a large portion of the “Estates” east of the Village was annexed and in 1957, the “Shoreham Slopes” was added. Currently, there are approximately 190 homes in the Village of Shoreham.

#### Governing Body Format

The Village of Shoreham Government consists of a Mayor and four Trustees, all elected for two-year terms. The Government also consists of a police justice, elected for a four-year term and several commissioners and other officials appointed by the Trustees, who volunteer their service.



**Growth/Development Trends**

None identified at this time.

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

Suffolk County has a history of 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 events that have occurred from 2008 to the present 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 9.15-1. Hazard Event History**

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	Suffolk County Designated?	Summary of Damages/Losses
June 6-8, 2013	Record Heavy Rain	N/A	N/A	Washout of beach access road
February 8-9, 2013	Severe Winter Storm and Snowstorm	DR-4111	Yes - PA (Public Assistance)	Downed trees, blocked unplowed roads, loss of electric power
October 27- November 8, 2012	Hurricane Sandy	DR-4085	Yes – IA (Individual Assistance) and PA	Debris, power outages, damage to structures
August 26 – September 5, 2011	Hurricane Irene	EM 3328 DR 4020	Yes – IA and PA	Debris, power outages

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



### 9.15.4 Hazard Vulnerabilities and Ranking

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the hazard vulnerabilities and their ranking in the Village of Shoreham. 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 Shoreham.

**Table 9.15-2. 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)
3	Coastal Erosion	RCV in CEHA: \$29,106,506	Frequent	33
5	Drought	Damage estimate not available	Occasional	6
7	Earthquake	500-Year MRP: \$128,618,913 2,500-Year MRP: \$2,065,631,997	None	0
5	Expansive Soils	Damage estimate not available	Rare	6
2	Flood	1% Annual Chance: \$0 0.2% Annual Chance: \$0	Frequent	36
6	Groundwater Contamination (natural)	Damage estimate not available	Rare	4
1	Hurricane	Category 1 SLOSH: \$0 Category 2 SLOSH: \$0 Category 3 SLOSH: \$0 Category 4 SLOSH: \$0	Frequent	45
4	Infestation	No measurable impact to property	Occasional	14
1	Nor'Easter	100-Year RCV: \$1,725,996,479 500-Year RCV: \$1,596,906,895	Frequent	45
1	Severe Storm	100-Year RCV: \$1,725,996,479 500-Year RCV: \$1,596,906,895	Frequent	45
2	Severe Winter Storm	1% of GBS: \$2,905,064 5% of GBS: \$14,525,322	Frequent	36
7	Shallow Groundwater Flooding	Damage estimate not available	None	0
5	Wildfire	Estimated RCV in Interface/Intermix: \$444,350,588	Rare	6

- 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 9.15-3. NFIP Summary**

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 100-year Boundary (3)	# Policies in 500-Boundary (3)	# Policies Outside the 500-year Flood Hazard (3)
Village of Shoreham	No record	5	\$1,033	0	0	0	0	0

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

Note (3): The policies inside and outside of the flood zones is based on the latitude and longitude provided by FEMA Region 2 in the policy file. FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.

### Critical Facilities

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

**Table 9.15-4. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure	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>
None identified at this time.										

Source: HAZUS-MH 2.1

### Other Vulnerabilities Identified

None identified at this time.



### 9.15.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

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

#### Planning and Regulatory Capability

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

**Table 9.15-5. Planning and Regulatory Capability**

Tool / Program (code, ordinance, plan)	Do you have this? (Y/N)	Authority (local, county, state, federal)	Dep't. / Agency Responsible	Code Citation and Comments (Code Chapter, date of adoption, name of plan, explanation of authority, etc.)
Building Code	Y	Local and State	Building Inspector	New York State building code, Chapter 9, Section 9-1. Village of Shoreham Ordinance of 1951, added Deputy Building Inspector to assist with code enforcement
Zoning Ordinance	Y	Local	Board of Trustees	Local Law 93-2: 1993 Amendment to the Incorporated Village of Shoreham Zoning Ordinance of 1951, THE VILLAGE IS ENACTING A NEW ZONING CODE
Subdivision Ordinance	N		Board of Trustees	The Village is enacting a subdivision local law
Special Purpose Ordinances	Y	Local and State		Local Law 83-1, Section 1.0
Growth Management	N			
Floodplain Management / Basin Plan	Y	Local and State		Local Law 89-1, Section 5.0, Local Law 1 of 2009 enacted. Only the beach is in the floodplain.
Stormwater Management Plan/Ordinance	Y	Local and State	Stormwater Management Officer	Stormwater and green infrastructure committees created to implement drainage improvements
Comprehensive Plan / Master Plan	N	Local	Board of Trustees	Is currently being written and reviewed by Village attorney
Capital Improvements Plan	N			
Site Plan Review Requirements	Y	Local		Local Law 07-1
Habitat Conservation Plan	Y	Local		Local Laws 05-1 and 05-2
Economic Development Plan	N			
Emergency Response Plan	Y	County		
Shoreline Management Plan	N			
Post Disaster Recovery Plan	N			
Post Disaster Recovery Ordinance	N			



