



9.2 Town of Babylon

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

9.2.1 Hazard Mitigation Planning Team

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

Table 9.2-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Brian Zitani, WMS Address: 281 Phelps Lane North Babylon, NY 11703 Phone Number: 631-422-7645 Email: bzitani@townofbabylon.com	Name/Title: John Cifelli, Director of Operations Address: 200 E. Sunrise Highway Linden, NY 11757 Phone Number: 631-957-4464 Email: jcifelli@townofbabylon.com
NFIP Floodplain Administrator	
Name/Title: Brian Zitani, WMS Address: 281 Phelps Lane North Babylon, NY 11703 Phone Number: 631-422-7645 Email: bzitani@townofbabylon.com	

9.2.2 Municipal Profile

The geographical area now known as the Town of Babylon was originally part of the Town of Huntington, and designated “Huntington South” until 1803. In 1872, the Babylon was officially partitioned into an independent Town, responsible for all aspects of government and response under the New York State “home rule” system. It should be noted the Villages maintain zoning and building codes independent of the Town.

Town of Babylon, including the Village of Amityville, Village of Lindenhurst, and Babylon Village, is the located on the south shore and western border of Suffolk County. The Town and Villages are bordered on the south by the Atlantic Ocean. An 8.5-mile-long inhabited barrier island prevents direct ocean wave impact along Babylon’s South Shore lies between the Atlantic Ocean and the Great South Bay. This island, known as Jones Island, was created by the Long Island State Parks Commission from several smaller islands in the early 1900s. The waterfront area of the town is highly developed, primarily with residences, as depicted in the aerial photographs below, showing portions of our frontage along the Great South Bay.



Both the Town and Villages have boards which will be responsible for the adoption of this Hazard Mitigation Plan. The Town Board consists of an Elected Supervisor, and 4 elected Town Council members.

According to the U.S. Census, the 2010 population for the Town of Babylon was 164,661. The estimated 2017 population was 162,968, a 1.0 percent decrease 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 14.0 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.

9.2.3 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 9.2-2 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 9.2-2. 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	44	9	37	8	53	14	41	8	77	21	62	6
Multi-Family	10	0	15	0	22	0	15	1	11	3	6	0
Other (commercial, mixed-use, etc.)	13	11	0	0	26	25	3	0	2	2	16	0
Total Permits Issued	67	20	52	8	101	39	59	9	90	26	84	6
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												
Bayview Villas	Multiple-Residence	18 apartment units		438 Sunrise Highway, West Babylon, NY SCTM# 0100-		NEHRP Class D		Development completed in 2018				



Type of Development	2014	2015	2016	2017	2018	2019
			157.00-02.00-018.000			
Marconi Villas	Multiple-Residence	20 apartment units	500 Marconi Blvd., Copiague, NY SCTM# 0100-177.00-03.00-058.001	NEHRP Class D, SLOSH 4		Development completed in 2019
Harbor View Estates	Senior Citizen MR	40 Condo Units	235 S. Great Neck Road, Copiague, NY SCTM# 0100-192-01-11.002	1% and .2% Flood Zones, NEHRP Class D, SLOSH 2, 3, 4, High coastal risk hazard area		Development completed in 2018
Grey Barn	Mixed –use	500 apartments/Retail/Office use	805 Broadway, N. Amityville, NY SCTM# 0100-163-01-57.001, 57.002, 57.003 0100-164-02-25.001	NEHRP Class D		Development to be completed in 2020
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years						
Wyandanch Rising	Mixed-use	40 Acre Downtown redevelopment	Wyandanch Hamlet	High Groundwater Brownfield		Multi-year Multi-phased development of mixed-use, single-use, affordable housing and transit oriented development
Downtown Copiague	Mixed-use	30 Acre Downtown redevelopment	Copiague Hamlet	High Groundwater		Multi-year Multi-phased development of mixed-use and single-use transit oriented development.

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.

9.2.4 Capability Assessment

The Town of Babylon 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 9.2.4). The Town of Babylon 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 Town of Babylon and where hazard mitigation has been integrated.



Table 9.2-3. Planning, Legal, and Regulatory Capability

	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated?	
						If no - can it be a mitigation action?	
Codes, Ordinances, & Requirements							
Building Code	Yes	Building Code; Code of the Town of Babylon, Chapter 89	Local	Building Inspector	Yes	Yes	-
<p>Comment: The Building Code regulates construction in the Town of Babylon. All matters concerning, affecting or relating to the construction, alteration or removal of buildings or structures herein specified as public, residence, business or storage buildings erected or to be erected within the zoned areas of the Town and outside the limits of any incorporated village are presumptively provided for in this chapter. Such provisions shall apply with the same force to town, county or state buildings as they do to private buildings, except as may be otherwise specifically provided. No building or structure shall hereafter be constructed, altered, repaired or removed, nor shall the equipment of a building, structure or premises be constructed, installed, altered, repaired or removed except in conformity with the provisions of this chapter or authorized rule or approval of the Building Inspector made and issued thereunder.</p>							
Zoning Code	Yes	Zoning Code; Code of the Town of Babylon, Chapter 213	Local	Department of Planning and Development	No	Yes	-
<p>Comment: It is the intention of the Town Board to conduct a coastal zone management program and study which will result in a development of a comprehensive plan and scheme for the future development of the areas set forth herein.</p>							
Subdivisions	Yes	Subdivision Code; Code of the Town of Babylon, Chapter 213, Article XVIII, 213-230	Local	Department of Planning and Development, Planning Board	No	Yes	-
<p>Comment: The ordinance regulates subdivision of land in the town.</p>							
Stormwater Management	Yes	Stormwater Management and Erosion and Sediment Control; Code of the Town of Babylon, Chapter 189	Local	Department of Environmental Control/ Planning and Development Department	Yes	Yes	-
<p>Comment: The Town Board of the Town of Babylon hereby establishes this policy applicable to all land development activities within the Town of Babylon to provide reasonable guidance for the regulation of stormwater runoff and erosion and sediment control for the purpose of protecting local water resources from degradation. It is determined that the regulation of stormwater runoff and sediment discharges from land development projects and other construction activities is in the public interest in order to control and minimize increases in stormwater runoff rates and volumes, soil erosion, stream channel erosion, and nonpoint source pollution associated with stormwater runoff and will prevent threats to public health and safety and enhance and improve the environmental and economic conditions within the Town of Babylon.</p>							
Post-Disaster Recovery	No	-	-	-	No	-	-
<p>Comment:</p>							
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes	Yes	-
<p>Comment:</p>							
Growth Management	No	N/A	Local	-	No	-	-



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated?	
						If no - can it be a mitigation action?	
Comment: Incorporated into most local ordinances listed above.							
Site Plan Review	Yes	Site Plan Review Code;	Local and County	Suffolk County Planning Commission, Town Department of Planning and Development, Planning Board	No	Yes	-
Comment: Suffolk County Planning Commission has review authority on certain actions. If they disapprove an action, Town Boards must approve with a greater majority & present findings. Town Board Adopted site plan review requirements under Chapter 186. Form based code for Wyandanch Chapter 212. Originally adopted under L.L. no. 1-1977 the Town Site Plan review regulations was last revised in 2005. Form based code adopted for Wyandanch Downtown Revitalization Plan in 2011.							
Environmental Protection	Yes	Environmental Quality Review, Chapter 114; Freshwater Wetlands, Chapter 128	Local	Department of Environmental Control	Yes	Yes	-
Comment: In adopting the Town of Babylon Environmental Quality Review Act (TOBEQRA), it is the Town Board of the Town of Babylon's intention that all agencies conduct their affairs with an awareness that they are stewards of the air, water, land and living resources and that they have an obligation to protect the environment for the use and enjoyment of this and all future generations.							
Flood Damage Prevention	Yes	Flood Damage Prevention Code, Code of the Town of Babylon, Chapter 125	Local	Commissioner of Planning and Development	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)	Yes	-
Comment: The code is adopted in order to: A. Protect human life and health; B. Minimize expenditure of public money for costly flood control projects; C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public; D. Minimize prolonged business interruptions; E. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone, sewer lines, streets and bridges located in areas of special flood hazard; F. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas; G. Provide that developers are notified that property is in an area of special flood hazard; and H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.							
Municipal Separate Storm Sewer System (MS4)	Yes	Storm Sewers: Illicit Discharges, Activities and Connections, Code of the Town of Babylon, Town of Babylon MS4 Stormwater Management Program Plan 2017 Update, Code of the Town of Babylon, Chapter 190	Local	Commissioners of Environmental Control, Planning and Development and the Department of Public Works, Town Attorney and/or his/her designee(s) are authorized to administer and implement the provisions of this chapter.	Yes	Yes	-



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated?	
						If no - can it be a mitigation action?	
<p>Comment: Chapter 190: The purpose of this chapter is to provide for the health, safety, and general welfare of the residents and general public of the Town of Babylon through the regulation of non-stormwater discharges to the Town of Babylon municipal separate stormwater drainage system (MS4) to the maximum extent practicable as required by Section 402 of the Clean Water Act[1] and the New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s), Permit GP-0-10-002 issued pursuant to Article 17, Titles 7 and 8 and Article 70 of the Environmental Conservation Law or as amended or revised. This chapter establishes methods for controlling the introduction of pollutants into the Town of Babylon MS4 system in order to comply with the requirements of the SPDES General Permit for Municipal Separate Storm Sewer Systems.</p>							
Emergency Management	No	-	-	-	Yes	-	-
Comment:							
Climate Change	No	-	-	-	Yes	-	-
Comment:							
Disaster Recovery Ordinance	No	-	-	-	No	-	-
Comment:							
Disaster Reconstruction Ordinance	No	-	-	-	No	-	-
Comment:							
Other	Yes	Coastal Erosion Hazard Areas, Chapter 99	Local	Commissioner of Environmental Control	No	Yes	-
<p>Comment: The Town of Babylon hereby assumes the responsibility and authority to implement and administer a coastal erosion management program within its jurisdiction pursuant to Article 34 of the New York State Environmental Conservation Law. It is the purpose of this chapter to:</p> <ul style="list-style-type: none"> Establish standards and procedures for minimizing and preventing damage to structures from coastal flooding and erosion and to protect natural protective features and other natural resources. Regulate, in coastal areas subject to coastal flooding and erosion, land use and development activities so as to minimize or prevent damage or destruction to man-made property, natural protective features and other natural resources and to protect human life. Regulate new construction or placement of structures in order to place them a safe distance from areas of active erosion and the impacts of coastal storms to ensure that these structures are not prematurely destroyed or damaged due to improper siting, as well as to prevent damage to natural protective features and other natural resources. Restrict public investment in services, facilities or activities which are likely to encourage new permanent development in erosion hazard areas. Regulate the construction of erosion protection structures in coastal areas subject to serious erosion to assure that, when the construction of erosion protection structures is justified, their construction and operation will minimize or prevent damage or destruction to man-made property, private and public property, natural protective features and other natural resources. 							
Planning Documents							
Comprehensive Plan	Yes	Comprehensive Plan, 8/11/1998	Local	Town Board	No	Yes	-
Comment: Completed per state mandate 8/11/98. Town has adopted a Vision Plan for downtown Copiague, downtown Wyandanch.							
Capital Improvement Plan	Yes	Capital Improvement Plan	Local	DPW	No	Yes	-
Comment: The plan is updated annually.							
Disaster Debris Management Plan	Yes	Suffolk County Multi-Jurisdictional Debris Management Plan	County, Local	Suffolk County FRES	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?	
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	9/22/2009	Local	Town Department of Environmental Control, Town Flood Plain Manager	No	Yes	-
Comment: <ul style="list-style-type: none"> Floodplain Management Study. Fire Island Inlet to Montauk Point (FIMP) Reformulation Study Great South Bay Watershed Study Nassau County Bay-Bay Study (USACE) 							
Stormwater Plan	No	In progress	-	-	No	-	-
Comment:							
Open Space Plan	No	-	-	-	Yes	-	-
Comment:							
Urban Water Management Plan	No	-	-	-	No	-	-
Comment:							
Habitat Conservation Plan	No	-	-	-	No	-	-
Comment:							
Economic Development Plan	No	-	-	-	No	-	-
Comment:							
Shoreline Management Plan	No	-	-	-	Yes	-	-
Comment:							
Community Wildfire Protection Plan	No	-	-	-	No	-	-
Comment:							
Forest Management Plan	No	-	-	-	No	-	-
Comment:							
Transportation Plan	No	-	-	-	No	-	-
Comment:							
Agriculture Plan	No	-	-	-	Yes	-	-
Comment:							
Other (this could include a climate action plan, tourism plan, business development plan, etc.)	Yes	Long Island South Shore Estuary Reserve Comprehensive Management Plan	State/Federal	Long Island South Shore Estuary Reserve	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?	
Comment: The County is completing a Hike/Bike Plan and a County Blueways Plan. Babylon is involved with both plans that are being prepared through the County Department of Planning under an Economic Development Grant. Plans will be adopted in 2020.							
Response/Recovery Planning							
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	-	-	-	-	-	-
Comment:							
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	2019	Local	OEM	Yes	Yes	-
Comment:							
Post-Disaster Recovery Plan	No	-	-	-	No	-	-
Comment:							
Continuity of Operations Plan	No	-	-	-	No	-	-
Comment:							
Public Health Plan	No	-	-	-	No	-	-
Comment:							
Other	No	-	-	-	No	-	-
Comment:							

Table 9.2-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Building Department
Permits are tracked by hazard area. For example, floodplain development permits.	Incorporated in Building Code
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	Incorporated in comprehensive plan

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Babylon.



Table 9.2-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Planning Board
Mitigation Planning Committee	No	Responsibility included in other departments
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	Industrial Development Agency
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Code Red with Suffolk County
Maintenance programs to reduce risk	Yes	DPW at town level, larger projects with County, State, and Army Corps
Mutual aid agreements	Yes	With County
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Department of Planning & Development - Planners, Assistant Civil Engineers, Engineering Aides
Engineers or professionals trained in building or infrastructure construction practices	Yes	Department of Planning & Development – Building Inspectors, Assistant Civil Engineers Contract Engineers
Planners or engineers with an understanding of natural hazards	Yes	Department of Planning & Development – Fire Marshall/Assistant Civil Engineer Department of Environmental Control – Waterways Management Supervisor
Staff with expertise or training in benefit/cost analysis	Yes	Department of Finance -- Comptroller & Environmental Control
Professionals trained in conducting damage assessments	Yes	Town Chief Building Inspector and full time building inspectors are trained for damage assessments.
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Department of Planning & Development - Planners, Assistant Civil Engineers, Engineering Aides Department of Environmental Control – Environmental Analysts, Waterways Management Supervisors Department of Public Works Highway Engineering – Senior Engineering Aides Department of Information Technologies – IT Director Contract Application Developers
Scientist familiar with natural hazards	Yes	Department of Environmental Control – Environmental Analysts, Waterways Management Supervisors
NFIP Floodplain Administrator (FPA)	Yes	Department of Environmental Control – Waterways Management Supervisor ASFPM –Certified Floodplain Manager 2009
Surveyor(s)	No	Contract Surveyors
Emergency Manager	Yes	OEM Committee



Resources	Available? (Yes or No)	Department/ Agency/Position
Grant writer(s)	Yes	Department of Finance – Grant Writer Department of Environmental Control, Planning and Development-Down Town Revitalization, Department of Public Works - Engineering
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	Yes	Coastal Erosion Administrator, Stormwater Manager

Fiscal Capability

The table below summarizes financial resources available to the Town of Babylon.

Table 9.2-6. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR, CDBG-CV)	Yes, have utilized in the past Community Reconstruction Program (CRP), CDBG – Home Improvement Program (HIP)
Capital improvements project funding	Yes, have utilized in the past Town Post-Storm facility reconstruction
Authority to levy taxes for specific purposes	Yes, have utilized in the past
User fees for water, sewer, gas or electric service	No
Impact fees for homebuyers or developers of new development/homes	Yes, have utilized for traffic safety measures, optical pre-emption, and roadway improvements
Stormwater utility fee	Charge for reviews on Stormwater Pollution Prevention Plans
Incur debt through general obligation bonds	Yes, have utilized in the past Updated/ Bonds issued for Irene and Sandy recovery
Incur debt through special tax bonds	Yes, have utilized in the past
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	FEMA sponsored grant funding; County sponsored grant funding for roadways improvements and stormwater remediation County Water Quality Program funding for proposed stormwater project. HMGP
Open Space Acquisition funding programs	Yes, County Sponsored Open Space and ground water protection funds.
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	Mitigation grant programs

Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Town of Babylon.

Table 9.2-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	Yes – Supervisor’s Office



Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Personnel skilled or trained in website development?	No – contracted out
Hazard mitigation information available on your website; if yes, describe	Yes – needs to be updated
Social media for hazard mitigation education and outreach; if yes, briefly describe.	Yes – Facebook and Twitter
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	No
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	Yes – Civic Association, Rotary Club
Warning systems for hazard events; if yes, briefly describe.	County Code Red
Natural disaster/safety programs in place for schools; if yes, briefly describe.	No
Other	PSAs on website

Community Classifications

The table below summarizes classifications for community programs available to the Town of Babylon.

Table 9.2-8. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	NP	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	4/4	2003
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	3/9*	-
NYSDEC Climate Smart Community	Yes	3/4	2020
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 9.2-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Coastal Erosion	Medium
Cyber Security	High
Disease Outbreak	Medium
Drought	Medium



Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Earthquake	Medium
Expansive Soils	Medium
Extreme Temperature	Medium
Flood	Medium
Groundwater Contamination	Medium
Hurricane	High
Infestation and Invasive Species	Medium
Nor'Easter	High
Severe Storm	High
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 Town of Babylon has access to resources to determine the possible impacts of climate change upon the municipality through the Environmental Control Department and Planning Department. The Town follows NYS planning guidance and NOAA GIS models for sea level rise. The Town is developing policy for internal projects such as elevating docks to a higher elevation post-Sandy to take into account rising sea level and is looking to codify these policies.

9.2.5 National Flood Insurance Program

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

NFIP Floodplain Administrator (FPA)

Brian Zitani, CFM, Waterways Management Supervisor- Department of Environmental Control

National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Town of Babylon.

Table 9.2-10. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties
Town of Babylon	2,852	4,505	\$182,615,399.67	574

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

Flood Vulnerability Summary

High risk areas include the barrier beach communities and Bayfront hamlets of West Babylon, Lindenhurst and Copiague Town maintains a list of property owners interested in mitigation (over 300).

