City of Rochester, New Hampshire

All Hazard Mitigation Plan

Prepared By

Strafford Regional Planning Commission

In Cooperation With

City of Rochester All Hazard Mitigation Planning Committee

April 2005

CERTIFICATE OF ADOPTION

City of Rochester, New Hampshire
City Council
A Resolution Adopting the Rochester Hazard Mitigation Plan
June 7, 2005

WHEREAS, the City of Rochester received assistance in the preparation of the Rochester All Hazard Mitigation Plan with funding from the NH Office of Emergency Management under a Flood Mitigation Assistance Project Grant; and

WHEREAS, several public planning meetings were held between March and June 2003 regarding the development and review of the Rochester All Hazard Mitigation Plan; and

WHEREAS, the Rochester All Hazard Mitigation Plan contains several potential future projects to mitigate hazard damage in the City of Rochester; and

WHEREAS, the Federal Emergency Management Agency (FEMA) has rendered its approval of the Rochester All Hazard Mitigation Plan on February 26, 2004; and

WHEREAS, a duly-noticed public hearing was held by the Rochester City Council through its Public Safety Committee on May 5, 2005 to solicit public comment on the Rochester All Hazard Mitigation Plan; and

WHEREAS, a duly-noticed public meeting was held by the Rochester City Council on June 7, 2005 to formally approve and adopt the revised Rochester All Hazard Mitigation Plan.

NOW, THEREFORE BE IT RESOLVED that the Rochester City Council adopts the Rochester All Hazard Mitigation Plan.

ADOPTED AND SIGNED this _7th_ day of _June_ 2005.

_____
Mayor David E. Walker

ATTEST:

_____
Name

_____
Name, City Clerk

_____
Name

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Executive Summary

As part of the City of Rochester's Master Plan, the All Hazard Mitigation section's aim is to reduce future losses from natural hazards, such as flooding, or man-made hazard events, such as terrorism, before they occur. The Rochester All Hazard Mitigation Planning Committee developed this section of the Master Plan.

Background

Natural Hazards are:

Flooding (Riverine, Ice & Dam Breach)
Wind (Downburst, Tornado & Hurricane)
Wildfire
Extreme Winter Weather
Earthquakes
Extreme Heat
Landslide and Subsidence
Geomagnetism
Radon Air/Water
Lightning
Man-Made:Terrorism

Critical Facilities and Areas at Risk include:

Critical Facilities
Emergency Operations Center
Police Station
Fire Station
Emergency Fuel Facility
Shelter
Bridges
Water Tower

Areas at Risk
Mobile Home Parks
Masonry buildings
Buildings in the floodplain
Buildings at risk from dam failures

Goals

1. Improve upon the protection of the general population, the citizens of the City of Rochester and guests, from all natural and man-made hazards.

2. Improve the City's ability to protect properties from flooding.

3. Reduce the potential impact of natural and man-made disasters on the Critical Facilities in the City of Rochester.

4. Reduce the potential impact of natural and man-made disasters on the City of Rochester's infrastructure.

5. Support the adoption of programs that minimize damage from natural hazards.

6. Reduce the potential impact of natural and man-made disasters on private property in the City of Rochester.

7. Reduce the potential impact of natural and man-made disasters on the City of Rochester's economy.

Implementation Strategies

1. Continue to implement existing all hazard mitigation programs including:
    - Emergency Action Plan
    - Tree Programs/Trees down
    - Snow Removal Plan
    - Dam Inundation Plan
    - Building compliance with earthquake standards

2. Improve existing all hazard mitigation strategies include:
    - Update dam inundation plan
    - Update FEMA maps
    - Require mobile home tie downs
    - Ensure future buildings comply with earthquake standards

Part 1- Introduction

Background

The Federal Emergency Management Agency (FEMA) has mandated that all communities within the United States establish all local hazard mitigation plans as a means to reduce future losses from natural or man-made hazard events before they occur. In addition, communities must have locally adopted all hazard mitigation plans by November 1, 2003, in order to apply for Pre-Disaster Mitigation Program (PDM) Grants or the Hazard Mitigation Grant Program (HMGP). In response to this mandate, the New Hampshire Office of Emergency Management contracted with Strafford Regional Planning Commission (SRPC) to assist local communities in preparing local plans that would achieve this goal.

Purpose

The Hazard Mitigation section of the Master Plan reflects local public policy about all hazard mitigation and implementation strategies to reduce loss. The municipality, as well as other local, state and federal governments, uses hazard mitigation in their efforts to reduce the effects from natural and man-made hazards.

Scope

The scope of this section includes the identification of natural and man-made hazards affecting the municipality, as identified by the Hazard Mitigation Planning Committee. The hazards were reviewed under the following categories as outlined in the State of New Hampshire's All Hazard Mitigation Plan:

I. Flood, Drought, Extreme Heat and Wildfire.
II. Geological Hazards (Earthquake, Landslide, Subsidence, Geomagnetism and Radon).
III. Severe Wind (Tornado, Hurricane, Thunderstorm, Downburst and Lightning).
IV. Winter Weather (Snow, Ice Storm and Extreme Cold).
V. Man-Made Hazards (Railroads, Roads, Pipelines, Hazardous Materials).

Adoption

The local All Hazard Mitigation Planning Committee members reviewed and approved the plan as it was completed. After acceptance by the Committee members, the plan was submitted to the New Hampshire Office of Emergency Management and twice to FEMA Region 1 for review and approval. FEMA granted preliminary approval (all but local adoption) on February 26, 2004. At a public meeting, the City Council formally adopted the plan on June 7, 2005 as a statement of policy. (See the official Certificate of Adoption at the beginning of this document.)

Part 2 – Policies and Implementation Strategies

The following are all hazard mitigation policies (goals, principles and standards) and implementation strategies:

Goals

1. Improve upon the protection of the general population, the citizens and guests, from all natural and man-made hazards.

2. Improve the municipality's ability to protect properties from flooding.

3. Reduce the potential impact of natural and man-made disasters on the Critical Facilities in the municipality.

4. Reduce the potential impact of natural and man-made disasters on the municipality's infrastructure.

5. Support the adoption of programs that minimize damage from natural hazards.

6. Reduce the potential impact of natural and man-made disasters on private property in the municipality.

7. Reduce the potential impact of natural and man-made disasters on the municipality's economy.

Principles

1. Critical facilities are divided into four categories:

- The *first category* contains facilities needed for Emergency Response in the event of a disaster.

- The *second category* contains Non-Emergency Response Facilities that have been identified by the committee as non-essential. These are not required in an emergency response event, but are considered essential for the everyday operation of Rochester.

- The *third category* contains Facilities/Populations that the committee wishes to protect in the event of a disaster.

- The *fourth category* contains Potential Resources, which can provide services or supplies in the event of a disaster. The "Critical Facilities Maps and Evacuation Plans" at the end of this Chapter identifies the facilities and the evacuation routes.

2. Critical facilities by category include:

Category 1 – Emergency Response Services

Emergency Response Facilities and Services that are the highest priority in regards to protection from natural and man-made hazards are:

Emergency Operations Center
Central Fire Station

Police Station
Rochester Police Station

Fire Station
Central Fire Station
EOC (Fire Station-Central)
Gonic (Fire Station)

Emergency Fuel Facilities
Eastern Propane
Local Pride

Emergency Shelters (Proposed)
Community Center
Spaulding High School
Middle School

Evacuation Routes
Route 125 and Route 202
Route 202A
Spaulding Turnpike
Route 11

Bridges
North Main Street Bridge

Communications
Water Tower (Communications) (3)

Category 2 - Non Emergency Response Facilities

Non-emergency facilities; however, they are considered essential for the everyday operation of the municipality are:

Water Supply
Water Tower (3)

Category 3 - Facilities/Populations to Protect

Facilities and populations that need to be protected in the event of a disaster are:

Special Needs Population - identified by confidential survey administered by Emergency Medical Services:
Oxygen-dependent
Lifeline Assistance
Home Health Assistance
Shut-ins and disabled
Mentally challenged
Elderly
Hearing impaired
Sight impaired

Mobile Home Parks and Campgrounds
Lilac City Estates
Baxter Lake
Grandview Campground
Tara Estates
Fieldstone Village
SAK's MHP
Westwind Estates
Chestnut Hill MHP

Category 4 - Potential Resources

Potential resources that provide resources for services or supplies are:

Hospitals
Frisbie Memorial Hospital

Miscellaneous Resources
Skyhaven Airport
Army Reserve
National Guard Armory
Public Works Department
Wastewater Treatment Plant
Old Wastewater Treatment Plant
Public Works Garage-Communications
Water Treatment Plant

Implementation Strategies

1. Continue and improve existing mitigation programs:

   1.1 Floodplain Information on the Rochester Web Site
   Section 42.20 of the Rochester Zoning Ordinance has provisions dealing with the Regulatory Floodway Zone. The public can access this information on the Rochester web site to see if their home is in the floodplain.

   1.2 Tree Program
   The Public Works Department clears trees from roads after a storm or if they have become a hazard to existing traffic flow.

   1.3 Snow Removal Plan
   The Public Works Department prioritizes what roadways get plowed first during a storm and where to put the snow

   1.4 Dam Inundation Plan
   Emergency Action Plan in case of a dam failure.

   1.5 Building Standards (Earthquakes)
   State building codes require that all new "critical" buildings have to be constructed using current earthquake standards.

2. Improve existing programs as follows:

   2.1 *Update the dam inundation plan*. The municipality would like FEMA to update the city's dam inundation program.

   2.2 *Update the floodplain maps*. The municipality has requested FEMA update the city's flood plain maps to have more accurate information. This will be an item to move forward with when FEMA is able to provide resources for the municipality.

   2.3 *Obtain funding to help mobile home park owners purchase and install tie downs*.

   2.4 *Have all future buildings comply with earthquake standards*. Make sure that at any future development complies with existing earthquake standards.

