



9.14 Village of Shoreham

This section presents the jurisdictional annex for the Village of Shoreham. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the municipality and who in the Village of Shoreham participated in the planning process; an assessment of the Village of Shoreham’s risk and vulnerability; the different capabilities utilized in the Village of Shoreham; and an action plan that will be implemented to achieve a more resilient community.

9.14.1 Hazard Mitigation Planning Team

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

Table 9.14-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Edward Brickley, Trustee Address: PO Box 389, Shoreham, NY 11786-0389 Phone Number: 631-821-0680 Email: ebrickley@shorehamvillage.org	Name/Title: Laura Baish, Trustee Address: PO Box 389, Shoreham, NY 11786-0389 Phone Number: 631-821-0680 Email: lbaisch@shorehamvillage.org
NFIP Floodplain Administrator	
Name/Title: Larry Kogel, Commissioner of Public Works Address: P.O. Box 43 Shoreham, NY 11786-43 Phone Number: 631-821-0210 Email: lkogel@optonline.net	

9.14.2 Municipal Profile

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.

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.

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.

According to the U.S. Census, the 2010 population for the Village of Shoreham was 531. The estimated 2017 population was 437, a 17.7 percent decrease from the 2010 Census. Data from the 2017 U.S. Census American Community Survey indicate that 7.3 percent of the population is 5 years of age or younger and 29.5 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.





9.14.3 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.14-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. The figures at the end of this annex illustrate the geographically-delineated hazard areas and the location of potential new development, where available. The recent and anticipated development depicted on these figures excludes the Suffolk County wastewater upgrades; refer to Section 4 (County Profile) for additional information on this development.

Table 9.14-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018		2019	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)												
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	0	0	0	0	0	0	0	0	0	0	1	0
Multi-Family	0	0	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	0	0	0
Total Permits Issued	0	0	0	0	0	0	0	0	0	0	1	0
Property or Development Name	Type of Development	# of Units / Structures		Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development				
Recent Major Development and Infrastructure from 2015 to Present												
Magnusson-Rosario	Residential	1		9 Thompson Street Section 1 – Block 1 Lot 3		1 and .2% Flood Zone, Sea level rise 1-4 ft, SLOSH categories 1-4, Extreme coastal risk hazard areas, Coastal erosion hazard area, Wildfire interface		In progress				
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years												
None												

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.

9.14.4 Capability Assessment

The Village of Shoreham performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of legal and regulatory capabilities.



- Development and permitting capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Information on National Flood Insurance Program (NFIP) compliance.
- Classification under various community mitigation programs.
- The community’s adaptive capacity for the impacts of climate change.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.14.4). The Village of Shoreham identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. Appendix G provides the results of the planning/policy document review and the answers to integration survey questions.

Planning, Legal, and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Village of Shoreham and where hazard mitigation has been integrated.

Table 9.14-3. Planning, Legal, and Regulatory Capability

	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated?	
						If no - can it be a mitigation action?	
Codes, Ordinances, & Requirements							
Building Code	Yes	Building Construction Law, Code of the Village of Shoreham, Chapter 5, Local Law No. 3 of 2015 Administration and Enforcement of the New York State Uniform Fire Prevention and Building Code and Energy Conservation Code	Local and State	Building Commissioner	Yes	Yes	-
Comment: The purpose of this Chapter 5, entitled a Building Construction Law, is to provide for the administration and enforcement of the New York State Uniform Fire Prevention and Building Code (Uniform Code) and Energy Conservation Code (Energy Code). No person shall perform permit work, unless a building permit is issued therefor by the Building Inspector in accordance with the provisions of this Chapter 5, with the understanding that no such permit shall be issued without satisfaction of the conditions set forth							
Zoning Code	Yes	Zoning Code, Code of the Village of Shoreham, Chapter 31, Local Law No. 5 of 2015	Local	Planning Board	No	Yes	-
Comment: The purpose of this Chapter 31, entitled the Village Zoning Code, is to implement the authority granted to the Village under New York Village Law, Article 7 thereof, to protect and promote the public health, safety and welfare and specifically to address the following: (1) Efficient and adequate provision of public places and resources.							



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated?	
						If no - can it be a mitigation action?	
(2) Assurance of adequate plots for lawful uses. (3) Provision for the privacy of families. (4) Prevention of traffic congestion and promotion of public safety. (5) Protection of residential and historic places and areas. (6) Discouragement of nonconforming uses. (7) Enhancement of the appearance of the Village. (8) Protection of the Village's coastal resources and environment.							
Subdivisions	Yes	Code of the Village of Shoreham, Chapter 27, Local Law No. 1 of 2015	Local	Planning Board	No	Yes	-
Comment: In the interest of having orderly growth and a coordinated development of the Village, and the health, safety and welfare of Village residents, the Village Board hereby enacts this Chapter 27, setting forth regulations for the subdivision of land.							
Stormwater Management	Yes	Stormwater Management, Code of the Village of Shoreham, Chapter 25, Local Law No. 1 of 2006	Local and State	Stormwater Management Officer	Yes	Yes	-
Comment: The purpose of this local law is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within the Village. Requirements include: <ul style="list-style-type: none"> Require runoff from impervious surfaces to be contained to the maximum extent practicable; Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01 or as amended or revised; Minimize increases in stormwater runoff from impervious surfaces and land development activities in order to reduce the amount of such water reaching the Sound; Minimize increases in pollution caused by storm water runoff from impervious surfaces and land development activities which would otherwise degrade local water quality; Minimize the total annual volume of stormwater runoff which flows from impervious surfaces and any specific site during and following development to the maximum extent practicable; Reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management practices; Ensure that these management practices are properly maintained. 							
Post-Disaster Recovery	No	-	-	-	No	-	-
Comment:							
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes	Yes	-
Comment:							
Growth Management	No	-	-	-	No	-	-
Comment:							
Site Plan Review	Yes	Local Law 07-1	Local		No	Yes	-
Comment:							
Environmental Protection	Yes	Code of the Village of Shoreham, Chapter 10,	Local	Board of Trustees	Yes	Yes	-



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated?	
						If no - can it be a mitigation action?	
		Local Law No. 3 of 2014					
<p>Comment: The purpose of this Chapter 10, entitled an Environmental Quality Review Law, is to implement the provisions of the New York State Environmental Quality Review Act (Article 8, NY Environmental Conservation Law) and New York State Environmental Quality Review Regulations (6 NYCRR Part 617), thereby incorporating environmental factors into the existing planning and decision-making processes.</p>							
Flood Damage Prevention	Yes	Local Law #1 of 2009 Flood Damage Prevention	State	Building Department	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)	Yes	-
<p>Comment:</p>							
Municipal Separate Storm Sewer System (MS4)	Yes	Code of the Village of Shoreham, Chapter 14 Local Law No. 2 of 2006	Local	Stormwater Management Officer	Yes	Yes	-
<p>Comment: The purpose of this law is to provide for the health, safety, and general welfare of the citizens of the Village of Shoreham through the regulation of non-stormwater discharges to the municipal separate storm sewer system (MS4) to the maximum extent practicable as required by federal and state law. This law establishes methods for controlling the introduction of pollutants into the MS4 in order to comply with requirements of the SPDES General Permit for Municipal Separate Storm Sewer Systems. The law aims to:</p> <ul style="list-style-type: none"> • To meet the requirements of the SPDES General Permit for Stormwater Discharges from MS4s, Permit no. GP-02-02 or as amended or revised; • To regulate the contribution of pollutants to the MS4 since such systems are not designed to accept, process or discharge non-stormwater wastes; • To prohibit Illicit Connections, Activities and Discharges to the MS4; • To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this law; and • To promote public awareness of the hazards involved in the improper discharge of trash, yard waste, lawn chemicals, pet waste, wastewater, grease, oil, petroleum products, cleaning products, paint products, hazardous waste, sediment and other pollutants into the MS4. 							
Emergency Management	No	-	-	-	Yes	-	-
<p>Comment:</p>							
Climate Change	No	-	-	-	Yes	-	-
<p>Comment:</p>							
Disaster Recovery Ordinance	No	-	-	-	No	-	-
<p>Comment:</p>							
Disaster Reconstruction Ordinance	No	-	-	-	No	-	-
<p>Comment:</p>							
Coastal Erosion and Hazard Area	Yes	Local Law #2 of 1989 Coastal Erosion Hazard Area	Local	Administrator	No	Yes	-
<p>Comment: The Village of Shoreham hereby assumes the responsibility and authority to implement and administer a coastal erosion management program within its jurisdiction pursuant to Article 34 of New York State Environmental Conservation Law. The law is adopted in order to:</p> <ol style="list-style-type: none"> Establish standards and procedures for minimizing and preventing damage to structures from coastal flooding and erosion and to protect natural protective features and other natural resources. Regulate in coastal areas subject to coastal flooding and erosion, land use and development activities so as to minimize or 							



