HAZARD MITIGATION PLAN UPDATE
ANNEX FOR THE MOHEGAN TRIBE

Southeastern Connecticut Council of Governments
Multi-Jurisdictional Hazard Mitigation Plan Update

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ACKNOWLEDGEMENTS

This HMP annex update could not have been completed without the time and dedication of the following individuals at the tribal level:

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1.0 INTRODUCTION

1.1 Purpose of Annex

The purpose of this HMP annex is to provide an update to the natural hazard risk assessment and capability assessment provided in the previous HMP, and to evaluate potential hazard mitigation measures and prioritize hazard mitigation projects specific to mitigating the effects of natural hazards on the Mohegan Tribe. Background information and the regional effects of pertinent natural hazards are discussed in the main body of the Southeastern Connecticut Council of Governments (SCCOG) Multi-Jurisdictional Hazard Mitigation Plan. Thus, this annex is designed to supplement the information presented in the Multi-Jurisdictional HMP with more specific detail for the Mohegan Tribe and is not to be considered a standalone document.

The primary goal of this hazard mitigation plan annex is to identify particular vulnerability to natural hazards and potential mitigation measures for such natural hazards in order to ***reduce the loss of or damage to life, property, infrastructure, and natural, cultural, and economic resources.*** This includes the reduction of public and private damage costs. Limiting losses of and damage to life and property will also reduce the social, emotional, and economic disruption associated with a natural disaster.

Unlike the municipalities in the SCCOG region, an Indian Tribal Government with an approved Tribal Mitigation Plan in accordance with 44 Code of Federal Regulations (CFR) 201.7 may apply for assistance from FEMA directly as a grantee under the various grant programs. Because the Mohegan Tribe has coordinated with the State of Connecticut through SCCOG in the development of this multi-jurisdictional HMP, the Tribe also has the option of applying as a subgrantee through the State. The Mohegan Tribe can determine on a case-by-case basis how it wishes to apply with respect to each grant program offered under each Presidential Disaster Declaration.

Given the "Tribal Multi-Hazard Mitigation Planning Guidance" that was released by FEMA in March 2010, a major rewrite of the HMP annex was determined by SCCOG to be the best method of updating the 2005 HMP to address all the requirements of 44 CFR 201.7. For the purposes of this plan, the term "public" includes but is not limited to tribal residents, tribal members, those employed on the reservation, and visitors to tribal lands.

1.2 Setting

The Mohegan Tribe was recognized by the Connecticut Colony in the Treaty of 1638. During this time, the Mohegan Reservation was as large as 2,700 acres. However, by 1872 the reservation land had been largely encroached and diminished and the tribe was disbanded. The Mohegan Tribe continued to be active in the Montville are despite being disbanded. As a result of many Indian tribes being disbanded across the country, the U.S. Government created a process in 1978 through which tribes could petition for Federal acknowledgement. In March 1994, the Mohegan Tribe became a federally-recognized Indian tribe.

As a result of Federal recognition, the Mohegan Tribe was able to obtain all Federal approvals from the U.S. Government for the operation of a casino. The Mohegan Sun Resort was built on reservation grounds in 1996 and attracts tourists from around the world. The amount of tourists passing through the reservation dwarfs the approximately 105 full-time residents of the

reservation. As the Mohegan Tribe has approximately 1,700 members, the majority of tribal members do not live on the reservation but rather in outlying communities.

The Mohegan Tribe Reservation is generally situated among properties in the northeastern section of Montville and the southern section of the City of Norwich just west of the Thames River. The Mohegan Tribe has access to several transportation routes such including Route 2A and Route 32. Today, the Reservation is approximately 385 acres in size and is surrounded by the Town of Montville with the exception of approximately 28 acres bounded by the City of Norwich. This land has been accepted into federal trust by the United States Bureau of Indian Affairs. The last successful Trust Application in 2008 increased the size of the Reservation by approximately 30 acres. The 1994 Federal Land Claims Settlement Act allows the Tribe to have a total of 700 acres taken into trust.

In addition, the Mohegan Tribe controls an additional 159 acres at Fort Shantok located immediately south of the reservation. This land was formerly operated by the State of Connecticut as a State Park, but was purchased by the tribe in 1994 through the land claims settlement act. The Mohegan Tribe has decided to preserve the land as it is a site of distinction for the tribe. The figures within this annex depict the boundaries of trust land and the land at Fort Shantok which is considered to be the tribal planning area for this annex.

The Mohegan Tribe also owns a few small parcels considered as fee lands outside the reservation; most of these lands lie within the Town of Montville. These lands are considered part of the Town of Montville and therefore are not specifically discussed in this Tribal annex.

1.3 Plan Development

The 2005 HMP and its annexes were developed through a series of meetings and the completion of written questionnaires, personal interviews, and workshops as described in the Multi-Jurisdictional HMP update. Since that time, the HMP has been available in tribal governmental offices and available to emergency personnel. Tribal residents were encouraged to contact the Office of Public Safety or the Department of Public Works with any concerns regarding emergency response or potential projects related to natural hazard damage.

Based on the existing plan, existing information, and hazards that have occurred since 2005, SCCOG determined that the following data collection program would be sufficient to collect data to update the Multi-Jurisdictional plan and each annex. Public notices distributed regarding this plan were delivered to the general public via SCCOG and to tribal residents and tribal members by Tribal personnel.

- The SCCOG issued a press release on November 20, 2011 announcing a public information meeting on the multi-jurisdictional HMP update. This press release was published in the Norwich Bulletin and The Day. This notice was also posted on the SCCOG website. The public information meeting was held on December 13, 2011 at the SCCOG office.

- A data collection meeting was held with the Mohegan Tribe on January 24, 2012 to discuss the scope and process for updating the plan and to collect information. The Office of Public Safety coordinated the local planning team which included the members of the Public Safety and Regulation & Compliance departments. The meeting focused on reviewing each section

of the existing hazard mitigation plan and annex, critical facilities, and various types of hazards that have affected the Tribe and that should be addressed in the update.

- The draft that is sent for State review will be posted on the Tribe website (www.mohegan.nsn.us) as well as the SCCOG website (www.seccog.org) for public review and comment. In addition, a hard copy will be made available in the SCCOG office in Norwich. A press release will announce the availability of the HMP for review. This will provide residents, tribal members, and other stakeholders throughout the SCCOG region the opportunity to review and comment on a relatively complete draft with all annexes. Comments received from the public will be incorporated into the final draft where applicable following State and Federal comments.

The adoption of this HMP update by the Mohegan Tribe will be coordinated by SCCOG and the Office of Public Safety. The HMP update must be adopted within one year of conditional approval by FEMA, or the Mohegan Tribe will need to update the HMP and resubmit it to FEMA for review. The adoption resolution is located in Appendix A of this annex.

1.4 Progress Monitoring

Following adoption, the Office of Public Safety will continue to administer this HMP (as it has since 2005) under the authority of the Tribal Council and will be the local coordinator of the HMP. The Office of Public Safety will coordinate with responsible departments as listed in Table 11-1 and ensure that the recommendations of this HMP are considered or enacted. Refer to Section 1.8 of the Multi-Jurisdictional HMP for a description of how the local coordinator will perform progress monitoring. The majority of recommendations in this annex can be accomplished within or with only a slight increase in the operating budgets of the various departments. Projects that require capital improvements or additional funding will need to be approved by the Tribal Council.

The Mohegan Tribe plans to incorporate this HMP as a direct annex to its Emergency Operations Plan (EOP). This will occur at the next EOP update following HMP adoption. The HMP will also be on file in the Office of Land Management to assist in guiding growth decisions. See Section 2.5 for recommendations related to integrating the findings of this HMP into other Tribal planning documents. The Mohegan Tribe will continue to encourage Tribal residents to contact the Office of Public Safety or the Department of Public Works with concerns related to natural hazards via the regular Tribal newsletter. Such announcements will also state that the HMP is available for public review at the Office of Land Management and the Office of Public Safety. This level of public coordination is believed sufficient given the relatively disaster-resilient nature of the Reservation and the relatively low number of residents.

The Mohegan Tribe will review the status of plan recommendations each year. The Office of Public Safety will be in charge of overseeing recommended projects and coordinating an annual meeting with applicable departments (those listed in Table 11-1) and other interested departments. Refer to Section 1.8 of the Multi-Jurisdictional HMP for a list of matters to be discussed at the annual meeting, including a review of each recommendation and progress achieved to date, or reasons for why the recommendation has not been enacted. The Office of Public Safety will keep a written record of meeting minutes and the status of the recommendations. These records of progress monitoring will form the basis for the next HMP update.

The Mohegan Tribe understands that the multi-jurisdictional HMP and this annex will be effective for five years from the date of FEMA approval of the first SCCOG jurisdiction regardless of the date of adoption by the Mohegan Tribe. The Office of Public Safety will coordinate with SCCOG for the next HMP update which is expected to occur in 2016-2017.

1.5 Assurances

Should Federal grant funding be available for a particular project, the Office of Public Safety will secure permission from the Tribal Council to apply for funding. The Mohegan Tribe understands that it must comply with all applicable Federal statutes and regulations in effect with respect to the periods for which is receives grant funding. The Mohegan Tribe further understands that it will need to amend its plan to reflect new or revised Federal regulations or statutes, or changes in Tribal law, organization, policy, or tribal agency operation. The amendment can be added as an annex and later incorporated directly during the next HMP update. Adoption of this HMP update at the Tribal level indicates that the Mohegan Tribe agrees to these Federal assurances.

2.0 COMMUNITY PROFILE

2.1 Physical Setting

The most developed portion of Reservation lands lie on the northern side of Crow Hill. Elevations range from approximately mean sea level near the Thames River to approximately 250 feet above sea level at the top of Crow Hill. Crow Hill therefore provides a modicum of defense against strong winds coming in from the coastline.

Geology is important to the occurrence and relative effects of natural hazards such as earthquakes. Thus, it is important to understand the geologic setting and variation of bedrock and surficial formations in lands controlled by the Mohegan Tribe.

The Mohegan Tribe contains three bedrock types, which lie in fairly diagonal bands. The tribal area north of State Route 2A is Hope Valley Alaskite Gneiss, while the land area south of the highway is dominated by Plainfield Formation and the Waterford Group. Each of these formations consists primarily of gneiss, a relatively hard metamorphic rock.