Hurricane Sandy inundated all structures located in the Town mapped 100-year and in some areas 500-year flood plain. 1507 structures were surveyed for substantial damage using FEMA’s Substantial Damage Estimate (SDE) program. Approximately 300 were identified as potentially being substantially damaged based on the SDE review, 428 have been confirmed to date. Most of the existing structures are pre-FIRM construction. Most SDE





properties were located in the moderate wave action zone, and damage resulted from wave action. A small number of homes were buoyed off the foundations and damage resulted when the flood receded.

After Tropical Storm Irene 60 residents inquired about 404 elevation funding, 16 filed Letter of Intent, 10 applications were approved and five completed the process of elevating in 2019.

Funding sources include: HMGP 404, Federal flood insurance Increased Cost of Compliance, Small Business Administration loans, NY Rising (CDBG-DR), and property owners.

Substantial Damage Estimates are done by the NFIP Flood Plain Administrator. Hurricane Sandy inundated all structures located in the Town mapped 100-year and in some areas 500-year flood plain.

Resources

The Building Department is responsible for floodplain management. The community FDPO identifies the Commissioner of Planning and Development as the local NFIP Floodplain Administrator. The Waterways Management Supervisor, currently Brian Zitani, was appointed to the position of floodplain administration, which is an auxiliary duty.

Town of Babylon's NFIP program is administered through the Town departments of Environmental Control and Planning and Development. Town Waterways Manager is the primary contact. NFIP administration services include site planning assistance, building permit review, inspections, and engineering services.

The Department of Environmental Control maintains and updates the Town GIS system, comments on Zoning Board, Planning Board, Town Board and building permit applications, conducts public outreach programs, provides flood map information and flood history to residents, schedules professional training for staff and maintains the Flood Code/Flood Insurance Study/current and Historic FIRM records.

The Department of Planning & Development/Building Division enforces flood construction code, reviews/processes all building permits in the flood plain, conducts building permit and substantial damage/substantial improvement inspections, maintains permit records.

The Town of Babylon requests annual flood claim updates from FEMA for GIS mapping inventory. The list does not include damaged properties that do not have flood insurance. The Town started keeping a residential mitigation inventory in 2011.

Staff from the Department of Environmental Control and Planning and Development speaks at community and Civic Association meetings to discuss local flood risk, mitigation and NFIP regulations and Flood Insurance.

Substantial improvements are determined by determining the cost of the improvement first. If the cost is 50% or higher compared to the value of the structure excluding the land, then it may be considered as a substantial improvement.

Compliance History

Town of Babylon joined the NFIP on July 16, 1979 and is currently an active member of the NFIP. The current effective Flood Insurance Rate Maps are dated September 25, 2009. The community's Flood Damage Prevention Ordinance (FDPO), found at Chapter 125 of the local code, was last updated on August 4, 2009. The Town meets the state's minimum requirements for floodplain management.



The community is currently in good standing in the NFIP and has no outstanding compliance issues. The Town of Babylon has completed a Community Assistance Visits (CAV), with the most recent visit completed on October 8, 2014.

Regulatory

The communities Flood Damage Prevention Ordinance (FDPO) was last updated on August 4, 2009 and is found at Chapter 125 of the local code.

Minimum standards set forth by FEMA and New York State have been adopted by the Town of Babylon. Following Hurricane Sandy, the Zoning Board suspended height restrictions for structures being elevated to the BFE +2'. Planning Board recognizes elevation requirements on new homes when reviewing "Architectural Review" applications.

Community Rating System

The Town of Babylon does not participate in the Community Rating System. The Town previously was a Class 10 community in the program but is not interested in rejoining the program at this time.

9.2.6 Integration with Other Planning Initiatives

As this HMP update is implemented, the Town of Babylon 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

- **Community Development:** The Town of Babylon Community Development Program (CDP) develops programs to improve private and community facilities, principally for persons of low and moderate income. The Community Development Department is responsible for overseeing, managing and administering projects that receive funding from HUD. Projects include the construction and rehabilitation of housing, parks, streets, sidewalks, roads, senior centers, and handicap accessibility features in various low-mod areas within the Town.
- **Department of Public Works:** The Department of Public Works (DPW) is responsible for the maintenance and engineering functions relating to municipal buildings, facilities, structures, roadways, sumps, trees, and other green vegetation. DPW includes the Highway Division, Highway Engineering, the Buildings and Grounds Division, Street Lighting, the Sign Shop, Fleet Maintenance, and the Beautification Program.
 - *Highway Division:* The Highway Division is responsible for the maintenance of all town recharge basins and drainage structures, ice control and snow removal, street leaf bag distribution, street sweeping program, tree inspection, pothole repair, and debris cleanup.
 - *Highway Engineering:* Highway Engineering is responsible for road, catch basin, and other related structure design, construction management, and quality control oversight.
 - *Building & Grounds Division:* The Building and Grounds Division is responsible for the repairs, alterations, and maintenance of all town facilities, including fences, town pools and filtration systems, plumbing, carpentry, masonry, painting, landscaping, building of new structures, removing refuse, and maintenance of all facility grounds.
 - *The Sign Shop:* The Sign Shop is responsible for the installation, care, and maintenance of all traffic control and street signs in the town. This includes all street name signs and regulatory



- signs (including those on county roads), such as "No Parking." The Sign Shop is also responsible for pavement markings on town roads.
- *Street Lighting Division:* The Street Lighting Division is responsible for the installation, maintenance, and emergency service of approximately 15,000 streetlights located throughout the town. In addition, this division is responsible for an additional 3,500 lights located in the Villages of Babylon and Lindenhurst.
 - *Fleet Maintenance Division:* The Fleet Maintenance division maintains all of the vehicles for the Town, including buses, pickup trucks, vans, hybrid cars, pay-loaders and Highway trucks.
 - **Department of Environmental Control:** The Department manages the environmental monitoring programs and provides technical support associated with the operation and permit requirements of the Town's solid waste management facilities. The Department assists the Town Board, Planning Board and Zoning Board of Appeals in complying with the requirements of the State Environmental Quality Review Act (SEQRA) for all actions brought before them. The Department carries out a stormwater management program to ensure the Town's compliance with the New York State MS4 regulations. The Department provides technical assistance for Town special projects and environmental initiatives such as sewerage, wetland restoration, stormwater mitigation, and waterfowl control and the preparation of technical documents related to the protection of natural resources of the Town. The Department assists the Town Board and other Departments with funding requests, environmental permitting and advice on environmental issues. There are several departments that fall under the jurisdiction of the Department of Environmental Control that relate to hazard mitigation:
 - *Bay Management & Shellfish Management:* The Hard Clam Survey is an annual survey of the town's 10,000 acres of underwater land and is used to determine the abundance and distribution of clams and their predators. The Spawner Sanctuary is an area stocked with clams at high densities with the hope of enhancing reproduction. To date, over 7,900 bushels of clams have been stocked.
 - *Shellfish Grow Out:* The aquaculture program began back in 1978, with the first introduction of 180,000 seed clams. One million seed clams are grown out every year. The seed is placed in the rafts at 3-5 millimeter in size and then re-seeded into the bay in October when they are about 18-20 millimeters. Over 40,000,000 clams and 1,000,000 oyster have been introduced since the program's inception.
 - *Endangered Species Management:* The Town has about 6.5 miles of beach that is monitored almost daily during the breeding season for the Federally-listed Endangered species Piping Plover and the NYS-listed Threatened species Least Tern. We also monitor the marsh islands in the Bay for the NYS listed Threatened species Common Tern and the Federally-listed Endangered Species the Roseate Tern. At the end of each season, we report our productivity numbers to both the State and Federal governments.
 - **Fire Marshal's Office:** The Town of Babylon's Fire Marshal's Office protects life and property from fires, explosion, and man-made and natural hazards through aggressive investigation of fire and explosion incidents, quality fire protection inspection services, enforcement of the State Fire Prevention laws, data collection and analysis, and public safety education. The Fire Marshal's Office works with 11 fire departments and one Ambulance Corp, encompassing the 58 square miles of the Town of Babylon. Fire Marshals are NYS peace officers and can issue summons and make arrests. The Fire Marshal's Office is responsible for:
 - Investigation involving hazardous materials, homeland security incidents, plan reviews, and public education
 - Issuing violation and criminal appearance tickets to ensure compliance with the town's codes
 - Restricting occupancy of a building or use of equipment due to violation of the law and adverse health and safety conditions
 - The enforcement of the New York State Fire and Building codes, the Code of the Town of Babylon, and the NFPA Code
 - **Department of General Services:** The Town of Babylon's General Services Department has a variety of divisions for which it is responsible. Among these divisions are Purchasing, Personnel and Labor



Relations, Affirmative Action, Building Maintenance, Central Printing and Mailing, and Information Technology.

- *Purchasing*: The Purchasing Division is responsible for the purchase of all equipment, supplies, and services required by the town. The division manages the bidders list, evaluates vendors, and handles bid solicitation and competitive bidding, receiving, and quality control.
- *Building Maintenance*: The Building Maintenance Division supervises the custodial staff that is responsible for Town of Babylon building maintenance.
- *Central Printing & Mailing*: Central Printing and Mailing is responsible for the printing and copying for in-house purposes. The Mailing Office is responsible for distribution of all correspondence throughout town government.
- *Information Technology*: Information Technology is responsible for providing both mainframe and PC-based computer support systems for all town departments
- **Long Island Green Homes**: The Long Island Green Homes Program helps Town of Babylon homeowners make energy efficiency improvements at no upfront cost to themselves. The improvements enable residents to reduce their annual energy costs, while making their homes more comfortable and healthier.
- **Department of Planning & Development**: The Town of Babylon Department of Planning and Development is committed to managing development through effective planning and zoning practices designed to enhance the quality of life in residential neighborhoods, create vibrant downtowns and business districts, protect the environment and promote an atmosphere in which industry can thrive. The Department advises the Supervisor, Town Board and various boards and commissions on matters of land use and development and also maintains and updates the Town's Zoning Map, and Subdivision and Site Plan Regulations. The Department strives to work with communities to achieve and maintain a better quality of life by providing professional guidance and coordination of all land planning and development activities, and by fairly and consistently implementing the Town's regulations and policies.
 - *Division of Building*: The Division of Building issues permits and enforces the zoning and local laws, ordinances, and buildings codes of the town. No building can be constructed or altered on any lot, plot, or premises until a Town of Babylon building permit authorizing the work has been issued. The Building Division requires that copies of plans, specifications, and other necessary information be filed with every permit application.
 - *Division of Engineering*: This division is responsible for site plan reviews, which ensure that plans submitted for new building construction or for major modifications to an existing site are in conformance with Town of Babylon specifications with regard to drainage, parking lot design, outdoor lighting, and landscaping. This division is also responsible for on-site inspections to ensure correct implementation of site plans in accordance with town specifications. The Engineering Division also participates in special projects.
 - *Division of Planning*: The Division of Planning is responsible for the administration of zoning, subdivision, bar/restaurant, and gasoline station applications. The division is also responsible for developing the master plan for the town. Some important issues that the master plan addresses are transportation, revitalization, land use, beach preservation, and recreational facilities.
 - *Division of Traffic Safety*: The division provides study, implementation, and maintenance of traffic signals and other traffic control devices as well as pavement markings, data collection and analysis, spot speed radar studies, vehicle turning movements and volume counts, and maintenance and updating of the Babylon Unified Code of Traffic Ordinances. Requests for stop signs and other traffic safety devices for traffic control are processed through this division. The Traffic Safety Committee works closely with Traffic Safety Division and the Suffolk County Police Department in enforcing traffic ordinances within the Town of Babylon. The committee reviews requests for traffic control measures, as well as develops programs to reduce deaths and injuries related to traffic accidents.
 - *Accessory Apartment Review Board*: This board reviews and conducts public hearings on applications for temporary permits for accessory apartments.



- *Planning Board*: The board studies and makes recommendations concerning zoning problems to the Town Board. The Planning Board considers and approves the filing of subdivision maps for home development, requiring the necessary site and street improvements.
- *Zoning Board of Appeals*: The Zoning Board of Appeals reviews and conducts public hearings on applications for variance of the zoning ordinances. The board may grant a variance after considering the effects of these requests on the subject parcel, surrounding area, and the intended purpose of the zoning.
- **Public Safety**: The Department of Public Safety consists of four types of enforcement officers, including bay constables, fire marshals, park rangers, and public safety officers that have a NYS Guards License. The department responds to complaints from residents of the Town of Babylon. The department is responsible for most of the uniformed enforcement and security activities within the town. This is accomplished by the various personnel patrolling an area of 53 square miles and serving a population of 213,603 people. Our operation works seven days a week, 24 hours a day to ensure the continuity of town government.
 - *Public Safety Officers*: Responsible for the security of Town property and facilities. They enforce parking regulations, issue parking summonses, and control traffic and security for all town facilities. All Public Safety Officers have NYS guard licenses.
 - *Marine Patrol*: The Marine Patrol consists of a harbor master and bay constables that patrol the Great South Bay, as well as the Town of Babylon's beaches and facilities. They enforce all town codes and NYS and Federal Navigation Law, as well as NYS Environmental Conservation Law. They are NYS peace officers, and have the power to issue summonses and make arrests.
 - *Park Rangers*: Park rangers protect park resources and the residents who patronize them. They enforce all local and state laws and ordinances pertaining to parks and town facilities. They are NYS peace officers, and have the power to issue summonses and make arrests.
 - *Fire Marshals*: Fire marshals enforce all town and NYS codes and laws. They are NYS peace officers and have the power to issue summonses and make arrests. They also respond to fire investigations and hazmat accidents.
- **Town Clerk**: The Town Clerk's Office is a multifaceted office that is charged with acting as the chief records keeper for the town. The Town Clerk's Office maintains the minutes for all town board meetings, the Zoning Board, the Accessory Apartment Review Board, the Planning Board, and all other boards governing the town. This office has records dating back to 1827, of town laws, resolutions, ordinances, and other town business, in original form and on micro-film.

Opportunities for Future Integration

Consider Low-Density Land Use in High Risk Coastal, Surface Water and Groundwater Zones (2020-Town of Babylon-010): The Town will work to include low-density land use in high risk coast, surface water, and groundwater zones. Several meetings with town Planning, Environmental and OEM staff have taken place to develop a local code or overlay district for future enforcement.

Develop Plan for Pre-FIRM Structure Mitigation (2020-Town of Babylon-017): With many Pre-FIRM buildings in the Town, many structures are vulnerable to Flood and are at a greater risk of sustaining damage. This is something the Town would like to minimize in disasters. The Town plans to undertake a study to investigate, prioritize issues and develop mitigation options to reduce the Town's risk in disasters. Planning meetings have begun to produce a report in-house. It is anticipated that it will be completed in 2021.

9.2.7 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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



Evacuation Routes

All evacuation routes within the Town of Babylon are Suffolk County or New York State Roads.

Sheltering

Sheltering and feeding needs during emergencies in the Town of Babylon are handled by the American Red Cross.

Temporary Housing

The Town of Babylon has not identified appropriate locations for the placement of temporary housing. The Town has limited open space outside of the flood zone and most appropriate locations have already been designated for debris management. The Town will work with Suffolk County to identify appropriate regional locations outside of the Town boundary for temporary housing (2020-Town of Babylon-020).

Permanent Housing

The Town of Babylon has not identified appropriate locations for the placement or relocation of houses outside of the floodplain.

9.2.8 Hazard Event History Specific to the Town of Babylon

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 Town of Babylon’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 9.2-11 provides details regarding municipal-specific loss and damages the Town 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 9.2-11. 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.	Winter Storm Nemo resulted in 27.5 inches of snow.
October 22, 2014	Flash Flood	No	Deep low pressure passed to the south and east of the area which produced strong winds and isolated flash flooding across portions of New York City and Long Island.	Flash flooding and high winds occurred in the Town of Babylon. The storm generated 149 flood claims.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
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.	Costs incurred for storm response included \$46,831 for overtime costs, \$58,246 for equipment use, \$32,267 for salt, and \$21,870 for outside contracts.

Notes:

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

9.2.9 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

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

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 9.2-12. 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			
Denise's Nursery Family Day Care	Day Care	-	X	X	Unknown	2020-Town of Babylon-018
Oak Island Chapel	Religious Institution	-	X	X	Yes	2020-Town of Babylon-018



Maintenance/Office – Bergen Point County Golf Course*	County Building	-	X	X	Unknown	2020-Town of Babylon-018
Butler Building – Bergen Point County Golf Course*	County Building	-	X	X	Unknown	2020-Town of Babylon-018
New Club House Restaurant – Bergen Point County Golf Course*	County Building	-	X	X	Unknown	2020-Town of Babylon-018
UV Electrical & Storage*	County Building	-	X	X	Unknown	2020-Town of Babylon-018
Lake Drive*	Transportation	-	X	X	Yes	-
Hawkins Boulevard*	Transportation	-	X	X	Yes	-
Venetian Promenade*	Transportation	-	X	X	Yes	-
Pump Station #10*	Wastewater	-	X	X	Unknown	2020-Town of Babylon-018
Bergen Point WWTP	Tier 2	-	X	X	Unknown	2020-Town of Babylon-018
Life's W.O.R.C., Inc.*	OPWDD	-	-	X	-	-

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 Town of Babylon. The Town of Babylon 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 Town of Babylon indicated the following:

- The Town of Babylon changed the hazard ranking for disease outbreak from medium to high, citing the impacts of coronavirus and other potential disease outbreaks.
- The Town changed the hazard ranking for infestation and invasive species from medium to high due to past impacts from Asian long horned beetle and the rising number of invasive species in the region.
- The Town changed the hazard ranking for shallow groundwater flooding from low to medium, noting the previous two years had above average rainfall and caused flooding issues.
- The Town changed the hazard ranking for wildfire from low to medium due to past events in limited areas.



Table 9.2-13. Hazard Ranking

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

Identified Issues

The municipality has identified the following vulnerabilities within their community:

Coastal flooding has and continues to cause damage to private structures in the Hamlets of West Babylon, Lindenhurst, Copiague and Amity Harbor primarily south of Montauk Highway. Also, the barrier beach communities of Oak Beach, Oak Beach Association, Oak Island, Captree Island, Gilgo Beach and West Gilgo Beach Association. Town Park and recreational facilities in these areas suffer damage from coastal flooding and storms. The majority of existing structures are pre-FIRM construction and floods as common as 10-year events can cause damage resulting in flood claims.