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated?	
						If no - can it be a mitigation action?	
<p>prevent damage or destruction to man-made property, natural protective features, other natural resources, and to protect human life.</p> <p>c. Regulate new construction or placement of structures in order to place them a safe distance from areas of active erosion and the impacts of coastal storms to ensure that these structures are not prematurely destroyed or damaged due to improper siting, as well as to prevent damage to natural protective features and other natural resources.</p> <p>d. Restrict public investment in services, facilities, or activities which are likely to encourage new permanent development in erosion hazard areas.</p> <p>e. Regulate the construction of erosion protection structures in coastal areas subject to serious erosion to assure that when the construction of erosion protection structures is justified, their construction and operation will minimize or prevent damage or destruction to man-made property, private and public property, natural protective features, and other natural resources.</p>							
Steep Slopes	Yes	Code of the Village of Shoreham, Chapter 24, Local Law No. 15 of 2016	Local	Planning Board	No	Yes	-
<p>Comment: The purpose of this Chapter 24, entitled a Steep-Slopes Law, is to protect and safeguard scenic landscapes and vegetative features of steeply sloped lands located in the Village and ameliorate the impact of flooding, soil movement, stormwater runoff, sudden slope failure and surface erosion.</p>							
Planning Documents							
Comprehensive Plan	Yes	Village of Shoreham Comprehensive Plan, October 2015	Local	Board of Trustees	No	Yes	-
<p>Comment: The Plan discusses infrastructure, stormwater, environmental issues, beach and bluff erosion, invasive plants and insects, wetlands, zoning, land and use. Relevant goals include:</p> <ul style="list-style-type: none"> • Abate stormwater runoff into the Sound. • Reduce runoff from chemical pesticides and fertilizers. • Reduce the flow volume and pollutant content of road stormwater to the Sound • Work with the Town of Brookhaven to keep the Village recharge basins and drains functional • Monitor and mitigate erosion of the Village beach and bluff areas and encourage residents with property on the bluff to do the same • Monitor and mitigate the damaging effects of invasive plants and insects on the flora and fauna on Village public lands and the safety and health of residents • Maintain Village Parkland such that they are free of invasive plants and that the walking trails are open for safe use and clear of fallen trees and tick-harboring vegetation • Assess the need and desirability of protecting vulnerable trees on Village public lands with a program incorporating State or Federal recommendations • Establish an effective program to keep vines off of utility poles and wires, and maintain the health of trees and other vegetation on Village lands • Encourage State action to reduce the out-of-control deer population and its rising threat to residents' health and safety • Monitor organic lawn care on the Village playgrounds to determine whether it is cost effective in achieving its purpose 							
Capital Improvement Plan	No	-	-	-	No	-	-
<p>Comment:</p>							
Disaster Debris Management Plan	Yes	Suffolk County Multi-Jurisdictional Debris Management Plan	County, Local	Suffolk County FRES	No	Yes	-
<p>Comment: This NYS and FEMA approved comprehensive Multi-Jurisdictional Debris Management Plan was developed through the cooperative efforts of Suffolk County and each of the ten (10) Towns, working together in conjunction with partners from private, state and federal agencies.</p>							
Floodplain or Watershed Plan	No	-	-	-	No	-	-
<p>Comment:</p>							
Stormwater Plan	Yes	Shoreham Village	Local	Stormwater Management	No	Yes	-



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated?	
						If no - can it be a mitigation action?	
		Stormwater Management Program Plan 2018		Officer			
<p>Comment: Goals include: Provide appropriate brochures for the public. Brochures to be kept at the Village Hall; Educate the public, as well as professionals, who appear before the Planning Board for site plan review; Provide information on the Village web site; Record and report observations of identified or suspected illicit discharges; Monitor drainage out-fall on a regular basis; Review site plans for potential illicit discharges; Refer appropriate site plans to the Suffolk County Department of Health Services for compliance with Article 6 of the Sanitary Code; Prepare standard details for stormwater runoff control measures; Provide site specific details to developers and contractors; Require "Third Party" certifications of all developers and contractors; Obtain post construction easements for all projects required to file a Notice of Intent; Monitor post construction activities for all projects required to file a Notice of Intent; Maintain Village vehicles off site; Clean storm drains on a regular basis; Maintain Village property free of junk and debris; No direct discharge of stormwater runoff to surface waters, marshes or wetlands; Site development plans shall include measures such as holding ponds, sedimentation basins, berming, vegetated buffer areas or other means to attenuate the outflow of stormwater pollutants; Any water discharged from control systems shall be of acceptable quality before it is permitted to enter wetlands or surface waters; During construction, all disposal of stormwater runoff shall be handled on site; Soil erosion on site shall be contained by such measures as baling, mulching, use of fibrous cover materials or temporary vegetation; Site designs shall minimize impermeable paving; Site designs shall incorporate the use of natural land features, such as shallow depressions, whenever possible for the on-site collection of stormwater for recharge; Natural vegetation and trees shall be retained to the maximum extent possible in the site design in order to reduce erosion potential and stormwater runoff.</p>							
Open Space Plan	No	-	-	-	Yes	-	-
Comment:							
Urban Water Management Plan	No	-	-	-	No	-	-
Comment:							
Habitat Conservation Plan	No	-	-	-	No	-	-
Comment:							
Economic Development Plan	No	-	-	-	No	-	-
Comment:							
Shoreline Management Plan	No	-	-	-	Yes	-	-
Comment:							
Community Wildfire Protection Plan	No	-	-	-	No	-	-
Comment:							
Forest Management Plan	No	-	-	-	No	-	-
Comment:							
Transportation Plan	No	-	-	-	No	-	-
Comment:							
Agriculture Plan	No	-	-	-	Yes	-	-
Comment:							
Other (this could include a climate action plan, tourism plan, business development plan, etc.)	No	-	-	-	No	-	-



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated?	
						If no - can it be a mitigation action?	
Comment:							
Response/Recovery Planning							
Comprehensive Emergency Management Plan	Yes	Shoreham Village Emergency Plan, December 2015	Local	Emergency Response Organization	Yes	Yes	-
Comment: 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. The Plan defines procedures to be followed to prepare for, respond to and recover from a Major Emergency, defined as an emergency condition affecting all or a significant portion of the Village or its residents.							
Strategic Recovery Planning Report	No	-	-	-	No	-	-
Comment:							
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-	Yes	-	-
Comment:							
Post-Disaster Recovery Plan	No	-	-	-	No	-	-
Comment:							
Continuity of Operations Plan	No	-	-	-	No	-	-
Comment:							
Public Health Plan	No	-	-	-	No	-	-
Comment:							
Other	No	-	-	-	No	-	-
Comment:							

Table 9.14-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Yes, Building Department
Permits are tracked by hazard area. For example, floodplain development permits.	Yes, but no floodplain present other than the beach
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	The Village is Built out

Administrative and Technical Capability

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



Table 9.14-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Planning Board
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Master email list, traffic signs
Maintenance programs to reduce risk	Yes	Tree trimming, stormwater drain cleaning
Mutual aid agreements	Yes	Intermunicipal agreement with Town for snow removal, fire district (recently included)
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Building Inspector, Village Engineer, Parks Commissioner
Engineers or professionals trained in building or infrastructure construction practices	Yes	Building Inspector and Village Engineer
Planners or engineers with an understanding of natural hazards	Yes	Village Engineer
Staff with expertise or training in benefit/cost analysis	Yes	Treasurer
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Village Engineer
Scientist familiar with natural hazards	Yes	Parks Commissioner
NFIP Floodplain Administrator (FPA)	Yes	Building Inspector, Len Emma Village Engineer
Surveyor(s)	Yes	By Contract
Emergency Manager	Yes	Police Commissioner
Grant writer(s)	Yes	Village Engineer and Deputy Clerk
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

Fiscal Capability

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

Table 9.14-6. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No



Financial Resources	Accessible or Eligible to Use (Yes/No)
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Village of Shoreham.