There are no faults within the Mohegan Tribe limits; however the Honey Hill Fault is located just north of the tribal land limits, crossing through Trading Cove. The Honey Hill Fault is a thrust fault, mostly Devonian or Ordovician in origin. Refer to the Multi-Jurisdictional HMP for the location of this fault line.

The Mohegan Tribe's different surficial geologic formations include glacial till and stratified drift formations. Refer to the Multi-Jurisdictional HMP for a generalized view of surficial materials. The central portion of the Reservation is covered primarily by glacial till, with the northern section adjacent to Trading Cove covered by sand and gravel. Till contains an unsorted mixture of clay, silt, sand, gravel, and boulders deposited by glaciers as a ground moraine. The amount of stratified drift present is important as areas of stratified materials are generally coincident with floodplains. These materials were deposited at lower elevations by glacial streams, and these valleys were later inherited by the larger of our present day streams and rivers. However, the smaller glacial till watercourses can also cause flooding. The amount of stratified drift also has bearing on the relative intensity of earthquakes and the likelihood of soil subsidence in areas of fill.

2.2 Land Use and Development Trends

Prior to 1992, development on the reservation was relatively sparse and predominantly residential, with the exception of a large industry located in close proximity to the present location of the casino. The development of the Mohegan Sun began in 1992 when three companies formed Trading Cove Associates to provide the Mohegan Tribe with financial support, tribal attorneys, and advisers to assist in the tribe's effort to gain official recognition as a tribe. In March 1994 they gained federal recognition as a sovereign people, opening the way to develop a casino. The casino and resort first opened on October 12, 1996. In 2000, Trading Cove Associates turned over complete control of the resort to the Mohegan tribe.

Today, Mohegan Sun employs some 10,000 local employees and is the commercial fixture of the reservation, providing gaming, hotel, and entertainment amenities. It is located in the northern

portion of the reservation. No industry is located on the reservation. Residences are located in the southern portion of the reservation west of Fort Shantok.

There have been no major changes in infrastructure since 2008. The majority of work completed since 2005 has been interior renovations. The only new building has been the 200,000 square foot government center (60,000 square foot footprint) that was recently completed at 13 Crow Hill Road. Major new developments or residences are not currently proposed.

The Mohegan Tribe has several areas that they deem sacred. The majority of these areas are located on fee lands outside of the reservation. On the Reservation, Fort Shantok is a place of distinction for the Tribe and is being preserved from development as it is the site of the Tribe's first village in the area, a fortress, a celebration site, and a burial ground. The area is listed on the National Register of Historic Places and is a National Historic Landmark.

2.3 Drainage Basins and Hydrology

The Mohegan Tribe is divided among two sub-regional watersheds as delineated by the Connecticut DEEP. The majority of the land area drains directly to the Thames River, whereas the far northwest corner of the reservation drains into Trading Cove Brook and eventually discharges to the Thames River. Thus, the entire reservation drains directly to the Thames River. The Mohegan Tribe does not experience any flooding problems associated with runoff entering the reservation from Montville.

2.4 Governmental Structure

The Mohegan Tribe is governed by its Tribal Council and its Council of Elders. The nine-member Tribal Council has all executive and legislative responsibilities of the tribe not granted to the Council of Elders per the Tribe's Constitution. The Tribal Council has the authority to enact laws and adopt resolutions such as that required for this HMP. The Chairman of the Tribal Council serves as the Chief Executive Officer of the Tribe.

The seven-member Council of Elders is responsible for overseeing judicial matters and the Tribe's cultural integrity. It possesses certain legislative powers specifically granted to this body pursuant to the Tribe's Constitution, such as the authority to establish and enforce ordinances pertaining to tribal membership and enrollment. The Council of Elders provides traditional Mohegan names to members and appoints, defines, and supervises all religious and ceremonial positions. The Council advises on all cultural matters and enforces rules of Tribal custom.

The Mohegan Tribe has several departments that manage the various facets of Tribal life. The Tribal Chief Operating Officer oversees the Office of Land Management, Office of Tribal Member Services, and the Finance, Human Resources, and Information Systems Departments. The Office of Land Management contains several departments pertinent to natural hazard mitigation, including Land Preservation & Planning, Public Works, Public Safety, and Regulation & Compliance.

- The Land Preservation & Planning Department manages the reservation's lands and infrastructure. They review all development plans and ensure that it is performed in an environmentally sound manner. They work closely with the Tribal Utility Authority and the

Environmental Protection group to develop environmentally-friendly solutions to engineering issues.

- The Public Works Department provides services including comprehensive solid waste collection, recycling and disposal; safe, efficient and well-maintained infrastructure of roads, bridges and stormwater management. The Public Works Department also conducts snow removal and deicing on roads; tree and tree limb removal in rights-of-way; and maintains and upgrades storm drainage systems to prevent flooding caused by rainfall.

- The Public Safety Department includes Police, Fire, Protective services, and surveillance. The Mohegan Tribal Fire Department is considered the premier firefighting and Emergency Medical Service operation in southeastern Connecticut. The department handles calls both on the reservation and throughout Montville. The Protective Services Department handles security, crime scene preservation, and hazardous materials incidents. The Police Department enforces Tribal and Federal laws on the reservation. The Public Safety Department coordinates emergency response during natural disasters.

- The Regulation & Compliance Department includes Building Officials, document retention, and Environmental Protection services. Building Officials ensure that all existing and new buildings meet Tribal building codes and industry construction standards. The Environmental Protection group works closely with the Land Preservation & Planning Department to ensure that environmentally-friendly engineering solutions are utilized.

In addition to the departments described above, the Mohegan Tribe has several other departments similar to surrounding municipalities, including Finance, Human Resources, attorneys, etc. The roles of Tribal departments have not changed since the time of the previous HMP. Thus, the Mohegan Tribe is technically, financially, and legally capable of implementing mitigation projects for natural hazards.

As discussed in the next section and the historic record throughout this annex, the Reservation is relatively disaster-resilient and as such has not focused on mitigation activities. Instead, the Mohegan Tribe has made a concerted effort to perform environmentally friendly building solutions and utilize best management practices in construction. These practices have had the secondary effect of reducing vulnerability to natural hazards (e.g., utilities have been placed underground, and no development has occurred in floodplains) such that hazard mitigation is not specifically addressed in Tribal land use regulations except as noted below.

2.5 Review of Existing Plans and Regulations

The Tribe has an Emergency Operations Plan (EOP) that is updated annually. This document provides general procedures to be instituted by the Public Safety Department in case of an emergency. Emergencies can include but are not limited to natural hazard events such as hurricanes and nor'easters. In general, the Tribe is relatively disaster resilient and as such limited natural hazard planning exists outside of the EOP. The Tribe plans to add this HMP as an Annex to its EOP following adoption.

The Tribe does not have many of the planning documents typical to municipalities, such as a Plan of Conservation and Development, Zoning Regulations, Subdivision Regulations, Wetland Regulations, Open Space Plans, and Transportation Plans. Instead, they utilize other documents

within the Office of Land Management to guide growth decisions, including tribal regulations, Tribal planning documents, consultant reports, and regional hazard information. These plans were reviewed by the Office of Land Management and it was suggested at the data collection meeting that there are opportunities for formally integrating the findings and recommendations of this HMP into Tribal planning documents.

The most notable existing Tribal regulation pertinent to hazard mitigation is that the Tribe utilizes the 1% annual chance and 0.2% annual chance floodplains as defined by FEMA. No development currently exists within the floodplains nor will be allowed in the future. The Tribal Council has adopted the latest revision of the FEMA Flood Maps (effective July 18, 2011).

The Tribe also exceeds the Connecticut State Building Code, utilizing the 2009 updates to the 2005 amendments to the 2003 International Building Code. Thus, newer Tribal buildings are slightly more disaster resilient than those of the Tribe's neighbors. The Tribal Fire Code is the Life Safety Code similar to Connecticut's fire code.

2.6 Critical Facilities, Sheltering Capacity, and Evacuation

The Mohegan Tribe considers several facilities to be critical to ensure that emergencies are addressed while day-to-day management of the Tribe continues:

- Emergency Services: The Public Safety Building houses both the Police and Fire Departments and the Tribe's Emergency Operations Center (EOC).
- Tribal Facilities: Shelter, Senior Center and daycare, and public works.
- Tribal Infrastructure: Roads, transmission lines, emergency backup generators, and substation.

Critical facilities are presented on figures throughout this annex. Facilities are not located within a 1% annual chance floodplain, a 0.2% chance annual floodplain, or a hurricane surge area as defined by FEMA.

Public Safety Facilities

The Public Safety Building is located on Sandy Desert Road off of Route 32. This facility houses all Public safety departments including police, fire, protective services, and surveillance. The Tribe's Emergency Operations Center (EOC) is the Public Safety Building classroom adjacent to the Dispatch Center. This juxtaposition is very useful to command staff during emergencies.

The Police Department radio system is considered excellent. While there is always room for improvement, in general the Tribe believes that the system is robust. The portable radios and base stations can communicate with their municipal neighbors and the State Police. The Fire Department also uses the New London County radio frequency. The Tribe does not have a Reverse 9-1-1 system to communicate directly with its residents since existing response procedures are sufficient to contact them during an emergency. However, Tribal personnel have access to the State's Reverse 9-1-1 system through employees such that they are aware of ongoing emergencies in other parts of the SCCOG region.

The Fire Department provides emergency medical services. Patients are transported to Backus Hospital in Norwich. The Tribe provides some medical services to its members but does not operate an emergency care facility.

Public Works Facilities

The Tribe has two Public Works Facilities. The first is the Engineering Department located out of the Thames Garage. They care for Mohegan Sun facilities. The second operates out of the Public Works Barn on Fort Shantok Road, providing services to the remainder of tribal lands.

Shelters

The Tribe has one shelter facility on Fort Hill Drive at the elderly housing complex. It has a capacity to shelter less than 50 people, or slightly less than half of the residents of the Reservation. It has a generator. The Tribe does not have a formal shelter plan.

In the case of a regional or large-scale emergency, people could be sheltered at Mohegan Sun Arena or in the hotels. These facilities are located off Mohegan Sun Boulevard and meet current building codes. No formal regional agreements are in place to provide shelter at these facilities.

Other Tribal Facilities

The Senior Center and Daycare facilities are located on Crow Hill Road near Route 32. The Daycare is public, but the Senior Center is open to tribal residents only. This facility is considered critical because during the day it has populations who are very old and very young, thus potentially more susceptible to the effects of natural hazards.

