



9.45 Unkechaug Tribal Nation

The Unkechaug Indian Nation has participated in the Suffolk County Hazard Mitigation Plan to be eligible as a subgrantee for disaster assistance and mitigation grant programs. This section presents the jurisdictional annex for the Unkechaug Indian Nation. It includes resources and information 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, people, cultural resources and the natural environment. This annex includes a general overview of the Indian Nation and who participated in the planning process; an assessment of the Unkechaug Indian Nation’s risk and vulnerability; the different capabilities utilized in the Nation; and an action plan that will be implemented to achieve a more resilient community. This annex includes the additional elements that the Indian Nation must also meet as a plan participant.

9.45.1 Hazard Mitigation Planning Team

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

Table 9.1-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Points of Contact
Name/Title: Mary Treadwell, Emergency Management Coordinator Address: 12a Abby Lane, Mastic, NY 11950 Phone: 631-395-1618 Email: uneimt@gmail.com	Name/Title: Wendy Samuels, Recovery Manager Address: 12a Abby Lane, Mastic, NY 11950 Phone: 631-860-4862 Email: wendysamuels97@gmail.com Name/Title: Veronica Treadwell, Emergency Manager Address: 12a Abby Lane, Mastic, NY 11950 Phone: 631-902-5057 Email: vctread@yahoo.com
NFIP Floodplain Administrator	
The Unkechaug Indian Nation does not participate in the NFIP at this time.	

9.45.2 Tribal Nation Profile

The Unkechaug (“People from beyond the hill”) Nation maintains a sovereign relationship with the State of New York, other Indian Nations in the United States and Canada and other foreign powers. The Unkechaug Nation is located on the Poospatuck (“where the waters meet”) Reservation in Suffolk County.

The Unkechaug originally inhabited the area of Long Island from Blue Point to Westhampton (Otter 42). The Poospatuck Reservation is all that remains of the original Unkechaug land base. It is located on the north side of Poospatuck Creek on the east side of Poospatuck Lane and south of Eleanor Avenue. The reservation is surrounded by the Town of Mastic. The land is flat and not very high above sea level. This would put the reservation residents at risk of any severe weather on the ocean and other water related hazards, including hurricanes, winter storms, inland flooding, ice storms, and wind storms.

The total population of tribal members, families, and extended relations is 450 of which approximately 250 reside on the Poospatuck Reservation. The Nation is home to many formally designated and recognized cultural assets, historic places and sites that are important for shaping the identity of place and the people.



The Unkechaug Nation is among the oldest self-governing nations of indigenous people in what is now the United States and has had a relationship with the United States and State of New York, and its colonial political antecedents since earliest contact with non-indigenous people. As an American Indian Nation, predating the United State of America and the State of New York, the Unkechaug have sovereign authority to govern our territory. This authority has not been assigned or yielded to any other power, and it is the central principle of our government, that sovereign authority will not be surrendered. Since the beginning, Unkechaug time has been measured in moons and seasons, and the daily lives of our people revolved around the land and the waters surrounding it. Our earliest history was oral, passed down by word of mouth from generation to generation, and as far back as our collective memory can reach, we are an Algonquin people who have forever lived along the shores of Eastern Long Island.

With modest resources, we have managed to build a community to help us better meet the demands of an ever expanding and intrusive world and have used our resources to preserve who and what we are; the Unkechaug Indian Nation.

The Unkechaug Tribal Nation has sovereign authority to govern their territory. This authority has not been assigned or yielded to any other power, and it is the central principle of government, that sovereign authority will not be surrendered. The government consists of a Chief of the Unkechaug Nation, and three trustees that serve a three year term. In addition, there is a Secretary and Treasurer. This government is recognized by the State of New York in Article Ten of the State's Indian Law (Indian Law, § 150-153).

Assurances

The Unkechaug Tribal Nation will comply with all applicable Federal statutes and regulations in effect with respect to the periods for which it receives grant funding, in compliance with 44 CFR 13.11(c). The Unkechaug Tribal government will amend its plan whenever necessary to reflect changes in tribal or Federal laws and statutes as required in 44 CFR 13.11(d).

Public Involvement

As discussed in Section 3, public participation is a component of the mitigation planning process. The public must have opportunities to comment on the mitigation plan during the draft stage and prior to plan approval [44 CFR Section 201.7 (b)]. In addition, neighboring communities, local and regional agencies were involved in hazard mitigation activities as described in Section 3.

The Unkechaug Tribal Nation defines 'public' as the entire Tribal Nation. The Unkechaug Tribal Nation participated in the same public involvement strategy as all plan participants in the Suffolk County plan update. The Tribal Council was kept informed throughout the planning process by the points of contact.

The public was informed of the hazard mitigation planning effort commencement at the kick-off meeting and through news releases, new articles, websites, social media posts and hard copy materials placed at public locations released throughout the planning process. Copies of these announcements may be found in Appendix C.

A public website is being maintained as another way to facilitate communication between the Steering and Planning Committees and County residents and stakeholders (<http://apps.suffolkcountyny.gov/RESPOND/>). The public website contains a project overview, County and local contact information, access to the citizens survey and various stakeholder surveys, and sections of the HMP for public review and comment.



9.45.3 Growth/Development Trends

Throughout time the Unkechaug Nation has been committed to preserving our ancestral homeland and its natural environment. 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.

The Unkechaug Tribal Nation is looking to purchase land and expand the reservation to ensure members can return and there is land available for future generations. Structural projects that have been implemented over the last few years include the Community Center development and the elevation of residential homes post-Superstorm Sandy. In addition, the Unkechaug Tribal Nation has identified structural projects as part of their mitigation strategy (i.e., bulkheading) with the intent of implementing these projects within the next five years.

Table 9.45-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

Table 9.45-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)										
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	The Tribal Nation uses the State Building code for improvements. After Hurricane Sandy, 48 manufactured homes and 1 modular were provided by the State and are located throughout the reservation. There were 11 single-family residences elevated in the floodplain post-Hurricane Sandy.									
Multi-Family										
Other (commercial, mixed-use, etc.)										
Total Permits Issued										
Property or Development Name	Type of Development	# of Units / Structures		Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development		
Recent Major Development and Infrastructure from 2015 to Present										
Community Center	Shelter	1		151 Poospatuck Lane Mastic, NY 11950		None		In progress		
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										
None anticipated										

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.

9.45.4 Capability Assessment

This section describes the Unkechaug Tribal Nation’s pre- and post-disaster management policies, programs and capabilities and presents an analysis of funding opportunities to directly support mitigation. The tables below summarize the legal and regulatory capability of the Unkechaug Tribe; the administrative and technical capabilities of the Unkechaug Tribe and their fiscal capabilities.

Pre- and Post-Disaster Hazard Management Policies, Programs and Capabilities

Tribal sovereignty ensures that any decisions about the tribe with regard to their property and citizens are made by the Tribal governance. As presented earlier, the Tribal Council consists of a Chief of the Unkechaug



Nation, and three trustees that serve a three-year term. In addition, there is a Secretary and Treasurer. This government is recognized by the State of New York in Article Ten of the State's Indian Law (Indian Law, §150-153).

The Unkechaug Comprehensive Emergency Management Plan (CEMP) outlines the Nation's emergency management capabilities and responsibilities before, during and after an emergency. The Chief has the authority to direct and coordinate all disaster and emergency management activities and operations of the Unkechaug Indian Nation. This authority may be delegated to the Unkechaug Trustee serving as Emergency Management Coordinator. The Unkechaug Tribal Nation will utilize their facilities, equipment, supplies, personnel and resources first; however, assistance may be obtained from local and county government and emergency service organizations. The Unkechaug Indian Nation utilizes the National Interagency Incident Management System (NIIMS) Incident Command System (ICS) to manage all emergencies requiring a multi-agency response.

The Unkechaug Tribal Nation seeks to promote policies, programs and activities to reduce hazard risks throughout the Nation. In the future, they would like to look towards utilizing a standard building code for all new development on the reservation. Further, the Nation is in the process of joining the National Flood Insurance Program (NFIP).

The Unkechaug Indian Nation Council is responsible for land use management of Unkechaug land and the review of land use management actions throughout the Nation.

The Unkechaug Tribal Nation has been proactive in reducing hazard risks on the Reservation. In 2009, the Nation retained a marine contractor to construct a properly engineered erosion control riprap revetment along portions of their shoreline to mitigate the erosive effects of storm waves. However, Tribal finances will not allow for the necessary improvement of the existing structure or to continue the protection to other areas to protect other critical areas.

In 2009, the Long Island Indian Nations (Shinnecock Indian Nation and Unkechaug Indian Nation), with assistance from the Homeland Security and Public Safety Training Consortium of the Schenectady County Community College, prepared a Community Emergency Preparedness Guide to ensure residents are informed and prepared for any type of disaster.

In 2010, in cooperation with the New York State Office of Emergency Management, the Unkechaug Tribal Nation conducted a hazard analysis using the automated program, HAZNY (Hazards New York).

In 2010, the Unkechaug Indian Nation applied for a U.S. Housing and Urban Development Imminent Threat Grant to address health and safety issues along the shoreline of the Reservation. A report was prepared in support of this application which outlines the additional work needed to stabilize the shoreline.

According to their CEMP, the Unkechaug Indian Nation Emergency Planning Committee annually conducts a risk reduction workshop for the Unkechaug Indian Nation community to encourage their involvement in the risk reduction program. The Unkechaug Indian Nation Emergency Planning Committee will meet bi-annually to identify specific hazard reduction actions that could be taken for those hazards determined by the hazard analysis to be most significant.

A new community center, built to withstand hurricane-force winds, is still under construction. This new facility will serve as a potential shelter, as well as hold the tribal offices, medical facility, after-school program and daycare, and library. However, this community center cannot support sheltering of Tribal members long-term and it cannot shelter the entire Tribal population.

