

2007

HAZARD MITIGATION PLAN TOWN OF RINDGE, NH



Courtesy of the Rindge Historical Society

Prepared by the:

Town of Rindge Hazard Mitigation Committee

&

Southwest Region Planning Commission

20 Central Square, 2nd Floor

Keene, NH 03431

(603) 357-0557

www.swrpc.org

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Executive Summary

The Rindge Hazard Mitigation Plan serves as a means to reduce future losses from natural or man-made hazard events before they occur. The Plan was developed by the Rindge Hazard Mitigation Committee and contains statements of policy adopted by the Board of Selectmen.

Natural hazards are addressed as follows:

- Flooding (Riverine, Ice/Snow Melt)
- Wind (Downburst, Tornado & Hurricane)
- Wildfire
- Extreme Winter Weather
- Subsidence
- Radon (Air/Water)
- Drought
- Extreme Heat
- Earthquakes
- Lightning
- Man-Made (Hazardous Materials/Dam Breach)

The Rindge Hazard Mitigation Committee, as shown per Chapters III and IV, identified “Critical Facilities” and “Areas at Risk” as follows:

Critical Facilities

- Emergency Operations Center
- Fire Station
- Police Station
- Emergency Fuel Facilities
- Emergency Electrical Power Facility
- Emergency Shelters
- Dry Hydrants/Fire Ponds/Water Sources
- Evacuation Routes & Bridges (Primary & Secondary)
- Town Garage / Transfer Station
- Communications
- Hospitals
- Helicopter Landing Sites

Areas at Risk

- Old New Ipswich Road
- Conservation Lands
- Construction site on US 202 North
- Fuel stations throughout town
- US 202 North at Jaffrey T/L
- Franklin Pierce University Road
- Intersection of US 202/NH 119

The Rindge Hazard Mitigation Committee identified existing hazard mitigation programs as follows:

- Emergency Management Plan
- School Evacuation Plan
- Fire Dry Hydrant Management Plan
- Town Warning System
- Local Road Design Standards
- Local Bridge Maintenance Program
- Local Road Maintenance Program
- Tree Maintenance Program
- Code Enforcement Officer
- Fire Inspector
- Health Officer
- Building Codes
- Shoreland Protection Program
- Winter Storms Operations Plan
- Hazardous Materials Spill Prevention Control & Counter Measures Plan
- Town Radio System
- Mutual Aid
- Erosion and Sedimentation Plan
- Emergency Power Back-up Program
- Town Master Plan
- Wetlands Protection Ordinance
- Safety Awareness Program
- Ambulance Service
- Radiological Evacuation Plan
- Steep Slopes Ordinance

The Rindge Hazard Mitigation Committee prioritized newly identified hazard mitigation strategies as follows:

1. Sandbag program (stockpile materials & organize volunteers)
2. Portable generators for sump pumps and to power up homes of special needs populations
3. Portable Pumps
4. Detours – Acquire cones, barriers, and signs and educate public on detour routes
5. Buy additional radio frequencies and 2 repeaters (radio interoperability)
6. Beaver control program
7. Conduct survey of residents regarding vulnerability and volunteer opportunities
8. ATV's (Rhinos) & Boats for rescue
9. Install more dry hydrants
10. Coordinate Yankee evacuation plans with the State
11. Power back up for signals at the intersection of routes 119/202
12. Acquire CB & HAM radio for Emergency Operations Center
13. Expand existing surface water testing
14. Reverse 911 system
15. RMS School power backup
16. Franklin Pierce Shelter power back up
17. Power back up for Town Hall
18. Fuel spill containment booms, training, and inspection of gas stations
19. Fix Culvert on Old New Ipswich Road
20. Resolve Mutual Aid radio jams during VT Yankee drills
21. Emergency Transportation Plan for moving people to shelters
22. Neighborhood level plans, with town coordinator designated to each
23. Coordination of volunteers and private resources (snowmobiles, ATVs, etc.)
24. Securing supplies with retail stores
25. Coordinate School Superintendent w/ FD & PD re: days off & trouble students
26. Radiological training for monitors
27. Public education on town warning signals and procedures for extended power outages
28. New fire codes for commercial buildings (more stringent sprinkler regulations)
29. Dam inspection policy
30. Implement septic system ordinance
31. Acquire excavator for Public Works
32. Forest Management practices for conservation lands to prevent forest fires
33. Code enforcement –environmental training for health officer
34. Erosion Sediment Control ordinance
35. Snow fencing/landscaping to prevent white-outs on College Road
36. Security fence around explosives storage area
37. Public sewer around lakes (such as little Michigan)

