



## 9.44 Shinnecock Indian Nation

The Shinnecock 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 Shinnecock 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 Shinnecock Indian Nation and who participated in the planning process; an assessment of the Shinnecock 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.

### 9.44.1 Hazard Mitigation Planning Team

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

**Table 9.441. Hazard Mitigation Planning Team**

Primary Point of Contact	Alternate Points of Contact
Daniel Collins, Sr., Trustee and Secretary PO Box 6001, Southampton, NY 11969 Phone: 631-599-2709 (631) 283-6143 Email: <a href="mailto:Daniel@shinnecock.org">Daniel@shinnecock.org</a>	Bryan Polite, Chairman and Randy King Vice Chairman PO Box 6001, Southampton, NY 11969 Phone: (631) 283-6143 Email: Bryan <a href="mailto:Polite@shinnecock.org">Polite@shinnecock.org</a> and <a href="mailto:RandyKing@shinnecock.org">RandyKing@shinnecock.org</a>
NFIP Floodplain Administrator	
The Shinnecock Indian Nation does not participate in the NFIP at this time.	

### 9.44.2 Tribal Nation Profile

The Shinnecock Nation, a federally recognized Indian Nation, is among the oldest self-governing tribes of Indians in the United States and has been a state-recognized tribe for over 200 years. The Shinnecock Indian Nation Reservation is located on the south shore of Suffolk County surrounded by the Shinnecock Bay. According to the U.S. Census (2010) the total population on the Shinnecock Indian Nation Reservation is 662. Currently, the population has increased to an estimated 673. 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.

In 1978, the tribe applied for Federal Recognition, and in 2003, was placed on the Bureau of Indian Affairs' "Ready for Active" list. On December 15, 2009, the Bureau of Indian Affairs issued a finding of preliminary recognition for the tribe. Final federal recognition was accomplished on October 1, 2010.

Since the beginning, Shinnecock 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 Algonquian people who have forever lived along the shores of Eastern Long Island.



Scientists say we came here on caribou hunts when the land was covered with ice. But our creation story says we were born here; that we are the human children of the goddess who descended from the sky. It was she, the story goes, who caused the land to form beneath her feet from the back of Great Turtle, Deer to spring forth from her fingertips, Bear to roar into awakening, Wolf to prowl on the first hunt. It was she who filled the sky with birds, made the land to blossom and the ponds and bays to fill with fish and mollusks. And when all was done, the Shinnecock, the People of the Stony Shore, appeared in this lush terrain. We are still here.

As coastal dwellers, we continue to prize the bounty of the sea, the shellfish, the scaly fish, which for thousands of years provided the bulk of our diet. We were whalers, challenging the mighty Atlantic from our dugout canoes long before the arrival of the big ships, long before the whaling industry flourished in the 19th century.

In the 1700's, we became noted among the northeastern coastal tribes for our fine beads made from the Northern quahog clam and whelk shells (wampum).

Traditionally, decisions concerning the welfare of the tribe were made by consensus of adult male members. Seeking to shortcut the consensus process and more easily facilitate the outright theft of Shinnecock Indian lands, the Town of Southampton devised a three-member trustee system for the Shinnecock people. This system of tribal government was imposed by the New York State legislature in February of 1792. Since April 3, 1792, the Shinnecock Indians made an annual trek up to the Southampton Town Hall the first Tuesday after the first Monday in April to elect three tribal members to serve a one-year term as Trustees. That came to a halt in April of 2007, when the Shinnecock exercised their sovereign right as an ancient Indian Nation and returned to one of its basic Traditions: it bypassed the State and the Town and for the first time since 1792 held its leadership elections at home, where they will forever remain.

Despite setbacks, we have managed to build a community that has equipped us meet the challenges of an ever-expanding and intrusive world. In addition to the Shinnecock Presbyterian Church and Manse, our infrastructure includes a tribal community center, a health and dental clinic, a family preservation, Indian education center, an Early Learning Child Center, a tribal office building, a Tribal Administration building, a Tobacco Distribution Center, a greenhouse, hatchery, a museum, and playgrounds for our children.

Our annual Powwow is the economic development project of record for the Shinnecock Nation. Revived in 1946 as a benefit for our church, the Powwow has evolved into an event that hosts thousands of visitors and helps supports our church and tribal budgets. However, we are at the mercy of the weather and a rainy Labor Day Weekend means a difficult year ahead of us. We are currently exploring Indian Gaming to attain the self-sufficiency that will enable us to perform the sacred duties laid out for us by the Ancestors - to protect, manage and maintain the Shinnecock Indian Nation.

On December 10, 2013, the Shinnecock Indian Nation changed its history and adopted a Constitution. The Shinnecock constitution replaced the 3 Trustee system with a seven-member Council of Trustees board. The new governing body will serve a two-year staggered term and includes a seat reserved for a female elder.

### **Assurances**

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The Shinnecock Indian 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 Shinnecock Indian 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

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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)]. For this planning effort, the Shinnecock Indian Nation has defined “public” as the General Council and entire community.

The Shinnecock Indian 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.

### 9.44.3 Growth/Development Trends

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Throughout time the Shinnecock 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. Table 9.442 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. The figures at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.



**Table 9.442. 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	Large projects go through a formal review process by which presentations are made to the community at Tribal meetings and executive sessions. A resolution is drafted, dated, recorded, voted on by the General Council. Records are stored at the Tribal Office.									
Multi-Family										
Other (commercial, mixed-use, etc.)										
<b>Total Permits Issued</b>										
Property or Development Name	Type of Development	# of Units / Structures		Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development		
Recent Major Development and Infrastructure from 2015 to Present										
Early Learning Center	Education	1		Church Street				Completed		
Tribal Office Administration	Government	1		Church Street		Storm Surge		Completed		
Shinnecock Sovereign Distribution	Warehouse	1		Church Street				Completed		
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										
Medicinal Dispensary	Commercial	1		Montauk Highway		Wildfire Intermix		To be completed summer 2020		
Business District	Commercial			Area around Little Church Street, Little Beach Road and Swamp Road		0.2% and 1% Flood Zone, NEHRP Class D, SLOSH Zones 3 and 4, Moderate and high coastal risk hazard areas, Wildfire intermix				

SFHA Special Flood Hazard Area (1% flood event)

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

### 9.44.4 Capability Assessment

The Shinnecock 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.





For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.44.4). The Shinnecock 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 table below summarizes the regulatory tools that are available to the Shinnecock Indian Nation and where hazard mitigation has been integrated. The Tribal Nation is still in the process of developing additional codes and laws; over the past year, 26 resolutions have been passed. Most recently, the Shinnecock Indian Nation Ohke/Land Use Plan (2018-2021) was prepared by the Shinnecock Environmental Department. The Trustees are the only tribal members who may allot or temporarily lease ohke.

**Table 9.443. 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	-	-	-	-	All Hazards	A draft building code was developed and reviewed in 2014. This is in progress and will be reviewed and passed by the Council and Trustees in the future.
Emergency Response Plan	Yes	X	X	X	X	All Hazards	Resolution passed April 2020
Climate Change Adaptation Plan	Yes	-	-	-	-	Climate Change	Plan developed in October 2013
Land Use Management Plan	Yes	X	X	X	X	Floodplains, Coastal Erosion	Plan developed in 2017/2018

**Table 9.444. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Development records are kept at the Tribal Office
Permits are tracked by hazard area. For example, floodplain development permits.	The flood maps are referenced during the planning phase
Buildable land inventory	Shinnecock Ohke/Land Use Plan



Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
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 Shinnecock Indian Nation.