Part 3 – Implementation Program

To achieve the policies, a prioritized schedule for implementation follows:

MITIGATION ACTION	WHO (LEADERSHIP)	WHEN (DEADLINE)	HOW (FUNDING SOURCE)
1.) Update the Dam Inundation Plan	Department of Public Works (City Engineer)	2005	Funded by FEMA, $25,000 to hire a consultant
2.) Update the Floodplain Maps	FEMA	2004	Funded by FEMA, Map Modernization Program; There will be routine communication by the Rochester Planning Department with FEMA to check the progress of the project
3.) Mobile Home Tie-Downs	Code Enforcement (Codes and Ordinance Committee of the City Council)	2006-2012	Funded by City. Make available to mobile home park owners; Research existing ordinances, find a model ordinance; evaluate and pattern new ordinance after it; Require tie downs for future mobile homes
4.) Future Buildings Comply with Earthquake Standards	Code Enforcement (Codes and Ordinance Committee of the City Council)	Ongoing	Funded by City. When making updates to the Ordinance, need to make sure local plans stay consistent with state and federal standards; Ongoing training for code enforcement to keep up-to-date on standards; Especially important for the school department

Part 4 - Appendix

City of Rochester, New Hampshire

Background for All Hazard Mitigation Policies and Implementation Strategies

Prepared by

Strafford Regional Planning Commission

In cooperation with

City of Rochester All Hazard Mitigation Planning Committee

April 2005

Certificate of Adoption

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Certificate of Adoption
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Executive Summary

The Rochester All Hazard Mitigation Plan serves as a means to reduce future losses from natural hazards, such as flooding, or man-made hazard events, such as terrorism, before they occur. The Plan was developed by the Rochester All Hazard Mitigation Planning Committee and contains statements of policy to be adopted by the Rochester City Council in Chapter VII and VIII.

Natural hazards are addressed as follows:

Flooding (Riverine, Ice & Dam Breach)
Wind (Downburst, Tornado & Hurricane)
Wildfire
Extreme Winter Weather
Earthquakes
Extreme Heat
Landslide and Subsidence
Geomagnetism
Radon Air/Water
Lightning
Man-Made:Terrorism

The Rochester All Hazard Mitigation Planning Committee, as shown per Chapter III and IV, identified "Critical Facilities" and "Areas at Risk" as follows:

Critical Facilities

Emergency Operations Center
Police Stations
Fire Station
Emergency Fuel Facility
Shelter
Bridges
Water Tower

Areas at Risk

Mobile Home Parks
Masonry buildings
Buildings in the floodplain
Buildings at risk from dam failures

The Rochester All Hazard Mitigation Planning Committee identified existing hazard mitigation programs as follows:

Emergency Action Plan
Snow Removal Plan
Tree Program/Trees down
Building compliance with earthquake standards
Dam Inundation Plan

The Rochester All Hazard Mitigation Planning Committee prioritized newly identified hazard mitigation strategies as follows:

Mobile Home tie downs
Updated FEMA maps
Updated dam inundation plan
Future buildings comply with earthquake standards

Chapter 1: Introduction

Background

The Federal Emergency Management Agency (FEMA) has mandated that all communities within the United States establish local all hazard mitigation plans as a means to reduce future losses from natural or man-made hazard events before they occur. In addition, communities must have locally adopted hazard mitigation plans by November 1, 2003, in order to apply for Pre-Disaster Mitigation Program (PDM) Grants or the Hazard Mitigation Grant Program (HMGP). In response to this mandate, The New Hampshire Office of Emergency Management contracted with the Southwest Region Planning Commission (SWRPC) to develop a program that would achieve this goal. SWRPC prepared a hazard mitigation-planning handbook to be used by local communities as a guide in the preparation of hazard mitigation plans. SWRPC then facilitated two hazard mitigation-planning processes with selected communities as pilot projects. The resulting plans are now used as models in an effort to enable all New Hampshire Regional Planning Commissions (RPC), to provide education outreach and to assist their local communities in the preparation of local all hazard mitigation plans.

Authority

This All Hazard Mitigation Plan was prepared in accordance with the City of Rochester's Emergency Management Ordinance, effective June 7, 2005 and under the authority of the Planning Mandate of Section 409 of Public Law 93-288 as amended by Public Law 100-707, the Robert T. Stafford Act of 1988, hereinafter referred to as the "Stafford Act." Accordingly, this Hazard Mitigation Plan will be referred to as the "Plan."

Funding Source

This Plan was funded by the NH Office of Emergency Management with grants from the Flood Mitigation Assistance (FMA) Program, as well as with matching funds from the City of Rochester.

Purpose

The Rochester All Hazard Mitigation Plan is a planning tool to be used by the City of Rochester, as well as other local, state and federal governments, in their efforts to reduce the effects from natural and man-made hazards.

Scope of the Plan

The scope of this Plan includes the identification of natural and man-made hazards affecting the City of Rochester, as identified by the All Hazard Mitigation Planning Committee. The hazards were reviewed under the following categories as outlined in the State of New Hampshire's All Hazard Mitigation Plan:

I. **Flood, Drought, Extreme Heat and Wildfire.**
II. **Geological Hazards** (Earthquake, Landslide, Subsidence, Geomagnetism and Radon).
III. **Severe Wind** (Tornado, Hurricane, Thunderstorm, Downburst and Lightning).
IV. **Winter Weather** (Snow, Ice Storm and Extreme Cold).
V. **Man-Made Hazards** (Railroads, Roads, Pipelines, Hazardous Materials).

In addition, the Committee briefly discussed issues related to man-made hazards such as terrorism. Further development of man-made hazards should be included in any future revision to this plan.

Methodology

Using the *Hazard Mitigation Planning for New Hampshire Communities* handbook, the Rochester Hazard Mitigation Planning Committee developed the content of the *Rochester Hazard Mitigation Plan* by following the ten-step process set forth in the handbook. The Team held monthly meetings, open to the public, starting March 17, 2003 through April 30, 2003, in order to develop the *Plan*. On June 7, 2005 the Rochester City Council held a public meeting and adopted the *Plan*.

The following are dates of Committee meetings:

Open to the Public Committee Meetings:

March 17, 2003, 10am-12pm:
Working committee meeting held at Rochester City Hall

March 27, 2003, 10am-12pm:
Working committee meeting held at Rochester City Hall.

April 30, 2003, 10am-12pm:
Working committee meeting held at Rochester City Hall.

The team developed this Plan as a result of following the described meeting procedures and planning steps:

Step 1: Establish and Orient a Hazard Mitigation Planning Committee
Strafford Regional Planning Commission contacted Kenn Ortmann, the Director of Planning and Development for the City of Rochester. Subsequently, he contacted five people (Melody Esterberg, Director of Public Works, Norman Sanborn, Jr. and Fran Zombeck of the Fire Department, and Dennis Schafer of the MIS Department). All agreed to serve on the All Hazard Mitigation Planning Committee.

Step 2: Set Hazard Mitigation Goals
The first meeting was organizational in nature, with the plan authorization being discussed. The funding source was explained and the purpose and scope of the plan were established. The All-Hazard Mitigation Goals were set. The process of identifying hazards was discussed.

Step 3: Identification of Hazards and Critical Facilities
As listed below, the Committee members identified seventeen (17) categories of man-made and natural hazards that could affect or have affected the City of Rochester.

Riverine flooding	**Wildfire**	**Radon air & water**	**Extreme winter weather**
Ice jam flooding	**Earthquakes**	**Tornado**	**Man-made hazards**
Dam breach	**Landslides**	**Hurricanes**	
Drought	**Subsidence**	**Downburst**	
Extreme heat	**Geomagnetism**	**Lightning Strikes**	

The Committee brainstormed on the type of hazards and locations that have sustained or could be susceptible to each hazard within the City. The results were the "Hazard Identification Maps," which can be found at the end of Chapter 3, "Hazard Identification and Areas at Risk."

The Committee then identified and catalogued all of the critical facilities within the City. The results are found in Chapter 4, "Critical Facilities Analysis," with a location map at the end of the chapter.

Step 4: Assessing Vulnerability – Estimating Potential Losses
The Committee Members completed Vulnerability Assessment Worksheets for the hazards identified in Step 3. The Potential Loss Estimates Summary Sheet, which compiles the data collected in this step, can be found in Chapter 5 “Vulnerability Assessment”.

Step 5: Analyze Development Trends
This step was conducted by staff from the City of Rochester and Strafford Regional Planning Commission. The results were shared with the committee and agreed upon the Community Profile can be found in Chapter 2.

Step 6: Existing Mitigation Strategies and Proposed Improvements
The Committee identified plans and policies that are already in place to reduce the effects of man-made and natural hazards. Then the Committee evaluated the effectiveness of the existing measures to identify where they could be improved. The results are found in Chapter 6, "Existing Mitigation Strategies."

Step 7: Develop Specific Mitigation Measures
To assist with determining mitigation projects, the Committee considered the following seven (7) objectives:

Preventative (Programs & Policies)
Property Protection
Structural
Public Education & Information
Engineering Projects
Equipment Purchase
Training

Step 8: Prioritized Mitigation Measures
Using the projects identified in Step 7, the Committee developed a prioritized list of mitigation projects considered feasible to implement. This prioritized list can be found at the end of the Chapter 7.

Step 9: Mitigation Action Plan
Using the prioritized list of mitigation actions identified in Step 8, the Committee developed a clear strategy that outlines who is responsible for implementing each project, as well as when and how the actions will be implemented.

Step 10: Adopt and Implement the Plan
The Committee members reviewed and approved each section of the plan as it was completed. After review and comments by the Committee, the Plan was submitted to the New Hampshire Office of Emergency Management and twice to the Federal Emergency Agency Region 1 (FEMA), for review and approval. FEMA granted preliminary approval (all but local adoption) on February 26, 2004. At a public meeting, the Rochester City Council formally adopted the plan on June 7, 2005.

