

**HAZARD MITIGATION PLAN
ANNEX
FOR
MASHANTUCKET PEQUOT TRIBAL NATION, CONNECTICUT**

**An Annex of the
Southeastern Connecticut
Regional Hazard Mitigation Plan**

PREPARED FOR:

**Southeastern Connecticut
Council of Governments**

DATE: June 2005



COMMUNITY CONTACTS

Roger Sylvestre

Fire Chief

SOUTHEASTERN CONNECTICUT COUNCIL OF GOVERNMENTS STAFF

James S. Butler, AICP

Executive Director

Linda Parquette

Senior Planner

Colleen Bezanson

GIS Specialist

Thomas Seidel

Senior Planner

CONSULTANTS

DELTA Environmental Services, Inc., Branford, CT.

Wilbur Smith Associates, New Haven, CT

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE NUMBER</u>
I. INTRODUCTION	1
A. Setting	1
B. Purpose of Annex	2
C. Plan Development Process and Public Involvement	2
II. HAZARD RISK ASSESSMENT	3
A. Residential	3
B. Commercial/Industrial	3
C. Critical Facilities	3
D. Transportation Corridors	4
III. HAZARD MITIGATION MEASURES	5
A. Prevention	5
B. Property Protection	7
C. Emergency Services	7
D. Structural Projects	8
E. Public Information	9
IV. HAZARD MITIGATION PROJECT RANKING	11
V. IMPLEMENTATION, MONITORING, AND EVALUATION	12

APPENDICES

- APPENDIX A - HAZARD MITIGATION PROJECT LOCATION & RANKING MATRIX

- APPENDIX B - HAZARD ASSESSMENT MAP

I. INTRODUCTION

A. Setting

The Mashantucket Pequot Reservation is approximately 1,238 acres in area and is located near the northeastern corporate boundary within the Town of Ledyard. The Shewville Brook and the Indiantown Brook are located along the northernmost portion of the reservation. Cedar Swamp comprises a large portion of the north-central portion of the reservation. The southern portion of the reservation is characterized by hills and valleys and is predominantly wooded.

The history of the Mashantucket Pequot Tribe describes how the 1638 Treaty of Hartford divided the Mashantucket Pequot tribe into two tribes: the Pawcatuck Pequots and the Mashantucket Pequots. By 1865, only 214 acres of original reservation land was left to the Mashantucket Pequot tribe. Throughout the late 1800s and 1900s many tribal members continued to live on the reservation. By the 1970s, their numbers had dwindled to only two tribal members living on the reservation. In 1983, Congress recognized the Mashantucket Pequot Tribe and awarded funds for the purchase of eight hundred acres of Tribal land. Subsequently, many tribal members from around the country returned to the reservation.

The Mashantucket Pequot Tribe attempted to open a bingo hall on their reservation in 1986, but was halted by the State of Connecticut. This matter was ultimately brought before the Federal District Court where a favorable ruling paved the way for the opening of the first bingo hall in 1986. Since the opening of the bingo hall, the Mashantucket Pequots have expanded their operations into the Foxwoods High Stakes Bingo and Casino which by 1993 was yielding over \$4.5 million in annual revenues. Since the 1990s, the casino has expanded into the Foxwoods Resort Casino, which as the largest casino in the country, is a regional tourist attraction featuring numerous restaurants, hotels, and spas.

Profits from the Foxwoods Resort Casino have enabled the Mashantucket Pequots to perform infrastructure projects in the area of the casino, to establish a transit system for their employees, and to develop a plan to convert their fleet of vans and buses to natural gas. In addition to creating thousands of jobs for the region, the Mashantucket Pequots have also invested in regional history and culture with the opening of a museum and research center that has allowed the tribe to recover artifacts dating back to the 17th century.

B. Purpose of Annex

The purpose of this annex is to provide hazard risk assessment, capability assessment, hazard mitigation measures, and a hazard mitigation project ranking for the Mashantucket Pequot Tribe Reservation. Hazards such as earthquakes and windstorms which affect the entire region are addressed in the Southeastern Connecticut Council of Governments Regional Hazard Mitigation Plan.