**Table 9.445. Administrative and Technical Capabilities**

Resources	Available? (Yes or No)	Department/ Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Council and Trustees
Mitigation Planning Committee	Yes	For purposes of this update
Environmental Board/Commission	Yes	Natural Resources Committee
Open Space Board/Committee	Yes	Land Management Committee
Economic Development Commission/Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Door-to-door; social media live streams Initiate notification to elders and home-bound residents
Maintenance programs to reduce risk	Yes	Work crew, environmental and emergency managers
Mutual aid agreements	Yes	Services provided through local EMS and Fire; State Police, State DOT for plowing  Unkechaug Tribal Nation – meet together
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Land Management / Defense Committee Natural Resources Committee Consultants
Engineers or professionals trained in building or infrastructure construction practices	Yes	Philip Brown, Director of Housing Department
Planners or engineers with an understanding of natural hazards	No	As needed by outside consultants
Staff with expertise or training in benefit/cost analysis	No	As needed by outside consultants
Professionals trained in conducting damage assessments	No	As needed by outside consultants
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	As needed by outside consultants
Scientist familiar with natural hazards	Yes	Tribal Council; Natural Resources Manager
NFIP Floodplain Administrator (FPA)	No	Not applicable; not participating in the NFIP at this time
Surveyor(s)	No	As needed by outside consultants
Emergency Manager	Yes	Coordinator
Grant writer(s)	Yes	Research and Development Office/Grants
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-



### Fiscal Capability

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

**Table 9.446. Fiscal Capabilities**

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Indian Housing Block Grant	Yes
Indian Community Development Block Grant	Yes
Title VI Loan Guarantee Program	Yes
Rural Innovation Fund	Yes
SBA Office of Native American Affairs	Yes
State mitigation grant programs (e.g. NYSDEC, NYCDEP)	No
Indian Health Services	Yes
Tribal Homeland Security Grants	Yes
Disaster Relief Appropriations Act of 2013	Yes
Other	No

### Education and Outreach Capability

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

**Table 9.447. Education and Outreach Capabilities**

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	Advisory committee leads public outreach
Personnel skilled or trained in website development?	Yes, Council member
Hazard mitigation information available on your website; if yes, describe	No, in progress Tribal Newsletter that is distributed Live stream as well
Social media for hazard mitigation education and outreach; if yes, briefly describe.	Yes, utilizes Facebook live streams from the executive chambers to share updates with the community; weekly updates during the COVID-19 pandemic
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	Public Safety and Emergency Management Committee
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	Indian Health Service assists with notifications to community related to COVID-19 pandemic
Warning systems for hazard events; if yes, briefly describe.	Tribal Newsletter that is distributed Live stream as well Door-to-door; social media live streams Initiate notification to elders and home-bound residents
Natural disaster/safety programs in place for schools; if yes, briefly describe.	Daycare center has an evacuation plan and run drills
Other	No

### Community Classifications

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



**Table 9.448. 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	-	-

N/A Not applicable NP Not participating  
 - Unavailable

**Adaptive Capacity**

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

**Table 9.449. Adaptive Capacity**

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Coastal Erosion	Low capacity
Cyber Security	Medium (have IT Tech on board) and starting to educate work staff
Disease Outbreak	Medium capacity (Indian Health Facility)
Drought	Low capacity
Earthquake	Low capacity
Expansive Soils	Medium capacity
Extreme Temperature	Medium capacity; The Tribal Nation has a shelter for warming and cooling
Flood	Low capacity
Groundwater Contamination	Medium capacity; Switched to city water because wells are not safe.
Hurricane	Low capacity – not a lot of resources to mitigate; High risk
Infestation and Invasive Species	Low capacity; USDA has been assisting recently
Nor’Easter	Low capacity – not enough equipment
Severe Storm	Low/Medium capacity
Severe Winter Storm	Low capacity
Shallow Groundwater	Low capacity
Wildfire	Medium capacity due to local fire fighting capabilities

\*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 Shinnecock Environmental Department considers climate change and how to prepare in terms of land use and shoreline. The Tribal Nation implemented one project post-Superstorm Sandy to restore the Shinnecock Bay-side beaches. The Tribal Nation is considering integrating climate change in future decision making. The Tribal Nation has a climate change plan as indicated above and considers the changing climate when making land use decisions and the design of mitigation projects (e.g., shoreline erosion).

#### 9.44.5 National Flood Insurance Program

The Shinnecock 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.

#### 9.44.6 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 Shinnecock Indian 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.

The Shinnecock Indian Nation has a land management/defense committee and natural resources committee in place to ensure proper land use on Tribal lands. The Shinnecock Indian Nation Ohke/Land Use Plan's goals and objectives include the following:

1. Incorporate flood plan maps into all planning
2. Identify projected sea level rise for Shinnecock and surrounding area
3. Update Climate Change Adaptation Plan to include Land Management priorities.

A Climate Change Adaptation Plan was developed in October 2013. The planning process involved researching climate change and particularly the impacts on surface water and ocean acidification because of tribal shellfish cultivation. Another large concern was the increasing shoreline erosion which is contributing to the loss of trees. The Shinnecock Environmental Department will lead the effort to implement the plan.

The Shinnecock Indian Nation Climate Vulnerability Assessment and Action Plan was developed in 2019 in cooperation with the Peconic Estuary Program. This plan identified vulnerabilities and potential adaptation strategies to address natural hazard risk.

The Shinnecock Indian Nation meets with the Unkechaug Indian 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 Shinnecock Indian Nation Emergency Management/Public Safety Advisory Committee directs and coordinates all disaster and emergency management activities and operations for the Tribe. This office also ensures proper maintenance procedures and testing is conducted of the generator for the Health and Family Centers.



Members of the Emergency Management/Public Safety Advisory Committee also attend Suffolk County quarterly emergency management and emergency services meetings. Members are trained in ICS 100, 200, 400 and 700.

The Department of Public Safety and Emergency Management is actively pursuing a CPR instructor course for all interested parties.

An Opioid Overdose Prevention Program will be offered in April 2014 to non-medical personnel. This training will prevent heroin overdoses by teaching personnel how to correctly perform rescue breathing and correctly administer Naloxone or Narcan.

“Zones” are currently being established within the reservation to assist public safety response during emergencies. Reference markers are also being installed at all residences and facilities to ensure efficient and timely response of emergency personnel.

**Opportunities for Future Integration**

The following summarizes opportunities for future integration:

- Enroll in the National Flood Insurance Program – refer to mitigation action 2020-Shinnecock-001
- Adopt a building code – refer to mitigation action 2020-Shinnecock-002
- Implement the potential adaptation actions and strategies identified in the 2019 Shinnecock Indian Nation Climate Vulnerability Assessment and Action Plan

**9.44.7 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 are documented in the Comprehensive Emergency Plan. In the past, the Public Safety Committee works with the Trustees and goes door-to-door to notify the community of an evacuation. If community members refuse to evacuate, they are asked to sign a waiver. There are no signs on roads for evacuation on the reservation; however, once you reach Montauk Highway these signs are present.

**Sheltering**

The Tribal Nation has an agreement with the Town of Southampton to utilize their schools as a shelter. In the past, the gym at the Stonybrook property (former Southampton College) has been used. 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-Shinnecock-003.

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Community Center	Church Street	45-50 people for cots; 100	No	Yes	Yes	None	None – refer to new mitigation action 2020-Shinnecock-003



Shelter Name	Address	Capacity people for gathering	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided

### 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; homeless). The Housing Director has been speaking to businesses regarding bringing in modular homes as needed. There is an area on the reservation that modular homes could be placed. Refer to the table below

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
Cul-de-sac on the Reservation	200 yards off of Old Soldiers Road. The Public Safety reference marker is #429.	There is underground water springs so that is accessible but need to be tested for drinking water.	You can fit 6 to 7 20x20 small modular homes in a semi-circle	Modular homes	Yes this would be needed

### Permanent Housing

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

Consideration should be given to allowing residents of a given jurisdiction to continue to reside there. However, discussion of this matter may need to include site development elsewhere if such available locations are not available in a given jurisdiction.

Community members are unable to obtain mortgages therefore in the past, an extended family structure was in place where land and homesteads were passed down through generations. Currently, there is a moratorium on allotting land to ensure proper land use planning and zoning. The population is growing and land management is critical to ensure wise land use decisions. The Tribal Nation has not identified locations for the placement of permanent housing.

#### 9.44.8 Hazard Event History Specific to the Shinnecock 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 Shinnecock 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 9.4410 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 9.4410. 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 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.	Many community members do not live directly along the main roads and their driveways are long. There is limited resources and equipment needed to plow the roads by the maintenance crews on the reservation. The State only plows main roads which creates emergency access issues reaching residents and limits their mobility to get to work. The EOC has been activated in the past during these types of events. The Tribal Nation continues to work with the State to get services back to where they once were.
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.	Same as above
High tides/storm events	None	No	Flooding and shoreline erosion are the biggest concern	Flood damage, coastal erosion.

Notes:

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

### 9.44.9 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 the Shinnecock Indian Nation’s risk assessment results and data used to determine the hazard ranking.