The Tribal Government Center is a relatively new building located at the terminus of Crow Hill Road. It is not considered to be a critical facility since emergency functions do not originate from this facility. Restoring services to this building would be a high priority following any hazard event.

Under normal conditions, electricity and gas services are provided by Norwich Public Utilities. The Tribe has an electrical substation on Fort Hill Drive and several large generators on Crow Hill Road to provide emergency backup power to the reservation. Power lines are underground throughout the reservation except for infrastructure in the Town of Montville along Route 32. In the case of an extended outage in areas without backup service, these residents would be directed to the shelter at the elderly housing complex. If necessary, they would be directed to Mohegan Sun.

Public water supply is provided by Norwich Public Utilities and the Town of Montville. The dual water providers offer critical water supply redundancy.

Evacuation

Transportation corridors are well-developed. There are two major roads in and out of the nation (Route 2A and Route 32), three main interior roads, and few areas where it would be difficult to reroute traffic during an emergency. Fee lands in Montville generally link into the Route 32 corridor for evacuation purposes, providing access to Route 2A, Interstate 395, and Route 2.

2.7 Status of 2005 Plan Recommendations

The previous HMP included several general recommendations related to mitigating natural hazards. The recommendations and a summary of actions taken over the past several years towards those actions are listed below. Where progress was indicated, the progress was paid for out of the Tribe's operating budget.

- Evaluate the Hazard Resistant Nature of Critical Facilities – This is ongoing as part of the Tribe's annual EOP update. In general, Tribal critical facilities are considered disaster-resilient since they are not located in FEMA Special Flood hazard areas and hurricane surge zones, and are constructed to building codes that reportedly meet or exceed industry standards.

- Comprehensive Evaluation of Emergency Communication Capabilities Throughout the Reservation – This is ongoing along with the annual EOP update. Tribal communication capability is considered to be robust and public safety services can communicate with each other and with Montville and other communities in New London County.

- Develop a Flood Audit Program – The Tribe does not experience flooding. Thus, this recommendation was not pursued and is not carried forward in this HMP update.

- Hazardous Materials Spills on Major Roadways / Railroads – The Tribe has improved all of its roads throughout the reservation. They are also part of the Eastern Connecticut Hazardous Materials Response Team and store much of that team's equipment and supplies. This recommendation is not specific to natural hazards and therefore is not carried forward in this HMP update.

- Review of Transportation Facilities to Identify Critical Risks – This is ongoing annually as part of the Emergency Operations Plan update.

- Implement a Reverse 9-1-1 System to Relay Important Information During an Emergency – The Tribal government can receive CT Alerts "Everbridge" System notices through employees although residents are not actually enrolled in that system. There are no plans to implement such a system, as the existing response procedures are considered acceptable for the relatively low number of residents.

- Distribute or Post Public Information Regarding Hazards on the Reservation – All employees are required to attend safety training and this training is reinforced with bulletin boards throughout employee areas. Notices for the tribe are posted at the Community Center. Quarterly safety meetings are held with residents. Housing and facilities staff went to residents and delivered food and water during Irene power outages. This level of coordination is believed sufficient and will not be increased in the immediate future.

- Evaluate Emergency Shelters, Update Supplies, and Check Communication Equipment – This is done at least annually or following any use of the facility. Communication equipment is checked at least quarterly.

- Maintain Emergency Personnel Training as Well as Maintaining and Updating Emergency Equipment and Response Protocols – This is done regularly, with equipment upgrades occurring to the extent the budget will allow.

- Evaluate and Consider Burying Power Lines Underground and Away from Possible Tree Damage – All power lines on the reservation are below ground, with the exception of infrastructure on Route 32. This Tribe will continue to follow this recommendation in the future where possible.

- Complete an Earthquake Survey of all Critical Facilities and Infrastructures – A specific survey has not been performed and there are no plans to perform such a survey in the future given the low occurrence of this hazard type. New buildings are designed to meet or exceed industry standard and as such are believed to be generally disaster-resilient.

- Complete Catch Basin and Culvert Surveys to Identify Structures in Need of Maintenance or Replacement – Inspections are performed by the Public Works Department annually as part of regularly scheduled cleaning activities. Basins are cleaned by vacuum truck. If the inspections or any complaints reveal vulnerabilities, then a more detailed inspection is performed.

- Complete a Survey of Fire Hydrants to Assess Vulnerabilities and Capabilities for Fire Protection – The Tribe believes that its fire protection is adequate. Norwich Public Utilities recently banded its hydrants such that fire fighters know how much flow is available from each hydrant. There are several fire pumps with excellent pressure and these are tested weekly. They also have a 1,000,000 gallon tank that is only used to store fire protection water.

3.0 INLAND FLOODING

3.1 Setting / Historic Record

There are no notable flooding issues or drainage issues on the Reservation. Drainage systems are of recent construction and are reportedly oversized as compared to the Connecticut Department of Transportation (DOT) drainage manual. Thus, nuisance flooding is not typically an issue. No floods have occurred on the Reservation since the last HMP. If flooding did occur, the engineering department or the facilities department would handle the complaints depending on the location.

3.2 Existing Programs, Policies, and Regulations

The Mohegan Tribe utilizes the 1% annual chance and the 0.2% annual chance floodplains as defined by FEMA. No development exists within these floodplains, nor will development be allowed in such areas in the future. Therefore, the Mohegan Tribe does not currently budget for flood mitigation activities.

Drainage systems for new construction have all been oversized as compared to the Connecticut DOT drainage manual since the Tribe realizes that research has shown that the incidence of rainfall in southeastern Connecticut has been increasing over time. This policy of over-sizing drainage systems has helped to minimize flooding issues on the Reservation. Public Works cleans and inspects catch basins and culverts at least annually or more often if problems are noted. The Tribe accesses weather reports through the National Weather Service, but personnel are not typically concerned about the effects of flooding except for the largest of storm events.

3.3 Vulnerabilities and Risk Assessment

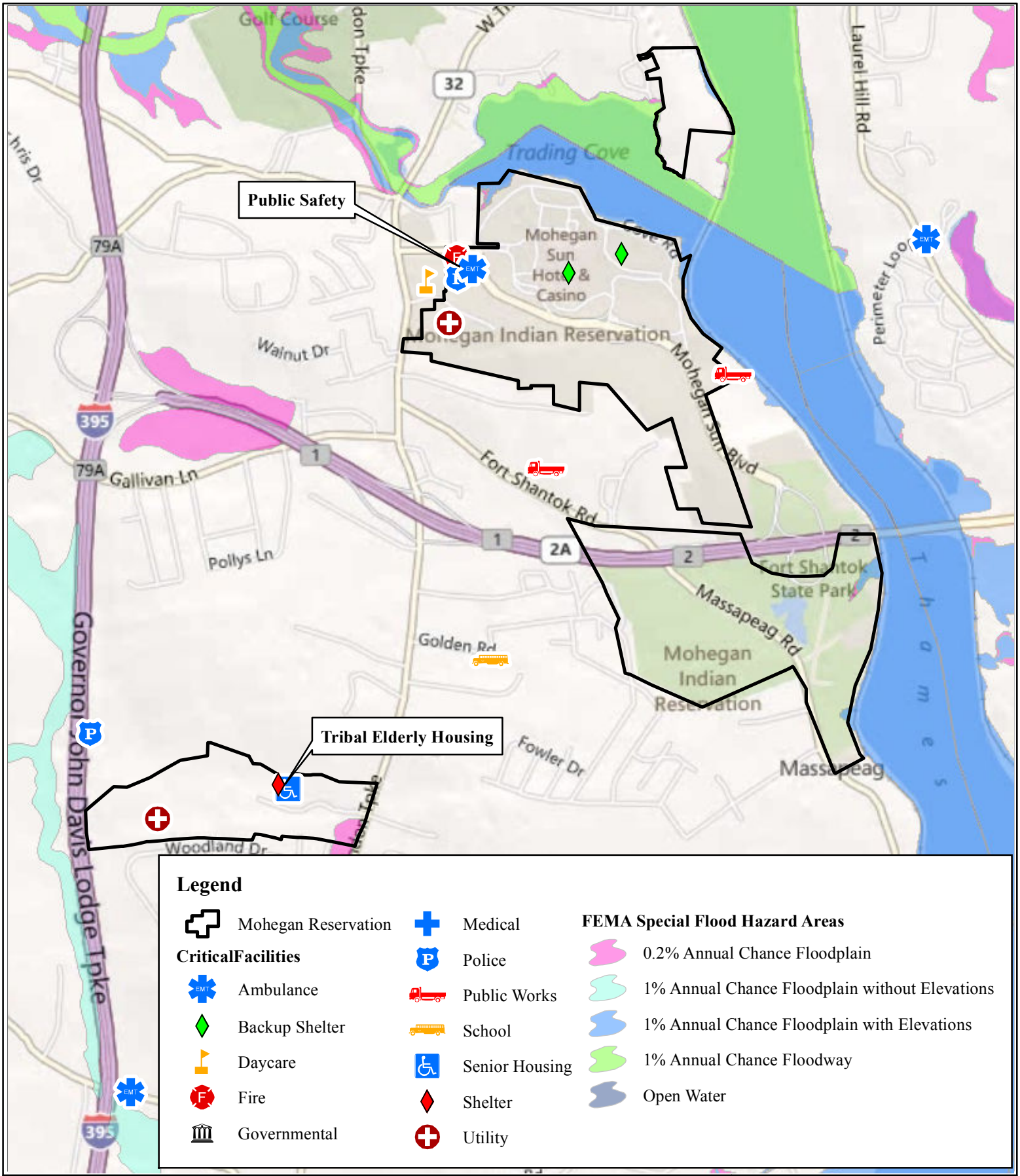
This section discusses specific areas at risk to flooding within the Reservation. Areas located on fee lands outside of the reservation are not considered.

3.3.1 Vulnerability Analysis of Areas along Watercourses

The major water bodies nearby the Reservation include Trading Cove and the Thames River (Figure 3-1). These water bodies are coincident with Special Flood Hazard Areas (SFHAs) mapped by FEMA. However, no development is located in these areas on Reservation lands. Shantok Brook drains from the vicinity of Route 32 into Fort Shantok where it is impounded by the Fort Shantok Dam. The 1% annual chance and 0.2% annual chance floodplain associated with the Thames River backwaters up the downstream section of the brook downstream of the dam.