The Emergency Managers maintain their CPR training and are Narcon trained.



In 2011, the Tribe participated in a five-day training event with the Seneca Tribe. For eight-hours per day, members of the Unkechaug Tribe were trained on how to work with outside agencies if an emergency/disaster occurs. They were taught how to develop press releases and materials for Tribal members, what equipment would be needed and how to use the Incident Command System.

In response to Hurricane Sandy, in 2012, the Tribal Emergency Operations Center was activated and support was provided to residents. In advance of the storm, emergency preparedness guides were distributed to 150 households and residents were contacted regarding evacuation and available sheltering. A recovery center was established where support was provided on the Individual Assistance program.

The Unkechaug Indian Nation 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.

The Unkechaug Indian Nation identified specific integration activities that will be incorporated into Tribal procedures; these 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 Unkechaug Tribal Nation seeks to promote policies, programs and activities to reduce hazard risks throughout the Nation. In the future, they would like to look towards utilizing a standard building code for all new development on the reservation. Further, the Nation is in the process of joining the National Flood Insurance Program (NFIP).

Though the Nation operates under a tribal government, Town of Brookhaven and Suffolk County Office of Emergency Management are the current jurisdictions that assist the Nation when needed. The Nation falls under historic preservation rules, bringing about challenges with land management and use.

The table below summarizes the regulatory tools that are available to the Unkechaug Indian Nation and where hazard mitigation has been integrated.



Table 9.45-3. Planning, Legal, and Regulatory Capability

Tool / Program (code, ordinance, plan)	Do you have this?	Capability		Effect on Loss Reduction		Hazard Impacted	Description, Code Citation and Comments
		Pre- Disaster	Post- Disaster	Support	Facilitate		
Building Code	No	-	-	-	-	-	The Tribal Nation is considering to have building code in place. At this time, the State Building Code is followed for new development. Refer to 2020-Unkechaug-002.
Emergency Response Plan	Yes	Yes	Yes	Yes	Yes	All Hazards	-
Shoreline Management Plan	Yes	Yes	No	Yes	Yes	Coastal erosion, Hurricane, Severe Storms, Flood	Coastal Erosion Technical Analysis (December 2010)

Table 9.45-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	The Tribal Nation does not request permits from the Town. The individual homeowner ensures proper credentials are gathered at time of construction from contractors. In addition, when projects are grant-funded, the Tribal Nation ensure proper credentials are held by hired contractors.
Permits are tracked by hazard area. For example, floodplain development permits.	
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Unkechaug Indian Nation.

Table 9.45-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Land Tribal Trustee works on land use with private owners; if there are land use decisions concerning community property the Tribal Council is the lead



Resources	Available? (Yes or No)	Department/ Agency/Position
Mitigation Planning Committee	Yes	The Tribal Nation Emergency Management serves in this capacity
Environmental Board/Commission	Yes	Tribal Nation Emergency Management; Tribal Leaders
Open Space Board/Committee	Yes	Land Tribal Trustee works on land use with private owners; if there are land use decisions concerning community property the Tribal Council is the lead
Economic Development Commission/Committee	Yes	Tribal Council
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Tribal Nation Emergency Management; utilize County and Town services as well
Maintenance programs to reduce risk	Yes	Tribal Nation Recovery Manager
Mutual aid agreements	Yes	There are Memorandums of Understanding with the Town Department of Health, Fire Department, Ambulance Corps, and EMS.
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	As needed by outside consultants
Engineers or professionals trained in building or infrastructure construction practices	Yes	As needed by outside consultants
Planners or engineers with an understanding of natural hazards	Yes	As needed by outside consultants
Staff with expertise or training in benefit/cost analysis	Yes	As needed by outside consultants
Professionals trained in conducting damage assessments	Yes	As needed by outside consultants
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	As needed by outside consultants
Scientist familiar with natural hazards	Yes	As needed by outside consultants
NFIP Floodplain Administrator (FPA)	N/A	-
Surveyor(s)	Yes	As needed by outside consultants
Emergency Manager	Yes	Tribal Trustee and Emergency Management Coordinator
Grant writer(s)	Yes	This depends on the grant/case by case basis. If needed, outside consultants are used.
Resilience Officer	Yes	As needed by outside consultants
Other (this could include stormwater engineer, environmental specialist, etc.)	None	-

Fiscal Capability

The table below summarizes financial resources available to the Unkechaug Indian Nation.

Table 9.45-6. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community Services Block Grants (U.S. Department of Health and Human Services)	The Nation has administered these grants for 20 years under the New York State Department of State
Unkechaug Nation Community Development Corporation 501c3	Certified public accountant who takes care of the funding and budget
HUD Grant	Received grant in the 1980's to rehab homes on the reservation



Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Unkechaug Indian Nation.

Table 9.45-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	Emergency Management; door-to-door working with the County do get the Tribal Nation on using Smart 911
Personnel skilled or trained in website development?	No, this capability is in progress
Hazard mitigation information available on your website; if yes, describe	No, utilize the County website for hazard mitigation
Social media for hazard mitigation education and outreach; if yes, briefly describe.	Yes, utilizes Facebook and have someone who leads monitoring their page
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	No, this is led by Emergency Management
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	No
Warning systems for hazard events; if yes, briefly describe.	No, door-to-door
Natural disaster/safety programs in place for schools; if yes, briefly describe.	Coordinate with the Suffolk County FRES on preparedness in the schools
Other	None

Community Classifications

The table below summarizes classifications for community programs available to the Unkechaug Indian Nation.

Table 9.45-8. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	NP	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	N/A	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	N/A	-	-
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.

The Unkechaug Tribal Nation is limited in their capacity to manage, recover and mitigate natural hazard risk. Currently, the Tribal Nation relies on State/FEMA and County resources and capacity to supplement their needs. The updated mitigation strategy identifies mitigation actions to assist with increasing their mitigation and adaptive capacity.

Table 9.45-9. Adaptive Capacity

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

*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 Tribal Nation is aware of climate change and sees it happening every day (e.g., land loss, loss of food supply in the water, environmental contamination). The Tribal Nation continues to consider climate change to ensure future resilience but support is needed to implement mitigation projects and plans that include climate change in their design. Refer to the mitigation strategy later in this section.

9.45.5 National Flood Insurance Program

The Unkechaug Indian Nation does not currently participate in the NFIP. However, this is something the Tribal Nation would like to pursue and has included as a mitigation action in their updated strategy.

The Nation’s current floodplain and emergency management needs are taken care of by Mary Treadwell, Veronica Treadwell, and Wendy Samuels.

The NFIP administration services and functions to be provided by the Unkechaug Nation at this time are unknown. In the future, being able to install natural barriers and bulkheading along the shore would be something of interest.



Mortgages cannot be obtained by Tribal members. Instead, there are retail agreements/loans on the homes on the Reservation; homes cannot be bought and sold.

Additional training and support are needed for the NFIP Floodplain Administrator to better understand the impacts and how the Unkechaug Nation is able to implement NFIP.

Since the Unkechaug Nation is awaiting membership in NFIP, the biggest push at this moment is on community outreach. Being able to get the true message out about flood risk and NFIP is important.

The NFIP administration services and functions to be provided by the Unkechaug Nation at this time are unknown. In the future, being able to install natural barriers and bulkheading along the shore would be something of interest.

Compliance History

Hurricane Sandy resulted in 8 to 12 structures being damaged. FEMA conducts the Substantial Damage Estimates. Funding through New York Rising is being sought out for mitigation projects at 4 to 5 properties that would like to be elevated. At this time because of the Unkechaug's classification, only Public Assistance (PA) funding is made available in the aftermath of a disaster.

The land of the Reservation is held in trust for the Nation, however individual homeowners cannot obtain flood insurance. This concept is very confusing and disheartening as the Nation finalizes its membership in the NFIP.

The biggest barrier to implementing the floodplain management program for the Unkechaug Nation will be outside resources and bureaucracy. Additional information on floodplain management would be welcomed. Funding would allow further training which currently is only possible if hosted in/by Suffolk County.

Joining the Community Rating System (CRS) is not feasible for the Unkechaug Nation at this time.

Regulatory

Though the Nation operates under a tribal government, Town of Brookhaven and Suffolk County Office of Emergency Management are the current jurisdictions that assist the Nation. The Nation falls under historic preservation rules, bringing about challenges with land management and use. Financial restrictions inhibit the Unkechaug Nation's ability to go beyond FEMA and New York State minimum requirements for floodplain management.

Once membership in the NFIP is finalized, additional regulations and ordinances can be pursued by the tribal government.

9.45.6 Integration with Other Planning Initiatives

Existing Integration

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

The Unkechaug Comprehensive Emergency Management Plan (CEMP) outlines the Nation's emergency management capabilities and responsibilities before, during and after an emergency. The Emergency



Managers have the authority to declare a state of emergency and direct and coordinate all disaster and emergency management activities and operations of the Unkechaug Indian Nation. The Emergency Managers keep the Chief informed. The Chief informs the Trustees.

The Unkechaug Tribal Nation completed a comprehensive needs assessment as a joint venture with Stonybrook University School of Social Welfare. This assessment covered community safety and health and housing issues. The Emergency Managers are currently reviewing the results and updating their assessment by going door-to-door to determine progress on positive changes made to the Tribe to improve living conditions and safety.

The Unkechaug Tribal Nation will utilize their facilities, equipment, supplies, personnel and resources first; however assistance may be obtained from local and county government and emergency service organizations. The Unkechaug Indian Nation utilizes the National Interagency Incident Management System (NIIMS) Incident Command System (ICS) to manage all emergencies requiring a multi-agency response.