Table 9.14-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	Clerk’s Office
Personnel skilled or trained in website development?	Emergency Management maintains and updates website
Hazard mitigation information available on your website; if yes, describe	Yes, disaster preparedness, power outage and road clearing resources, protection from Zika virus, deer population management, stormwater management
Social media for hazard mitigation education and outreach; if yes, briefly describe.	No
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	Village Association takes on various projects to assist the Village such as beach cleanups and landscaping, senior assistance, educational forums
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	Mayor’s presentations, Forums such as the December 2018 Deer Forum, Tesla Museum, Shoreham Garden Club, Village bulletin boards, and other educational opportunities
Warning systems for hazard events; if yes, briefly describe.	Master email list, traffic signs
Natural disaster/safety programs in place for schools; if yes, briefly describe.	County FRES conducts outreach in schools
Other	None

Community Classifications

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

Table 9.14-8. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	NP	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	NP	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	NP	-	-
NYSDEC Climate Smart Community	NP	-	-
Storm Ready Certification	NP	-	-
Firewise Communities classification	NP	-	-





Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Other	NP	-	-

Note:

- N/A Not applicable
- NP Not participating
- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.14-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Coastal Erosion	High
Cyber Security	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Medium
Expansive Soils	Medium
Extreme Temperature	Medium
Flood	Medium
Groundwater Contamination	Medium
Hurricane	Medium
Infestation and Invasive Species	Medium
Nor’Easter	Medium
Severe Storm	Medium
Severe Winter Storm	Medium
Shallow Groundwater	Medium
Wildfire	Medium

- *High Capacity exists and is in use
- Medium Capacity may exist; but is not used or could use some improvement
- Low Capacity does not exist or could use substantial improvement
- Unsure Not enough information is known to assign a rating

The Village would like to identify additional resources to determine the possible impacts of climate change upon the municipality. The administration is supportive of integrating climate change in policies and actions. The Village has placed rocks along the bluff and added sand to the beach due to erosional issues. Sea level rise contributes to erosion.

9.14.5 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.

NFIP Floodplain Administrator (FPA)

Larry Kogel, Commissioner of Public Works





National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Village of Shoreham.

Table 9.14-10. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties
Village of Shoreham	0	5	\$1,033	0

Source: FEMA 2020

Notes: According to FEMA statistics as of 7/13/2020

RL Repetitive Loss

Flood Vulnerability Summary

According to the National Floodplain map, the Village of Shoreham is located in Zone X, which is minimal flooding potential. The only zone VE is the beach which contains no structures except a wooden handicap beach access ramp. The beach bluff has a minimum elevation of 14 feet. The Village does not maintain a list of past flooding damages as flooding is not a hazard.

Resources

The Village does not have any certified floodplain managers on staff and does not currently provide any NFIP administration services.

Substantial improvements are determined via the Village of Shoreham and NYS Building Codes.

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 Village does not have any outstanding NFIP compliance violations. The date of the most recent Community Assistance Visit (CAV) was March 12, 1998.

Regulatory

The community’s Flood Damage Prevention Ordinance (FDPO), found at Local Law No. 1 of 2009 of the local code, was last updated in 2009. Floodplain management in the Village meets minimum requirements.

Floodplain management is considered by both the zoning board and planning board, but the vast majority of the Village, aside from the beach is located in NFP map zone X (500-year flood level).

Community Rating System

The Village of Shoreham does not participate in the Community Rating System program.

9.14.6 Integration with Other Planning Initiatives



As this HMP update is implemented, the Village of Shoreham will use information from the plan as the best available science and data for natural hazards. The capability assessment presented in this annex identifies codes, plans, and programs that provide opportunities for integration. The Suffolk County and local action plans developed for this HMP update actions related to plan integration, as well as progress on these actions, will be reported through the progress reporting process described in Volume I. New opportunities for integration also will be identified as part of the annual progress report.

Existing Integration

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

- **Parks Department:** The Parks Department works to identify problem trees and contract out for tree trimming. The Parks Department also actively works to identify and remove invasive species.
- **Shoreham Garden Club:** The Garden Club has completed outreach on native species to plant.
- **Rocky Point Fire District:** The Village is now part of the Rocky Point Fire District. There have been many equipment and training upgrades since the 1995 wildfires.
- **Cyber Security:** The Village has brought in an outside firm to address cyber security.

Opportunities for Future Integration

None identified.

9.14.7 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

Evacuation routes, sheltering measures, temporary housing, and permanent housing must all be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

Evacuation Routes

The Village maintains and updates the Emergency Preparedness Registry that identifies residents who require assistance evacuating. Evacuation notifications are transmitted through a County-wide system. In addition, the Suffolk County Department of Transportation designates evacuation routes that are made available to the Village and public.

Sheltering

Shelters are established with the coordination of the American Red Cross (ARC) as the primary agency for ESF6. Suffolk County has a non-binding memorandum of understanding with the ARC for all sheltering needs.

Temporary Housing

Jurisdictions must identify sites for the placement of temporary housing units to house residents displaced by a disaster.



The Village of Shoreham has identified the Village Hall parking lot at 80 Woodville Road and the Village baseball field on the east side of Woodville Road as locations that could be used for the placement of temporary housing. The Village Hall parking lot is approximately ½ acre while the baseball field has roughly 2 acres of space.

Permanent Housing

Structures located in the SFHA may need to be relocated, or new properties must be built once severely damaged properties are demolished. Jurisdictions must identify all suitable sites currently owned by the jurisdiction, and potential sites under private ownership that meet applicable local zoning requirements and floodplain laws.

The Village of Shoreham has not identified suitable locations for permanent housing.

9.14.8 Hazard Event History Specific to the Village of Shoreham

Suffolk County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) 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 Village of Shoreham’s history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Suffolk County. Table 9.14-11 provides details regarding municipal-specific loss and damages the Village of Shoreham experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.14-11. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
February 8 – 9, 2013	Severe Winter Storm and Snowstorm (FEMA DR-4111)	Yes	Low pressure that formed along the northern Gulf coast by the morning of Thursday, February 7, 2013 moved northeast to near Cape Hatteras by the morning of Friday, February 8, 2013 . The low then rapidly intensified while moving northeast to a position east of Cape Cod by the morning of Saturday, February 9, 2013, producing very heavy snowfall and blizzard conditions across central and eastern Long Island on February 8th and 9th, and winter storm conditions across the rest of southeast New York.	Although the County was impacted, the Village of Shoreham did not report any damages.
March 14 – 15, 2017	Severe Winter Storm and Snowstorm (FEMA DR-4322)	Yes	On Tuesday, March 14th, rapidly deepening low pressure tracked up the eastern seaboard resulting in damaging winds in Suffolk County.	Several trees came down in the Village. The only beach access road within the community was impassable. This marine access road is the only access road for four miles. Contract costs totaled \$132,500.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses

Notes:

FEMA Federal Emergency Management Agency

DR Major Disaster Declaration (FEMA)

9.14.9 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes critical facility and community lifeline flood exposure, and the hazards of greatest concern and risk to the Village of Shoreham. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.

A gradient of certainty was developed to summarize the confidence level regarding the input used to populate the hazard ranking. A certainty factor of high, medium or low was selected and assigned to each hazard to provide a level of transparency and create increased understanding of the data used to support the resulting ranking. The following scale was used to assign a certainty factor to each hazard:

- High—Defined scenario/event to evaluate; probability calculated; evidenced-based/quantitative assessment to estimate potential impacts through hazard modeling.
- Moderate—Defined scenario/event or only a hazard area to evaluate; estimated probability; combination of quantitative (exposure analysis, no hazard modeling) and qualitative data to estimate potential impacts.
- Low—Scenario or hazard area is undefined; there is a degree of uncertainty regarding event probability; majority of potential impacts are qualitative.

Critical Facilities

New York Department of Environmental Conservation (DEC) Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a Special Flood Hazard Area (SFHA) unless constructed according to specific mitigation specifications, including being raised 2’ above the Base Flood Elevation (BFE). This statute is outlined at <http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, the State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 500-year flood event, or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities and community lifelines located in the 1-percent and 0.2-percent floodplain. It also summarizes if the facility is already mitigated in compliance with NYS standards (i.e., to the 0.2-percent annual chance event or worse-case scenario), or if a new mitigation action is proposed in the plan update.

