



## 9.11 Village of Patchogue

This section presents the jurisdictional annex for the Village of Patchogue. 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 Village of Patchogue and who in the Village participated in the planning process; an assessment of the Village of Patchogue’s risk and vulnerability; the different capabilities utilized in the Village ; and an action plan that will be implemented to achieve a more resilient community.

### 9.11.1 Hazard Mitigation Planning Team

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

**Table 9.11-1. Hazard Mitigation Planning Team**

Primary Point of Contact	Alternate Point of Contact
Name/Title: Marian H. Russo, CBA Executive Director Address: 14 Baker Street Patchogue, NY Phone Number: 631-475-4300 x126 Email: mrusso@patchoguevillage.org	Name/Title: Paul Poutieri, Mayor Address: 14 Baker Street Patchogue, NY Phone Number: 631-475-4300 Email: ppoutieri@pathoguevillage.org
NFIP Floodplain Administrator	
Name/Title: Peter Sarich, Senior Building Inspector Address: 14 Baker Street Patchogue, NY Phone Number: 631-475-4300 x137 Email: psarich@patchoguevillage.org	

### 9.11.2 Municipal Profile

Patchogue’s recorded history dates from 1664. European settlers were drawn to the area because of waterpower generated by the flowing streams and the adjacent port which provided safe harbor. Starting in the 1750’s mills were constructed on Patchogue’s waterways, and by the mid-1800’s, Patchogue was a thriving seaport with oyster, fishing, and shipbuilding industries and mills on both the Patchogue River and the Great South Bay. Patchogue was a U.S. port of entry until 1922. The Long Island Rail Road arrived in 1869 and brought thousands of summer visitors from New York City. By the end of the 19<sup>th</sup> century Patchogue had over 1,000 hotels rooms. With the extension of the Long Island Rail Road to Montauk and the advent of automobiles, the tourism industry declined. The Village then became one of the first major commercial centers in Suffolk County and remained a shopping destination for many years. The downtown declined with the establishment of malls and box stores. The Village has become an entertainment center starting with the renovation of the Patchogue Theatre for the Performing Arts in 1997 and continuing with the opening of many restaurants, music venues, and bars. The industrial uses along the River have diminished and the River is now a recreation area with marinas and restaurants with attendant bars and entertainment.

The Village of Patchogue is a residential community that encompasses an area of about 2.5 mi<sup>2</sup> (6.5 km<sup>2</sup>) (with .3 mi<sup>2</sup> under water) on the south shore of eastern Long Island in the Town of Brookhaven, Suffolk County, N.Y. The village lies along Great South Bay and is bordered by Tuthills Creek to the west, Bay Avenue to the east, and N.Y. State Route 27 (Sunrise Highway) to the north.



The Village of Patchogue was incorporated in 1893 and is governed by a Mayor and six Trustees serving four year terms.

According to the U.S. Census, the 2010 population for the Village of Patchogue was 11,798. The estimated 2017 population was 12,398, a 5.1 percent increase from the 2010 Census. Data from the 2017 U.S. Census American Community Survey indicate that 6.0 percent of the population is 5 years of age or younger and 11.0 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.

### 9.11.3 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 9.11-2 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 9.11-2. 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	4	3	2	1	7	3	1	0	1	0	9	0
Multi-Family	0	0	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	3	0	2	0	0	0	0	0
<b>Total Permits Issued</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>10</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>0</b>
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												
Riverwalk	Res.	92/Townhouses		Rosebud court & Millie Ct		None		Condos/completed				
Pinewood Terrace	Res.	8/Townhouses		Terrace Lane		None		Condos/completed				
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years												
Cornerstone	Res.	50 units/1 structure		Mulford Street		None		Applications to planning and zoning board submitted.				

SFHA Special Flood Hazard Area (1% flood event)

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

### 9.11.4 Capability Assessment

The Village of Patchogue 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 9.11.4). The Village of Patchogue 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 Patchogue and where hazard mitigation has been integrated.

**Table 9.11-3. 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?	
						Yes	If no - can it be a mitigation action?
<b>Codes, Ordinances, &amp; Requirements</b>							
Building Code	Yes	Code for the Village of Patchogue §205-1	State	Building and Housing	Yes	Yes	-
Comment: It is the purpose of this chapter to recognize and adopt the New York State Uniform Fire Prevention and Building Code, and all standards incorporated by reference therein, as the Building Code for the Village of Patchogue.							
Zoning Code	Yes	Code of the Village of Patchogue, Chapter 435	Local	Planning Board	No	Yes	-
Comment: In interpreting and applying the provisions of this chapter, the minimum requirements for the promotion of the health, safety, morals or the general welfare of the Village shall be held.							
Subdivisions	Yes	Code of the Village of Patchogue, Chapter 377	Local	Planning Board	No	Yes	-
Comment: No building permit in connection with any lot which is the result of a subdivision as defined above shall be granted unless and until said subdivision has received the approval of the Village Planning Board pursuant to regulations referred in this Chapter, including the preparation of a stormwater pollution prevention plan consistent with the requirements of this Code.							
Stormwater Management	Yes	Code of the Village of Patchogue, Chapters 370, 369 (1/26/2009)	Local	Board of Trustees	Yes	Yes	-
Comment: The purpose of this Chapter is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction. The goal of these requirements is to reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management practices and to ensure that these management practices are properly maintained.							



	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?	
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	Yes	Village Code §435-82 (12/23/1974)	Local	Planning Board	No	Yes	-
Comment:							
Site Plan Review	Yes	Code of the Village of Patchogue Chapter 435, Article XIII, 82-83	Local	Planning Board	No	Yes	-
Comment: Site development plan approval by the Planning Board shall be required for certain secondary actions, the construction of one- and two-family homes and major actions. It is the intent of such review and approval to result in minimal degradation of unique or irreplaceable land types and in minimal adverse impact upon the critical areas such as streams, wetlands, areas of aquifer recharge and discharge, highly erodible soils, areas with a high-water table, mature stands of vegetation and extraordinary wildlife nesting, feeding or breeding grounds.							
Environmental Protection	Yes	Code of the Village of Patchogue Chapter 195	State/Local	Multiple Departments	Yes	Yes	-
Comment: Upon the making of any application for a permit to any Village officer or agency concerning real property, the reviewing officer shall indicate whether or not the action to be taken under the permit will or is likely to have a significant adverse effect upon the environment requiring further action by the Applicant.							
Flood Damage Prevention	Yes	Code of the Village of Patchogue, Chapter 210. Adopted 4/27/1998 "Flood Damage Prevention"	Local	Building Department	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)	Yes	-
<p>Comment: It is the purpose of this chapter to promote the public health, safety and general welfare, and to minimize public and private losses due to flood conditions in specific areas, by provisions designed to:</p> <ul style="list-style-type: none"> <li>Regulate uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;</li> <li>Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;</li> <li>Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters;</li> <li>Control filling, grading, dredging and other development which may increase erosion or flood damages;</li> <li>Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands; and</li> <li>Qualify for and maintain participation in the National Flood Insurance Program.</li> </ul>							
Municipal Separate Storm Sewer System (MS4)	Yes	Code of the Village of Patchogue, Chapter 369	Local	Board of Trustees	Yes	Yes	-
Comment: This article establishes methods for controlling the introduction of pollutant into the MS4 in order to comply with the requirements of the SPDES General Permit for Municipal Separate Storm Sewer Systems that is applicable to the Village.							



	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?	
Emergency Management	No	-	-	-	Yes	-	-
Comment:							
Climate Change	No	-	-	-	Yes	-	-
Comment:							
Disaster Recovery Ordinance	No	-	-	-	No	-	-
Comment:							
Disaster Reconstruction Ordinance	No	-	-	-	No	-	-
Comment:							
1. Other 2. Cumulative Substantial Damages 3. Coastal Erosion Control Districts	1. Yes 2. No 3. No	1. A draft of the LWRP has been completed. The Village is currently incorporated the final comments from the NYS DOS.	Local	Administration	No	Yes	-
Comment:							
<b>Planning Documents</b>							
Comprehensive Plan	No	-	-	-	No	-	-
Comment:							
Capital Improvement Plan	No	-	-	-	No	-	-
Comment:							
Disaster Debris Management Plan	Yes	Suffolk County Multi-Jurisdictional Debris Management Plan	County, Local	Suffolk County FRES	No	Yes	-
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.							
Floodplain or Watershed Plan	Yes	Village Code Chapter 210	Local	Building & Housing	No	Yes	-
Comment:							
Stormwater Plan	Yes	Village Code Chapters 370, (1/26/2009)	Local	Stormwater Management Officer designated by the Board of Trustees.	No	Yes	-
Comment: The purpose of this article is to provide for the health, safety, and general welfare of the citizens of the Village of Patchogue through the regulation of non-stormwater discharges to the municipal storm sewer system to the maximum extent practicable as required by federal and state law.							