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

**Table 9.4412. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure			Complies with NYS Standards	Addressed by Proposed Action
		1% Event		0.2% Event		
		A-Zone	V-Zone			
Oyster Project*	Cultural	X		X	Not applicable	Still sits on land constantly eroding, starts from there and  Erosion at West Woods – Hampton Bays – sand bluff that is eroding; shoreline restoration and consider all options (protect in place is needed)
Sacred Burial Ground and additional cultural sites*	Cultural	X		X	Not applicable	Shoreline restoration in this area; no storm has tested this yet; ongoing process.  Important to sustain to preserve history
Shinnecock Cemetery*	Cultural	X		X	Not applicable	Beachfront restoration project is helping with this; the tidal ponds and widened the trenches to increase flow of water  High tides and no flooding
Residential Homes	Residential homes	X		X	No	52 homes along the shoreline are vulnerable to storm surge. Solution: Individual home/cluster assessments and outreach what can be done; elevate; relocate house inland; compile list and apply for funding

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 Shinnecock Indian Nation. The Shinnecock 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 community.

During the review of the hazard/vulnerability risk ranking, the Shinnecock Indian Nation indicated the following. The Shinnecock Tribal Nation changed the initial ranking based on event history, experience, and feedback from the Council and Trustees.

- Coastal Erosion is a high risk due to geography, storms, sea level rise.
- Cyber Security is a high risk.
- Disease Outbreak: There is an Indian Health Facility available for residents.
- Drought is considered low risk; now on city water.
- Expansive Soils: Soil contamination is a concern
- Extreme Temperatures: The Tribal Nation has a warming and cooling shelter.
- Flood: Continues to be high risk.
- Groundwater contamination: The Tribal Nation switched to city water because of well contamination.
- Hurricane: Continues to be high risk due to storm surge and winds. 52 homes out of 200+ that are in SLOSH category 1 and 2. Freshwater spring is threatened by salt-water intrusion.
- Infestation and Invasive Species: Phragmites are taking over and killing native fauna; insects are compromising the integrity of trees. The Southern Pine Beetle is along Sunrise Highway.
- Nor'Easter: Winters have changed and are milder. This was previously ranked high. However, the wind, erosion and surge associated with coastal storms is still a high risk as shown by the ranking of the coastal erosion, hurricane and severe storm hazards.
- Severe Storm: Year-round wind concerns. Houses on the reservation are older and not built to certain code; and wiring being upgraded. 15mph sustained wind would lose power in the past but new wires have been installed. Trees with shallow roots and high winds threaten them coming down. Storm events bring the salt upland and the soil is changing. The Indian Nation is seeing marshland plans and wetlands migrate north because of changing conditions and shoreline erosion.
- Severe Winter Storm is a high risk.
- Shallow groundwater: The variation of the land is dramatic. Some homes do not experience flooding/basements and others closer to the shoreline and marshland with higher water table
- Wildfire is medium risk because of local fire-fighting capabilities.

Table 9.4413. Hazard Ranking Input

Coastal Erosion	Cyber Security	Disease Outbreak	Drought	Earthquake	Expansive Soils
High	High	Medium	Low	Low	Medium



<b>Extreme Temperature</b>	<b>Flood</b>	<b>Groundwater Contamination</b>	<b>Hurricane</b>	<b>Infestation and Invasive Species</b>	<b>Nor'Easter</b>
Medium	High	Medium	High	High	Medium
<b>Severe Storm</b>	<b>Severe Winter Storm</b>	<b>Shallow Groundwater</b>	<b>Wildfire</b>		
High	High	Medium	Medium		

**Identified Issues**

The Tribal Nation has identified the following vulnerabilities:

- Inadequate equipment to plow our roads
- Flooding and coastal erosion and associated loss of land and impacts
- Sea level rise and climate change
  - More frequent and intense storms
  - Rising seas impacting ancestral land
  - Changes in vegetation and wetland location and species
- Technical assistance needed to complete paperwork for COVID-19 pandemic assistance
- Communication system needed with reliable internet and cell service

**9.44.10 Mitigation Strategy and Prioritization**

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

**Past Mitigation Initiative Status**

The following table indicates progress on the community’s mitigation strategy identified in the 2020 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 9.4414. 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		
S-1	Road and drainage improvements – especially along evacuation routes (Middle Gate and West Gate Roads)	Flood, Severe Storm, Hurricane	Tribal Council and Trustees; Transportation/Road Safety Program	Conduct a feasibility study to determine the best mitigation solution to alleviate flooding and drainage issues throughout the reservation, and more critically along evacuation routes including the Middle and West Gate Roads.	In Progress; The Tribal Nation now has a dedicated Transportation/Road Safety Program to lead these types of road and drainage projects.  A new drain was installed at the east gate (State funded) however drainage issues continue at the middle and west gates.	Cost	High	1. Include in the 2020 HMP as a new project. This is still a priority to address (2020-Shinnecock-004).
						Level of Protection	Not known	
						Damages Avoided; Evidence of Success	Reduce damages to roadway surfaces (property protection); ensure availability of evacuation routes during floods (life safety)	
S-2	Parking lot paving improvements	Flood, Severe Storm, Hurricane	Tribal Council and Trustees	Tribal facilities parking lots do not have enough drainage and flood. Access to these facilities for residents is vital during emergencies and disasters.	Complete. Early Learning Center – put in a paved parking lot there; Executive Building across from it used millings as the base for the parking lot; Worked on most of the parking lots and in good condition.	Cost	High	
						Level of Protection	Not applicable	
						Damages Avoided; Evidence of Success	Improved parking and access to the Early Learning Center	
S-3	Home elevations off Cemetery Road	Flood, Severe Storm, Hurricane	Tribal Council and Trustees	Several homes on Cemetery Road are vulnerable to flooding. The Tribal Nation does not participate in the	No Progress; No elevations completed to date	Cost		1. Include in the 2020 HMP as a project. This is still a priority to address (2020-Shinnecock-005).
						Level of Protection		





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
				NFIP and needs to wait for HMGP or additional funding sources to support this project.		Damages Avoided; Evidence of Success		<ol style="list-style-type: none"> <li>Project to be included in 2020 HMP or Discontinue</li> <li>If including action in the 2020 HMP, revise/reword to be more specific (as appropriate).</li> <li>If discontinue, explain why.</li> </ol>
S-4	Protect historic/sacred sites from natural hazards	All hazards	Tribal Council and Trustees	Physical environment is being destroyed, grass is dying and grave sites may become compromised. Shoreline is vulnerable to erosion and flooding.	In Progress; Sections of the shoreline were restored after Superstorm Sandy however additional protection is needed to protect historic, sacred and cultural sites.	Cost	High	1. Include in the 2020 HMP as a new project. This is still a priority to address (2020-Shinnecock-006).
						Level of Protection	Not quantified	
						Damages Avoided; Evidence of Success	Loss of land, historic and sacred sites	
S-5	Join the National Flood Insurance Program	Flood	Tribal Council and Trustees	The Tribal Nation does not participate in the program and residents do not have an opportunity to obtain flood insurance.	No Progress; progress has been made on this action; however the Council does want to pursue in the future.	Cost		1. Include in the 2020 HMP as a new project. This is still a priority to address (2020-Shinnecock-001).
						Level of Protection		
						Damages Avoided; Evidence of Success		
S-6	Support and participate in county led initiatives intended to build local and regional mitigation and risk-reduction capabilities (see Section 9.1), specifically:					Cost		1. Include in the 2020 HMP. This is still a priority to address (2020-Shinnecock-007).
						Level of Protection		
	<ul style="list-style-type: none"> <li>Mitigation Education for Natural Disasters (natural hazard awareness and personal scale risk reduction/mitigation public education and outreach program)</li> </ul>							