The Emergency Managers meet daily to monthly to discuss hazard mitigation topics such as ways to obtain more training and secure funding to implement mitigation actions. The Emergency Managers regularly check FEMA and other federal agency websites for grant funding opportunities.

The Unkechaug Tribal Nation meets with the Shinnecock Tribal Nation quarterly to discuss how the two tribes can support each other. At these meetings, risk reduction is often a topic discussed and how the Tribes can mitigate their natural hazard risks.

The Unkechaug Tribal Nation seeks to promote policies, programs and activities to reduce hazard risks throughout the Nation. In the future, they would like to look towards utilizing a standard building code for all new development on the reservation. Further, the Nation is in the process of joining the National Flood Insurance Program.

Opportunities for Future Integration

The following summarizes opportunities for future integration:

- Enroll in the National Flood Insurance Program (2020-Unkechaug-001): Refer to mitigation action 2020-Unkechaug-001.
- Adopt a Building Code (2020-Unkechaug-002): Refer to mitigation action 2020-Unkechaug-002.

9.45.7 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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

Evacuation Routes

Evacuation procedures for the Tribal Nation include going door-to-door with a choice of staying in place, or to County-identified shelters that are hotels off the reservation. There are no evacuation signs on roads for evacuation on the reservation.

Sheltering

The Tribal Nation works the County to identify shelters in neighboring Towns while the Community Center, which will serve as their shelter on the reservation, is completed. In the past, the County has assisted with sending residents to nursing homes that required medical care. The Nation is looking to enhance the current



Community Center identified as their one shelter on the reservation to have additional services needed for a proper shelter. Refer to mitigation action 2020-Unkechaug-003.

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Community Center – in progress	On the reservation	300-400 people	No	Yes	Yes	None at this time. There are plans to have a Section of building set up place for physical exams, dentists and pool.	Self-contained with solar power, thermal heating; kitchen will be included

Temporary Housing

The Tribal Nation has recently been discussing temporary housing sites on the reservation to accommodate community members during times of need (e.g., natural disasters). There is little open space on the reservation. If a home is destroyed, a temporary structure can be put on that land depending upon the size. The PowWow grounds are open land that can be used for this purpose; however is located in the flood zone and therefore not a feasible site to serve as temporary housing to residents impacted by flood events. There is property at 10 Clover that may also be used.

As a mitigation action, the Nation will research land that may be used to accommodate temporary housing. Refer to mitigation action 2020-Unkechaug-004 for additional details.

Permanent Housing

Structures located in the SFHA may need to be relocated, or new properties must be built once severely damaged properties are demolished. As previously noted, there is little open land that can be used to relocate residents on the reservation. The Tribal Nation is looking into purchasing land that can be used to provide additional housing; refer to mitigation action 2020-Unkechaug-004.

9.45.8 Hazard Event History Specific to the Unkechaug Indian Nation

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 all jurisdictions. The Unkechaug Indian Nation’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 9.45-11 provides details regarding Nation-specific loss and damages the Nation 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 9.45-11. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damages and Losses
February 8 – 9, 2013	Severe Winter Storm and Snowstorm (FEMA DR-4111)	Yes	Low pressure that formed along the northern Gulf coast by the morning of Thursday, February 7, 2013 moved northeast to near Cape Hatteras by the morning of Friday, February 8, 2013 . The low then rapidly intensified while	Snow clearing and removal The Tribal Nation contacts the State with what roads needs to be cleared – Poospatuck Lane at the start



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damages and Losses
			moving northeast to a position east of Cape Cod by the morning of Saturday, February 9, 2013, producing very heavy snowfall and blizzard conditions across central and eastern Long Island on February 8th and 9th, and winter storm conditions across the rest of southeast New York.	of the reservation is State Road. Poospatuck Lane meets up with Elenanor Avenue and Overlook which is Town responsibility. As needed, local/private services are used to plow but not compensated for their services.
March 14 – 15, 2017	Severe Winter Storm and Snowstorm (FEMA DR-4322)	Yes	On Tuesday, March 14th, rapidly deepening low pressure tracked up the eastern seaboard resulting in damaging winds in Suffolk County.	Snow clearing and removal The Tribal Nation contacts the State with what roads needs to be cleared. Private roads are taken care of by the Tribal Nation but they do not have adequate equipment and a private resident provides these services as needed but is not compensated.

Notes:

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

9.45.9 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (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 Unkechaug Tribal Nation. 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 even, 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 in the community located in the 1-percent and 0.2-percent floodplain and presents Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

Table 9.1-14. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Potential Loss from 1% Flood Event		Addressed by Proposed Action
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage	
None Identified						

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 jurisdiction 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 natural hazards for the Unkechaug Indian Nation. The Unkechaug Indian Nation 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 Tribal Nation.

Table 9.45-13. Hazard Ranking Input

Coastal Erosion	Cyber Security	Disease Outbreak	Drought	Earthquake	Expansive Soils
High	Medium	Medium	Low	Medium	Low
Extreme Temperature	Flood	Groundwater Contamination	Hurricane	Infestation and Invasive Species	Nor’Easter
Medium	High	Medium	High	Medium	High





Severe Storm	Severe Winter Storm	Shallow Groundwater	Wildfire
Medium	Medium	Low	Low

Note: The hazard ranking methodology is described further in Section 5.4 (Hazard Ranking).

*The Tribal Nation changed the initial ranking of this hazard based on event history, experience, and feedback from the Council and Trustees.

Identified Issues

The Tribal Nation has identified the following vulnerabilities:

- The Reservation is located on the Mastic-Shirley peninsula and is bordered by the Forge River and Poospatuck Creek, tributaries that drain into Moriches Bay and the greater Long Island South Shore Estuary. The waterfront location exposes the Reservation property to erosion from storm-driven waves and coastal flooding.
- Lack of open space to support temporary and permanent housing
- Community Center is not completed to serve as a shelter on the reservation
- Inadequate drainage and roadway width to support emergency vehicles during and after events

9.45.10 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 Tribal Nation’s mitigation strategy identified in the 2014 HMP. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. 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 9.45-15. 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	
U-1	Improve stormwater drainage on Abby Lane and Poospatuck Lane.	Flood, Severe Storm, Hurricane	Tribal Nation	Upgrade and increase stormwater drainage capacity on Abby Lane and Poospatuck Lane. Currently the stormwater system in the Nation is inadequate and the capacity needs to increase to mitigate flooding on the roadways identified.	In Progress; One drain was added however it did not resolve the flooding; roads are still too narrow to accommodate emergency vehicles. Additional work is needed to mitigate flooding.	Cost		<ol style="list-style-type: none"> 1. Include project in the 2020 update: 2020-Unkechaug-006. 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
U-2	Install bulkheading along waterfront areas.	Coastal erosion, Hurricane, Severe Storm	Tribal Nation	The Nation continues to lose land. Harden the shoreline by installing bulkheading along waterfront areas (Poospatuck Creek and Forge River) to protect the shoreline from future erosion and potential further damage to Tribal land and resources.	No Progress	Cost		<ol style="list-style-type: none"> 1. Include project in the 2020 update: 2020-Unkechaug-007. 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
U-3	Preserve the shoreline and land.	All hazards	Tribal Nation	Loss of vegetation due to erosion; Aerial photography documents the loss of soil, land and vegetation	No Progress	Cost		<ol style="list-style-type: none"> 1. Include project in the 2020 update: 2020-Unkechaug-008. 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
U-4	Elevate four to five homes as identified during the NY Community Rising program	Flood, Hurricane, Severe Storm	Tribal Nation	Elevate flood-prone homes to protect them from future flood loss	In Progress; 11 homes were elevated post-Superstorm Sandy	Cost	High	<ol style="list-style-type: none"> 1. Include project in the 2020 update to elevate additional homes: 2020-Unkechaug-005.
						Level of Protection	1% annual chance flood event plus freeboard	



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.
						Damages Avoided; Evidence of Success	Structural and content damage, potential health and environmental issues such as mold	
					however there are still homes in need to be mitigated.	Damages Avoided; Evidence of Success	Structural and content damage, potential health and environmental issues such as mold	2. 3.
U-5	Create a program to label homes for emergency services. By creating a program like this, it will increase the 9-1-1 technical capabilities of the Tribal Nation.	All hazards	Tribal Nation	<p>The buildings are not labeled in terms of number and street address. This is an issue because emergency service providers coming from outside of the Nation are not familiar with the location of each address, and this causes delays in finding the correct location to provide assistance.</p> <p>Label each building for emergency services. It will increase 911 technical capabilities. The Emergency Managers will begin with creating a spatial file using the mapping application built for the 2014 hazard mitigation plan, provide to emergency services and the Town, and then have markers made and posted throughout the Tribe.</p>	No Progress	Cost		<p>1. Include project in the 2020 update: 2020-Unkechaug-009.</p> <p>2.</p> <p>3.</p>
						Level of Protection		
						Damages Avoided; Evidence of Success		
U-6	Complete shoreline	Coastal erosion,	Tribal Nation	Flooding still occurs	In Progress; It has	Cost		1. Include project in the 2020



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.
						Level of Protection	Damages Avoided; Evidence of Success	
	stabilization project as outlined in the 2010 Coastal Erosion and Hazard Technical Analysis report.	Hurricane, Severe Storm		Continued extension of the engineered riprap seawall which has been placed in front of ceremonial grounds to further protect Tribal land, property and residents (800 feet of shoreline). The scope would include what is outlined in the 2010 Coastal Erosion and Hazard Technical Analysis report.	been 10-years since this shoreline project was completed and erosion has started again; before and after the cemetery. The protection area needs to be extended along the coastline. State is aware of this vulnerability because a survey was conducted post-Hurricane Sandy for rip-rap and home elevations. High priority; candidate for FEMA HMA grant.	Level of Protection		update: 2020-Unkechaug-007. 2. 3.
U-7	Consider alternative energy sources such as wind and solar power.	All hazards	Tribal Nation	The Unkechaug Nation experiences power outages for extended periods of time as a result of weather events. Consider alternative energy sources such as wind and solar power. The Tribe has already begun investigating this option and having three wind turbines/towers installed off-shore with backup batteries and generators should there be no wind.	In Progress; A consultant visited and advised only one turbine is needed; in addition, training is needed to ensure feasible to maintain	Cost		1. Include project in the 2020 update: 2020-Unkechaug-010 2. 3.
						Level of Protection		
U-8	Create and post evacuation route signage.	All hazards	Tribal Nation	Currently there is no evacuation route	Complete. There is evacuation	Cost	Medium – This was a Town/County	1. Discontinue 2.