Section 9.11: Village of Patchogue

	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?	
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: Freshwater Wetlands Code	Yes	Code of the Village of Patchogue, Chapter 216	State/Local	Village Board, NYS DEC	No	-	-
Comment: The Village of Patchogue shall fully undertake and exercise its regulatory authority with regard to activities subject to regulate under the Act in freshwater wetlands, as shown on the Freshwater Wetlands Map, filed by the Department of Environmental Conservation, and in all areas adjacent to any such freshwater wetlands up to 100 feet from the boundary of such wetlands							
<b>Response/Recovery Planning</b>							
Comprehensive Emergency Management Plan	Yes	Suffolk County Comprehensive Emergency Management Plan (2018)	Suffolk County and Associated Jurisdictions	Suffolk FRES	Yes	Yes	-
Comment: The County Comprehensive Emergency Management Plan (CEMP) describes the emergency obligations of County government and its capability and capacity to undertake emergency assignments or acquire those resources necessary to support its emergency mission. The Concept of Operations of the CEMP describes the management of emergencies within the National Incident Management System (NIMS) and details emergency management programmatic efforts to accommodate present standards.							
Strategic Recovery Planning Report	No	-	-	-	No	-	-
Comment:							
Threat & Hazard Identification &	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?	
Risk Assessment (THIRA)							
Comment:							
Post-Disaster Recovery Plan	No	-	-	-	No	-	-
Comment:							
Continuity of Operations Plan	No	-	-	-	No	-	2020-Patchogue-009
Comment:							
Public Health Plan	No	-	-	-	No	-	-
Comment:							
Other	No	-	-	-	No	-	-
Comment:							

**Table 9.11-4. 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
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 Patchogue.

**Table 9.11-5. Administrative and Technical Capabilities**

Resources	Available? (Yes or No)	Department/ Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Building and Housing Dept
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	Protecting the Environment in Patchogue Committee (PEP) – non-governmental body
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	The Mayor is responsible for economic development
Warning Systems / Services (reverse 911, outdoor warning signals)	No	Reverse 911 with county
Maintenance programs to reduce risk	Yes	Department of Public Works



Resources	Available? (Yes or No)	Department/ Agency/Position
Mutual aid agreements	Yes	Town, County, and Village of Bellport
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	No	-
Engineers or professionals trained in building or infrastructure construction practices	Yes	Building and Housing Department
Planners or engineers with an understanding of natural hazards	Yes	Contracted as needed
Staff with expertise or training in benefit/cost analysis	Yes	Accounting Department
Professionals trained in conducting damage assessments	Yes	Building and Housing
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	DPW staff is trained in “GIS”
Scientist familiar with natural hazards	No	-
NFIP Floodplain Administrator (FPA)	Yes	Chief Building Inspector is the NFIP Floodplain Administrator
Surveyor(s)	No	-
Emergency Manager	No	-
Grant writer(s)	Yes	Executive Director of the Community Development Agency
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	Yes	Public Safety Department

### Fiscal Capability

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

**Table 9.11-6. Fiscal Capabilities**

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Annual allocation from the Town of Brookhaven
Capital improvements project funding	Yes. Village Board is responsible
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes. Village Board; Sewer fees
Impact fees for homebuyers or developers of new development/homes	Yes. Village Board
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes. Village Board
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. Village Board
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	Suffolk County Water Quality Grant

### Education and Outreach Capability

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





**Table 9.11-7. Education and Outreach Capabilities**

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	Yes
Personnel skilled or trained in website development?	No
Hazard mitigation information available on your website; if yes, describe	Yes: LWRP
Social media for hazard mitigation education and outreach; if yes, briefly describe.	Yes: Facebook
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	Yes: Community Organization Active in Disaster; Business Improvement District; Chamber of Commerce
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	Yes: Live After 5, Great South Bay Music Festival, Prepare-a-thon provide MS4 information
Warning systems for hazard events; if yes, briefly describe.	Yes: County and Town
Natural disaster/safety programs in place for schools; if yes, briefly describe.	Yes: County
Other	Yes: Work with library for educational workshops. Messaging through Chamber of Commerce. County does preparedness training in schools.

**Community Classifications**

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

**Table 9.11-8. 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)	Yes	5 (raising to a 7)	2017
NYSDEC Climate Smart Community	NP	-	-
Storm Ready Certification	NP	-	-
Firewise Communities classification	NP	-	-
Other	No	-	-

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 9.11-9. Adaptive Capacity**

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Coastal Erosion	Medium
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	High
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 of Patchogue does not currently have access to resources to determine the possible impacts of climate change upon the Village of Patchogue? However, the Village currently is working on numerous climate related projects such as a living shoreline project, a clean fleet policy, the Suffolk County Sewer Project, and Little Creek mitigation.

**9.11.5 National Flood Insurance Program**

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

**NFIP Floodplain Administrator (FPA)**

Peter Sarich, Senior Building Inspector

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

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

**Table 9.11-10. NFIP Summary**

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties
Village of Patchogue	353	378	\$13,986,588	43

Source: FEMA 200  
 Notes: According to FEMA statistics as of 7/13/2020  
 RL Repetitive Loss

**Flood Vulnerability Summary**

The Village of Patchogue does not have identified flood prone areas. The Village does not maintain a list of properties that have been damaged by flooding or property owners that are interested in flood mitigation. Substantial Damage determinations are made by a Professional Engineer who reports the percentage of damage.





15 to 20 properties have been mitigated in the Village. The Village feels the flood hazard maps adequately address the flood risk within the Village.

### Resources

The Building and Housing Department is responsible for floodplain management. The Village does not have any certified floodplain managers on staff. NFIP services include permitting and plan review. A professional engineering report is used to determine if proposed development on an existing structure would qualify as a substantial improvement. The Village would like to receive additional floodplain management training for staff. Funding and staffing present barriers to running an effective NFIP program at this time.

### Compliance History

The Village of Patchogue joined the NFIP on November 3, 1982, and is currently an active member. The current effective Flood Insurance Rate Maps are dated September 25, 2009. The community is currently in good standing in the NFIP and has no outstanding compliance issues. The most recent Community Assistance Visit (CAV) took place on August 24, 2014.

### Regulatory

The community's Flood Damage Prevention Ordinance (FDPO), found at Chapter 210 of the local code, was last updated on January 28, 2013. The Village's floodplain management program exceeds minimum NFIP requirements through the Village's 4 foot freeboard requirement.

### Community Rating System

The Village of Patchogue does not participate in the CRS program but is considering participation.

## 9.11.6 Integration with Other Planning Initiatives

As this HMP update is implemented, the Village of Patchogue 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":

- **Building Department:** The Building Department manages and approves all construction and alteration of commercial and residential buildings within the Village boundaries. It ensures that all construction projects meet New York State Building and Fire Codes, and Village of Patchogue Zoning Codes and conducts fire inspections of all commercial building. Any property owner in the Village of Patchogue can call the Housing Department for an informal inspection. An inspector will go to the property and perform an inspection to bring any existing or potential violations to the owner's attention. The property owner will be contacted by mail with a list of all violations found and will be given ample time to correct all of the violations with no summonses issued. All property owners in the



Village are asked to be aware of the outward condition of their property. A property that is not maintained effects the community as whole.

- **Community Development Agency:** The Incorporated Village of Patchogue Community Development Agency (CDA) was established in 1980. It is Federally funded by the Housing and Urban Development (HUD). The basic purpose of the CDA is to help low to moderate income people. The Patchogue Village CDA is limited to helping those income eligible village residents.
- **Public Safety:** The office of Public Safety and Code Enforcement is tasked with diligently enforcing Village Codes to assure the health and safety of Village residents and to address issues related to quality of life. The Department is also charged with preserving the public peace and protecting property through education and enforcement.
- **Village website:** The Village of Patchogue operates a village website (<http://www.patchoguevillage.org/>) that includes community information, news, and information on hazards such as hurricanes and mitigation measures such as stormwater.
- **Land Use Plans:** develop a Marina Property Protection Plan to protect shore front properties from hazard impacts. Information on hazard areas and relevant mitigation strategies from the HMP will be incorporated.
- **Land Use Plans:** develop Local Waterfront Revitalization Plan to improve safer waterfront usage, reduced river front flooding, contribute to improved water quality, and preserve natural areas and fish habitats. Information on hazard areas and mitigation measures from the HMP will be incorporated into the plan.

### 9.11.7 Mitigation Strategy and Prioritization

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

#### Opportunities for Future Integration

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- **Emergency Services Continuity of Operations (2020-Patchogue-009):** Village emergency services need to plan for flood events beyond the SFHA. The Village will work with emergency service providers to ensure that emergency plans exist to provide for continuity of services for large scale flood and storm events.

### 9.11.8 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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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

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The Village of Patchogue follows the County's guidance for evacuation routes and procedures.