The Committee approved the "Prioritized Mitigation Projects" list, which identifies responsibility, funding, support and timeframe for each project. The head of the department may share responsibility for other projects that may develop with the support of Rochester's Emergency Management Director. The Emergency Management Director should be tasked with requesting annual reports as to the progress of each project.

It is important to the City of Rochester that this plan be monitored and updated annually or after a presidential declared disaster. Chapter 7 addresses this issue.

Acknowledgements

The Rochester City Council extends special thanks to the Rochester All Hazard Mitigation Planning Committee as follows:

- Melody Esterberg, Public Works Department
- Norman Sanborn, Jr., Fire Chief
- Fran Zombeck, Fire Department
- Dennis Schafer, MIS Department
- Kenn Ortmann, Planning and Development

The Rochester City Council offers thanks to the New Hampshire Office of Emergency Management for funding and for developing the State *of New Hampshire Natural Hazards Mitigation Plan* (www.nhoem.state.nh.us) which served as a model for this plan. In addition, special thanks are extended to the staff of Strafford Regional Planning Commission for professional services, process facilitation and preparation of this document.

Hazard Mitigation Goals for the City of Rochester, NH

The overall goals of the City of Rochester with respect to Hazard Mitigation are stipulated here in the following order:

1. Improve upon the protection of the general population, the citizens of the City of Rochester and guests, from all natural and man-made hazards.

2. Improve the City's ability to protect properties from flooding.

3. Reduce the potential impact of natural and man-made disasters on the Critical Facilities in the City of Rochester.

4. Reduce the potential impact of natural and man-made disasters on the City of Rochester's infrastructure.

5. Support the adoption of programs that minimize damage from natural hazards.

6. Reduce the potential impact of natural and man-made disasters on private property in the City of Rochester.

7. Reduce the potential impact of natural and man-made disasters on the City of Rochester's economy.

Resource List for All Hazard Mitigation Planning Committee

Rochester's Emergency Management Director (EMD) reviewed and coordinated with the following agencies in order to determine if any conflicts existed or if there were potential areas for cooperation. The agencies mentioned below were contacted by Rochester's EMD and either attended committee work sessions or provided valuable input and guidance through telephone conversation or printed data. Training support has been offered by some of those on this resource list.

New Hampshire Office of Emergency Management:

State Office Park South
107 Pleasant Street
Concord, NH 03301

Field Representative:	Regional Representative- none	
Planner:		
Mitigation Officer:	Mike Poirier	1-800-852-3792

Chapter 2: Community Profile

Introduction

The City of Rochester is located in the southeast portion of Strafford County in southern New Hampshire. Rochester is bounded on the north by Farmington, on the east by Berwick, Maine, on the south by Somersworth and Dover and on the west by Barrington and Strafford. With a population of 30,000, Rochester is the largest city in the seacoast region and the fourth largest city in New Hampshire

The City of Rochester consists of 46 square miles and is located only 30 minutes from Lake Winnipesaukee and the Lakes Region, the Atlantic Ocean and Great Bay National Estuary. The topography of Rochester consists of rolling hills and rivers. The Cocheco River runs through the heart of the city, and the Salmon Falls River forms the border between Rochester and Maine. Major highways include Routes 11, 108, 125, 202, 202A and the Spaulding Turnpike (Route 16), a four-lane, limited access highway with six exits providing access to the City.

Rochester's climate is temperate. Normal average temperature is 47 degrees Fahrenheit. The average rainfall is 41.9". The City is known as the "Lilac City" because of the extensive plantings of these flowering shrubs. Rochester has a pleasant 4-season climate that is conducive to outdoor activities. The city offers a variety of activities including swimming, boating, fishing and hiking.

The City Manager serves as the Chief Executive of the City Government and is responsible for the day-to-day supervision and direction of most City Departments. The City Manager is appointed by the City Council on the basis of his/her qualifications and serves at their pleasure. In addition, the City Manager serves as chief policy advisor to the Council and represents the interests of the City in dealing with other municipalities, and the state and federal governments.

The Rochester Fire Department serves the City with a dedicated and well-trained staff of firefighters who use state of the art equipment and apparatus. The Department consists of 37 full-time firefighters and officers with 40 on-call members. Firefighters respond to numerous types of emergencies throughout Rochester's 46 square miles on a daily basis from two stations, making quick and efficient responses throughout the City. The City recently completed a 7,000 square foot fire station in the southern corridor. The station is manned with 1 Lieutenant and 2 firefighters operating as an engine company. The facility includes living quarters, a physical training room, a meeting/training room and an office from which general fire department business can be conducted. The Department has five pumpers, one tanker, one 110' aerial ladder, one heavy-duty Rescue unit and one Forestry unit.

Other departments include a full-time Police Department, full-time Water and Sewer Department, Assessing, Building and Grounds, Code Enforcement, MIS and Planning, Public Works and Economic Development.

Frisbie Memorial Hospital is an 88-bed acute care community hospital located in Rochester. The medical staff includes more than 250 physicians and other healthcare providers, representing 39 specialties in addition to general practice. The hospital serves adults, children, and infants from Rochester and the greater Strafford County and Southern Maine areas.

Disaster Risk

Rochester is prone to a variety of man-made and natural hazards. These include: dam failures, riverine and ice jam flooding, severe wind events, wildfire, drought, earthquakes, ice storms and severe winter storms.

Flooding, whether from heavy rains or ice jams, carries the greatest risk for Rochester because of the presence of both the Cocheco and Salmon Falls Rivers.

Severe wind events, hurricane residuals and downbursts have also caused damage to Rochester in the past.

New Hampshire lies over an area of "moderate risk" seismic activity.

Development Trends

Rochester is one of the fastest growing cities in New Hampshire. People are drawn to the area by lower housing prices, a diversified economic base, including manufacturing and high-tech companies, and a myriad of recreational opportunities.

The following summarizes development trends over the past 30 years that have had a significant effect on shaping the City's current land use:

- Steady growth in the 1980's and 1990's, especially in the Gonic area on the south side of City.
- Explosive residential growth in the late 1990's and into the 2000's, fueled by a number of factors including: 2nd season home buyers from out-of-state, and people priced out of the NH coastline market moving to Rochester
- Growth along and near the Spaulding Turnpike
- Commercial development along Milton Road, Calef Road and Henry Wilson Highway
- An emphasis on revitalizing downtown as a regional shopping destination attraction

In addition to these events, there are a number of forces in place that have affected development in Rochester during the 1990's, and are expected to continue for some time. These include the following items:

- The pressure to build more housing
- The tendency toward building primarily single-family homes on large lots.
- Opening up new areas of hilly, forested land to development that is beyond access to City water and sewer.
- Many of the new housing units are being constructed in remote portions of the City, which creates a greater burden on the City to provide municipal services.

The City hopes to maintain a rural character with limited large lot residential development in several areas, including along the Salmon Falls River bordering Somersworth and the entire northern part of the city bordering Farmington.

National Flood Insurance Program

Rochester has been participating in the National Flood Insurance Program since June 1979. Flood Insurance Rate Maps and the Flood Boundary and Floodway Map, all bearing the effective date of June 15, 1979, are used for flood insurance purposes and are on file with the Rochester Planning Board. As of January 1997, there are approximately 397 structures located in the FEMA designated Special Flood Hazard Areas (SFHA's), with a population of 1200, and eighteen NFIP Policies.

Chapter 3: Hazard Identification and Vulnerability Assessment

The following is a list of natural and man-made disasters, and the areas affected by them, that have affected or could affect the City of Rochester. These hazards were identified in a brainstorming session with the All Hazard Mitigation Planning Committee meeting on March 27, 2003. The "Past and Potential Hazards Map" at the end of this Chapter reflects the contents of this list.

In order to determine estimated losses due to natural and man made hazards in Rochester, each hazard area was analyzed with results shown below. Human losses are not calculated during this exercise, but could be expected to occur depending on the type and severity of the hazard. Most of these figures exclude both the land value and contents of the structure. The data below was calculated using FEMA's *Understanding Your Risks: Identifying Hazards and Estimating Losses,* August 2001. In addition, the Committee completed the Vulnerability Assessment Worksheets that provided more data to estimate the potential losses.

Riverine Flooding - High Risk

Flooding rarely occurs in Rochester and usually only happens during heavy spring rainstorms, when water will overflow the banks of the Cocheco and Salmon Falls Rivers. Although moderate flooding has occurred regularly but infrequently in the past, no significant damages were found to be recorded. Overlay analysis of floodplains on structures in the City revealed a large number of structures in the floodplain and thereby exposed to flooding.

Cocheco, Salmon Falls Rivers: High Hazard Potential - $66,755,000-Total Value: Approximately 396 structures, businesses, and residential homes are in the 100-year floodplain. Estimated cost of 30% damage to 40% of the structures is $8,010,600.

Recurrence Potential: Low - Every few years some moderate flooding occurs in floodplains from both spring runoff and heavy summer/fall rains; however, in recent decades no major flooding has occurred.

Dam Breach- Medium Risk

No dam breaches are on record in Rochester, but the potential for serious damage does exist from the Rochester Reservoir Dam, a Class B – High Hazard dam. The inundation area is quite extensive, and a breach would especially affect areas along the Isinglass River, a major tributary of the Cocheco River, and immediately downstream of the Reservoir. Although the hazard potential is arguably even greater from dams on the Cocheco and Salmon Falls Rivers, dam inundation areas had not yet been delineated at the time of this study, so risk associated with breach of these dams is not considered here.

Of further note is the overlap of the Rochester Reservoir Dam inundation area with that of the Bow Lake Dam, a Class C – Extreme Hazard dam in the Town of Strafford. The Isinglass River begins at the Bow Lake, so floodwaters from any breach would affect the same stretch of the Isinglass in Rochester that would a Reservoir breach. Damages, with the assumption of total loss, would probably be about the same.