3.3.2 Vulnerability Analysis of Private Properties

No residential, commercial, or industrial development on the Reservation is located within FEMA SFHAs, and drainage systems are all recent and oversized. Thus, there are no flooding issues on the Reservation. The risk of flooding is therefore considered to be minimal and the *HAZUS-MH* software was not run to calculate the economic effect of flooding to Reservation lands.



SOURCE(S):
SCCOG, Mohegan Tribe, FEMA

Figure 3-1: FEMA Special Flood Hazard Areas

LOCATION: **Mohegan Reservation & Montville, CT**

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SCCOG HMP Update
Mohegan Tribe Annex

Map By: scottb
MMI#: 3570-05
MXD: H:\3570-05\GIS\Maps\Mohegan\Figure3-1.mxd
1st Version: 6/6/2012
Revision: 6/11/2012
Scale: 1 inch = 1,750 feet

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3.3.3 Vulnerability Analysis of Critical Facilities

As shown on Figure 3-1, no critical facilities associated with the Mohegan Tribe are located within FEMA SFHAs. Tribal personnel indicate that such facilities have no issues with flooding. The risk of flooding to critical facilities is therefore considered to be minimal.

3.4 Potential Mitigation Measures, Strategies, and Alternatives

General potential mitigation measures that can be taken to reduce the effects of inland flooding were discussed in Section 3.7 and in Section 11.2.2 of the Multi-Jurisdictional HMP. General recommendations pertinent to all natural hazards that could affect the Reservation are listed in Section 11 of this annex along with general and specific measures pertinent to reducing inland flooding on the Mohegan Tribe Reservation under the categories of prevention, property protection, emergency services, public education and awareness, natural resource protection, and structural projects.

4.0 COASTAL FLOODING & STORM SURGE

4.1 Setting / Historic Record

The Thames River is tidally influenced adjacent to the Mohegan Reservation. Thus, while the reservation may not typically be a recipient of direct coastal flooding, the effects of hurricane storm surge could be felt on some undeveloped sections of the reservation such as near Trading Cove and the Thames River. Coastal flooding and storm surges have not affected the Reservation since the last HMP.

4.2 Existing Programs, Policies, and Regulations

The Mohegan Tribe does not have any regulations in affect to restrict development in potential storm surge areas. However, such areas are generally coincident with FEMA SFHAs and as such are not developed.

The Mohegan Tribe understands that shelter space at the Mohegan Sun hotel and arena may need to be utilized if a regional evacuation occurred due to a coastal flooding event, although no formal regional agreement is currently in place. A recommendation regarding this possibility is presented in Section 11 of this annex.

4.3 Vulnerabilities and Risk Assessment

This section discusses specific areas at risk to flooding within the Reservation. Areas located on fee lands outside of the reservation are not considered.

4.3.1 Vulnerability Analysis of Areas along Watercourses

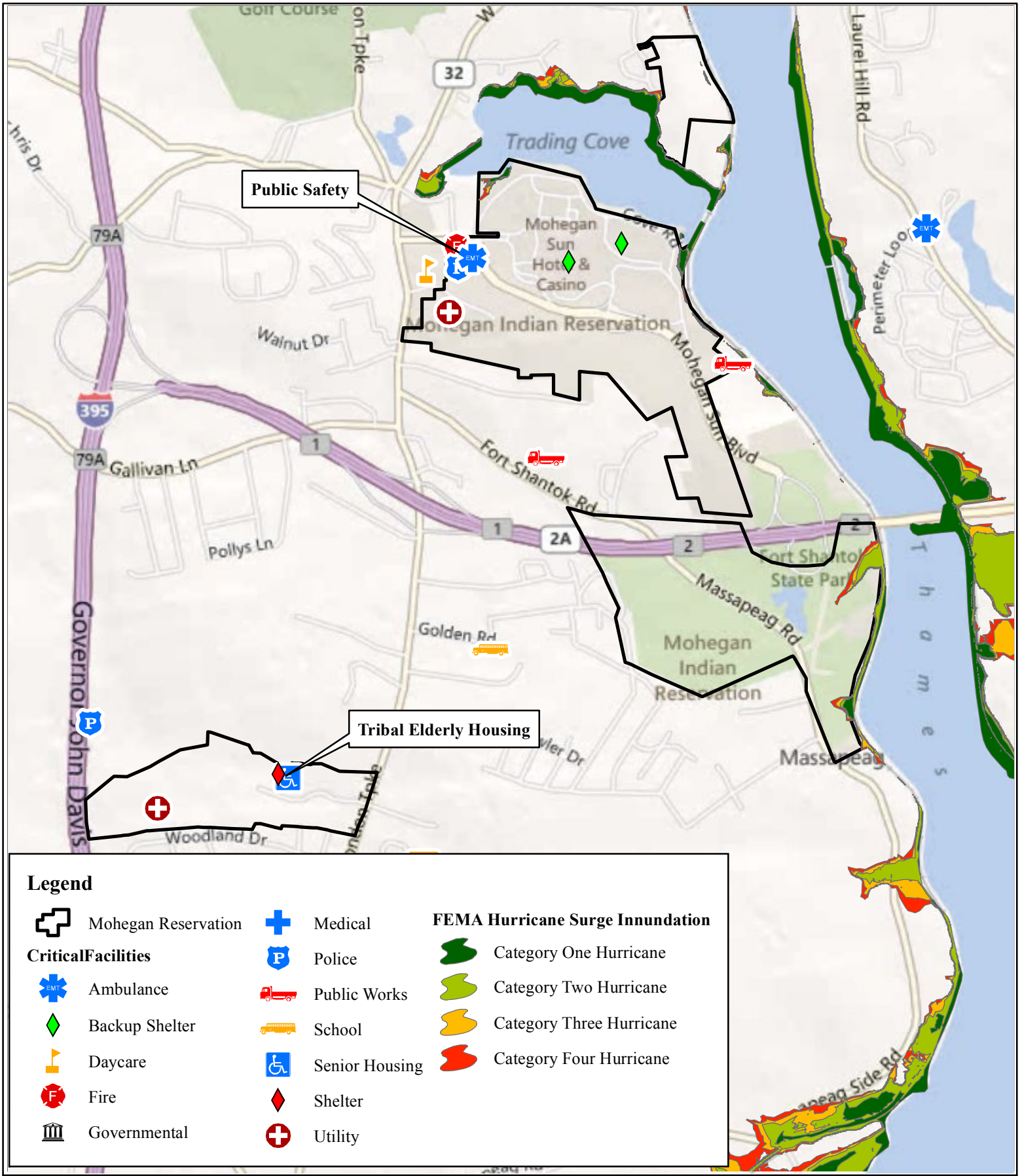
Undeveloped areas of the Reservation along Trading Cove and the Thames River can potentially be affected by hurricane storm surge (Figure 4-1). However, the risk is believed to be minimal since even the potential storm surge from a Category Four hurricane would not reach any developed areas on the Reservation.

4.3.2 Vulnerability Analysis of Private Properties

No residential, commercial, or industrial development on the Reservation is located within potential storm surge areas. The risk of flooding is therefore considered to be minimal.

4.3.3 Vulnerability Analysis of Critical Facilities

As shown on Figure 4-1, no critical facilities associated with the Mohegan Tribe are located within potential storm surge areas. Tribal personnel indicate that such facilities have no issues with flooding. The risk of flooding to critical facilities is therefore considered to be minimal.



SOURCE(S):
SCCOG, Mohegan Tribe, CT DEEP

Figure 4-1: Potential Hurricane Storm Surge Areas

LOCATION: Mohegan Reservation & Montville, CT

N

SCCOG HMP Update
Mohegan Tribe Annex

Map By: scottb
MMI#: 3570-05
MXD: H:\3570-05\GIS\Maps\Mohegan\Figure4-1.mxd
1st Version: 6/6/2012
Revision: 6/11/2012
Scale: 1 inch = 1,750 feet

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4.4 Potential Mitigation Measures, Strategies, and Alternatives

General potential mitigation measures that can be taken to reduce the effects of inland flooding were discussed in Section 4.7 and in Section 11.2.2 of the Multi-Jurisdictional HMP. General recommendations pertinent to all natural hazards that could affect the Reservation are listed in Section 11 of this annex along with general and specific measures pertinent to reducing inland flooding on the Mohegan Tribe Reservation under the categories of prevention, property protection, emergency services, public education and awareness, natural resource protection, and structural projects.

5.0 HURRICANES AND TROPICAL STORMS

5.1 Setting / Historic Record

Several types of hazards may be associated with tropical storms and hurricanes including heavy or tornado winds, heavy rains, and flooding. Wind hazards are widespread and can affect any part of the Reservation. However, some buildings on the Reservation are more susceptible to wind damage than others.

The last major hurricane or tropical storm wind event to affect the Reservation was associated with Hurricane Irene in August 2011. While trees fell throughout the reservation, power outages were limited because nearly all of tribal utilities are located underground, and because Norwich Public Utilities was not forced to interrupt service.

5.2 Existing Programs, Policies, and Mitigation Measures

Wind loading requirements for new buildings are addressed through the International Building Code which is utilized by the Tribe. Tribal personnel note that recent tribal buildings all meet or exceed industry standards for wind loading.

Parts of trees (limbs) or entire tall and older trees may fall during heavy wind events, potentially damaging structures, utility lines, and vehicles. Utility lines are located underground throughout the Reservation. The only utility lines that are above ground that affect the Reservation are located along Route 32 in the Town of Montville and are outside of the Tribe's jurisdiction. The Public Works staff monitors trees as part of their normal rounds. The general grounds budget includes tree maintenance. Mohegan hires outside contractors to trim along feeder lines.

The Mohegan Tribe receives utility service from Norwich Public Utilities. In the case of an extended power outage, residents would be directed to the shelter at the elderly housing facility on Fort Hill Drive. The Mohegan Tribe understands that shelter space at the Mohegan Sun hotel and arena may need to be utilized if a regional evacuation occurred due to a hurricane event, although no formal regional agreement is currently in place. A recommendation regarding this possibility is presented in Section 2.8 of this annex.

Warning is one of the best ways to prevent damage from hurricanes and tropical storms, as these storms often are tracked well in advance of reaching Connecticut. The Tribe can access National Weather Service forecasts via the internet as well as listen to local media outlets (television, radio) to receive information about the relative strength of the approaching storm. This information allows the Tribe to activate its EOP and encourage residents to take protective measures if appropriate.