Table 9.14-12. Potential Flood Losses to Critical Facilities

Name	Type	Exposure			Complies with NYS Standards	Addressed by Proposed Action
		1% Event		0.2% Event		
		A-Zone	V-Zone			
None identified at this time						

Source: Suffolk County 2020; FEMA 2009





Notes: x = Facility is located in the floodplain boundary. *Community Lifeline

Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Suffolk County as a whole. Therefore, each municipality ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Village of Shoreham. The Village of Shoreham has reviewed the county hazard risk/vulnerability risk ranking table and provided input to its individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Village of Shoreham indicated the following:

- The Village agreed with the hazard ranking for disease outbreak as a medium, noting the coronavirus outbreak and a rise in the spread of tick-borne disease.
- The Village agreed with the remainder of the calculated hazard rankings.

Table 9.14-13. Hazard Ranking

Coastal Erosion	Cyber Security	Disease Outbreak	Drought	Earthquake	Expansive Soils
High	Medium	Medium	Low	Low	Low
Extreme Temperature	Flood	Groundwater Contamination	Hurricane	Infestation and Invasive Species	Nor'Easter
Medium	Medium	Medium	High	Medium	High
	Severe Storm	Severe Winter Storm	Shallow Groundwater	Wildfire	
	Medium	Medium	Low	Medium	

Identified Issues

The municipality has identified the following vulnerabilities within their community:

- Woodville Road is in a valley and side streets are funneled onto the Road. After large rainfall events, bacterial issues in the Sound result in beach closures and degraded water quality. This can also negatively impact local wetlands leading to increased erosion
- Beach erosion is a recurring issue on the Village Beach. During Sandy, erosion resulted in the loss of the beach access stairs. These stairs were replaced. The beach has an access road for emergency vehicles that ends at the bottom of the bluff which is currently protected by rip rap. However, damages do occur regularly to the access road. Big storms results in the loss of beach and the Village has spent money to bring in sand.



9.14.10 Mitigation Strategy and Prioritization

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

Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2014 HMP. Actions that are carried forward as part of this plan update are included in the updated mitigation strategy table (Table 9.14-15). 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.

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Table 9.14-14. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2020 HMP or Discontinue 2. If including action in the 2020 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	
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.	Flood, Coastal Erosion, Hurricane, Nor' Easter, Severe Storm, Wildfire, Winter Storm	Village of Shoreham with NYSOEM, FEMA support		Complete; The Village does not have any repetitive loss properties identified.	Cost		1. Discontinue 2. 3. Complete
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.	Flooding Nor'easter Severe Storms Hurricane Coastal Erosion	Village of Shoreham		In Progress; Phase 1 complete	Cost		1. Include in 2020 HMP 2. 3.
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.	Flooding Nor'easter Severe Storms Hurricane Coastal Erosion	Village of Shoreham		In Progress; Phase 1 complete	Cost		1. Include in 2020 HMP 2. 3.
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.	Flooding Nor'easter Severe Storms Hurricane Coastal Erosion	Village of Shoreham		Complete	Cost		1. Discontinue 2. 3. Complete
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.	Flooding Nor'easter Severe Storms Hurricane Coastal	Village of Shoreham		In Progress	Cost		1. Include in 2020 HMP 2. 3.



		Erosion				Success		
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.	All	Village of Shoreham		Complete; Propane generator was installed at Village Hall post-Sandy. New roof was installed.	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Complete
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.	Earthquake, Flood, Groundwater Contam, Hurricane, Nor'Easter, Severe Storm, Shallow GW, Wildfire, Winter Storm	Village of Shoreham		Complete; Propane generator was installed at Village Hall post-Sandy. New roof was installed.	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Complete
VS-8	Assess and prioritize options to enhance the Village's drainage system, and implement as funding becomes available.	Flood, Hurricane, Nor'Easter, Severe Storm, Shallow GW, Winter Storm	Village of Shoreham		In Progress	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Repetitive action
VS-9	Sandy HMGP LOI #2166 - install a backup power generator at Village Hall.	Earthquake, Flood, Hurricane, Nor'Easter, Severe Storm, Wildfire, Winter Storm	Village of Shoreham, Cathy Donahue-Spier, Clerk/Treasurer		Complete; Propane generator was installed.	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Complete
VS-10 (former VS-12)	Enhance tree trimming and invasive species program and encourage residents to do likewise.	Nor'easter Severe Storms Hurricane Infestation	Village of Shoreham		Ongoing Capability	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided;		



						Evidence of Success		3. Ongoing Capability
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	Flood, Nor'Easter, Hurricane, Severe Storm	Village of Shoreham NFIP Floodplain Administrator		Ongoing Capability	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Ongoing Capability
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.	Flooding Nor'easter Severe Storms Hurricane Coastal Erosion	Village of Shoreham		In Progress	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Repetitive action
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"> Mitigation Education for Natural Disasters (natural hazard awareness and personal scale risk reduction/mitigation on public education and outreach program) Build Local Floodplain Management and Disaster Recovery Capabilities (enhanced floodplain management, and post-disaster assessment and recovery capabilities) County-Wide Debris Management Plan 	All Hazards	Suffolk County, as supported by relevant local department leads		Ongoing Capability	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Ongoing Capability



	<ul style="list-style-type: none"> Jurisdictional Knowledge of Mitigation Needs of Property Owners (improved understanding of damages and mitigation interest/activity of private property owners) 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) 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). 													
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.	Severe Storm; Severe Winter Storm; Hurricane; Nor'Easter	PSEG, County		Ongoing Capability	<table border="1"> <tr> <td>Cost</td> <td></td> </tr> <tr> <td>Level of Protection</td> <td></td> </tr> <tr> <td>Damages Avoided; Evidence of Success</td> <td></td> </tr> </table>	Cost		Level of Protection		Damages Avoided; Evidence of Success			<ol style="list-style-type: none"> Discontinue Ongoing Capability
Cost														
Level of Protection														
Damages Avoided; Evidence of Success														



Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Village of Shoreham has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2020 HMP:

- A new roof was installed at Village Hall.
- Beach rock revetments have been installed to combat erosion.
- Rain Garden: Grant was received from the County and garden was completed.
- Sumps: Worked with town to clean out sumps to increase drainage.
- Bulletin Board installed at Tennis Court and parking lot outside Village Hall. 5 other bulletin boards throughout the Village.
- Put in two emergency landline phones (designed for marine environment). One at the children's playground and one at the beach.
- Propane generator was installed at Village Hall post-Sandy.

Proposed Hazard Mitigation Initiatives for the HMP Update

The Village of Shoreham participated in a mitigation action workshop in June 2020 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

Table 9.14-16 summarizes the comprehensive-range of specific mitigation initiatives the Village of Shoreham would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6 (Mitigation Strategy), fourteen criteria are used to evaluate and prioritize each proposed mitigation action. A numeric factor is assigned (-1, 0, or 1) to each criterion to provide a relative indication of the opportunities and constraints of each action. A numerical sum of the input provides the basis of the prioritization of actions wherein each action is assigned a category of Low, Medium, or High to indicate an implementation hierarchy. A High priority action indicates the jurisdiction will prioritize its implementation and apply for funding, if needed, as opportunities become available during the plan period of performance. This does not prevent the jurisdiction from implementing other ranked actions; however, this provides a snapshot of implementation priority at the time of this plan update.

Table 9.14-16 provides a summary of the evaluation and prioritization for each proposed mitigation initiative. Refer to the action worksheets at the end of this annex for more details on the high-ranked hazards identified first for implementation.