Isinglass River/Rochester Reservoir - High Hazard Potential - $4,035,200 – Total Value: Approximately 41 structures are in the dam inundation area, with an assessed value of $4,035,200. Here, total loss of structures from a breach is assumed.

Recurrence potential: LOW – High hazard dams are well maintained and flows are carefully managed, so there is no expectation of breach ever occurring. Earthquake or directed attack conceivably could cause a breach, but the likelihood of either occurring in Rochester is low.

Drought- Medium Risk

Droughts are characterized by prolonged periods of lack of rainfall. The ground water table and surface waters may drop to very low levels. Droughts may last for months, years, or decades in extreme cases. New Hampshire has forest coverage, numerous rivers, lakes, ponds, and wetlands contributing to adequate ground and surface water resources. The last drought that occurred in the southeastern portion of the state was from 1999 through 2002. Conditions during the summer and fall of 2002 were particularly severe. The city gets its water from one main source and is vulnerable to drought conditions.

Damage caused by drought may include: dryness of vegetation and structures with an increase of fire hazards, lack of adequate potable water, and soil erosion by wind. Firefighting may be hampered by a lack of water. Without adequate water flow, the Town sewers may not function, and, if the river courses were to become dry, the Waste Water Treatment Plant may not be able to discharge treated wastewater. Impact on local agriculture also could be severe. Also, the likelihood of secondary hazards, such as wildfire due to extreme dryness of environmental fuels, may increase.

High Hazard Potential - Given the extensive direct and secondary effects of prolonged drought, it is difficult to be more specific with loss estimates. The Committee will research this issue and endeavor to develop estimates of potential economic loss from this hazard.

Recurrence Potential: Moderate - Drought and dry conditions will continue to affect the Rochester area. The National Climatic Data Center web site documents several recent dry spells/droughts that have affected Strafford County since 1999. The City should anticipate periodic recurrence of such conditions. Furthermore, global climate change could be leading to an increased frequency, duration, and severity of droughts.

Extreme Heat - Medium Risk

Normally, the state enjoys variably moderate temperatures throughout the summer months with occasional peaks of high temperature and humidity. Extreme heat may come from a lasting heat wave in the summer.

The major threat from extreme heat to humans is heat stroke and exhaustion. Elderly citizens are especially affected. Roads, bridges, and railroads can be damaged in very high temperature, and utilities may need more energy for artificial cooling to remain functional. Other structures used by humans may have a similarly increased energy demand.

Moderate Hazard Potential- The 2000 census shows Rochester with 3,834 citizens over 65 (13.5%), so the hazard potential is significant. Direct impacts and extensive and variable indirect effects of extreme heat make an estimate of economic losses difficult. The City of Rochester has good availability of heat emergency sheltering for the elderly, so exposure of the elderly to extreme heat hazards is low to moderate.

Recurrence Potential: Moderate – Heat wave conditions will continue to affect the Rochester area. The City should anticipate periodic recurrence of such conditions. An Internet search of temperature and climate data shows a high frequency of heat wave conditions, characterized by 3 consecutive days of temperatures exceeding 90 degrees F.

Wildfire – Low Risk

The cause of wildfire may include arson, lightning, and burning of debris. The damage may include burned trees, a destroyed ecosystem, property damage, and loss of life. If the fire is detected and put under control immediately after breakout, the damage may be minimized.

Although the City is urbanized and relatively densely populated, several large (300-800 acres) areas of unfragmented lands (further than 500' from Class I – V roads) remain, a significant amount of which is forested. Much of the rest is agricultural land, but residences do occur around the periphery of the unfragmented areas. Rochester does have good firefighting infrastructure, so serious wildfires are not likely to develop.

Low Hazard Potential - A dollar estimate of losses really depends on the severity and location of the fire, which can vary tremendously with weather conditions, fuel loads, etc. Costs, therefore, could range from thousands to millions. More detailed research is really required to develop an estimate. The Committee found no records of significant wildfire in Rochester in recent decades.

Recurrence Potential: Moderate- Conditions that favor wildfire are likely to recur on a periodic basis. The City should anticipate recurrence of such conditions. No documentation of this hazard was available during the writing of this report.

Earthquake - Medium Risk

New England experiences an average of 30-40 earthquakes per year although most are not felt. Due to the solid bedrock geology of New England, an earthquake will affect a much larger area than an earthquake of similar magnitude in California.

The State of New Hampshire lies in an area of the Northeastern United States that has a "Moderate" risk from seismic activity. On April 19, 2002, a 5.1 earthquake centered near Plattsburgh, N.Y. hit New Hampshire. The tremor was felt in Rollinsford, but did not cause any damage.

Earthquakes can cause buildings and bridges to collapse, disrupt gas, electric and phone lines, and often cause landslides, flash floods, fires, avalanches, and tsunamis. Larger earthquakes usually begin with slight tremors but rapidly take the form of one or more violent shocks, and end in vibrations of gradually diminishing force called aftershocks. There is no season for earthquakes. They can occur at any time without warning. The Committee could find no records of earthquake damage in Rochester.

High Hazard Potential - $103,290,500 – Total Value: Moderate potential for serious damage to the large masonry structures, mostly located in the downtown area. Fifteen structures are mostly of un-reinforced masonry construction and have an assessed value of $103,290,500. With 50 percent damage, the estimated cost for repair or rebuilding is $51,645,250. This does not include the costs of repairing or replacing roads, bridges, railroads, power lines, telephone lines, or the contents of the structures.

Recurrence Potential: Moderate - Significant seismic activity in southeast New Hampshire is rare. Given the proximity to past significant events, the likelihood of a significant seismic event occurring in the future should be considered moderate. The most significant earthquake in the Rochester area was the Cape Ann quake that occurred November 18, 1875.

Landslide – Low Risk

Low Hazard Potential: The potential for landslide in Rochester is minimal. The City is mostly a low-lying area with little topographic relief, sitting at about 200 feet above sea level. There are some hilly areas west of the City, especially south of the Spaulding Turnpike, along the Rochester Reservoir and the Barrington Town line, where elevations rise to about 500 feet. Soils are not generally of unstable types that would contribute to landslide events.

Recurrence Potential: Low – There is no record of any landslide activity in Rochester, and the lack of physical conditions that would promote landslide indicates a minimal likelihood of occurrence.

Subsidence – Low Risk

Land subsidence, the loss of surface elevation due to removal of subsurface support, occurs in nearly every state in the United States. Subsidence is one of the most diverse forms of ground failure, ranging from small or local collapses to broad regional lowering of the earth's surface. The causes (mostly due to human activities) of subsidence are as diverse as the forms of failure, and include dewatering of peat or organic soils, dissolution in limestone aquifers, first-time wetting of moisture-deficient, low-density soils (hydrocompaction), natural compaction, liquefaction, crystal deformation, subterranean mining, and withdrawal of fluids (ground water, petroleum, geothermal).

Subsidence poses a greater risk to property than to life. Damage consists of direct structural damage, property loss, and depreciation of land values.

Low Hazard Potential: Unpredictable areas could be along old river channels or old land fills. No evidence exists of subsidence in Rochester, though, and the soils, the bedrock structure, and the prevailing water extraction and development practices in the City would not tend to promote subsidence. The State of New Hampshire Hazard Mitigation Plan shows Rochester to be in a non-hazard area for subsidence.

Recurrence Potential: Low - Subsidence conditions are thought to be rare at most in Rochester, so the probability of occurrence should be considered minimal.

Geomagnetism - Low Risk

Geomagnetic disturbances are of potential risk to Rochester. It can be of significance for electric power utilities, pipeline operations, and radio communications. Nothing can be done to shield earth from these events. Effects could include brownouts throughout City; disruptions of radio and television service; disruptions of digital communication, the effects on which are not fully understood; and disruptions of telephone service. The latter would happen primarily to wireless service, and would be a minor problem due to minimal cellular coverage.

Recurrence Potential: Low – Serious geomagnetic disturbances are generally rare. Because they are naturally occurring, human activities are unlikely to have any effect on the frequency of these events.

Estimated Potential Loss: There are no records of any effects of geomagnetic disturbances in Rochester. The potential losses are difficult to estimate, because the effects can be so variable in both their strength and the thing affected. Loss of emergency communications or business data communications could lead to substantial loss of life or economic losses.

Radon Air/Water - Medium Risk

A naturally occurring radioactive gas with carcinogenic properties, radon is a common problem in many states. New Hampshire is one of them. Data collected by the NH Office of Community and Public Health Bureau of Radiological Health indicated that one third of the houses in New Hampshire have indoor radon levels that exceed the US Environmental Protection Agency's "action level" of four picocuries per liter for at least some portion of the year.

Radon may also enter homes dissolved in drinking water from drilled wells. High levels of radon in water from individual drilled wells are a common occurrence in New Hampshire. In New Hampshire, homes with high levels of airborne radon are most prevalent in the southeast portion of the State. The only health effect that has been definitively linked with radon exposure is lung cancer. Lung cancer would usually occur years (5-25) after exposure.

Recurrence Potential: High – The relatively thin soils over granite bedrock that characterizes New Hampshire result in continuous emission of radon gas. The amount of radon in the Rochester area is not extreme but can often exceed adopted safety limits in the confines of structures, especially in structures with dirt or granite cellars. Exposure to radon in water is possibly somewhat reduced due to the municipal water supply and treatment infrastructure, but individually-drilled wells are still in use in the City.

Estimated Potential Loss: No known records of illness in Rochester can be attributed to radon; however, Rochester should be aware that radon is present. Effects from radon exposure are not immediate and are difficult to positively identify. Also, the number of people significantly affected at any one time is probably low. Besides loss of life for those affected, medical treatment costs could be very high.

Tornado - Low Risk

Tornadoes are severe local storms characterized by winds in excess of two hundred miles per hour concentrated at a narrow vortex, often accompanied by violent lightening, peripheral high winds, severe hail, and severe rain. Tornados are not common in New Hampshire.