5.3 Vulnerabilities and Risk Assessment

Although Tribal lands are located inland from the Connecticut shoreline, the Reservation is still vulnerable to hurricane and tropical storm wind damage. Of particular concern are the blockage of roads and the damage to the electrical power supply from falling trees and tree limbs. The

Tribe had very limited outages during Irene and Alfred, as Norwich Public Utilities continued to deliver power.

Direct wind damage to newer buildings from hurricane or tropical storm-level winds is rare on the Reservation since the new buildings were constructed to meet or exceed current building codes. Buildings built prior to 1994 may have been constructed to the Connecticut building code at that time. Older buildings on the reservation are particularly susceptible to roof and window damage from high wind events, although this risk will be reduced with time as these buildings are remodeled or replaced with buildings that meet the current codes.

The Mohegan Tribe has several sacred sites that are vulnerable to wind damage. Some, like Cochegan Rock, Fort Shantok, and Fort Hill, are undeveloped preservation areas where the effects of hurricanes will not diminish the sacred nature or heritage of the site. Others, like the Royal Mohegan Burial Ground in Norwich, are relatively resilient to wind damage as there are no buildings on the site. However, the Mohegan Church and the Tantaquidegeon Museum both include historic buildings that were not specifically designed to resist the effects of wind damage. Despite this vulnerability, these sites are both historic and sacred and therefore no mitigation activities are planned, particularly as both have been renovated in recent years. Future renovation activities may take into account the effects of wind.

The potential economic effect of wind damage to SCCOG was evaluated in the Multi-Jurisdictional HMP. A separate analysis was not performed specifically for the Reservation.

5.4 Potential Mitigation Measures, Strategies, and Alternatives

General potential mitigation measures that can be taken to reduce the effects of wind damage from hurricanes and tropical storms were discussed in Section 5.7 and in Section 11.2.3 of the Multi-Jurisdictional HMP. General recommendations pertinent to all natural hazards that could affect the Reservation are listed in Section 11 of this annex along with general and specific measures pertinent to reducing wind damage on the Mohegan Tribe Reservation under the categories of prevention, property protection, emergency services, public education and awareness, natural resource protection, and structural projects.

6.0 SUMMER STORMS AND TORNADOES

6.1 Setting / Historic Record

Similar to hurricanes and winter storms, wind damage associated with summer storms and tornadoes has the potential to affect any area of the Reservation. Furthermore, because these types of storms and the hazards that result (flash flooding, wind, hail, and lightning) might have limited geographic extent, it is possible for a summer storm to harm one area within the Reservation without harming another. Such storms occur on the Reservation each year, although hail and direct lightning strikes to Reservation lands are rarer. No tornadoes have occurred on the Reservation since the last HMP.

6.2 Existing Programs, Policies, and Mitigation Measures

Warning is the most viable and therefore the primary method of existing mitigation for tornadoes and thunderstorm-related hazards. The NOAA National Weather Service issues watches and warnings when severe weather is likely to develop or has developed, respectively. The Tribe can access National Weather Service forecasts via the internet as well as listen to local media outlets (television, radio) to receive information about the relative strength of the approaching storm. This information allows the Tribe to activate its EOP and encourage residents to take protective measures if appropriate.

Aside from warnings, several other methods of mitigation for wind damage are employed by the Tribe as explained in Section 5.2 within the context of hurricanes and tropical storms. In addition, the International Building Code includes guidelines for the proper grounding of buildings and electrical boxes to protect against lightning damage.

6.3 Vulnerabilities and Risk Assessment

Summer storms are expected to occur each year and are expected to at times produce heavy winds, heavy rainfall, lightning, and hail. All areas of the Reservation are equally likely to experience the effects of summer storms.

Most thunderstorm damage is caused by straight-line winds exceeding 100 mph. Experience has generally shown that wind in excess of 50 miles per hour (mph) will cause significant tree damage during the summer season as the effects of wind on trees is exacerbated when the trees are in full leaf. The damage to buildings and cable utilities due to downed trees has historically been the biggest problem associated with wind storms. Heavy winds can take down trees near power lines, leading to the start and spread of fires. Such fires can be extremely dangerous during the summer months during dry and drought conditions. Fortunately, the Reservation has nearly all of its utilities located underground such that downed trees are not a utility issue.

Lightning and hail are generally associated with severe thunderstorms and can produce damaging effects. All areas of the reservation are equally susceptible to damage from lightning and hail, although lightning damage is typically mitigated by warnings and proper grounding of buildings and equipment. Hail is primarily mitigated by warning. These are considered likely events each year, but typically cause limited damage on the reservation. The majority of buildings are well-constructed and meet current building codes.

Although tornadoes pose a threat to all areas of Connecticut, their occurrence is least frequent in New London County as compared with the rest of the State. Thus, while the possibility of a tornado striking the Reservation exists, it is considered to be an event with a very low probability of occurrence.

As discussed in Section 5.3, the Mohegan Tribe has several sacred sites that are vulnerable to summer storm damage. Hail, lightning, and heavy wind could each potentially cause damage to these areas. However, these sites are historic and sacred and no mitigation activities are planned at this time. Future renovation activities may take into account the effects of summer storms, particularly lightning.

6.4 Potential Mitigation Measures, Strategies, and Alternatives

General potential mitigation measures that can be taken to reduce the effects of wind damage were discussed in Section 5.7 and in Section 11.2.3 of the Multi-Jurisdictional HMP. No additional recommendations are available specific to reducing damage from summer storms and tornadoes. Refer to Section 11 of this annex for recommendations related to wind damage and general recommendations related to emergency services.

7.0 WINTER STORMS AND NOR'EASTERS

7.1 Setting / Historic Record

Similar to hurricanes and summer storms, winter storms have the potential to affect any area of the Reservation. However, unlike summer storms, winter storms and the hazards that result (wind, snow, and ice) have more widespread geographic extent. In general, winter storms are considered highly likely to occur each year (major storms are less frequent), and the hazards that result (nor'easter winds, snow, and blizzard conditions) can potentially have a significant effect over a large area of the Reservation. Winter storms and nor'easters have affected the Reservation since the last HMP, but only storms during the winter of 2010-2011 had a significant effect.

7.2 Existing Programs, Policies, and Mitigation Measures

Existing programs applicable to winter storm winds are the same as those discussed in Sections 5.2 and 6.2. Programs that are specific to winter storms are generally those related to preparing plows and sand and salt trucks; tree trimming and maintenance to protect power lines, roads, and structures; and other associated snow removal and response preparations.

As it is almost guaranteed that winter storms will occur annually in Connecticut, it is important to locally budget fiscal resources toward snow management. Snow is the most common natural hazard requiring additional overtime effort from Mohegan staff, as parking garages and roadways need constant maintenance during storms. The Public Works Department oversees snow removal on the Reservation. Employees understand that the livelihood of the Tribe depends on there being constant access to its facilities, so response to storms is quick and efficient. Salt is stored at the Public Works facility.

The International Building Code specifies that a pressure of 30 pounds per square foot be used as the base "ground snow load" for computing snow loading for roofs above habitable attics and sleeping areas. A minimum pressure of 40 pounds per square foot is the base snow loading for all other areas. The Tribe monitored the weight of snow on all its buildings during the winter of 2010-2011. They took depth measurements to estimate snow weight and compared the estimates to the bearing load of the structure. They hired crews to shovel several buildings as the weight approached safety limits, but they were still well below the bearing loads of the structures. The Engineering Department now has a draft written plan to address snow load issues each winter.

7.3 Vulnerabilities and Risk Assessment

Severe winter storms can produce an array of hazardous weather conditions, including heavy snow, blizzards, freezing rain and ice pellets, flooding, heavy winds, and extreme cold. Further "flood" damage could be caused by flooding from frozen water pipes. Often, tree limbs on roadways are not suited to withstand high wind and snow or ice loads.

This section focuses on those effects commonly associated with winter storms, including those from blizzards, ice storms, heavy snow, freezing rain, and extreme cold. Warning and education can prevent most injuries from winter storms. Most deaths from winter storms are indirectly related to the storm, such as from traffic accidents on icy roads and hypothermia from prolonged exposure to cold. Damage to trees and tree limbs and the resultant downing of utility cables are a common effect of these types of events. Secondary effects can include loss of power and heat.

The majority of Tribal buildings are recently constructed and therefore not susceptible to damage from heavy snow. The draft snow removal plan in place by the Engineering Department requires visits and measurements to determine if snow loads are approaching safety limits such that roof shoveling can be prioritized. Thus, while some tribal buildings could be susceptible to heavy snow loads, they will be cleared quickly if safety is a concern.

Icing is not an issue anywhere on the Reservation. In general, there are few steep slopes such that extra sanding and salting of the roadways in necessary locations alleviates any trouble spots.

7.4 Potential Mitigation Measures, Strategies, and Alternatives

Potential mitigation measures for flooding caused by nor'easters include those appropriate for flooding that were discussed in Section 3.7 of the Multi-Jurisdictional HMP and Section 11 of this annex. However, winter storm mitigation measures must also address blizzards, snow, and ice hazards. General potential mitigation measures that can be taken to reduce the effects of wind damage were discussed in Section 5.7 and in Section 11.2.3 of the Multi-Jurisdictional HMP. General recommendations pertinent to all natural hazards that could affect the Reservation are listed in Section 11 of this annex along with general and specific measures pertinent to reducing damage from winter storms on the Mohegan Tribe Reservation under the categories of prevention, property protection, emergency services, public education and awareness, natural resource protection, and structural projects.

8.0 EARTHQUAKES

8.1 Setting / Historic Record

An earthquake is a sudden rapid shaking of the earth caused by the breaking and shifting of rock beneath the earth's surface. Earthquakes can cause buildings and bridges to collapse; disrupt gas, electric, and telephone lines; and often cause landslides, flash floods, fires, avalanches, and tsunamis. Earthquakes can occur at any time and often without warning. Detailed descriptions of earthquakes, scales, and effects can be found in Section 8 of the Multi-Jurisdictional HMP. Despite the low probability of an earthquake occurrence, earthquake damage presents a potentially catastrophic hazard to the Reservation. However, it is very unlikely that the Reservation would be at the epicenter of such a damaging earthquake. No major earthquakes have affected the Reservation since the last HMP.