Tool / Program (code, ordinance, plan)	Do you have this? (Y/N)	Authority (local, county, state, federal)	Dep't. / Agency Responsible	Code Citation and Comments (Code Chapter, date of adoption, name of plan, explanation of authority, etc.)
Real Estate Disclosure req.	N			
Other (e.g. steep slope ordinance, local waterfront revitalization plan)	N	Local	Board of Trustees	Steep slope local law currently being drafted
NFIP Flood Damage Protection Ordinance	Y	State	Building Department	Local Law No. 1 of the local code, was last updated in 2009. Ch. 300-16, 9/09
NFIP - Freeboard	Y	State	Building Department	Ch. 300-16 - State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other
NFIP - Cumulative Substantial Damages	N			
Coastal Erosion Control Districts	Y	Local		Local Law #2 of 1989 Coastal Erosion Hazard Area

### Administrative and Technical Capability

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

**Table 9.15-6. Administrative and Technical Capabilities**

Staff/ Personnel Resources	Available (Y or N)	Department/ Agency/Position
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Y	Building Inspector, Village Engineer, Parks Commissioner
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Building Inspector and Village Engineer
Planners or engineers with an understanding of natural hazards	Y	Village Engineer
NFIP Floodplain Administrator	Y	Building Inspector, Len Emma Village Engineer
Surveyor(s)	Y	By Contract
Personnel skilled or trained in "GIS" applications	Y	Village Engineer
Scientist familiar with natural hazards in the County.	Y	Parks Commissioner
Emergency Manager	Y	Police Commissioner
Grant Writer(s)	Y	Village Engineer and Deputy Clerk
Staff with expertise or training in benefit/cost analysis	Y	Treasurer

*\*\*Per municipal Flood Damage Prevention Ordinance*

### Fiscal Capability

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

**Table 9.15-7. Fiscal Capabilities**

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community development Block Grants (CDBG)	Y
Capital Improvements Project Funding	Y
Authority to Levy Taxes for specific purposes	Y





Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
User fees for water, sewer, gas or electric service	N
Impact Fees for homebuyers or developers of new development/homes	N
Incur debt through general obligation bonds	Y
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	Y
Other	Don't Know

### Community Classifications

The table below summarizes classifications for the community programs available to the Village of Shoreham.

**Table 9.15-8. Community Classifications**

Program	Classification	Date Classified
Community Rating System (CRS)	NP	NA
Building Code Effectiveness Grading Schedule (BCEGS)	NP	NA
Public Protection	NP	NA
Storm Ready	NP	NA
Firewise	NP	NA

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

The classifications listed above relate to the community’s effectiveness in providing services that may impact its vulnerability to the natural 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 one (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:** Leonard Emma

### Program and Compliance History

Village of Shoreham originally joined the NFIP on May 25, 1978. The current effective Flood Insurance Rate Maps are dated September 25, 2009. The community's Flood Damage Prevention Ordinance (FDPO), found at Local Law No. 1 of the local code, was last updated in 2009.

Leonard Emma, the current NFIP Floodplain Administrator, stated the Village of Shoreham no longer participates in the NFIP.

## 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":

**Land Use Plans** – maintain the Master Plan and habitat conservation plan to minimize risk in hazard areas. Updates will include a review of the HMP to ensure that hazard areas are identified in the respective plans.

**Building Code, Ordinances, and Enforcement** – review planned development against the hazard areas identified in the HMP during zoning reviews.

**Building Code, Ordinances, and Enforcement** – maintain NFIP flood damage prevention ordinance.

**Stormwater Management Plan** – Planned flood mitigation actions and their intended effect will be reflected in the Stormwater Management Plan.