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps
	<ul style="list-style-type: none"> <li>Build Local Floodplain Management and Disaster Recovery Capabilities (enhanced floodplain management, and post-disaster assessment and recovery capabilities)</li> <li>County-Wide Debris Management Plan</li> <li>Jurisdictional Knowledge of Mitigation Needs of Property Owners (improved understanding of damages and mitigation interest/activity of private property owners)</li> <li>Create a Multi-Jurisdictional Seismic Safety Committee in Suffolk County (build regional, county and local capabilities to manage seismic risk, both pre- and post-disaster)</li> <li>Alignment of Mitigation 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).</li> </ul>							<ol style="list-style-type: none"> <li>Project to be included in 2020 HMP or Discontinue</li> <li>If including action in the 2020 HMP, revise/reword to be more specific (as appropriate).</li> <li>If discontinue, explain why.</li> </ol>
	See above	All Hazards	Tribal Council and Trustees	Mitigating natural hazard risk is a priority however technical assistance and coordination is required to implement.	In Progress; The Tribal Nation coordinates with the County and surrounding Towns. The Tribal Nation is prioritizing mitigation and requires capacity building to support the implementation of hazard mitigation actions and initiatives identified. Coordination is required with the County and State, as well as technical assistance and funding sources to assist with implementation.	Damages Avoided; Evidence of Success		
S-7	Work with County and PSEG (formerly LIPA) to	Severe Storm; Severe Winter Storm;	Tribal Council and Trustees	Tree trimming and maintenance of power lines are needed to ensure continuity of services,	In Progress; PSE&G has been replacing poles on the reservation but there are additional unmet needs in terms of	Cost		Include in the 2020 HMP. This is still a priority to address (2020-Shinnecock-008).
						Level of Protection		



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
	identify roads within the jurisdiction that are considered “critical”, and to be the first priority for clearing after an event involving downed power lines.	Hurricane; Nor’Easter		especially during and post-wind events.	upgrading power to the Indian Nation	Damages Avoided; Evidence of Success		<ol style="list-style-type: none"> <li>1. Project to be included in 2020 HMP or Discontinue</li> <li>2. If including action in the 2020 HMP, revise/reword to be more specific (as appropriate).</li> <li>3. If discontinue, explain why.</li> </ol>



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

The Shinnecock Indian Nation has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2020 HMP:

Shoreline restoration on Shinnecock Bay post-Superstorm Sandy; replenish sand for a 3,250-foot stretch of beach, plant vegetation and use oyster shells to calm the waves and clean the water, in an effort to protect sacred burial grounds, marsh, and beach using federal funding.



Image credit: Andrew Seng, The New York Times 2020

### Proposed Hazard Mitigation Initiatives for the HMP Update

The Shinnecock Tribal 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: 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 9.4415 summarizes the comprehensive-range of specific mitigation initiatives the Tribal 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 municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6 (Mitigation Strategy), 14 criteria are used to evaluate and prioritize each proposed mitigation action. A numeric factor is assigned (-1, 0, or 1) to each criterion to provide a relative indication of the opportunities and constraints of each action. A numerical sum of the input provides the basis of the prioritization of actions wherein each action is assigned a category of Low, Medium, or High to indicate an implementation hierarchy. A High priority action indicates the jurisdiction will prioritize its implementation and apply for funding, if needed, as opportunities become available during the plan period of performance. This does not prevent the jurisdiction from implementing other ranked actions; however, this provides a snapshot of implementation priority at the time of this plan update.

Table 9.44-16 provides a summary of the evaluation and prioritization for each proposed mitigation initiative. Refer to the action worksheets at the end of this annex for more details on the high-ranked hazards identified first for implementation.



Table 9.4415. 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-Shinnecock-001 (previous S-5)	Join and participate in the NFIP	1, 2	Flood	<p><b>Problem:</b> The Tribal Nation does not participate in the NFIP and does not have access to certain mitigation funding grants.</p> <p><b>Solution:</b> Join the National Flood Insurance Program to provide Tribal members the opportunity to obtain flood insurance.</p>	No	No	Long	Council	Medium	High	To be identified	High	LPR	PR
2020-Shinnecock-002	Building Code	1, 2	All	<p><b>Problem:</b> The Tribal Nation does not currently have a building code.</p> <p><b>Solution:</b> 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	No	Short	Council	Medium	High	FEMA BRIC	High	LPR	PR
2020-Shinnecock-003	Enhance Community Center to serve as a community shelter	1, 2, 7	All	<p><b>Problem:</b> The Community Center is the only shelter on the reservation however it lacks the facilities needed (e.g., adequate bathrooms and showers).</p> <p><b>Solution:</b> Enhance the Community Center to include proper bathrooms, showers and lock rooms for sheltering.</p>	Yes	Unknown	Short	Council	High	High	Tribal Grant funding	High	SIP	PP



Table 9.4415. 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-Shinnecock -004 (previous S-1)	Road and drainage improvements	1, 2, 3	Hurricane, Flood	<p><b>Problem:</b> There is roadway flooding throughout the reservation caused by insufficient drainage capacity which leads to road damage and putting evacuation routes at risk (middle and west gate roads).</p> <p><b>Solution:</b> Conduct a feasibility study to determine the best mitigation solution to alleviate flooding and drainage issues throughout the reservation, and more critically along evacuation routes including the Middle and West Gate Roads. Select a technically feasible and cost-effective mitigation solution and apply for FEMA mitigation funding to implement. This may include green infrastructure projects.</p>	No	Unknown	Short	Council	High	High	FEMA HMA	High	SIP	PP
2020-Shinnecock -005	Elevation Homes	1, 2	Hurricane, Flood	<p><b>Problem:</b> Several homes on Cemetery Road are vulnerable to flooding. The Tribal Nation does not participate in the NFIP and needs to wait for HMGP or additional funding</p>	No	Unknown	Short	Council	High	High	FEMA HMGP	High	SIP	PP



Table 9.4415. 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
				sources to support this project. <b>Solution:</b> Identify funding sources to elevate the flood-vulnerable homes in the elevation. At this time, the homes on Cemetery Road and other shoreline areas are identified for elevation.										
2020-Shinnecock -006 (previous S-4)	Protect historic, cultural and sacred sites from natural hazards along the shoreline and through out the Nation	1, 2, 3, 4, 5	Coastal erosion, Hurricane, Flood, Severe storm; Invasive Species	<b>Problem:</b> Physical environment is being destroyed, grass is dying and grave sites may become compromised. The shoreline continues to be vulnerable to surge, erosion and sea level rise. Several cultural, sacred and historic sites are vulnerable to flood, surge, erosion and sea level rise. <b>Solution:</b> Install a bulkhead/revetments/riprap seawall on the southern portion of the peninsula along the western shoreline to protect historic and sacred sites from natural hazards. Explore additional living shoreline options with native vegetation and habitat creation and restoration.	Yes	Yes	Short	Council	High	High	FEMA HMA	High	NSP	NR





Table 9.4415. 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-Shinnecock-007 (previous S-6)	Increase capacity to support mitigation and participation in local/regional/county initiatives	1, 2, 3, 4, 5, 6, 7, 8	All	<p><b>Problem:</b> The Tribal Nation prioritizes natural hazard mitigation and supports local, regional and County initiatives. However technical assistance, capacity building and funding is needed to implement projects.</p> <p><b>Solution:</b> The Tribal Nation will continue to increase capacity to support hazard risk reduction. Technical assistance, capacity building and funding sources will be identified to implement mitigation initiatives identified in this annex as well as support and participate in county led initiatives intended to build local and regional mitigation and risk-reduction capabilities.</p>	No	No	Long	Council	Low	High	Tribal Budget	High	LPR	PR
2020-Shinnecock-008 (previous S-7)	Coordinate with PSE&G to prioritize and restore power	1, 2, 7	Hurricane, Nor'Easter, Severe Storm, Severe Winter Storm	<p><b>Problem:</b> Tree trimming and maintenance of power lines are needed to ensure continuity of services, especially during and post-wind events.</p> <p><b>Solution:</b> Work with County and PSE&amp;G (formerly LIPA) to</p>	No	No	Short	Council	Low	High	Tribal Budget	High	LPR	PR



Table 9.4415. 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
				identify roads within the jurisdiction that are considered "critical", and to be the first priority for clearing after an event involving downed power lines.										
2020-Shinnecock -009	Identify Locations for Permanent Housing	1	All	<p><b>Problem:</b> Community members are unable to obtain mortgages therefore in the past, an extended family structure was in place where land and homesteads were passed down through generations. Currently, there is a moratorium on allotting land to ensure proper land use planning and zoning. The population is growing and land management is critical to ensure wise land use decisions. The Tribal Nation has not identified locations for the placement of permanent housing.</p> <p><b>Solution:</b> The Tribal Nation will work with the County and surrounding municipalities to identify land for permanent housing post-disaster.</p>	No	No	Short	Council	Low	High	Tribal Budget	High	LPR	PR



Notes:

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

<u>Acronyms and Abbreviations:</u>		<u>Potential FEMA HMA Funding Sources:</u>		<u>Timeline:</u>
CAV	Community Assistance Visit	FMA	Flood Mitigation Assistance Grant Program	The time required for completion of the project upon implementation
CRS	Community Rating System			
DPW	Department of Public Works	HMGP	Hazard Mitigation Grant Program	<u>Cost:</u>
EHP	Environmental Planning and Historic Preservation	PDM	Pre-Disaster Mitigation Grant Program	The estimated cost for implementation.
FEMA	Federal Emergency Management Agency			<u>Benefits:</u>
FPA	Floodplain Administrator			A description of the estimated benefits, either quantitative and/or qualitative.
HMA	Hazard Mitigation Assistance			
N/A	Not applicable			
NFIP	National Flood Insurance Program			
OEM	Office of Emergency Management			

Critical Facility:

Yes Critical Facility located in 1% floodplain

Mitigation Category:

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

CRS Category:

- Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP) - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI) - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.





