



## 9.28 Town of Riverhead

This section presents the jurisdictional annex for the Town of Riverhead. 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 Riverhead’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.

### 9.28.1 Hazard Mitigation Planning Team

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

**Table 9.28-1. Hazard Mitigation Planning Team**

Primary Point of Contact	Alternate Point of Contact
Name/Title: Chief David Hegermiller, Police Chief Address: 210 Howell Avenue Riverhead, NY 11901 Phone Number: 631-727-4500 x315 Email: djh@townofriverheadny.gov	Name/Title: Ed Frost, Deputy Address: 210 Howell Avenue Riverhead, NY 11901 Phone Number: 631-727-4500 x318 Email: frost@townofriverheadny.gov
NFIP Floodplain Administrator	
Name/Title: Jefferson Murphree, AICP Building and Planning Administrator Address: 210 Howell Avenue Riverhead, NY 11901 Phone Number: 631-727-4500 x239 Email: murphree@townofriverheadny.gov	

### 9.28.2 Municipal Profile

The Town was originally part of Southold Town and became its own township when it was incorporated in 1792 at which time it also became the County Seat. It remains the County Seat until this date. The name signifies that the Town is the mouth of the Peconic River.

The Town of Riverhead is located on the east end of Long Island in Suffolk County, approximately 75 miles east of Manhattan. It has a land area of 67.4 square miles and is bounded on the west by the Town of Brookhaven, on the north by the Long Island Sound with Connecticut on the opposite shore, on the east by the Town of Southold, and on the south by Southampton Town with the dividing line being the Peconic River and the Great Peconic Bay. The eastern terminus of Interstate 495, the Long Island Expressway, brings you close to the center of our Town. The Long Island Railroad services the Town with one station located in downtown.

The five-member Riverhead Town Board is the governing legislative body and consists of a Supervisor and four council members; all of whom are elected at large. The body will assume the responsibility for the adoption and implementation of this plan. The Town consists of numerous departments and divisions encompassing police, juvenile aid bureau, emergency management, emergency medical services, accounting, highway, community development, planning, personnel, information technology, engineering, building and grounds, recreation, assessors, animal control, Empire development zone, industrial development agency, fire marshal, justice court, municipal garage, purchasing, sanitation, seniors, sewer, tax receiver, town attorney, town attorney investigations unit, town clerk, and water district.



According to the U.S. Census, the 2010 population for the Town of Riverhead was 33,506. The estimated 2017 population was 33,625, a 0.4 percent increase from the 2010 Census. Data from the 2017 U.S. Census American Community Survey indicate that 4.3 percent of the population is 5 years of age or younger and 24.3 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.

### 9.28.3 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 9.28-2 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 9.28-2. Recent and Expected Future Development**

Type of Development	2014		2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)</b>												
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single Family	N/A	N/A	N/A	N/A	19	10	57	18	87	19	64	10
Multi-Family	N/A	N/A	N/A	N/A	1	1	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	N/A	N/A	N/A	N/A	18	1	32	2	26	1	23	2
<b>Total Permits Issued</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>38</b>	<b>12</b>	<b>89</b>	<b>20</b>	<b>113</b>	<b>20</b>	<b>87</b>	<b>12</b>
Property or Development Name	Type of Development	# of Units / Structures		Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development				
<b>Recent Major Development and Infrastructure from 2015 to Present</b>												
None identified												
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>												
None anticipated												

Note: Records begin on June 16, 2016. No records available prior to this date.

SFHA Special Flood Hazard Area (1% flood event)

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

### 9.28.4 Capability Assessment

The Town of Riverhead 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 9.28.4). The Town of Riverhead 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 Riverhead and where hazard mitigation has been integrated.

**Table 9.28-3. Planning, Legal, and Regulatory Capability**

	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated?	
						Yes	If no - can it be a mitigation action?
<b>Codes, Ordinances, &amp; Requirements</b>							
Building Code	Yes	Chapter 217 Buildings, Building Construction and Improvements and Housing Standards, 2012	Local, State	Building Department	Yes	Yes	-
Comment: Chapter 217 establishes that the New York State Uniform Fire Prevention and Building Code," are applicable to all buildings and construction in the Town of Riverhead. Green Building Standards are established for Town-owned buildings.							
Zoning Code	Yes	Chapter 301 Zoning and Land Development, 1976	Local	Planning Board	No	Yes	-
Comment: The purpose of this chapter is to regulate and restrict the height, number of stories and size of buildings and other structures; the percentage of lot that may be occupied; the size of yards, courts and other open spaces; the density of population; and the location and use of buildings, structures and land for trade, industry, residence and other purposes; and to establish the boundaries of districts for said purposes so as to promote the health, safety, morals and general welfare of the Town of Riverhead, with reasonable consideration, among other things, of the character of a district and its peculiar suitability for particular uses and of the conservation of property values; and to encourage the most appropriate use of land in the Town of Riverhead in accordance with a Comprehensive Plan.							
Subdivisions	Yes	Chapter 301 Zoning and Land Development, Article LIII Subdivision Regulations, 1976	Local	Planning Board	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?	
						Yes	No
<p>Comment: It is declared to be the policy of the Planning Board to consider land subdivision plats as part of a plan for the orderly, efficient and economical development of the Town. This means, among other things, that land to be subdivided shall be of such character that it can be used safely for building purposes without danger to health or peril from fire, flood or other menace; that proper provision shall be made for drainage, water supply, sewerage and other needed improvements; that all proposed lots shall be as laid out and of such size as to be in harmony with the development pattern of the neighboring properties; that the proposed streets shall compose a convenient system conforming to the Official Map, if such exists, and shall be properly related to the proposals shown on the Master Plan, if such exists, and shall be of such width, grade and location as to accommodate the prospective traffic, to facilitate fire protection and to provide access of fire-fighting equipment to buildings; and that proper provision shall be made for open spaces for parks and playgrounds.</p>							
Stormwater Management	Yes	Chapter 275 Stormwater Management and Erosion and Sediment Control	Local	Stormwater Management Officer	Yes	Yes	-
<p>Comment: The purpose of this article is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within the Town and to address the findings of fact in § 275-1 hereof. This article seeks to meet those purposes by achieving the following objectives:</p> <ul style="list-style-type: none"> <li>• Meet the requirements of minimum measures 4 and 5 of New York State's SPDES General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s), Permit No. GP-02-02, or as amended or revised;</li> <li>• Require land development and redevelopment activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01, or as amended or revised;</li> <li>• Minimize increases in stormwater runoff from land development and redevelopment activities in order to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels, watercourses, and waterways;</li> <li>• Minimize increases in nonpoint source pollution caused by stormwater runoff from land development and redevelopment activities which would otherwise degrade local water quality;</li> <li>• Minimize the total annual volume of stormwater runoff which flows from any specific site during and following development and redevelopment to the maximum extent practicable; and</li> <li>• Utilize stormwater management practices to achieve the objectives outlined above, and ensure that these practices are properly maintained and eliminate threats to public safety.</li> </ul>							
Post-Disaster Recovery	No	-	-	-	No	-	-
Comment:							
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes	Yes	-
Comment:							
Growth Management	Yes	Chapter 301 Zoning and Land Development, Article XLI Pine Barrens Overlay District, 2003	Local	Planning Board	No	Yes	-
<p>Comment: It is the intent of this article to enact certain clarifications of existing provisions to insure that the safeguards that the Town of Riverhead intended to impose regarding land clearing are observed. The provisions of the Pine Barrens Overlay District were designed, in part, to protect the Pine Barrens Core and Compatible Growth Areas.</p>							
Site Plan Review	Yes	Chapter 301 Zoning and Land Development, 1976	Local	Planning Board	No	Yes	-
Comment: Site plan review is noted in the zoning ordinance.							



	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?	
Environmental Protection	Yes	Chapter 225 Environmental Quality Review; Chapter 211 Beaches and Recreation 1976; Chapter 235 Hazardous Materials 1988; Chapter 295 Wetlands 2002	Local	Various departments	Yes	Yes	-
<p>Comment: The purpose of the Environmental Quality Review chapter is to implement for the Town of Riverhead the provisions of the State Environmental Quality Review Act and the State Environmental Quality Review Regulations, thereby incorporating environmental factors into the existing planning and decision-making process. The Beach and Recreation chapter establishes guidance for the safe use of beaches and parks to prevent environmental damage. The Hazardous Materials chapter protects from the release of hazardous materials. The Wetlands chapter protects wetland ecosystems.</p>							
Flood Damage Prevention	Yes	Chapter 233 Flood Damage Prevention, 2009	Local	Floodplain Administrator	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)	Yes	-
<p>Comment: It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:</p> <ul style="list-style-type: none"> <li>Regulate uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities.</li> <li>Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.</li> <li>Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters.</li> <li>Control filling, grading, dredging and other development which may increase erosion or flood damages.</li> <li>Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.</li> <li>Qualify for, and maintain participation in, the National Flood Insurance Program.</li> </ul>							
Municipal Separate Storm Sewer System (MS4)	Yes	Chapter 275 Stormwater Management and Erosion and Sediment Control, Art II: Illicit Discharges and Connections to Storm Sewers, 2007	Local	Stormwater Management Officer	Yes	Yes	-
<p>Comment: The purpose of this article is to provide for the health, safety and general welfare of the residents of the Town of Riverhead through the regulation of connections to the Town's municipal separate storm sewer system (MS4) and the regulation of non-stormwater discharges to the MS4 to the maximum extent practicable as required by federal and state law. This article establishes methods for controlling the introduction of pollutants into the MS4 in order to comply with requirements of the New York State Department of Environmental Conservation's (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit (GP-02-02) for Municipal Separate Storm Sewer Systems. The objectives of this article are:</p> <ul style="list-style-type: none"> <li>To meet the requirements of the SPDES General Permit for Stormwater Discharges from MS4s, Permit No. GP-02-02, or as amended or revised;</li> <li>To regulate the contribution of pollutants to the MS4 since such systems are not designed to accept, process or discharge non-stormwater wastes;</li> <li>To prohibit unauthorized and illicit connections, activities and discharges to the MS4;</li> </ul>							