#### Sheltering

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The Village relies on the County and the American Red Cross for sheltering.



### Temporary Housing

The Village has several parks that could be utilized for the hosting of temporary housing (Rider Avenue Park and Shorefront Park). However, these parks are located in the floodplain. The Village will work with Suffolk County to identify regional temporary housing locations that are outside of the 100-year floodplain (2020-Patchogue-004).

### Permanent Housing

The Village is fully built out and does not have any suitable locations for permanent housing in the event that homes need to be rebuilt away from the floodplain.

#### 9.11.9 Hazard Event History Specific to the Village of Patchogue

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 Patchogue’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 9.11-11 provides details regarding municipal-specific loss and damages the Village 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 9.11-11. 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 Patchogue did not report any damages.
March 2, 2017	Strong Wind	No	Gusty northwest winds occurred behind a strong cold front.	There were power outages in the area.
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	Although the County was impacted, the Village of Patchogue did not report any damages.
March 22, 2017	Strong Wind	No	Gusty northwest winds occurred behind deep low pressure and strong cold front.	In Patchogue, law enforcement reported wires down on North Prospect Avenue at 145 pm.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
March 21-22, 2018	Winter Storm	No	A large and slow moving low pressure developed along the Middle Atlantic coast on Wednesday, March 21st and moved slowly north and east along the coast through Thursday, March 22nd. Moderate to heavy snow bands moved across Long Island and New York City with lighter snow across the Lower Hudson Valley. The heaviest snow occurred in New York City and Long Island Wednesday night into early Thursday morning. The highest snowfall rates occurred on Long Island with generally 2 to 4 inches per hour at times. The NWS official observation at the Islip Airport indicated a snowfall rate of 5 inches per hour between 9pm and 10pm on March 21st with around 9 inches of snow falling from 8pm to 10pm. Within these heavier bands, near-blizzard conditions occurred with visibilities one quarter mile or less and winds gusting 30 to 35 mph	Employee Overtime was needed for snow removal.
November 1, 2019	Strong Wind	No	Strong winds occurred behind low pressure and strong cold front.	The Long Island Railroad reported a downed tree across the tracks near Patchogue at 111 am.

Notes:

- EM Emergency Declaration (FEMA)
- FEMA Federal Emergency Management Agency
- DR Major Disaster Declaration (FEMA)
- N/A Not applicable

### 9.11.10 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 Town of Babylon. 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 9.11-12. 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			
0227 - Long Island DDSO*	OPWDD	X	-	X	Unknown	2020-Patchogue-005
NYS Arc Suffolk County Chapter*	OPWDD	-	-	X	Unknown	2020-Patchogue-005
Mount Zion Baptist Church	Religious Institution	X	-	X	Unknown	2020-Patchogue-005
Temporary 5 <sup>th</sup> Police Precinct*	County Building	X	-	X	Site has been demolished	-
Tuthills Creek Bridge*	Transportation	X	-	X	Unknown	2020-Patchogue-005
Watergate Apts*	Wastewater	X	-	X	Site has been abandoned	-
Patchogue Village Stp*	Wastewater	X	-	X	No	2020-Patchogue-006
Davis Park Ferry*	Ferry/Marine	-	X	X	Unknown	2020-Patchogue-005
Fire Island National Seashore*	Ferry/Marine	X	-	X		2020-Patchogue-005
Waterworks Road Well Field, Pump Station, and Elevated Tank*	SCWA	X	-	X	Unknown	2020-Patchogue-005



Waterworks Road Well Field, Pump Station, and Elevated Tank*	SCWA	X	-	X	Unknown	2020-Patchogue-005
Pump Station on South Street	Stormwater	X	-	X	No	2020-Patchogue-007

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 Patchogue. The Village of Patchogue 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 Patchogue indicated the following:

- The Village agreed with the calculated hazard rankings.

Table 9.11-13. Hazard Ranking

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

### Identified Issues

The Village of Patchogue has identified the following vulnerabilities within their community:

- Patchogue River Watershed in the Village of Patchogue: An estimated \$29.6 million project would be used to address nitrogen and pathogen pollution in Patchogue River, Patchogue Lake and the Great South Bay. The proposed project would: install sewers south of Main Street between West Avenue and South Ocean Avenue. A total of 513 residential units are expected to be connected to the Village of Patchogue wastewater treatment plant. Design is underway and construction is expected to begin in 2020.





- Daylight nuisance flooding has become an issue in the south end of the Village.
- Erosion has become a problem at Shorefront Park.
- All 2.2 sq. miles of the Village in in the floodplain and subject to the vulnerabilities associated with it. 500 of the Villages 4,000 homes were impacted by Sandy.

Specific areas of concern based on resident response to the Suffolk County Hazard Mitigation Citizen survey include:

- The entire shoreline of Patchogue River and along Great South Bay is very vulnerable to flooding.
- The entire south end of the village is at risk from sea level rise.
- Shorefront Park is frequently flooded and bulkhead is failing. Mascot Dock was previously destroyed and rebuilt due to Sandy. Many streets and homes were flooded at that time in the 100 year flood plan and subsequently homes were raised.

### 9.11.11 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 9.11-15). 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.



Table 9.11-14. 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	
VPTCH-1	Assess the current capabilities of critical evacuation facilities against the requirements listed in the Village HMP.	Earthquake, Flood, Hurricane, Nor'Easter, Severe Storm, Wildfire, Winter Storm	Village		Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing Capability
VPTCH-2	Assess and prioritize options to protect pumping stations, lift stations, and the sewage treatment facility, and implement as funding becomes available.	Earthquake, Flood, Groundwater Contam, Hurricane, Nor'Easter, Severe Storm, Shallow GW, Wildfire, Winter Storm	Village		In Progress	Cost		1. Include in 2020 HMP 2. Sewage Treatment Facility action and South Street Pump Station action 3.
VPTCH-3	Survey and assess trees in the Village, and develop a plan to reduce potential damages caused by fallen or windblown trees or branches.	Earthquake, Hurricane, Nor'Easter, Severe Storm, Wildfire, Winter Storm	Village		Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing Capability
VPTCH-4	Participate in the Community Rating System, including working with the County and others to bring CRS training/workshops into the community, where appropriate community officials and staff will actively participate.	Coastal Erosion, Flood, Groundwater Contam, Hurricane, Nor'Easter, Severe Storm, Shallow	Village		No Progress	Cost		1. Discontinue 2. 3. Village manpower limitations



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	
		GW, Winter Storm						
VPTCH-5	Install and maintain an emergency power generator for Village Hall.	Earthquake, Flood, Hurricane, Nor'Easter, Severe Storm, Wildfire, Winter Storm	Village		Complete			1. Discontinue 2. 3. Complete
VPTCH-6	Assess and prioritize options for installing breakwater protection on the east side of Shore Front Park, and implement as funding becomes available.	Coastal Erosion, Flood, Hurricane, Nor'Easter, Severe Storm	Village		In Progress; The Village has submitted applications to the NYSDEC and USACOE to install a living shoreline at Shorefront Park which will include rock sills and other storm surge attenuation structures which include protection on the east side of Shorefront Park.			1. Include in 2020 HMP 2. 3. \$4million, Building
VPTCH-7	Develop a Marina Property Protection Plan to protect shore front properties.	Coastal Erosion, Flood, Hurricane, Nor'Easter, Severe Storm	Village		No Progress			1. Discontinue 2. 3. No longer a priority
VPTCH-8	Assess and prioritize options to improve the drainage capacity of the Little Creek.	Flood, Hurricane, Nor'Easter, Severe Storm,	Village, NYSDEC		In Progress; The Village has a report assessing the options to improve drainage			1. Include in 2020 HMP 2. 3. North of Shorefront Park, Daylighting, invasive species removal, increase drainage capacity



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.
		Shallow GW, Winter Storm			capacity of Little Creek. Improvements will be made as funding becomes available.	Evidence of Success		of stormwater system, high water table, on site septic.
VPTCH-9	Assess and prioritize options to correct flooding problems on Brightwood St./Beach Ave./Roosevelt Ave., and implement as funding becomes available.	Flood, Hurricane, Nor'Easter, Severe Storm, Shallow GW	Village		No Progress	Cost		1. Include in 2020 HMP 2. 3. possible roadway elevations, low lying, stormwater upgrades, curbs and gutters. High. Stormwater AW
VPTCH-10	Assess and prioritize options to correct flooding problems in the Central Business District, and implement as funding becomes available.	Flood, Hurricane, Nor'Easter, Severe Storm, Shallow GW	Village		No Progress	Level of Protection		1. Include in 2020 HMP 2. East Main Street Stormwater system is undersized. Pipes run under main, through alleyways, and Terry Street parking lot 3.
VPTCH-11	Assess and prioritize options to elevate buildings and/or their utilities, and implement as funding becomes available.	Flood, Hurricane, Nor'Easter, Severe Storm, Shallow GW	Village		In Progress	Damages Avoided; Evidence of Success		1. Include in 2020 HMP 2. Sewage Treatment Facility action and South Street Pump Station action 3.
VPTCH-12	Assess and prioritize options to retrofit buildings to withstand hazard impacts, and implement as funding becomes available.	Earthquake, Flood, Hurricane, Nor'Easter, Severe Storm, Wildfire, Winter Storm	Village		Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing Capability
VPTCH-13	Acquire easements from Suffolk Co. to improve drainage for protection or restoration of ecosystem integrity, natural control of	Coastal Erosion, Flood, Groundwater Contam,	Village		In Progress; Lots on Sunset acquired for	Level of Protection		1. Include in 2020 HMP 2. Septic hookup action 3.
						Damages Avoided;		