CHAPTER I INTRODUCTION

Background

The Federal Emergency Management Agency (FEMA) has mandated that all communities within the State of New Hampshire establish local hazard mitigation plans as a means to reduce future losses from natural or man-made hazard events before they occur. In response to this mandate, the NH Bureau of Emergency Management (BEM) contracted 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 laid the foundation in an effort to enable all New Hampshire Regional Planning Commissions, through education outreach, the capability to assist their local communities, such as the Town of Rindge, in the preparation of local hazard mitigation plans.

What is Hazard Mitigation?

<p>“Hazard Mitigation means any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards” (44 CFR 206.401).</p>

Authority

This Hazard Mitigation Plan was prepared 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 All-Hazard Mitigation Plan will be referred to as the "Plan."

Funding Source

This Plan was funded by the NH Bureau of Emergency Management, with grants from the Predisaster Mitigation Competitive Grant Program as well as from funds appropriated by the Town of Rindge.

Purpose

The Rindge All-Hazard Mitigation Plan is a planning tool to be used by the Town of Rindge, as well as other local, state and federal governments, in their efforts to reduce the effects from natural and human-made hazards. This plan does not constitute any sections of Rindge's Master Plan or Town Ordinances.

Scope of the Plan

The scope of this Plan includes the identification of natural hazards affecting the Town of Rindge, as identified by the Hazard Mitigation Committee. The hazards were reviewed under the following categories as outlined in the State of New Hampshire's Natural Hazards Mitigation Plan:

- I. Flood, Erosion, Drought, Extreme Heat and Wildfire.**
- II. Geological Hazards** (Earthquake, Subsidence, and Radon).
- III. Severe Wind** (Tornado, Hurricane, Thunderstorm, Downburst and Lightning).
- IV. Winter Weather** (Snow, Ice Storm and Extreme Cold).

The Committee also discussed man-made hazards such as Dams and Hazardous Materials Spills.

Methodology

Using the Guide to Hazard Mitigation Planning for New Hampshire Communities handbook, the Rindge Hazard Mitigation Committee developed the content of the Rindge's Hazard Mitigation Plan by following the nine step process set forth in the handbook. The Committee held monthly meetings, open to the public including area business owners, schools, organizations and communities, starting April 20, 2006 through November 2, 2006, in order to develop the Plan. On **Enter Date** the Rindge Board of Selectmen held a public hearing and adopted the Plan.

The following are dates of Committee meetings and sub-committee meetings.

Public Committee Meetings:

April 20, 2006, 7:00 - 8:30 p.m.: Public informational and organizational meeting, held at Rindge Town Offices.

May 22, 2006, 7:00 - 9:00 p.m.: Working committee meeting held at Rindge Town Offices.

June 6, 2006, 10:00 - 12:00 p.m.: Working committee meeting held at Rindge Town Offices.

July 11, 2006, 10:00 - 1:00 p.m.: Working committee meeting held in Rindge Town Offices.

August 8, 2006, 10:00 - 1:00 p.m.: Working committee meeting held in Rindge Town Offices.

September 19, 2006, 10:00 - 1:00 p.m.: Working committee meeting held in Rindge Town Offices.

November 2, 2006, 10:30 - 12:00 p.m.: Working committee draft plan review meeting held at Rindge Town Offices.

A mailing was made to each committee member, prior to each meeting that contained information from the previous meeting, an agenda sheet, and information to be covered. In addition, the meetings were advertised as a public meeting in accordance with RSA 91-A, and the meeting dates were posted on the town's website. (Meeting agendas and notices are included in Appendix D at the back of the Plan.)