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.
				signage. Create and post signage throughout the Nation on the evacuation routes that should be taken in the event of a hurricane or other severe weather event.	signage once you are off the Reservation for residents to follow.		project; cost details are unknown at this time.	3. Complete
						Level of Protection	Not applicable	
						Damages Avoided; Evidence of Success	Life safety	
U-9	Establish back-up power for 12A Abby Lane. This location serves as the post-Sandy emergency operations center because the Community Center is not finished.	All hazards	Tribal Nation	12A Abby Lane is the emergency operations center for the Tribal Nation and it currently does not have any backup power. Install a permanent generator.	No Progress; generator still needed	Cost		1. Include project in the 2020 update: 2020-Unkechaug-0012 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
U-10	Purchase fire equipment and pumping trucks to equip the Tribe to fight local fires until outside emergency services arrives	All hazards	Tribal Nation	The Tribal homes are constructed of wood and are located very close to one another. If one goes on fire, the entire Nation's building stock would be at risk. Further, the responding fire services (Village of Mastic) have very large vehicles which make it difficult to navigate down Tribal roads. Purchase fire equipment and pumping trucks to equip the Tribe to fight local fires until outside emergency services arrive.	No Progress	Cost		1. Discontinue 2. 3. Not plausible
						Level of Protection		
						Damages Avoided; Evidence of Success		
U-11	Conduct study to determine how to revitalize the fishing	Coastal Erosion, Severe Storms	Tribal Nation	The fishing has declined in the waters	No Progress	Cost	Not applicable	1. Discontinue 2.



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.
						Level of Protection	Not applicable	
	industry in the Forge River and Poospatuck Creek			of the Forge River and Poospatuck Creek; River has not been dredged in a long time. Conduct a study to determine the next steps to revitalize the fishing industry once again in terms of a food source and source of income for the Tribe.		Damages Avoided; Evidence of Success	Not applicable	3. No longer a priority
U-12	Move electrical overhead wiring underground	All hazards	Tribal Nation	<p>The Tribal Nation was without power for up to 2 weeks as a result of Hurricane Sandy. Trees and limbs took down wires. It cost a lot of money to have the connections made to the homes once power was restored. The Tribal Nation received funding to trim and cut back trees as a result of the storm but this is a short-term solution.</p> <p>When the Tribal land was under 4-feet of water as a result of Sandy, there was the risk of Tribal members being electrocuted while being evacuated walking through waist-deep waters should a live water have fallen.</p>	In Progress; PSE&G has upgraded the reservation; however underground lines would assist with wind hazard. This may be done at the time of other drainage work for some areas on the Reservation.	Cost		<ol style="list-style-type: none"> 1. Include project in the 2020 update: 2020-Unkechaug-014 2. 3.
						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	
U-13	Support and participate in county led initiatives intended to build local and regional mitigation and risk-reduction capabilities (see Section 9.1), specifically: <ul style="list-style-type: none"> Mitigation Education for Natural Disasters (natural hazard awareness and personal scale risk reduction/mitigation public education and outreach program) Build Local Floodplain Management and Disaster Recovery Capabilities (enhanced floodplain management, and post-disaster assessment and recovery capabilities) County-Wide Debris Management Plan Jurisdictional Knowledge of Mitigation Needs of Property Owners (improved understanding of damages and mitigation interest/activity of private property owners) Create a Multi-Jurisdictional Seismic Safety Committee in Suffolk County (build regional, county and local capabilities to manage seismic risk, both pre- and post-disaster) Alignment of Mitigation Initiatives through all levels of Government (effort to build State and Federal level recognition and support of the County and local hazard mitigation planning strategies identified in this plan). 	All Hazards	Tribal Nation	Yes, the Tribal Nation is currently coordinating and participating with the County on mitigation initiatives. This is considered a capability of Tribal Nation Emergency Management and will continue this coordination.	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing Capability
						Level of Protection		
	See above					Damages Avoided; Evidence of Success		
U-14	Work with County and PSEG (formerly LIPA) to identify roads within the jurisdiction 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	Tribal Nation	PSEG has a tree trimming program in place and notifies the Tribal Nation when in the area. Lines and meters are also being changed/upgraded by PSEG. Transformers have been updated as well.	Complete	Cost		1. Discontinue 2. 3. Complete
						Level of Protection		
						Damages Avoided; Evidence of Success		



Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

None identified.

Proposed Hazard Mitigation Initiatives for the HMP Update

The Unkechaug Indian Nation 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: e.g., 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 9.45-16 summarizes the comprehensive-range of specific mitigation initiatives the Unkechaug Indian Nation 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 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), 14 criteria are used to evaluate each mitigation action. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria. The results of the evaluation, with an emphasis on benefits, costs and implementation timeline were used to assist with prioritizing actions as *High*, *Medium*, or *Low*. A high-ranked hazard indicates the jurisdiction will prioritize the implementation of this action and apply for funding, if needed as opportunities become available. Table 9.45-17 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 9.45-16. 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-Unkechaug-001 (previous S-5)	Participate in the NFIP	1, 2, 4	Flood	<p>Problem: The Tribal Nation does not participate in the NFIP and does not have access to certain mitigation funding grants.</p> <p>Solution: Join the National Flood Insurance Program to provide Tribal members the opportunity to obtain flood insurance.</p>	No	None	Within 1 year	<u>Emergency Management</u>	Staff time	Insurance established, increased standards for construction	Tribal Nation budget	High	LPR	PR
2020-Unkechaug-002	Building Code	2, 4, 5	All	<p>Problem: The Tribal Nation does not currently have a building code.</p> <p>Solution: Develop and pass an ordinance with a building code to guide future development in a safe manner to protect against future hazard events</p>	No	None	Within 5 years	<u>Tribal Council</u>	Staff time	Buildings more resilient to hazard events	Tribal Nation budget	High	LPR	PR
2020-Unkechaug-003	Enhance Community Center to serve as a community shelter	2, 7	All	<p>Problem: The Community Center is the only shelter on the reservation however it lacks the facilities needed (e.g., adequate bathrooms and showers).</p> <p>Solution: Enhance the Community Center to include</p>	Yes	None	Within 5 years	<u>OEM and Tribal Council</u>	\$350,000	Increased emergency and sheltering capabilities	HMGP, BRIC, Community Facilities Grant Program, Emergency	High	SIP	ES



Table 9.45-16. 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
				proper bathrooms, showers, medical unit, kitchens, and locker rooms for self-contained sheltering for the community. Hire an architect/engineer to design and revise plans to ensure the Community Center can be used to shelter-in-place, use as a hurricane shelter, and during a pandemic.										
2020-Unkechaug-004 (previous S-1)	Coordinate with Neighboring Communities and County to Support Temporary and Permanent Housing	1, 7	All Hazards	<p>Problem: The Tribal Nation is built out and needs more land to accommodate temporary housing and permanent housing.</p> <p>Solution: The Tribal Nation will work with the County and neighboring communities to develop a mutual aid agreement and identify locations for temporary and permanent housing short-term. In addition, the Tribal Nation will explore the purchase of land support</p>	No	None	Within 1 year	<u>Emergency Management</u>	Low	Temporary and Permanent Housing areas identified	County and Tribal Nation budgets	High	LPR	ES



Table 9.45-16. 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-Unkechaug-005 (previous U-4)	Elevations	1, 2	Flood, Severe Storm	<p>temporary and permanent housing options in the long term.</p> <p>Problem: There are several flood-vulnerable homes that need mitigating that were not completed post-Hurricane Sandy</p> <p>Solution: Identify funding sources to elevate the four-existing flood-vulnerable homes on Abby Lane.</p>	No	None	3 years	<u>Emergency Management</u>	\$350,000	Eliminates flood damage to homes and residents,	FEMA HMGP and FMA, BRIC, local cost share by residents	High	SIP	PP
2020-Unkechaug-006 (previous U-1)	Improve stormwater drainage	2, 5	Severe Storm, Flood	<p>Problem: As a result of rain events and coastal flooding, the roadways flood on Abby Lane and Poospatuck Lane due to the inadequate stormwater drainage system. The roads are regularly damaged as a result. Further, the flooded roadways inhibit emergency services from accessing residents. There is no detour available for the residents who live along these roadways and</p>	No	None	Within 2 years	<u>Tribal Council</u>	Low for the study, High for mitigation	Life safety; reduce property damage; increase response time for emergency services; assist with emergency evacuation	HMGP, BRIC	High	SIP	SP



Table 9.45-16. 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>therefore can potentially isolate this population during flood events.</p> <p>Solution: Conduct a feasibility study to determine the proper mitigation measures. Suggest upgrading and increasing stormwater drainage capacity is needed; potentially widening of the roadway and elevations to ensure emergency vehicles can access the reservation and get through. Concurrent with this work, electrical lines may be buried to expand roadway width with the removal of the poles.</p>										
2020-Unkechaug-007 (previous U-2 and U-6)	Shoreline is eroding and threatening ceremonial grounds and Tribal land	3, 4, 5	All	<p>Problem: Shoreline is eroding and threatening ceremonial grounds and Tribal land</p> <p>Solution: Conduct a feasibility study to determine the best mitigation</p>	No	Permitting	Within 5 years	<u>Emergency Management</u>	High	Protects ceremonial grounds, Tribal land, homes. The bulkhead will help hold back the water to prevent flooding and	HMGP, BRIC	High	SIP	PP