**Floodplain Management** - work together with the County and others to bring CRS training/workshops into the community where appropriate community officials and staff will actively participate

**Emergency Response Plan** – the village developed and adopted an Emergency Response Plan in order to outline in detail the functions and responsibilities of each village department during a large scale natural or man-made emergency, so that response to emergencies lessens the severity of a disaster on property and the population. This plan includes many pre-event actions that both mitigate disaster losses, and directly supports recovery efforts.

**Public Education and Outreach** – Expand public education on ways to protect their property before and during hazard events



### 9.28.6 Mitigation Strategy

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

#### Past Mitigation Initiative Status

The following table summarizes progress on the mitigation strategy identified in the 2008 plan for the Village.

**Table 9.15-9. Past Mitigation Initiative Status**

Description	Status	Review Comments
VS-1: Consider participation in incentive-based programs such as CRS and Storm Ready.	No Progress	An amended version of this initiative is being carried forward in the updated strategy.
VS-2: Continue to support the implementation, monitoring, maintenance and updating of this Plan, as defined in Section 7.0	Ongoing	This initiative is being removed from the updated mitigation strategy as it refers to activities that are an ongoing and normal part of Village operations. The Village has fully participated in the 2014 update to this plan.
VS-3: Strive to maintain compliance with and good-standing in the National Flood Insurance program.	Ongoing	This initiative is being removed from the updated mitigation strategy, and identified as a mitigation capability as it refers to activities that are an ongoing and normal part of Village operations. Initiatives that enhance local floodplain management capabilities and participation in the NFIP have been identified in the Village’s updated mitigation strategy.
VS-4: Continue to develop, enhance and implement existing emergency plans.	Continuous	This initiative is being carried forward as an integration action, specifically identifying that the Village will incorporate the findings and recommendations of this HMP update into amendments/updates to their emergency plans.
VS-5: Create/enhance/ maintain mutual aid agreements with neighboring communities.	Continuous	This initiative is being removed from the updated mitigation strategy, and identified as a mitigation capability as it refers to activities that are an ongoing and normal part of Village operations.
VS-6: Support County-wide initiatives identified in Section 9.1 of the County Annex. Support county-wide initiatives identified in the Suffolk County Hazard Mitigation Plan	Continuous	A modified version of this initiative is being carried forward, identifying local participation in specific county-led mitigation programs and initiatives.
VS-7: Consider the development of a post – disaster action plan, including a debris management plan. This to be incorporated into existing emergency management plans .	100% Completed	A modified version of this initiative is being carried forward, identifying local participation in the pending county-led debris management planning process.
VS-8: Install storm drains, leeching basins and curbing as needed at higher elevations in the “old village” to prevent water from reaching lower elevation problem areas.	50% Completed	An amended version of this initiative is being carried forward in the updated strategy.
VS-9: Install additional storm drains, leeching basins and curbing as needed in lower elevations of the “old village” to curtail excess water which accumulates and backs up onto roadways and private property before entering 100 year-old drain which empties onto beach and ultimately the Sound.	75% Completed	An amended version of this initiative is being carried forward in the updated strategy.



Description	Status	Review Comments
VS-10: Install additional storm drains, leeching basins and some type of water channeling or curbing in eastern sections of the Village to prevent excess water from undermining roads and causing wash-outs on private property. This area has no curbs.	80% Completed	An amended version of this initiative is being carried forward in the updated strategy.
VS-11: Research ways to route more storm water into existing re-charge basins and less into 100 year-old storm drain.	35% Completed	An amended version of this initiative is being carried forward in the updated strategy.
VS-12: Enhance tree trimming and invasive species program to keep roadways open, parklands safe and encourage residents to do likewise.	75% Completed	An amended version of this initiative is being carried forward in the updated strategy.
VS-13: Enhance drainage maintenance program throughout the Village to reduce flooding.	50% Completed	An amended version of this initiative is being carried forward in the updated strategy.
VS-14: Expand public education on ways to protect their property before and during hazard events.	Continuous	An amended version of this initiative is being carried forward in the updated strategy.
VS-15: Evaluate and retrofit (if necessary) Village Hall and the surrounding bluff area so that it is functional in a disaster situation.	50% Completed	An amended version of this initiative is being carried forward in the updated strategy.

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

Previous actions that are now on-going programs and capabilities are described below. Refer to Table 9.15-11 presented later in this annex.