	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?	
<ul style="list-style-type: none"> <li>To establish legal authority to implement all inspection, surveillance and monitoring procedures necessary to ensure compliance with this article; and</li> <li>To promote public awareness of the hazards involved in the improper discharge of trash, yard waste, lawn chemicals, pet waste, wastewater, grease, oil, petroleum products, cleaning products, paint products, hazardous waste, sediment and other pollutants into the MS4.</li> </ul>							
Emergency Management	No	-	-	-	Yes	-	-
Comment:							
Climate Change	No	-	-	-	Yes	-	-
Comment:							
Disaster Recovery Ordinance	No	-	-	-	No	-	-
Comment:							
Disaster Reconstruction Ordinance	No	-	-	-	No	-	-
Comment:							
Coastal Erosion Hazard Areas	Yes	Chapter 219 Coastal Erosion Hazard Areas, 2005	Local	Administrator	No	Yes	-
<p>Comment: The Town of Riverhead 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. In addition, it is the purpose of this chapter to:</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>Regulate new construction or placement of structures in order to place them a safe distance from areas of active erosion and the impact 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.</li> <li>Restrict public investment in services, facilities or activities which are likely to encourage new permanent development in erosion hazard areas.</li> <li>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.</li> </ul>							
<b>Planning Documents</b>							
Comprehensive Plan	Yes	Town of Riverhead Comprehensive Plan, November 2003	Local	Planning Dept. & Town Board	No	No	-
Comment: The Town of Riverhead's Comprehensive Plan is currently undergoing an update.							
Capital Improvement Plan	No	-	-	-	No	-	-
Comment:							
Disaster Debris Management Plan	Yes	Suffolk County Multi-Jurisdictional Debris Management Plan	County, Local	Suffolk County FRES	No	Yes	-
<p><b>Comment:</b> This NYS and FEMA approved comprehensive Multi-Jurisdictional Debris Management Plan was developed through the cooperative efforts of Suffolk County and each of the ten (10) Towns, working together in conjunction with partners from private, state and federal agencies.</p>							



	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?	
Floodplain or Watershed Plan	No	-	-	-	No	-	-
Comment:							
Stormwater Plan	Yes	Town of Riverhead Storm Water Management Program	Local	Engineering Department	No	Yes	-
Comment: The Town of Riverhead has developed a storm water management program (TORSWMP) as required for coverage under the New York State Pollution Discharge Elimination System (SPDES) general permit No. GP-0-10-002, specific permit NYR-20A020. The aim of this program is to control storm water runoff discharges from the Town facilities, and developed land within the Town to the waters of the United States in accordance with the requirements of federal Phase II storm water regulations under the Clean Water Act.							
Open Space Plan	In development	In development	Local	Open Space Committee, Town Board	Yes	Yes	-
Comment: The Open Space Committee is working to develop and recommend for adoption by the Town Board an open space conservation plan for the utilization, maintenance and management of lands owned or acquired by the Town.							
Urban Water Management Plan	Yes	2018 Drinking Water Quality Report	Local	Riverhead Water District	No	Yes	-
Comment: In accordance with State regulations, the Riverhead Water District routinely monitors drinking water for numerous parameters. Drinking water is tested for coliform bacteria, turbidity, inorganic contaminants, lead and copper, nitrate, volatile organic contaminants, total trihalomethanes and synthetic organic contaminants.							
Habitat Conservation Plan	No	-	-	-	No	-	-
Comment:							
Economic Development Plan	Yes	Community Development Agency Annual Reports	Local	Community Development Authority	No	Yes	-
Comment: As required by the bylaws of the Town of Riverhead Community Development Agency (CDA), information on Urban Renewal Areas, Downtown, and other activities is provided for consideration and review by the Members of the CDA.							
Shoreline Management Plan	No	-	-	-	Yes	-	-
Comment:							
Community Wildfire Protection Plan	Yes, in progress	Community Wildfire Protection Plan for the Ridge-Manorville-Calverton Communities	Regional, Local	Central Pine Barrens Commission	No	Yes	-
Comment: The Central Pine Barrens Commission is working with the Ridge and Manorville Fire Departments and other municipal, state and federal land management agencies to develop a Community Wildfire Protection Plan that seeks to identify the most at risk areas of the Ridge, Manorville and Calverton Hamlets to wildfire. The Plan area encompasses the Ridge Hamlet and portions of the Manorville and Calverton Hamlets as indicated in the aerial below. The Plan will identify strategies to mitigate wildfire on the public lands in this area and will also provide an outreach to homeowners on measures that they can readily implement to protect their properties and significantly reduce their loss and damage to their homes from a wildfire through programs such as Firewise and by learning how to become a Firewise Community.							
Forest Management Plan	No	-	-	-	No	-	-
Comment:							
Transportation Plan	No	-	-	-	No	-	-
Comment: The Town has a Traffic Safety Committee but does not have a transportation plan.							
Agriculture Plan	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 Town has a Farmland Preservation Committee but does not have an agriculture plan.							
Other (this could include a climate action plan, tourism plan, business development plan, etc.)	No	-	-	-	No	-	-
Comment:							
<b>Response/Recovery Planning</b>							
Comprehensive Emergency Management Plan	Yes	Suffolk County Comprehensive Emergency Management Plan (2018)	Suffolk County and Associated Jurisdictions	Suffolk FRES	Yes	Yes	-
Comment: The County Comprehensive Emergency Management Plan (CEMP) describes the emergency obligations of County government and its capability and capacity to undertake emergency assignments or acquire those resources necessary to support its emergency mission. The Concept of Operations of the CEMP describes the management of emergencies within the National Incident Management System (NIMS) and details emergency management programmatic efforts to accommodate present standards.							
Strategic Recovery Planning Report	No	-	-	-	No	-	-
Comment:							
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-	Yes	-	-
Comment:							
Post-Disaster Recovery Plan	Yes	Post-Disaster Recovery Plan	Local	Supervisor's Office & Police Dept.	No	Yes	-
Comment:							
Continuity of Operations Plan	No	-	-	-	No	-	-
Comment: Informal plan developed during coronavirus response.							
Public Health Plan	No	-	-	-	No	-	-
Comment: Follow Suffolk County							
Other	No	-	-	-	No	-	-
Comment:							

**Table 9.28-4. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Yes, Building Department
Permits are tracked by hazard area. For example, floodplain development permits.	No
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	Yes, but in need of update. Hoping to update through Comprehensive Plan Update.





**Administrative and Technical Capability**

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

**Table 9.28-5. Administrative and Technical Capabilities**

Resources	Available? (Yes or No)	Department/ Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Planning Board
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	Environmental Committee
Open Space Board/Committee	Yes	Open Space Committee
Economic Development Commission/Committee	Yes	Community Development Agency and Department, IDA
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Smart 911 and CodeRED (Through County FRES)
Maintenance programs to reduce risk	Yes	Tree trimming handled by PSEG LI, Highway Department handles catch basins
Mutual aid agreements	Yes	Law enforcement with surrounding towns, HazMAT with Brookhaven and Southampton
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Planning & Engineering Depts.
Engineers or professionals trained in building or infrastructure construction practices	Yes	Planning, Engineering, Fire Marshal & Building Depts.
Planners or engineers with an understanding of natural hazards	Yes	Engineering & Building Depts.
Staff with expertise or training in benefit/cost analysis	Yes	Accounting, Community Development, Engineering & Planning Depts.
Professionals trained in conducting damage assessments	Yes	Building Department to the level of determining Substantial Damage
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	IT/GIS Dept.
Scientist familiar with natural hazards	No	Private Contractors
NFIP Floodplain Administrator (FPA)	Yes	Leroy Barnes, Head of the Building Dept.
Surveyor(s)	No	Private Contractors
Emergency Manager	Yes	Supervisor’s Office & Police Dept.
Grant writer(s)	Yes	Community Development
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

**Fiscal Capability**

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



**Table 9.28-6. Fiscal Capabilities**

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	Yes
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	Yes
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	County and Community Preservation Fund (for farmland preservation)
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

**Education and Outreach Capability**

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

**Table 9.28-7. Education and Outreach Capabilities**

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	Supervisor’s Office, Police Department
Personnel skilled or trained in website development?	Contracted out but minor changes can be made by staff
Hazard mitigation information available on your website; if yes, describe	Yes
Social media for hazard mitigation education and outreach; if yes, briefly describe.	Facebook, for Town and Police Dept.
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	Peconic Estuary Program, Nature Conservancy
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	Announcements made at Town Board meetings
Warning systems for hazard events; if yes, briefly describe.	Smart 911 and CodeRED (Through County FRES)
Natural disaster/safety programs in place for schools; if yes, briefly describe.	County completes safety programs for public schools
Other	No

**Community Classifications**

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

**Table 9.28-8. Community Classifications**

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	NP	-	-





Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	4/4	2004
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	4/9	-
NYSDEC Climate Smart Community	NP	-	-
Storm Ready Certification	NP	-	-
Firewise Communities classification	NP	-	-
Other	No	-	-

Note:

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

### Adaptive Capacity

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

**Table 9.28-9. Adaptive Capacity**

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

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

The Town of Riverhead does not currently have resources to determine possible impacts of climate change but are looking to include such resources in the Comprehensive Plan update. The Town administration is supportive of integrating climate change in policies and actions and has already considered the impact of sea level rise on projects within the Town.

### 9.28.5 National Flood Insurance Program





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

**NFIP Floodplain Administrator (FPA)**

Jefferson Murphree, AICP Building and Planning Administrator

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

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

**Table 9.28-10. NFIP Summary**

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties
Town of Riverhead	538	750	\$12,603,709	74

Source: FEMA 2020

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

RL Repetitive Loss

**Flood Vulnerability Summary**

Following Hurricane Sandy a total of 53 structures were damaged- 22 residences, 39 bulkheads, and two commercial buildings. Four Substantial Damage determination letters were issued for damaged buildings following Hurricane Sandy. Substantial Damage Estimates are not made by the Floodplain Administrator. The financial information is provided by the property owner and then the damages are compared to the FEMA requirements. Then a determination letter is sent out regarding the status of the property. Eight property owners came forward with an interest in mitigation- seven were interested in various types of mitigation and one was interested in acquisition. Funding sources including private funds, flood insurance and ICC, grant funding, and FEMA funding.

**Resources**

The community FDPO identifies the GIS Coordinator and the Building Inspector as the local NFIP Floodplain Administrator, currently Jeff Murphree, for which floodplain administration is an auxiliary duty.

In addition to the NFIP FPA, the community has supplementary staff for which NFIP is an auxiliary duty; personnel including the Senior Building Inspector.

Duties and responsibilities of the Building Inspector/NFIP Administrator are permit review, inspections, damage assessments, record-keeping, GIS, and education and outreach. An inventory is maintained of all flood-damaged properties however there is no indication of whether or not property owners were interested in mitigation.

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

In the Town of Riverhead, the following educational and/or outreach activities related to the NFIP: posting of information to the bulletin board in Town Hall and the Town website, including information with permit applications, and addressing the issues of the public when they walk in with questions or concerns.

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



## Compliance History

Town of Riverhead joined the NFIP on March 1, 1978 and is currently an active member of the NFIP. The current effective Flood Insurance Rate Maps are dated September 25, 2009. The community is currently in good standing in the NFIP and has no outstanding compliance issues. The last Community Assistance Visit (CAV) was performed on September 14, 2011. The municipality sees no specific need for a CAV at this time.