Public Meetings with the Board of Selectmen:

Insert Date: The Board of Selectmen agreed to begin the process of developing a Local Hazard Mitigation Plan. Meeting held at Rindge Town Offices.

INSERT DATE.: The Board of Selectmen adopted the Local Hazard Mitigation Plan. Public hearing held at Rindge Town Offices.

The Committee 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

Southwest Region Planning Commission presented the Town of Rindge with recommendations for the make up of the committee. Recommendations included the inclusion of town staff, emergency response staff, public works, elected officials, business owners, and those with knowledge of historical events. Town staff selected persons based on these recommendations and submitted a list of prospective members to the Board of Selectmen. The Selectmen approved the members and the committee was formed.

Step 2: Identification of Hazards and Critical Facilities

As listed below, the Committee members identified human-made and natural hazards that could or have affected the Town of Rindge.

Flooding	Tornado	Hazardous Materials Spills
Drought	Hurricanes	Snow Avalanche
Extreme Heat	Earthquakes	Subsidence
Wildfire	Severe Wind/Downburst	Radon
Lightning Strikes	Extreme Winter Weather	Dams

The Committee brainstormed on the type of hazards and locations that have sustained or could be susceptible to each hazard within the Town. The results are shown in the Past and Potential Hazard Map, which can be found at the end of the Plan.

The Committee then identified and catalogued all of the critical facilities within the Town. The result is found in Chapter IV, "Critical Facilities Analysis," and shown on a location map at the end of the Plan.

Step 3: Assessing Probability, Severity and Risk, and Estimating Potential Losses

The Committee members completed Risk Assessment Worksheets for all of the types hazards identified in Step 2 in order to assess probability, severity and risk. Potential losses for each hazard type were estimated. This data is found in Chapter IV "Assessing Probability, Severity and Risk- Estimating Potential Losses."

Step 4: Analyze Development Trends

This Step was conducted by town staff and the Regional Planning Commission. The results of this research were shared with the Committee and can be found in Chapter II, "Community Profile."

Step 5: Existing Mitigation Strategies and Proposed Improvements

The Committee identified plans and policies that are already in place to reduce the affects of man-made and natural hazards. Then the Committee evaluated the effectiveness of the existing measures to identify where they can be improved. The results are found in Chapter VII, "Existing Mitigation Strategies." The Committee also identified programs in place that would not be categorized as mitigation strategies.

Step 6: Brainstorm and Develop Disaster Minimization Alternatives

To assist with determining mitigation projects, the Committee considered the following eight (8) objectives:

- Preventative (Programs & Policies)**
- Property Protection**
- Structural**
- Public Education & Information**

**Engineering Projects
Equipment Purchase
Training**

The Committee also identified mitigation actions for each of the potential hazards identified in Chapter III.

Step 7: Prioritized Mitigation Measures

The Committee developed a prioritized list of mitigation projects identified in Step 6 considered feasible to implement. This prioritized list can be found in Chapter VII.

Step 8: Develop an Implementation Strategy- Action Plan

Using the prioritized list of mitigation actions identified in Step 7, 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 9: Adopt and Implement the Plan

The Committee members reviewed and approved each section of the plan as it was completed. After acceptance by the Committee, the Plan was submitted to the New Hampshire Bureau of Emergency Management for initial review, and then forwarded to FEMA, for formal approval. Once approved, the Plan was formally adopted by the Town of Rindge on [REDACTED].

The Committee approved the "Prioritized Mitigation Projects" list, which identifies responsibility, funding, support and timeframe for each project. Other projects that may be developed with the support of Rindge's Emergency Management Director shall be led by the head of the department that shares that responsibility. The Town Administrator should be charged with requesting annual reports as to the progress of each project.

It is important to the Town of Rindge that this plan be monitored and updated annually or after a presidentially declared disaster. Chapter VIII addresses this issue.