8.2 Existing Programs, Policies, and Mitigation Measures

The International Building Codes include design criteria for buildings specific to each region as adopted by Building Officials and Code Administrators (BOCA). These include the seismic coefficients for building design on the Reservation. The Tribe has adopted these codes for new construction, and they are enforced by the Regulation and Compliance Department.

Due to the infrequent nature of damaging earthquakes, Tribal land use policies do not directly address earthquake hazards. However, the potential for an earthquake and emergency response procedures is addressed in the Tribal EOP.

8.3 Vulnerabilities and Risk Assessment

Surficial earth materials behave differently in response to seismic activity. Unconsolidated materials such as sand and artificial fill can amplify the shaking associated with an earthquake. As noted in Section 2.1, buildings in the vicinity of Mohegan Sun Casino are built on stratified drift, making this area potentially more at risk of earthquake damage than the areas of Reservation underlain by glacial till. The best mitigation for future development in areas of sandy material is the application of the most stringent standards in the International Building Code, exceeding the building code requirements, or, if the Tribe deems necessary, the possible prohibition of new construction. The areas that are not at increased risk during an earthquake due to unstable soils are the areas underlain by glacial till.

A known fault line, the Honey Hill fault, passes just to the north of the casino area. Unlike seismic activity in California, earthquakes in Connecticut are not associated with specific known active faults. However, bedrock in Connecticut and New England in general is typically formed from relatively hard metamorphic rock that is highly capable of transmitting seismic energy over great distances. For example, the relatively strong earthquake that occurred recently in Virginia was felt in Connecticut because the energy was transmitted over a great distance through such hard bedrock.

The built environment on the Reservation primarily includes relatively new construction that is seismically designed. Thus, it is believed that most tribal buildings would be able to withstand the effects of a significant earthquake with moderate damage or less. Those Tribal residents who live or work in older, non-reinforced masonry buildings that pre-date Federal recognition in 1994

are at the highest risk for experiencing earthquake damage. For example buildings such as the Tantaquideon Museum and the Mohegan church are historic buildings that were not seismically designed and are considered to be vulnerable to damage even from a relatively minor intensity event. No mitigation is currently proposed for sacred structures, although future renovation efforts may include seismically-designed building construction or protection for sacred features.

Areas of steep slopes can collapse during an earthquake, creating landslides. Fortunately, the Reservation has relatively limited areas of steep slopes and the majority of developed areas have been reinforced. Thus, landslides are not a concern on the Reservation.

Seismic activity can also break utility lines such as water mains, gas mains, electric and telephone lines, and stormwater management systems. Damage to utility lines can lead to fires, especially in electric and gas mains. Dam failure can also pose a significant threat to developed areas during an earthquake. For this HMP, dam failure has been addressed separately in Section 10.0. As noted previously, nearly all utility infrastructure on the Reservation is located underground. A quick and coordinated response with Norwich Public Utilities will be necessary to inspect damaged utilities following an earthquake, to isolate damaged areas, and to bring backup systems online. This is covered in the Tribal EOP.

A *HAZUS-MH* analysis of the potential economic and societal impacts to the SCCOG region from earthquake damage is detailed in the Multi-Jurisdictional HMP. The analysis addresses a range of potential impacts from any earthquake scenario, estimated damage to buildings by building type, potential damage to utilities and infrastructure, predicted sheltering requirements , estimated casualties, and total estimated losses and direct economic impact that may result from various earthquake scenarios.

8.4 Potential Mitigation Measures, Strategies, and Alternatives

Due to the low probability of occurrence, potential mitigation measures related to earthquake damage primarily include adherence to building codes and emergency response services. Both of these are mitigation measures common to all hazards as listed in Section 11 of this annex. The Multi-Jurisdictional HMP also includes additional recommendations for mitigating the effects of earthquakes that are also presented in Section 11.

9.0 WILDFIRES

9.1 Setting / Historic Record

Wildfires are considered to be highly destructive, uncontrollable fires. The most common causes of wildfires are arson, lightning strikes, and fires started from downed trees hitting electrical lines. Thus, wildfires have the potential to occur anywhere and at any time in both undeveloped and lightly developed areas of the Reservation. Structural fires in higher density areas of the Reservation, such as at the Mohegan Sun Casino, are not directly addressed herein. No wildfires have occurred on the Reservation since the last HMP.

9.2 Existing Programs, Policies, and Mitigation Measures

Monitoring of potential fire conditions is an important part of mitigation. The Connecticut DEEP Forestry Division uses the rainfall data recorded by the Automated Flood Warning system to compile forest fire probability forecasts. This allows the DEEP to monitor drier areas to be prepared for forest fire conditions. The Mohegan Tribe can access this information over the internet. The Tribe also receives "Red Flag" warnings via local media outlets.

Existing mitigation for wildland fire control is typically focused on building codes, public education, Fire Department training, and maintaining an adequate supply of equipment. The Mohegan Tribe's Fire Code is similar to the Life Safety Code used throughout the State of Connecticut.

The Mohegan Tribal Fire Department is considered to be the premier firefighting and emergency medical service operation in southeastern Connecticut. It goes to fires as quickly as possible both on the Reservation and within Montville. The Tribe has a 1,000,000-gallon storage tank near Mohegan Sun that is used to store fire protection water. Fire pumps are tested weekly and are considered to provide excellent pressure. In addition, all developed areas on the Reservation have public water service and fire hydrants provided by Norwich Public Utilities. Each hydrant is banded such that the Fire Department knows how much pressure is available. The Tribe does not have any dry hydrants.

9.3 Vulnerabilities and Risk Assessment

The risk for wildlife on the Reservation is very low for several reasons. First, the Reservation is relatively small and mostly developed such that there are few outlying areas where a wildfire could advance undetected. As such, there have been no major fires in recent history. Secondly, all developed areas on the Reservation have public water service provided by Norwich Public Utilities and the Town of Montville. This public water service, combined with the 1,000,000-gallon storage tank, provide sufficient water volume and pressure to fight nearly any fire.

Third, the Thames River and Trading Cove are nearby if additional firefighting water was necessary. Fourth, there are no notable dead ends or one-way roads that are difficult to access on the Reservation. Finally, the Tribe has agreements with its neighbors to provide assistance in case of an emergency. Thus, if a wildfire did occur, it would likely be contained to within only a few acres.

Off the reservation, the only potential area of concern for Tribal personnel would be the Fort Hill area. This area has some grassland areas, but they are easy to access such that a wildfire would be contained quickly.

9.4 Potential Mitigation Measures, Strategies, and Alternatives

Potential mitigation measures for wildfires include a combination of prevention, education, and emergency planning as presented in Section 11.

10.0 DAM FAILURE

10.1 Setting / Historic Record

Dam failures can be triggered suddenly with little or no warning and often in connection with natural disasters such as floods and earthquakes. Dam failures can occur during flooding when the dam breaks under the additional force of floodwaters. In addition, a dam failure can cause a chain reaction where the sudden release of floodwaters causes the next dam downstream to fail. While flooding from a dam failure generally has a limited geographic extent, the effects are potentially catastrophic depending on the downstream population. A dam failure affecting the Mohegan Tribe is considered a possible event each year although the damage would likely be minimal. No dam failures affected the Reservation since the time of the last HMP.

10.2 Existing Programs, Policies, and Mitigation Measures

The Mohegan Tribe has only one dam on its Reservation and it is located at Fort Shantok as an impoundment of Shantok Brook. The Fort Shantok dam is a low-hazard earthen dam that is about 12 feet high. It was formerly owned and operated by the Connecticut DEEP. The dam was recently rebuilt by the Tribe and a fish ladder was added. The dam is believed to be in excellent condition. The Tribe does not have a separate EOP for the dam.

Other dams in the region whose failure could impact the Thames River are under the jurisdiction of the Connecticut DEEP. The dam safety statutes are codified in Section 22a-401 through 22a-411 inclusive of the Connecticut General Statutes. Sections 22a-409-1 and 22a-409-2 of the Regulations of Connecticut State Agencies have been enacted, which govern the registration, classification, and inspection of dams. Dams must be registered by the owner with the DEEP according to Connecticut Public Act 83-38. Owners of high and significant hazard dams are required to maintain EOPs for such dams.

10.3 Vulnerabilities and Risk Assessment

The risk of dam failure impacting any areas of the Reservation is minimal. The Fort Shantok Dam is believed to be in excellent condition and it is not located upstream of any developed areas. A parking lot access road in Fort Shantok State Park is in close proximity downstream of the dam, and a railroad track is located between the reservation and the Thames River. This infrastructure is unlikely to be affected by a failure of the dam.

It is believed that the Reservation would not be affected by the failure of any dams located off the Reservation. This is because Trading Cove and the Thames River have a significant capacity to absorb flood waters during a sunny day dam failure event, and the developed areas of the Reservation are located above the 0.2% annual chance floodplain and the storm surge areas predicted for a Category Four hurricane for a failure event associated with heavy rainfall.

10.4 Potential Mitigation Measures, Strategies, and Alternatives

Given the fact that the Mohegan Tribe is unlikely to be affected by flooding from dam failure, the only one recommendation is appropriate at this time as presented in Section 11.

11.0 RECOMMENDATIONS

11.1 Summary of Specific Recommendations

All recommendations presented in this plan for each hazard are summarized below:

11.1.1 Recommendations Applicable to All Hazards

Regional Coordination

- Continue to promote inter-jurisdictional coordination efforts for emergency response.
- Continue to promote local and regional planning exercises that increase readiness to respond to disasters.
- Continue to evaluate communication capabilities and pursue upgrades to communication and ensure redundant layers of communication are in place within the Tribe and other SCCOG communities, New London County, and the State of Connecticut.
- Continue to promote regional transportation planning through SCCOG to balance general transportation, shipping, and potential evacuation needs.
- Work with SCCOG to perform a regional study to identify the vulnerability of critical facilities that may be unable to withstand natural hazard damage. Emphasis should be placed on critical infrastructure, shelters and other sites to ensure structural integrity against various hazards and adequacy of backup supplies.
- Work with SCCOG to develop regional evacuation scenarios that include but build upon the Millstone evacuation plan.
- Work with SCCOG to determine the level of interest for Mohegan Sun Arena and hotel to be a potential regional shelter location. If the level of interest is high enough, pursue the necessary agreements such that the Tribe is logistically prepared in case a major disaster strikes.