## Regulatory

The community's Flood Damage Prevention Ordinance (FDPO), found at Chapter 65 of the local code, was last updated on March 7, 1995. Floodplain management regulations and ordinances meet FEMA and New York State minimum requirements. Chapter 107 of Town Code, the Conservation Advisory Committee, further supports floodplain management by mapping 150 feet inland from freshwater sources and 300ft inland from coastal sources.

## Community Rating System

The Town of Riverhead is not currently a CRS community. Attending a seminar on the CRS is something of interest to the community to see if joining would benefit the flood insurance policy holders in Riverhead.

### 9.28.6 Integration with Other Planning Initiatives

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

## Existing Integration

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

- **Agricultural Advisory Committee:** The Agricultural Advisory Committee advises the Town Board on legislative and regulatory issues pertaining to agriculture.
- **Building Department:** The Building Department enforces the NY Building Code and Zoning regulations adopted by the Town. Permits for new construction, additions, alterations and signs are issued. The Department inspects construction in progress and issues Certificates of Occupancy upon completion.
- **Conservation Advisory Council:** The Conservation Advisory Council consists of seven members appointed by the Town Board. The CAC advises the Town Board on the issuing of permits for the development and management of Riverhead Town's natural resources, with emphasis on the protection of these resources. The CAC, in addition to the Planning Department, reviews applications for permits, and inspect properties, for all regulated activities within 150 feet of ALL freshwater wetlands & 300 feet of ALL tidal wetlands.



- **Community Development Department:** The Community Development Department is responsible for the economic development and workforce housing functions in the Town of Riverhead. Projects including downtown revitalization activities, historic restoration, business development incentives and urban renewal programs are initiated and implemented by CD staff. Grant procurement and administration is a primary function of the department including capital projects such as downtown waterfront revitalization, Calverton park development, infrastructure development to encourage business growth, the restoration of public spaces such as parks and venues like the Vail Leavitt Theatre and Suffolk Theatre, home improvement programs to assist senior citizens and low to moderate income homeowner-occupants with emergency home repairs, and projects to improve the environment and the quality of life of the Riverhead Town residents.
- **Community Development Agency:** The Community Development Agency functions as the economic development agency for the Town of Riverhead and was established in 1982 under New York State General Municipal Law to foster economic development. Using powers granted under New York State Urban Renewal Law, pursuant to Section 505 of Article 15, the Community Development Agency has played a critical role in economic development at Calverton Enterprise Park, as well as downtown. The CDA Board consists of the Chairman (the Town Supervisor) and the four Town board members. In the capacity as the economic development agency of the Town of Riverhead, the CDA administers and secures financing for numerous downtown revitalization projects and public improvement projects. The CDA has been proactive in fostering economic revitalization in the downtown business district.
- **Engineering Department:** The Engineering Department oversees construction and maintenance of buildings, parks, beaches, marinas, historical properties and other Town of Riverhead owned properties.
  - The Street Lighting division repairs and maintains streetlights and traffic signals throughout the Town.
  - Stormwater Management: The Town operates and maintains a Municipal Separate Storm Sewer System (MS4) which includes Stormwater Management and inspections.
  - GIS: The GIS division is responsible for managing the Town's Geographic Information Systems data repository and web applications, digital mapping systems and managing structure addressing.
- **Environmental Advisory Council:** The mission of the Riverhead Environmental Advisory Committee is to serve as a resource for the facilitation of conservation and environmental stewardship by the Town and its residents through education, government policies, and incentives.
- **Fire Department:** The Fire Marshal's Office mission is to safeguard the health, safety and welfare of it's residents and visitors through public education and the enforcement of applicable codes. In addition, the Fire Marshal's Office works to:
  - Enforce applicable codes to assure the health and safety of Town residents and visitors
  - To serve as a source of fire prevention and public safety materials and to provide education programs for organizations upon request.
  - Protect business interests through the use of public education and the fair and consistent enforcement of fire prevention and building codes.
  - To maintain records of existing buildings and businesses (excluding one and two family dwellings and exempt agricultural buildings) for compliance including fire safety and other related issues.



- To issue permits in accordance with requirements of the Fire Code of NYS and the Code of the Town of Riverhead (Public Assembly, Hazmat Storage, Hazmat Use, etc.)
  - To enforce codes regarding commercial buildings and property that are in disrepair and not properly maintained secure and to pursue enforcement actions (Chapter 54) at the direction of the Town Board.
  - To assist in Town safety policies related to fire safety and other safety related programs.
  - To provide professional and technical support to the Volunteer Fire Departments in the Town of Riverhead through fire prevention programs, the review of site plans, building plans and inspections of new and existing commercial buildings, complete and accurate fire investigations, and provide hazardous material technical assistance.
  - To continue to jointly work with Suffolk County and neighboring townships to address the problem of juvenile fire setters.
- **Highway Department:** The Highway Department provides maintenance and improvement to approximately 230 miles of Town roads. Some responsibilities of the Highway Department include maintenance of town equipment, roads, traffic lines, installation of traffic and street signs, brush control along roadways, street cleaning, catch basins and storm water drains, snow and ice control, resurfacing, and sealing of streets. It is the mission of the Highway Department to efficiently manage and maintain the towns' roadway system to provide for the safe, convenient and efficient movement of traffic and pedestrians at the lowest cost and best value.
  - **Open Space Committee:** The mission of the Open Space Committee is to identify, review and recommend to the Town Board lands that should be acquired by the Town and preserved as open space or incorporated into the Town park system or dedicated as a Town park. Additionally, the Committee is working to develop and recommend for adoption by the Town Board an open space conservation plan for the utilization, maintenance and management of lands owned or acquired by the Town.
  - **Planning Board:** The Planning Board is responsible for guiding development of land and growth within the Town of Riverhead. In accordance with the Riverhead Town Zoning Ordinance, state statute, and subdivision regulations, the Planning Board reviews and approves commercial and residential development. The Planning Board also reviews and recommends revisions to land use ordinances to the Town Board.
  - **Zoning Board of Appeals:** The Zoning Board of Appeals is directly given jurisdiction by State Law. Appellate jurisdiction is the power to hear and decide appeals from decisions of those officials' charged with the administration and enforcement of the Zoning ordinance or local law. This is the primary function and purpose of the Zoning Board of Appeals in zoning administration and encompasses the power (if appeal is properly taken to the board) to interpret the zoning ordinance or local law and to grant variances (use/area with the imposition of conditions).
  - **Sewer District:** The Riverhead Sewer District plant was originally constructed in 1937 as a primary treatment plant with chlorination for disinfection. In 1959 the plant was upgraded to a secondary treatment facility with the installation of trickling filters. The plant was upgraded again in the year 2000. The improvements included the installation of sequencing batch reactors (SBR's) and the use of ultraviolet light for disinfection.

The plants permitted capacity is 1,200,000 gallons per day with a current flow of about 900,000 gallons per day. The Riverhead Sewer District boundaries mainly include the hub area and business district of





Riverhead. There are twelve (12) pumping stations and approximately 25 miles of sewer mains that transport sewage to the treatment plant.

In addition, the Town of Riverhead also owns the Riverhead Scavenger Waste plant. The scavenger waste plant treats waste from private and commercial septic systems or cesspools. Septic waste from the five East End towns and Eastern Brookhaven is transported to the plant by private haulers.

### Opportunities for Future Integration

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None identified.

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

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

### Evacuation Routes

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The Town of Riverhead follows State and County guidance for evacuation but also makes evacuation decisions at the local level as necessary. The Town utilizes the County's evacuation routes with connections via Sound Avenue, State Route 25/25a, Peconic Bay Boulevard, and the Long Island Expressway.

### Sheltering

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The Town of Riverhead relies on the American Red Cross for sheltering needs. The American Red Cross traditionally uses area schools for sheltering.

The Senior Center, located at 60 Shade Tree Lane in Aquebogue, serves as a shelter for emergency and essential workers for the Town.

### Temporary Housing

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The Town has identified the former naval facility in Calverton (Grumman Peconic River Airport) as an area for the placement of temporary housing following a disaster event. The site could host a very large number of temporary housing units. The site is currently for sale but could be used for the short term. Stotzky Park is another option for temporary housing and is located in the downtown Riverhead Area

### Permanent Housing

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The Town of Riverhead has many vacant lots available for the placement of permanent housing to relocate flood prone residential structures outside of the floodplain.

## 9.28.8 Hazard Event History Specific to the Town of Riverhead

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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 Riverhead'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 9.28-11 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 9.28-11. 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	An intensifying offshore storm passed close enough on Monday February 8th to bring heavy snow to parts of central and much of eastern Long Island, NY.	While the County was impacted, the Town did not report damages.
July 1, 2015	Thunderstorm Wind	No	A passing warm front triggered a severe thunderstorm that impacted Northeastern Suffolk County.	In Riverhead, trees were reported down on Marcy, Sweezy and Hamilton Avenues with \$5K in property damage reported. A large tree was reported down on a house along Wilson Avenue with \$3K in property damage.
July 1, 2016	Thunderstorm Wind	No	A passing cold front triggered isolated severe thunderstorms in Orange and Suffolk Counties.	There were multiple reports of trees and wires down throughout Riverhead resulting in \$3K in property damage.
September 3, 2016	High Surf, Coastal Erosion	No	Slow moving tropical cyclone Hermine caused several days of 8 to 12 feet of surf breaking on Atlantic Ocean shorelines. The surf on top of storm tide September 3rd through the 6th caused significant beach erosion on Long Island ocean beaches.	Moderate beach erosion was reported at Wildwood State Park on the north shore of the Town of Riverhead.
January 23, 2017	Strong Wind	No	Deep low pressure passed south and east of Long Island.	In Riverhead, law enforcement reported a downed utility pole on East Main Street and Union Avenue at 5 pm on the 23rd
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 high winds.	While the County was impacted, the Town did not report damages.

**Notes:**

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

**9.28.9 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 Riverhead. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.

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





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

**Critical Facilities**

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

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

**Table 9.28-12. Potential Flood Losses to Critical Facilities**

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

Source: Suffolk County 2020; FEMA 2009

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

\*Community Lifeline

**Hazard Ranking**

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

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Suffolk County as a whole. Therefore, each municipality ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Town of Riverhead. The Town of Riverhead 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 Riverhead indicated the following:



- The Town changed the hazard ranking for flood from medium to high, noting repeated flooding that impacts roadways and properties.
- The Town changed the hazard ranking for coastal erosion from medium to high, noting erosion at Town beaches and bluffs.
- The Town changed the hazard ranking for groundwater contamination from medium to high, noting the navy remediation projects that are underway to address past contamination issues. In addition, the Town noted contamination potential from agricultural process.
- The Town changed the hazard ranking for earthquake from medium to low, noting low risk and modern building codes.
- The Town agreed with the remainder of the calculated hazard rankings.

