HAZARD MITIGATION PLAN
ANNEX
FOR
COLCHESTER, CONNECTICUT

An Annex of the
Southeastern Connecticut
Regional Hazard Mitigation Plan

PREPARED FOR:

Southeastern Connecticut
Council of Governments

DATE: June 2005

COMMUNITY CONTACTS

Jennie Contois	First Selectman
N. Reed Gustafson	Fire Marshal
Sal Tassone	Town Engineer
Wendy Mis	Director of Health

SOUTHEASTERN CONNECTICUT COUNCIL OF GOVERNMENTS

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.

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I. INTRODUCTION

A. Setting

The Town of Colchester, is 50.6 square miles in area, and is located in the northwestern portion of New London County. The town is bordered by the Town of Lebanon to the northeast, the Town of Salem to the southeast, the Town of East Haddam to the south, the Town of East Hampton to the west, the Town of Marlborough to the northwest, and the Town of Hebron to the north.

The Town of Colchester was first incorporated in 1698 and has since grown to a 2000 Census population of 14,551. The center of Colchester is located near the intersection of several main roads including Routes 2, 85, 16, 616, and Old Hartford Road. Several important buildings including the Town Hall, Fire Department and Fire Marshal, and the Public Works building are situated along Route 616.

The suburban town is known for its principal industries of agriculture and manufacture of leather novelties, plastics, machine shops, and metal fabrication. Colchester also has a private airport called Skis Landing Area, which is generally used by small private planes and a heliport at Hub Ford.

Babcock Wildlife Management Area and Salmon River State Forest are located in Colchester near the western and southwestern corporate boundaries. These areas are open to the public for hiking and picnics. Several bodies of water are located in Colchester including Babcock Pond, Pickerel Lake, and Deep River Reservoir.

B. Purpose of Annex

The purpose of this annex is to provide hazard risk assessment, capability assessment, evaluation of hazard mitigation measures, and a hazard mitigation project ranking for the Town of Colchester. 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 community officials on September 16, 2003 to develop a community risk assessment for Colchester. Based on the results of the meeting and additional risk assessment research it was determined that a significant hazard in Colchester is flooding.

As a result of its location and development, the Town of Colchester is not as exposed to natural hazards as many communities in the region. Despite the limited floodplain, flooding can still occur. Spring floods are caused by rainfall in combination with snowmelt. Floods in late summer and fall are usually the result of hurricanes or other storms moving northeast along the Atlantic coast. Winter floods result from occasional thaws, particularly in years of heavy snowfall.

Major floods of this century occurred in the town in March 1913, November 1927, March 1936, September 1938, August 1955, February 1973, January 1978, and January 1979. Streamflow records at the USGS gaging station on the Salmon River in the nearby Town of East Hampton indicate that the September 1938 and January 1979 floods had recurrence intervals of 100-years.

Buildings located in flood hazard areas are primarily residential but also include some commercial, and industrial structures. Most of the structures that are threatened by flooding are located within the 100-year floodplain. Continued development is expected and pressures leading to floodplain use will accompany such development along the streams in town. There are no flood protection measures at this time along anybody of water in the Town of Colchester.

There is no formalized program currently in place to identify the location or the number of structures that are susceptible to flooding in Colchester. Such information would be valuable in directing hazard mitigation efforts to locations with the greatest risk. A potential hazard mitigation project would involve the review of all existing available data regarding flood hazards and the preparation of an inventory and assessment of structures at risk in the flood hazard areas.

Such an inventory program would be the first step in completing a Flood Audit which would provide early flood warning, guidance and technical information regarding flood risks to property owners, as well as prioritize future property protection projects. The completion of a Flood Audit would be an important step in the National Flood Insurance Programs Community Rating System by which towns can qualify for a reduction in flood insurance rates.

A. Residential

Based on a review of the Flood Insurance Rate Maps and topographic maps, residential structures in the Town of Colchester located along Judd Brook and Meadow Brook could be subject to flooding during severe storms.