The Village has identified the following mitigation projects/activities that have been completed:

The three completed projects include:

- Installing drainage basins to catch more storm water. Roads have been improved with better curbing to direct storm water into the basins.
- The Village created storm water and green infrastructure committees. It is the intent of these committees to further develop the plan to reduce the risk posed by storm water.
- Projects focusing on hardening the beach front and its structures have been completed.

The two proposed projects include the Village’s pursuit of projects focusing on enhancing the drainage systems and developing Village Hall as an Emergency Operations Center. To develop Village Hall as an Emergency Operations Center, the Village applied for Hazard Mitigation Grant Program funding.

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

The Village of Shoreham 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 9.15-10 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 9.15-11 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.15-10. 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
VS-1	Assess and prioritize options to retrofit, acquire, or relocate structures located in hazard-prone areas, and support implementation as funding becomes available. Implementation is further supported by county-led initiatives identified below.	Existing	Flood, Coastal Erosion, Hurricane, Nor'easter, Severe Storm, Wildfire, Winter Storm	2, 6, 9, 15, 16	Village of Shoreham with NYSOEM, FEMA support	High	High	Federal and State Mitigation Grant Programs and local budget (or property owner) for cost share	Long-term DOF	High	SIP
VS-2 (former VS-8)	Install storm drains, leeching basins and curbing as needed at higher elevations in the "old village" to prevent water from reaching lower elevation problem areas.	New and Existing	Flooding Nor'easter Severe Storms Hurricane Coastal Erosion	5,8,11,15	Village of Shoreham	High	High	General Fund, PDM Grant Funding	Long term DOF OG	High	SIP
VS-3 (former VS-9)	Install additional storm drains, leeching basins and curbing as needed in lower elevations of the "old village" to curtail excess water which accumulates and backs up onto roadways and private property.	New and Existing	Flooding Nor'easter Severe Storms Hurricane Coastal Erosion	5,8,11,15	Village of Shoreham	High	High	General Fund, PDM Grant Funding	Long term DOF OG	High	SIP
VS-4 (former VS-10)	Install additional storm drains, leeching basins and some type of water channeling or curbing in eastern sections of the Village to prevent excess water from undermining roads and causing wash-outs on private property.	New and Existing	Flooding Nor'easter Severe Storms Hurricane Coastal Erosion	5,8,11,15	Village of Shoreham	High	High	General Fund, Grant Funding	Long term DOF	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
VS-5 (former VS-11)	Assess and prioritize options to route more storm water into existing re-charge basins and less into the 100 year-old storm drain.	New and Existing	Flooding Nor'easter Severe Storms Hurricane Coastal Erosion	5,8,11,15	Village of Shoreham	High	Medium	General Fund Grant Funding	Short term DOF	Medium	SIP
VS-6 (former VS-15)	Assess and prioritize options to retrofit Village Hall and maintain the surrounding bluff area so that Village Hall remains functional in a disaster situation.	Existing	All	5,12,13,16	Village of Shoreham	High	Medium	General Fund PDM Grant Funding	Long term DOF	Medium	SIP
VS-7	Assess and prioritize options to upgrade or retrofit Village Hall to sustain hazard impacts, so that it can operate as an Emergency Operations Center.	Existing	Earthquake , Flood, Groundwater Contam, Hurricane, Nor'Easter, Severe Storm, Shallow GW, Wildfire, Winter Storm	2, 13, 14, 16	Village of Shoreham	High	High	General Fund PDM Grant Funding	Short term	High	SIP
VS-8	Assess and prioritize options to enhance the Village's drainage system, and implement as funding becomes available.	New and Existing	Flood, Hurricane, Nor'Easter, Severe Storm, Shallow GW, Winter Storm	1, 2, 13, 14, 16, 17	Village of Shoreham	High	High	General Fund PDM Grant Funding	Long term DOF	High	SIP
VS-9	Sandy HMGP LOI #2166 - install a backup power generator at Village Hall.	See Action Worksheet (VS-9 – LOI 2166 – 031814)									
VS-10 (former VS-12)	Enhance tree trimming and invasive species program and encourage residents to do likewise.	Existing	Nor'easter Severe Storms Hurricane Infestation	1,3,5,10,13,16	Village of Shoreham	Low	Low	General Fund	Short term and OG	Medium	NRP