Local Emergency Response

- Continue to review and update the Tribal EOP at least once annually.
- Add the HMP update as an annex to the Tribal EOP.
- Continue to maintain emergency response training and equipment and upgrade equipment when possible.
- Encourage tribal officials to attend FEMA-sponsored training seminars at the Emergency Management Institute (EMI) in Emmitsburg, Maryland. All of these workshops are free of charge. Tuition, travel and lodging are provided by FEMA for the EMI training. Annual training sessions include emergency management, environmental reviews, the FEMA grant programs, the NFIP and CRS and others related to the other hazards.

- Continue to evaluate emergency shelters, update supplies, and check communication equipment.

- Continue to promote dissemination of public information regarding natural hazard effects and mitigation measures into local governmental and community buildings. Specifically,

  - ⇨ Obtain copies of the disaster planning guides and manuals from the "Are You Ready?" series (http://www.ready.gov/are-you-ready-guide).

  - ⇨ Encourage tribal residents and other members to purchase NOAA weather radios with an alarm feature.

  - ⇨ Post hazard preparedness information on the tribal community website. Include links to established sources at the State of Connecticut and FEMA.

- Consider implementing a Reverse 9-1-1 system to telephone warnings into potentially affected areas. While not pertinent for flooding hazards, this system could potentially save lives from a tornado strike.

Prevention

- Form a committee to review planning documents in the Office of Land Management and integrate appropriate elements of this HMP into those planning documents.

- Continue reviewing building plans to ensure proper access for emergency vehicles.

- Continue to require the burying of utility lines where appropriate.

- Continue to enforce the appropriate building code for new building projects.

- Encourage tribal residents and members to install and maintain lightning rods on their buildings.

11.1.2 Recommendations Applicable to Inland and Coastal Flooding

- Continue to prohibit new development activities within SFHAs to the greatest extent possible within the Tribal land use regulations.

- Consider prohibiting new development activities within potential storm surge areas to the greatest extent possible within the Tribal land use regulations.

- Make available FEMA-provided flood insurance brochures at public accessible places such as the local government buildings and the Community Center. Encourage tribal members to purchase flood insurance if they are located within a FEMA SFHA.

- Continue to regulate development in protected and sensitive areas, including steep slopes, wetlands, and floodplains.

- Utilize recently available extreme rainfall data to determine existing sizing of culverts. Encourage bridge replacements and culvert replacements in areas found to be undersized.

- Continue to perform catch basin and culvert surveys to identify and prioritize structures in need of replacement and to perform maintenance and cleaning.

- Over the long term, upgrade stormwater collection and discharge systems to keep up with rising sea level.

11.1.3 Recommendations Applicable to Wind Damage from Hurricanes, Tropical Storms, Summer Storms, Tornados, and Winter Storms

- Promote the use of functional shutters for older buildings on the Reservation to guard against window breakage which can result in structural failure. Investigate funding sources to promote this relatively inexpensive type of retrofitting on a large scale.

- Identify a location or locations on the Reservation for a brush-disposal operation for dealing with debris after wind storms. Determine how these trees can be reused within the Reservation (chips, firewood, composting) to reduce costs of exporting.

- Consider surveying all tribal buildings, particularly historic buildings, to determine their ability to withstand wind loading.

- Visit tribal schools (as is currently done under fire prevention) and educate children about the risks of wind events (and other natural hazards) and how to prepare for them.

11.1.4 Recommendations Applicable to Other Damage from Winter Storms

- Finalize the draft written plan for inspecting and prioritizing the removal of snow from Tribally-owned structures.

- Make funding available to the Public Works Department each year for clearing snow from roofs as well as from roads and parking lots.

- Provide information for generally protecting tribal residents during cold weather and for mitigating icing and insulating pipes at Tribal residences.

- Continue to identify areas that are difficult to access during winter storm events and develop contingency plans for emergency personnel.

11.1.5 Recommendations Applicable to Earthquakes

- Ensure that tribal departments have adequate backup supplies and facilities for continued functionality in case earthquake damage occurs to these buildings where these critical facilities are housed. This should be part of the regional critical facility study discussed in Section 2.8.

- Consider preventing residential development in areas prone to collapse such as below steep slopes or in areas prone to liquefaction.

11.1.6 Recommendations Applicable to Wildfires

- Continue to evaluate fire flows, available water supply, and areas at risk of wildfire on the Reservation.
- Extend public water supply and fire protection to future areas identified as being particularly at risk.
- Pursue other sources of firefighting water where adequate supplies do not exist, such as through the installation of dry hydrants.
- Continue to support public outreach programs to increase awareness of forest fire danger, equipment usage, and protecting homes from wildfires. Educational materials should be made available at the Tribal Community Center and the Government Building.
- Ensure that provisions of Tribal regulations regarding fire protection facilities and infrastructure are being enforced.

11.1.7 Recommendations Applicable to Dam Failure

- Continue to maintain the Fort Shantok dam in excellent condition.

11.2 Prioritization of Specific Recommendations

As explained in Section 11.3 of the Multi-Jurisdictional HMP, the STAPLEE method was utilized in this annex to prioritize recommendations. Table 11-1 presents the STAPLEE matrix for the Mohegan Tribe. Each recommendation includes the Tribal department responsible for implementing the recommendation, a proposed schedule, and whether or not the recommendation is new or originally from the previous HMP. Refer to Section 2.7 for the list of previous plan recommendations and whether or not each recommendation was carried forward into this HMP.

TABLE 11-1: MOHEGAN TRIBE STAPLEE MATRIX FOR PRIORITIZING RECOMMENDATIONS

Implementation of Current Recommendations	Existing or New Recommendation?	Responsible Department [1]	Schedule	Cost [2]	Potential Funding Source [3]	Weighted STAPLEE Criteria [4]															Total STAPLEE Score
						Benefits								*Costs*							
						Social	Technical (x2)	Administrative	Political	Legal	Economic (x2)	Environmental	**STAPLEE Subtotal**	Social	Technical (x2)	Administrative	Political	Legal	Economic (x2)	Environmental	**STAPLEE Subtotal**	
ALL HAZARDS																					
Regional Coordination																					
Continue to promote inter-jurisdictional coordination efforts for emergency response	New	TC, PS	2012-2017	Minimal	OB	1	1	1	1	1	1	1	**9.0**								**0.0**	***9.0***
Continue to promote local and regional planning exercises that increase readiness to respond to disasters	New	PS	2012-2017	Low	OB	1	1	1	1	1	0.5	1	**8.0**								**0.0**	***8.0***
Continue to evaluate communication capabilities and pursue upgrades to communication and ensure redundant equipment is available	Existing	PS	2012-2017	Low	OB. CI	1	1	1	1	1	1	1	**9.0**								**0.0**	***9.0***
Continue to promote regional transportation planning through SCCOG	Existing	LP	2012-2017	Low	OB	0.5	1	1	1	1	0.5		**6.5**								**0.0**	***6.5***
Work with the SCCOG to perform a regional study of the vulnerability of critical facilities to natural hazard damage	New	TC, PS	2012-2017	Low	OB	1	0.5	0.5	0.5	1	0.5		**5.0**		-0.5				-0.5		**-2.0**	***3.0***
Work with the SCCOG to develop regional evacuation scenarios that include but build upon the Millstone evacuation plan	New	PS	2012-2017	Low	OB	1	0.5	1	0.5	1	0.5		**5.5**						-0.5		**-1.0**	***4.5***
Work with the SCCOG to determine interest in Mohegan Sun Arena becoming a regional shelter location and pursue if appropriate	New	TC, PS	2012-2017	Moderate	OB	0.5	1	0.5		1			**4.0**				-0.5		-1		**-2.5**	***1.5***
Local Emergency Response																					
Continue to review and update the Tribal EOP at least once annually	Existing	PS	2012-2017	Low	OB	1	1	1	1	1	1	1	**9.0**								**0.0**	***9.0***
Add the HMP update as an annex to the Tribal EOP.	New	PS	2012-2017	Minimal	OB	1	1	1	1	1	1	1	**9.0**								**0.0**	***9.0***
Continue to maintain emergency response training and equipment and upgrade equipment when possible	Existing	PS	2012-2017	Moderate	OB, CI	1	1	1	1	1	0.5	1	**8.0**						-0.5		**-1.0**	***7.0***
Encourage tribal officials to attend FEMA-sponsored training seminars at EMI	New	PS	2012-2017	Minimal	OB	0.5	0.5	1	1	1	1	0.5	**7.0**								**0.0**	***7.0***
Continue to evaluate emergency shelters, update supplies, and check communication equipment	Existing	PS	2012-2017	Low	OB	1	1	1	1	1	1		**8.0**								**0.0**	***8.0***
Continue to promote dissemination of public information regarding natural hazard effects into Tribal community and Government buildings	Existing	PS	2012-2017	Minimal	OB	1	1	1	1	1	1	1	**9.0**								**0.0**	***9.0***
Consider implementing a Reverse 9-1-1 service for tribal residents	Existing	PS	2012-2017	Minimal	CI	0.5	1	1		1	0.5		**5.5**						-1		**-2.0**	***3.5***
Prevention																					
Form a committee to review planning documents in the Office of Land Management and integrate appropriate elements of this HMP	New	PS, LM, RC	2012-2017	Low	OB	0.5	1	1	0.5	1	1	1	**8.0**	-0.5			-0.5				**-1.0**	***7.0***
Continue reviewing building plans to ensure proper access for emergency vehicles	New	PS	2012-2017	Minimal	OB	1	1	1	1	1	1		**8.0**								**0.0**	***8.0***
Continue to require the burying of utility lines where appropriate	Existing	LP, RC	2012-2017	Minimal	OB	1	1	1	1	1	1	0.5	**8.5**								**0.0**	***8.5***
Continue to enforce the appropriate building code for new building projects	New	RC	2012-2017	Minimal	OB	1	1	1	1	1	1		**8.0**								**0.0**	***8.0***
Encourage tribal residents and members to install and maintain lightning rods on their structures	New	PS	2012-2017	Minimal	OB	1	0.5	1	1	1	0.5	0.5	**6.5**								**0.0**	***6.5***
FLOODING RECOMMENDATIONS																					
Continue to prohibit new development activities within SFHAs to the greatest extent possible within Tribal land use regulations	New	LP, RC	2012-2017	Minimal	OB	1	1	1	1	1	1	1	**9.0**								**0.0**	***9.0***
Consider prohibiting development activities within potential storm surge areas as mapped by FEMA	New	LP, RC	2012-2017	Minimal	OB	0.5	1	1	0.5	0.5	1	1	**7.5**				-0.5		-0.5		**-1.5**	***6.0***
Make available FEMA-provided flood insurance brochures and encourage tribal members to purchase insurance if they are in a SFHA	New	LP, RC	2012-2017	Minimal	OB	1	1	1	1	1	1		**8.0**								**0.0**	***8.0***
Continue to regulate development in protected and sensitive areas, including steep slopes, wetlands, and floodplains	New	LP, RC	2012-2017	Minimal	OB	1	1	1	1	1	1	1	**9.0**								**0.0**	***9.0***
Utilize the recently available extreme rainfall data to determine existing culvert sizing and encourage upgrades where undersized	New	DPW, RC	2012-2017	Moderate	CI	0.5	1	1		1			**4.5**				-1		-0.5		**-2.0**	***2.5***
Continue to perform catch basin and culvert surveys to prioritize upgrades and perform maintenance and cleaning	Existing	DPW	2012-2017	Moderate	OB	1	1	1	1	1	0.5	0.5	**7.5**								**0.0**	***7.5***
Upgrade stormwater collection and discharge systems to keep up with rising sea level	New	RC	2017-2027	High	CI		0.5	1		0.5			**2.5**		-0.5		-1		-1		**-4.0**	***-1.5***
WIND DAMAGE RELATED TO HURRICANES, SUMMER STORMS, AND WINTER STORMS																					
Promote the use of shutters for older properties to guard against window breakage which can result in structural failure	New	PS	2012-2017	Minimal	OB, CI	1	0.5	1	1	1	0.5		**6.0**								**0.0**	***6.0***
Identify a location for a brush-disposal operation for dealing with debris following wind storms and determine potential reuse	New	DPW	2012-2017	Minimal	CI	0.5	1	1	1	1	1		**7.5**								**0.0**	***7.5***
Consider surveying all tribal buildings, particularly historic buildings to determine their ability to withstand wind loading	New	RC	2012-2017	Low	OB	1	0.5	1	0.5	1	0.5		**5.5**								**0.0**	***5.5***
Visit Tribal schools and educate children about the risks of wind events and how to prepare for them	New	PS	2012-2017	Low	OB	1	1	1	1	1	0.5		**7.0**								**0.0**	***7.0***