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.
	runoff, recreational opportunities and our natural resources, through reduction of unintentional discharges and increased enforcement against illegal discharges.	Hurricane, Nor'Easter, Severe Storm, Shallow GW			stormwater recharge	Evidence of Success		
VPTCH-14	Assess and prioritize options to restore and protect the Patchogue Lake shoreline and lakefront property, and implement as funding becomes available.	Coastal Erosion, Flood, Hurricane, Nor'Easter, Severe Storm	Village		In Progress; The County has undertaken a road project at the south end of Patchogue Lake which will expand the parkland along the south shore the lake.	Cost Level of Protection Damages Avoided; Evidence of Success		1. Include in 2020 HMP 2. 3.
VPTCH-15	Assess and prioritize options for Wetland and Habitat Conservation, Restoration, and Protection, and implement as funding becomes available.	Coastal Erosion, Drought, Expansive Soils, Flood, Groundwater Contam, Hurricane, Infestation, Nor'Easter, Severe Storm, Shallow GW, Wildfire, Winter Storm	Village		In Progress; The Village has received a grant from NYSDEC for habitat restoration as part of the Shorefront Park Shoreline improvement project. The Village will continue to assess and prioritize options for other Wetland and Habitat Conservation, Restoration, and Protection and implement as funding becomes available.	Cost Level of Protection Damages Avoided; Evidence of Success		1. Include in 2020 HMP 2. 3.



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	
VPTCH-16	Maintain and dredge waterways to ensure navigability.	Coastal Erosion, Flood, Hurricane, Nor'Easter, Severe Storm	Village		Ongoing capability	Cost		1. Discontinue 2. 3. Ongoing capability
VPTCH-17	Assess and prioritize the options available to expand the connectivity of the low pressure sewer system to include flood-prone neighborhoods, and implement as funding becomes available.	Flood, Groundwater Contam, Hurricane, Nor'Easter, Severe Storm, Shallow GW, Winter Storm	Village		In Progress; 600 homes on the east and west side of the Patchogue River and other areas of the Village are slated to be connected to the low pressure sewer system in the next 24 months as part of a Suffolk County program based on a watershed study.	Cost		1. Include in 2020 HMP 2. 3.
VPTCH-18	Assess and prioritize the options available to elevate flood-prone roads, and implement as funding becomes available	Flood, Hurricane, Nor'Easter, Severe Storm, Shallow GW	Village		No Progress	Cost		1. Include in 2020 HMP 2. Smith Street, Patchogue Street, Beach Avenue, South Ocean, Rider Avenue, Brightwood Street, Dock Street, INCLUDE ABOVE 3.
VPTCH-19	Improve drainage to include grey and green infrastructure to minimize flooding.	Coastal Erosion, Flood, Hurricane, Nor'Easter, Severe Storm, Shallow GW	Village		Ongoing Capability; The Village continues to explore including grey and green infrastructure in other projects. A green infrastructure	Cost		1. Discontinue 2. 3. Ongoing capability



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.
					project was included in Action ID 21. Drainage structures were installed under Sunset Lane in order to collect storm water runoff.			
VPTCH-20	Planned drainage improvement for Little Creek outfall.	Coastal Erosion, Flood, Hurricane, Nor'Easter, Severe Storm, Shallow GW	Administration		In Progress; The Village has received grant funding to replace the bulkhead at Shorefront Park with a living shoreline. The project includes removal of the vaults and valves at the end of Little Creek which will improve drainage of Little Creek. A study was conducted of the northern portion of the Little Creek with recommendations for widening portions of Little Creek where it drains into the ponds in Waldbauer Park and for creation of a wet meadow for increased	Cost		1. Include in 2020 HMP
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3.



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	
					storm water drainage capacity.			
VPTCH-21	Connect private homes to the River Avenue sewer extension.	Flood, Groundwater Contam, Hurricane, Nor'Easter, Severe Storm, Shallow GW, Winter Storm	Village		Complete; Project was completed in 2017.	Cost		1. Discontinue 2. 3. Complete
VPTCH-22	Assess and prioritize installation of tide flex valves and/or gates where storm drain system discharges into surface water system to prevent storm surge coming up to the street through the storm drainage system and implement as funding becomes available.	Flood, Hurricane, Nor'Easter, Severe Storm	Village		In Progress	Cost		1. Include in 2020 HMP 2. Anything on waterfront 3.
VPTCH-23	Assess and prioritize repair or replacement of jetty on the east side of the mouth of the Patchogue River which allows sand to drift into the mouth of the river and implement as funding becomes available.	Coastal Erosion, Flood, Hurricane, Nor'Easter, Severe Storm	Village		Complete; The jetty on the east side of the river was replaced in 2019.	Cost		1. Discontinue 2. 3. Complete
VPTCH-24	Assess and prioritize restoration of beach front along the Great South Bay in the area south of Sunset Lane, between the Patchogue River and Tuthill's Creek and implement as funding becomes available.	Coastal Erosion, Flood, Hurricane, Nor'Easter, Severe Storm	Village, NYSDEC		No Progress	Cost		1. Include in 2020 HMP 2. 3.





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	
VPTCH-25	Assess and prioritize restoration of wetlands on the east side of Tuthill's Creek.	Drought, Flood, Groundwater Contam, Hurricane, Infestation, Nor'Easter, Severe Storm, Shallow GW, Wildfire	Village, NYSDEC		No Progress			1. Include in 2020 HMP 2. 3.
VPTCH-26	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			1. Discontinue 2. 3. Ongoing Capability
VPTCH-27	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</li> </ul>	All Hazards	Suffolk County, as supported by relevant local department leads		Ongoing Capability			1. Discontinue 2. 3. Ongoing Capability



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.
	Capabilities (enhanced floodplain management, and post-disaster assessment and recovery capabilities) <ul style="list-style-type: none"> <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</li> </ul>							



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.
	hazard mitigation planning strategies identified in this plan).							

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

The Village of Patchogue has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 HMP:

- None identified

### Proposed Hazard Mitigation Initiatives for the HMP Update

The Village of Patchogue 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 9.11-16 summarizes the comprehensive-range of specific mitigation initiatives the Village of Patchogue 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 9.11-16 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 9.11-15. 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-Patchogue-001	Repetitive Loss Mitigation	1, 2	Flood; Severe Storm; Shallow Groundwater	<p><b>Problem:</b> All 2.2 sq. miles of the Village in the floodplain and subject to the vulnerabilities associated with it. 500 of the Villages 4,000 homes were impacted by Sandy. The most flood prone residential areas of the Village are the coastal areas in the southern portion of the Village including Smith Street, Brightwood, and Roosevelt.</p> <p><b>Solution:</b> Conduct outreach to 45 flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).</p>	No	None	3 years	NFIP Floodplain Administrator, supported by homeowners	\$3 Million	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.	FEMA HMGP and FMA, local cost share by residents	High	SIP	PP
2020-Patchogue-002	Shorefront Park	2, 4, 5	Coastal Erosion	<p><b>Problem:</b> Erosion has become a problem at Shorefront Park.</p> <p><b>Solution:</b> The Village has received a grant from NYSDEC for habitat restoration as part of the Shorefront Park Shoreline improvement project. The Village has submitted applications to the NYSDEC and USACOE to install a living shoreline at Shorefront Park which will include rock sills and other storm surge attenuation structures which include</p>	No	Permitting applications submitted	Within 2 years	Building Department	\$4 million	Restoration of habitat, erosion protection	NYS DEC	High	NSP	NR