Babylon’s barrier beach is mapped as a New York State Coastal Erosion Hazard area. The Town operates 4 park facilities located within this designation, Gilgo Beach, Cedar Beach, Overlook Beach and Oak Beach Park. Oak Beach Park was improved with a vinyl sheet pile bulkhead in 2006 to protect the shoreline. An unprotected section was maintained for water access, erosion continues to impact this section. Our 8 miles of beach which includes our 3 ocean front facilities are severely impacted by storm erosion. Semi-annual dredging of the Fire Island Inlet with sand deposition at Gilgo State Park west to the Nassau County border provides temporary relief from the impacts of long-term beach erosion. Lack of consistency of maintenance dredging projects has impacted our Gilgo Beach facility. The lack of beach width has reduced the protection to the adjacent Ocean Parkway and residential properties. In the summer of 2013, the beach could not support recreational use as the distance from the Parkway to the high water line was often less than 100 feet. Hurricane Sandy damaged approximately 2.5 miles of Ocean Parkway from Tobay Beach in the Town of Oyster Bay to Gilgo State Park in Babylon. Since 2013 our Overlook Beach facility has shown an increase in annual erosion which is now threatening infrastructure and reducing recreational capacity. In the winter of 2014, the Town hired a private contractor to place 50,000 cubic yards of beach sand on the bathing beach, that material has been lost to erosion.

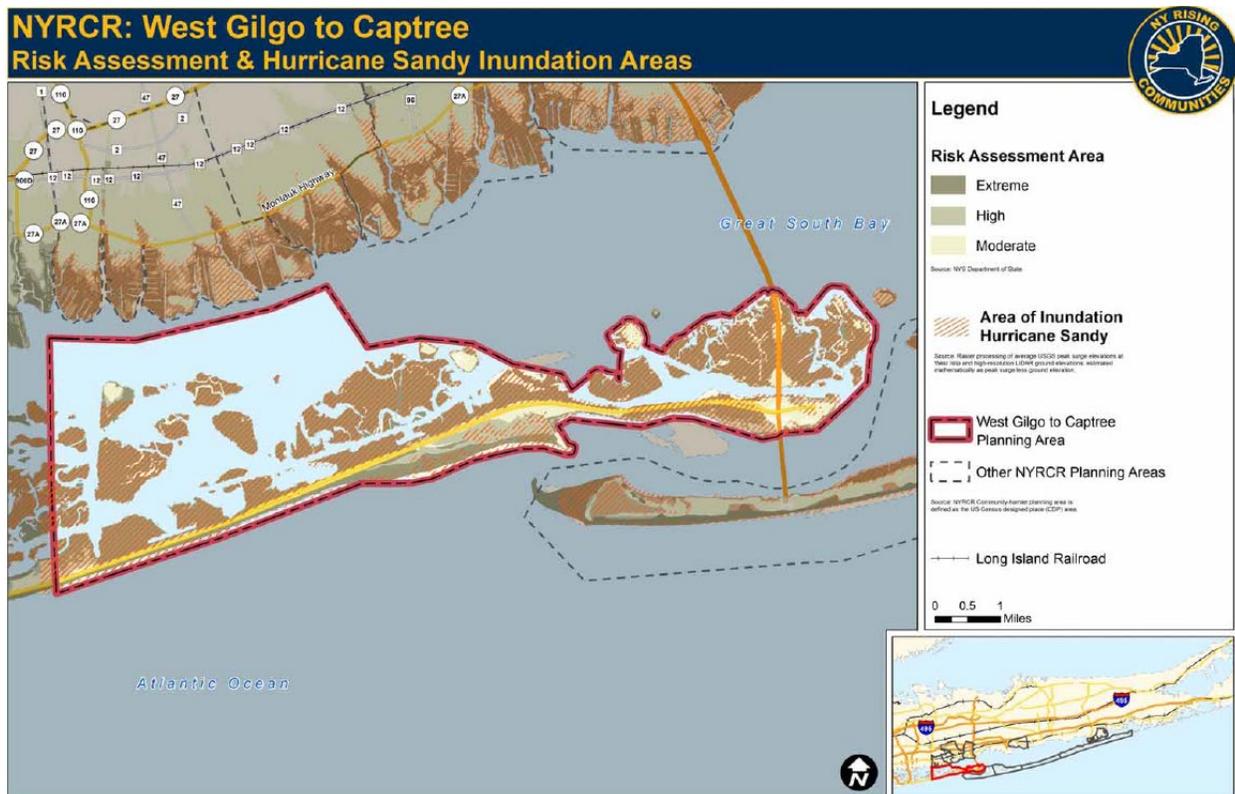
High groundwater continues to be problematic in several areas in the Town. Past construction of homes with basements or cellars was standard practice. After significant rainfall events or in low lying areas were above average rainfall has temporarily elevated groundwater, basement flooding is a common issue. Many of these homes either have their utilities installed in the basement area or the owners have chosen to “finish” the basement area to increase habitable space. Flooding damages the finished spaces and/or the utilities installed. Its common practice to see temporary sump pumps or even permanent discharge lines leading from homes to adjacent creeks, roads or public drainage systems. Most of the impacted areas fall within the watershed areas of our natural stream channels. Common issues homeowners deal with is damage to their contents and appliances. In many cases mold issues have occurred if the problem persist. Damage to public infrastructure has occurred in several cases where homeowners have attempted to connect a sump drainage line directly to a municipal drainage structure in the roadway. Shoddy construction practices have resulting in road collapsing or drainage structures failing form the



illegal sump connection. The County DPW has reported similar occurrences on illegal connections to existing sanitary sewer mains. Safety issues have arisen from sump pumps flooding local streets during winter and ice forming on the roads and sidewalks.

Superstorm Sandy in October 2012 caused massive flooding in the Town. The figure below shows the inundated areas from West Gilgo to Captree (in the Town of Islip). A description of the effects of Superstorm Sandy on the Town can be found in Section C, above. The NYRSCP process has identified relevant vulnerabilities and potential mitigation initiatives within the community, as documented in the NYRCRP planning documents available at <http://stormrecovery.ny.gov/community-reconstruction-program>. Key projects and initiatives identified in these documents are included in the updated mitigation strategy (Table F3), and elsewhere within this annex as noted.

In addition, the Villages of Amityville, Babylon and Lindenhurst participated in the New York Community Reconstruction program. Additional community profiling may be found in these plans as well which was finalized early April 2014.



Source: New York Rising Community Reconstruction Program. “Conceptual Plan – West Gilgo to Captree”. October 2013.

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

- American Venice section south of bridges took on a substantial amount of flooding during Sandy.
- Certain streets flood in events, (tidal, nor’easters etc.).
- Some bulkheads are broken, land has eroded.
- Some storm drains back up in heavy rain.
- Creek canal beds are filling up with sediment.



- New developments are being done in flood zones.
- West Lido Promenade and West Riviera streets flood during high tide events.

9.2.10 Mitigation Strategy and Prioritization

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

Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2014 HMP. Actions that are carried forward as part of this plan update are included in the updated mitigation strategy table (Table 9.2.16). 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 9.2-14. Status of Previous Mitigation Actions

Project #	Project Name	Hazards 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) Blank		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 Damage Avoided ; Evidence of Success	
Babylon Town-1	Road Dead end flood control project.	Flood , Hurricane, Severe Storm, Severe Winter Storm	Town of Babylon	Due to the geographical exposure of Babylon Town's shoreline and the dense development along the Great South Bay, even the slightest natural events can cause disruption to the economy. Shallow flood events, below the predicted 10-year elevation, account for the majority of the private flood damage claims as well as damage to public road infrastructure and disruption of sewer and natural gas service. Over time our waterfront shoreline has been hardened by private development, even pre-FIRM development which was elevated on fill with sea walls or bulk head used to retain the fill material. Consequently many flood events inundate neighborhoods from road ends that terminate at the water, as this is the lowest structural elevation in the area. This problem has impacted our coastal area since widespread development began in the 1920's, rising sea level and an increase in the occurrence of Nor'Easters and tropical depressions has increased the frequency of these Flood events. Based on the Suffolk County Multi-Jurisdictional/Hazard Mitigation Plan (The Plan), this is the most frequent type of flood event that impacts Babylon. The Plan states that between 1931 to 2006, 26 Nor'Easter's were documented, 12	In Progress; The Town has completed engineering and regulatory permits to complete 5 road ends located on mud Creek in West Babylon. Funding is being provided by GOSR under their NY Rising Community Reconstruction Program. These 5 road ends are scheduled to be completed by December 2020. Engineering and permit review will continue along other tidal wetland creeks over the next 5 years.	Cost		1. Include in 2020 HMP 2. 3.
						Level of Protection		
						Damage Avoided ; Evidence of Success		



Project #	Project Name	Hazards 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) Blank		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.					
				<p>caused property, infrastructure and economic damage exceeding 30% of the Town's total replacement costs for the years of the events. Our local Department of Public works estimates that the frequent Flood of these roads shortens the predicted life of the pavement by as much as 10 years. Salt water infiltration into the public sewer system occurs when the roads over-top and water infiltrates through damaged or failing seals on man-holes. The County DPW that manages the public sewer system has also acknowledged deliberate acts by frustrated residents to "pry" the man-holes open to drain the road into the sewer system as a recurring problem. The County could not provide a damage cost estimate for these storms. Since the completion of the Plan the Town has been impacted by shallow Flood by a Nor'Easter in 2009, 2010, Tropical Storm Irene in 2011 and 8 events following Hurricane Sandy, 4 of which resulted in street Flood</p>									
Babylon Town-2	Flood Proof Tanner Park Filter room.	Flood , Hurricane, Nor'E aster	Town of Babylon	The Town of Babylon maintains a waterfront recreational park at Tanner Park in the Hamlet of Copiague. The Pavilion which was completed in 2009 houses a restaurant, spray park and pump/filter room. The pump/filter room extends below grade and is subject to water seepage during exceptionally high tides and storm	No Progress	<table border="1"> <tr> <td data-bbox="1465 1162 1570 1203">Cost</td> <td data-bbox="1570 1162 1612 1203"></td> </tr> <tr> <td data-bbox="1465 1203 1570 1279">Level of Protection</td> <td data-bbox="1570 1203 1612 1279"></td> </tr> <tr> <td data-bbox="1465 1279 1570 1411">Damage s Avoided ; Evidenc</td> <td data-bbox="1570 1279 1612 1411"></td> </tr> </table>	Cost		Level of Protection		Damage s Avoided ; Evidenc		<ol style="list-style-type: none"> Discontinue The Town had applied for HMG funding post-Sandy to upgrade this facility. As the County Multi-Hazard Plan had expired during grant review our application was denied. Upon
Cost													
Level of Protection													
Damage s Avoided ; Evidenc													



Project #	Project Name	Hazards 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) Blank		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.
				events. A series of sump-pumps prevents the water from accumulating and inundating the mechanical and electrical equipment used for the spray park. There is no back up power and the entrance to the room is below the BFE and is not watertight. The storm surge from Hurricane Sandy exceeded the BFE and flooded the pump/filter room. Power was not restored at the facility for over 60 days. The Flood destroyed the filter and pumping equipment contained in the building. The replacement costs exceeded \$100,000.00 dollars		Level of Success		further review the Town determined that the use of a portable generator would be sufficient for future flooding events.
Babylon Town-3	Babylon NY P25 Upgrade.	Coastal Erosion, Hurricane, Nor'Easter, Severe Storm, Severe Winter Weather	Town of Babylon	Several years ago, the Town of Babylon was provided with replacement 2-way radio infrastructure through the FCC rebinding initiative. The system is used by our Department of Public Works and Department of Public Safety. The replacement infrastructure utilized used equipment and was based on an older technology. After Hurricane Sandy the loss of land lines and intermittent cell outages made the Town rely heavily on our based 2-way communication system. Recently, the existing system has been running at less than optimal levels, many channels are out of service. Since Hurricane Sandy the entire 2-way communication system has been operating in fail safe mode. In addition, this communication platform is beyond its factory supported lifecycle and	Complete; The Town applied for HMG funding post-Sandy to complete the communication upgrade. As this was an emergency action, delays in the HMG process forced the Town to complete the project using Town funding in 2013. Eventually, the HMG application was denied as the County Multi-Hazard plan expired during the grant review.	Cost		1. Discontinue 2. 3. Complete
						Level of Protection		
						Damages Avoided ; Evidence of Success		



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				is repaired on a "best efforts" basis. The Town put together an implementation team consisting of Town representatives, Suffolk County OEM personnel and several private sector representatives from the telecommunication industry. The team released their Contract design Review report in June 2013 recommending a new upgradable system.				
Babylon Town-4	Tanner Park Dredge Spoil Stabilization Project.	Flood , Hurricane, Nor'easter	Town of Babylon	<p>The Town maintains a dredging spoil disposal site at it's park facility at Tanner Park in the Hamlet of Copiague. This site is the primary dredge spoil storage area for all public canals, marina's and channels that are within a 4,000 foot radius of this site. The storage facility is available for County and Town sponsored dredging projects.</p> <p>The facility is an earthen dyke protected area of 5.5 acres with a storage capacity of 55,000 cubic yards. The facility borders the western shoreline of Howells Creek and erosion from Tropical Storm Irene and Hurricane Sandy has impacted the entire eastern dyke wall. The site was evaluated by the Suffolk County Department of Public Works, Bridges and Waterways Division after Hurricane Sandy to access damages. They reported that the eastern perimeter dyke wall was eroded to the point of it being structurally compromised and damage to the dewatering system was noted. Failure of the dyke wall</p>	No Progress; Conceptual design work has been completed. Currently funding, engineering and regulatory permit applications are all pending. There potential to complete this project in 2021-2022 with the County dredging of the adjacent channel at Howells Creek.	Cost		<ol style="list-style-type: none"> 1. Include in 2020 HMP 2. 3.
						Level of Protection		
						Damage s Avoided ; Evidenc e of Success		



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				will allow fill to erode into the creek which will impact navigation to a municipal marina, boat launching ramp and private residences. Damages resulting from Hurricane Sandy is estimated at \$150,000.00.				
Babylon Town-5	Oak Beach Community Center Floodproofing Project.	Flood , Hurricane, Nor'E aster	Town of Babylon	The Town maintains a Community Building in the Hamlet of Oak Beach, the building is currently used by the residents of our barrier beach communities for public meetings, civic meetings, polling/voting and for informational briefings. The building was constructed prior to the first Town Flood study and is not elevated to the BFE. Part of the original structure dates back to the 1860's and was once used as a United States Life Saving Station which was later transferred to the United States Coast Guard. The building is wood frame construction and the foundation is wood pilings. After Tropical Storm Irene the west side of the building began to settle, an inspection of the foundation posts showed some pilings had failed from the storm surge causing the floor to separate. Initial remediation estimates were placed at \$165,000.00 to raise the structure on a new foundation. While an engineering report was being prepared Hurricane Sandy struck and that storm surge further damaged the structure. A detailed engineering investigation of the foundation found multiple failures	Complete; This project was completed in 2019 using a combination of State Round 1 and Round 2 Hurricane Sandy Historic Preservation Grants and Town funds.	Cost		1. Discontinue 2. Complete 3. Complete
						Level of Protection		
						Damages Avoided ; Evidence of Success		



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				of the foundation pilings and the building has been since closed to the public for safety.				
Babylon Town-6	Tanner Park Electric Sub-Station Flood Proofing Project.	Flood , Hurricane, Nor'E aster	Town of Babylon	<p>The Town of Babylon operates a bayfront park facility, Tanner Park in the Hamlet of Copiague. The 93 acre park offers several amenities including a seasonal water park, beach, marina, 7 sports fields, tennis, basketball, skateboarding, walking trails, concerts, food and beverage concession and a year round senior citizen center.</p> <p>Electric power is supplied to the park through 3 sub-stations, 1 sub-station is located above the BFE and has not sustained damage from flood waters. The remaining 2 were inundated by sea water during the storm surge from Hurricane Sandy. Past flood events at the 10-year frequency or lower caused some damage to the electrical systems but did not reach the sub-stations. Replacement of the sub-station equipment cost \$118,000.00 as all electrical components exposed to salt water had to be replaced. The system was energized shortly after, however systems have been failing as the Flood of the sub-stations allowed salt water into the conduit system. Older equipment and repairs that were not sealed are failing from salt water corrosion, an additional \$200,000.00 in repairs have been identified. Town electrical engineers in a preliminary</p>	Complete; The Town submitted an HMG application post-Sandy which was declined as our Multi-hazard plan had expired in 2013. No additional funding opportunities have come up since 2014. Although electric power was restored after Sandy, Town capital funds have been used to replace systems that were inundated by flood waters and over time have failed due to salt water corrosion.	Cost		<ol style="list-style-type: none"> Discontinue Complete



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				assessment concluded the whole park electric grid has been compromised and will require complete replacement. Cost estimates are still being prepared.				
Babylon Town-7	Venetian Shores Emergency generator.	Flood , Hurricane, Nor'E aster	Town of Babylon	The Town of Babylon maintains a waterfront recreational park at Venetian Shores in the Hamlet of Lindenhurst. The pavilion which was completely re-constructed in 2006 houses a restaurant, spray park, and pump/filter room. The pump/filter room entrance is elevated above the 100-year flood height, however the room extends below grade and is subject to water seepage during exceptionally high tides and storm events. A series of sump-pumps prevents the water from accumulating and inundating the mechanical and electrical equipment. There is no back up power and damage to the equipment has resulted from extend The Town operates a community facility in the Hamlet of Wyandanch that provides meals and family services for local residents. United States 2010 census data list Wyandanch as a community of approximately 12,000 residents, over 85% of the households identify themselves as African American or Hispanic/Latino decent, median household income is below the New York State average and 15% of the population is identified as earning below the poverty level. The Town rates this facility as one	No Progress	Cost	Level of Protection	<ol style="list-style-type: none"> Discontinue An HMG application was submitted to fund this application in 2013, our application was dismissed when the County Multi-Hazard Plan expired. The Town has re-evaluated the risk at this location and has determined that the use a portable generator is sufficient to address the issue of an electric outage in a future flood event.