Table 9.45-16. 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
				solutions. Suggest hardening the shoreline by installing bulkheading along waterfront areas (Poospatuck Creek and Forge River) to protect the shoreline from future erosion and potential further damage to Tribal land and resources. Continued extension of the engineered riprap seawall which has been placed in front of ceremonial grounds to further protect Tribal land, property and residents (800 feet of shoreline). The scope would include what is outlined in the 2010 Coastal Erosion and Hazard Technical Analysis report.						evacuations.				
2020-Unkechaug-008 (previous U-3)	Plant natural shrubbery and vegetation along the shoreline.	3, 4, 5	Erosion	Problem: Due to the erosion that has taken place, the Tribal land has lost native vegetation and continues to lose as work is conducted.	No	May require permitting	Within 5 years	Tribal Council and Suffolk County Community College and the Long Island	High	Ecosystem services provided, erosion risk reduced.	HMGP, BRIC, Suffolk County Community College and the Long Island Native	Medium	NSP	NR



Table 9.45-16. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<p>Solution: Coordinate with Suffolk County Community College with an indigenous planting program to plant along the shoreline. Plant natural shrubbery and vegetation along the shoreline as construction.</p>				Native Plan Initiative			Plan Initiative			
2020-Unkechaug-009 (previous U-5)	Improve emergency services in the Nation	7	All Hazards	<p>Problem: The buildings are not labeled in terms of number and street address. This is an issue because emergency service providers coming from outside of the Nation are not familiar with the location of each address, and this causes delays in finding the correct location to provide assistance.</p> <p>Solution: Utilize the survey completed on Abby Lane after Hurricane Sandy during NY Rising which mapped the streets and help to label each building for emergency services. It will</p>	Yes	None	Within 1 year	<u>Emergency Management</u>	Low	Increased emergency capabilities	HMGP, Suffolk County, Emergency Facilities Grant Program	High	LPR, SIP	ES



Table 9.45-16. 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
				increase 911 technical capabilities. Coordinate and communicate with the Town and emergency services to improve response times. Participate in Smart 911 project with the County.										
2020-Unkechaug-010 (previous U-7)	Utility outages	2	Hurricane, Nor'Easter, Severe Storm, Severe Winter Storm	<p>Problem: The Unkechaug Nation experiences power outages for extended periods of time as a result of weather events.</p> <p>Solution: Continue to explore options for wind turbine be installed as power source; provide training to maintain to ensure it is a feasible and sustainable solution.</p>	No	None anticipated	Within 5 years	<u>Emergency Management</u>	High	Continuity of power services	HMGP, BRIC	Low	SIP	PP, ES
2020-Unkechaug-011	Sheltering Solution	7	All Hazards	<p>Problem: The only shelter on the reservation is the Community Center with no established agreements in terms of transportation off the reservation and locations identified in advance of a</p>	Yes	None	Within 1 year	<u>Emergency Management</u>	Staff time	Increased sheltering capabilities	Town, County, and Tribal Nation budgets	Medium	SIP	ES



Table 9.45-16. 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
				disaster. Solution: Coordinate with the Town and County to identify transportation services to bus community members to identified shelter locations and establish MOUs. Also discuss with sister Tribes (e.g., Oneida) to shelter and house the Unkechaug Tribal Nation.										
2020-Unkechaug-012 (previous U-9)	Backup power at critical facilities and lifelines	1, 2, 7	All Hazards	Problem: 12A Abby Lane is the emergency operations center for the Tribal Nation and it currently does not have any backup power. Solution: Establish backup power through the purchase and installation of a solar powered backup generator.	Yes	None	1 years	<u>Emergency Management</u>	\$50,000	Ensures continuity of operations of Emergency Operations Center	FEMA HMGP and PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	High	SIP	ES
2020-Unkechaug-013 (previous U-9)	Coastal Erosion Monitoring	1, 2, 3, 5	Nor'Easter, Coastal Erosion, Hurricane, Flood	Problem: The Tribal Nation has shoreline which could be exposed to coastal erosion and	No	None	Within 1 year	Suffolk County SWCD, NYSDOS, NYSDEC,	Staff time	Identification of coastal erosion	NYS and County budgets	High	NSP	NR



Table 9.45-16. 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
				has experienced erosion events in the past. Solution: The Tribal Nation will participate in a county led erosion monitoring program.				NYSCSIC, NYSEMO, FEMA, and all other agencies currently producing aerial photography						
2020-Unkechaug-014 (previous U-12)	Reduce use of overhead wiring	1, 2	Hurricane, Nor'Easter, Severe Storm, Severe Winter Storm	Problem: The Tribal Nation was without power for up to 2 weeks as a result of Hurricane Sandy. Trees and limbs took down wires. It cost a lot of money to have the connections made to the homes once power was restored. The Tribal Nation received funding to trim and cut back trees as a result of the storm but this is a short-term solution. When the Tribal land was under 4-feet of water as a result of Sandy, there was the risk of Tribal members being electrocuted while being evacuated walking through waist-deep waters should a live	No	None	Within 5 years	<u>Emergency Management</u>	High	Reduction in power outages	Homeowners, Tribal Nation Budget	Medium	SIP	PP



Table 9.45-16. 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
				water have fallen. Solution: Move electrical overhead wiring underground to reduce the utility outages from future storm events; protect lives. This can be done when wastewater and other infrastructure work is being completed to increase cost effectiveness.										

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
- HMGP Hazard Mitigation Grant Program
- PDM Pre-Disaster Mitigation Grant Program

Timeline:

The time required for completion of the project upon implementation

Cost:

The estimated cost for implementation.

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*

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Table 9.45-17. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2020-Unkechaug-001	Participate in the NFIP	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2020-Unkechaug-002	Building Code	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2020-Unkechaug-003	Enhance Community Center to serve as a community shelter	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2020-Unkechaug-004	Coordinate with Neighboring Communities and County to Support Temporary and Permanent Housing	1	0	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2020-Unkechaug-005	Elevations	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2020-Unkechaug-006	Improve stormwater drainage	0	1	1	1	1	1	0	1	1	1	1	1	1	1	12	High
2020-Unkechaug-007	Shoreline is eroding and threatening ceremonial grounds and Tribal land	0	1	1	1	1	1	0	0	1	1	0	1	1	1	10	High
2020-Unkechaug-008	Plant natural shrubbery and vegetation along the shoreline.	0	1	1	1	1	1	0	1	1	1	0	1	1	1	11	High
2020-Unkechaug-009	Improve emergency services in the Nation	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2020-Unkechaug-010	Utility outages	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2020-Unkechaug-	Sheltering Solution	1	0	1	1	1	1	1	1	1	1	1	1	1	1	13	High



Table 9.45-17. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
011																	
2020-Unkechaug-012	Backup power at critical facilities and lifelines	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2020- Unkechaug-013	Coastal Erosion Monitoring	0	1	1	1	1	1	0	1	1	1	0	1	1	1	11	High
2020-Unkechaug-014	Reduce use of overhead wiring	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High

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

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9.45.11 Proposed Mitigation Action Types

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

Table 9.45-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Coastal Erosion	2020- Unkechaug - 002, 2020- Unkechaug - 004, 2020- Unkechaug- 009	2020- Unkechaug - 003, 2020- Unkechaug - 007, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012	2020- Unkechaug- 008, 2020- Unkechaug- 013		2020- Unkechaug - 002	2020- Unkechaug - 007		2020- Unkechaug- 008, 2020- Unkechaug- 013		2020- Unkechaug - 003, 2020- Unkechaug - 004, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012
Cyber Security	2020- Unkechaug - 002, 2020- Unkechaug - 004, 2020- Unkechaug- 009	2020- Unkechaug - 003, 2020- Unkechaug - 007, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012	2020- Unkechaug- 008		2020- Unkechaug - 002	2020- Unkechaug - 007		2020- Unkechaug- 008		2020- Unkechaug - 003, 2020- Unkechaug - 004, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012
Disease Outbreak	2020- Unkechaug - 002, 2020- Unkechaug - 004, 2020- Unkechaug- 009	2020- Unkechaug - 003, 2020- Unkechaug - 007, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012	2020- Unkechaug- 008		2020- Unkechaug - 002	2020- Unkechaug - 007		2020- Unkechaug- 008		2020- Unkechaug - 003, 2020- Unkechaug - 004, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012
Drought	2020- Unkechaug - 002, 2020- Unkechaug - 004, 2020- Unkechaug- 009	2020- Unkechaug - 003, 2020- Unkechaug - 007, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012	2020- Unkechaug- 008		2020- Unkechaug - 002	2020- Unkechaug - 007		2020- Unkechaug- 008		2020- Unkechaug - 003, 2020- Unkechaug - 004, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012
Earthquake	2020- Unkechaug - 002, 2020- Unkechaug - 004, 2020- Unkechaug- 009	2020- Unkechaug - 003, 2020- Unkechaug - 007, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012	2020- Unkechaug- 008		2020- Unkechaug - 002	2020- Unkechaug - 007		2020- Unkechaug- 008		2020- Unkechaug - 003, 2020- Unkechaug - 004, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012
Expansive Soils	2020- Unkechaug -	2020- Unkechaug -	2020- Unkechaug-		2020- Unkechaug -	2020- Unkechaug -		2020- Unkechaug-		2020- Unkechaug -