**Table 9.28-13. Hazard Ranking**

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

**Identified Issues**

The municipality has identified the following vulnerabilities within their community:

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

- The major hazard problem facing the Town of Riverhead is coastal flooding/erosion. Sandy brought record flooding to the Town’s bay/river front communities and decimated the entire north shore leaving no beach at high tide and exposing the fragile bluffs to erosion. The Town has invited USACE to visit the town to see the flooding and erosional issues.
- North side bluffs have erosional issues. Water reaches the bluff during coastal flooding situations. Some homes have been removed due to erosion. Some rip rap has been placed (toe armoring). 6 applications per year.
  - Some bungalow communities are at risk.
- The downtown commercial area is prone to coastal flooding. Full moon coastal flooding occurs regularly. To the east of the downtown area, residential areas are prone to flooding as well.
- Four small dams are located downtown that control flow to the bay. When flooding takes place, resident cesspools upstream are impacted.
- The sewer transfer pump station in the downtown area is located on the Peconic River and is floodprone.
- The municipal boat ramp has been damaged by erosion over time. Concrete boat ramp. Major boat ramp for the area.





- Stormwater runoff issue Wading River. Dumps into scenic pond. Duck Pond. More stormwater containment needed.
- Boat launches on north shore. Dredging has been required regularly to maintain the navigable channel. USACE has not allowed jetties to be installed. Emergency launch access on north end of town.
- On Long Island Sound, multiple small boat launches have had minor erosion issues.
- Iron Pier Beach boat launch is damaged during major nor'easter events.
- North Shore has three Town beaches. The beaches have erosional issues but past efforts to receive funding for replenishment and repair have been ineffective due to lack of data.
- On the north shore, beach homes located near creeks where there are no bluffs are at low elevations and are flood prone. Creek road and Wading River is one of these locations.
  - Looking to elevate the road.
- The Town has had issues with stormwater runoff during heavy rain events on farms. Roanoke Avenue washed out during a flooding event. During times of heavy runoff, soil erosion occurs and the farms lose topsoil.
- The McDonalds located at 268 Route 58 has issues with parking lot flooding. The lot backs up to the tributary for Sawmill Creek.

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

- Downtown Riverhead behind Main Street where the Peconic River is has serious flood problems.

### **9.28.10 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 9.28-15). Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.



Table 9.28-14. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)			Next Steps 1. Project to be included in 2020 HMP or Discontinue 2. If including action in the 2020 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	Damages Avoided; Evidence of Success	
R-1 (Sandy HMGP LOI #346)	The DeFriest Pump Station Rehabilitation	Nor'Easter, Severe Winter Storm, Severe Storm, Hurricane, Flood	Town of Riverhead: David J Hegermiller, Chief of Police		No Progress				1. Include in 2020 HMP 2. 3.
R-2 (Sandy HMGP LOI #1227)	Riverhead Sewer District Sanitary Collection Inflow Mitigation. □	Nor'Easter, Severe Winter Storm, Severe Storm, Hurricane Flood	Town of Riverhead: David Hegermiller, Emergency Manager		No Progress				1. Discontinue 2. 3. No longer a priority
R-3 (Sandy HMGP LOI #1269)	Wading River Creek Restoration.	Nor'Easter, Severe Winter Storm, Severe Storm, Hurricane, Flood, Coastal Erosion	Town of Riverhead: David Hegermiller, Emergency Manager		In Progress; Repeated dredging.				1. Include in 2020 HMP 2. Bridge over the creek and access the nuclear facility jetties. Would require cooperation of Brookhaven and private property of PSEG. Creek is only western access to Long Island Sound. Currently oversilted to the point of not being navigable. 3.
R-4 (Sandy HMGP LOI #1960)	Town Hall and Police Headquarters Generator Upgrade.	All	Town of Riverhead: David Hegermiller, Emergency Manager		In Progress; Generator needs to be replaced from diesel to natural gas				1. Include in 2020 HMP 2. 3.
R-5 (formerR-7)	Establish Jetties at the Town Boat Ramp at Iron Pier to diminish the depositing of sand onto one of the only maintained emergency accesses to the LI Sound thereby reducing the weekly removal of the sand by the Highway Department	Nor'easter, Severe Winter Storm, Severe Storm, Hurricane, Coastal Erosion	RHD		In Progress				1. Include in 2020 HMP 2. 3.



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)			Next Steps 1. Project to be included in 2020 HMP or Discontinue 2. If including action in the 2020 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	Damages Avoided; Evidence of Success	
R-6 (former R-9)	Conduct Joint Annual Drills for all facets of emergency services in the Town and their partner agencies	All	RHD		Ongoing Capability; Did Black Swan with the hospital (active shooter).				1. Discontinue 2. 3. Ongoing Capability
R-7 (former R-11)	Relocation/Acquisition Residences on the North Shore Bluffs that are at risk of destruction from bluff erosion	Nor'easter, Severe Winter Storm, Severe Storm, Hurricane, Coastal Erosion	RHD		In Progress; Children's Home Director's Home was removed.				1. Include in 2020 HMP 2. 3.
R-8 (former R-12)	Elevation of Residences on the South Shore that are in designated flood prone areas	Nor'easter, Severe Winter Storm, Severe Storm, Hurricane, Flood, Coastal Erosion	RHD		In Progress				1. Include in 2020 HMP 2. 3.
R-9 (former R-14)	Road Elevation on flood prone South Shore Roads & Creek Road	Nor'easter, Severe Winter Storm, Severe Storm, Hurricane, Flood, Coastal Erosion	RHD		In Progress				1. Include in 2020 HMP 2. 3.
R-10 (NEW)	Acquire, demolish and prepare land for constructed wetlands at twelve residences (ten properties) on Horton Avenue.	Nor'Easter, Severe Winter Storm, Severe Storm	RHD		In Progress; homes demolished. Need funding for wetlands restoration.				1. Include in 2020 HMP 2. 3.
R-11 (NEW)	Undertake an analysis of the engineering options to harden the Northshore beach and bluff. Implement the improvements once funding has been secured.	Nor'easter, Severe Winter Storm, Severe Storm, Hurricane, Flood, Coastal Erosion	RHD		In Progress; Private properties have installed bulkheading and riprap.				1. Discontinue 2. 3.





Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2020 HMP or Discontinue 2. If including action in the 2020 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Damages Avoided; Evidence of Success	
R-12 (former R-3)	Retrofit existing Police Department Headquarters to establish a dedicated EOC	All	RHD		No Progress; Current EOC is in Supervisor's Office	Cost		1. Discontinue 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
R-13 (NEW)	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future 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.	Flood, Coastal Erosion, Hurricane, Nor'Easter, Severe Storm, Wildfire, Winter Storm	Town/Village Engineering via NFIP FPA) with NYSOEM, FEMA support		In Progress	Cost		1. Include in 2020 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
R-14 (NEW)	Support and participate in county led initiatives intended to build local and regional mitigation and risk-reduction capabilities (see Section 9.1), specifically:  • Mitigation Education for Natural Disasters (natural hazard awareness and personal scale risk	All Hazards	Suffolk County, as supported by relevant local department leads,		Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing Capability
						Level of Protection		
						Damages Avoided; Evidence of Success		



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2020 HMP or Discontinue 2. If including action in the 2020 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	reduction/mitigation public education and outreach program) <ul style="list-style-type: none"> <li>• Build Local Floodplain Management and Disaster Recovery Capabilities (enhanced floodplain management, and post-disaster assessment and recovery capabilities)</li> <li>• County-Wide Debris Management Plan</li> <li>• Jurisdictional Knowledge of Mitigation Needs of Property Owners (improved understanding of damages and mitigation interest/activity of private property owners)</li> <li>• Create a Multi-Jurisdictional Seismic Safety Committee in Suffolk County (build regional, county and local capabilities to manage seismic risk, both pre- and post-disaster)</li> <li>• Alignment of Mitigation</li> </ul>							



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2020 HMP or Discontinue 2. If including action in the 2020 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	
	Initiatives through all levels of Government (effort to build State and Federal level recognition and support of the County and local hazard mitigation planning strategies identified in this plan).							
R-15 (NEW)	Work with County and PSEG (formerly LIPA) to identify roads within the municipality that are considered “critical”, and to be the first priority for clearing after an event involving downed power lines.	Severe Storm; Severe Winter Storm; Hurricane; Nor’Easter			Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing Capability
R-16 (former R-4)	Create a Point of Distribution Plan to establish locations, personnel, training and procedures to streamline distribution of vital necessities post disaster	All	RHD		Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing Capability
R-17 (former R-5)	Create a Generator Plan to designate personnel, guide distribution of equipment from County and pre-wire facilities to accommodate generators.	Nor’easter, Severe Winter Storm, Severe Storm, Hurricane, Flood, Wildfire	RHD		Ongoing Capability; Have County Generators that are used to power critical facilities.	Cost		1. Discontinue 2. 3. Ongoing Capability
R-18 (former R-8)	Create a Public Awareness Program natural disasters and emergency preparedness	All	RHD		Ongoing Capability; Hurricane brochure, website has link for emergency	Cost		1. Discontinue 2. 3. Ongoing Capability



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2020 HMP or Discontinue 2. If including action in the 2020 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	
					preparedness, etc.			
R-19 (former R10)	Create a Volunteer Program to help recruit volunteers for Red Cross and Town Shelters, POD's and Ham Radio Operation during a disaster	Nor'easter, Severe Winter Storm, Severe Storm, Hurricane, Flood, Wildfire	RHD		No Progress	Cost		1. Include in 2020 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
R-20 (former R-13)	Create County-Wide Debris Removal Plan to develop protocols and designate shared sights to manage debris removal	Nor'easter, Severe Winter Storm, Severe Storm, Hurricane	Suffolk County		Complete	Cost		1. Discontinue 2. 3. Complete
						Level of Protection		
						Damages Avoided; Evidence of Success		
R-21 (former R-16)	Town Hall Basement and Records Storage Facility Remediation from Groundwater and Flooding	Nor'easter, Severe Winter Storm, Severe Storm, Hurricane, Flood, Shallow Groundwater	RHD		In Progress; Removed sheetrock from lower half. Raised items off floor.	Cost		1. Include in 2020 HMP 2. Relocate Town Hall. Building is undersized, Justice Court is undersized, building is aged. If the Town moves Town Hall to a new location, the Police Department and Justice Court will have appropriate space. Would allow for condensing numerous facilities into one centralized location and allow for greater continuity of operations during hazard events. Would include EOC. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
R-22 (NEW)	Continue to support the implementation, monitoring, maintenance and updating of this plan.	All Hazards	Town		Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing Capability
						Level of Protection		
						Damages Avoided; Evidence of Success		



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2020 HMP or Discontinue 2. If including action in the 2020 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	
R-23 (NEW)	Strive to maintain compliance with and good standing in National Flood Insurance Program	Flooding, Hurricanes, Coastal Erosion	Town		Ongoing Capability			1. Discontinue 2. 3. Ongoing Capability
						Damages Avoided; Evidence of Success		



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

The Town of Riverhead 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:

- Electric panels at the Jamesport Boat Ramp are being raised at the time of this plan update.