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				<p>of our critical facilities providing services to an underserved community. The Facility is not located in the 100-year flood zone however power outages resulting from Hurricane, Tropical Storms, NorEasters and winter storms has impacted this facility. Most recently Hurricane Sandy caused widespread outages to 90% of Long Island. This facility was not in service for several days, portable generators were not available which resulted in spoilage of stored food stuffs. In addition power surges damaged compressors and electrical components which delayed the opening of the facility after the building was energized by the local power utility. As the residential population served by this facility was also without power the loss of the facility over this time period further exacerbated the problems faced by the residents. Electrical upgrades are proposed at the facility including surge protection systems. Damage estimates resulting from Hurricane Sandy has been placed at \$32,575.00.ed power outages. Portable generators have been used during short term outages (3 days or less), such as after Tropical Storm Irene and a 2009 Nor'Easter. Annual maintenance costs during these outages include work-force labor, generator and re-fueling. An extended power outage of over 60</p>				



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				<p>days resulted from Hurricane Sandy (10/28/12), water seepage during the storm flooded the pump/filter room and all equipment was lost. Maintenance was delayed as generators were re-tasked to power other equipment used for emergency services. Equipment damage exceeded \$100,000.00 dollars.</p>					
Babylon Town-8	Back-up Power System Wyandanch Nutrition Center.	Hurricane, Severe Storm	Town of Babylon	<p>The Town operates a community facility in the Hamlet of Wyandanch that provides meals and family services for local residents. United States 2010 census data list Wyandanch as a community of approximately 12,000 residents, over 85% of the households identify themselves as African American or Hispanic/Latino decent, median household income is below the New York State average and 15% of the population is identified as earning below the poverty level. The Town rates this facility as one of our critical facilities providing services to an underserved community. The Facility is not located in the 100-year flood zone however power outages resulting from Hurricane, Tropical Storms, NorEasters and winter storms has impacted this facility. Most recently Hurricane Sandy caused widespread outages to 90% of Long Island. This facility was not in service for several days, portable generators were not available which resulted in spoilage of</p>	No Progress; No action has been taken on this project to date. A HMG application was filed shortly after Hurricane Sandy but our application was declined after our multi-hazard plan expired and the generator did not qualify for Section 406 mitigation funding.	Cost		<ol style="list-style-type: none"> 1. Include in 2020 HMP 2. 3. 	
						Level of Protection			
						Damage Avoided ; Evidence of Success			



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				stored food stuffs. In addition, power surges damaged compressors and electrical components which delayed the opening of the facility after the building was energized by the local power utility. As the residential population served by this facility was also without power the loss of the facility over this time period further exacerbated the problems faced by the residents. Electrical upgrades are proposed at the facility including surge protection systems. Damage estimates resulting from Hurricane Sandy has been placed at \$32,575.00.				
Babylon Town-9	Address brush fire vulnerability in Outer Beach Communities where no public water supply systems are available. Need to fund drafting wells depth and locations, drafting access points and potential public water supply systems.	Wildfire, Drought	Town of Babylon		Complete; Using funding provided by GOSR the Town, working with the Babylon Village Fire Department completed the installation of 5 new drafting wells in the communities of Gilgo Beach and the West Gilgo Beach Association. The final wells were installed in May 2020.	Cost		1. Discontinue 2. 3. Complete
						Level of Protection		
						Damages Avoided ; Evidence of Success		
Babylon Town-10	Continue existing Federal and State -authorized 2-year cycle projects and money for perpetuity to preserve, restore, and nourish Jones Island so that it can be considered for certification as a levee under the National Flood Insurance program.	Nor'Easter, Coastal Erosion, Hurricane, Flood	USACE, NYSDOS, NYSDOT, NYSDEC		Ongoing Capability; The Army Corps of Engineers partnering with the New York State Department of Environmental Conservation completed maintenance dredging of Fire Island Inlet in March 2019. Sand was by-passed for beach nourishment on Gilgo and Gilgo State Park beaches. Annual surveying by the Army Corps will determine the next project cycle.	Cost		1. Discontinue 2. 3. Complete
						Level of Protection		
						Damages Avoided ; Evidence of Success		



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						Cost		
Babylon Town-11	Encourage Federal and State agencies to identify new reliable and consistent sources of sand for beach nourishment programs, building on recommendations of existing feasibility studies concerning coastal sand budgets.	Nor'E aster, Coastal Erosion, Hurricane, Flood	USACE, NYSDOS		Ongoing Capability; Currently the Army Corps of Engineers is adopting or completing the Fire Island to Montauk Point (FIMP) update and the Nassau County Back Bay Study. Both reports identify coastal sand budgets for Jones and Fire Island.	Cost		1. Discontinue 2. 3. Ongoing capability
						Level of Protection		
						Damages Avoided ; Evidence of Success		
Babylon Town-12	Analyze and investigate options to increase structural stability and transport capacity of the bridges in the American Venice section of town. These bridges are cultural and aesthetic features which support critical evacuation and response routes. Their current capacity is 12 tons. Implement priorities as funding becomes available.	Nor'E aster, Coastal Erosion, Hurricane, Flood	Town of Babylon		Complete; This project was funded by GOSR using HUD CDBG-DR funding through the State NY Rising CRP program. All construction was completed in 2019.	Cost		1. Discontinue 2. 3. Complete
						Level of Protection		
						Damages Avoided ; Evidence of Success		
Babylon Town-13	Analyze and implement actions to increase the capacity of the mouths of tidal tributaries, established navigational channels such as Fire Island Inlet (Deposits shall be used to augment mitigation strategy concerning engineered barrier islands mentioned above). Prioritize and implement as funding becomes available.	Nor'E aster, Coastal Erosion, Hurricane, Flood	USACE, NYSDOS, NYSDOT, NYSDEC, USFWC		No Progress	Cost		1. Discontinue 2. 3. Projects are not within the authority or jurisdiction of the Town of Babylon.
						Level of Protection		
						Damages Avoided ; Evidence of Success		
						Cost		1. Include in 2020 HMP



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						Level of Protection	Damage Avoided ; Evidence of Success	
Babylon Town-14	Institute a stream- program to restore habitats of tidal tributaries and freshwater rivers by reducing invasive species, trash, excess sediment, etc. to increase natural and municipal drainage capabilities.	Nor'E aster, Coastal Erosion, Hurricane, Flood	NYSDEC, SCDPW Vector Control		In Progress; The Town completed its Watershed study for the Carlls River, an additional 10 more streams are having their watershed plans written. In the past 5 years the Town has completed a wetland restoration and constructed a stormwater treatment pond on the upper Carlls River corridor. program.	Level of Protection		2. A second stormwater treatment pond is proposed on the mid-section of the Carlls River and should be completed by December 2020. A tidal wetland restoration is in the design stage for a section of Santapogue Cree on land transferred to the Town through the GOSR NY Rising Buy-out program.
Babylon Town-15	Investigate the options available and install as funding becomes available tidal flaps and valves at ten prioritized trial locations to determine the best ways of preventing tidal backflow into municipal drainage systems	Nor'E aster, Coastal Erosion, Hurricane, Flood	Town of Babylon		Complete; The Town completed the pilot/trial project in 2016 and has selected the tidal backflow device for use on all Town street drainage sites.	Cost		1. Discontinue
Babylon Town-15						Level of Protection		2. Complete
Babylon Town-15						Damage Avoided ; Evidence of Success		3. Complete
Babylon Town-16	Investigation design and funding alternatives to reconstruct roadways in Venetian Shores area, reconstruction will include raising the maximum amount possible and increase drainage capacity. Implement as funding becomes available.	Nor'E aster, Coastal Erosion, Hurricane, Flood	Town of Babylon		In Progress; The Town has adopted the 10-year flood height, when possible, to reduce daylight flooding events. The Town has adopted a 5-year road elevation plan. This area will be addressed in the next 5-year plan, unless additional funding sources become available.	Cost		1. Include in 2020 HMP
Babylon Town-16						Level of Protection		2.
Babylon Town-16						Damage Avoided ; Evidence of Success		3.



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						Cost	Level of Protection	Damages Avoided ; Evidence of Success	
Babylon Town-17	Investigate and analyze design and funding options to enhance existing municipal drainage systems to provide increased capacity of the drainage system. Implement as funding becomes available.	Nor'E aster, Coastal Erosion, Hurricane, Flood	Town of Babylon		Ongoing Capability	Cost			1. Discontinue 2. 3. As road reconstruction projects are being spec'd, the current drainage design is evaluated to determine if it meets current design requirements or in specific cases, local demand if drainage exceeds standards.
						Level of Protection			
						Damages Avoided ; Evidence of Success			
Babylon Town-18	Based on the results of tidal backflow trials, retro-fit approximately 10 1 outfall pipes to prevent tidal backflow into drainage systems.	Nor'E aster, Coastal Erosion, Hurricane, Flood			In Progress; In the past 5 years the town has installed approximately 12 new backflow valves on projects located in the Hamlets of Copiague, Lindenhurst and West Babylon. Currently, through GOSR's NY Rising CRP program, additional backflow valves are proposed on roadways on Mud Creek (West Babylon) and Santapogue Creek (Lindenhurst). Installation is planned for completion in 2020. Over the next 5 years the Hamlets of Amity Harbor/Copiague are being targeted for backflow valve installation being funded locally through Town Highway Improvement funds..	Cost			1. Include in 2020 HMP 2. 3.
						Level of Protection			
						Damages Avoided ; Evidence of Success			
Babylon Town-19	Continue a program, in cooperation with existing US Ags,Markets programs, to inform and certify contractors for debris removal operations in the quarantine area.	Nor'E aster, Coastal Erosion, Hurricane, Flood	State Agriculture & Markets		Ongoing Capability; After Hurricane Sandy a second infestation of Asian Longhorned Beetle was found in the Amityville Quarantine Zone which expanded the quarantine boundary through the municipal boundary of the Town of Babylon. When requested the Town works with the	Cost			1. Discontinue 2. 3. Ongoing capability
						Level of Protection			
						Damages Avoided ;			



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					Department of Agriculture and Markets on education, training, PSA delivery and other actions to assist with combating this invasive species.	Evidence of Success	
Babylon Town-20	Elevate roads that are vital, critical to evacuation and local community operations.	Nor'E aster, Coastal Erosion, Hurricane, Flood	Town of Babylon		No Progress	Cost Level of Protection Damage s Avoided ; Evidence of Success	1. Discontinue 2. 3. This project is already being covered in another Action and is a duplication. All evacuation routes have been identified as State or County roads and not within the jurisdiction of the Town DPW for elevation.
Babylon Town-21	Re-engineer and reconstruct Copiague roadways (for example Coolidge Ave) to eliminate or minimize pronounced low points which capture stormwater runoff and coastal flood waters with no available dissipation outlet.	Nor'E aster, Coastal Erosion, Hurricane, Flood	Town of Babylon		In Progress; Preliminary design work has begun for this project. The Town has proposed a 5-year plan to re-engineer and reconstruct the local roadways in this Hamlet. Engineering is complete for Western Concourse, upon completion of the bidding process construction will begin. This project is funded locally by the Town of Babylon through the Highway fund. The Town DPW will be committing 20% of annual highway funds towards roadway projects in the 100-year flood zone.	Cost Level of Protection Damage s Avoided ; Evidence of Success	1. Include in 2020 HMP 2. 3.
Babylon Town-22	Implement a permanent measure to prevent tidal backflow under overpasses along Ocean Parkway, such	Nor'E aster, Coastal	NYSDOT, Town of		No Progress	Cost Level of Protection	1. Discontinue 2. 3. All underpasses are maintained by NY State



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	as at Gilgo Beach, and reduce likelihood of inlet creation at this Jones Island location.	Erosion, Hurricane, Flood	Babylon			Damage Avoided ; Evidence of Success	and is not within the jurisdiction of the Town.
Babylon Town-23	Encourage NYS and FEMA to document erosion rates by taking standardized aerial photographs of our shoreline on a yearly basis, and when necessary after severe storms.	Nor'E aster, Coastal Erosion, Hurricane, Flood	NYSDOS, NYSDERC, NYSCSIC, NYSEM O, FEMA, and all other agencies currently producing aerial photography		No Progress; The Town does advocate for this funding when opportunities present themselves. In the past 5 years no progress has been made on this Action.	Cost Level of Protection Damage Avoided ; Evidence of Success	1. Include in 2020 HMP 2. 3.
Babylon Town-24	Consider low-density land use in high risk coastal, surface water and groundwater zones.	Nor'E aster, Coastal Erosion, Hurricane, Flood	Town of Babylon		In Progress; Currently low-density land use is being applied to new development applications as "policy", however, as final decisions are made by elected/appointed Board members the policy is being followed on a case-by-case basis. Several meetings with town Planning, Environmental and OEM staff have taken place to develop a local code or overlay district for future enforcement.	Cost Level of Protection Damage Avoided ; Evidence of Success	1. Include in 2020 HMP 2. 3.



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						Cost	Level of Protection ; Evidence of Success	
Babylon Town-25	Elevate public facilities and,or MEP controls to above the 5 10-year event and harden to withstand hurricane level wind speeds.	Nor'E aster, Coastal Erosion, Hurricane, Flood	Town of Babylon		In Progress; The Town is and will continue to modernize existing facilities/infrastructure and design all new construction to meet these requirements. The most recent completed project involved the reconstruction of the Town Gilgo Marina facility in 2018.	Cost		1. Include in 2020 HMP 2. 3.
						Level of Protection		
						Damages Avoided ; Evidence of Success		
Babylon Town-26	Locate,relocate public facilities to lower risk areas.	Nor'E aster, Coastal Erosion, Hurricane, Flood	Suffolk County, Town of Babylon		No Progress	Cost		1. Discontinue 2. 3. The Town has not identified any essential facilities in high risk areas. Only recreational facilities located in our coastal hazard areas will remain with no plans to abandon as they are the only locations for water/marine access. All facilities have been modernized to exceed the 100 year flood height.
						Level of Protection		
						Damages Avoided ; Evidence of Success		
Babylon Town-27	Harden,bury telecommunications and power infrastructure.	Nor'E aster, Coastal Erosion, Hurricane, Wildfire, Flood	Town of Babylon		In Progress; As facilities are upgraded and/or modernized any opportunity to provide buried service is applied where site conditions allow.	Cost		1. Include in 2020 HMP 2. 3.
						Level of Protection		
						Damages Avoided ; Evidence of Success		



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						Cost	Level of Protection Damage Avoided ; Evidence of Success	
Babylon Town-28	Restore and maintain the dunes.	Nor'E aster, Coastal Erosion, Hurricane, Flood	Town of Babylon , NYSDEC		Ongoing Capability; The Town maintains over 6 miles of primary/secondary dune area on the Jones Island Barrier Beach. Actions include planting of beach grass and other dune plantings and installation of sand fencing to capture and stabilize wind blown sand. The Town installs 5,000' of sand fencing annually. Volunteer dune grass planting projects were completed in 2016 & 2017.	Cost		1. Discontinue 2. 3. Ongoing capability
Babylon Town-29	Implement wetlands restoration projects.	Nor'E aster, Coastal Erosion, Hurricane, Flood	Town of Babylon , NYSDEC		In Progress; As funding is available, the Town has a list of sites that preliminary restoration plans have been prepared or are being prepared. In 2020 a freshwater restoration on the Carlls River freshwater stream corridor is proposed. It's anticipated that construction will be completed in the fall of 2020.	Cost		1. Include in 2020 HMP 2. 3.
Babylon Town-30	Conduct a study to determine the best, most cost-effective means of enhancing the natural sediment processes of the inlet and beaches with consideration of various strategies, including jetties.	Nor'E aster, Coastal Erosion, Hurricane, Flood	Town of Babylon		In Progress	Cost		1. Discontinue 2. 3. This project is being incorporated by the US Army Corps and not being pursued by the Town of Babylon.
Babylon Town-31	Assess and prioritize town critical facilities needs and obtain funding to acquire and install back-up power	Nor'E aster, Coastal	Suffolk County, Town of Babylon		Complete; In the Town NY Rising Community Reconstruction Program Plans adopted in 2014, all Town Critical/essential facilities	Cost		1. Discontinue 2. 3. Complete



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	or alternative power on critical assets	Erosion, Hurricane, Flood			were indentified for micro-grid or back-up power. Using HUD CDBG-DR funds back-up power generators were installed at our Cedar Beach marina Facility in 2019.	Damage s Avoided ; Evidenc e of Success	
Babylon Town-32	Investigate options ,opportunities to create living shorelines wherever possible to restore natural processes, minimize erosion, and create habitat. Implement as funding becomes available.	Nor'E aster, Coast al Erosi on, Hurri cane, Flood	Town of Babylon , NYSDEC		No Progress; As funding opportunities and eligible sites become available the Town will continue to use this policy for shorefront locations. In 2019 the Town completed the GOSR funded Little East Neck Road Shoreline Stabilization Project. The conceptual plan included a living shoreline component, however during project design this location was determined not to have the conditions for a successful living shoreline as it was exposed to substantial wave action which would make shore plantings impossible to establish. The project also proposed the establishment of an oyster reef, unfortunately local water quality was not acceptable for oyster survival. In the next 5 years plans are in place to restore a 1/2 acre property on Santapogue Creek that was deeded to the Town by NY Rising through their Buy out program. Additional plans to remove invasive plant species and restore tidal wetlands at the Town Santapogue Creek Restoration site are in place. Both projects currently lack funding.	Cost Level of Protecti on Damage s Avoided ; Evidenc e of Success	1. Include in 2020 HMP 2. 3.
						Cost	1. Include in 2020 HMP



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Babylon Town-33	Explore options and feasibility of instituting shoreline stabilization programs where natural restoration is not an option. Implement as funding becomes available.	Nor'E aster, Coastal Erosion, Hurricane, Flood	Town of Babylon		In Progress; Post - Sandy several shoreline stabilization projects were completed after the Town bonded repair funds which were later reimbursed through the FEMA PW process. The Town has identified 2 additional locations (Tanner Park & Kay Road) where shoreline erosion is threatening infrastructure and the eroding sediments are creating navigational hazards by silting in navigational channels. A 1,200' section of shoreline at Tanner Park adjacent to a dredge spoil containment area has been steadily eroding which is weakening the dyke walls and silting the entrance to Howells Creek which is currently 50% blocked. The County DPW has plans to dredge the entrance to Howells Creek in 2021, the Town is in conceptual design to harden the shore with stone to coincide with the dredging project. A similar project located at Ketchams Creek is in conceptual planning as well. The County DPW proposes to dredge the entrance of Ketchams Creek in the fall of 2020. A 1,300', privately owned section of shore line is eroding which is the source of drifted sand silting in the channel. The Town is coordinating a stabilization project to coincide with the dredging project. Both projects will be funded by the Town through Bonds.	Level of Protection Damage Avoided ; Evidence of Success	2. 3.
					In Progress	Cost	1. Discontinue



Project #	Project Name	Hazards 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) Blank		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.
						Level of Protection	Damage Avoided ; Evidence of Success	
Babylon Town-34	Explore options and feasibility where possible, opportunities to create vegetated buffers to protect homes and structures. Implement as funding becomes available.	Nor'E aster, Coastal Erosion, Hurricane, Flood	Town of Babylon			Level of Protection		2. 3. This Action is being covered by another action already.
Babylon Town-35	Explore options and feasibility to use streets (including reducing impermeable surfaces), public rights of way, public lands, and green space to implement projects to store, infiltrate, filter, and detain stormwater runoff and reduce on-street Flood. Implement as funding becomes available.	Nor'E aster, Coastal Erosion, Hurricane, Flood	Suffolk County, Town of Babylon, NYSDOT		Ongoing Capability; Under the Town Stormwater Program projects involving new construction or renovating existing facilities are using stormwater best management practices (BMP) which includes reducing impervious areas, increase/create/preserve green spaces and construct storm water ponds/wetlands. The Town has been working for several years to eliminate stormwater runoff from our DPW yard which directs all runoff from a 12 acre site directly to the upper reach of the Santapogue Creek stream corridor. As a truck facility yard this site is defined as a ""hot spot"" for runoff pollutants associated with industrial runoff. As opportunities present themselves the Town will continue to enforce this policy over the next 5 years.	Cost		1. Discontinue 2. 3. Ongoing Capability
Babylon Town-36	Assess needs, options and funding to install a public water system in the areas of the Town of Babylon that	Nor'E aster, Coastal	Town of Babylon		In Progress; The largest concentration of homes in the Town of Babylon without public water supplies is on our Barrier	Cost		1. Include in 2020 HMP 2. 3.