SECTION 9.45: UNKECHAUG TRIBAL NATION

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
	002, 2020- Unkechaug - 004, 2020- Unkechaug- 009	003, 2020- Unkechaug - 007, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012	008		002	007		008		003, 2020- Unkechaug - 004, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012
Extreme Temperature	2020- Unkechaug - 002, 2020- Unkechaug - 004, 2020- Unkechaug- 009	2020- Unkechaug - 003, 2020- Unkechaug - 007, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012	2020- Unkechaug- 008		2020- Unkechaug - 002	2020- Unkechaug - 007		2020- Unkechaug- 008		2020- Unkechaug - 003, 2020- Unkechaug - 004, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012
Flood	2020- Unkechaug- 001, 2020- Unkechaug - 002, 2020- Unkechaug - 004, 2020- Unkechaug- 009	2020- Unkechaug - 003, 2020- Unkechaug - 005, 2020- Unkechaug - 006, 2020- Unkechaug - 007, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012	2020- Unkechaug- 008		2020- Unkechaug- 001, 2020- Unkechaug - 002	2020- Unkechaug - 005, 2020- Unkechaug - 007	2020- Unkechaug -006	2020- Unkechaug- 008		2020- Unkechaug - 003, 2020- Unkechaug - 004, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012
Groundwater Contamination	2020- Unkechaug - 002, 2020- Unkechaug - 004, 2020- Unkechaug- 009	2020- Unkechaug - 003, 2020- Unkechaug - 007, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012	2020- Unkechaug- 008		2020- Unkechaug - 002	2020- Unkechaug - 007		2020- Unkechaug- 008		2020- Unkechaug - 003, 2020- Unkechaug - 004, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012
Hurricane	2020- Unkechaug - 002, 2020- Unkechaug - 004, 2020- Unkechaug- 009	2020- Unkechaug - 003, 2020- Unkechaug - 007, 2020- Unkechaug- 009, 2020- Unkechaug- 010, 2020- Unkechaug- 011, 2020- Unkechaug- 012, 2020- Unkechaug- 014	2020- Unkechaug- 008		2020- Unkechaug - 002	2020- Unkechaug - 007, 2020- Unkechaug- 010, 2020- Unkechaug- 014		2020- Unkechaug- 008		2020- Unkechaug - 003, 2020- Unkechaug - 004, 2020- Unkechaug- 009, 2020- Unkechaug- 010, 2020- Unkechaug- 011, 2020- Unkechaug- 012
Infestation and Invasive Species	2020- Unkechaug - 002, 2020- Unkechaug -	2020- Unkechaug - 003, 2020- Unkechaug -	2020- Unkechaug- 008		2020- Unkechaug - 002	2020- Unkechaug - 007		2020- Unkechaug- 008		2020- Unkechaug - 003, 2020- Unkechaug -





SECTION 9.45: UNKECHAUG TRIBAL NATION

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
	2004, 2020- Unkechaug- 009	2007, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012								2004, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012
Nor'Easter	2020- Unkechaug - 002, 2020- Unkechaug - 004, 2020- Unkechaug- 009	2020- Unkechaug - 003, 2020- Unkechaug - 007, 2020- Unkechaug- 009, 2020- Unkechaug- 010, 2020- Unkechaug- 011, 2020- Unkechaug- 012, 2020- Unkechaug- 014	2020- Unkechaug- 008		2020- Unkechaug - 002	2020- Unkechaug - 007, 2020- Unkechaug- 010, 2020- Unkechaug- 014		2020- Unkechaug- 008		2020- Unkechaug - 003, 2020- Unkechaug - 004, 2020- Unkechaug- 009, 2020- Unkechaug- 010, 2020- Unkechaug- 011, 2020- Unkechaug- 012
Severe Storm	2020- Unkechaug - 002, 2020- Unkechaug - 004, 2020- Unkechaug- 009	2020- Unkechaug - 003, 2020- Unkechaug - 005, 2020- Unkechaug - 006, 2020- Unkechaug - 007, 2020- Unkechaug- 009, 2020- Unkechaug- 010, 2020- Unkechaug- 011, 2020- Unkechaug- 012, 2020- Unkechaug- 014	2020- Unkechaug- 008		2020- Unkechaug - 002	2020- Unkechaug - 005, 2020- Unkechaug - 007, 2020- Unkechaug- 010, 2020- Unkechaug- 014	2020- Unkechaug -006,	2020- Unkechaug- 008		2020- Unkechaug - 003, 2020- Unkechaug - 004, 2020- Unkechaug- 009, 2020- Unkechaug- 010, 2020- Unkechaug- 011, 2020- Unkechaug- 012
Severe Winter Storm	2020- Unkechaug - 002, 2020- Unkechaug - 004, 2020- Unkechaug- 009	2020- Unkechaug - 003, 2020- Unkechaug - 007, 2020- Unkechaug- 009, 2020- Unkechaug- 010, 2020- Unkechaug- 011, 2020- Unkechaug- 012, 2020- Unkechaug- 014	2020- Unkechaug- 008		2020- Unkechaug - 002	2020- Unkechaug - 007, 2020- Unkechaug- 014		2020- Unkechaug- 008		2020- Unkechaug - 003, 2020- Unkechaug - 004, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012
Shallow Groundwater	2020- Unkechaug - 002, 2020- Unkechaug - 004, 2020- Unkechaug- 009	2020- Unkechaug - 003, 2020- Unkechaug - 007, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug-	2020- Unkechaug- 008		2020- Unkechaug - 002	2020- Unkechaug - 007, 2020- Unkechaug- 010		2020- Unkechaug- 008		2020- Unkechaug - 003, 2020- Unkechaug - 004, 2020- Unkechaug- 009, 2020- Unkechaug- 010, 2020- Unkechaug-





Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
		012								011, 2020- Unkechaug- 012
Wildfire	2020- Unkechaug - 002, 2020- Unkechaug - 004, 2020- Unkechaug- 009	2020- Unkechaug - 003, 2020- Unkechaug - 007, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012	2020- Unkechaug- 008		2020- Unkechaug - 002	2020- Unkechaug - 007		2020- Unkechaug- 008		2020- Unkechaug - 003, 2020- Unkechaug - 004, 2020- Unkechaug- 009, 2020- Unkechaug- 011, 2020- Unkechaug- 012

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

9.45.12 Staff and Local Stakeholder Involvement in Annex Development

The Unkechaug Indian Nation 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 Nation departments, including: Emergency Management, Recovery Manager. The Emergency Management Coordinator 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 Tribal Nation’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meeting Documentation).

Table 9.45-19. Contributors to the Annex

Name	Title/Entity	Method of Participation
Mary Treadwell	Emergency Management Coordinator	Participated in meetings; identified capabilities, vulnerable areas; reported progress on 2014 actions; updated the mitigation strategy; reviewed the annex
Wendy Samuels	Recovery Manager	Participated in meetings; identified capabilities, vulnerable areas; reported progress on 2014 actions; updated the mitigation strategy; reviewed the annex

9.45.13 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Unkechaug Indian Nation that illustrates the probable areas impacted within the reservation. This map is based on the best available data at the time of the preparation of this plan and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Unkechaug Indian Nation has significant exposure. The map is illustrated below.