Possible damage may include: felled trees, downed power lines, structural damage, blocked roads, secondary damage from wind driven debris, fires caused by lightening or downed power lines, and traffic accidents. Loss of life and mass casualties may happen. Dollar estimates from this type of hazard can range widely from thousands to millions depending on the nature and severity of the hazard.

High Hazard Potential ***- $106,858,400 – Total Value:*** Tornados rarely occur in this part of the country; therefore, assessing damages is difficult. Rochester has 23 mobile home parks, largely near the Salmon Falls River and in the north of the City, that could be

especially affected by tornadoes and high winds. There are a total of 2,038 buildings in mobile home parks in Rochester with an assessed valuation of $106,858,400. Estimated damages to 10% of structures with 20% damage are $2,137,168. Estimated cost does not include building contents, land values or damages to utilities. Many other structures could be severely damaged in a tornado touchdown, depending on the track of the tornado.

Hurricane - Medium Risk

Rochester's location in southeast New Hampshire makes it somewhat more susceptible to extremely high winds and flooding that are associated with hurricanes. There have been relatively recent instances where hurricanes uprooted trees onto structures, specifically Hurricane Gloria in 1985 and Hurricane Bob in 1991. The great hurricane of 1938 devastated much of south coastal New England, causing significant damage in Rochester.

Recurrence Potential: Medium - Significant hurricanes could be expected to affect Rochester approximately every 15-20 years. Although this frequency is relatively low, the damage from a hurricane that makes landfall in Coastal New Hampshire could be enormous.

Estimated Potential Loss: Hurricanes can and do create flooding. The mobile home parks in Rochester would be most susceptible to wind damage from a hurricane. There are a total of 2,038 buildings in mobile home parks in Rochester with an assessed valuation of $106,858,400. Estimated damages to 10% of structures with 20% damage are $2,137,168. Cost of repairing or replacing the roads, bridges, railroads, utilities, natural gas pipeline, and contents of structures and loss of cropland is not included.

Downburst - Medium Risk

Downbursts are strong, columnar, downwardly moving gusts of wind generated most often by powerful thunderstorms. Rochester has not experienced damage from downbursts in recent memory.

Recurrence Potential: Low – Although thunderstorms are common in the Rochester area, downbursts are relatively rare, and the spatial concentration of a downburst further reduces the likelihood of damage. No specific records of downbursts could be found for Rochester.

Estimated Potential Loss: As with tornadoes and hurricanes, the most vulnerable items in Rochester are the mobile homes. Again, these structures in Rochester have a total value of $106,858,400. Estimating losses is essentially impossible, due to the unpredictability of downbursts. Losses would vary with strength of the wind, the location of the event in town, and the exposure of those structures generally vulnerable to high wind. Still, the total value of vulnerable structures is high, and extensive damage would mean major losses.

Lightning Strikes - Low Risk

Lightning strikes are common with the common thunderstorms in the Rochester area. Damage is most likely to be done through secondary effects like wildfire or tree felling. Direct strike of people and buildings, however, remains a distinct possibility.

Recurrence Potential: Low – The probability of damaging lightning strikes is low, despite the high frequency of lightning generating storms.

Estimated Potential Loss: Monetary losses could range from a few thousand dollars in the case of a tree falling on a structure to millions of dollars in a large, lightning-generated wildfire (though the probability of wildfire is moderate at most – see Wildfire above). Loss of life from direct strike is generally not likely, though the probability of such an occurrence would be elevated during major outdoor events, such as the Lilac Festival, the 4th of July Festival, and the Rochester Fair. These events all happen during the time of year most likely to experience thunderstorms.

Extreme Winter Weather - Medium Risk

In the New England region, the winter season may extend from September to May. Severe winter weather includes snow, sleet, icy storms, freezing rain, and hail. Possible damage may include: felled trees, downed power lines with loss of electrical power, structure collapse under the weight of snow, blocked or narrowed right-of-ways, frozen or restricted water/sewer lines, flooding caused by ice-jammed rivers or storm drains, train derailments, and traffic accidents.

Recurrence Potential: High - Winter storms will continue to affect the City of Rochester regularly. According to the National Climatic Data Center web site at least 67 significant winter storms have affected Strafford County. Records from the early 1900's and from the 1950's through 1980's indicate multiple occurrences of extremely heavy snowfalls. More recently, in March 1993, February 1996, and three times in Winter 2002, heavy snow events occurred. Perhaps most significantly in recent history, January 1998 brought a devastating ice storm, after which President Clinton issued a Disaster Declaration for the State of New Hampshire (with the exception of Rockingham County). While the likelihood of winter storms affecting Rochester is very high, the risk is reduced due to the low occurrence of truly severe storms

Estimated Potential Loss: Rochester's recent history has not recorded any loss of life due to the extreme winter weather. All structures in Rochester have a total combined value of $2,073,067,285, and storms could be expected to cause damage ranging from a few thousand dollars to several million, depending on the severity of the storm.

Man-Made Hazards - Medium Risk

Transportation of chemicals and bio-hazardous materials to and from Canada or Maine by railroad or truck is a concern. The seasonal influx of vacationers in our area is of concern to the firefighters and emergency care providers as far as preparing for protection of these visitors in the case of an accidental release.

New Hampshire Northcoast rail line runs through Rochester, mostly carrying freight and crossing major city streets at signaled, street-level crossings in several locations. Potential for accidents exist at rail crossings. The Spaulding Turnpike (Route 16) is a main highway from southern New Hampshire to the Lakes Region and the White Mountains that passes through Rochester and close to the downtown area. Traffic accidents occur on this highway regularly, and hazardous materials are routinely carried on this road.

Recurrence Potential: Low – No disastrous accidents on either the highway or rail system in Rochester have been recorded. Safety regulations and enforcement are fairly strict, so the likelihood of an accidental and seriously damaging release of harmful chemicals in Rochester is quite small. If an accident does occur, though, especially close to downtown, the percentage of the population exposed to the hazard could be large.

Estimated Potential Loss: The dollar cost from such an incident is extremely difficult to estimate, due to the random nature of the events; however, the losses would be primarily in human injury and death and in response and cleanup costs.

Chapter 4: Critical Facilities

The Critical Facilities List for the City of Rochester has been identified utilizing a Critical Facilities List provided by the State Hazard Mitigation Officer. Rochester's All Hazard Mitigation Planning Committee divided up this list of facilities into four categories:

- The *first category* contains facilities needed for Emergency Response in the event of a disaster.

- The *second category* contains Non-Emergency Response Facilities that have been identified by the committee as non-essential. These are not required in an emergency response event, but are considered essential for the everyday operation of Rochester.

- The *third category* contains Facilities/Populations that the committee wishes to protect in the event of a disaster.

- The *fourth category* contains Potential Resources, which can provide services or supplies in the event of a disaster. The "Critical Facilities Maps and Evacuation Plans" at the end of this Chapter identifies the facilities and the evacuation routes.

Category 1 – Emergency Response Services

The City has identified the Emergency Response Facilities and Services as the highest priority in regards to protection from natural and man-made hazards.

Emergency Operations Center
Fire Department-Central

Police Station
Rochester Police Station

Fire Station
Central Fire Station
EOC (Fire Station-Central)
Gonic (Fire Station)

Emergency Fuel Facilities
Eastern Propane
Local Pride

Emergency Shelters (Proposed)
Community Center
Spaulding High School
Middle School

Evacuation Routes
Routes 125, Route 202, Route 202A, Route 108 and Route 11
Spaulding Turnpike

Bridges
North Main Street Bridge

Communications
Water Tower (Communications) (3)

Category 2 - Non Emergency Response Facilities

The City has identified these facilities as non-emergency facilities; however, they are considered essential for the everyday operation of Rochester.

Water Supply
Water Tower (3)

Category 3 - Facilities/Populations to Protect

The third category contains people and facilities that need to be protected in event of a disaster.

Special Needs Population - identified by confidential survey administered by Emergency Medical Services.
- Oxygen-dependent
- Lifeline Assistance
- Home Health Assistance
- Shut-ins and disabled
- Mentally challenged
- Elderly
- Hearing impaired
- Sight impaired

Mobile Home Parks and Campgrounds
- Lilac City Estates
- Tara Estates
- Fieldstone Village
- Grandview Campground
- Baxter Lake
- Westwind Estates

Category 4 - Potential Resources

Contains facilities that provide potential resources for services or supplies.

Hospitals
Frisbie Memorial Hospital

Miscellaneous Resources
Sky Haven Airport
Army Reserve
National Guard Armory
Public Works Department
Wastewater Treatment Plant
Old Wastewater Treatment Plant
Public Works Garage-Communications
Water Treatment Plant

Chapter 5: Existing Mitigation Strategies and Proposed Improvements

Description of Existing Programs

Floodplain Information on the Rochester Web Site
Section 42.20 of the Rochester Zoning Ordinance has provisions dealing with the Regulatory Floodway Zone. The public can access this information on the Rochester web site to see if their home is in the floodplain.

Tree Program
The Public Works Department clears trees from roads after a storm or if they have become a hazard to existing traffic flow.

Snow Removal Plan
The Public Works Department prioritizes what roadways get plowed first during a storm and where to put the snow.

Dam Inundation Plan
Emergency Action Plan in case of a dam failure.

Building Standards (Earthquakes)
State building codes require that all new "critical" buildings have to be constructed using current earthquake standards

Summary of Recommended Improvements

The Rochester All Hazard Mitigation Planning Committee recommends the following improvements to existing programs:

1. **Have all future buildings comply with earthquake standards.** Make sure that any future development complies with existing earthquake standards.
2. **Update Flood Maps.** The City of Rochester has requested that FEMA update their flood maps so that they have more accurate information. This will be an item to move forward with when FEMA is able to supply resources for the City.
3. **Update the Dam Inundation Plan.** The City of Rochester would like FEMA to update their Dam Inundation Plan.