Table 9.14-15. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2020-Shoreham-001	Coastal Erosion Monitoring Program	1, 2, 3, 5	Coastal Erosion, Hurricane, Nor'Easter	<p>Problem: Beach erosion is a recurring issue on the Village Beach. During Sandy, erosion resulted in the loss of the beach access stairs. These stairs were replaced. The beach has an access road for emergency vehicles that ends at the bottom of the bluff which is currently protected by rip rap. However, damages do occur regularly to the access road. Big storms results in the loss of beach. Further hardening of the shoreline is not possible due to NYS DEC restrictions and renourishment is the only viable option. The Village has spent money to bring in sand but has not been able to be reimbursed for losses.</p> <p>Solution: The Village will participate in the Countywide coastal erosion monitoring program being established by the Soil and Water Conservation District to monitor the beaches for shoreline retreat and volume loss. After large erosion events, the Village will use this data to apply for funding support.</p>	No	None	1 year, Ongoing once established	SCWA, Village Administration support	No cost to Village	Data available to support grants, reporting, and decision making.	County SCWA	High	LPR	PR
2020-Shoreham-002	Stormwater Upgrades 1	1, 2, 3, 5, 7	Flood, Severe Storm, Coastal Erosion	<p>Problem: Woodville Road is in a valley and side streets are funneled onto the Road. After large rainfall events, bacterial issues in the Sound result in beach closures and degraded water quality. This can also negatively impact local wetlands leading to increased erosion.</p> <p>Solution: Install subsurface stormwater infiltration system to capture runoff from the 1.4" water</p>	No	None	Within 5 years	Engineer, DPW	High	Decrease in flooding, increase in stormwater quality, increase in groundwater recharge	HMGP, PDM, BRIC, CDBG, Village budget	High	SIP	SP





Table 9.14-15. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2020-Shoreham-003	Stormwater Upgrades 2	1, 2, 3, 5, 7	Flood, Severe Storm, Coastal Erosion	<p>quality rainfall. 10' diameter perforated metal pipes will be surrounded by a stone envelope below ground. Footprint of the system will be approximately 125' by 70' and based on well draining soils in this area.</p> <p>Problem: Woodville Road is in a valley and side streets are funneled onto the Road. After large rainfall events, bacterial issues in the Sound result in beach closures and degraded water quality. This can also negatively impact local wetlands leading to increased erosion.</p> <p>Solution: The Village will install a grass infiltration swale with leaching basins at the southeast corner of Woodville Road and Gridley Road.</p>	No	None	Within 2 years	Engineer, DPW	Medium	Reduction in stormwater flooding, increased drainage	HMGP, PDM, BRIC, CDBG, Village budget	High	SIP	SP
2020-Shoreham-004	Roadway upgrades for stormwater and winter storm response improvements	1, 2, 3, 5, 7	Flood, Severe Storm, Severe Winter Storm	<p>Problem: Roadways in the Village need improvements to aid in proper stormwater management and provide for ability to efficiently clear snow during winter storm events.</p> <p>Solution: Install curbing and other green infrastructure techniques as needed to control stormwater flooding and repave roadways as needed for proper runoff and increased snow plowing efficiency.</p>	No	None	Within 5 years	Engineer, DPW	\$250,000	Increased stormwater management capacity and efficiency of plowing.	CDBG, BRIC, Village budget	High	SIP	SP, PP

Notes:

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

Acronyms and Abbreviations:

CAV Community Assistance Visit

Potential FEMA HMA Funding Sources:

FMA Flood Mitigation Assistance Grant Program

Timeline:

The time required for completion of the project upon implementation





CRS	Community Rating System	HMGP	Hazard Mitigation Grant Program
DPW	Department of Public Works	PDM	Pre-Disaster Mitigation Grant Program
EHP	Environmental Planning and Historic Preservation		
FEMA	Federal Emergency Management Agency		
FPA	Floodplain Administrator		
HMA	Hazard Mitigation Assistance		
N/A	Not applicable		
NFIP	National Flood Insurance Program		
OEM	Office of Emergency Management		

Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

Critical Facility:

Yes Critical Facility located in 1% floodplain

Mitigation Category:

- Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP) - These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP) – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities

CRS Category:

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

Critical Facility:

Yes Critical Facility located in 1% floodplain





Table 9.14-16. Summary of Prioritization of Actions

Project Number	Project Name	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
2020-Shoreham-001	Coastal Erosion Monitoring Program	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2020-Shoreham-002	Stormwater Upgrades 1	0	1	1	1	1	1	0	1	1	1	1	0	1	1	11	High
2020-Shoreham-003	Stormwater Upgrades 2	0	1	1	1	1	1	0	1	1	1	1	1	1	1	12	High
2020-Shoreham-004	Roadway upgrades for stormwater and winter storm response improvements	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).

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9.14.11 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.14-17. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Coastal Erosion	2020-Shoreham-001	2020-Shoreham-002, 2020-Shoreham-003			2020-Shoreham-001				2020-Shoreham-002, 2020-Shoreham-003	
Cyber Security										
Disease Outbreak										
Drought										
Earthquake										
Expansive Soils										
Extreme Temperature										
Flood		2020-Shoreham-002, 2020-Shoreham-003, 2020-Shoreham-04				2020-Shoreham-04			2020-Shoreham-002, 2020-Shoreham-003, 2020-Shoreham-04	
Groundwater Contamination										
Hurricane	2020-Shoreham-001				2020-Shoreham-001					
Infestation and Invasive Species										
Nor'Easter	2020-Shoreham-001				2020-Shoreham-001					
Severe Storm		2020-Shoreham-002, 2020-Shoreham-003, 2020-Shoreham-04				2020-Shoreham-04			2020-Shoreham-002, 2020-Shoreham-003, 2020-Shoreham-04	
Severe Winter Storm		2020-Shoreham-04				2020-Shoreham-04			2020-Shoreham-04	
Shallow Groundwater										
Wildfire										

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.14.12 Staff and Local Stakeholder Involvement in Annex Development

The Village of Shoreham followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Village



departments, including: the Board of Trustees. The Board of Trustees represented the community on the Suffolk County Hazard Mitigation Plan Planning Partnership, and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes who participated and in what capacity. Additional documentation on the municipality’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

Table 9.14-18. Contributors to the Annex

Name	Title/Entity	Method of Participation
Ed Brickley	Trustee	Primary Point of Contact, attended plan participant meetings, provided impact information, contributed to hazard mitigation strategy.
Larry Kogel	Commissioner of Public Works	NFIP Floodplain Administrator, attended plan participant meetings, provided impact information, contributed to hazard mitigation strategy.

9.14.13 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Village of Shoreham that illustrate the probable areas that may be 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. The 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.