- *Natural Resource Protection (NR) - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.*
- *Structural Flood Control Projects (SP) - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.*
- *Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities*

**Table 9.4416. 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-Shinnecock-001	Join the NFIP	1	1	1	1	1	1	0	0	1	0	1	1	1	1	11	High
2020-Shinnecock-002	Develop building code	1	1	1	1	1	1	0	0	1	0	1	1	1	1	11	High
2020-Shinnecock-003	Enhance Community Center to serve as a community shelter	1	0	1	1	1	1	0	0	1	0	1	1	1	1	10	High
2020-Shinnecock-004	Road and drainage projects	1	1	1	1	1	1	0	0	1	0	1	1	1	1	11	High
2020-Shinnecock-005	Elevate homes	1	1	1	1	1	1	0	0	1	0	1	0	1	1	11	High
2020-Shinnecock-006	Protect historic, cultural and sacred sites from natural hazards	0	1	1	1	1	1	0	1	1	0	1	1	1	1	11	High
2020-Shinnecock-007	Increase capacity to support mitigation implementation and participation in local/regional/county initiatives	1	1	1	1	1	1	0	0	1	0	1	1	1	1	11	High
2020-Shinnecock-008	Coordinate with PSE&G to prioritize and restore power	1	1	1	1	1	0	0	0	1	0	1	1	1	1	10	High
2020-Shinnecock-009	Identify Locations for Permanent Housing	1	1	1	1	1	1	0	0	1	0	1	1	1	0	10	High
2020-Shinnecock-010	Prioritize and implement adaptation strategies identified in the Climate Vulnerability Assessment and Action Plan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High

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



### 9.44.11 Proposed Mitigation Action Types

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

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

The Shinnecock 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 representatives from the Tribal Nation. Daniel Collins represented the community on the Suffolk County Hazard Mitigation Plan Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. The Council and representatives from other 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 9.4418. Contributors to the Annex**

Name	Title/Entity	Method of Participation
Daniel Collins	Council of Trustees, Secretary	Participated in meetings; identified capabilities, vulnerable areas; reported progress on 2014 actions; updated the mitigation strategy; reviewed the annex
Germain Smith	General Council Secretary	Participated in meetings; identified capabilities, vulnerable areas; reported progress on 2014 actions; updated the mitigation strategy; reviewed the annex
Bryan Polite	Chairman	Participated in meetings; identified capabilities, vulnerable areas; updated the mitigation strategy; reviewed the annex
Launcelot A. Gumbs	Vice Chairman	Participated in meetings; identified capabilities, vulnerable areas; updated the mitigation strategy; reviewed the annex
Seneca Bowen	Treasurer	Participated in meetings; identified capabilities, vulnerable areas; updated the mitigation strategy; reviewed the annex
Donald William Jr.	Sachem	Participated in meetings; identified capabilities, vulnerable areas; updated the mitigation strategy; reviewed the annex
Linda Franklin	Sunksqua	Participated in meetings; identified capabilities, vulnerable areas; updated the mitigation strategy; reviewed the annex
Shavonne Smith	Director of Environmental Protection Dept.	Participated in meetings; identified capabilities, vulnerable areas; updated the mitigation strategy; reviewed the annex

### 9.44.13 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Shinnecock Indian Nation that illustrate the probable areas impacted within the reservation. These maps are based on the best available data at the time of the preparation of this plan and are considered to be adequate for planning purposes. These maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Shinnecock Indian Nation has significant exposure. These maps are illustrated below.



Table 9.4417. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Coastal Erosion	2020-Shinnecock-002; 2020-Shinnecock-007; 2020-Shinnecock-009	2020-Shinnecock-003; 2020-Shinnecock-004	2020-Shinnecock-006	2020-Shinnecock-007	2020-Shinnecock-002; 2020-Shinnecock-007; 2020-Shinnecock-009	2020-Shinnecock-003; 2020-Shinnecock-004	2020-Shinnecock-007	2020-Shinnecock-006	2020-Shinnecock-006	
Cyber Security	2020-Shinnecock-007			2020-Shinnecock-007	2020-Shinnecock-002; 2020-Shinnecock-007		2020-Shinnecock-007			
Disease Outbreak	2020-Shinnecock-007	2020-Shinnecock-003		2020-Shinnecock-007	2020-Shinnecock-007		2020-Shinnecock-007			
Drought	2020-Shinnecock-007			2020-Shinnecock-007	2020-Shinnecock-007		2020-Shinnecock-007			
Earthquake	2020-Shinnecock-002; 2020-Shinnecock-007; 2020-Shinnecock-008; 2020-Shinnecock-009			2020-Shinnecock-007	2020-Shinnecock-002; 2020-Shinnecock-007; 2020-Shinnecock-008; 2020-Shinnecock-009		2020-Shinnecock-007			
Expansive Soils	2020-Shinnecock-002; 2020-Shinnecock-007	2020-Shinnecock-003		2020-Shinnecock-007	2020-Shinnecock-002; 2020-Shinnecock-007		2020-Shinnecock-007			
Extreme Temperature	2020-Shinnecock-007; 2020-Shinnecock-008	2020-Shinnecock-003		2020-Shinnecock-007	2020-Shinnecock-007; 2020-Shinnecock-008		2020-Shinnecock-007			
Flood	2020-Shinnecock-001; 2020-Shinnecock-002; 2020-Shinnecock-	2020-Shinnecock-003; 2020-Shinnecock-004; 2020-	2020-Shinnecock-006	2020-Shinnecock-007	2020-Shinnecock-001; 2020-Shinnecock-002; 2020-Shinnecock-	2020-Shinnecock-003; 2020-Shinnecock-004; 2020-	2020-Shinnecock-007	2020-Shinnecock-006	2020-Shinnecock-006	



Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
	007; 2020-Shinnecock-008; 2020-Shinnecock-009	Shinnecock-005			007; 2020-Shinnecock-008; 2020-Shinnecock-009	Shinnecock-005				
Groundwater Contamination	2020-Shinnecock-007			2020-Shinnecock-007	2020-Shinnecock-007		2020-Shinnecock-007			
Hurricane	2020-Shinnecock-002; 2020-Shinnecock-007; 2020-Shinnecock-008; 2020-Shinnecock-009	2020-Shinnecock-003; 2020-Shinnecock-004; 2020-Shinnecock-005	2020-Shinnecock-006	2020-Shinnecock-007	2020-Shinnecock-002; 2020-Shinnecock-007; 2020-Shinnecock-008; 2020-Shinnecock-009	2020-Shinnecock-003; 2020-Shinnecock-004; 2020-Shinnecock-005	2020-Shinnecock-007	2020-Shinnecock-006	2020-Shinnecock-006	
Infestation and Invasive Species	2020-Shinnecock-007		2020-Shinnecock-006	2020-Shinnecock-007	2020-Shinnecock-007		2020-Shinnecock-007			
Nor'Easter	2020-Shinnecock-002; 2020-Shinnecock-007; 2020-Shinnecock-008; 2020-Shinnecock-009	2020-Shinnecock-003; 2020-Shinnecock-004; 2020-Shinnecock-005	2020-Shinnecock-006	2020-Shinnecock-007	2020-Shinnecock-002; 2020-Shinnecock-007; 2020-Shinnecock-008; 2020-Shinnecock-009	2020-Shinnecock-003; 2020-Shinnecock-004; 2020-Shinnecock-005	2020-Shinnecock-007	2020-Shinnecock-006	2020-Shinnecock-006	
Severe Storm	2020-Shinnecock-002; 2020-Shinnecock-007; 2020-Shinnecock-008	2020-Shinnecock-003; 2020-Shinnecock-004; 2020-Shinnecock-005	2020-Shinnecock-006	2020-Shinnecock-007	2020-Shinnecock-002; 2020-Shinnecock-007; 2020-Shinnecock-008	2020-Shinnecock-003; 2020-Shinnecock-004; 2020-Shinnecock-005	2020-Shinnecock-007	2020-Shinnecock-006	2020-Shinnecock-006	
Severe Winter Storm	2020-Shinnecock-002; 2020-Shinnecock-007; 2020-Shinnecock-008	2020-Shinnecock-003	2020-Shinnecock-006	2020-Shinnecock-007	2020-Shinnecock-002; 2020-Shinnecock-007; 2020-Shinnecock-008		2020-Shinnecock-007	2020-Shinnecock-006	2020-Shinnecock-006	



Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Shallow Groundwater	2020-Shinnecock-002; 2020-Shinnecock-007			2020-Shinnecock-007	2020-Shinnecock-002; 2020-Shinnecock-007		2020-Shinnecock-007			
Wildfire	2020-Shinnecock-002; 2020-Shinnecock-007; 2020-Shinnecock-008; 2020-Shinnecock-009	2020-Shinnecock-003		2020-Shinnecock-007	2020-Shinnecock-002; 2020-Shinnecock-007; 2020-Shinnecock-008; 2020-Shinnecock-009		2020-Shinnecock-007			

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





Figure 9.441. Shinnecock Indian Nation Hazard Area Extent and Location Map 1

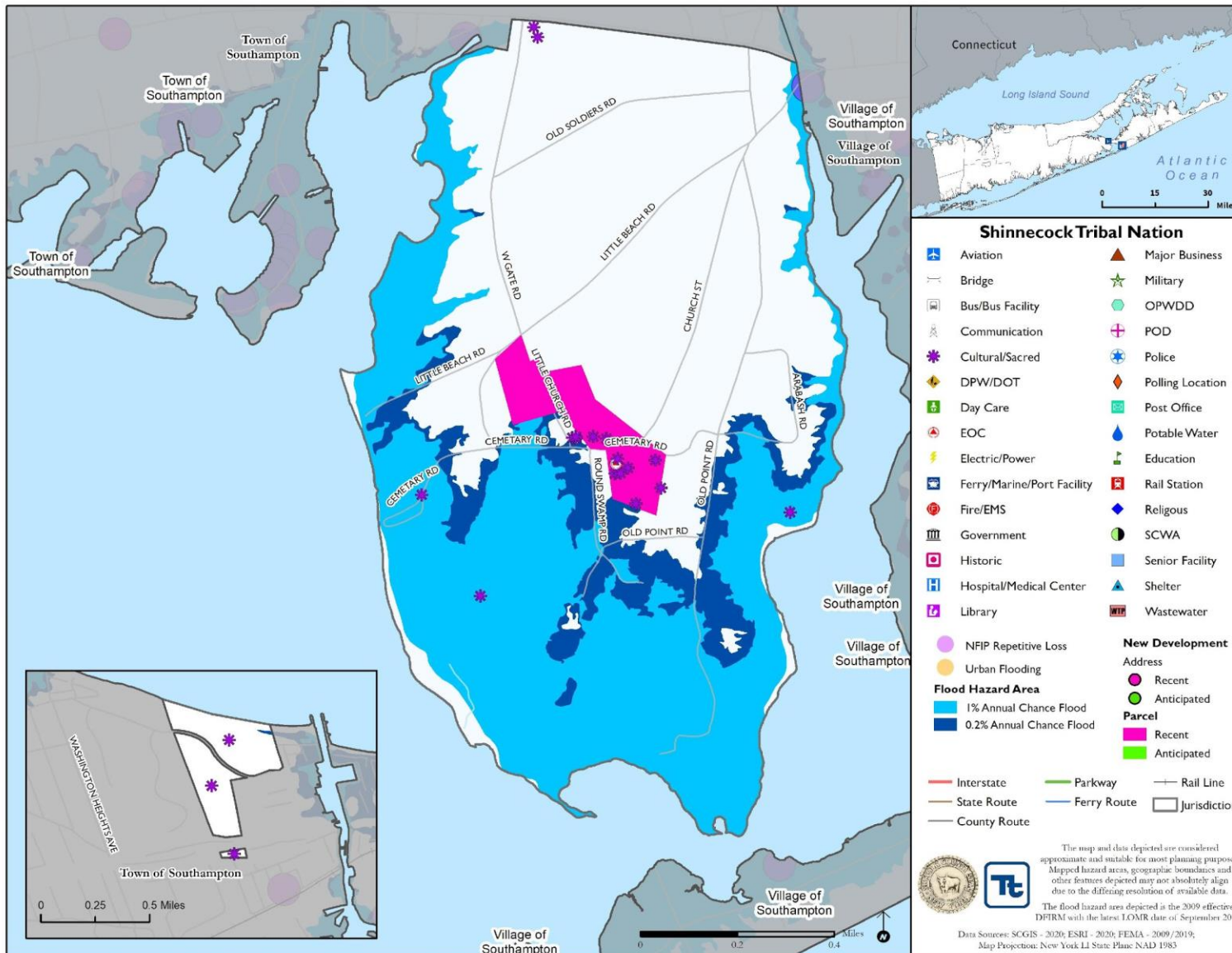




Figure 9.443. Shinnecock Indian Nation Hazard Area Extent and Location Map 2

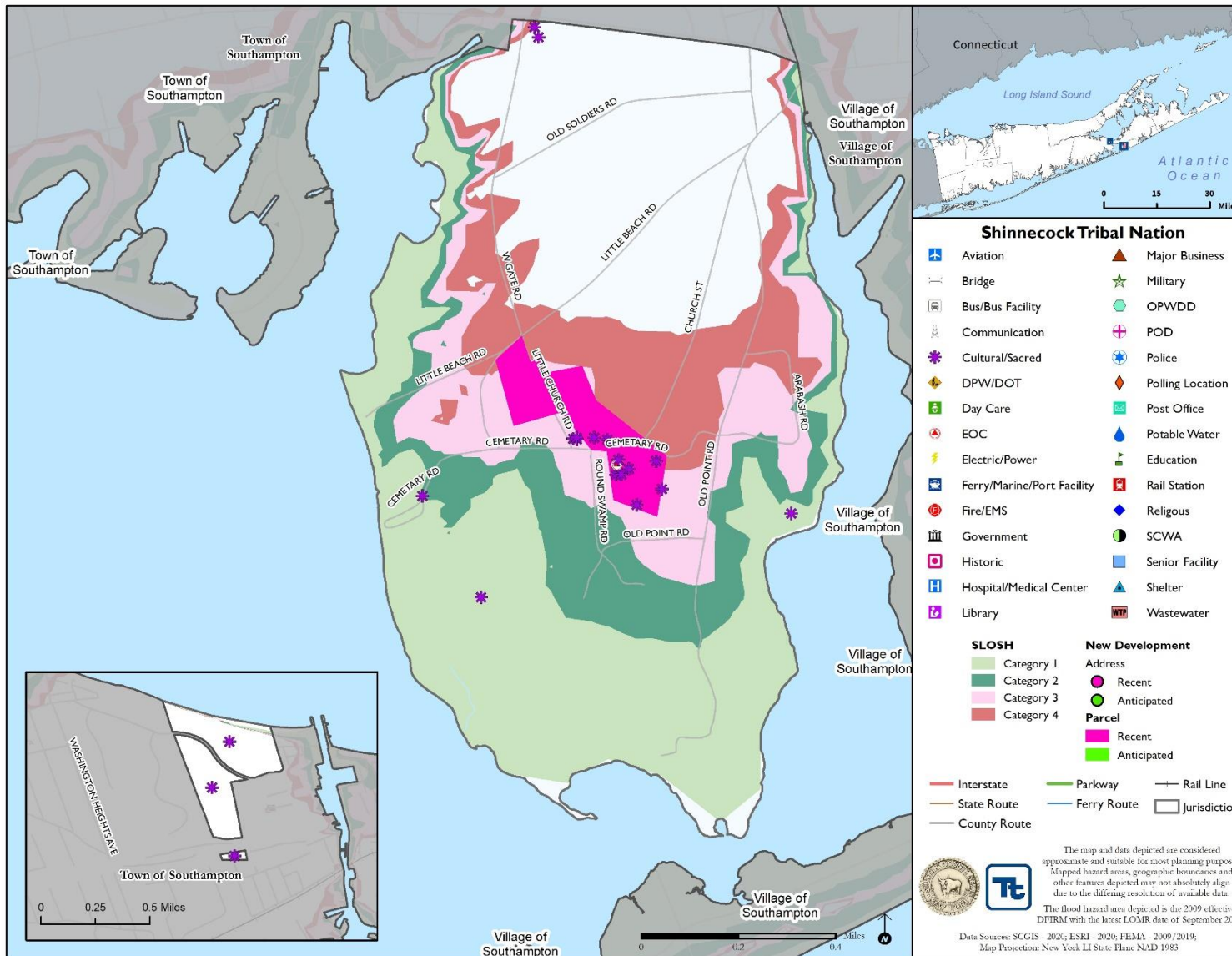




Figure 9.444. Shinnecock Indian Nation Hazard Area Extent and Location Map 3

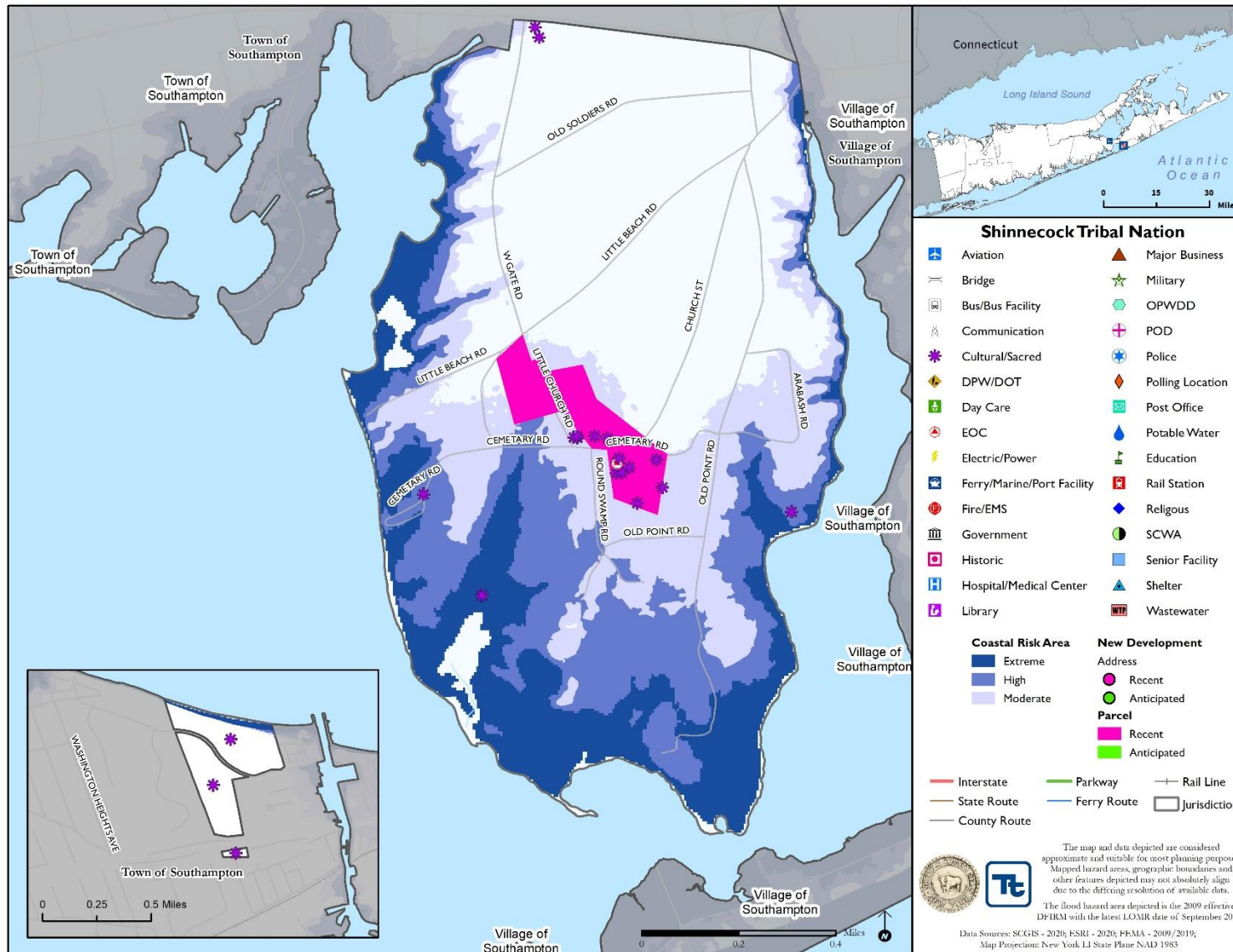




Figure 9.445. Shinnecock Indian Nation Hazard Area Extent and Location Map 4

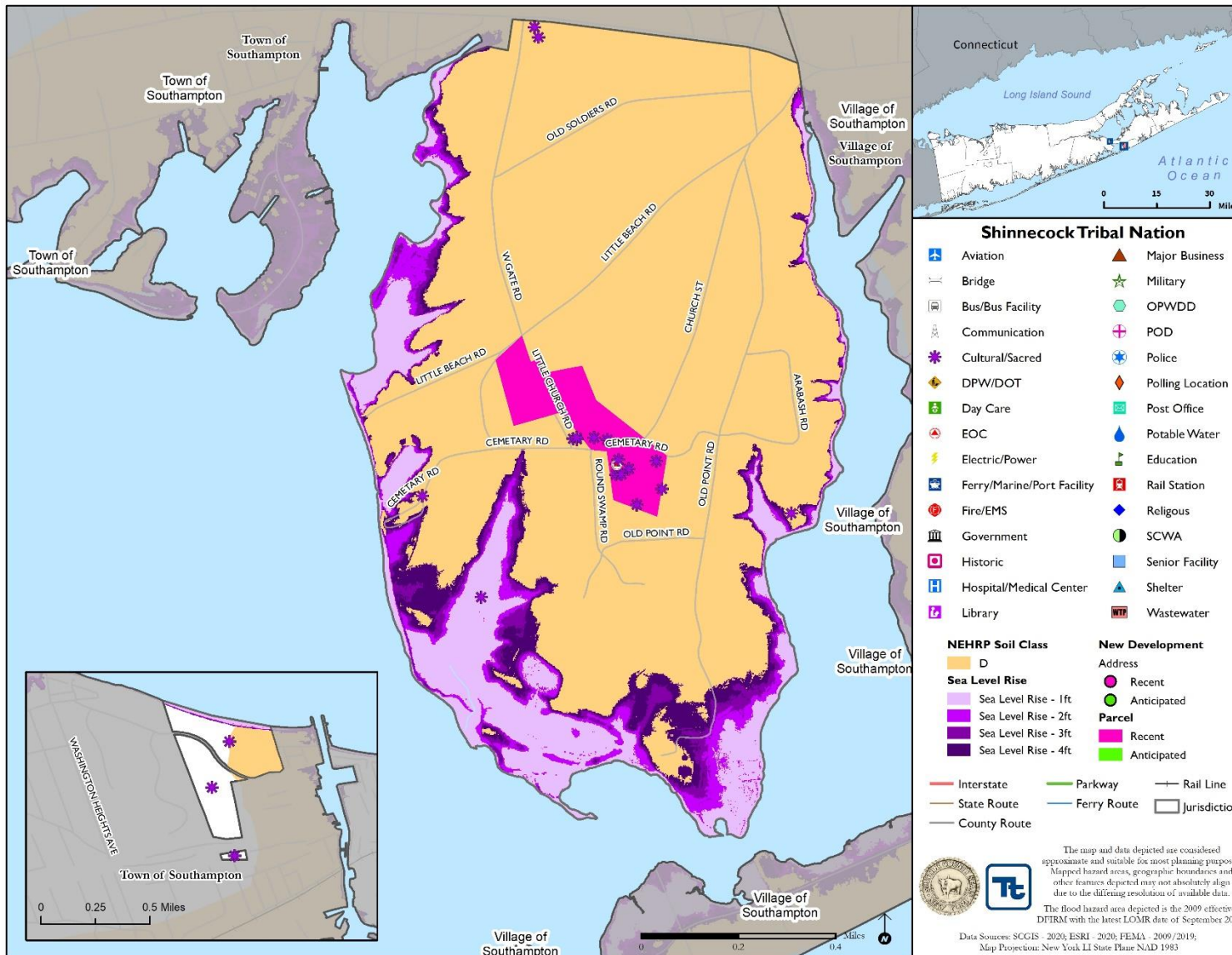
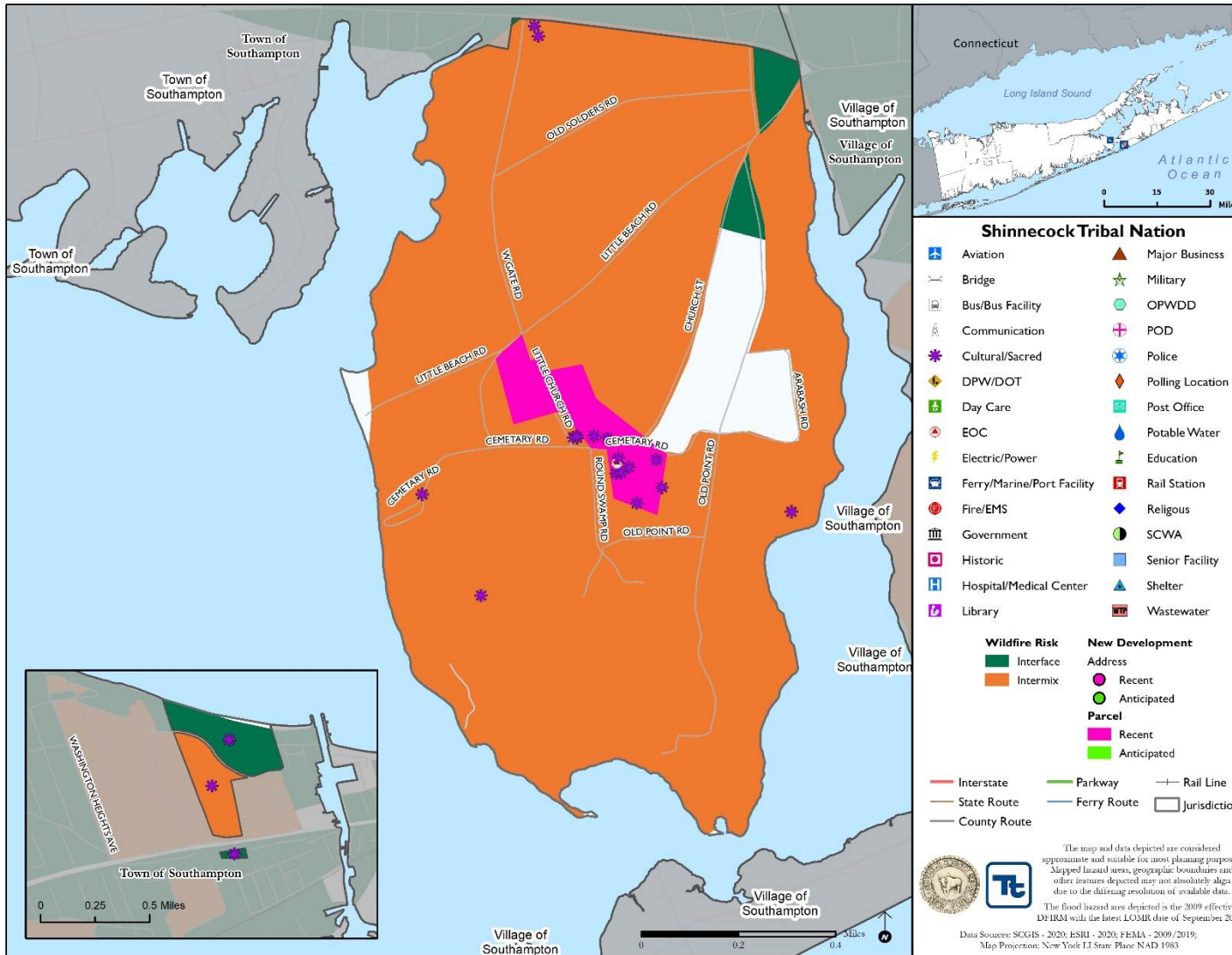




Figure 9.46. Shinnecock Indian Nation Hazard Area Extent and Location Map 5





Action Worksheet			
<b>Project Name:</b>	Elevate Flood-prone Homes		
<b>Project Number:</b>	2020-Shinnecock-005		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Storm		
<b>Description of the Problem:</b>	The Tribal Nation is located on the coast and vulnerable to flooding. With the risk of flood, storm surge and sea level rise, homes need to be elevated to mitigate future losses.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Conduct outreach to flood-prone property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA HMGP grant application and BCA to obtain funding to implement elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	1% annual chance flood event + freeboard	<b>Estimated Benefits (losses avoided):</b>	Eliminates flood damage to homes and residents
<b>Useful Life:</b>	Elevation: 30 years (residential)	<b>Goals Met:</b>	1, 2
<b>Estimated Cost:</b>	\$20Million	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	6-12 months