Project #	Project Name	Hazards 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) Blank	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.
	do not have one with backup generators for all systems. Implement as funding becomes available.	Erosion, Hurricane, Flood			<p>Beach area. Typically a private well will supply potable water for up to 5 homes. The wells are artesian and do not produce adequate water pressure for home service. Individual homes must use a well pump to draw water and unless the homeowner has a back up power system, cannot draw water during a power outage.</p> <p>Since 2009 the Town has been working with the NYSDOH and SCDHS to merge 3 small public water systems for approximately 60 homes at Oak Beach. Project design is completed and construction is anticipated to begin in 2020, once completed as capacity allows adjacent homes currently on private wells may be able to join as private wells fail. The new public water system will provide treatment and back-up power for continuous service during power outages.</p> <p>In 2019 working with GOSR a 100kw generator was installed at the Town Cedar beach Marina facility. This is the only municipal run location on the barrier beach that has year round water service, all other public facilities are winterized. The site will be used on an emergency basis if prolonged power outage occurs on the barrier beach depriving residents of potable water.</p> <p>Another GOSR project beginning construction in 2020 is providing upgrades to the West Gilgo</p>	Damage s Avoided ; Evidence of Success	



Project #	Project Name	Hazards 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) Blank		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.
					Association Public Water facility. Funds were allocated to upgrade the water system and back up power system. This system provides potable water to 83 homes. The Town is working with the County Health Department to identify additional small public water supply systems and seek funding for upgrades in the next 5 year period.			
Babylon Town-37	Explore options, feasibility and funding availability to take measures to protect potable water wells from wastewater contamination with the installation of small package treatment plants. Implement as funding becomes available.	Nor'E aster, Coastal Erosion, Hurricane, Flood	Town of Babylon		No Progress	Cost		1. Discontinue 2. 3. The County is investigating alternative technology systems to remediate nitrication of ground water supplies. The Town will not be pursuing it's own research. Once systems are approved for use in Suffolk County the Town will approve their use in local applications.
Babylon Town-38	Implement tree management programs and augment existing programs, including containment of the Asian Beetle, and measures to improve post-disaster debris management	Nor'E aster, Coastal Erosion, Hurricane, Flood	NYS Agriculture & Markets, USDA APHIS		In Progress; Post-Sandy a new infestation of Asian Longhorned Beetle was discovered in Babylon, the Town continued to work with the State Department of Agriculture and Markets to identify new quarantine areas and adopt policies to control and limit the spread of this species. As the quarantine is still active in Babylon, the Town will continue to work with the State to control this	Cost		1. Include in 2020 HMP 2. 3.



Project #	Project Name	Hazards 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) Blank	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.
					pest. Public outreach and education activities formerly listed under Action ID #49 will be incorporated into this Action.		
Babylon Town-39	Design and implement an on-going public outreach program to increase public participation in maintenance of municipal drainage by reducing roadway, recharge basin litter, dumping yard, household waste into streets, identification of neighborhood inlets, and notifying DPW of drainage problems. Implement as funding becomes available.	All	TOWN OF BABYLON		Ongoing Capability; Under the Town Stormwater program the Department of Environmental Control will continue to provide/update PSA on social media as well as posting educational signs along stream corridors and sensitive surface water areas. The Town will continue to do annual surveys of all storm drain inlets, applying PSA placards and enforcing illicit discharge regulations.	Cost Level of Protection Damage Avoided ; Evidence of Success	1. Discontinue 2. 3. Ongoing capability
Babylon Town-40	Work with adjacent communities and the County to support, enhance Building and/or Flood codes and planning regulations, and enforcement programs at the local level.	All	TOWN OF BABYLON		Ongoing Capability; The Town participates in multiple Federal, State, County and Local Planning groups and organizations who's sole objective or plans include code revisions to create resiliency in infrastructure and the built environment.	Cost Level of Protection Damage Avoided ; Evidence of Success	1. Discontinue 2. 3. Ongoing capability
Babylon Town-41	Investigate and implement a program to enhance floodplain management capabilities through participation in some or all of the following activities: work with adjacent communities to institute a continuing education program for County and	Nor'E aster, Coastal Erosion, Hurricane, Flood			Ongoing Capability; The Town of Babylon will remain active with several professional organizations that deal with floodplain management. The Town currently has 3 CFM's on staff. Is active with the ASFPM and NYSFSPM (Waterways Management Supervisor is State Region 1 Chapter Chair). In 2020 the Town	Cost Level of Protection Damage Avoided ; Evidenc	1. Discontinue 2. 3. Ongoing capability



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	community staff to become certified in benefit cost analysis and floodplain management with the goal to become certified floodplain managers, establish and maintain a schedule of on-going training classes to obtain and maintain these certifications, CRS program workshops and training, BCA training, elevation certificate training, etc.				began hosting the Long Island CRS Users Group.	Level of Success	
Babylon Town-42	Encourage applicable agencies to update existing CoastalView program on a yearly basis. (CoastalView is a joint venture of State and Federal agencies which has established benchmarks within erosion data in a GIS format)	Nor'E aster, Coastal Erosion, Hurricane, Flood	NYSDOS		Ongoing Capability; The Town will continue to support funding of CoastalView.	Cost Level of Protection Damage s Avoided ; Evidenc e of Success	1. Discontinue 2. 3. Ongoing Capability
Babylon Town-43	Participate in homeowner partnership program to elevate, retrofit, or acquire vulnerable properties in high risk areas impacted by coastal storms, surface Flood, and/or . High risk areas include: those properties identified as "repetitive loss" by FEMA and those areas of concern identified by the Town of Babylon.	Nor'E aster, Coastal Erosion, Hurricane, Flood	FEMA		Ongoing Capability; "The Town will continue to participate in or assist other Agencies in residential resiliency programs. In 2017 and 2018 the Town submitted HMG applications to elevate Sandy damaged homes in Babylon. Both grant applications were declined funding as the State prioritized funding for Multi-Hazard Planning and property acquisitions. Since 2018 the Town has commented on and has been meeting with the US Army Corps of Engineers on their	Cost Level of Protection Damage s Avoided ; Evidenc e of Success	1. Discontinue 2. 3. Ongoing Capability



Project #	Project Name	Hazards 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) Blank	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.
					Non-Structural Project associated with the Fire Island to Montauk Point (FIMP) to elevate and acquire up to 4400 properties in Suffolk County. The Town has already committed to provide logistical support for this action. As FEMA transitions from HMG to BRIC the Town of Babylon will continue to participate in grant programs for our residents. Activities previously listed in Action ID # 55 will be included in this Project. "		
Babylon Town-44	Develop a post-disaster action plan for coastal storm events that will address the continuity of local government operations, such as operations of the Comptroller, Town Clerk, Planning & Development, etc. post disaster.	All	Town of Babylon		Complete; The Town completed our Emergency Management Plan in 2019. It will be updated every 5 years.	Cost	1. Discontinue 2. 3. Complete
						Level of Protection	
						Damages Avoided ; Evidence of Success	
Babylon Town-45	Continue to develop, enhance and implement existing emergency response plans, including evacuation plans, to utilize new and developing technology, information as it becomes available.	All	Town of Babylon		Complete; The Town completed the Emergency Management Plan in 2019, the plan will be revised every 5 years.	Cost	1. Discontinue 2. 3. Complete
						Level of Protection	
						Damages Avoided ; Evidence of Success	
						Cost	1. Discontinue



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						Level of Protection	Damage Avoided ; Evidence of Success	
Babylon Town-46	Promote the purchase of Flood Insurance.	Nor'E aster, Coastal Erosion, Hurricane, Flood , Severe Storm	FEMA NFIS		Ongoing Capability; The Town has been and will continue to provide residents and commercial property owners with information on flooding threats and flood insurance. The Department of Environmental Control will continue to provide flood determination letters and RP and SRL information.	Level of Protection		2. 3. Ongoing Capability
Babylon Town-47	Educate the public on ways to protect their property before and during natural events, and what they can acquire to install appropriate property protection measures.	Nor'E aster, Coastal Erosion, Hurricane, Flood , Severe Storm	FEMA NFIS		Ongoing Capability; The Town has and will continue to meet with property owners and provide general and site specific information and guidance on resiliency, structural and non-structural methods to protect themselves from natural events and pre-existing conditions, such as high ground water. Public education involving the CEHA will be included in this Action and not carried out as a separate Action in this update. (Action ID Babylon Town-48)	Cost		1. Discontinue 2. 3. Ongoing Capability
Babylon Town-48	Implement public education programs that inform the public of local coastal hazard area zone ordinances (TOB Code Chapter 99), why this is important and how the public can help preserve and protect our managed coastal zones (i.e. Jones island)	Nor'E aster, Coastal Erosion, Hurricane, Flood , Sever	Town of Babylon		In Progress	Cost		1. Discontinue 2. 3. This program has been combined with the outreach efforts on flood education as all CEHA are located in the 100 year flood plain.
						Level of Protection		
						Damage Avoided ; Evidence of Success		



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						Cost	Level of Protection ; Evidence of Success	
		Severe Storm				Cost		
Babylon Town-49	Increase public education and notification concerning Asian Beetle , including production and distribution of maps of affected areas.	Nor'E aster, Coastal Erosion, Hurricane, Flood , Severe Storm	USACE, Markets		In Progress	Cost		1. Discontinue 2. 3. This action is being carried out under Action ID #38.
Babylon Town-50	Consider participation in incentive-based programs such as CRS and "Storm Ready."	Nor'E aster, Coastal Erosion, Hurricane, Flood , Severe Storm	Town of Babylon		Ongoing Capability; Although the Town has not re-joined the CRS program or participated in the Storm Ready program, staff continues to follow program updates and changes for review by the Town Board.	Cost		1. Include in 2020 HMP 2. 3.
Babylon Town-51	Continue to support the implementation, monitoring, maintenance	Nor'E aster, Coastal	Suffolk County, Town of		Ongoing Capability; The Town will continue to assign staff for the maintenance and updating of this plan.	Cost		1. Discontinue 2. 3. Ongoing Capability



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	and updating of this Plan, as defined in Section 7. 1	Erosion, Hurricane, Flood, Severe Storm	Babylon, Village			Damage s Avoided ; Evidenc e of Success	
Babylon Town-52	Strive to maintain compliance with and good-standing in the National Flood Insurance program.	Nor'E aster, Coastal Erosion, Hurricane, Flood, Severe Storm	NFIP Floodpl ain Administrator		Ongoing Capability; FEMA conducted a post-Sandy CAV in the fall of 2014, several actions were brought to the attention of the Town and the CAV eventually was closed in 2018 as most issues were resolved. The Town strives to continue to remain in compliance with the FIA, continuous training of Building Department and Environmental Control Staff will continue. Staff with CFM certifications will continue training and pursuit of CEC for flood prevention and flood code courses.	Cost ; Level of Protecti on ; Damage s Avoided ; Evidenc e of Success	1. Discontinue 2. 3. Ongoing Capability
Babylon Town-53	Encourage the International Bldg. Codes Council to investigate seismic design provisions for inclusion in the New York State Bldg. & Fire Prevention Codes.	Earth quake	Town of Babylon		Complete; NYS has adopted seismic design provisions in the 2020 NYS Building Code.	Cost ; Level of Protecti on ; Damage s Avoided ; Evidenc e of Success	1. Discontinue 2. 3. Complete
		All				Cost	1. Discontinue



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						Level of Protection	Damage Avoided ; Evidence of Success	
Babylon Town-54	Increase public outreach, including enhancing connectedness (e.g., social media, text messaging), on emergency preparedness, the importance of health dune systems, and local ecology.		Town of Babylon , Village, Engineering		Ongoing Capability; The Town has spent considerable effort in the past 5 years increasing our presence on popular social media platforms (i.e. Facebook, Twitter). Operating out of the Town Supervisors Office our Public Communications Office works with our Department of Environmental Control and Office of Emergency Management to message on emergencies and general preparedness for resiliency and ecological stewardship. Several work projects took advantage of our 311 system and residents receiving direct email and/or text messaging on actions in their area.	Level of Protection		2. 3. Ongoing Capability
Babylon Town-55	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition, relocation to protect structures from damage, with repetitive loss and severe repetitive loss properties as a priority when applicable. Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option (in progress). Phase 2: Work with the property owners to implement selected action based on available funding and local match availability.	Nor'E aster, Coastal Erosion, Hurricane, Wildfire, Flood	Town of Babylon		In Progress	Cost		1. Discontinue 2. 3. This activity is being incorporated with Action ID #43.
		All				Cost		1. Discontinue



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Babylon Town-56	<p>Support and participate in county led initiatives intended to build local and regional mitigation and risk-reduction capabilities (see Section 9.1), specifically:</p> <ul style="list-style-type: none"> • Mitigation Education for Natural Disasters (natural hazard awareness and personal scale risk reduction, mitigation public education and outreach program) • Build Local Floodplain Management and Disaster Recovery Capabilities (enhanced floodplain management, and post-disaster assessment and recovery capabilities) • County-Wide Debris Management Plan • Jurisdictional Knowledge of Mitigation Needs of Property Owners (improved understanding of damages and mitigation interest, activity of private property owners) <ul style="list-style-type: none"> • Create a Multi-Jurisdictional Seismic Safety Committee in Suffolk County (build regional, county and local capabilities to manage seismic risk, both pre- and post-disaster) • Alignment of Mitigation Initiatives through all levels 		Town of Babylon		Ongoing Capability; Since 2014 the Town has participated in the County lead updating of this Plan, the County Debris Management Plan and most recently the adoption of the County Emergency Management Plan. The Town Office of Emergency Management will continue to work with FRES and the County Planning Department on regional plans and disaster management planning.	<p>Level of Protection</p> <p>Damage Avoided ; Evidence of Success</p>	<p>2.</p> <p>3. Ongoing Capability</p>



Project #	Project Name	Hazards 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) Blank	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.
	of Government (effort to build State and Federal level recognition and support of the County and local hazard mitigation planning strategies identified in this plan).						
Babylon Town-57	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.	Nor'E aster, Hurricane, Flood , Severe Storm	Town of Babylon		Complete; Our Town DPW has completed their emergency response plan for snow removal, ice storm and downed power lines. GIS maps which are printed and supplied to DPW Area foreman and workers identify the priority roadways in an emergency response.	Cost Level of Protection Damage s Avoided ; Evidenc e of Success	1. Discontinue 2. 3. Complete
Babylon Town-58	With many Pre-FIRM buildings in the Town, many structures are vulnerable to Flood and are at a greater risk of sustaining damage. This is something the Town would like to minimize in disasters. Undertake a study to investigate, prioritize issues and develop mitigation options to reduce the Towns risk in disasters,	-	-		No Progress; Although the Town is aware of the vulnerability of our residential neighborhoods, actions to review planning updates were carried out by our Office of Downtown Revitalization, a division of our Department of Planning and Development. In 2019 that office was absorbed back into the Department of Planning and Development. Planning meeting have begun to produce a report in-house. it is anticipated that it will be completed in 2021.	Cost Level of Protection Damage s Avoided ; Evidenc e of Success	1. Include in 2020 HMP 2. 3. Complete
Babylon Town-59	Following Hurricane Sandy there was significant damage to utilities, heating units and oil tanks. Many	-	-		Ongoing Capability; Although permitting and anchoring requirements were already in place prior to Hurricane Sandy the	Cost Level of Protection	1. Discontinue 2. 3. Ongoing Capability



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	<p>of these were in the flood zone and oil spills resulted. The insurance coverage of an incident like this is uncertain or non-existent. The Town would like to address the vulnerability of these structures.</p>				<p>majority of the damages that occurred in Sandy were from incorrect or work where no permit review was conducted. Many items such as fuel tanks, A/C condensers and boilers/hot water heaters are routinely installed without permit review. Many properties suffered the same damage from Tropical Storm Irene, only to replace the same items after Sandy because of improper installation. Post-Sandy the Town worked with the Oil Heat Institute of America to produce a standardized tank anchoring specification as FEMA guidelines require engineering analysis which overly complicated even legal construction. In addition the Town performed outreach to homeowners to educate them on the permit requirements and the benefits of installing utilities correctly in the flood zone.</p>	<p>Damage s Avoided ; Evidenc e of Success</p>		
Babylon Town-60	<p>Long-term electrical power loss was a major issue following Hurricane Sandy. Addressing a quicker way of restoring power is something the Town would like to address in the .</p>	-	-		No Progress	Cost		<ol style="list-style-type: none"> 1. Discontinue 2. 3. The Town working with GOSR/NY Rising investigated the use of micro grids in Mainstreet and Downtown commercial areas. Upon completion of our study it was determined that micro grid systems would not solve the issue of downed lines which was the primary cause of electric outages.
						Level of Protection		
						Damage s Avoided ; Evidenc e of Success		



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								Although buried service was also evaluated, high ground water tables complicated this approach which is used in site specific locations were there is adequate ground water separation. Advocating continued line clearance actions and utility pole upgrades to withstand higher wind loads was chosen as the best course of action.
Babylon Town-61	Losses To Avoid: 6, 10 1 residents affected with millions of dollars in damage, Town revenue loss of \$9.6 million in Building Permits, and an estimated Town-wide damage of \$18,496,561. 10.	-	-		In Progress	Cost		1. Discontinue 2. 3. Resiliency in our flood zone and other vulnerable areas has been a primary focus of the Town post-Sandy. The Town continues to improve and upgrade our infrastructure and work with private sector to make private property storm resilient. This action is already being addressed in several of the previous Actions and is being discontinued as a separate action.
						Level of Protection		
						Damage Avoided ; Evidence of Success		



Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Town of Babylon 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:

- The Town rebuilt the east and west bridges on Riviera Drive in the American Venice Civic Association using \$9 million of GOSR funding.