Figure 9.45-1. Unkechaug Indian Nation Hazard Area Extent and Location Map 1

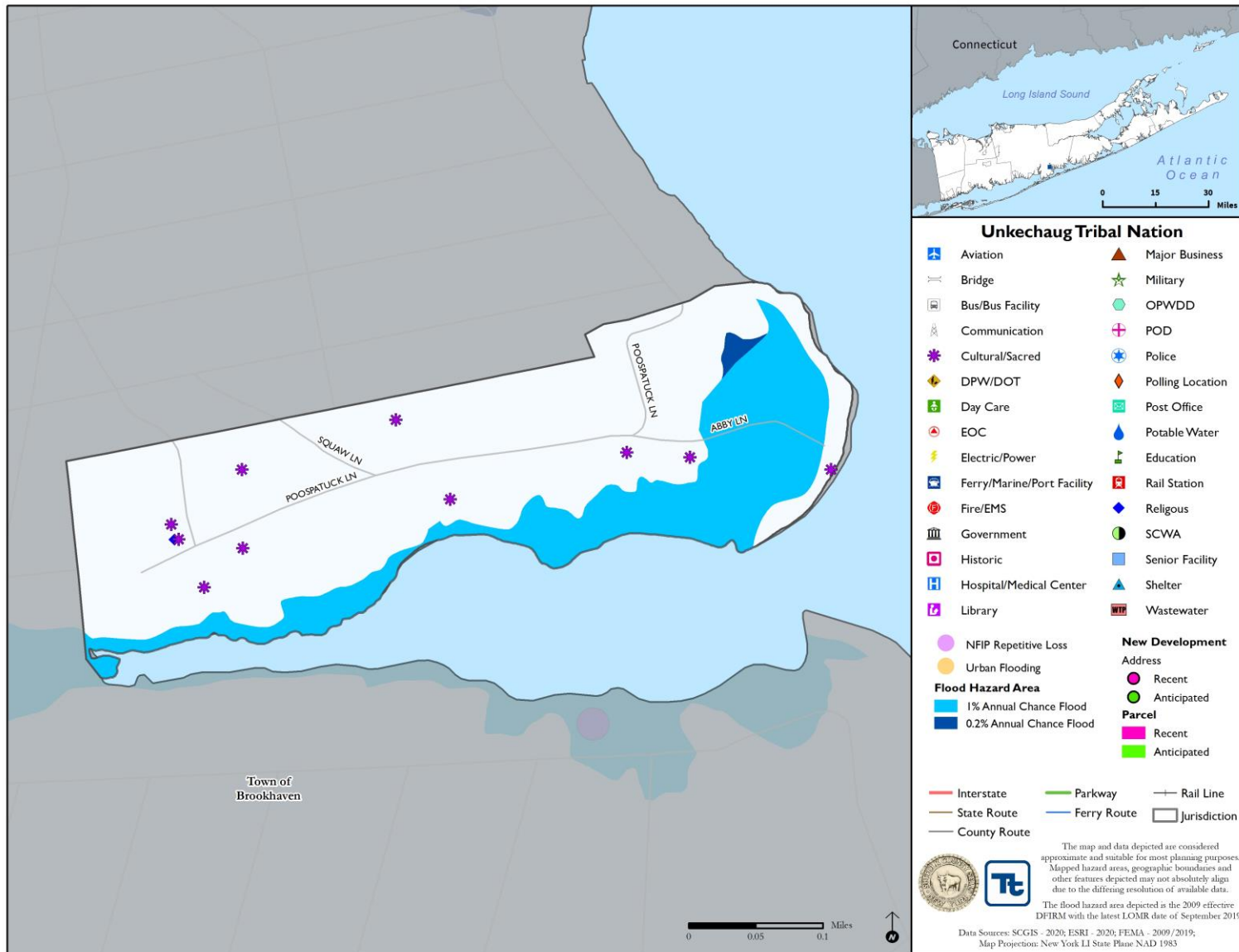




Figure 9.1-2. Unkechaug Indian Nation Hazard Area Extent and Location Map 2

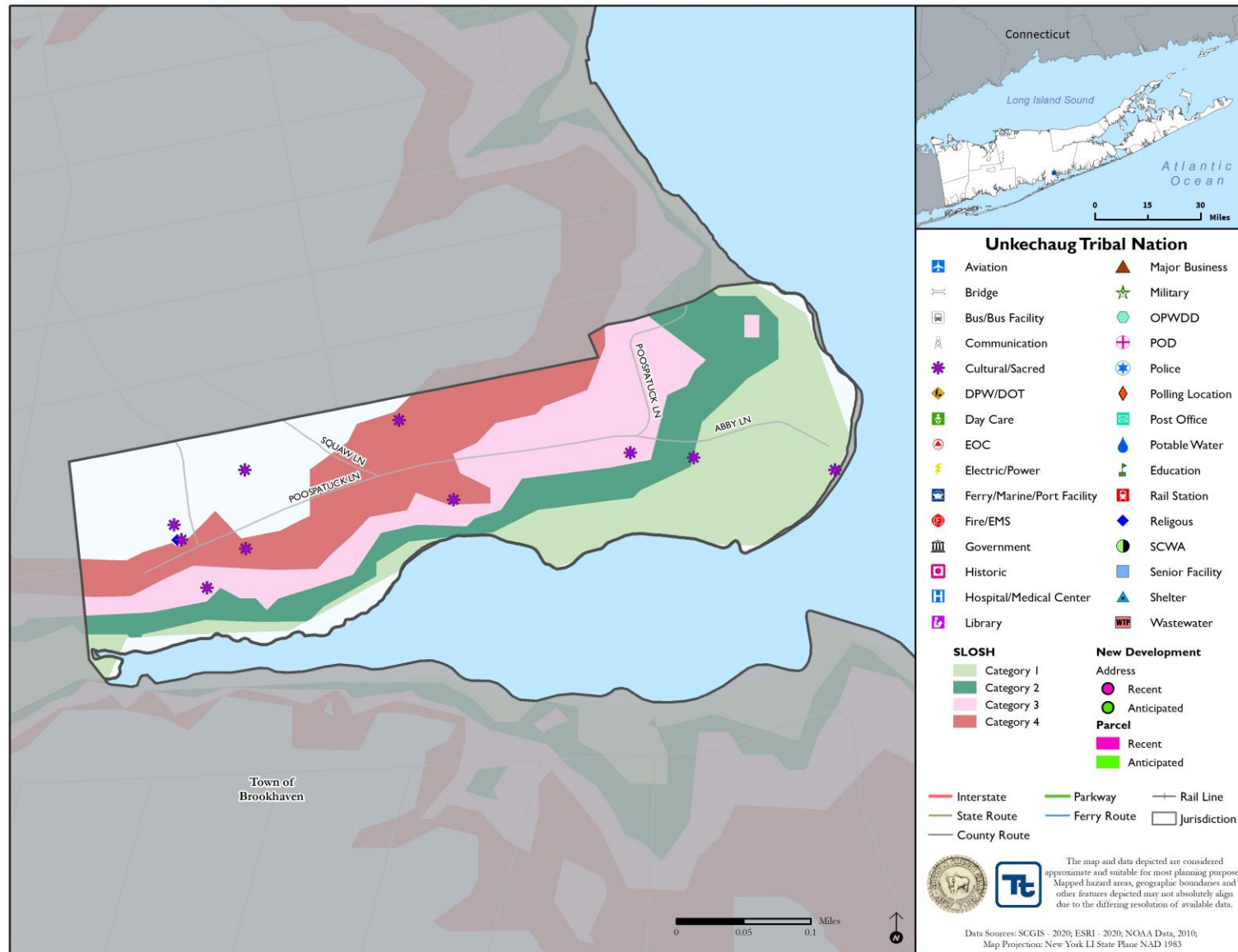




Figure 9.1-3. Unkechaug Indian Nation Hazard Area Extent and Location Map 3

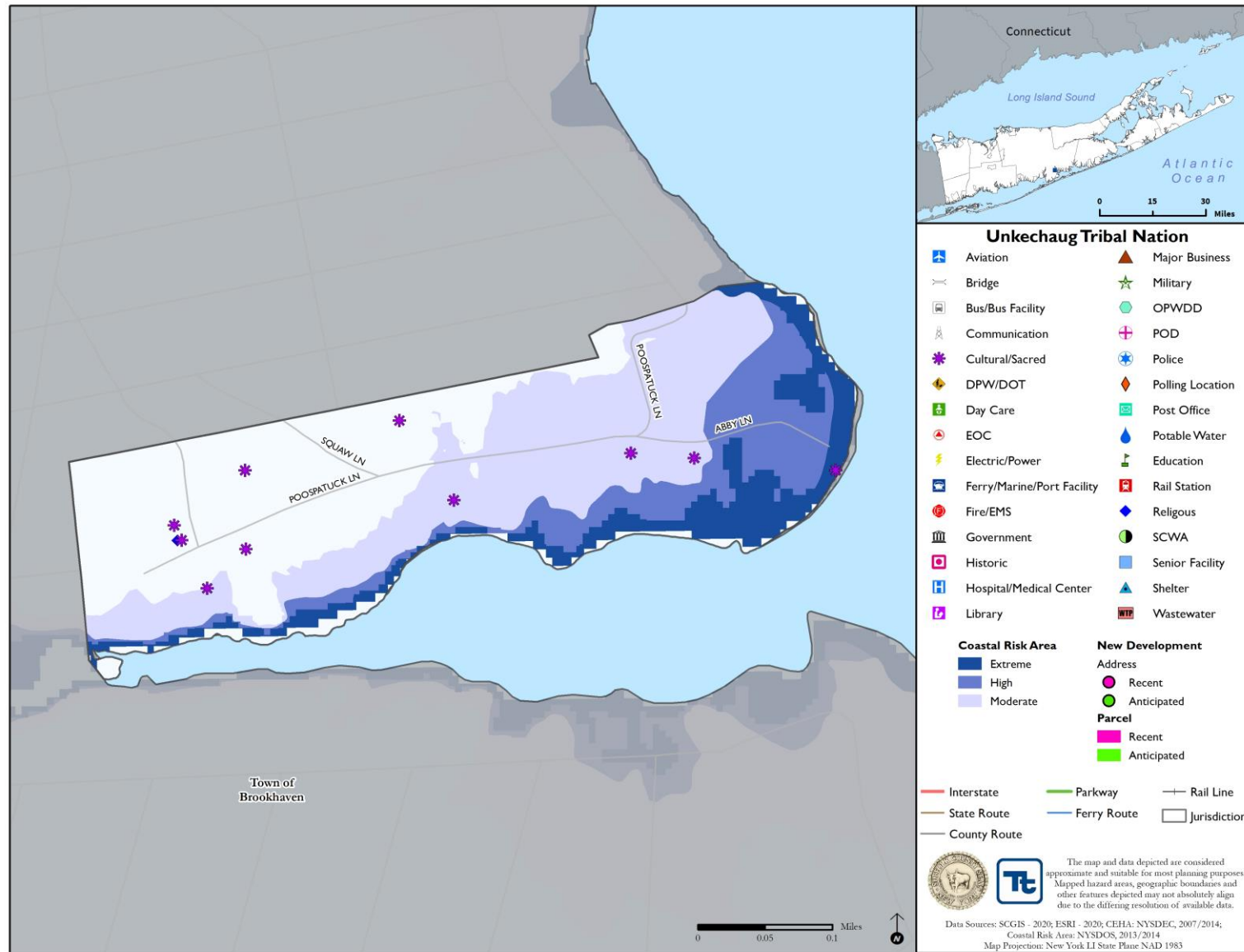




Figure 9.1-4. Unkechaug Indian Nation Hazard Area Extent and Location Map 4

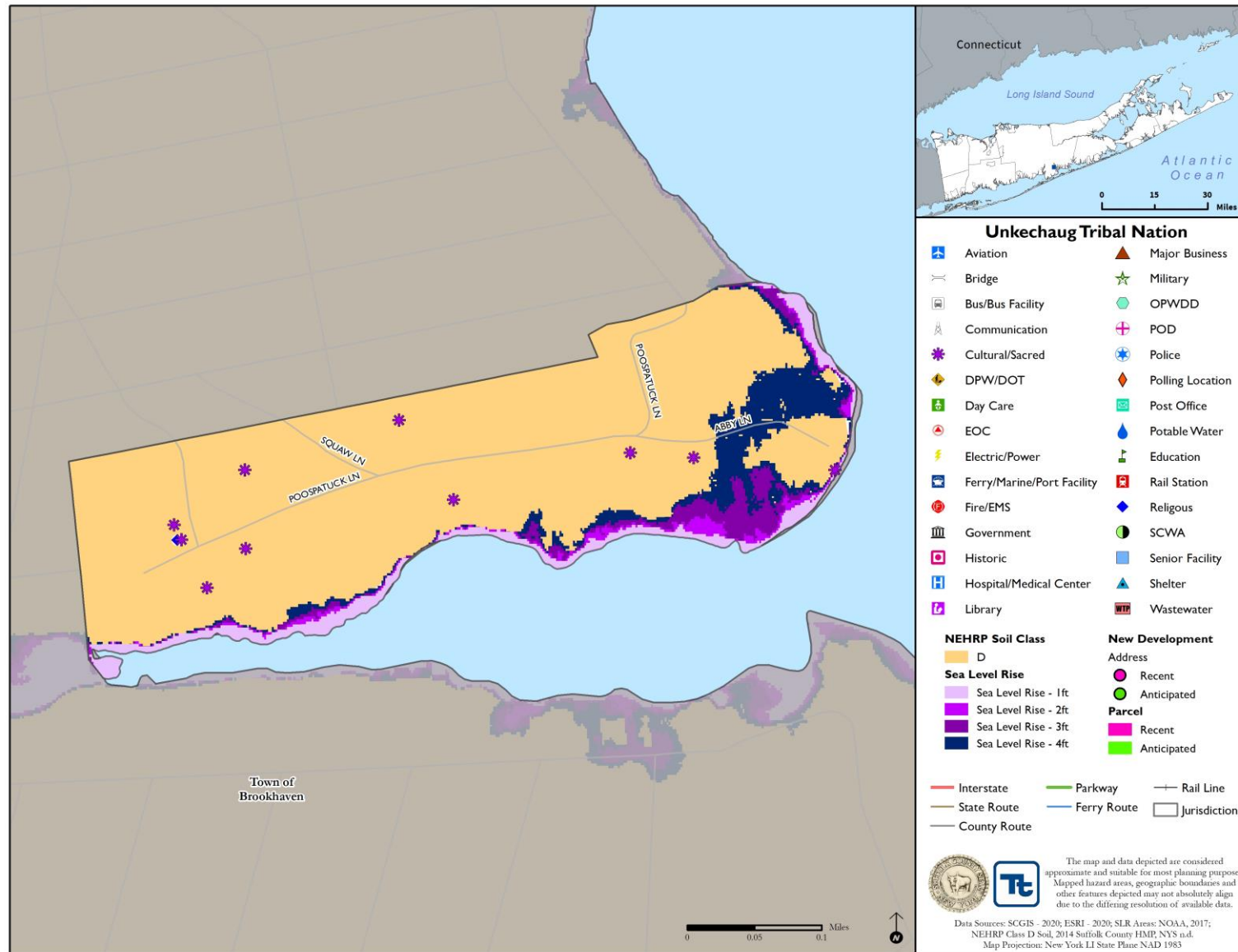
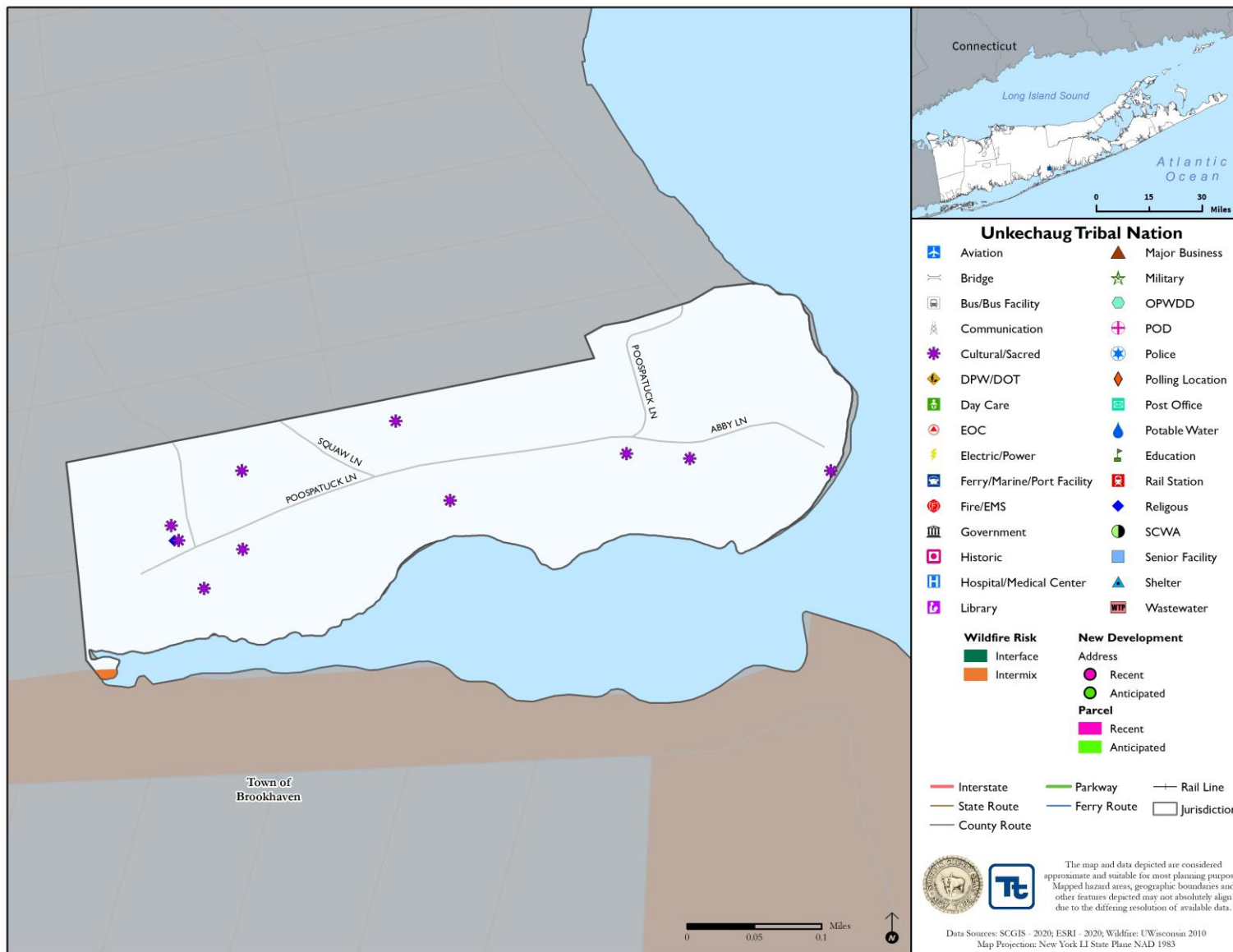




Figure 9.1-5. Unkechaug Indian Nation Hazard Area Extent and Location Map 5





Action Worksheet			
Project Name:	Repetitive Loss Properties		
Project Number:	2020- Unkechaug -005 (previous U-4)		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	Frequent flooding events have resulted in damages to residential properties. There are several flood-vulnerable homes on Abby Lane that need mitigating that were not completed post-Hurricane Sandy		
Action or Project Intended for Implementation			
Description of the Solution:	Collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement elevating four residential homes in the flood prone areas that experience frequent flooding (high risk areas).		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	1% annual chance flood event + freeboard (<i>in accordance with flood ordinance</i>)	Estimated Benefits (losses avoided):	Eliminates flood damage to homes and residents,
Useful Life:	Acquisition: Lifetime Elevation: 30 years (residential)	Goals Met:	1, 2
Estimated Cost:	\$350,000	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6-12 months
Estimated Time Required for Project Implementation:	Three years	Potential Funding Sources:	FEMA HMGP and FMA, local cost share by residents
Responsible Organization:	Emergency Management, supported by homeowners	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	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)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Elevations	
Project Number:	2020- Unkechaug -005 (previous U-4)	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Families moved out of high-risk flood areas.
Property Protection	1	Properties removed from high-risk flood areas.
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	The Tribal Nation has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	0	