B. Commercial/Industrial

There are several significant areas of commercial properties located within the floodplain that are considered susceptible to damage. They are along the Jeremy River at Hartford Road, and Judd Brook near the center of Colchester at Lebanon Avenue and Norwich Avenue.

Town officials have expressed concern with the possible release of materials into the water or air in the area of a privately owned propane supply facility. There are multiple propane tanks on site. The privately owned tanks are in the center of Colchester and are near schools, shopping centers, and elderly housing. Town officials are concerned with the safety of the surrounding community and would like to develop a risk analysis and emergency plan for this area.

C. Critical Facilities

A review of the critical public facilities in the Town of Colchester indicates that they are located in areas free from flooding and are generally protected from other potential hazards.

D. Transportation Corridors

Colchester has several major transportation corridors, including Route 2, Route 11, and Route 16. These major corridors are not substantially threatened by the floodplain. However, Route 85 near Judd Brook and Route 2 near Meadow Brook are susceptible to flooding.

Several secondary roads in Colchester are in the potential flood zone. These include Mill Hill Road at the intersection of Meadow Brook and Miller Road at the intersection of Judd Brook.

Town officials expressed concern regarding a dirt road with a small wooden bridge near Savin's Pond where the road has washed out during severe storms. On occasion this area requires reconstruction of the roadway. There are only two houses affected in this area by flooding. However, emergency access/egress to these residences could be threatened in the case of a substantial flood. In addition, just over the town line in Lebanon, the bridge on state road 616 floods at least twice a year. Flooding of this roadway effectively cuts off access between the two towns and further restricts the ability for the towns to assist one another with mutual aid during emergencies.

Town officials have also expressed concern with increased thru-traffic in Colchester. Specifically, the town 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 in the town.

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 town'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 the 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 in the Regional Hazard Mitigation Plan.

C. Emergency Services

Emergency communication is a critical aspect of the hazard response programs currently in place in Colchester. 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 town 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 town and independent utilities requires continued coordination to assure the critical communications link between the town 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

D. Structural Projects

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

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

1. Levees/Floodwalls
2. Bridge and 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 in 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 Town of Colchester. 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 potential hazard mitigation projects recommended to reduce Colchester'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 town'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 Town of Colchester Hazard Mitigation Projects			
Hazard	**Vulnerable Location**	**Mitigation Project**	**Priority**
Flooding	Town Wide	Inventory Flood Hazard Structures and Prepare Flood Audits	High
All Hazards	Propane Supply	Evaluate the Hazard Resistant of Facility	High
All Hazards	Town Wide	Evaluate the Hazard Resistant Nature of All Critical Facilities	High
All Hazards	Town Wide	Comprehensive Evaluation of Emergency Communication Capabilities Throughout Town	High
Flooding	Savin's Pond	Repair Wooden Bridge to Make it Flood Resistant	Medium

The Town of Colchester Hazard Mitigation Projects			
Flooding	Route 616 Bridge	Improve Hydraulics of Bridge / Roadway	Medium
Hazard	**Vulnerable Location**	**Mitigation Project**	**Priority**
All Hazards	Town Wide	Review of TownTransportation Facilities to Identify Critical Risks	Medium
Hazardous Materials Spills on Roadways	State Roads	Identify Appropriate Improvements to Traffic Infrastructure and Emergency Response Training and Equipment	Medium
All Hazards	Town Wide	Implement a Reverse 9-1-1 System to Automatically Call Telephones Throughout Town, Relaying Important Information During an Emergency	Low

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

The Town of Colchester Hazard Mitigation Projects			
Earthquake Hazards	Town Wide	Complete an Earthquake Survey of all Critical Facilities and Infrastructures	Low
Flooding	Town 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**

The Town of Colchester Hazard Mitigation Projects			
Fire Hazards	Town Wide	Complete a Survey of Fire Hydrants in the Town to Assess Vulnerabilities and Capabilities for Fire Protection Dry Hydrants should be Considered as a means for Emergency Equipment	Low