Figure 9.14-1. Village of Shoreham Hazard Area Extent and Location Map 1

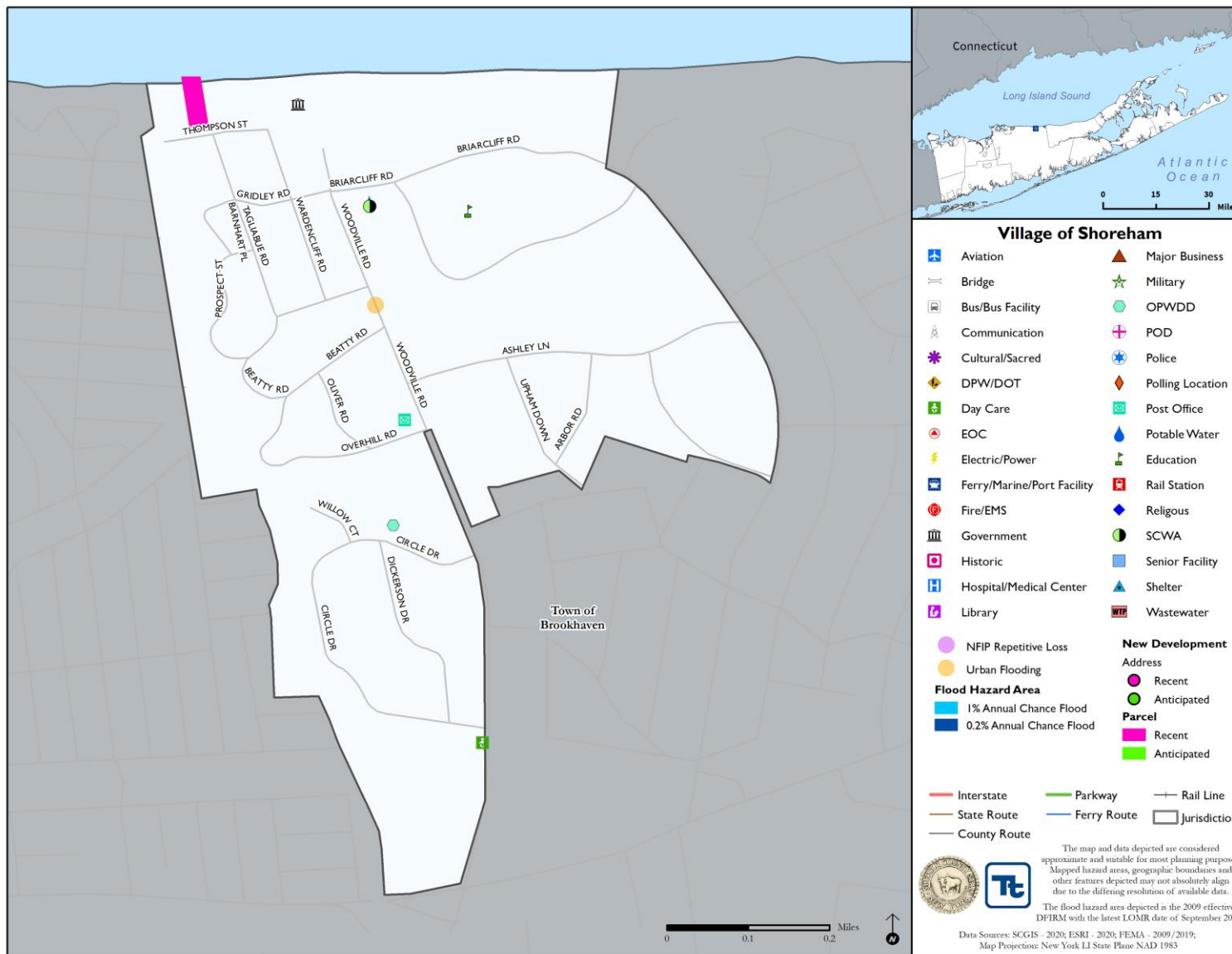




Figure 9.14-2. Village of Shoreham Hazard Area Extent and Location Map 2

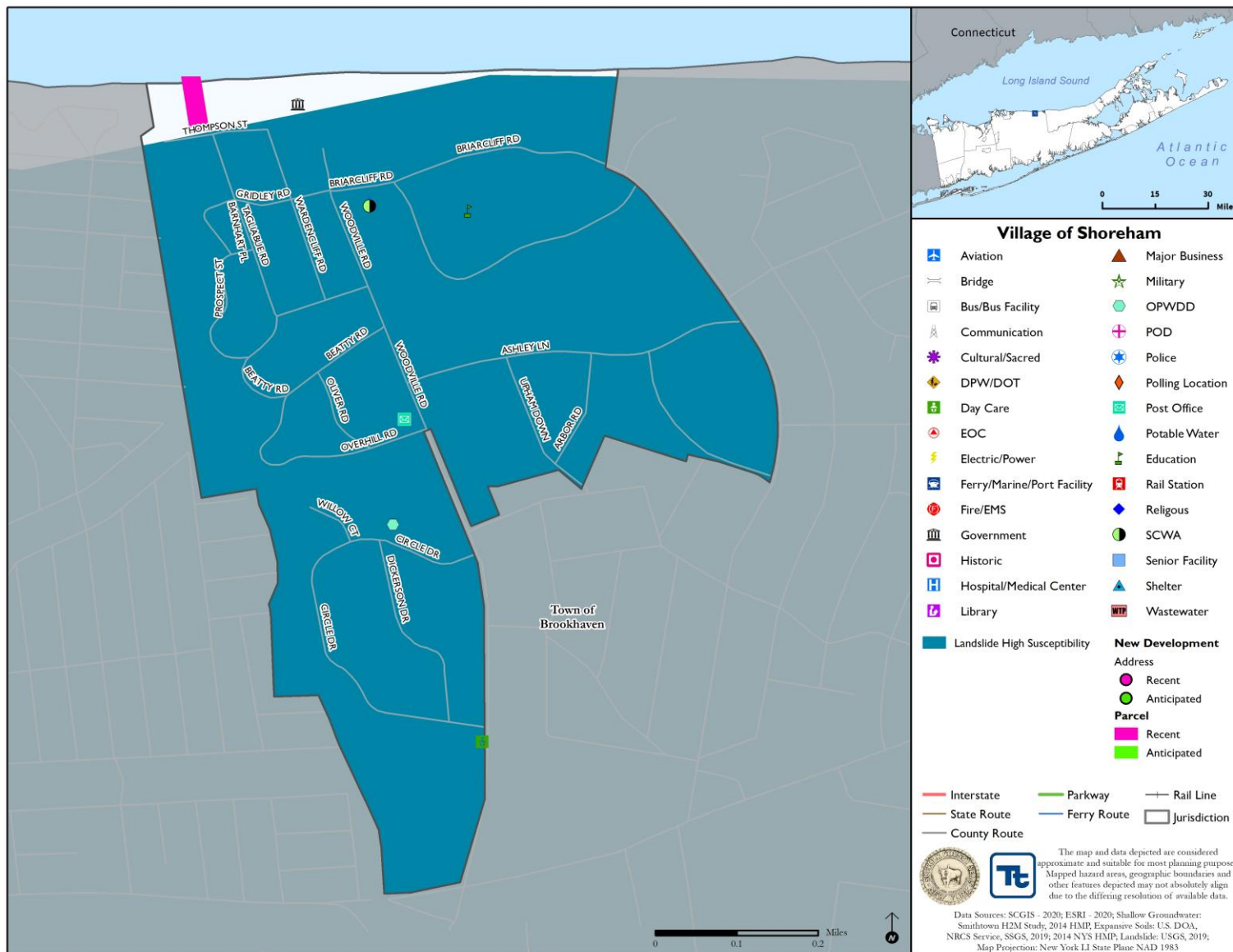




Figure 9.14-3. Village of Shoreham Hazard Area Extent and Location Map 3

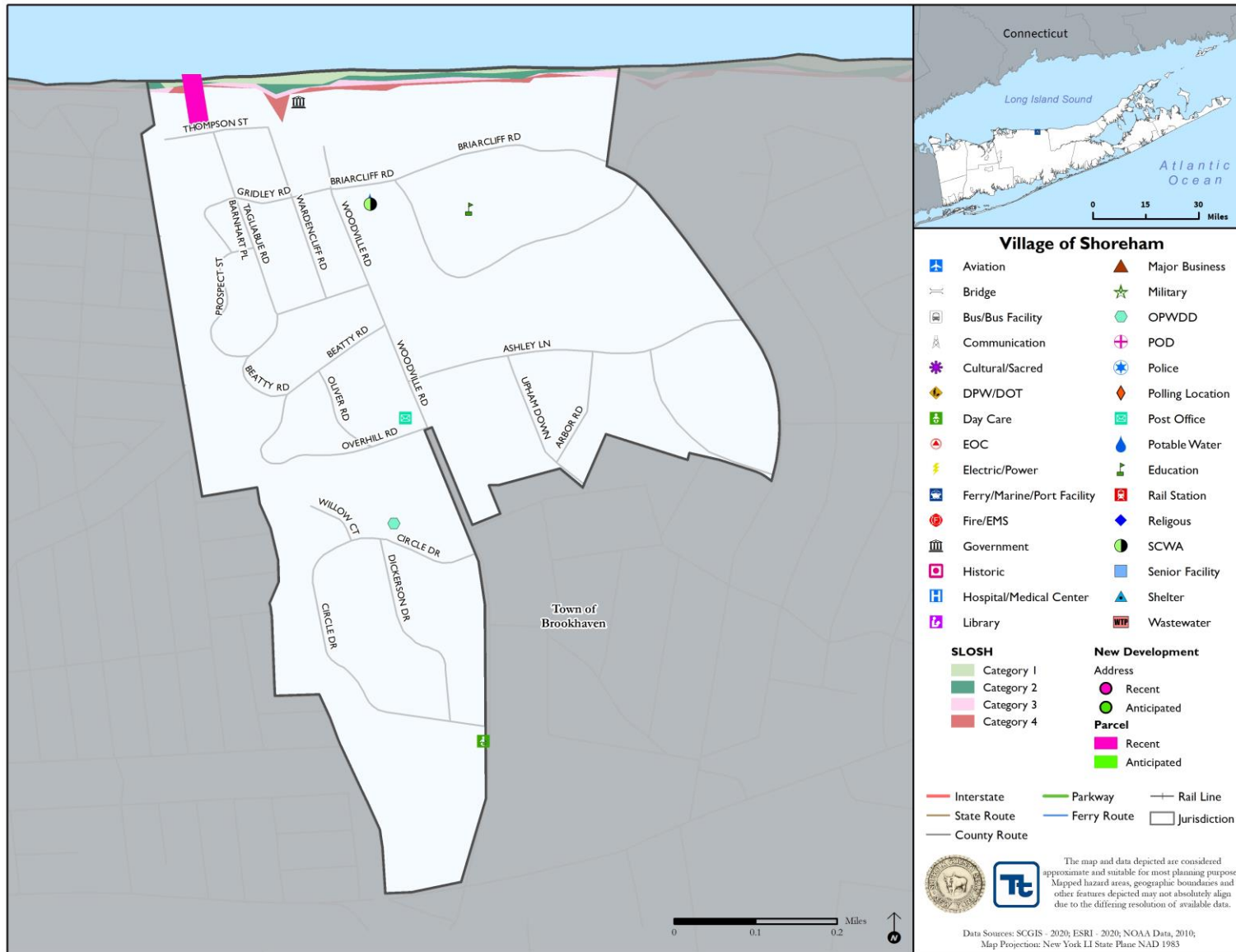




Figure 9.14-4. Village of Shoreham Hazard Area Extent and Location Map 4

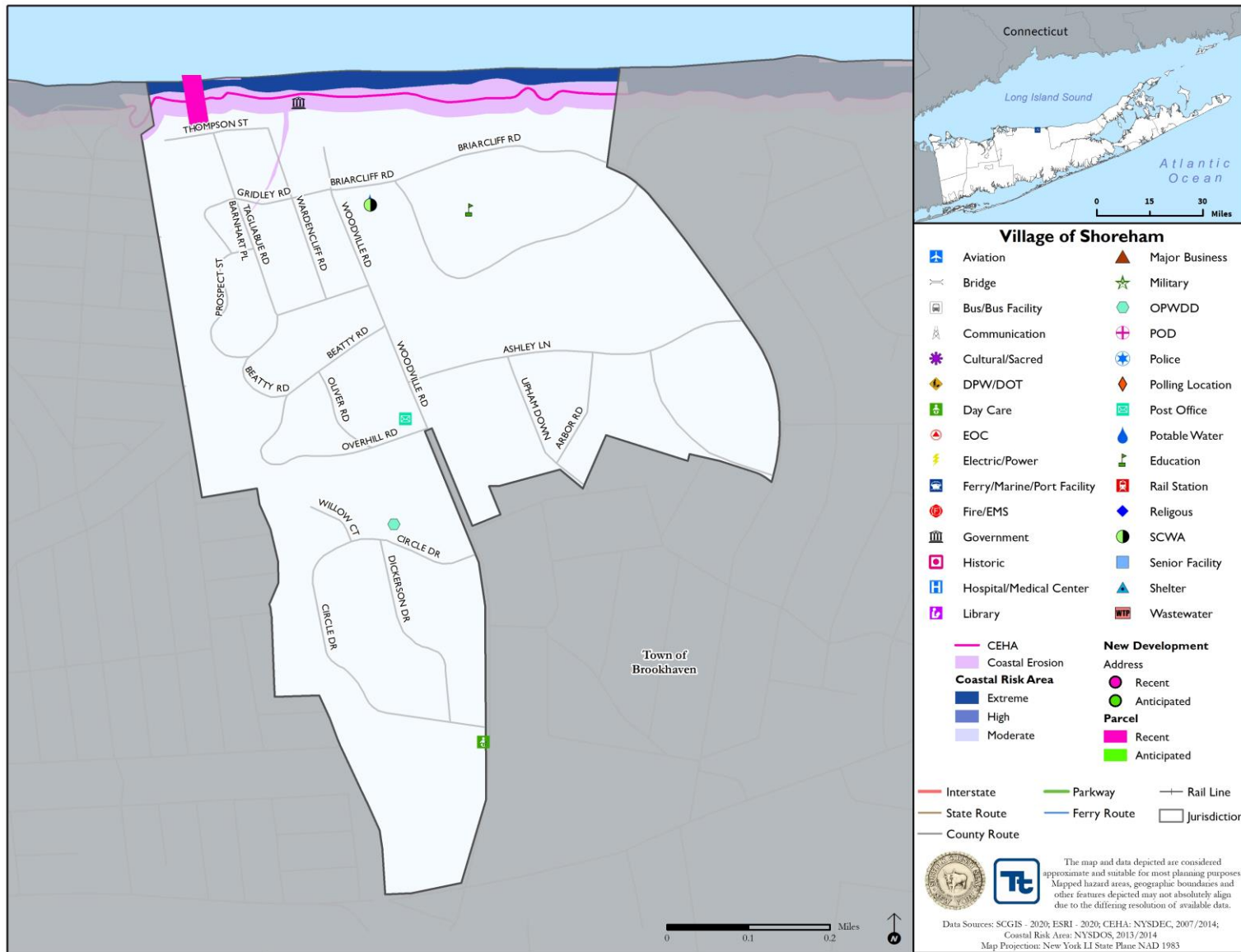




Figure 9.14-5. Village of Shoreham Hazard Area Extent and Location Map 5

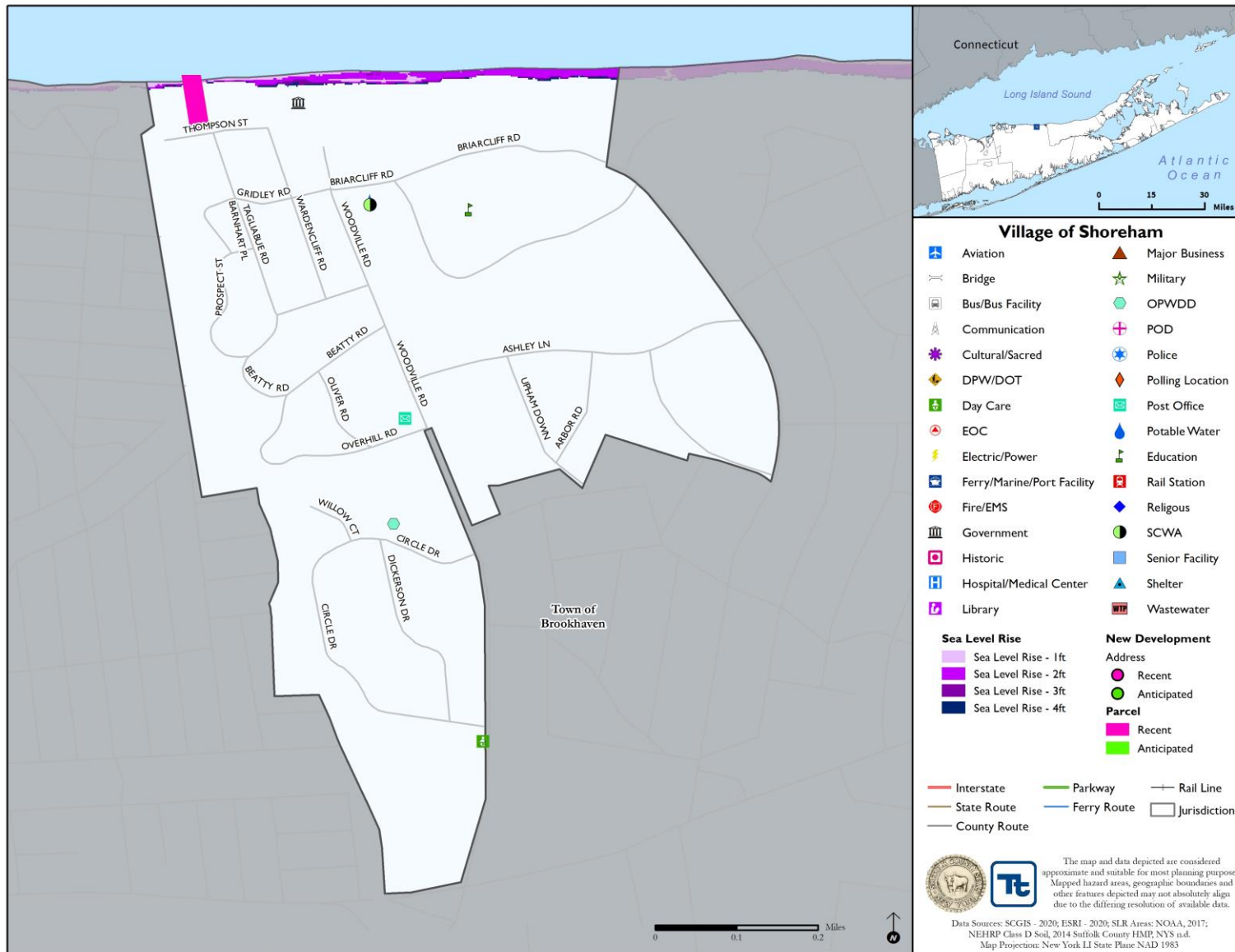
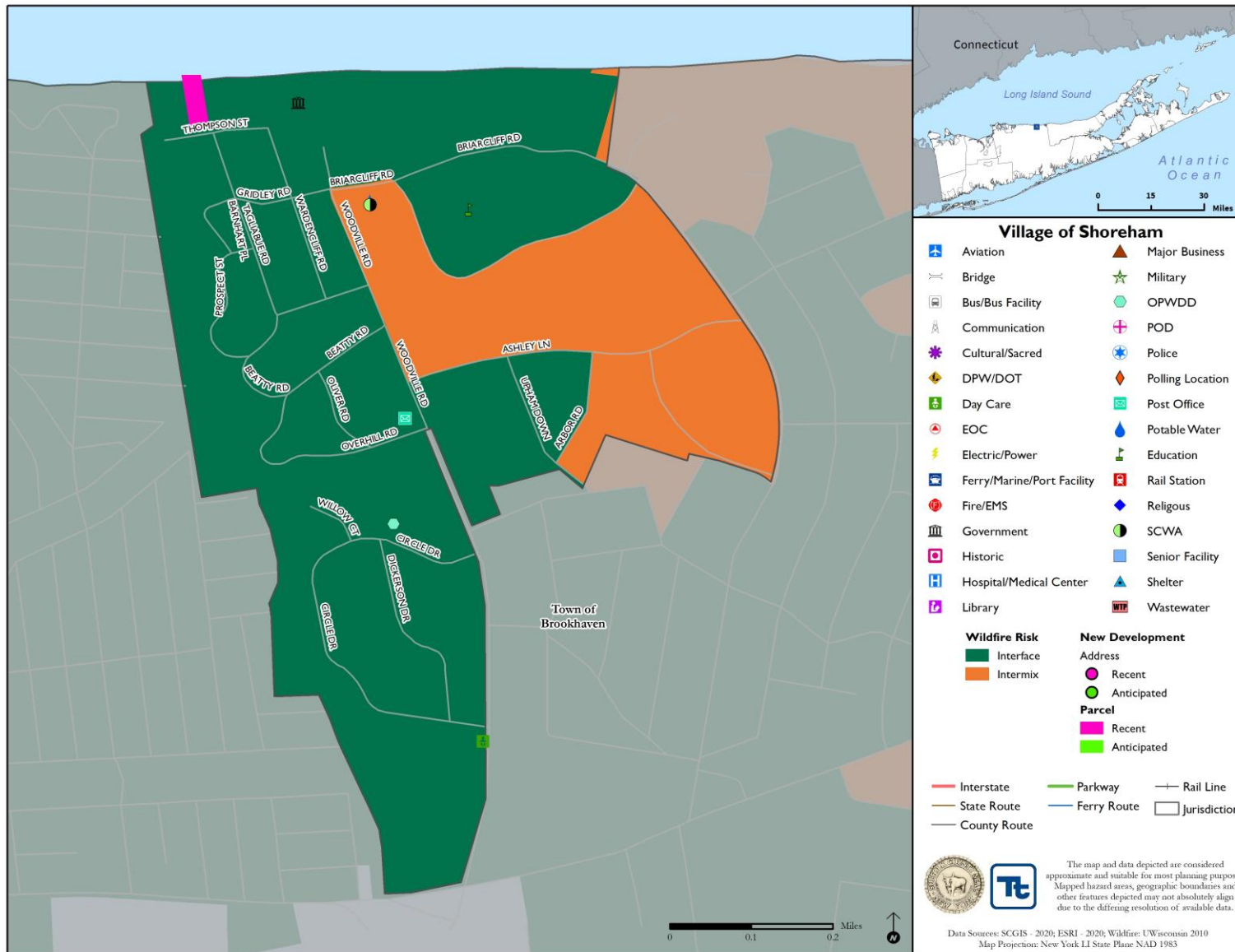




Figure 9.14-6. Village of Shoreham Hazard Area Extent and Location Map 6





Action Worksheet			
Project Name:	Stormwater Upgrades 1		
Project Number:	2020-Shoreham-002		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm, Coastal Erosion		
Description of the Problem:	Woodville Road is in a valley and side streets are funneled onto the Road. After large rainfall events, bacterial issues in the Sound result in beach closures and degraded water quality. This can also negatively impact local wetlands leading to increased erosion.		
Action or Project Intended for Implementation			
Description of the Solution:	Install subsurface stormwater infiltration system to capture runoff from the 1.4" water quality rainfall. 10' diameter perforated metal pipes will be surrounded by a stone envelope below ground. Footprint of the system will be approximately 125' by 70' and based on well draining soils in this area. Based on an annual rainfall of 47 inches per year, it is estimated that approximately 17 million gallons of stormwater runoff to the Long Island Sound will be eliminated on an annual basis.		