C. Plan Development Process and Public Involvement

The Regional Hazard Mitigation Plan and this annex were developed through a series of meetings and the completion of written questionnaires, personal interviews, and workshops. To provide oversight of the plan development process and maximize local involvement, all member communities in the region and the two tribal affiliate members were invited to appoint a representative to serve on the Hazard Mitigation Steering Committee. Committee members and chief elected officials received notices of all the committee meetings and were encouraged to attend. Meeting notices and agendas were also sent to area media and to town and city clerks for posting in each community. Steering committee meetings were held in public at the Southeastern Connecticut Council of Governments office in Norwich. Three steering committee meetings were held during the development of the hazard mitigation plan. Verbal reports on progress were given to monthly meetings of the Southeastern Connecticut Council of Governments, which are routinely attended and covered by area press in local newspapers. Articles describing the planning process have appeared in the three issues of the SCCOG Quarterly Newsletter since March, 2003. This newsletter is mailed to 285 officials, organizations, and media within the region.

II. HAZARD RISK ASSESSMENT

A meeting was held with tribal officials on March 5, 2004 to develop a risk assessment for the Mashantucket Pequot Tribal Reservation. Based on the results of the meeting and additional risk assessment research it was determined that a significant hazard at the Reservation is transportation related hazards.

A. Residential

Based on a review of Flood Insurance Rate Maps and topographic maps, the currently developed portions of the Mashantucket Pequot Reservation appear to be free from flooding. The majority of the residential development is located in the southern part of the reservation. A review of USGS mapping and aerial photographs suggest that no residential structures are located in the flood hazard areas on the Tribal Reservation.

B. Commercial/Industrial

The main development on the Mashantucket Pequot Reservation is the Foxwoods Resort Casino, which is located off of Route 2. The Foxwoods Resort Casino is located to the east of the Cedar Swamp which is a large flood zone, however, the Foxwoods Resort Casino is not located in a flood area.

Another commercial development on the reservation that draws tourists is the Mashantucket Pequot Museum and Research Facility. It is located near the Mashantucket Pequot Fire House and is not in a flood zone.

C. Critical Facilities

A review of the critical facilities in the Mashantucket Pequot Reservation indicates that the community center, which is also the emergency shelter for the reservation is located in the southern area of the reservation. The Mashantucket Pequot Fire House on Route 214 acts as the emergency operations center during emergencies. These critical facilities are located in areas free from flooding and are generally protected from other potential hazards.

D. Transportation Corridors

The Reservation has several transportation routes such as Route 2 and Route 214.

Tribal officials have also expressed concern with increased thru-traffic on the Mashantucket Pequot Reservation. Specifically, the Tribe is concerned with the transportation of hazardous materials over their roadways and their ability to respond to a major incident regarding a release of such materials.

III. HAZARD MITIGATION MEASURES

The following sections provide a brief description of the types of hazard mitigation measures and programs that are available to address the natural hazards that exist on the Reservation.

A. Prevention

Hazard prevention includes identification of risks and the use of land-use regulatory and other available management tools to prevent future damage. The Mashantucket Pequot Reservation has planning and zoning tools in place that incorporate floodplain management. The Reservation's planning and zoning regulations, inland wetlands and watercourses regulations, and the building department's enforcement of the Connecticut Basic Building Code are all important existing regulatory mechanisms that address hazard prevention and incorporate floodplain management.

The following are examples of how hazard prevention can be accomplished through existing programs:

1. Planning and Zoning

Planning and Zoning Regulations can be tailored to be consistent with hazard mitigation planning. Establishment of Flood Prone Conservancy Districts, Coastal Resource Zones, and River Corridor Preservation Zones are all techniques that can potentially be employed to limit additional development in hazardous locations.

2. Open Space Preservation

Community planning that includes open space acquisition and preservation sections can be established or revised in a manner that is consistent with hazard mitigation planning. Acquisition of floodplain and river corridor properties should be encouraged as a municipal priority.

3. Floodplain Development Regulations

The modification of floodplain management regulations to include more restrictive development standards is consistent with hazard mitigation planning. The National Flood Insurance Program Community Rating System gives credit to communities that exceed the minimum floodplain management requirements of the National Flood Insurance Program. Requirements include elevating structures higher than the 100-year base flood elevation, which is an example of a more stringent standard.