TABLE 11-1: MOHEGAN TRIBE STAPLEE MATRIX FOR PRIORITIZING RECOMMENDATIONS

Implementation of Current Recommendations	Existing or New Recommendation?	Responsible Department [1]	Schedule	Cost [2]	Potential Funding Source [3]	Weighted STAPLEE Criteria [4]															Total STAPLEE Score
						Benefits								*Costs*							
						Social	Technical (x2)	Administrative	Political	Legal	Economic (x2)	Environmental	**STAPLEE Subtotal**	Social	Technical (x2)	Administrative	Political	Legal	Economic (x2)	Environmental	**STAPLEE Subtotal**	
WINTER STORMS																					
Finalize the draft written plan for inspecting and prioritizing the removal of snow from Tribally-owned structures	New	DPW, RC	2012-2017	Low	OB	1	1	1	1	1	0.5		**7.0**								**0.0**	***7.0***
Make funding available to the Public Works Department each year for clearing snow from roofs as well as from roads and parking lots	New	TC	2012-2017	Moderate	OB	1	1	1	1	1	0.5		**7.0**				-0.5				**-0.5**	***6.5***
Provide information for protecting tribal residents during cold weather and for mitigating icing and insulating pipes at Tribal residences	New	PS	2012-2017	Minimal	OB	1	1	1	1	1	1		**8.0**								**0.0**	***8.0***
Continue to identify areas that are difficult to access during winter storm events and develop contingency plans to access such areas	New	DPW, PS	2012-2017	Minimal	OB	1	1	1	1	1	1		**8.0**								**0.0**	***8.0***
EARTHQUAKES																					
Ensure that Tribal departments have adequate backup supplies and facilities for continued functionality following an earthquake	New	PS	2012-2017	Moderate	OB, CI		0.5	1	0.5	0.5			**3.0**		-0.5		-1				**-2.0**	***1.0***
Consider preventing residential development in areas prone to collapse such as below steep slopes or areas prone to liquefaction	New	RC, LP	2012-2017	Minimal	OB	0.5	1	1	0.5	0.5	1	0.5	**7.0**				-0.5				**-0.5**	***6.5***
WILDFIRES																					
Continue to evaluate fire flows, available water supply, and areas at risk of wildfire on the Reservation	Existing	FD	2012-2017	Minimal	OB	1	1	1	1	1	1	0.5	**8.5**								**0.0**	***8.5***
Extend public water supply and fire protection to future areas identified as being particularly at-risk	New	PS	2012-2017	Moderate	CI	0.5	1	1	0.5	1		0.5	**5.5**				-0.5		-0.5		**-1.5**	***4.0***
Pursue other sources of firefighting water where adequate supplies do not exist, such as through the installation of dry hydrants	New	PS	2012-2017	Low	CI	0.5	0.5	1		0.5			**3.0**				-0.5		-0.5		**-1.5**	***1.5***
Continue to support public outreach programs to increase awareness of forest fire danger, equipment usage, and protecting homes	New	FD	2012-2017	Low	OB	1	1	1	1	1	0.5	1	**8.0**								**0.0**	***8.0***
Ensure that provisions of Tribal regulations regarding fire protection facilities and infrastructure are being enforced	New	PS	2012-2017	Low	OB	0.5	0.5	1	0.5	1	0.5		**5.0**								**0.0**	***5.0***
DAM FAILURE																					
Continue to maintain the Fort Shantok Dam in excellent condition	New	DPW	2012-2017	Moderate	OB	0.5	1	1	1	1		1	**6.5**						-0.5		**-1.0**	***5.5***

NOTES

1. Departments:
   DPW = Department of Public Works
   FD = Fire Department
   PS = Public Safety
   LP = Land Preservation & Planning
   RC = Regulation & Compliance Office
   TC = Tribal Council
2. Minimal = To be completed by staff or volunteers where costs are primarily printing, copying, or meetings; Low = Costs are less than $10,000; Moderate = Costs are less than $100,000; High = Costs are > than $100,000.
3. OB = Operating Budget; CI = Capital Improvement budget
4. A beneficial or favorable rating = 1; an unfavorable rating = -1. Technical and Financial benefits and costs are double-weighted (i.e. their values are counted twice in each subtotal)

APPENDIX A

ADOPTION RESOLUTION

THE MOHEGAN TRIBE OF INDIANS OF CONNECTICUT
Resolution No. 2013-02

Approval of All Hazard Mitigation Plan

WHEREAS, the Mohegan Tribe of Indians of Connecticut (the "Mohegan Tribe") is an American Indian Tribe recognized by the government of the United States pursuant to the provisions of Title 25 of the Code of Federal Regulations, Part 83; and

WHEREAS, pursuant to Article IX, Section 2 of the Mohegan Tribal Constitution (the "Constitution"), the Mohegan Tribal Council ("Tribal Council") has the authority to exercise all executive and legislative powers reasonable and necessary to achieve the tribal goals set forth in the Constitution, including to promote the general welfare of the Mohegan Tribe; and

WHEREAS, the Tribal Council of the Mohegan Tribe is authorized under Article IX, Section 2(a) of the Constitution of the Mohegan Tribe to approve contracts or agreements with tribal, foreign, federal, state or local governments, with private persons or with corporate bodies; and

WHEREAS, the Tribal Council is authorized under Article IX, Section 2(b) of the Constitution to approve or disapprove any sale, disposition, lease or encumbrance of tribal lands, interests in land, tribal funds or other tribal assets or resources with or without advertisement for any period not in excess of the period provided for by federal law; and

WHEREAS, the Tribal Council is authorized under Article IX, Section 2(f) of the Constitution to appropriate available tribal funds for the benefit of the Mohegan Tribe; and

WHEREAS, the Tribal Council is authorized under Article IX, Section 2(i) of the Mohegan Constitution to approve or disapprove allocations or disbursements of tribal funds (or grant or contract funds under the administrative control of the Mohegan Tribe) not specifically appropriated or authorized in a budget approved by the Tribal Council; and

WHEREAS, the Mohegan Tribe has historically experienced severe damage from natural and human-caused hazards such as flooding, wildfire, earthquake, drought, thunderstorms/high winds, and hazardous materials incidents on many occasions in the past century, resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Mohegan Tribe has developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for its All Hazard Mitigation Plan (the "Plan") under the requirements of 44 CFR 201.7; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and plan maintenance procedures for the Mohegan Tribe; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural and human caused hazards that impact the Mohegan Tribe, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Mohegan Tribe eligible for funding to alleviate the impacts of future hazards on the Reservation; and

WHEREAS, the Tribal Council, with the assistance of its staff and the Office of Legal Counsel, has reviewed the Plan, substantially in the form attached hereto as Exhibit A, and desires to approve same.

NOW, THEREFORE, be it resolved that the Tribal Council, on behalf of the Mohegan Tribe, does hereby approve the All Hazard Mitigation Plan (the "Plan"), in substantially the same form attached hereto as Exhibit A; and it is

FURTHER RESOLVED, that the Plan is hereby adopted as an official plan of the Mohegan Tribe; and it is

FURTHER RESOLVED, that the respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them; and it is

FURTHER RESOLVED, that future revisions and Plan maintenance required by 44 CFR 201.7 and FEMA, are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution; and it is

FURTHER RESOLVED, that an annual report on the progress of the implementation elements of the Plan shall be presented to the Tribal Council by October 1 of each calendar year; and it is

FURTHER RESOLVED, that the Mohegan Tribe 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); and will amend its Plan whenever necessary to reflect applicable changes in Tribe, State or Federal laws and statutes as required in 44 CFR 13.11. (d); and it is

FURTHER RESOLVED, that either Bruce S. Bozsum as Chairman or R. James Gessner, Jr. as Vice-Chairman of the Tribal Council be and hereby is authorized to execute and deliver the Plan on behalf of the Mohegan Tribe.

Dated this 31st day of October 2012, at Uncasville, Connecticut.

THE MOHEGAN TRIBE OF INDIANS OF CONNECTICUT

By: _____
Bruce S. Bozsum, Chairman

ATTEST:

_____
Cheryl A. Todd, Recording Secretary