Table 9.11-15. 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-Patchogue-003	Sewer Improvements	3, 4, 5	Severe Storm, Flood, Groundwater Contamination	<p>protection on the east side of Shorefront Park.</p> <p><b>Problem:</b> Heavy rain storms cause Little Creek to flood causing septic systems to fail and reducing wildlife along the corridor.</p> <p><b>Solution:</b> A project will be used to address nitrogen and pathogen pollution in Patchogue River, Patchogue Lake and the Great South Bay. The proposed project would: install sewers south of Main Street between West Avenue and South Ocean Avenue. A total of 513 residential units are expected to be connected to the Village of Patchogue wastewater treatment plant. Design is underway and construction is expected to begin in 2020.</p>	No	None	Within 1 year	Suffolk County, DPW	\$29.6 million	Protection of Little Creek ecosystem	HMGP, BRIC, CDBG-DR, Village budget	High	SIP	SP
2020-Patchogue-004	Temporary Housing	1, 8	All Hazards	<p><b>Problem:</b> The Village has several parks that could be utilized for the hosting of temporary housing (Rider Avenue Park and Shorefront Park). However, these parks are located in the floodplain.</p> <p><b>Solution:</b> The Village will work with Suffolk County to identify regional temporary housing locations that are outside of the 100-year floodplain.</p>	No	None	Within 1 year	Administration, Suffolk County FRES	Staff time	Temporary Housing locations identified	County and Village budget	High	LP R	ES
2020-Patchogue-005	Critical Facilities Outreach	1, 2, 6	Flood	<p><b>Problem:</b> The Village has numerous critical facilities located in the 100-year floodplain.</p> <p><b>Solution:</b> The Village FPA will conduct outreach with facility managers to discuss flood risk and potential mitigation actions.</p>	Yes	None	Within 6 months	FPA	Staff time	Facility managers aware of flood exposure and mitigation options.	Village budget	High	EA P	PI



Table 9.11-15. 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-Patchogue-006	Patchogue Sewage Treatment Plant	2, 8	Flood	<p><b>Problem:</b> The Patchogue Sewage Treatment Plant is located in the 100-year flood zone. While the majority of the structure is located above the 500-year flood elevation, the Main Electrical Control Room has flooded in the past. The Village installed a flood door but additional floodproofing is needed. The Plant also acquired a pre-treatment plant which is now on site and also needs flood protection.</p> <p><b>Solution:</b> The Village will conduct an engineering study to determine the necessary floodproofing measures to protect the Sewage Treatment Plant to the 500-year flood level and carry out the selected actions.</p>	Yes 💧	None	Within 5 years	Engineer, Public Works	High	Facility protected from flood damage	HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Village budget	High	SIP	PP
2020-Patchogue-007	Floodproof South Street Pump Station	2, 8	Flood	<p><b>Problem:</b> The South Street Pump Station is located in the 100-year floodplain. The Pump Station has an emergency generator which is placed on slab on grade.</p> <p><b>Solution:</b> Conduct an engineering study to floodproof the pump station and raise the elevation of the backup generator above the 500-year flood level.</p>	Yes 💧	None	Within 5 years	Engineer, Public Works	Medium	Critical services protected.	HMGP, BRIC, Village budget	High	SIP	PP, SP
2020-Patchogue-008	Patchogue Medford Library Backup Power	1, 2, 7	All Hazards	<p><b>Problem:</b> The Patchogue Medford Library at 54-60 E Main Street as well as the Annex at 160 West Main Street are cooling and heating shelters. The buildings lack backup power.</p> <p><b>Solution:</b> The Library Engineer will research what size generator is necessary to supply backup power to the Library. The Village will work with the Library to</p>	Yes	None	1 year	Library, Village Administration	\$265,000 for Main Library and \$61,000 for Annex	Ensures continuity of operations of Medford Library as heating and cooling shelter	FEMA HMGP and PDM, USDA Community Facilities Grant Program, Emergency Management	High	SIP	PP



Table 9.11-15. 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
				secure funding for and install a backup generator and necessary electrical components.							Performance Grants (EMPG) Program, Municipal Budget			
2020-Patchogue-009	Emergency Services Continuity of Operations	7, 8	Flood	<p><b>Problem:</b> Village emergency services need to plan for flood events beyond the SFHA.</p> <p><b>Solution:</b> The Village will work with emergency service providers to ensure that emergency plans exist to provide for continuity of services for large scale flood and storm events.</p>	No	None	Within 1 year	OEM	Staff time	Continuity of services planned	Village budget	High	LP R	ES
2020-Patchogue-010	Update LWRP	4, 5	Coastal Erosion, Flood	<p><b>Problem:</b> The Village LWRP serves as a steering document for the Village. The LWRP is in need of update.</p> <p><b>Solution:</b> The Village with update the LWRP.</p>	No	None	Within 2 years	Village Administration	\$5,000	Updated LWRP to guide waterfront planning and mitigation	Municipal budget	High	LP R	PR
2020-Patchogue-011	Coastal Erosion Monitoring	1, 2, 3, 5	Coastal Erosion, Hurricane, Nor'Easter	<p><b>Problem:</b> The Village has shoreline which could be exposed to coastal erosion.</p> <p><b>Solution:</b> The Village will participate in a county led erosion monitoring program.</p>	No	None	Within 1 year	SCWD, Village Administration	Staff time	Identification of coastal erosion	Municipal budget	High	NS P	NR

Notes:

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

Acronyms and Abbreviations:

CAV Community Assistance Visit  
 CRS Community Rating System  
 DPW Department of Public Works  
 EHP Environmental Planning and Historic Preservation

Potential FEMA HMA Funding Sources:

FMA Flood Mitigation Assistance Grant Program  
 HMGP Hazard Mitigation Grant Program  
 PDM Pre-Disaster Mitigation Grant Program

Timeline:

The time required for completion of the project upon implementation

Cost:

The estimated cost for implementation.







- 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

**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



**Table 9.11-17. 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	Total	High / Medium / Low
2020-Patchogue-001	Repetitive Loss Mitigation	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2020-Patchogue-002	Shorefront Park	0	1	1	1	1	1	0	1	1	1	1	0	1	1	11	High
2020-Patchogue-003	Sewer Improvements	0	1	1	1	1	1	0	1	1	1	1	1	1	1	12	High
2020-Patchogue-004	Temporary Housing	1	0	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2020-Patchogue-005	Critical Facilities Outreach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2020-Patchogue-006	Patchogue Sewage Treatment Plant	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	High
2020-Patchogue-007	Floodproof South Street Pump Station	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	High
2020-Patchogue-008	Patchogue Medford Library Backup Power	1	1	1	1	1	0	0	1	1	1	1	1	1	1	12	High
2020-Patchogue-009	Emergency Services Continuity of Operations	1	0	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2020-Patchogue-010	Update LWRP	0	1	1	1	1	1	0	1	1	1	1	1	1	1	12	High
2020-Patchogue-011	Coastal Erosion Monitoring	0	1	1	1	1	1	0	1	1	1	0	1	1	1	11	High

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



### 9.11.12 Proposed Mitigation Action Types

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

**Table 9.11-17. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Coastal Erosion	2020-Patchogu e-004, 2020-Patchogu e-010	2020-Patchogu e-008	2020-Patchogu e-002, 2020-Patchogu e-011		2020-Patchogu e-010	2020-Patchogu e-008		2020-Patchogu e-002, 2020-Patchogu e-011		2020-Patchogu e-004,
Cyber Security	2020-Patchogu e-004,	2020-Patchogu e-008				2020-Patchogu e-008				2020-Patchogu e-004,
Disease Outbreak	2020-Patchogu e-004,	2020-Patchogu e-008				2020-Patchogu e-008				2020-Patchogu e-004,
Drought	2020-Patchogu e-004,	2020-Patchogu e-008				2020-Patchogu e-008				2020-Patchogu e-004,
Earthquake	2020-Patchogu e-004,	2020-Patchogu e-008				2020-Patchogu e-008				2020-Patchogu e-004,
Expansive Soils	2020-Patchogu e-004,	2020-Patchogu e-008				2020-Patchogu e-008				2020-Patchogu e-004,
Extreme Temperature	2020-Patchogu e-004,	2020-Patchogu e-008				2020-Patchogu e-008				2020-Patchogu e-004,
Flood	2020-Patchogu e-004, 2020-Patchogu e-009, 2020-Patchogu e-010	2020-Patchogu e-001, 2020-Patchogu e-003, 2020-Patchogu e-006, 2020-Patchogu e-007, 2020-Patchogu e-008		2020-Patchogu e-005	2020-Patchogu e-010	2020-Patchogu e-001, 2020-Patchogu e-006, 2020-Patchogu e-007, 2020-Patchogu e-008	2020-Patchogu e-005		2020-Patchogu e-003, 2020-Patchogu e-007	2020-Patchogu e-004, 2020-Patchogu e-009
Groundwater Contamination	2020-Patchogu e-004,	2020-Patchogu e-003, 2020-Patchogu e-008				2020-Patchogu e-008			2020-Patchogu e-003	2020-Patchogu e-004,
Hurricane	2020-Patchogu e-004,	2020-Patchogu e-008	2020-Patchogu e-011			2020-Patchogu e-008		2020-Patchogu e-011		2020-Patchogu e-004,
Infestation and Invasive Species	2020-Patchogu e-004,	2020-Patchogu e-008				2020-Patchogu e-008				2020-Patchogu e-004,
Nor'easter	2020-Patchogu e-004,	2020-Patchogu e-008, 2020-Patchogu e-011				2020-Patchogu e-008		2020-Patchogu e-011		2020-Patchogu e-004,



Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Severe Storm	2020-Patchogu e-004,	2020-Patchogu e-001, 2020-Patchogu e-003, 2020-Patchogu e-008				2020-Patchogu e-001, 2020-Patchogu e-008			2020-Patchogu e-003	2020-Patchogu e-004,
Severe Winter Storm	2020-Patchogu e-004,	2020-Patchogu e-008				2020-Patchogu e-008				2020-Patchogu e-004,
Shallow Groundwater	2020-Patchogu e-004,	2020-Patchogu e-001, 2020-Patchogu e-008				2020-Patchogu e-001, 2020-Patchogu e-008				2020-Patchogu e-004,
Wildfire	2020-Patchogu e-004,	2020-Patchogu e-008				2020-Patchogu e-008				2020-Patchogu e-004,

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

### 9.11.13 Staff and Local Stakeholder Involvement in Annex Development

The Village of Patchogue 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: CDA. The Executive Director of CDA represented the community on the Suffolk County Hazard Mitigation Plan Planning Partnership, Steering Committee, 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 Village of Patchogue’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.11-18. Contributors to the Annex**

Name	Title/Entity	Method of Participation
Marian Russo	Executive Director, CDA	Primary Point of Contact, attended plan participant meetings, provided impact data, contributed to mitigation strategy
Paul Poutieri	Mayor	Secondary Point of Contact
Peter Sarich	Senior Building Inspector	NFIP Floodplain Administrator
Joseph Dean	Superintendent of Public Works	Attended plan participant meetings, provided impact data, contributed to mitigation strategy

### 9.11.14 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Village of Patchogue 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 Patchogue has significant exposure.

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Figure 9.11-1. Village of Patchogue Hazard Area Extent and Location Map 1