4. Stormwater Management

Stormwater management regulations that limit any potential increase in the state of discharge of stormwater and that preserve floodplain storage are examples of the use of stormwater management in a manner consistent with hazard mitigation planning.

5. Wetlands Protection

Wetlands areas are generally also critical flood storage areas. By limiting wetlands development not only are important natural resource areas protected but additional floodplain development is also limited.

6. Erosion and Sediment Control Regulation

Effective implementation of sediment and erosion controls include utilization of detention basins and use of other Best Management Practices to slow the velocity and limit increase in runoff. Strict adherence to these requirements are effective hazard mitigation tools.

B. Property Protection

Property protection measures can address hazards at a single structure or can include multiple structures.

The following list identifies common property protection measures:

1. Relocation
2. Acquisition
3. Building Elevation
4. Utility Protection
5. Flood Proofing

Additional descriptions of property protection measures are provided in Appendix A of the Regional Hazard Mitigation Plan.

C. Emergency Services

Emergency communication is a critical aspect of the hazard response programs currently in place in the reservation. Emergency Services hazard mitigation measures can be combined with other types of measures to form successful projects, or remain as stand-alone projects.

The major utilities that provide service to the reservation follow similar procedures. The Connecticut Light and Power Company has emergency operation centers which become operational in the event of any emergency that could impact the utilities.

The interagency communication between the reservation and independent utilities requires continued coordination to assure the critical communications link between the reservation operations and the utilities is effectively maintained. A need for improved and continued coordination has been identified during this study.

Aspects of emergency services typically addressed in hazard mitigation include the following:

1. Emergency Communication
2. Flood Warning
3. Flood Response
4. Critical Facilities Protection

The Mashantucket Pequot Tribe has a good emergency communication system with the use of a reverse 9-1-1 system that calls and alerts residents to emergencies. One example of their reverse 9-1-1 system in use was when a major gas leak was detected on the reservation. The reverse 9-1-1 system was used to call residents and alert them of the potential danger.

The Mashantucket Pequot Fire Chief has maintained good communication for the past 4-6 years with surrounding communities by becoming members to the New London County Fire Chief's Association. The association allows for mutual aid agreement with surrounding communities.

D. Structural Projects

Structural projects include utilization of the flood control strategies that have been and continue to be applied throughout Connecticut. The potential environmental impacts of structural projects are often a concern.

Structural projects that can be included in hazard mitigation planning include the following:

1. Levees/Floodwalls
2. Bridge & Culvert Replacement
3. Channel Modifications
4. Storm Sewer Improvements
5. Structural Project Maintenance and Repair

Any prospective projects which were identified during the course of assembling this plan are included in the hazard mitigation matrix in Appendix A of this annex report. Additional information on some types of structural projects is provided in Appendix A of the Regional Hazard Mitigation Plan.

E. Public Information

Public Information is another type of hazard mitigation measure which, like prevention and resource protection, can be most effectively implemented in conjunction with other hazard mitigation projects.

The Hazard Mitigation Committee has identified the need for a continued and expanded program of public information. Such a program could include providing educational information to the homeowners and business owners in the flood hazard areas. A public education and information component should be included in all hazard mitigation projects undertaken by the Mashantucket Pequot Tribe.

The following list includes some common types of Public Information measures:

1. Map Information

Development of hazard maps for public distribution or posting in public locations. This type of information is easily understood and assists in raising the public's awareness of the natural hazards that exist in their community.

2. Flood Audits

For additional information regarding flood audits refer to Appendix F of the Regional Hazard Mitigation Plan.

3. Real Estate Disclosure

This is a procedure where buyers and sellers of real estate are compelled to provide notice of known hazards affecting the property to be conveyed.

4. Public Library

Libraries can be an effective location of a hazard information center. Town Halls and other public facilities can also serve as information centers. A wide range of hazard mitigation documentation should be compiled for review.

5. Technical Assistance

Local governments can provide technical assistance to homeowners and contractors regarding hazard resistant construction. An appropriate time for such assistance can be at the time of a building permit application.

6. Environmental Education

Private and public schools and adult education programs can offer environmental education classes that include hazard identification and hazard mitigation components.

IV. HAZARD MITIGATION PROJECT RANKING

Based on the hazard risk assessment analysis, the Hazard Mitigation Committee has developed a matrix of several hazard mitigation projects recommended to reduce the Mashantucket Pequot Tribal Nation's vulnerability to natural hazards. A matrix depicting potential hazard mitigation projects and a prioritized ranking is included in Appendix A.