Administrative	0	
Multi-Hazard	1	Flood, Severe Storm
Timeline	0	
Agency Champion	1	Emergency Management, supported by homeowners
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Backup power at critical facilities and lifelines		
Project Number:	2020- Unkechaug-012 (previous U-9)		
Risk / Vulnerability			
Hazard(s) of Concern:	All hazards		
Description of the Problem:	Backup power sources are necessary to maintain critical services for critical facilities. The Emergency Operations Center lacks a permanent power source.		
Action or Project Intended for Implementation			
Description of the Solution:	The Tribal Nation will research what size generator is necessary to supply backup power to the Village Hall. The Tribal Nation will then install a backup power generator and necessary electrical components. The priority will be to establish a solar powered unit to save space and be environmentally friendly.		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	N/A	Estimated Benefits (losses avoided):	Ensures continuity of operations of Emergency Operations Center
Useful Life:	20 years	Goals Met:	1, 2, 7
Estimated Cost:	\$50,000	Mitigation Action Type:	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Immediately after funding received
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	FEMA HMGP and PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
Responsible Organization:	Emergency Management	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation, Emergency Management
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Install solar panels	\$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbine	\$100,000	Weather dependent; poses a threat to wildlife; expensive repairs if needed
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Backup power at critical facilities and lifelines	
Project Number:	2020- Unkechaug-012 (previous U-9)	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Emergency Operations Center
Property Protection	1	Project will protect Emergency Operations Center from power loss.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Tribal Nation has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	1	1 year
Agency Champion	1	Emergency Management
Other Community Objectives	1	
Total	13	
Priority (High/Med/Low)	High	