<b>Estimated Time Required for Project Implementation:</b>	Three years	<b>Potential Funding Sources:</b>	FEMA HMGP local cost share by residents
<b>Responsible Organization:</b>	Council, supported by homeowners	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Buyout homes	\$300,000 per home	The Tribal Nation has a limited amount of land to support new homes and current land has been in families for generations.
	Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Elevate Flood-prone Structures	
<b>Project Number:</b>	2020-Shinnecock-005	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Families protected from flooding.
<b>Property Protection</b>	1	Properties removed from high-risk flood areas.
<b>Cost-Effectiveness</b>	1	Cost-effective project
<b>Technical</b>	1	Technically feasible project
<b>Political</b>	1	
<b>Legal</b>	1	
<b>Fiscal</b>	0	Project will require grant funding.
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	0	
<b>Multi-Hazard</b>	1	Flood, Severe Storm
<b>Timeline</b>	0	
<b>Agency Champion</b>	1	Council
<b>Other Community Objectives</b>	1	
<b>Total</b>	11	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet				
<b>Project Name:</b>	Protect historic, cultural and sacred sites from natural hazards			
<b>Project Number:</b>	2020-Shinnecock-006			
Risk / Vulnerability				
<b>Hazard(s) of Concern:</b>	Coastal Erosion, Hurricane, Nor'Easter, Flood, Severe Storm			
<b>Description of the Problem:</b>	Physical environment is being destroyed, grass is dying and grave sites may become compromised. The shoreline continues to be vulnerable to surge, erosion and sea level rise. Several cultural, sacred and historic sites are vulnerable to flood, surge, erosion and sea level rise.			
Action or Project Intended for Implementation				
<b>Description of the Solution:</b>	Install a bulkhead/revetments/riprap seawall on the southern portion of the peninsula along the western shoreline to protect historic and sacred sites from natural hazards. Explore additional living shoreline option.			