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
VS-11 (former VS-1)	Work together with the County and others to bring CRS training/workshops into the community where appropriate community officials and staff will actively participate	New & Existing	Flood, Nor'Easter, Hurricane, Severe Storm	1,2,3,7,13	Village of Shoreham NFIP Floodplain Administrator	High	Low	Village General Fund	Short	High	LPR
VS-12 (former VS-13)	Assess and prioritize options to enhance the drainage maintenance program throughout the Village to reduce flooding, and implement as funding becomes available.	Existing	Flooding Nor'easter Severe Storms Hurricane Coastal Erosion	5,8,11	Village of Shoreham	Medium	Low	General Fund	Short term and OG	Medium	LPR
VS-13 (former VS-6)	Support and participate in county led initiatives intended to build local and regional mitigation and risk-reduction capabilities (see Section 9.1), specifically: <ul style="list-style-type: none"> <li>Mitigation Education for Natural Disasters (natural hazard awareness and personal scale risk reduction/mitigation public education and outreach program)</li> <li>Build Local Floodplain Management and Disaster Recovery Capabilities (enhanced floodplain management, and post-disaster assessment and recovery capabilities)</li> <li>County-Wide Debris Management Plan</li> <li>Jurisdictional Knowledge of Mitigation Needs of Property Owners (improved understanding of damages and mitigation interest/activity of private property owners)</li> <li>Create a Multi-Jurisdictional Seismic Safety Committee in Suffolk County (build regional, county and local capabilities to manage seismic risk, both pre- and post-disaster)</li> <li>Alignment of Mitigation Initiatives through all levels of Government (effort to build State and Federal level recognition and support of the County and local hazard mitigation planning strategies identified in this plan).</li> </ul>										
	See above	New and Existing	All Hazards	All Objectives	Suffolk County, as supported by relevant local department leads	High (comprehensive improvements mitigation and risk-reduction capabilities)	Low-Medium (locally)	Local (staff resources)	Short	High	See above
VS-14	Work with County and PSEG (formerly LIPA) to identify roads within the municipality that are considered "critical", and to be the first priority for clearing after an event involving downed power lines.										
	See above.	Existing	Severe Storm; Severe Winter Storm; Hurricane; Nor'Easter	3, 7, 13, 14, 15, 16	PSEG, County	High	Low-Medium	Local	Short	High	LRP

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 9.15-11. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
VS-1	Assess and prioritize options to retrofit, acquire, or relocate structures located in hazard-prone areas, and support implementation as funding becomes available. Implementation is further supported by county-led initiatives identified below.	1	1	0	1	1	1	-1	1	1	1	1	1	1	1	11	High
VS-2 (former VS-8)	Install storm drains, leeching basins and curbing as needed at higher elevations in the “old village” to prevent water from reaching lower elevation problem areas.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
VS-3 (former VS-9)	Install additional storm drains, leeching basins and curbing as needed in lower elevations of the “old village” to curtail excess water which accumulates and backs up onto roadways and private property.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
VS-4 (former VS-10)	Install additional storm drains, leeching basins and some type of water channeling or curbing in eastern sections of the Village to prevent excess water from undermining roads and causing wash-outs on private property.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High





Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
VS-5 (former VS-11)	Assess and prioritize options to route more storm water into existing re-charge basins and less into the 100 year-old storm drain.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
VS-6 (former VS-15)	Assess and prioritize options to retrofit Village Hall and maintain the surrounding bluff area so that Village Hall remains functional in a disaster situation.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
VS-7	Assess and prioritize options to upgrade or retrofit Village Hall to sustain hazard impacts, so that it can operate as an Emergency Operations Center.	1	1	1	1	1	1	-1	0	0	1	1	1	0	0	8	High
VS-8	Assess and prioritize options to enhance the Village's drainage system, and implement as funding becomes available.	1	1	0	1	1	1	-1	0	0	1	1	0	1	1	8	High
VS-9	Sandy HMGP LOI #2166 - install a backup power generator at Village Hall.	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
VS-10 (former VS-12)	Enhance tree trimming and invasive species program and encourage residents to do likewise.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
VS-11 (former VS-1)	Work together with the County and others to bring CRS training/workshops into the community where appropriate community officials and staff will actively participate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High





Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
VS-12 (former VS-13)	Assess and prioritize options to enhance the drainage maintenance program throughout the Village to reduce flooding, and implement as funding becomes available.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
VS-13 (former VS-6)	Support and participate in county led initiatives...	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
VS-14	Work with County and PSEG (formerly LIPA) to identify roads within the municipality that are considered "critical", and to be the first priority for clearing after an event involving downed power lines.	1	0	1	1	1	1	0	0	1	1	1	1	1	1	11	High

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

- = Prioritization remained the same as the 2008 HMP.