Existing Protection Matrix

The Rochester All Hazard Mitigation Planning Committee has developed the summary matrix of existing hazard mitigation strategies presented on the following pages. This matrix, a summary of the preceding information, includes the type of existing protection (Column 1), a description of the existing protection (Column 2), the area of City affected (Column 3), the effectiveness and or enforcement of the strategy (Column 4), and the identified improvements or changes needed (Column 5).

Type of Existing Protection	Description	Area Covered	Effectiveness/ Enforcement	Gaps in Existing Protection/ Recommended Improvements
Floodplain information on the web site	Section 42.20 of the Rochester Zoning Ordinance has provisions dealing with the Regulatory Floodway Zone. The public can access this information on the Rochester web site to see if their home is in the floodplain	City-Wide	Good/Enforced by Code Enforcement	Quality of info on old maps is poor. Need more accurate info/up-to-date FEMA maps
Tree Program	Public Works clears trees from roads if they've become a hazard/after a storm	City-Wide	Good	None
Snow Removal Plan	Outlines priorities during a snow event and where to put the snow	City-Wide	Good	None
Dam Inundation Plan	Emergency Action plan in case of a dam failure	City Water Supply Reservoir	Obsolete/Not covering all sites	Need updated Dam Inundation Plan. The plan is obsolete and covers only the City Water Supply reservoir.
Building Standards (Earthquakes)	State building codes require that all new "critical" buildings have to be constructed using current earthquake standards	City-Wide	Very Effective/Enforced by State	Need to update the plan for all future buildings to comply with earthquake standards

Chapter 6: Mitigation Strategies

The All Hazard Mitigation Planning Committee held a brainstorming session during the fourth committee meeting. In order to determine mitigation projects, the Committee used the following objectives:

Protect properties from flooding
Adopt building codes that minimize damage from hazards

With these in mind, the Committee reviewed the goals (found in Chapter 1) and the hazards, both man-made and natural, as identified in Chapter 3. The Committee created a list of projects from the 17 types of hazards for which Rochester is at risk. These non-prioritized items are in the directory below. A prioritized list is located at the end of this chapter.

Property Protection

- Update the FEMA flood maps
- Have future buildings comply with existing earthquake standards
- Update the dam inundation plan

Structural Projects

- Funding to help mobile home park owners with tie downs

Summary of Critical Evaluation

The Rochester All Hazard Mitigation Committee reviewed each of the newly identified mitigation strategies and those improvements recommended in Column 5 of the Existing Protection Matrix using the following factors:

- ability to reduce disaster damage
- social acceptability
- ability to complete or be combined with other actions
- technical feasibility / potential success
- impact on the environment
- administrative workability
- ability to meet regulations
- political acceptability
- ability to save or protect historic structures
- legal implementation
- ability to meet other community objectives
- economic impact
- the duration of its implementation period
- environmental compatibility

Preliminary Prioritization

The Rochester All Hazard Mitigation Team assigned the following scores to each strategy for its effectiveness related to the critical evaluation factors listed above.

Rank	Proposed Mitigating Action	Does it reduce disaster damage?	Does it contribute to other goals?	Does it benefit the environment?	Does it meet regulations?	Will historic structures be saved or protected?	Does it help achieve other community objectives?	Could it be quickly implemented?	Is it socially acceptable?	Is it technically feasible and potentially successful?	Is it administratively workable?	Is it politically acceptable?	Is there legal authority to implement?	Is it economically beneficial?	Are other environmental approvals required?	TOTAL
1	buildings comply with earthquake standards	3	3	2	3	1	3	1	3	3	3	3	3	3	3	37
2	update dam inundation plan	2	2	1	3	1	2	2	3	3	3	3	3	3	3	34
3	mobile home tie downs	3	2	1	2	1	1	2	3	3	3	3	3	3	3	33
4	floodplain maps updated	1	2	1	3	1	3	1	3	3	3	3	3	3	3	33

Chapter 7: Prioritized Implementation Schedule

Implementation Strategy for Priority Mitigation Actions

The Rochester All Hazard Mitigation Team created the following prioritized schedule for implementation:

MITIGATION ACTION	WHO (LEADERSHIP)	WHEN (DEADLINE)	HOW (FUNDING SOURCE)
1.) Update the Dam Inundation Plan	Department of Public Works (City Engineer)	2005	Funded by FEMA, $25,000 to hire a consultant
2.) Update the Floodplain Maps	FEMA	2004	Funded by FEMA, Map Modernization Program; There will be routine communication by the Rochester Planning Department with FEMA to check the progress of the project
3.) Mobile Home Tie-Downs	Code Enforcement (Codes and Ordinance Committee of the City Council)	2006-2012	Funded by City. Make available to mobile home park owners; Research existing ordinances, find a model ordinance; evaluate and pattern new ordinance after it; Require tie downs for future mobile homes
4.) Future Buildings Comply with Earthquake Standards	Code Enforcement (Codes and Ordinance Committee of the City Council)	Ongoing	Funded by City. When making updates to the Ordinance, need to make sure local plans stay consistent with state and federal standards; Ongoing training for code enforcement to keep up-to-date on standards; Especially important for the school department

Chapter 8: Maintenance, Adoption, Implementation, and Monitoring

Plan Maintenance

The Hazard Mitigation Committee will meet annually to evaluate goals and effectiveness of the mitigation strategies (see also Monitoring & Updates below). The Committee will review the events of the past year and analyze the effectiveness of the strategies defined in the plan. Any changes or recommendations will be incorporated into a new draft plan to be posted at the City Hall for public review. Availability of the draft will be announced through the usual channels used by the City for announcing public review materials. Next, the Committee will present the plan in an appropriately advertised public meeting or forum such as a City Council meeting for comment. The Committee will then address comments and issue an updated plan, available to the public at the City Hall and ready for reauthorization by the City Council.

The Hazard Mitigation Committee may change in membership from one year to the next depending on the changing availability of its members, and the City Council will be responsible for annual Committee review and recruitment of new or replacement members. As always, citizens other than staff or officers are welcome and encouraged to serve on the Hazard Mitigation Committee

Adoption

The Rochester City Council by majority vote on June 7, 2005 adopted the *Rochester All Hazard Mitigation Plan* as a statement of policy. (See the official Certificate of Adoption at the beginning of this document.) Actions for implementation under this statement of policy are set forth in priority order in the chart "Implementation Strategy for Priority Mitigation Actions" in Chapter 7 and in the "Monitoring & Updates" sub-section contained in this chapter. All other sections of this *Plan* are supporting documentation for information purposes only and are not included as the statement of policy.

Implementation

There were four (4) mitigation projects that were prioritized by the Committee. For each project the Committee identified who, when, and how they would be implemented. Please refer to the "Prioritized Mitigation Actions" list in Chapter 7 for details. Also, at the time this plan was written data were not available to allow a detailed breakdown of dollar costs of hazards in the risk assessment (Chapter 3). The parties responsible for plan review and update will conduct a more detailed analysis of potential loss as part of the implementation strategy of this plan.

The City of Rochester periodically updates its Emergency Action Plan (EAP), Capital Improvements Plan (CIP), and Master Plan. The Hazard Mitigation Plan is intended to be an adoptable chapter of the Master Plan and to be compatible with and supportive of the EAP and CIP. As the update of the of these other plans proceeds, the Hazard Mitigation Committee will

reevaluate the funding sources for the prioritized mitigation actions presented in this plan to identify alternative funding sources or planning mechanisms under which the actions could be taken. Furthermore, the Committee also intends to insert the mitigation actions into the CIP wherever possible and appropriate to maintain a high profile for hazard mitigation and possibly to secure City funding of some mitigation actions.

Monitoring & Updates

The *Rochester All Hazard Mitigation Plan* will be reviewed annually, or after a disaster, by the Rochester Director of Emergency Management, currently Norman Sanborn, Jr. , to track progress and update the policy statement in Chapter 7. The Director will be responsible for evaluating the plan on an annual basis to make sure the plan is consistent with the Rochester Capital Improvement Plan. Plan review will include both update and monitoring. Updates to the Plan will follow from a review of each chapter of the Plan for any changes in mitigation goals, critical facility identification or status, vulnerability/risk analysis, existing mitigation policies or regulations, or demonstrated need for mitigation action. The entity or entities responsible for the implementation of each action (as listed in the Prioritized Mitigation Actions, Chapter 7) will be contacted by the Director and asked to provide a summary of the status of the action(s).

Additionally, the Hazard Mitigation Committee will re-prioritize the list of Proposed Mitigation Actions, incorporating any new actions that have been identified. Prioritization will be accomplished through use of the existing "STAPLEE" process and preferably, where possible, through calculation of benefit-cost ratios (BCR) according to FEMA-recommended methodology, currently compiled and presented on the "Mitigation BCA Toolkit" CD-ROM Version 1 (FEMA, July 2003). (Calculation of BCR will be required where FEMA funding for any project will be sought.) Mitigation actions will be ranked according to their STAPLEE and/or BCR values. The Committee will not necessarily include, however, only actions that carry a BCR > 1.0.

If the *Plan* requires major updating, the Director may choose to reconvene the Hazard Mitigation Committee. Updates to the *Plan* may be adopted subsequent to a public hearing by the Rochester City Council.