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<b>Level of Protection:</b>	Feasibility study needed to determine level of protection	<b>Estimated Benefits (losses avoided):</b>	Protects from flood loss	
<b>Useful Life:</b>	To be determined by the selected mitigation actions	<b>Goals Met:</b>	1, 2	
<b>Estimated Cost:</b>	High (\$5-20 Million)	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project; Natural Systems Protection	
Plan for Implementation				
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	6-12 months	
<b>Estimated Time Required for Project Implementation:</b>	Three years	<b>Potential Funding Sources:</b>	FEMA HMGP	
<b>Responsible Organization:</b>	Council, supported by homeowners	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation	
Three Alternatives Considered (including No Action)				
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>	
	No Action	\$0	Current problem continues	
	Living shoreline	High	This is a possible component to the solution but it may be needed in combination with infrastructure to provide protection needed.	
	Install flood wall/sea wall protection	>\$1M	This is a possible component to the solution but the Tribal Nation would like to integrate a nature-based solution as well.	
Progress Report (for plan maintenance)				
<b>Date of Status Report:</b>				
<b>Report of Progress:</b>				
<b>Update Evaluation of the Problem and/or Solution:</b>				





Action Worksheet		
<b>Project Name:</b>	Protect historic, cultural and sacred sites from natural hazards	
<b>Project Number:</b>	2020-Shinnecock-007	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	Families protected from flooding.
Property Protection	1	Protects historic, cultural and sacred sites
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	1	
Administrative	0	
Multi-Hazard	1	Coastal Erosion, Hurricane, Nor'Easter, Sea Level Rise, Flood, Severe Storm
Timeline	0	
Agency Champion	1	Council
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	