Proposed Hazard Mitigation Initiatives for the HMP Update

The Town of Babylon 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 9.2-15 summarizes the comprehensive-range of specific mitigation initiatives the Town of Babylon 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 9.2-16 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 9.2-15. 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-Town of Babylon-001	Road Dead End Flood Control Project.	2	Flood, Hurricane, Severe Storm, Severe Winter Storm	<p>Problem: Due to the geographical exposure of Babylon Town's shoreline and the dense development along the Great South Bay, even the slightest natural events can cause disruption to the economy. Shallow flood events, below the predicted 10-year elevation, account for the majority of the private flood damage claims as well as damage to public road infrastructure and disruption of sewer and natural gas service. Over time our waterfront shoreline has been hardened by private development, even pre-FIRM development which was elevated on fill with sea walls or bulkhead used to retain the fill material. Consequently, many flood events inundate neighborhoods from road ends that terminate at the water, as this is the lowest structural elevation in the area. This problem has impacted our coastal area since widespread development began in the 1920's, rising sea level and an increase in the occurrence of Nor'Easters and tropical depressions has increased the frequency of these Flood events. Based on the Suffolk County Multi-Jurisdictional/Hazard Mitigation Plan (The Plan), this is the most frequent type of flood event that impacts Babylon. The Plan states that between 1931 to 2006, 26 Nor'Easter's were documented, 12 caused property, infrastructure and</p>	No	None anticipated	These 5 road ends are scheduled to be completed by December 2020. Engineering and permit review will continue along other tidal wetland creeks over the next 5 years.	Town DPW	\$100,000 per dead end	Protection of roadways from erosion and flooding	GOSR	High	SIP	SP



Table 9.2-15. 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
				<p>economic damage exceeding 30% of the Town's total replacement costs for the years of the events. Our local Department of Public works estimates that the frequent Flood of these roads shortens the predicted life of the pavement by as much as 10 years. Saltwater infiltration into the public sewer system occurs when the roads over-top and water infiltrates through damaged or failing seals on man-holes. The County DPW that manages the public sewer system has also acknowledged deliberate acts by frustrated residents to "pry" the man-holes open to drain the road into the sewer system as a recurring problem. The County could not provide a damage cost estimate for these storms. Since the completion of the Plan the Town has been impacted by shallow Flood by a Nor'Easter in 2009, 2010, Tropical Storm Irene in 2011 and 8 events following Hurricane Sandy, 4 of which resulted in street Flood</p> <p>Solution: The Town has completed engineering and regulatory permits to complete 5 road ends located on mud Creek in West Babylon. Funding is being provided by GOSR under their NY Rising Community Reconstruction Program.</p>										
2020-Town of Babylon-002	Tanner Park Dredge Spoil Stabilization Project.	3, 4, 5	Flood, Hurricane, Nor'easter	Problem: The Town maintains a dredging spoil disposal site at it's park facility at Tanner Park in the Hamlet of Copiague. This site is the primary dredge spoil storage	No	Permitting	There potential to complete this	Town DPW	\$150,000	Increased navigability, restoration of channel	Town bond	High	SIP, NSP	PP, NR



Table 9.2-15. 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
				<p>area for all public canals, marina's and channels that are within a 4,000 foot radius of this site. The storage facility is available for County and Town sponsored dredging projects. The facility is an earthen dyke protected area of 5.5 acres with a storage capacity of 55,000 cubic yards. The facility borders the western shoreline of Howells Creek and erosion from Tropical Storm Irene and Hurricane Sandy has impacted the entire eastern dyke wall. The site was evaluated by the Suffolk County Department of Public Works, Bridges and Waterways Division after Hurricane Sandy to access damages. They reported that the eastern perimeter dyke wall was eroded to the point of it being structurally compromised and damage to the dewatering system was noted. Failure of the dyke wall will allow fill to erode into the creek which will impact navigation to a municipal marina, boat launching ramp and private residences. Damages resulting from Hurricane Sandy is estimated at \$150,000.00.</p> <p>Solution: Conceptual design work has been completed. Currently funding, engineering and regulatory permit applications are all pending.</p>			project in 2021-2022 with the County dredging of the adjacent channel at Howells Creek.							
2020-Town of Babylon-003	Town-wide Regional Emergency Action Facility	1, 2, 7, 8	All Hazards	<p>Problem: The Town lacks a centralized location for the storage of emergency supplies.</p> <p>Solution: The Town will identify an appropriate facility for the</p>	Yes	None	Within 5 years	OEM	\$2 million	Establishment of central emergency storage facility	FEMA HMGP, PDM, BRIC USDA	High	SIP	ES



Table 9.2-15. 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
				storage of emergency supplies and PPE. The Town will then purchase the facility and make appropriate upgrades as necessary.							Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town budget			
2020-Town of Babylon-004	Back-up Power for Senior and Nutrition Centers	2, 7	All Hazards	<p>Problem: The Town operates several facilities which provide critical services for socially vulnerable populations. Power loss can result in spoilage of stored food. The following facilities lack backup power:</p> <ul style="list-style-type: none"> • 3 senior centers • 2 nutrition centers <p>Solution: The Town will work to purchase and install backup power at the selected facilities.</p>	No	None	Within 5 years	Engineer	\$15,000 per generator; \$75,000 total	Maintain critical services of facilities	FEMA HMGP and PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	High	SIP	PP
2020-Town of Babylon-005	Restoration of Tidal Tributaries and Freshwater Rivers	3, 4, 5	Nor'Easter, Coastal Erosion, Hurricane, Flood, Infestation and Invasive Species.	<p>Problem: The Town completed its Watershed study for the Carlls River, an additional 10 more streams are having their watershed plans written. In the past 5 years the Town has completed a wetland restoration and constructed a stormwater treatment pond on the upper Carlls River corridor. program.</p>	No	Yes may require permitting	Fall 2020 for stormwater pond	Town of Babylon DEC	\$150,000	Reduces flooding, increased planning	GOSR for stormwater pond, WQIP, EPF	High	NSP	NR



Table 9.2-15. 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
				<p>Solution: Institute a stream-program to restore habitats of tidal tributaries and freshwater rivers by reducing invasive species, trash, excess sediment, etc. to increase natural and municipal drainage capabilities. A second stormwater treatment pond is proposed on the mid-section of the Carlls River and should be completed by December 2020. A tidal wetland restoration is in the design stage for a section of Santapogue Cree on land transferred to the Town through the GOSR NY Rising Buy-out program.</p>										
2020-Town of Babylon-006	Reconstruct Roadways in Venetian Shores Area and Increase Drainage Capacity	1, 2	Flood, Severe Storm	<p>Problem: The Venetian Shore area requires drainage improvements.</p> <p>Solution: Investigation design and funding alternatives to reconstruct roadways in Venetian Shores area, reconstruction will include raising the maximum amount possible and increase drainage capacity. The Town has adopted the 10-year flood height, when possible, to reduce daylight flooding events. The Town has adopted a 5-year road elevation plan. This area will be addressed in the next 5-year plan, unless additional funding sources become available.</p>	No	None anticipated	Within 5 years	Babylon DPW	\$2 million	Reduction in daylight flooding events	HMGP, BRIC, NY Rising, Town budget	High	SIP	PP, SP
2020-Town of Babylon-007	Backflow Prevention	1, 2	Nor'Eastern, Coastal Erosion, Hurricane, Flood	<p>Problem: Backflow of stormwater outflow due to high coastal waters results in flooding.</p> <p>Solution: Based on the results of tidal backflow trials, retrofit approximately 101 outfall pipes to prevent tidal backflow into</p>	No	None	Within 5 years	Babylon DPW	Roughly \$40,000 per site	Reduction in flood/backflow issues	HMGP, BRIC, Town budget	High	SIP	SP



Table 9.2-15. 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
				drainage systems. In the past 5 years the town has installed approximately 12 new backflow valves on projects located in the Hamlets of Copiague, Lindenhurst and West Babylon. Currently, through GOSR's NY Rising CRP program, additional backflow valves are proposed on roadways on Mud Creek (West Babylon) and Santapogue Creek (Lindenhurst). Installation is planned for completion in 2020. Over the next 5 years the Hamlets of Amity Harbor/Copiague are being targeted for backflow valve installation being funded locally through Town Highway Improvement funds. 100 outfalls have been identified south of Montauk Highway. During roadway improvements, the DPW Highway Department will add tidal valves.										
2020-Town of Babylon-008	Copiague Roadway Stormwater Improvements	1, 2	Nor'East, Coastal Erosion, Hurricane, Flood	<p>Problem: Copiague roadways experience flooding at low lying locations and have poor drainage.</p> <p>Solution: Re-engineer and reconstruct Copiague roadways (for example Coolidge Ave) to eliminate or minimize pronounced low points which capture stormwater runoff and coastal flood waters with no available dissipation outlet.</p>	No	None	5 years	Engineering, Highway Department	High	Increased drainage, reduced flooding	Town Highway Fund	High	SIP	PP, SP
2020-Town of Babylon-009	Coastal Erosion Monitoring	1, 2, 3, 5	Nor'East, Coastal Erosion, Hurricane, Flood	<p>Problem: The Town has shoreline which could be exposed to coastal erosion and has experienced erosion events in the past.</p> <p>Solution: The Town will participate in a county led erosion</p>	No	None	Within 1 year	Suffolk County SWCD, NYSDOS, NYSDEC, NYSCSIC,	Staff time	Identification of coastal erosion	NYS and County budgets	High	NSP	NR



Table 9.2-15. 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
				monitoring program. The Town will also encourage NYS and FEMA to document erosion rates by taking standardized aerial photographs of our shoreline on a yearly basis, and when necessary after severe storms.				NYSEMO, FEMA, and all other agencies currently producing aerial photography						
2020-Town of Babylon-010	Consider Low-Density Land Use in High Risk Coastal, Surface Water and Groundwater Zones	4, 5	Nor'Eastern, Coastal Erosion, Hurricane, Flood	<p>Problem: The coastal, surface water and groundwater zones have higher risk.</p> <p>Solution: The Town will work to include low-density land use in high risk coast, surface water, and groundwater zones. Several meetings with town Planning, Environmental and OEM staff have taken place to develop a local code or overlay district for future enforcement.</p>	No	None	Within 5 years	Town of Babylon Planning	Staff time	Reduction in future risk in high risk zones	Town budget	High	LP R	PR
2020-Town of Babylon-011	Implement Wetlands Restoration Projects	3, 4, 5	Nor'Eastern, Coastal Erosion, Hurricane, Flood	<p>Problem: Carlls River wetlands are degraded and need restoration. Other natural areas require restoration as well including Santapogue Creek.</p> <p>Solution: As funding is available, the Town has a list of sites that preliminary restoration plans have been prepared or are being prepared. In 2020 a freshwater restoration on the Carlls River freshwater stream corridor is proposed. It's anticipated that construction will be completed in the fall of 2020. In the next 5 years plans are in place to restore a 1/2 acre property on Santapogue Creek that was dedeed to the Town by NY Rising through their buyout program. Additional plans to remove</p>	No	Permitting may be required	Within 1 year	Town of Babylon, NYS DEC	High	Ecosystem restoration.	HMGP, BRIC, Town budget	High	NS P	N R



Table 9.2-15. 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
				invasive plant species and restore tidal wetlands at the Town Santapogue Creek Restoration site are in place. Both projects currently lack funding.										
2020-Town of Babylon-012	Emergency Response Equipment Upgrades	1, 7	All Hazards	<p>Problem: Firefighting equipment in the Town requires replacement and upgrade.</p> <p>Solution: Purchase new firefighting equipment as necessary</p>	No	None	Within 5 years	Fire Department	\$2 million	Increased emergency response capabilities	Assistance to Firefighters Grant program, Town budget	High	SIP	ES
2020-Town of Babylon-013	Shoreline Stabilization	3, 4, 5	Nor'East, Coastal Erosion, Hurricane, Flood	<p>Problem: Post - Sandy several shoreline stabilization projects were completed after the Town bonded repair funds which were later reimbursed through the FEMA PW process. The Town has identified 2 additional locations (Tanner Park & Kay Road) where shoreline erosion is threatening infrastructure and the eroding sediments are creating navigational hazards by silting in navigational channels. A 1,200' section of shoreline at Tanner Park adjacent to a dredge spoil containment area has been steadily eroding which is weakening the dyke walls and silting the entrance to Howells Creek which is currently 50% blocked. A similar project located at Ketchams Creek is in conceptual planning as well.</p> <p>Solution: Explore options and feasibility of instituting shoreline stabilization programs where natural restoration is not an option. Implement as funding becomes available. The County DPW has plans to dredge the</p>	No	Yes, permitting and privately owned shoreline	Within 5 years	Suffolk County, Town of Babylon DPW, Village of Amityville	High	Reopen navigation channel, reduce erosion, restore habitat	Town budget	High	NSP	NR



Table 9.2-15. 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	
				entrance to Howells Creek in 2021, the Town is in conceptual design to harden the shore with stone to coincide with the dredging project. The County DPW proposes to dredge the entrance of Ketchams Creek in the fall of 2020. A 1,300', privately owned section of shore line is eroding which is the source of drifted sand silting in the channel. The Town is coordinating a stabilization project to coincide with the dredging project. Both projects will be funded by the Town through Bonds.											
2020-Town of Babylon-014	Public Water System	1, 5, 8	Drought, Wildfire	<p>Problem: The largest concentration of homes in the Town of Babylon without public water supplies is in the Barrier Beach area. Typically, a private well will supply potable water for up to 5 homes. The wells are artesian and do not produce adequate water pressure for home service. Individual homes must use a well pump to draw water and unless the homeowner has a back up power system, cannot draw water during a power outage.</p> <p>Solution: Assess needs, options and funding to install a public water system in the areas of the Town of Babylon that do not have one with backup generators for all systems. Implement as funding becomes available. Since 2009 the Town has been working with the NYSDOH and SCDHS to merge 3 small public water systems for approximately 60 homes at Oak</p>	Yes	None	Within 5 years	Town of Babylon, SCWA	Oak Beach: \$3M West Gilgo: \$700K	Expansion of public water system	GOSR, SCWA	High	SIP	PP	



Table 9.2-15. 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
				<p>Beach. Project design is completed and construction is anticipated to begin in 2020, once completed as capacity allows adjacent homes currently on private wells may be able to join as private wells fail. The new public water system will provide treatment and back-up power for continuous service during power outages.</p> <p>Another GOSR project beginning construction in 2020 is providing upgrades to the West Gilgo Association Public Water facility. Funds were allocated to upgrade the water system and back up power system. This system provides potable water to 83 homes.</p> <p>The Town is working with the County Health Department to identify additional small public water supply systems and seek funding for upgrades in the next 5 year period.</p>										
2020-Town of Babylon-015	Invasive Species Tree Management	2, 3, 5	Infestation and Invasive Species	<p>Problem: Post-Sandy a new infestation of Asian Longhorned Beetle was discovered in Babylon, the Town continued to work with the State Department of Agriculture and Markets to identify new quarantine areas and adopt policies to control and limit the spread of this species.</p> <p>Solution: As the quarantine is still active in Babylon, the Town will continue to work with the State to control this pest. Public outreach and education activities will be incorporated into this Action.</p>	No	None	Within 5 years	NYS Agriculture & Markets, USDA APHIS	Medium	Identification and treatment of invasive species	NYS DEC, Municipal budget	Medium	NSP	NR



Table 9.2-15. 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-Town of Babylon-016	Consider Participation in Incentive-Based Programs	1, 2, 6	Nor'Eastern, Coastal Erosion, Hurricane, Flood, Severe Storm	<p>Problem: The Town does not participate in the CRS or Storm Ready programs. The Town previously participated in CRS. The Town Board is not currently interested in joining either program.</p> <p>Solution: Staff will follow program updates and changes for review by the Town Board.</p>	No	None	Within 5 years	Town of Babylon	Staff time	Reduction in flood insurance premiums, better flood/storm preparedness and outreach	Municipal budget	High	LP R	PR
2020-Town of Babylon-017	Develop Plan for Pre-FIRM Structure Mitigation	2, 3, 5	Flood	<p>Problem: With many Pre-FIRM buildings in the Town, many structures are vulnerable to Flood and are at a greater risk of sustaining damage. This is something the Town would like to minimize in disasters.</p> <p>Solution: Undertake a study to investigate, prioritize issues and develop mitigation options to reduce the Town's risk in disasters. Planning meeting have begun to produce a report in-house. It is anticipated that it will be completed in 2021.</p>	No	None	Within 2 years	Town of Babylon	Staff time	Mitigation options identified	Municipal budget	High	LP R	PR
2020-Town of Babylon-018	Critical Facilities Outreach	2, 6	Flood	<p>Problem: The Town of Babylon has numerous critical facilities located in the 100-year floodplain. These facilities are not owned by the Town. Facilities include:</p> <ul style="list-style-type: none"> Denise's Nursery Family Day Care Tutor Time Learning Centers, LLC MAINTENANCE/OFFICE - BERGEN POINT COUNTY GOLF COURSE BUTLER BUILDING - BERGEN POINT COUNTY GOLF COURSE 	Yes	None	Within 6 months	FPA	Staff time	Facility managers aware of flood risk and mitigation options	Town budget	High	EA P	PI



Table 9.2-15. 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
				<ul style="list-style-type: none"> NEW CLUB HOUSE RESTAURANT - BERGEN POINT COUNTY GOLF COURSE UV ELECTRICAL & STORAGE Pump Station #10 <p>Solution: The Town FPA will conduct outreach to the facility managers of critical facilities to discuss flood exposure and potential mitigation actions.</p>										
2020-Town of Babylon-019	Disease Control	1, 2, 7, 8	Disease Outbreak	<p>Problem: Town facilities will require sanitation controls to reduce the spread of infectious disease.</p> <p>Solution: The Town will investigate emerging technologies for sanitation systems for disease outbreak and pursue funding support for purchase and installation of appropriate systems.</p>	Yes	No	Within 5 years	Town Administration	TBD	Reduction in spread of disease and continuity of operations during times of disease outbreak	BRIC, Town budget	High	LP R	ES
2020-Town of Babylon-020	Temporary Housing	1, 8	All Hazards	<p>Problem: The Town of Babylon has not identified appropriate locations for the placement of temporary housing.</p> <p>Solution: The Town will work with Suffolk County to identify appropriate regional locations outside of the Town boundary for temporary housing.</p>	No	None	Within 1 year	Administration, Suffolk County	Staff time	Temporary Housing locations identified	Town budget, County budget	High	LP R	ES
2020-Town of Babylon-021	Central Alarm Facility Upgrades	1, 6, 7	All Hazards	<p>Problem: The Central Alarm Facility requires software and equipment upgrades to maintain efficiency and effectiveness.</p> <p>Solution: Improve emergency communications and technology for public outreach.</p>	Yes	None	Within 5 years	OEM	\$350K	Increased emergency response capabilities, increased public outreach	Town budget	High	SIP, EAP	ES, PI