### **9.28.7 Future Needs to Better Understand Risk/Vulnerability**

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A very old terra cotta drainage pipe (possibly 100 years old) extends approximately one third of a mile behind the homes on Woodville Road. It has ruptured several times and possibly been moved, though records are not conclusive. The pipe is known to change diameters from about 8 inches to 30 inches before exiting on the beach. A visual study (robotic camera) of this pipe is planned to ascertain its condition. A rupture in this pipe would lead to flooding of residents' property, which has happened on occasion.

### **9.28.8 Hazard Area Extent and Location**

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

### **9.28.9 Additional Comments**

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The above mentioned pipe receives the storm water drainage reaching the lower elevations of the Village. It is the goal of the Village to systematically provide for the alternative capture of water, thereby decreasing storm water run-off into the Sound. However, the pipe is still needed for severe storms that fill up the capture basins. For this reason, the pipe must be maintained in working condition.



Figure 9.15-1. Village of Shoreham Hazard Area Extent and Location Map 1

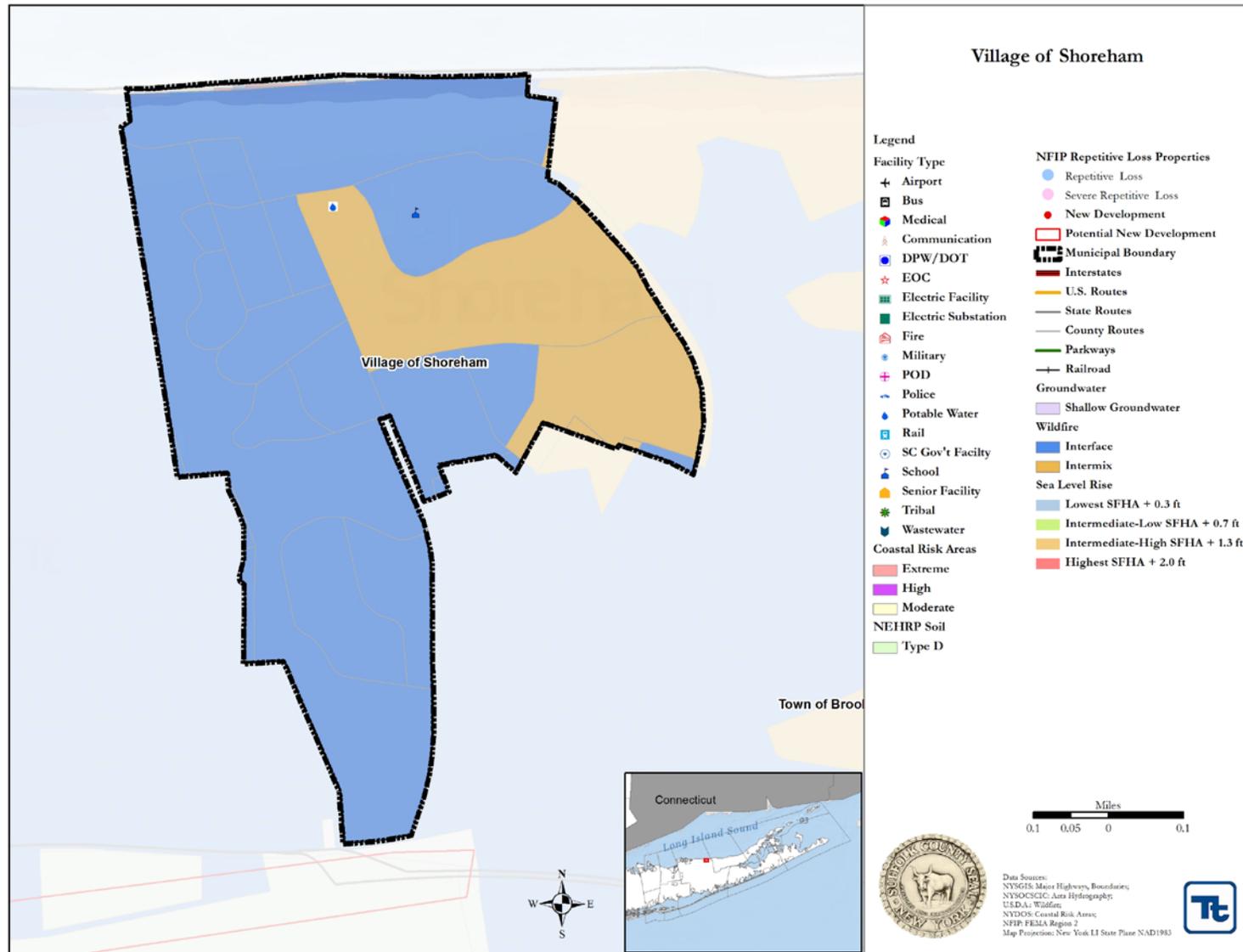
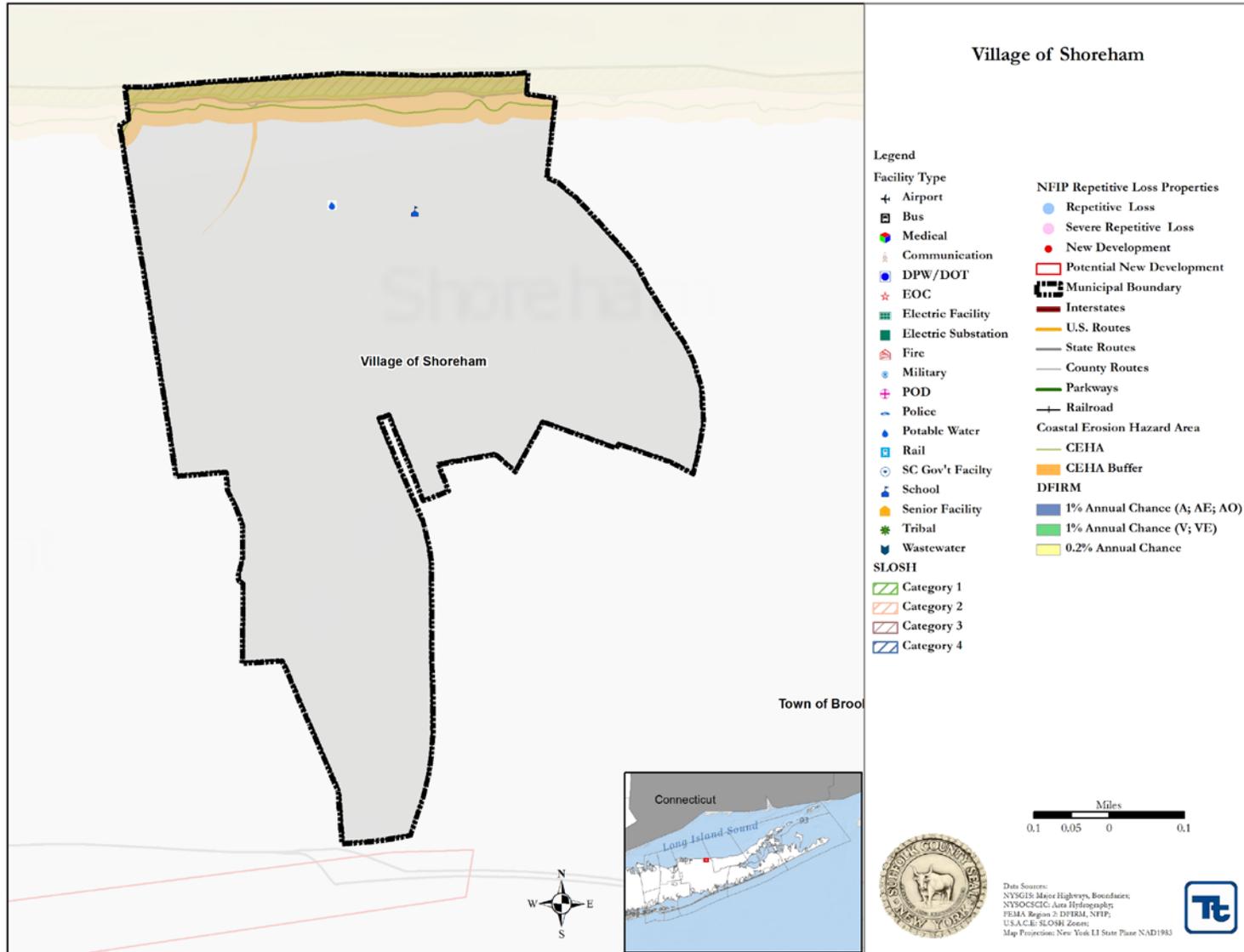