RESOURCES USED IN THE PREPARATION OF THIS PLAN

NH OEM's *State of New Hampshire Natural Hazards Mitigation Plan* (9/99)

Massachusetts's *Flood Hazard Mitigation Planning: A Community Guide* (6/97)

SWRPC's *Hazard Mitigation Planning for New Hampshire Communities* (7/99)

OEM's *Hazard Mitigation Plan for New Hampshire Communities* (12/97)

OEM / NH OSP's *Flood Insurance Handbook* (4/94)

FEMA's *Community Based Hazard Mitigation Planning: Lowering the Risks and Costs of Disasters* (8/98)

The Local Mitigation Strategy: A Guidebook for Florida Cities and Counties (4/98)

Texas Community Official's Primer on Floodplain Planning Strategies and Tools (6/94)

City of Keene, NH's *Flood Hazard Mitigation Plan* (2/2000)

City of Saco, ME's *All Hazard Mitigation Plan* (1/2000)

City of Montpelier, VT's *Flood Hazard Mitigation Plan* (5/98 draft)

USACoE *Flood Emergency Plan for Surry Mountain Lake* (1994)

USACoE *Flood Emergency Plan for Otter Brook* (1994 update)

APPENDICES

APPENDIX A: TECHNICAL RESOURCES

APPENDIX B: TECHNICAL AND FINANCIAL ASSISTANCE FOR HAZARD MITIGATION

APPENDIX A: TECHNICAL RESOURCES

1. AGENCIES

New Hampshire Office of Emergency Management 271-2231
Hazard Mitigation Section 271-2231

Federal Emergency Management Agency .....(617) 223-4175

NH Regional Planning Commissions:
Central NH Regional Planning Commission 796-2129
Lakes Region Planning Commission 279-8171
Nashua Regional Planning Commission 883-0366
North Country Council 444-6303
Rockingham Planning Commission 778-0885
Southern New Hampshire Planning Commission 669-4664
Southwest Region Planning Commission 357-0557
Strafford Regional Planning Commission 742-2523
Upper Valley Lake Sunapee Regional Planning Commission 448-1680

NH Executive Department:
Safety Department- Office of Emergency Management 271-2231
New Hampshire Office of State Planning 271-2155

NH Department of Cultural Affairs: 271-2540
Division of Historical Resources 271-3483

NH Department of Environmental Services: 271-3503
Air Resources 271-1370
Waste Management 271-2900
Water Resources 271-3406
Water Supply and Pollution Control 271-3504
Rivers Management and Protection Program 271-1152

NH Municipal Association 224-7447

NH Fish and Game Department 271-3421

NH Department of Resources and Economic Development: 271-2411
Natural Heritage Inventory 271-3623
Division of Forests and Lands 271-2214
Division of Parks and Recreation 271-3255

NH Department of Transportation 271-3734

Northeast States Emergency Consortium, Inc. (NESEC).....(781) 224-9876

US Department of Commerce:
National Oceanic and Atmospheric Administration:
National Weather Service; Tauton, Massachusetts .....(508) 824-5116

US Department of the Interior:
US Fish and Wildlife Service 225-1411
US Geological Survey 225-4681
US Army Corps of Engineers .....(978) 318-8087

US Department of Agriculture:
Natural Resource Conservation Service 868-7581

2. MITIGATION FUNDING RESOURCES

404 Hazard Mitigation Grant Program (HMGP).....NH Office of Emergency Management

406 Public Assistance and Hazard Mitigation.....NH Office of Emergency Management

Community Development Block Grant (CDBG).....NH OEM, NH OSP, also refer to RPC

Dam Safety Program.....NH Department of Environmental Services

Disaster Preparedness Improvement Grant (DPIG).....NH Office of Emergency Management

Emergency Generators Program by NESEC‡.....NH Office of Emergency Management

Emergency Watershed Protection (EWP) Program.....USDA, Natural Resources Conservation Service

Flood Mitigation Assistance Program (FMAP).....NH Office of Emergency Management

Flood Plain Management Services (FPMS).....US Army Corps of Engineers

Mitigation Assistance Planning (MAP).....NH Office of Emergency Management

Mutual Aid for Public Works.....NH Municipal Association

National Flood Insurance Program (NFIP) †.....NH Office of State Planning

Power of Prevention Grant by NESEC‡.....NH Office of Emergency Management

Project Impact.....NH Office of Emergency Management

Roadway Repair & Maintenance Program(s).....NH Department of Transportation

Section 14 Emergency Stream Bank Erosion & Shoreline Protection……..…….US Army Corps of Engineers

Section 103 Beach Erosion…….……..……US Army Corps of Engineers

Section 205 Flood Damage Reduction……..…….……..US Army Corps of Engineers

Section 208 Snagging and Clearing.....US Army Corps of Engineers

Shoreline Protection Program……..……NH Department of Environmental Services

Various Forest and Lands Program(s).....NH Department of Resources and Economic Development

Wetlands Programs.....NH Department of Environmental Services

‡NESEC – Northeast States Emergency Consortium, Inc. is a 501(c)(3), not-for-profit natural disaster, multi-hazard mitigation and emergency management organization located in Wakefield, Massachusetts. Please, contact NH OEM for more information.

† Note regarding **National Flood Insurance Program** (NFIP) and **Community Rating System** (CRS):
The National Flood Insurance Program has developed suggested floodplain management activities for those communities who wish to more thoroughly manage or reduce the impact of flooding in their jurisdiction. Through use of a rating system (CRS rating), a community's floodplain management efforts can be evaluated for effectiveness. The rating, which indicates an above average floodplain management effort, is then factored into the premium cost for flood insurance policies sold in the community. The higher the rating achieved in that community, the greater the reduction in flood insurance premium costs for local property owners. The NH Office of State Planning can provide additional information regarding participation in the NFIP-CRS Program.

3. WEBSITES

Sponsor	Internet Address	Summary of Contents
Natural Hazards Research Center, U. of Colorado	http://www.colorado.edu/litbase/hazards/	Searchable database of references and links to many disaster-related websites.
Atlantic Hurricane Tracking Data by Year	http://wxp.eas.purdue.edu/hurricane	Hurricane track maps for each year, 1886 – 1996
National Emergency Management Association	http://nemaweb.org	Association of state emergency management directors; list of mitigation projects.
NASA – Goddard Space Flight Center "Disaster Finder:	http://www.gsfc.nasa.gov/ndrd/disaster/	Searchable database of sites that encompass a wide range of natural disasters.
NASA Natural Disaster Reference Database	http://ltpwww.gsfc.nasa.gov/ndrd/main/html	Searchable database of worldwide natural disasters.
U.S. State & Local Gateway	http://www.statelocal.gov/	General information through the federal-state partnership.
National Weather Service	http://nws.noaa.gov/	Central page for National Weather Warnings, updated every 60 seconds.
USGS Real Time Hydrologic Data	http://h20.usgs.gov/public/realtime.html	Provisional hydrological data
Dartmouth Flood Observatory	http://www.dartmouth.edu/artsci/geog/floods/	Observations of flooding situations.
FEMA, National Flood Insurance Program, Community Status Book	http://www.fema.gov/fema/csb.htm	Searchable site for access of Community Status Books
Florida State University Atlantic Hurricane Site	http://www.met.fsu.edu/explores/tropical.html	Tracking and NWS warnings for Atlantic Hurricanes and other links
National Lightning Safety Institute	http://lightningsafety.com/	Information and listing of appropriate publications regarding lightning safety.
NASA Optical Transient Detector	http://www.ghcc.msfc.nasa.gov/otd.html	Space-based sensor of lightning strikes
LLNL Geologic & Atmospheric Hazards	http://wwwep.es.llnl.gov/wwwep/ghp.html	General hazard information developed for the Dept. of Energy.
The Tornado Project Online	http://www.tornadoroject.com/	Information on tornadoes, including details of recent impacts.
National Severe Storms Laboratory	http://www.nssl.uoknor.edu/	Information about and tracking of severe storms.
Independent Insurance Agents of America IIAA Natural Disaster Risk Map	http://www.iiaa.iix.com/ndcmap.htm	A multi-disaster risk map.
Earth Satellite Corporation	http://www.earthsat.com/	Flood risk maps searchable by state.
USDA Forest Service Web	http://www.fs.fed.us/land	Information on forest fires and land management.

APPENDIX B: TECHNICAL AND FINANCIAL ASSISTANCE FOR HAZARD MITIGATION

1. HAZARD MITIGATION GRANT PROGRAM - "Section 404 Mitigation"

The Hazard Mitigation Grant Program (HMGP) in New Hampshire is administered in accordance with the 404 HMGP Administration Plan, which was derived under the authority of Section 404 of the Stafford Act in accordance with Subpart N. of 44 CFR.

The program receives its funding pursuant to a Notice of Interest submitted by the Governor's Authorized Representative (or GAR, i.e. the Director of NHOEM) to the FEMA Regional Director within 60 days of the date of a Presidential Declared Disaster. The amount of funding that may be awarded to the State/Grantee under the HMGP may not exceed 15% of (over and above) the overall funds as are awarded to the State pursuant to the Disaster Recovery programs as are listed in 44 CFR Subpart N. Section 206.431 (d) (inclusive of all Public Assistance, Individual Assistance, etc.). Within 15 days of the Disaster Declaration, an Inter-Agency Hazard Mitigation Team is convened consisting of members of various Federal, State, County, Local and Private Agencies with an interest in Disaster Recovery and Mitigation. From this meeting, a Report is produced which evaluates the event and stipulates the State's desired Mitigation initiatives.

Upon the GAR's receipt of the notice of an award of funding by the Regional Director, the State Hazard Mitigation Officer (SHMO) publishes a Notice of Interest (NOI) to all NH communities and State Agencies announcing the availability of funding and solicits applications for grants. The 404 Administrative Plan calls for a State Hazard Mitigation Team to review all applications. The Team is comprised of individuals from various State Agencies.

Eligible Sub-grantees include:

- State and Local governments,
- Certain Not for Profit Corporations
- Indian Tribes or authorized tribal organizations
- Alaskan corporations not privately owned.