### **Proposed Hazard Mitigation Initiatives for the HMP Update**

The Town of Riverhead 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 9.28-15 summarizes the comprehensive-range of specific mitigation initiatives the Town of Riverhead 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 9.28-16 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 9.28-15. 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-Riverhead-001	Repetitive Loss Mitigation	1, 2	Flood, Severe Storm	<p><b>Problem:</b> Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims Flood prone areas of the Town include areas along the Bay and River, including Creek Road, South Jamesport, the South Shore, and Aquebogue.</p> <p><b>Solution:</b> Conduct outreach to 30 flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).</p>	No	None	3 years	NFIP Floodplain Administrator, supported by homeowners	\$3 Million	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.	FEMA HMGP and FMA, local cost share by residents	High	SIP	PP
2020-Riverhead-002	Roadway Elevation and Stabilization	1, 2	Flood, Severe Storm	<p><b>Problem:</b> Low lying roads are prone to flooding. Repeated flooding results in erosion of the roadway bed and base. Flooding restricts access and emergency response.</p> <p><b>Solution:</b> The Town will elevate and stabilize roadways that are low lying. Priority roadways for this action are Creek Road, Shore Road, Peconic Bay Boulevard, and South Jamesport roadways.</p>	No	None	Within 5 years	Highway Department	High	Flood risk reduced	HMGP, BRIC, CDBG, Town budget	High	SIP	PP
2020-Riverhead-003	Erosion Monitoring Program	1, 2, 3, 5	Coastal Erosion, Hurricane, Nor'Easter	<p><b>Problem:</b> The Town's beaches and bluffs are prone to erosion.</p> <p><b>Solution:</b> The Town will participate in a county led erosion monitoring program.</p>	No	None	Within 1 year	SCWD, Village Administration	Staff time	Identification of coastal erosion	County budget	High	NSP	NR





Table 9.28-15. 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-Riverhead-004	DeFriest Pump Station	2, 8	Nor'Easter, Severe Winter Storm, Severe Storm, Hurricane, Flood	<b>Problem:</b> The DeFriest Pump Station is located on the riverfront and is prone to flooding.	Yes	None	Within 2 years	Sewer Department, DPW Engineering	\$200,000	Pump station protected from flooding, critical services maintained.	HMGP, BRIC, Town budget	High	SIP	SP, PP
				<b>Solution:</b> The Town will conduct a flood study to determine the current level of protection and the feasibility of potential floodproofing solutions. The Town will then select the most cost effective option and floodproof the pump station.										
2020-Riverhead-005	Agriculture Practice Improvements	3, 4, 5, 6, 8	Groundwater Contamination	<b>Problem:</b> Agricultural practices can result in groundwater contamination issues.	No	None	Within 1 year	Administration, SWCD	SCWD staff time and local funding	Reduction in groundwater contamination risk from improved farming practices	SCWD	High	EAP	PI
				<b>Solution:</b> The Town will connect the County Soil and Water Conservation District with farmers to encourage modern agricultural practices which reduce contamination risk.										
2020-Riverhead-006	Senior Center Generator	1, 2, 7	All Hazards	<b>Problem:</b> The Senior Center (60 Shade Tree Lane in Aquebogue) is used as a shelter for essential workers and their families during emergency events. The building lacks a backup power source.	Yes	None	1 year	Engineer, OEM	\$50,000	Ensures continuity of operations of Police Headquarters	FEMA HMGP and PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	High	SIP	PP, ES
				<b>Solution:</b> The Town Engineer will research what size generator is necessary to supply backup power to the Senior Center. The Town will install a permanent backup power source and necessary electrical components at the Senior Center.										
2020-Riverhead-007	Town Hall/EOC relocation	1, 2, 7	All Hazards	<b>Problem:</b> The Town Hall is undersized and outdated. Numerous Town facilities are currently spread out across the Town to host the various Town departments that cannot fit within the Town Hall. The adjoining Justice Court and Police	Yes	None	Within 5 years	Administration, OEM	\$20 Million	Greater community capabilities, continuity of operations	FEMA HMGP and PDM, USDA Community Facilities Grant Program,	High	SIP	PP, ES



Table 9.28-15. 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>Department offices are also undersized and outdated.</p> <p><b>Solution:</b> The Town will relocate the Town Hall at a larger and more modern location. The Town will construct an updated EOC at this location. This will allow the various Town departments to be housed in one location. This will also allow the Police Department and Justice Court to expand into the current Town Hall location once it is retrofit.</p>							Emergency Management Performance Grants (EMPG) Program, Municipal Budget			
2020-Riverhead-008	Downtown Flood Improvements	1, 2, 4, 8	Flood, Severe Storm	<p><b>Problem:</b> The downtown area of Riverhead is flood prone. This area extends along the south side of E Main Street from the bridge to the aquarium. Sea level rise projections show the area is likely to experience permanent inundation by 2050. The Town has begun early planning and has purchased several properties in this location. This area is important as a transportation hub for emergency access and includes the sewer plant.</p> <p><b>Solution:</b> The Town will conduct an engineering study to determine the appropriate actions to take to address flooding in this location. Potential mitigation actions include raising the elevations of roadways and the grade of properties. Once the most cost-effective options are identified, the Town will implement the selected solutions.</p>	No	None anticipated	Within 5 years	Community Development, Engineering	\$500,000 for engineering study	Flood risk reduced	HMGP, BRIC, CDBG, USACE, Town budget	High	SIP	PP
2020-Riverhead-009	Wading River Creek Restoration.	3, 4, 5	Nor'Easter, Severe Winter Storm, Severe Storm, Hurricane, Flood, Coastal Erosion	<p><b>Problem:</b> Wading River Creek is the only western access to Long Island Sound. The Creek is currently oversilted to the point of not being navigable, limiting emergency access.</p> <p><b>Solution:</b> Build bridge over the creek and access the nuclear facility jetties.</p>	No	May require permitting	Within 5 years	Administration, Town of Brookhaven, PSEG	High	Emergency access restored, creek restored	HMGP, BRIC, USACE, Town budget	High	SIP, NSP	PP, NR, ES



Table 9.28-15. 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-Riverhead-010	Police Headquarters Generator Upgrade	1, 2, 7	All Hazards	<p>Would require cooperation of Brookhaven and private property of PSEG.</p> <p><b>Problem:</b> The Town's Police Headquarters backup generator is outdated and in risk of failure. Failure would risk continuity of operations and failure of critical services.</p> <p><b>Solution:</b> The Town Engineer will research what size generator is necessary to supply backup power to the Police Headquarters. The Town will then install backup power generators and necessary electrical components.</p>	Yes	None	1 year	Engineer, OEM	\$50,000	Ensures continuity of operations of Police Headquarters	FEMA HMGP and PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	High	SIP	PP, ES
2020-Riverhead-011	Jetties at the Town Boat Ramp at Iron Pier	1, 2, 3, 5, 7	Nor'easter, Severe Winter Storm, Severe Storm, Hurricane, Coastal Erosion	<p><b>Problem:</b> Due to silting, the Town Boat Ramp at Iron Pier is becoming unusable, restricting emergency access.</p> <p><b>Solution:</b> Establish Jetties at the Town Boat Ramp at Iron Pier to diminish the depositing of sand onto one of the only maintained emergency accesses to the LI Sound thereby reducing the weekly removal of the sand by the Highway Department.</p>	No	None	Within 5 years	RHD	High	Emergency access restored	HMGP, BRIC, USACE, Town budget	High	SIP, NSP	PP, NR, ES
2020-Riverhead-012	North Shore Bluffs	1, 2, 4	Coastal Erosion	<p><b>Problem:</b> Several residences on the North Shore Bluffs are at risk of destruction from bluff erosion</p> <p><b>Solution:</b> Relocation/Acquisition Residences on the North Shore Bluffs that are at risk of destruction from bluff erosion</p>	No	None	Within 5 years	RHD	\$300,000 per residence	Families moved out of high hazard area	HMGP, BRIC, Town budget	High	SIP	PP
2020-Riverhead-013	Wetlands Restoration at Horton Avenue	3, 4, 5	Flood, Severe Storm, Coastal Erosion, Infestation	<b>Problem:</b> The Town has completed acquisition and demolition of 10 properties on Horton Avenue. Ecosystem restoration is needed.	No	Permitting	Within 5 years	Engineering	High	Increased natural floodplain function	HMGP, BRIC, Town budget,	Medium	NSP	NR



Table 9.28-15. 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
			and Invasive Species	<b>Solution:</b> The Town will use the acquired open space to conduct a wetlands restoration.							Environmental grants			
2020-Riverhead-014	Emergency Volunteer Program	1, 7	All hazards	<p><b>Problem:</b> Disaster events require additional staff to assist regular Town staff.</p> <p><b>Solution:</b> The Town will create a Volunteer Program to help recruit volunteers for Red Cross and Town Shelters, POD's and Ham Radio Operation during a disaster</p>	No	None	Within 1 year	OEM	Staff time	Increased emergency capability	Town budget	High	LPR	ES

**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
- 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

Potential FEMA HMA Funding Sources:

- FMA Flood Mitigation Assistance Grant Program
- HMGF 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.

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 9.28-16. 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-Riverhead-001	Repetitive Loss Mitigation	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2020-Riverhead-002	Roadway Elevation and Stabilization	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2020-Riverhead-003	Erosion Monitoring Program	0	1	1	1	1	1	0	1	1	1	0	1	1	1	11	High
2020-Riverhead-004	DeFriest Pump Station	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2020-Riverhead-005	Agriculture Practice Improvements	0	1	1	1	1	1	0	1	1	1	1	1	1	1	12	High
2020-Riverhead-006	Senior Center Generator	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2020-Riverhead-007	Town Hall/EOC relocation	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2020-Riverhead-008	Downtown Flood Improvements	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2020-Riverhead-009	Wading River Creek Restoration.	1	0	1	1	1	0	0	1	1	1	1	0	1	1	10	High
2020-Riverhead-010	Police Headquarters Generator Upgrade	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2020-Riverhead-011	Jetties at the Town Boat Ramp at Iron Pier	1	0	1	1	1	0	0	1	1	1	1	0	1	1	10	High
2020-Riverhead-012	North Shore Bluffs	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2020-Riverhead-013	Wetlands Restoration at Horton Avenue	0	0	0	1	1	0	0	1	1	1	1	0	1	1	8	Medium
2020-Riverhead-014	Emergency Volunteer Program	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High