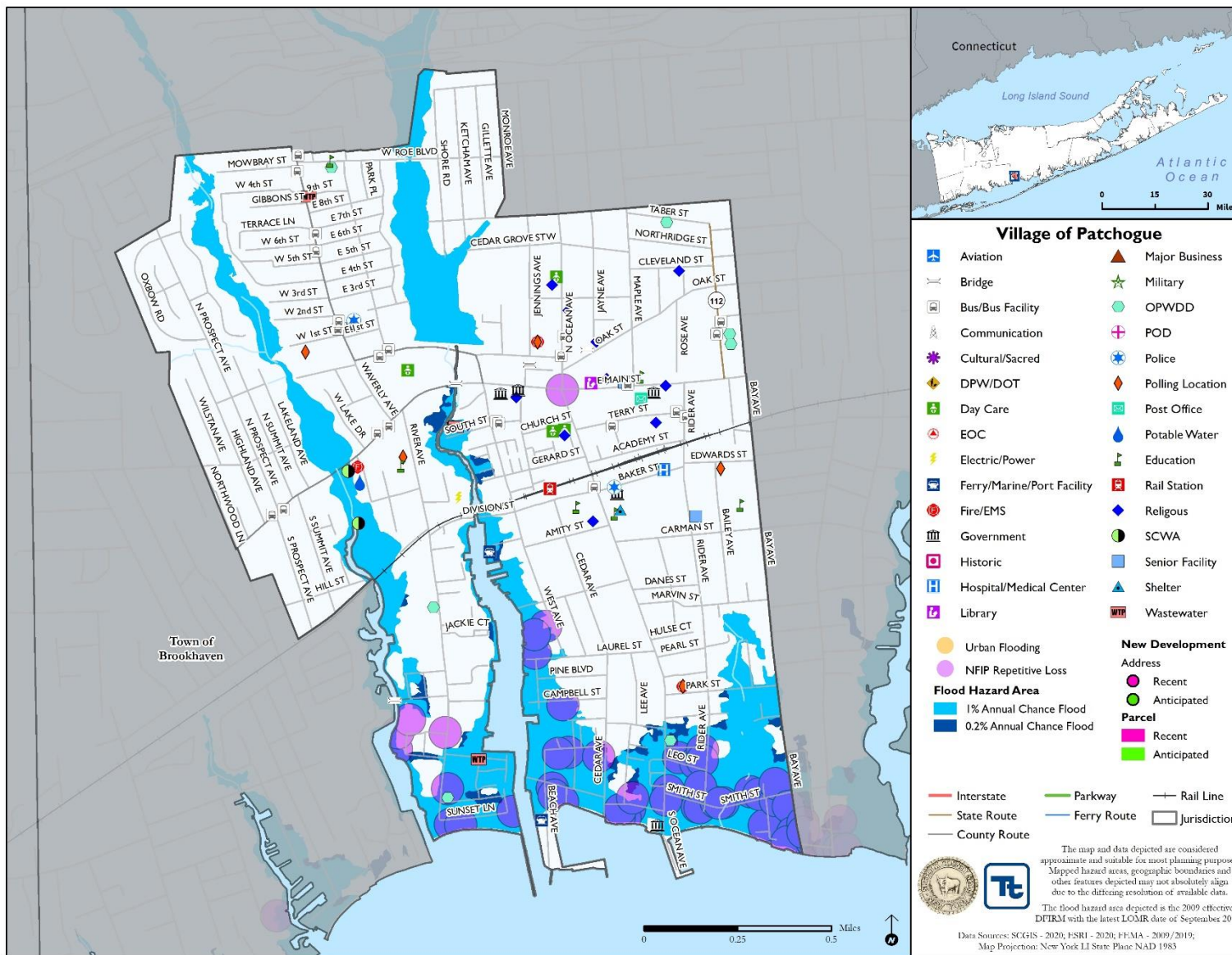




Figure 9.11-2. Village of Patchogue Hazard Area Extent and Location Map 2

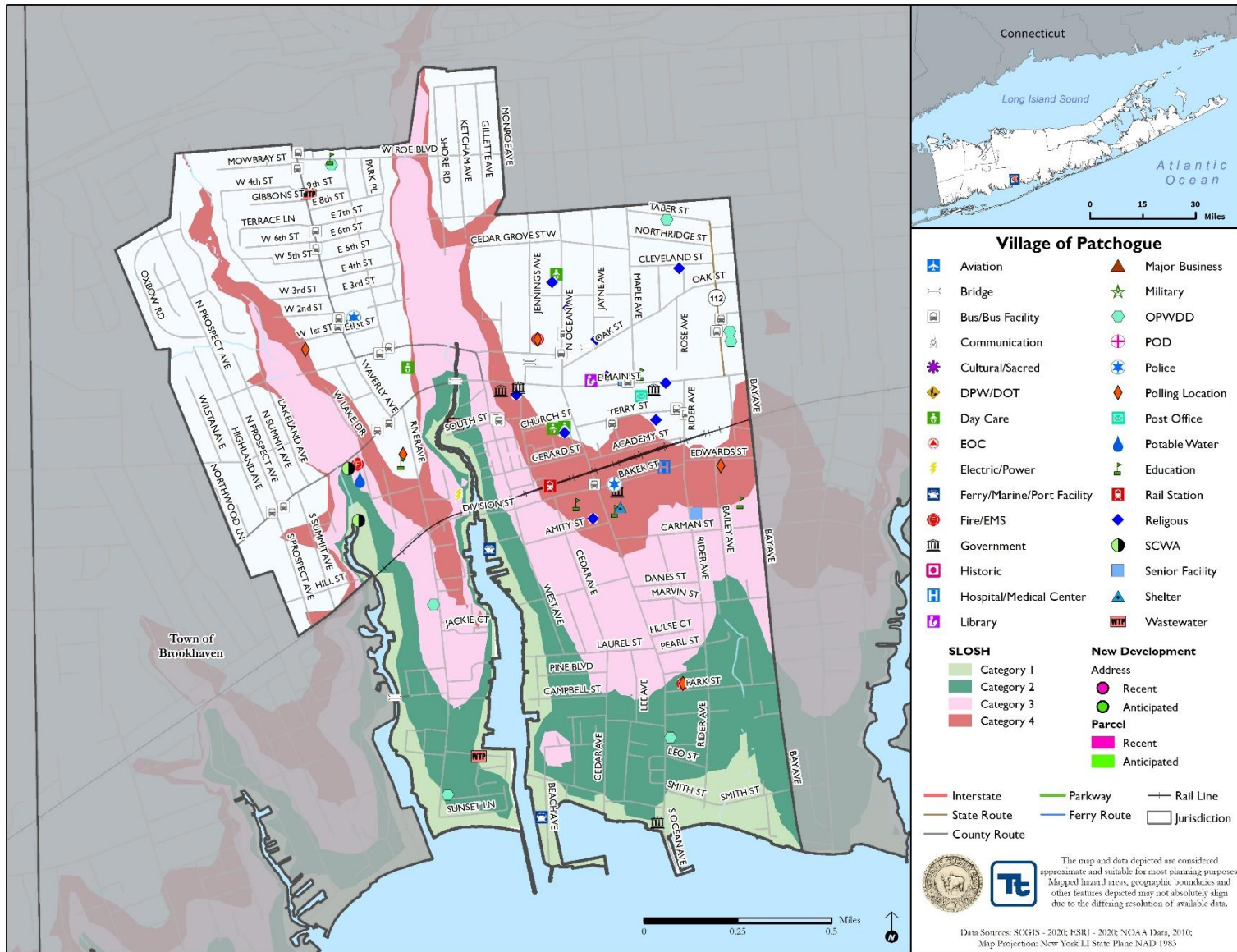




Figure 9.11-3. Village of Patchogue Hazard Area Extent and Location Map 3

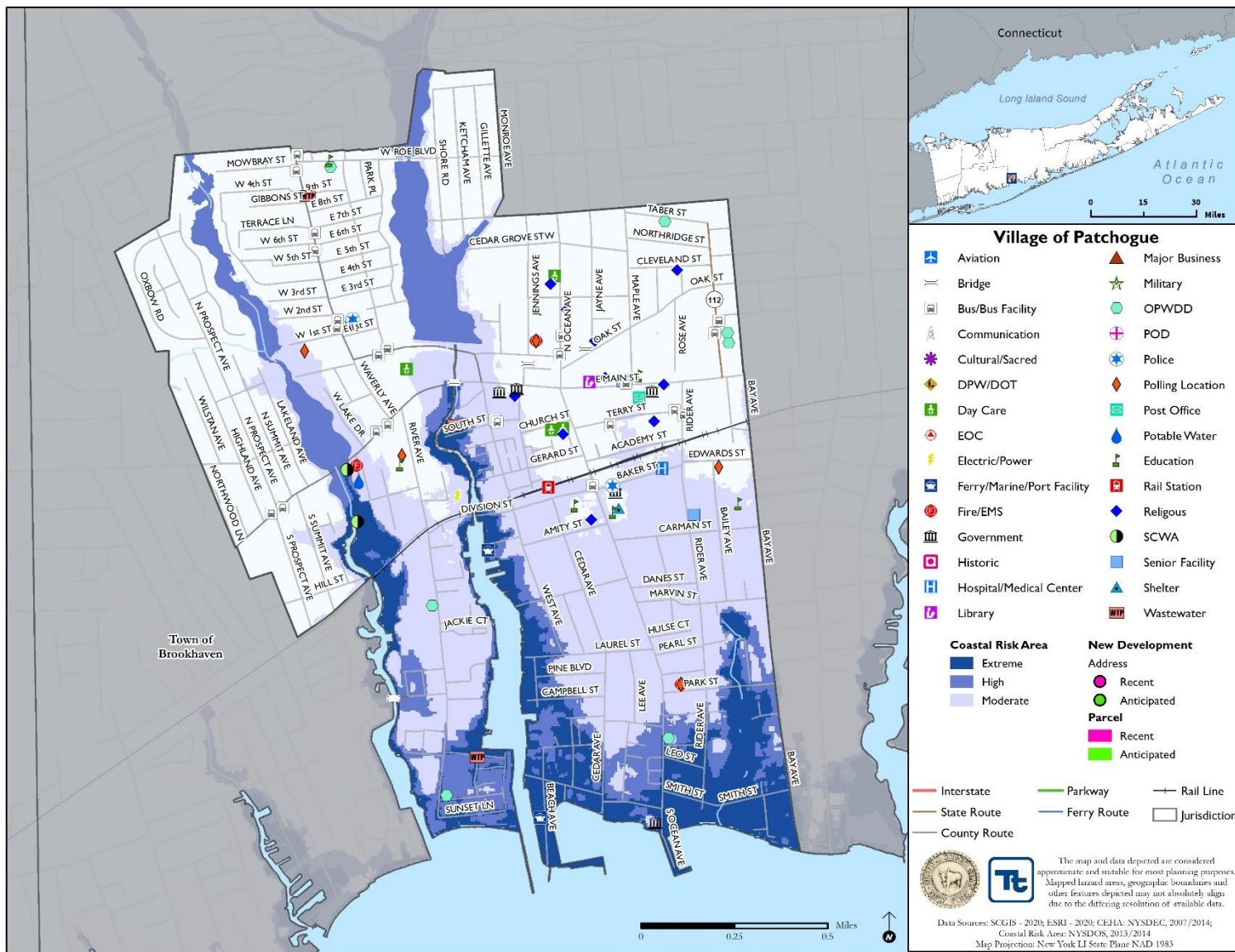






Figure 9.11-4. Village of Patchogue Hazard Area Extent and Location Map 4

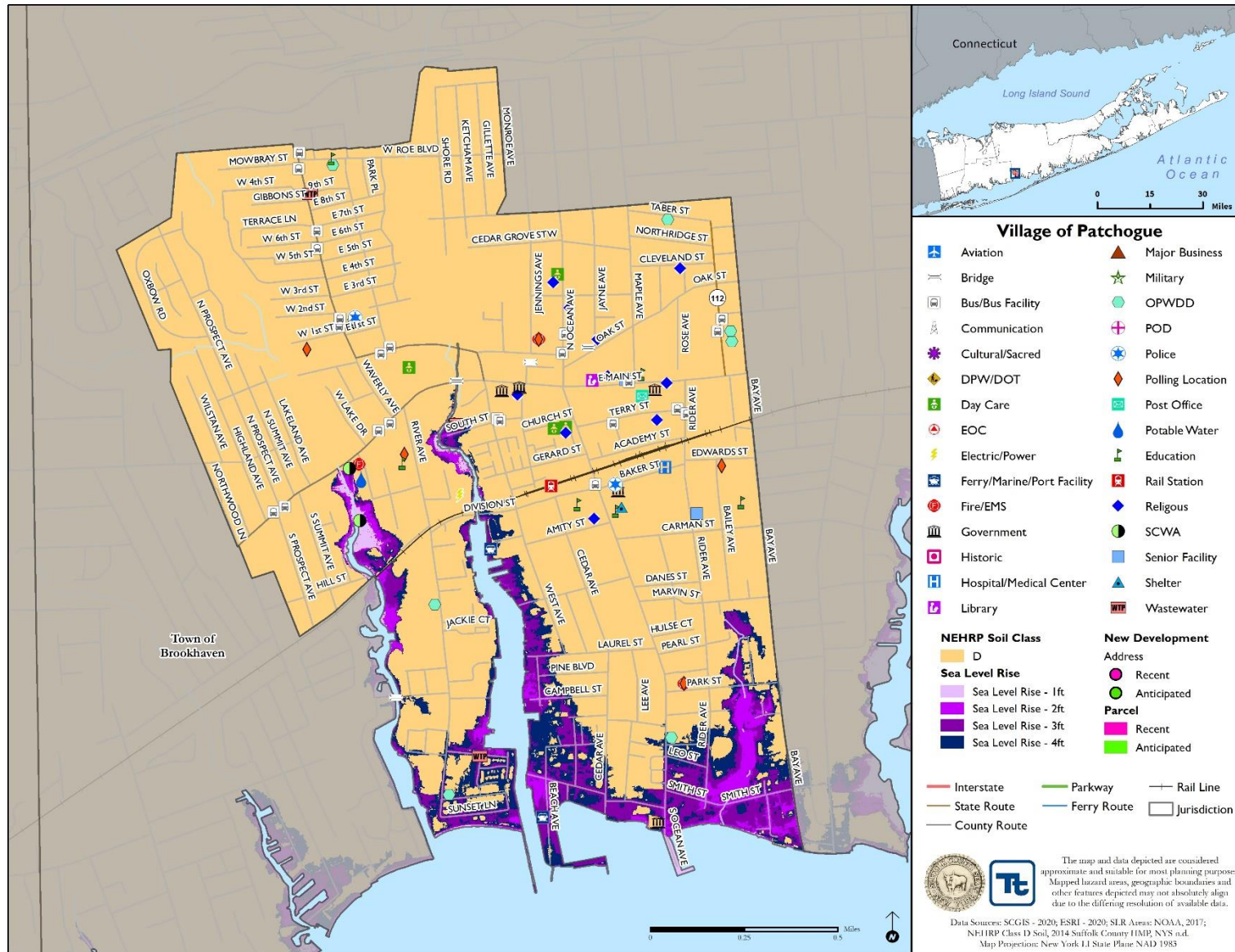
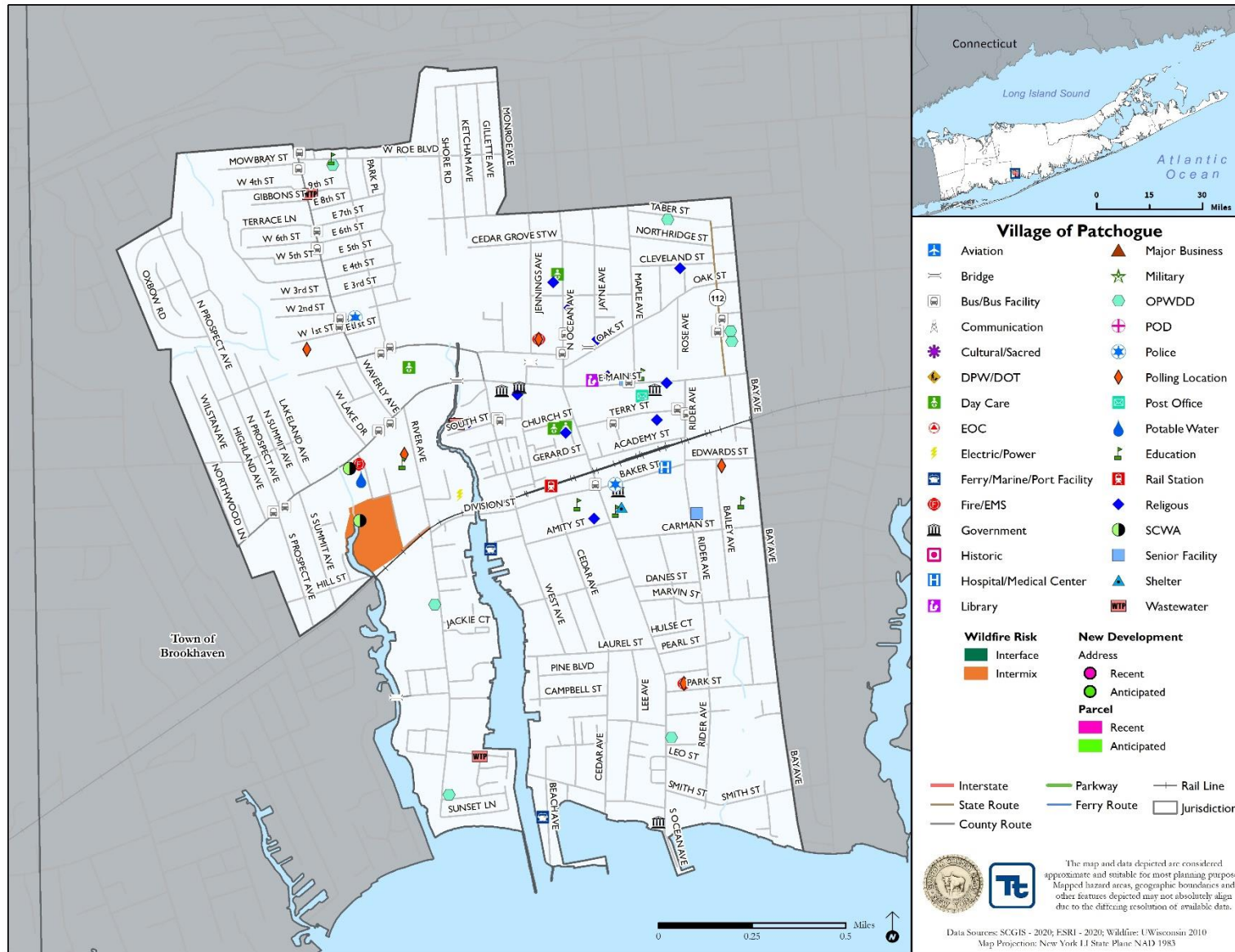