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	1.4" rainfall event captured	Estimated Benefits (losses avoided):	
Useful Life:	100 years	Goals Met:	1, 2, 3, 5, 7
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:		Potential Funding Sources:	HMGP, PDM, BRIC, CDBG, Village budget
Responsible Organization:	Engineer, DPW	Local Planning Mechanisms to be Used in Implementation if any:	Hazard mitigation, Stormwater management
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Install retention ponds	N/A	No room currently exists
	Buyout homes along roadway for stormwater retention	\$millions	Costly, negative social impacts.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Evaluation and Prioritization		
Project Name:	Stormwater Upgrades 1	
Project Number:	2020-Shoreham-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Reduces flood risk
Cost-Effectiveness	1	
Technical	1	
Political	1	There is political support for the project
Legal	1	The Village has the legal authority to complete the project
Fiscal	0	Project requires funding support
Environmental	1	Project will reduce runoff that leads to environmental damages
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Storm, Coastal Erosion
Timeline	0	Within 5 years
Agency Champion	1	Engineer
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	



Aerial showing location of proposed infiltration/rain harvesting system on the Village's Ball Field. Design to capture rainwater for the purpose of irrigating the ball field.



Action Worksheet			
Project Name:	Stormwater Upgrades 2		
Project Number:	2020-Shoreham-003		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm, Coastal Erosion		