Acknowledgements

The Rindge Board of Selectmen extends special thanks to the Rindge Hazard Mitigation Committee as follows:

Rickard Donovan, *Director of Public Life and Safety*
Carlotta Pini, *Assistant to the Town Administrator*
Patricia Barry, *Selectmen*
Bob Cleland, *Historical Society & Conservation Committee*
Jo Anne Carr, *Town Planner*
Michael Sielicki, *Police Chief*
Robert Forrest, *Director Public Works*
Michael A. Cloutier, Sr., *Highway Foreman*
Evelyn Fogg, *Business Owner*

The Rindge Board of Selectmen offers thanks to the New Hampshire Bureau of Emergency Management 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 the Southwest Region Planning Commission for professional services, process facilitation and preparation of this document.

Hazard Mitigation Goals

Town of Rindge, NH

The overall Goals of the Town of Rindge with respect to Hazard Mitigation are stipulated here:

1. To improve upon the protection of the general population, the citizens of the Town of Rindge and guests, from all natural and human-made hazards.
2. To reduce the potential impact of natural and man-made disasters on the Town of Rindge's Emergency Response Services.
3. To reduce the potential impact of natural and human-made disasters on the Critical Facilities in the Town of Rindge.
4. To reduce the potential impact of natural and human-made disasters on the Town of Rindge's infrastructure.
5. To improve the Town of Rindge's Emergency Preparedness and Disaster Response and Recovery Capability.
6. To reduce the potential impact of natural and human-made disasters on private property in the Town of Rindge.
7. To reduce the potential impact of natural and human-made disasters on the Town of Rindge's economy.
8. To reduce the potential impact of natural and human-made disasters on the Town of Rindge's natural environment.
9. To reduce the Town of Rindge's liability with respect to natural and human-made hazards through a community education program.
10. To reduce the potential impact of natural and human-made disasters on the Town of Rindge's specific historic treasures.
11. To identify, introduce and implement cost-effective Hazard Mitigation measures so as to accomplish the Town's Goals and Objectives and to raise the awareness of and acceptance of Hazard Mitigation opportunities generally.
12. The Town of Rindge will work in conjunction and cooperation with the State of New Hampshire's Hazard Mitigation Goals.

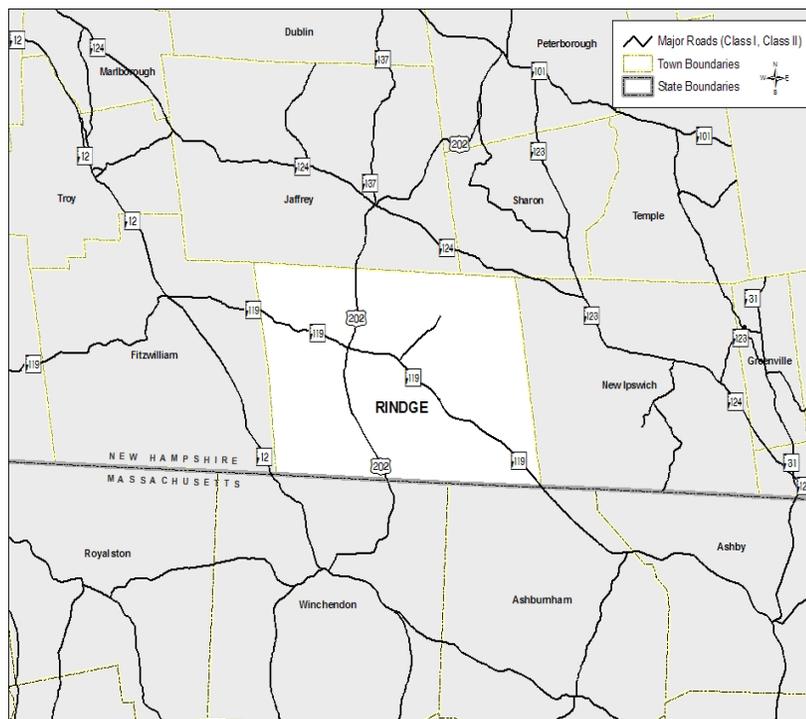
CHAPTER II COMMUNITY PROFILE

The Town of Rindge's master plan and annual report were reviewed and compiled along with up-to-date information from various agencies of the State of New Hampshire and from the Southwest Region Planning Commission. This information, along with anecdotal and factual information from the Hazard Mitigation Committee was used to provide the following profile.