Figure 9.15-2. Village of Shoreham Hazard Area Extent and Location Map 2





# 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:** Village of Shoreham  
**Number:** Sandy HMGP LOI #: 2166  
**Mitigation Action/Initiative:** Back-Up Power for Shoreham Village Hall

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Earthquake, Flood, Hurricane, Nor'Easter, Severe Storm, Wildfire, Winter Storm
<b>Specific problem being mitigated:</b>	<p>Shoreham Village is located on Long Island's north shore in Suffolk County, within the Town of Brookhaven. Its approximately 531 residents reside in the .4 square mile Village bordered at the north by the Long Island Sound. During severe storms, Village Hall functions as an information center and short term shelter for residents. Village Hall typically houses code enforcement, Village hall staff and elected officials; most other functions are contracted out but are coordinated within the Village Hall facility.</p> <p>Power outages typically occur as a result of severe storms and other rain or wind events. Our Village experiences sporadic short-term (1-2 hours) outages throughout the year. Recent long-term outages included Tropical Storm Irene for 5 days. Superstorm Sandy resulted in loss of power for 7 days.</p> <p>With no back up power, there is complete loss of use of the Village Hall facility. Communications capabilities (radio, telephone, computer) are essential for coordinating with emergency managers and disseminating information to residents. Power is also necessary to support staff who perform critical functions during extreme weather events and in order to make Village Hall available to residents as a short term shelter. None of these functions are possible during a power outage.</p> <p>Damages relating to loss of power include \$3,000 to rent and operate a generator following Superstorm Sandy (7 days). We experienced total loss of use as a result of Irene (5 days) and all other shorter term outages.</p> <p>This project is supported by the Suffolk County All Hazards Multi-Jurisdictional Pre-Disaster Hazard Mitigation Plan. Proposed hazard mitigation initiative SC-5 which addresses county wide preparedness, provides a recommendation which states, "Provide backup power sources at vital critical facilities."</p>
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	<ol style="list-style-type: none"> <li>1. Install generator</li> <li>2. No action – does not solve the problem</li> <li>3.</li> </ol>
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	The Village proposes to procure and install a generator that will power the Village Hall facility and allow for critical operations to continue





	<p>uninterrupted in the case of a power outage. The generator will support all facility operations and electronic communications, which are essential in coordinating storm activities with emergency services, the Town of Brookhaven, NYS Office of Emergency Management and utility companies. The generator will also power the heat and hot water when residents are in need of shelter, as was the case following Sandy. During the prolonged power outage and fuel shortage the Village provided shelter, cooking facilities and showers for residents in need who had nowhere else to go.</p> <p>The proposed generator is a 40 kW natural gas standby unit with an automatic transfer switch, conduits and concrete sub base installed. The cost provided in this letter includes required electrical work and related materials and supplies.</p> <p>Please note that the “recent damages” figure indicated in this form reflects only the generator rental following Superstorm Sandy. The figure is expected to be much higher when the benefit cost analysis (BCA) for this project is completed. The BCA calculation will be performed with the assistance of staff and software within the NYS Office of Emergency Management (SOEM). The final BCA will include inputs such as project useful life; loss of use of village offices; recurrence interval; duration of outages; population served; future benefit; and other factors.</p> <p>The cost estimate provided in this letter may change at the time a full HMGP application is prepared.</p>
<b>Mitigation Action/Project Type</b>	Structure and Infrastructure Project
<b>Objectives Met</b>	2, 13, 14, 16
<b>Applies to existing structures/infrastructure, future, or not applicable</b>	<b>Existing infrastructure</b>
<b>Benefits (losses avoided)</b>	Recent Damages: \$3,000
<b>Estimated Cost</b>	\$80,000
<b>Priority*</b>	<i>High</i>
<b>Plan for Implementation</b>	
<b>Responsible Organization</b>	Village of Shoreham, Cathy Donahue-Spier, Clerk/Treasurer
<b>Local Planning Mechanism</b>	
<b>Potential Funding Sources</b>	HMGP; Village General Fund for Local Match
<b>Timeline for Completion</b>	2 months
<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 #: 2166

**Mitigation Action/Initiative:** Back-Up Power for Shoreham Village Hall

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	