Table 9.2-15. 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-Town of Babylon-022	Repetitive Loss Mitigation	1, 2	Flood, Severe Storm	<p>Problem: Frequent flooding events have resulted in damages to residential properties in neighborhoods south of Montauk Highway. These properties have been repetitively flooded as documented by paid NFIP claims. The Village has completed significant mitigation of repetitive loss properties in the past, resulting in 300 homes being elevated and 41 homes acquired for open space.</p> <p>Solution: Conduct outreach to 300 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	\$30 Million	Eliminates flood damage to homes and residents	FEMA HMGP and FMA, local cost share by residents	High	SIP	PP

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 9.2-16. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
2020-Town of Babylon-001	Road Dead End Flood Control Project.	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2020-Town of Babylon-002	Tanner Park Dredge Spoil Stabilization Project.	0	1	1	1	1	0	1	1	1	1	1	0	1	1	11	High
2020-Town of Babylon-003	Town-wide Regional Emergency Action Facility	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2020-Town of Babylon-004	Back-up Power for Senior and Nutrition Centers	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2020-Town of Babylon-005	Restoration of Tidal Tributaries and Freshwater Rivers	0	0	1	1	1	0	1	1	1	1	1	1	1	1	11	High
2020-Town of Babylon-006	Reconstruct Roadways in Venetian Shores Area and Increase Drainage Capacity	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2020-Town of Babylon-007	Backflow Prevention	0	1	1	1	1	1	0	1	1	1	1	0	1	1	11	High
2020-Town of Babylon-008	Copiague Roadway Stormwater Improvements	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2020-Town of Babylon-009	Coastal Erosion Monitoring	0	1	1	1	1	1	0	1	1	1	0	1	1	1	11	High
2020-Town of Babylon-010	Consider Low-Density Land Use in High Risk Coastal, Surface Water and Groundwater Zones	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2020-Town of Babylon-011	Implement Wetlands Restoration Projects	0	0	1	1	1	0	1	1	1	1	1	1	1	1	11	High
2020-Town of Babylon-012	Emergency Response Equipment Upgrades																
2020-Town of Babylon-013	Shoreline Stabilization	0	1	1	1	1	1	0	1	1	1	0	1	1	1	11	High
2020-Town of Babylon-014	Public Water System	1	0	1	1	1	1	1	1	1	1	1	0	1	1	12	High



Table 9.2-16. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
2020-Town of Babylon-015	Invasive Species Tree Management	0	1	1	1	1	1	1	1	1	1	0	0	1	1	11	High
2020-Town of Babylon-016	Consider Participation in Incentive-Based Programs	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2020-Town of Babylon-017	Develop Plan for Pre-FIRM Structure mitigation	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2020-Town of Babylon-018	Critical Facilities Outreach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2020-Town of Babylon-019	Disease Control	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2020-Town of Babylon-020	Temporary Housing	1	0	1	1	1	0	1	1	1	1	1	1	1	1	12	High
2020-Town of Babylon-021	Central Alarm Facility Upgrades	1	0	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2020-Town of Babylon-022	Repetitive Loss Mitigation	1	1	1	1	1	1	0	1	1	0	1	0	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).



9.2.11 Proposed Mitigation Action Types

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

Table 9.2-17. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Coastal Erosion	2020-Town of Babylon-020, 2020-Town of Babylon-010, 2020-Town of Babylon-016,	2020-Town of Babylon-003, 2020-Town of Babylon-004, 2020-Town of Babylon-007, 2020-Town of Babylon-008, 2020-Town of Babylon-012, 2020-Town of Babylon-021	2020-Town of Babylon-005, 2020-Town of Babylon-009, 2020-Town of Babylon-011, 2020-Town of Babylon-013,	2020-Town of Babylon-021	2020-Town of Babylon-010, 2020-Town of Babylon-016,	2020-Town of Babylon-008,	2020-Town of Babylon-021	2020-Town of Babylon-005, 2020-Town of Babylon-009, 2020-Town of Babylon-011, 2020-Town of Babylon-013,	2020-Town of Babylon-007, 2020-Town of Babylon-008,	2020-Town of Babylon-003, 2020-Town of Babylon-004, 2020-Town of Babylon-012, 2020-Town of Babylon-020, 2020-Town of Babylon-021
Cyber Security	2020-Town of Babylon-020	2020-Town of Babylon-003, 2020-Town of Babylon-004, 2020-Town of Babylon-012, 2020-Town of Babylon-021		2020-Town of Babylon-021			2020-Town of Babylon-021			2020-Town of Babylon-003, 2020-Town of Babylon-004, 2020-Town of Babylon-012, 2020-Town of Babylon-020, 2020-Town of Babylon-021
Disease Outbreak	2020-Town of Babylon-020, 2020-Town of Babylon-019,	2020-Town of Babylon-003, 2020-Town of Babylon-004, 2020-Town of Babylon-012, 2020-Town of Babylon-021		2020-Town of Babylon-021			2020-Town of Babylon-021			2020-Town of Babylon-003, 2020-Town of Babylon-004, 2020-Town of Babylon-019,



Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Drought	2020-Town of Babylon-020	2020-Town of Babylon-003, 2020-Town of Babylon-004, 020-Town of Babylon-012, 2020-Town of Babylon-014, 2020-Town of Babylon-021		2020-Town of Babylon-021		2020-Town of Babylon-014,	2020-Town of Babylon-021			2020-Town of Babylon-003, 2020-Town of Babylon-004, 020-Town of Babylon-012, 2020-Town of Babylon-020, 2020-Town of Babylon-021
Earthquake	2020-Town of Babylon-020	2020-Town of Babylon-003, 2020-Town of Babylon-004, 020-Town of Babylon-012, 2020-Town of Babylon-021		2020-Town of Babylon-021			2020-Town of Babylon-021			2020-Town of Babylon-003, 2020-Town of Babylon-004, 020-Town of Babylon-012, 2020-Town of Babylon-020, 2020-Town of Babylon-021
Expansive Soils	2020-Town of Babylon-020	2020-Town of Babylon-003, 2020-Town of Babylon-004, 020-Town of Babylon-012, 2020-Town of Babylon-021		2020-Town of Babylon-021			2020-Town of Babylon-021			2020-Town of Babylon-003, 2020-Town of Babylon-004, 020-Town of Babylon-012, 2020-Town of Babylon-020, 2020-Town of Babylon-021
Extreme Temperature	2020-Town of Babylon-020	2020-Town of Babylon-003, 2020-Town of Babylon-004, 020-Town of		2020-Town of Babylon-021			2020-Town of Babylon-021			2020-Town of Babylon-003, 2020-Town of Babylon-004, 020-Town of Babylon-



Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
		Babylon-012, 2020-Town of Babylon-021								012, 2020-Town of Babylon-020, 2020-Town of Babylon-021
Flood	2020-Town of Babylon-020, 2020-Town of Babylon-010, 2020-Town of Babylon-016, 2020-Town of Babylon-017,	2020-Town of Babylon-001, 2020-Town of Babylon-002, 2020-Town of Babylon-003, 2020-Town of Babylon-004, 2020-Town of Babylon-006, 2020-Town of Babylon-007, 2020-Town of Babylon-008, 2020-Town of Babylon-012, 2020-Town of Babylon-021, 2020-Town of Babylon-022	2020-Town of Babylon-002, 2020-Town of Babylon-005, 2020-Town of Babylon-009, 2020-Town of Babylon-011, 2020-Town of Babylon-013,	2020-Town of Babylon-021, 2020-Town of Babylon-018	2020-Town of Babylon-010, 2020-Town of Babylon-017,	2020-Town of Babylon-002, 2020-Town of Babylon-006, 2020-Town of Babylon-022	2020-Town of Babylon-021, 2020-Town of Babylon-018	2020-Town of Babylon-002, 2020-Town of Babylon-005, 2020-Town of Babylon-009, 2020-Town of Babylon-011, 2020-Town of Babylon-013,	2020-Town of Babylon-001, 2020-Town of Babylon-006, 2020-Town of Babylon-007, 2020-Town of Babylon-008,	2020-Town of Babylon-003, 2020-Town of Babylon-004, 020-Town of Babylon-012, 2020-Town of Babylon-020, 2020-Town of Babylon-021
Groundwater Contamination	2020-Town of Babylon-020	2020-Town of Babylon-003, 2020-Town of Babylon-004, 020-Town of Babylon-012, 2020-Town of Babylon-021		2020-Town of Babylon-021			2020-Town of Babylon-021			2020-Town of Babylon-003, 2020-Town of Babylon-004, 020-Town of Babylon-012, 2020-Town of Babylon-020, 2020-Town of Babylon-021



Hazard	FEMA				CRS						
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES	
Hurricane	2020- Town of Babylon- 020, 2020- Town of Babylon- 010, 2020- Town of Babylon- 016,	2020- Town of Babylon- 001, 2020- Town of Babylon- 002, 2020- Town of Babylon- 003, 2020- Town of Babylon- 004, 2020- Town of Babylon- 007, 2020- Town of Babylon- 008, 2020- Town of Babylon- 012, 2020- Town of Babylon- 021	2020- Town of Babylon- 002, 2020- Town of Babylon- 005, 2020- Town of Babylon- 009, 2020- Town of Babylon- 011, 2020- Town of Babylon- 013,	2020- Town of Babylon- 021	2020- Town of Babylon- 010, 2020- Town of Babylon- 016,			2020- Town of Babylon- 021	2020- Town of Babylon- 002, 2020- Town of Babylon- 005, 2020- Town of Babylon- 009, 2020- Town of Babylon- 011, 2020- Town of Babylon- 013,	2020- Town of Babylon- 001, 2020- Town of Babylon- 007, 2020- Town of Babylon- 008,	2020- Town of Babylon- 003, 2020- Town of Babylon- 004, 020- Town of Babylon- 012, 2020- Town of Babylon- 020, 2020- Town of Babylon- 021
Infestation and Invasive Species	2020- Town of Babylon- 020	2020- Town of Babylon- 003, 2020- Town of Babylon- 004, 020- Town of Babylon- 012, Town of Babylon- 021	2020- Town of Babylon- 005, 2020- Town of Babylon- 015,	2020- Town of Babylon- 021			2020- Town of Babylon- 021	2020- Town of Babylon- 005, 2020- Town of Babylon- 015,		2020- Town of Babylon- 003, 2020- Town of Babylon- 004, 020- Town of Babylon- 012, 2020- Town of Babylon- 020, 2020- Town of Babylon- 021	
Noe' Easter	2020- Town of Babylon- 020, 2020- Town of Babylon- 010, 2020- Town of Babylon- 016,	2020- Town of Babylon- 002, 2020- Town of Babylon- 003, 2020- Town of Babylon- 004, 2020- Town of Babylon- 007, 2020-	2020- Town of Babylon- 002, 2020- Town of Babylon- 005, 2020- Town of Babylon- 009, 2020- Town of Babylon- 011, 2020-	2020- Town of Babylon- 021	2020- Town of Babylon- 010, 2020- Town of Babylon- 016,	2020- Town of Babylon- 002, 2020- Town of Babylon- 008,	2020- Town of Babylon- 021	2020- Town of Babylon- 002, 2020- Town of Babylon- 005, 2020- Town of Babylon- 009, 2020- Town of Babylon- 011, 2020-	2020- Town of Babylon- 007, 2020- Town of Babylon- 008,	2020- Town of Babylon- 003, 2020- Town of Babylon- 004, 020- Town of Babylon- 012, 2020- Town of Babylon- 020, 2020- Town of	





Section 9.2: Town of Babylon

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
		Town of Babylon-008, 020-Town of Babylon-012, 2020-Town of Babylon-021	Town of Babylon-013,					Town of Babylon-013,		Babylon-021
Severe Storm	2020-Town of Babylon-020	2020-Town of Babylon-001, 2020-Town of Babylon-003, 2020-Town of Babylon-004, 2020-Town of Babylon-006, 020-Town of Babylon-012, 2020-Town of Babylon-021, 2020-Town of Babylon-022		2020-Town of Babylon-021		2020-Town of Babylon-006, 2020-Town of Babylon-022	2020-Town of Babylon-021		2020-Town of Babylon-001, 2020-Town of Babylon-006,	2020-Town of Babylon-003, 2020-Town of Babylon-004, 020-Town of Babylon-012, 2020-Town of Babylon-020, 2020-Town of Babylon-021
Severe Winter Storm	2020-Town of Babylon-020	2020-Town of Babylon-001, 2020-Town of Babylon-003, 2020-Town of Babylon-004, 020-Town of Babylon-012, 2020-Town of Babylon-021		2020-Town of Babylon-021			2020-Town of Babylon-021		2020-Town of Babylon-001,	2020-Town of Babylon-003, 2020-Town of Babylon-004, 020-Town of Babylon-012, 2020-Town of Babylon-020, 2020-Town of Babylon-021
Shallow Groundwater	2020-Town of Babylon-020	2020-Town of Babylon-003, 2020-Town of Babylon-004, 020-		2020-Town of Babylon-021			2020-Town of Babylon-021			2020-Town of Babylon-003, 2020-Town of Babylon-004, 020-Town of





Hazard	LPR	FEMA			PR	PP	CRS			ES
		SIP	NSP	EAP			PI	NR	SP	
		Town of Babylon-012, 2020-Town of Babylon-021								Babylon-012, 2020-Town of Babylon-020, 2020-Town of Babylon-021
Wildfire	2020-Town of Babylon-020	2020-Town of Babylon-003, 2020-Town of Babylon-004, 2020-Town of Babylon-012, 2020-Town of Babylon-014, 2020-Town of Babylon-021		2020-Town of Babylon-021		2020-Town of Babylon-014,	2020-Town of Babylon-021			2020-Town of Babylon-003, 2020-Town of Babylon-004, 2020-Town of Babylon-012, 2020-Town of Babylon-020, 2020-Town of Babylon-021

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

9.2.12 Staff and Local Stakeholder Involvement in Annex Development

The Town of Babylon 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 TOWN departments, including: Waterways Management, Operations, and GIS. The Waterways Management Superintendent 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 municipality’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meeting Documentation).

Table 9.2-18. Contributors to the Annex

Name	Title/Entity	Method of Participation
Joe Guarino	Principal Environmental Analyst	Attended plan participant meetings, provided impact data, contributed to mitigation strategy.
Anna Triebwasser	GIS Tech	Attended plan participant meetings, provided impact data, contributed to mitigation strategy.
Brian Zitani	Waterways Management Superintendent	Primary Point of Contact, NFIP FPA, attended plan participant meetings, provided impact data, contributed to mitigation strategy.
John Cifelli	Director of Operations	Secondary Point of Contact, attended plan participant meetings, provided impact data, contributed to mitigation strategy.



Name	Title/Entity	Method of Participation
Emily Sweet	GIS Analyst	Attended plan participant meetings, provided impact data, contributed to mitigation strategy.