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



### 9.28.11 Proposed Mitigation Action Types

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

**Table 9.28-17. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Coastal Erosion	2020-Riverhead-014	2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-009, 2020-Riverhead-010, 2020-Riverhead-011, 2020-Riverhead-012	2020-Riverhead-003, 2020-Riverhead-009, 2020-Riverhead-011, 2020-Riverhead-013			2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-009, 2020-Riverhead-010, 2020-Riverhead-011, 2020-Riverhead-012		2020-Riverhead-003, 2020-Riverhead-009, 2020-Riverhead-011, 2020-Riverhead-013		2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-009, 2020-Riverhead-010, 2020-Riverhead-011, 2020-Riverhead-014
Cyber Security	2020-Riverhead-014	2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010				2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010				2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010, 2020-Riverhead-014
Disease Outbreak	2020-Riverhead-014	2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010				2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010				2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010, 2020-Riverhead-014
Drought	2020-Riverhead-014	2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010				2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010				2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010, 2020-Riverhead-014
Earthquake	2020-Riverhead-014	2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010				2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010				2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010, 2020-Riverhead-014
Expansive Soils	2020-Riverhead-014	2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010				2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010				2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010, 2020-Riverhead-014
Extreme Temperature	2020-Riverhead-014	2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010				2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010				2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010
Flood	2020-Riverhead-014	2020-Riverhead-001, 2020-Riverhead-	2020-Riverhead-013			2020-Riverhead-001, 2020-Riverhead-		2020-Riverhead-009, 2020-	2020-Riverhead-004,	2020-Riverhead-006, 2020-Riverhead-



Hazard	FEMA					CRS				
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
		002, 2020-Riverhead-004, 2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-008, 2020-Riverhead-009, 2020-Riverhead-010				002, 2020-Riverhead-004, 2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-008, 2020-Riverhead-009, 2020-Riverhead-010		Riverhead-013		007, 2020-Riverhead-009, 2020-Riverhead-010, 2020-Riverhead-014
Groundwater Contamination	2020-Riverhead-014	2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010		2020-Riverhead-005		2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010	2020-Riverhead-005			2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010, 2020-Riverhead-014
Hurricane	2020-Riverhead-014	2020-Riverhead-004, 2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-009, 2020-Riverhead-010, 2020-Riverhead-011,	2020-Riverhead-003, 2020-Riverhead-009, 2020-Riverhead-011,			2020-Riverhead-004, 2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-009, 2020-Riverhead-010, 2020-Riverhead-011,		2020-Riverhead-003, 2020-Riverhead-009, 2020-Riverhead-011,	2020-Riverhead-004,	2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-009, 2020-Riverhead-010, 2020-Riverhead-011, 2020-Riverhead-014
Infestation and Invasive Species	2020-Riverhead-014	2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010	2020-Riverhead-013			2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010		2020-Riverhead-013		2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010, 2020-Riverhead-014
Nor'easter	2020-Riverhead-014	2020-Riverhead-004, 2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-009, 2020-Riverhead-010, 2020-Riverhead-011,	2020-Riverhead-003, 2020-Riverhead-009, 2020-Riverhead-011,			2020-Riverhead-004, 2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-009, 2020-Riverhead-010, 2020-Riverhead-011,		2020-Riverhead-003, 2020-Riverhead-009, 2020-Riverhead-011,	2020-Riverhead-004,	2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-009, 2020-Riverhead-010, 2020-Riverhead-011, 2020-Riverhead-014
Severe Storm	2020-Riverhead-014	2020-Riverhead-001, 2020-Riverhead-002, 2020-Riverhead-004, 2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-008, 2020-Riverhead-009, 2020-Riverhead-010, 2020-Riverhead-011,	2020-Riverhead-009, 2020-Riverhead-011, 2020-Riverhead-013			2020-Riverhead-001, 2020-Riverhead-002, 2020-Riverhead-004, 2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-008, 2020-Riverhead-009, 2020-Riverhead-010, 2020-Riverhead-011,		2020-Riverhead-009, 2020-Riverhead-011, 2020-Riverhead-013	2020-Riverhead-004,	2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-009, 2020-Riverhead-010, 2020-Riverhead-011, 2020-Riverhead-014





Hazard	FEMA					CRS				
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Severe Winter Storm	2020-Riverhead-014	2020-Riverhead-004, 2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-009, 2020-Riverhead-010, 2020-Riverhead-011,	2020-Riverhead-009, 2020-Riverhead-011,			2020-Riverhead-004, 2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-009, 2020-Riverhead-010, 2020-Riverhead-011,		2020-Riverhead-009, 2020-Riverhead-011,	2020-Riverhead-004,	2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-009, 2020-Riverhead-010, 2020-Riverhead-011, 2020-Riverhead-014
Shallow Groundwater	2020-Riverhead-014	2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010				2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010				2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010, 2020-Riverhead-014
Wildfire	2020-Riverhead-014	2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010				2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010				2020-Riverhead-006, 2020-Riverhead-007, 2020-Riverhead-010, 2020-Riverhead-014

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

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

The Town of Riverhead 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: Police Department, AICP Building and Planning. The Chief of Police 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 9.28-18. Contributors to the Annex**

Name	Title/Entity	Method of Participation
David J. Hegermiller	Chief of Police/Emergency Project Manager	Primary Point of Contact, attended plan participant meetings, provided impact data, contributed to mitigation strategy
Jefferson Murphree	AICP Building and Planning Administrator	NFIP Floodplain Administrator, attended plan participant meetings, provided impact data, contributed to mitigation strategy
Robert Kozakiewicz	Town Attorney	Attended plan participant meetings, provided impact data, contributed to mitigation strategy
Edward Frost	Detective Sergeant/Deputy Emergency Project Manager	Secondary Point of Contact