Figure 9.11-5. Village of Patchogue Hazard Area Extent and Location Map 5





Action Worksheet			
<b>Project Name:</b>	Repetitive Loss Mitigation		
<b>Project Number:</b>	2020-Patchogue-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Storm		
<b>Description of the Problem:</b>	All 2.2 sq. miles of the Village in in the floodplain and subject to the vulnerabilities associated with it. 500 of the Villages 4,000 homes were impacted by Sandy. The most flood prone residential areas of the Village are the coastal areas in the southern portion of the Village including Smith Street, Brightwood, and Roosevelt. Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Conduct outreach to 45 flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	1% annual chance flood event + freeboard ( <i>in accordance with flood ordinance</i> )	<b>Estimated Benefits (losses avoided):</b>	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.
<b>Useful Life:</b>	Acquisition: Lifetime Elevation: 30 years (residential)	<b>Goals Met:</b>	1, 2
<b>Estimated Cost:</b>	\$4.5 Million	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	6-12 months
<b>Estimated Time Required for Project Implementation:</b>	Three years	<b>Potential Funding Sources:</b>	FEMA HMGP and FMA, local cost share by residents
<b>Responsible Organization:</b>	NFIP Floodplain Administrator, supported by homeowners	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate homes	\$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages	
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			



**Update Evaluation of the Problem and/or Solution:**

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Action Worksheet		
<b>Project Name:</b>	Repetitive Loss Mitigation	
<b>Project Number:</b>	2020-Patchogue-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Families moved out of high-risk flood areas.
<b>Property Protection</b>	1	Properties removed from high-risk flood areas.
<b>Cost-Effectiveness</b>	1	Cost-effective project
<b>Technical</b>	1	Technically feasible project
<b>Political</b>	1	
<b>Legal</b>	1	The Village has the legal authority to conduct the project.
<b>Fiscal</b>	0	Project will require grant funding.
<b>Environmental</b>	1	
<b>Social</b>	0	Project would remove families from the flood prone areas of the Village.
<b>Administrative</b>	0	
<b>Multi-Hazard</b>	1	Flood, Severe Storm
<b>Timeline</b>	0	
<b>Agency Champion</b>	1	NFIP Floodplain Administrator, supported by homeowners
<b>Other Community Objectives</b>	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Patchogue Sewage Treatment Plant		
<b>Project Number:</b>	2020-Patchogue-006		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood		
<b>Description of the Problem:</b>	The Patchogue Sewage Treatment Plant is located in the 100-year flood zone. While the majority of the structure is located above the 500-year flood elevation, the Main Electrical Control Room has flooded in the past. The Village installed a flood door but additional floodproofing is needed. The Plant also acquired a pre-treatment plant which is now on site and also needs flood protection.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	<p>The Village will conduct an engineering study to determine the necessary floodproofing measures to protect the Sewage Treatment Plant to the 500-year flood level and carry out the selected actions. Options include:</p> <ul style="list-style-type: none"> <li>• Elevation of facility</li> <li>• Floodproofing of facility</li> <li>• Mobile flood barriers</li> </ul> <p>Once the most cost effective option is identified, the Village will carry out the option.</p>		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	500-year flood level	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations
<b>Useful Life:</b>	TBD by engineering study	<b>Goals Met:</b>	2, 8
<b>Estimated Cost:</b>	TBD by engineering study	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Village Budget
<b>Responsible Organization:</b>	Engineer, Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Relocate wastewater plant	N/A	Not possible
	Build levee around facility	N/A	No space for full levee system
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Patchogue Sewage Treatment Plant	
<b>Project Number:</b>	2020-Patchogue-006	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Project will protect critical services of Wastewater Treatment Plant
<b>Property Protection</b>	1	Project will protect Wastewater Treatment Plant from flood damage.
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	
<b>Political</b>	1	
<b>Legal</b>	1	The Village has the legal authority to complete the project.
<b>Fiscal</b>	0	Project requires funding support.
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	0	Flood
<b>Timeline</b>	0	Within 5 years
<b>Agency Champion</b>	1	Engineer, Public Works
<b>Other Community Objectives</b>	1	Protection of critical services
<b>Total</b>	11	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Patchogue Medford Library Backup Power		
<b>Project Number:</b>	2020-Patchogue-008		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	All hazards		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. The Patchogue Medford Library at 54-60 E Main Street as well as the Annex at 160 West Main Street are cooling and heating shelters. The buildings lack backup power.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Library Engineer will research what size generator is necessary to supply backup power to the Library. The Village will work with the Library to secure funding for and install a backup generator and necessary electrical components.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of Medford Library as heating and cooling shelter
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 2, 7
<b>Estimated Cost:</b>	\$265,000 for Main Library and \$61,000 for Annex	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Immediately after funding received
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Library, Village Administration	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Install solar panels	\$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbine	\$100,000	Weather dependent; poses a threat to wildlife; expensive repairs if needed
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			





Action Worksheet		
<b>Project Name:</b>	Patchogue Medford Library Backup Power	
<b>Project Number:</b>	2020-Patchogue-008	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Project will protect critical services of library as heating and cooling shelter
<b>Property Protection</b>	1	Project will protect library from power loss.
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	
<b>Political</b>	1	
<b>Legal</b>	0	The Library has legal authority to complete the project.
<b>Fiscal</b>	0	Project requires funding support.
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	All hazards
<b>Timeline</b>	1	1 year
<b>Agency Champion</b>	1	Library, Village Administration
<b>Other Community Objectives</b>	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	