Minimum Project Criteria

- Must conform with the State's "409" Plan
- Have a beneficial impact on the Declared area
- Must conform with:
  - NFIP Floodplain Regulations
  - Wetlands Protection Regulations
  - Environmental Regulations
  - Historical Protection Regulations
- Be cost effective and substantially reduce the risk of future damage
- Not cost more than the anticipated value of the reduction of both direct damages and subsequent negative impacts to the area if future disasters were to occur i.e., min 1:1 benefit/cost ratio
- Both costs and benefits are to be computed on a "net present value" basis
- Has been determined to be the most practical, effective and environmentally sound alternative after a consideration of a range of options
- Contributes to a long-term solution to the problem it is intended to address
- Considers long-term changes and has manageable future maintenance and modification requirements

Eligible Projects may be of any nature that will result in the protection to public or private property and include:

- Structural hazard control or protection projects
- Construction activities that will result in protection from hazards
- Retrofitting of facilities
- Certain property acquisitions or relocations
- Development of State and local mitigation standards
- Development of comprehensive hazard mitigation programs with implementation as a component
- Development or improvement of warning systems

2. FLOOD MITIGATION ASSISTANCE (FMA) PROGRAM

New Hampshire has been a participant in the Flood Mitigation Assistance Program (FMA or FMAP) since 1996/97. In order to be eligible, a community must be a participant in the National Flood Insurance Program.

Flood Mitigation Assistance Program

- NFIP Funded by a % of Policy Premiums
- Planning Grants
- Technical Assistance Grants to States (10% of Project Grant)
- Project Grants to communities
- Communities must have FEMA approved Flood Mitigation Plan to receive Project Funds

In 1997, the State was awarded funds to assist communities with Flood Mitigation Planning and Projects. A Planning Grant from the 1996/97 fund was awarded to the City of Keene in 1998. In preparation for the development of the Flood Mitigation Plan, the Planning Department of the City of Keene created a digital database of its floodplain including the digitizing of its tax assessing maps as well as its Special Flood Hazard Areas in GIS layers. The Plan Draft was submitted to FEMA for review and approval in March of 2000. The Plan includes a detailed inventory of projects and a "model" project prioritization approach.

In 1998, the FMAP Planning Grant was awarded to the City of Salem. Given the complexity of the issues in the Spicket River watershed, the City of Salem subcontracted a substantial portion of the development of its Flood Mitigation Planning to SFC Engineering Partnership of Manchester, NH, a private engineering firm. Salem submitted a Plan and proposed projects to the State and FEMA in May of 1999, which were approved by FEMA. This made Salem the first community in NH to have a FEMA/NFIP approved Flood Mitigation Plan.

Eligible Projects

(44 CFR Part 78)

- Elevation of NFIP insured residential structures
- Elevation and dry-proofing of NFIP insured non-residential structures
- Acquisition of NFIP insured structures and underlying real property
- Relocation of NFIP insured structures from acquired or restricted real property to sites not prone to flood hazards
- Demolition of NFIP insured structures on acquired or restricted real property
- Other activities that bring NFIP insured structures into compliance with statutorily authorized floodplain management requirements
- Beach nourishment activities that include planting native dune vegetation and/or the installation of sand-fencing.
- Minor physical mitigation projects that do not duplicate the flood prevention activities of other Federal agencies and lessen the frequency of flooding or severity of flooding and decrease the predicted flood damages in localized flood problem areas. These include: modification of existing culverts and bridges, installation or modification of flood gates, stabilization of stream banks, and creation of small debris or flood/storm water retention basins in small watersheds (not dikes, levees, seawalls etc.)

3. PRE-DISASTER MITIGATION PROGRAM (PDM)

FEMA has long been promoting disaster resistant construction and retrofit of facilities that are vulnerable to hazards in order to reduce potential damages due to a hazard event. The goal is to reduce loss of life, human suffering, economic disruption, and disaster costs to the Federal taxpayer. This has been, and continues to be accomplished, through a variety of programs and grant funds.

Although the overall intent is to reduce vulnerability before the next disaster threatens, the bulk of the funding for such projects actually has been delivered through a "post-disaster" funding mechanism, the Hazard Mitigation Grant Program (HMGP). This program has successfully addressed the many hazard mitigation opportunities uniquely available following a disaster. However, funding of projects "pre-disaster" has been more difficult, particularly in states that have not experienced major disasters in the past decade. In an effort to address "pre-disaster mitigation", FEMA piloted a program from 1997-2001 entitled "Project Impact" that was community based and multi-hazard oriented.

Through the Disaster Mitigation Act of 2000, Congress approved creation of a national Predisaster Hazard Mitigation program to provide a funding mechanism that is not dependent on a Presidential disaster declaration. For FY2002, $25 million has been appropriated for the new grant program entitled the ***Pre-Disaster Mitigation Program (PDM)***. This new program builds on the experience gained from Project Impact, the HMGP, and other mitigation initiatives.

In CY 2002, the program will be administered by each State, with a base allocation of $250,000, and additional funds provided via a population formula.

Eligible projects include:

- State and local hazard mitigation planning
- Technical assistance [e.g. risk assessments, project development]
- Mitigation Projects
  - Acquisition or relocation of vulnerable properties
  - Hazard retrofits
  - Minor structural hazard control or protection projects
- Community outreach and education [up to 10% of state allocation]

The emphasis for FY2002 will be on mitigation planning, to help localities meet the new planning requirements of the Disaster Mitigation Act of 2000.

Each state establishes grant selection criteria and priorities based on:

- The State Hazard Mitigation Plan
- The degree of commitment of the community to hazard mitigation
- The cost effectiveness of the proposed project
- The type and degree of hazard being addressed
- For project grants, "good standing" of the community in the National Flood Insurance Program

The funding is 75% Federal share, 25% non-Federal, except as noted below. The grant performance periods will be 18 months for planning grants, and 24 months for mitigation project grants. The PDM program is available to regional agencies and Indian tribes. Special accommodation will be made for "small and impoverished communities", who will be eligible for 90% Federal share, 10% non-Federal.

4. **DISASTER PREPAREDNESS IMPROVEMENT GRANT (DPIG)**

FEMA and the State co-sponsor the DPIG Program, which supports the development and updating of disaster assistance plans and capabilities and promotes educational opportunities with respect to preparedness and mitigation. Authority: See Subchapter E. of 44 CFR.

Past DPIG initiatives include:

- Support of the position of Protection Planner/Hazard Mitigation Officer
- Installation of river gauges
- Support of the NH Environthon School Program
- Coordinate the Voluntary Organizations Active in Disasters (VOAD) Program
- Sponsor Dam Safety Training initiatives and workshops
- Distributed handbook for small embankment dam owners
- Inventory of NH's dams
- Review of Dam Plans
- Sponsored statewide workshops for Granite State Incident Stress Debriefing Teams
- Community visits
- Assisted with local Haz Mat planning.
- Funded workshops for NH Road Agents in with the T2 program at the University of New Hampshire

Present DPIG funded Hazard Mitigation initiatives

- Support the Protection Planner/Hazard Mitigation Officer
- Continued support of the Environthon Program
- Development of the All Hazard Mitigation Plan
- Provide Technical Assistance to officials
- Development of Emergency Operations Plans (EOPs) for Significant and High Hazard dams

Future DPIG funded Hazard Mitigation initiatives

- Continued support of the Protection Planner/Hazard Mitigation Officer
- Continued support of the Environthon Program
- Update and maintenance of the State Hazard Mitigation Plan
- Provide Technical Assistance to officials
- Support planning, technical assistance and training as indicated
- Digitize EOPs for the State's "Significant" and "High Hazard" dams for access to information and to facilitate Plan maintenance.

Disaster Preparedness Improvement Grant

- ***Evaluate natural hazards on a continuing basis and develop programs and actions required to mitigate such hazards***
- ***Provide Technical Assistance***
- ***Grants to States of up to $50,000 annually***
- ***(50% State match - cash or in kind)***

Eligible Projects Include:

- Evaluations of Natural Hazards
- Hazard Mitigation activities (i.e. Plan/ policy/program/strategy development
- Plan updates
- Handbooks: publication & distribution
- Creating exercise materials
- Developing Standard Operating Procedures
- Training state employees
- Report of formal analysis of State enabling legislation and authorities
- Update inventory of State/local Critical Facilities
- Develop a tracking system of critical actions to be taken post-event
- Creating Damage Assessment Plans and defining procedures
- Developing Plans for procedures when no Federal Aid is forthcoming
- Creating Plans for Search and Rescue Operations
- Developing Disaster accounting procedures

This list is not exhaustive

5. COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM

These Federal funds are provided through the U.S. Department of Housing and Urban Development (HUD) and are administered by the CDBG Program of the New Hampshire Office of State Planning.

Some CDBG disaster related funding has been transferred to FEMA recently and the SHMO is scheduled to receive guidance as to which specific funds and, new program management criteria.

The specific CDBG funds designated for hazard mitigation purposes are made available to address "unmet needs" pursuant to a given Disaster Declaration to States which request them. For these funds, project selection guidance is provided by NHOEM and NHOSP administers the grant.

Pursuant to Declaration DR-1144-NH, $557,000.00 was made available to the State and pursuant to DR-1199-NH, the grant award is targeted at $1,500,000.00.

In October of 1998, HUD announced the program guidelines for the expenditure of the DR-1144-NH related funding and the community of Salem applied for, and has received preliminary approval for funding to acquire a 19-unit trailer park in the Floodplain.

Community Development Block Grant

- ***U.S. Dept. of Housing and Urban Development***
- ***Funds for a Declared Disaster's "Unmet Needs"***
- ***Projects must meet one of three National Objectives***
- ***Provide a direct benefit to low and moderate income persons or households***
- ***Prevent or eliminate slums and blight***
- ***Eliminate conditions which seriously and immediately threaten the public health and welfare***

Additional conditions with respect to the expenditure of these funds includes the provision that at least 50% of the grant award must be expended in a manner which benefits individuals who earn 80% or less than the area's (county's) median income.

Mitigation Programs of Other NH State Agencies

The following agencies of the State of New Hampshire are directly or indirectly involved in activities that include Hazard Mitigation Planning and/or program implementation.

NH Department of Transportation Bureau of Repair and Maintenance
NH OSP/NFIP Program
NH OSP Coastal Program
NH DRED Division of Forests and Lands
NH DES Wetlands Program
NH DES Shoreline Protection Program
NH DES Water Resources Division – Dam Safety Program