9.2.13 Hazard Area Extent and Location

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



Figure 9.2-1. Town of Babylon Hazard Area Extent and Location Map 1

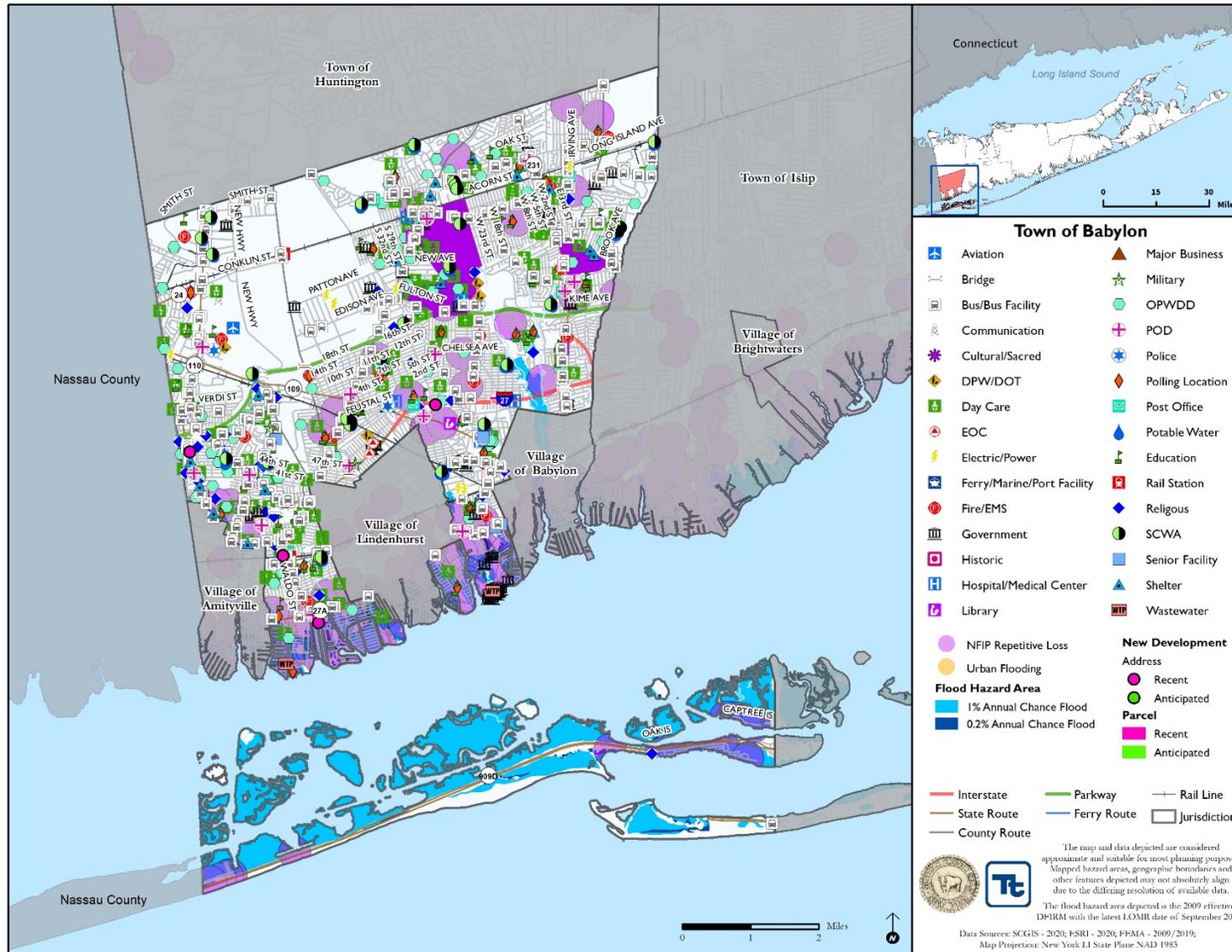




Figure 9.2-2. Town of Babylon Hazard Area Extent and Location Map 2

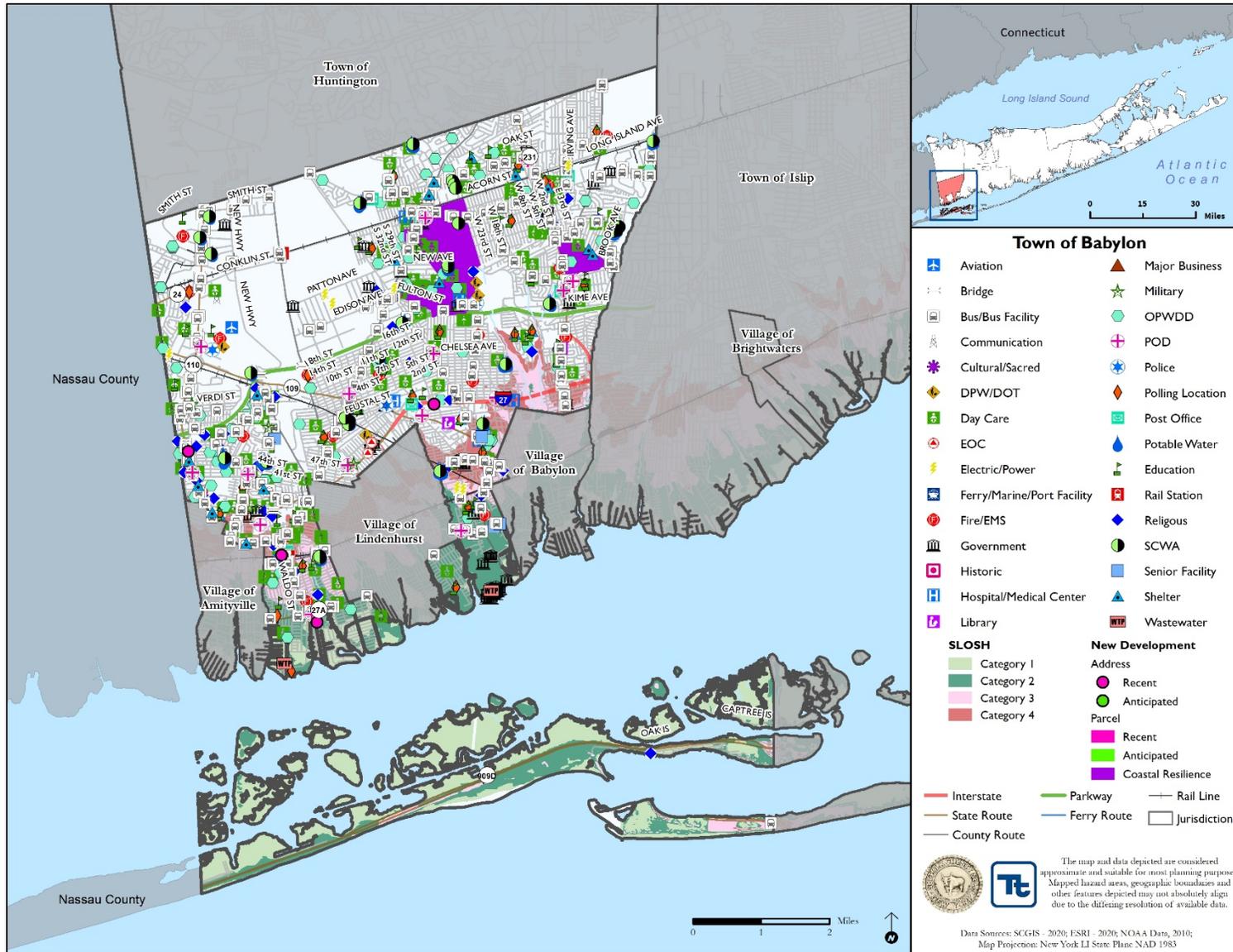




Figure 9.2-3. Town of Babylon Hazard Area Extent and Location Map 3

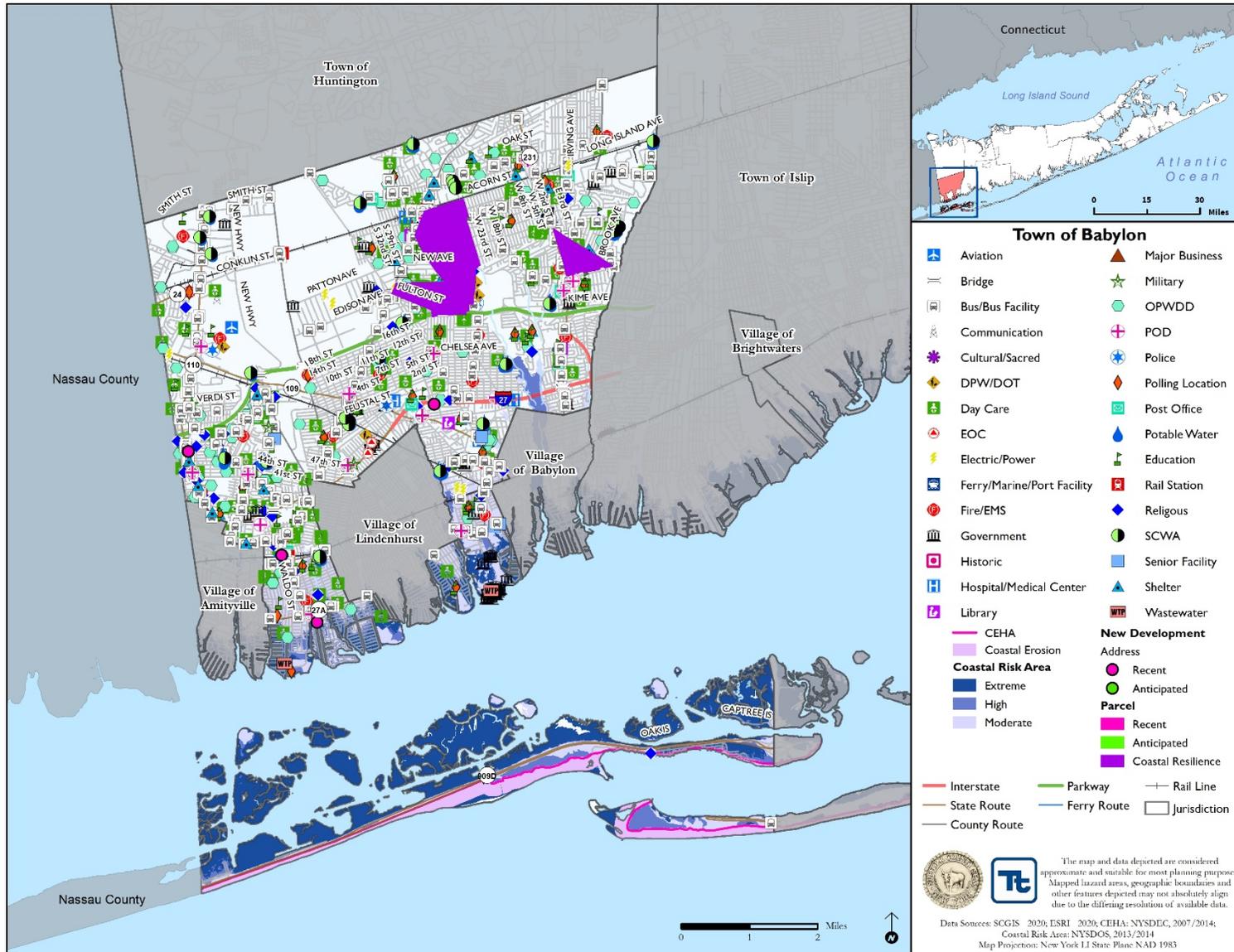




Figure 9.2-4. Town of Babylon Hazard Area Extent and Location Map 4

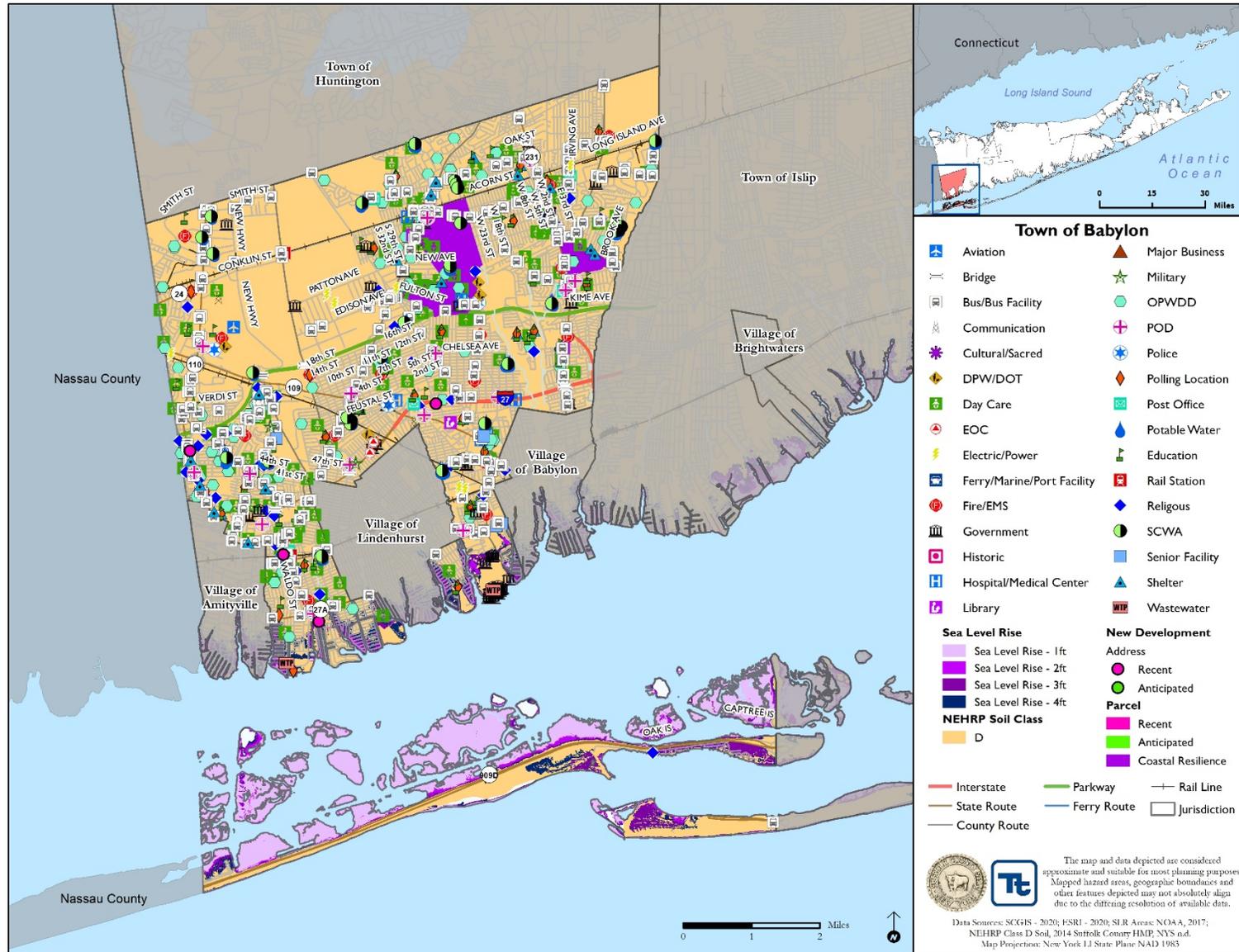
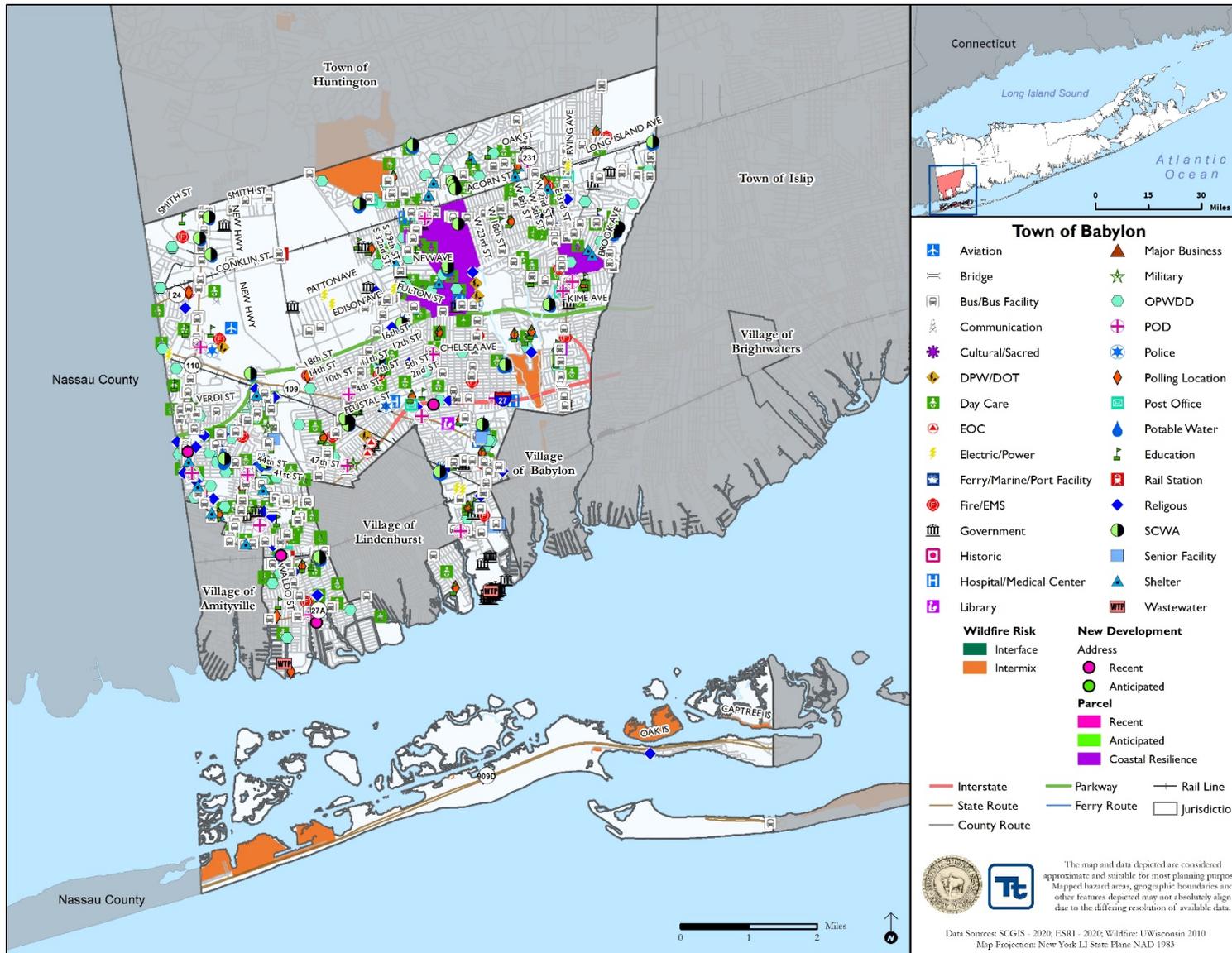




Figure 9.2-5. Town of Babylon Hazard Area Extent and Location Map 5





Action Worksheet			
Project Name:	Town-wide Regional Emergency Action Facility		
Project Number:	2020-Town of Babylon-003		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	The Town lacks a centralized location for the storage of emergency supplies.		
Action or Project Intended for Implementation			
Description of the Solution:	The Town will identify an appropriate facility for the storage of emergency supplies and PPE. The Town will then purchase the facility and make appropriate upgrades as necessary.		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	Facility established.	Estimated Benefits (losses avoided):	Establishment of central emergency storage facility
Useful Life:	25 years	Goals Met:	1, 2, 7, 8
Estimated Cost:	\$2 million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	Within 2 years	Potential Funding Sources:	FEMA HMGP, PDM, BRIC USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town budget
Responsible Organization:	OEM	Local Planning Mechanisms to be Used in Implementation if any:	Hazard mitigation, Emergency management
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Purchase multi-use trailers	\$50,000 per trailer	Require deployment, limited space
	Rely on County space	\$0	County space is limited
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Evaluation and Prioritization		
Project Name:	Town-wide Regional Emergency Action Facility	
Project Number:	2020-Town of Babylon-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Will store emergency response equipment to protect life
Property Protection	1	Will store emergency response equipment to protect property
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	The project has public support
Legal	1	
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	All Hazards
Timeline	0	Within 5 years
Agency Champion	1	OEM
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Back-up Power for Senior and Nutrition Centers		
Project Number:	2020-Town of Babylon-004		
Risk / Vulnerability			
Hazard(s) of Concern:	All hazards		
Description of the Problem:	Backup power sources are necessary to maintain critical services for critical facilities. The Town operates several facilities which provide critical services for socially vulnerable populations. Power loss can result in spoilage of stored food. The following facilities lack backup power: <ul style="list-style-type: none"> • 3 senior centers • 2 nutrition centers 		
Action or Project Intended for Implementation			
Description of the Solution:	The Town Engineer will research what size generator is necessary to supply backup power to the facilities and then install a backup power generator and necessary electrical components at each.		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	N/A	Estimated Benefits (losses avoided):	Ensures continuity of critical services of facilities
Useful Life:	20 years	Goals Met:	2, 7
Estimated Cost:	\$75,000	Mitigation Action Type:	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	FEMA HMGP and PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
Responsible Organization:	Engineer, OEM	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation, Emergency Management
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	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
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Back-up Power for Senior and Nutrition Centers	
Project Number:	2020-Town of Babylon-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Senior and Nutrition Centers
Property Protection	1	Project will protect Senior and Nutrition Centers from power loss.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Town has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	0	Within 5 years
Agency Champion	1	Engineer
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Repetitive Loss Properties		
Project Number:	2020-Town of Babylon-022		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	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			
Description of the Solution:	Conduct outreach to 300 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 elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	1% annual chance flood event + freeboard (<i>in accordance with flood ordinance</i>)	Estimated Benefits (losses avoided):	Eliminates flood damage to homes and residents
Useful Life:	Elevation: 30 years (residential)	Goals Met:	1, 2
Estimated Cost:	\$30Million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6-12 months
Estimated Time Required for Project Implementation:	Three years	Potential Funding Sources:	FEMA HMGP and FMA, local cost share by residents
Responsible Organization:	NFIP Floodplain Administrator, supported by homeowners	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Buyout homes	\$300,000 per home	Large scale buyouts would negatively impact the social structure of neighborhoods.
	Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Repetitive Loss Properties	
Project Number:	2020-Town of Babylon-022	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Families protected from flooding.
Property Protection	1	Properties removed from high-risk flood areas.
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	The Town has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	1	
Administrative	0	
Multi-Hazard	1	Flood, Severe Storm
Timeline	0	
Agency Champion	1	NFIP Floodplain Administrator, supported by homeowners
Other Community Objectives	1	
Total	11	
Priority (High/Med/Low)	High	