### **9.28.13 Hazard Area Extent and Location**

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



Figure 9.28-1. Town of Riverhead Hazard Area Extent and Location Map

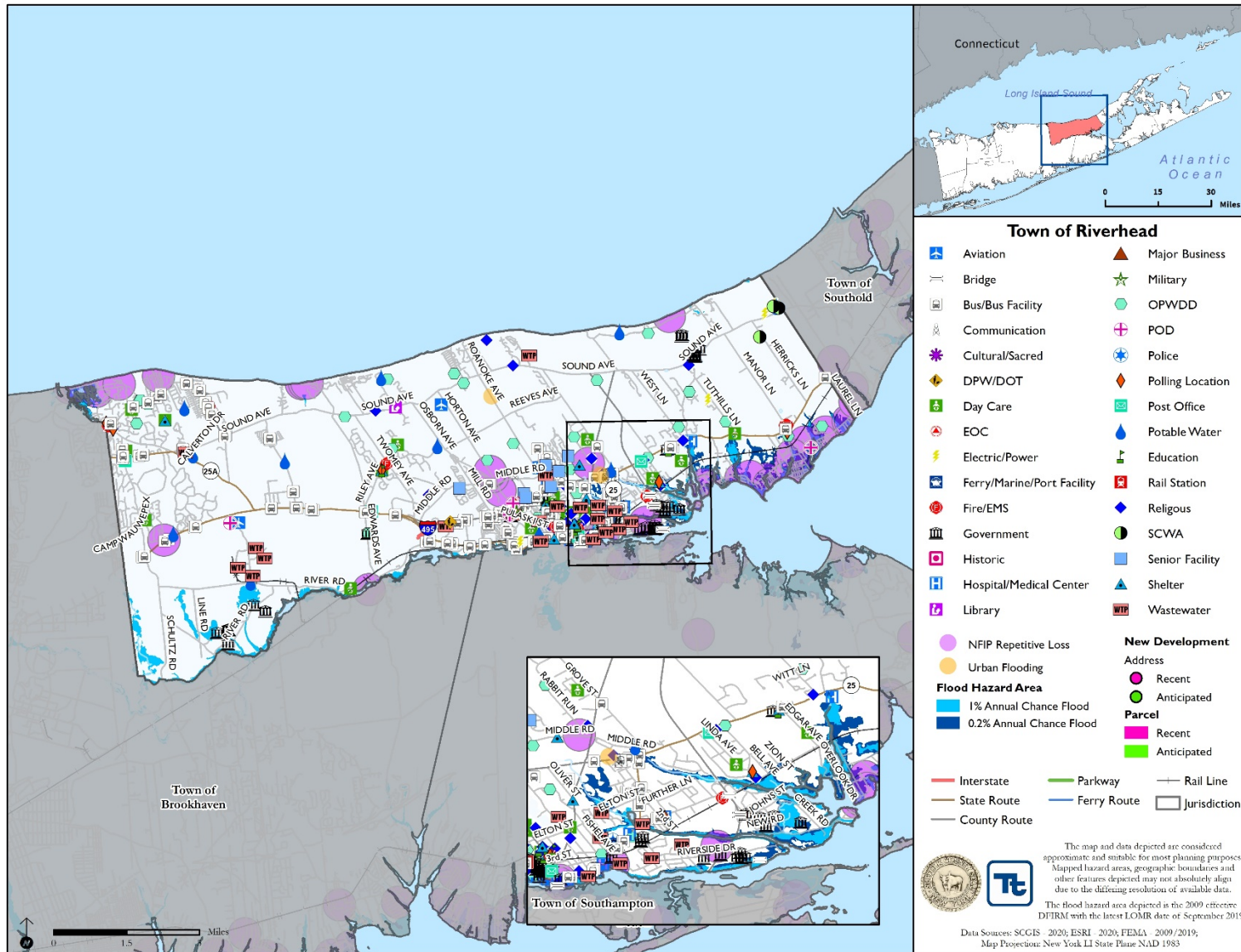




Figure 9.28-2. Town of Riverhead Hazard Area Extent and Location Map 2

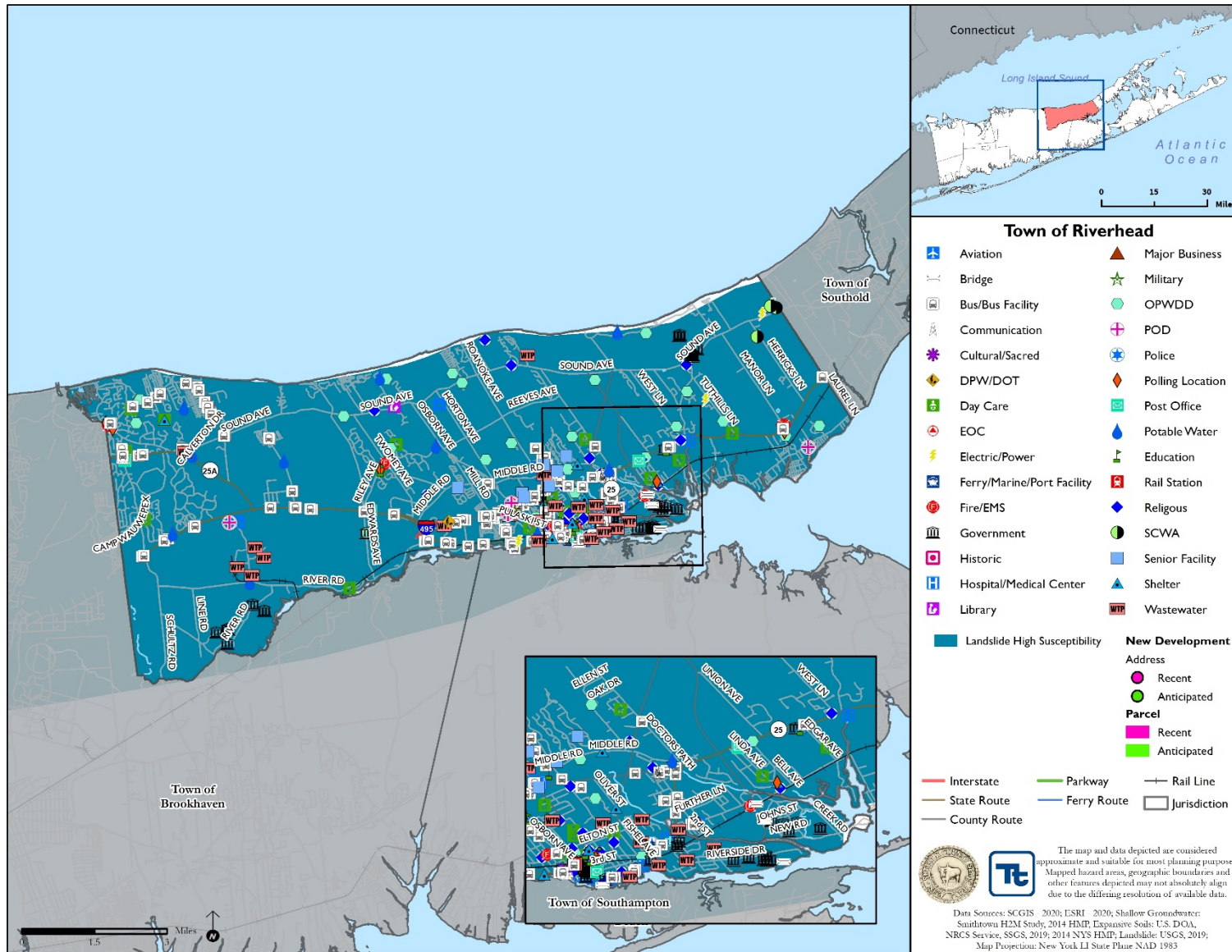






Figure 9.28-3. Town of Riverhead Hazard Area Extent and Location Map 3

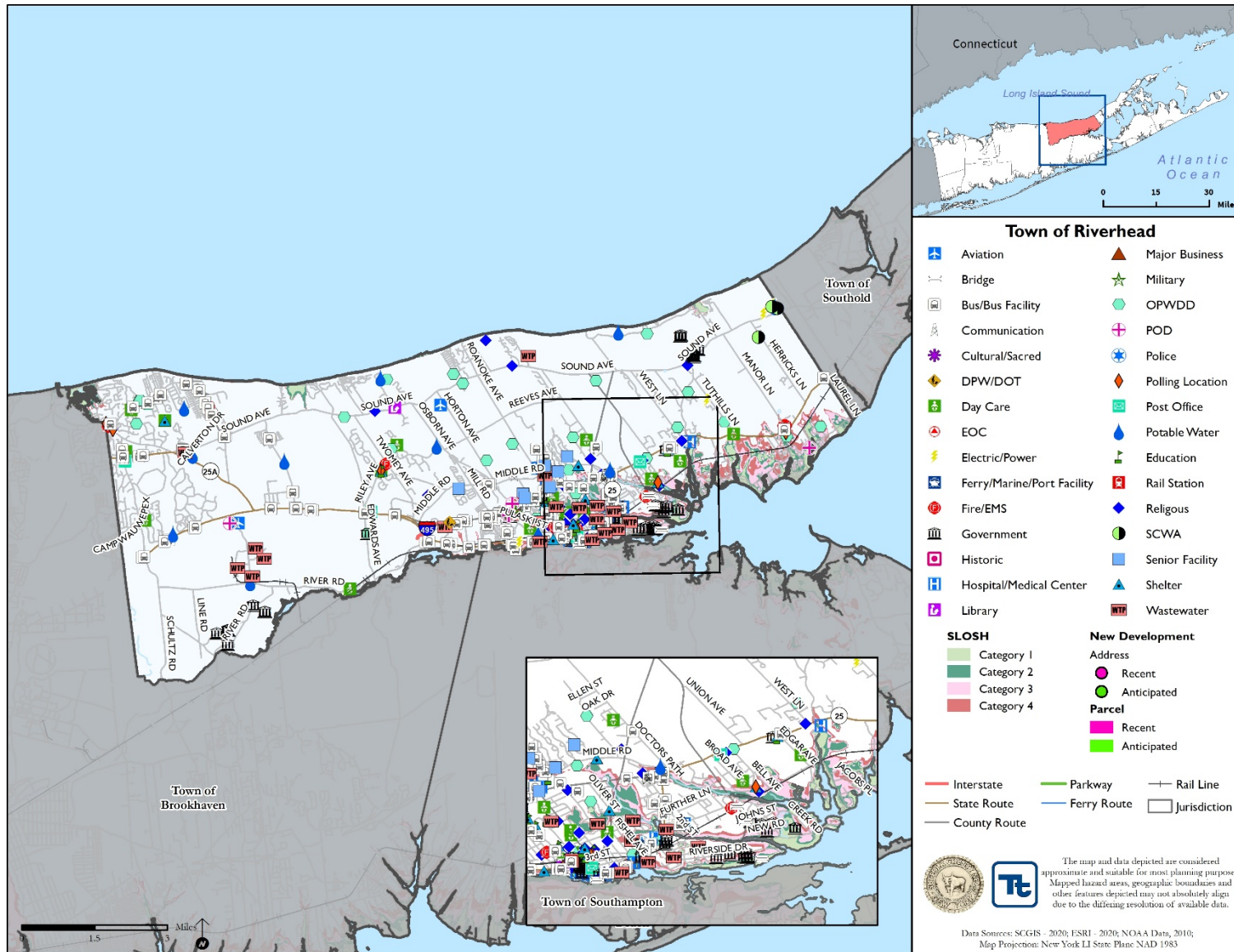




Figure 9.28-4. Town of Riverhead Hazard Area Extent and Location Map 4

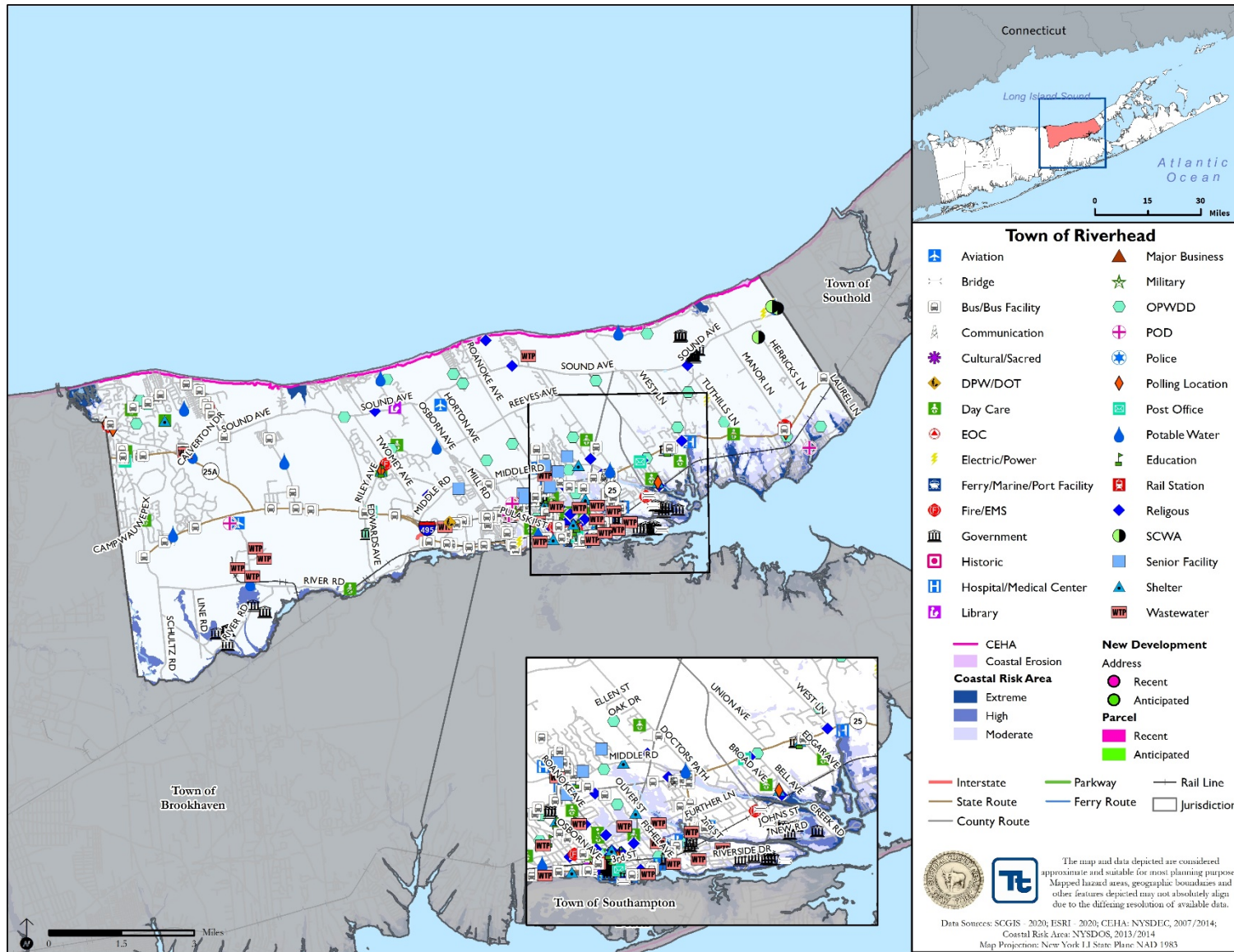






Figure 9.28-5. Town of Riverhead Hazard Area Extent and Location Map 5

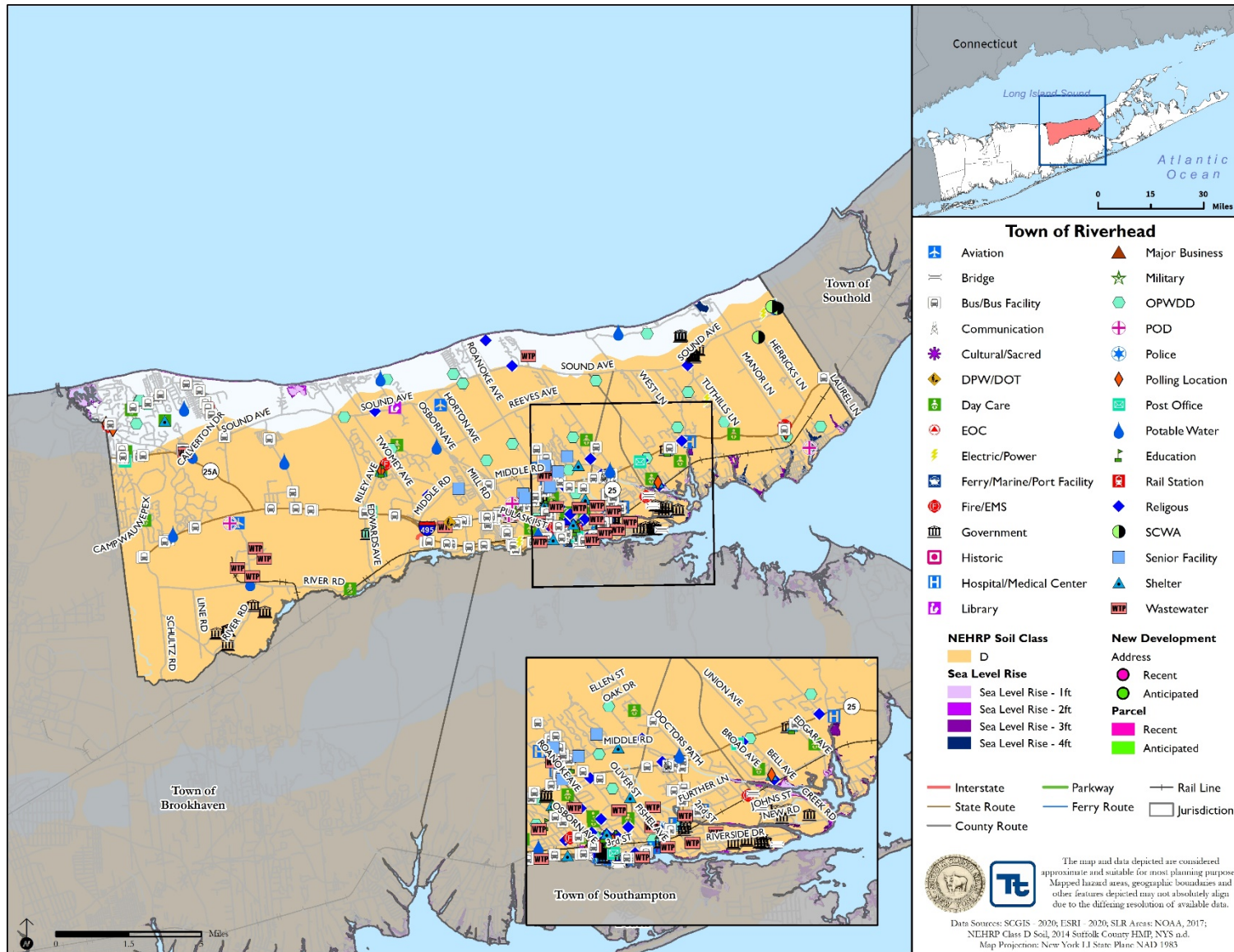
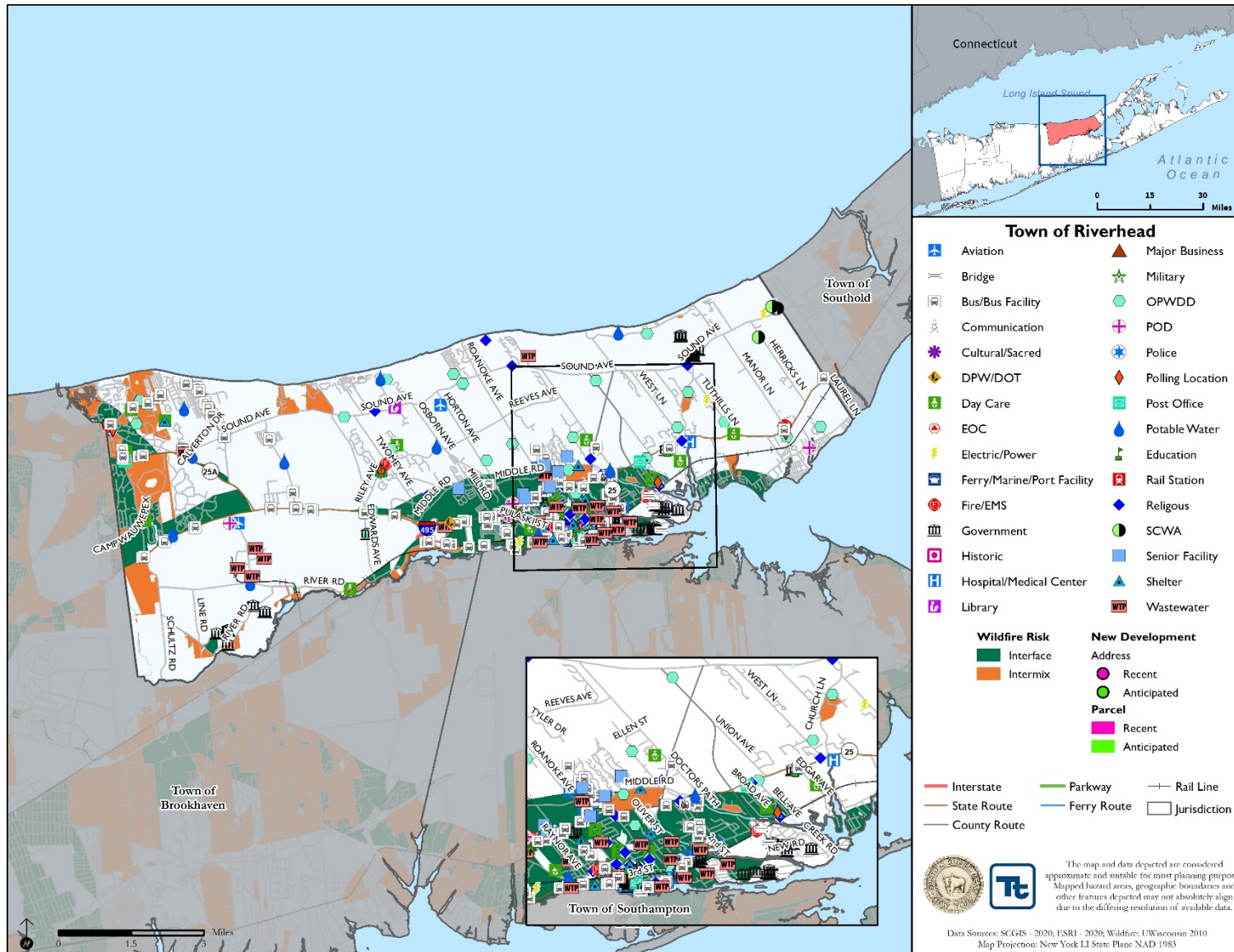






Figure 9.28-6. Town of Riverhead Hazard Area Extent and Location Map 6





Action Worksheet			
<b>Project Name:</b>	Repetitive Loss Mitigation		
<b>Project Number:</b>	2020-Riverhead-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Storm		
<b>Description of the Problem:</b>	Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims Flood prone areas of the Town include areas along the Bay and River, including Creek Road, South Jamesport, the South Shore, and Aquebogue.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Conduct outreach to 30 flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	1% annual chance flood event + freeboard ( <i>in accordance with flood ordinance</i> )	<b>Estimated Benefits (losses avoided):</b>	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.
<b>Useful Life:</b>	Acquisition: Lifetime Elevation: 30 years (residential)	<b>Goals Met:</b>	1, 2
<b>Estimated Cost:</b>	\$3Million	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	6-12 months
<b>Estimated Time Required for Project Implementation:</b>	Three years	<b>Potential Funding Sources:</b>	FEMA HMGP and FMA, local cost share by residents
<b>Responsible Organization:</b>	NFIP Floodplain Administrator, supported by homeowners	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Elevate homes	\$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
	Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			



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



Action Worksheet			
<b>Project Name:</b>	Roadway Elevation and Stabilization		
<b>Project Number:</b>	2020-Riverhead-002		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Storm		
<b>Description of the Problem:</b>	Low lying roads are prone to flooding. Repeated flooding results in erosion of the roadway bed and base. Flooding restricts access and emergency response.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Town will elevate and stabilize roadways that are low lying. Priority roadways for this action are Creek Road, Shore Road, Peconic Bay Boulevard, and South Jamesport roadways.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	Roadways elevated	<b>Estimated Benefits (losses avoided):</b>	Flood risk reduced
<b>Useful Life:</b>	25 years	<b>Goals Met:</b>	1, 2