Description of the Problem:	Woodville Road is in a valley and side streets are funneled onto the Road. After large rainfall events, bacterial issues in the Sound result in beach closures and degraded water quality. This can also negatively impact local wetlands leading to increased erosion.		
Action or Project Intended for Implementation			
Description of the Solution:	The Village will install a grass infiltration swale with leaching basins at the southeast corner of Woodville Road and Gridley Road.		
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	Increased drainage	Estimated Benefits (losses avoided):	Reduction in stormwater flooding
Useful Life:	50 years	Goals Met:	1, 2, 3, 5, 7
Estimated Cost:	Medium	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 1 year
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	HMGP, PDM, BRIC, CDBG, Village budget
Responsible Organization:	Engineer, DPW	Local Planning Mechanisms to be Used in Implementation if any:	Hazard mitigation, Stormwater management
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Close roadway	N/A	Would result in lost access for residents
	Buyout homes and close roadway	\$ millions	Negative social impacts, costly.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Evaluation and Prioritization		
Project Name:	Stormwater Upgrades 2	
Project Number:	2020-Shoreham-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Reduces flood risk
Cost-Effectiveness	1	
Technical	1	
Political	1	There is political support for the project
Legal	1	The Village has the legal authority to complete the project
Fiscal	0	Project requires funding support
Environmental	1	Project will reduce runoff that leads to environmental damages
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Storm, Coastal Erosion
Timeline	1	Within 1 year
Agency Champion	1	Engineer
Other Community Objectives	1	
Total	13	
Priority (High/Med/Low)	High	