Projects identified in the matrix have been prioritized based on the following criteria:

- Safety of the population
- Historical damage
- New development in high risk areas
- Value of property at risk
- Consistency with plan goals and objectives

The projects were also considered on how they relate to potential health risks, structural damage, access/egress for evacuation, and protection of structures that house people with special needs and residential areas housing a large portion of the tribe's population. For additional information on projects listed in the matrix and for a complete list of criteria used in the prioritization process, please refer to the text and attachments of the Regional Hazard Mitigation Plan.

V. IMPLEMENTATION, MONITORING, AND EVALUATION

The Southeastern Connecticut Council of Governments Regional Hazard Mitigation Plan and this associated community annex report were prepared with the understanding that potential funding sources may not be available within the time frame necessary to implement the recommended actions on a specific schedule. It is therefore necessary to incorporate into the plan a system of monitoring its progress and making necessary adjustments. In addition, the goals and objectives may need to be modified over time in order to meet the demands of a changing community. Accomplished activities will be eliminated, and new ones added.

The staff of the Southeastern Connecticut Council of Governments (SCCOG) serves as coordinator of the Hazard Mitigation Committee that provided oversight of the plan preparations. In accordance with § 201.6 (c)(4)(i) of the Interim Final Rule, it is recommended that the Committee meet on or before the fifth anniversary of the adoption of the plan to review the implementation progress as well as the goals, objectives, and actions outlined in the plan. With input from the Committee, SCCOG staff should prepare a report on the status of plan implementation. The report should include the following: a review of the goals and objectives of the original plan; a review of any disasters or hazards that occurred during the period; a review of each element or objective of the original plan, including what was accomplished the previous year; and recommendations for new projects or revised objectives.

FEMA also recommends that each of the local communities name a person as a local coordinator for the implementation and monitoring of the progress of the plan. This person would act as a contact for the Southeastern Connecticut Council of Governments and the State of Connecticut National Flood Insurance Program Coordinators during the grant application and cost-benefit analysis process.

The Mashantucket Pequot Tribal Nation Hazard Mitigation Projects

Hazard	Vulnerable Location	Mitigation Project	Priority
All Hazards	Reservation Wide	Evaluate the Hazard Resistant Nature of All Critical Facilities	High
All Hazards	Reservation Wide	Comprehensive Evaluation of Emergency Communication Capabilities Throughout Reservation	High
Flooding	Reservation Wide	Develop a Flood Audit Program	High
Hazardous Materials Spills on Roadways	Tribally Maintained Public Roads	Improvements to Traffic Infrastructure and Emergency Response Training and Equipment	Medium
All Hazards	Reservation Wide	Review of Reservation Transportation Facilities to Identify Critical Risks	Medium

The Mashantucket Pequot Tribal Nation Hazard Mitigation Projects

All Hazards	Reservation Wide	Distribute or Post Public Information Regarding Hazards on the Reservation	Low
Hazard	Vulnerable Location	Mitigation Project	Priority
All Hazards	Reservation Wide	Evaluate Emergency Shelters, Update Supplies and Check Communication Equipment	Low
All Hazards	Reservation Wide	Maintain Emergency Personnel Training as well as Maintaining and Updating Emergency Equipment and Response Protocols	Low
Wind Hazards	Reservation Wide	Evaluate and Consider Burying Power Lines Underground and Away From Possible Tree Damage	Low

The Mashantucket Pequot Tribal Nation Hazard Mitigation Projects

Earthquake Hazards	Reservation Wide	Complete an Earthquake Survey of all Critical Facilities and Infrastructures	Low
Flooding	Reservation Wide	1) Complete Catch Basin Surveys to Identify Catch Basins in need of Maintenance and/or Replacement 2) Complete Culvert Survey to Determine Priority for Maintenance and/or Replacement Plan	Low
Hazard	Vulnerable Location	Mitigation Project	Priority
Fire Hazards	Reservation Wide	Complete a Survey of Fire Hydrants to Assess Vulnerabilities and Capabilities for Fire Protection Dry Hydrants should be Considered as a means for Emergency Equipment	Low