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	3 years	<b>Potential Funding Sources:</b>	HMGP, BRIC, CDBG, Town budget
<b>Responsible Organization:</b>	Highway Department	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Remove flood prone roadways	N/A	Loss of access to neighborhoods, increased emergency risk
	Buyout properties that exist along flood prone roadways	\$Tens of Millions	Costly, loss of large portion of community
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Evaluation and Prioritization		
<b>Project Name:</b>	Roadway Elevation and Stabilization	
<b>Project Number:</b>	2020-Riverhead-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Project will protect roadway from flood damage
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
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	Flood, Severe Storm
Timeline	0	Within 5 years
Agency Champion	1	Highway Department
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	DeFriest Pump Station		
<b>Project Number:</b>	2020-Riverhead-004		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Nor'Easter, Severe Winter Storm, Severe Storm, Hurricane, Flood		
<b>Description of the Problem:</b>	The DeFriest Pump Station is located on the riverfront and is prone to flooding.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Town will conduct a flood study to determine the current level of protection and the feasibility of potential floodproofing solutions. The Town will then select the most cost effective option and floodproof the pump station.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	500-year flood level	<b>Estimated Benefits (losses avoided):</b>	Pump station protected from flooding, critical services maintained.
<b>Useful Life:</b>	50 years	<b>Goals Met:</b>	2, 8
<b>Estimated Cost:</b>	\$200,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 2 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, Municipal budget
<b>Responsible Organization:</b>	Sewer Department, DPW Engineering	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, Stormwater management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Build new pump station outside floodplain	\$500,000	Costly
	Sandbags	\$1,000	Requires deployment
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Evaluation and Prioritization		
<b>Project Name:</b>	DeFriest Pump Station	
<b>Project Number:</b>	2020-Riverhead-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Protects critical services
<b>Property Protection</b>	1	Protects pump station from flood damages
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	
<b>Political</b>	1	
<b>Legal</b>	1	The Town has the legal authority to complete the project
<b>Fiscal</b>	0	Project requires funding support
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	Nor'Easter, Severe Winter Storm, Severe Storm, Hurricane, Flood
<b>Timeline</b>	1	2 years
<b>Agency Champion</b>	1	Sewer Department, DPW Engineering
<b>Other Community Objectives</b>	1	Protection of critical facilities
<b>Total</b>	13	
<b>Priority (High/Med/Low)</b>	High	