Town Overview

The Town of Rindge is located in the southeastern portion of Cheshire County, in Southwest New Hampshire. Rindge is bounded on the north side by Jaffrey and Sharon, easterly by New Ipswich, westerly by Fitzwilliam, and southerly by the State of Massachusetts. The Town population is 6,137.¹

Location Map of Rindge, NH



The Town of Rindge has a density of 165.6 persons per square mile of land area and contains 37.1 square miles of land area and 2.7 square miles of inland water area. The Town has several significant water bodies, such as Lake Monomonac, Contoocook Lake, Emerson Pond, Grassy Pond, Hubbard Pond, Bullet Pond, Pool Pond, Crowcroft Pond and Pearly Pond. Some of these water features have attracted a substantial amount of shoreline development which consists mostly of seasonal dwellings on small, nonconforming lots of records that were subdivided many years ago. More recently, year-round residences have been built. Additionally, Rindge has large amounts of undeveloped land: 3,831 developed acres and 20,069 undeveloped acres.²

¹ Population data from Office of Energy & Planning's 2004 Population Estimates

² 1989 data from the Town of Rindge Master Plan (2001 Update)

Rindge has two different watersheds. The Contoocook River watershed, which is part of the Merrimack River Basin, drains approximately 30% of the Town (7,450 acres) to the north. The Millers River watershed is part of the Connecticut River Basin and drains approximately 70% of Rindge (18,150 acres) to the south.

The topography of Rindge is more of a rolling terrain characterized by broader and more gradual slopes than the steeper slopes found in neighboring Jaffrey and New Ipswich. The overall change in topography ranges from a low of approximately 900 feet in the extreme southwest corner near the Fitzwilliam/Rindge/Massachusetts border to approximately 1,500 feet in the extreme southeast corner adjacent to the New Ipswich town line. High points in Rindge are Thrasher Hill 1,382' and Griswold Hill 1,371'. However, the general terrain ranges mostly in the 1,000 – 1,200 foot elevation.

Rindge has a mid-latitude climate. Average summer temperature is 68 degrees Fahrenheit; average winter temperature is 20 degrees Fahrenheit. Average annual precipitation is 45 inches and the average annual snowfall is 74 inches.

Two major highways pass through Rindge; NH Route 119 and US Route 202. Route 119 is the major east-west artery and Route 202 is the major north-south artery.

A three-member Board of Selectmen governs the Town of Rindge. The Town has a full-time Town Administrator, full-time Fire Chief (Director of Public and Life Safety) with a volunteer Fire Department, a full-time Police Chief, and a full-time Director of Public Works. Area hospitals include the Cheshire Medical Center/Dartmouth-Hitchcock located in Keene, approximately 22 miles northwest, Monadnock Community Hospital in Peterborough, approximately 14 miles north of Rindge, and Heywood Hospital in Gardner, MA, approximately 16 miles south.

Disaster Risk

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

Rindge does not have the same flooding problems as communities to the north which border the Contoocook River because flooding is moderated by an extensive drainage network and the capacity of wetlands to store floodwaters. This allows the waters to be dispersed over a large area and discharged over a longer period of time.

Severe wind events and hurricane residuals have caused damage to Rindge. Over the years unrecorded wind events have caused losses of timber. In 1928, a tornado ripped through West Rindge causing major property damage.

Wildfires have occurred in Rindge as well. There have been several documented wildfires throughout town in the past 70 years. The areas in and around the forests are susceptible to wildfires due to the fuel load and many camping activities.

Winter weather has proven to be a regular hazard throughout the town of Rindge each year. Rindge is susceptible to receiving large volumes of snow from Nor'easters due to its geographical close proximity to the east coast where these storms track. In 1888, Rindge received 40 inches of snow from one of these storms. The town has also received a fair share of damage from ice storms in winter months.

Development Patterns

Examination of the Town’s existing land use as shown in the 1990 Rindge Master Plan indicates that most of the Town’s land area (about 78.4% land) is undeveloped and consists primarily of wooded and brush-covered areas, many of which have substantial development constraints. Rindge’s most prevalent natural limitation for development is its wetlands. Twenty-six percent of the Town’s area is undevelopable, approx. nineteen percent is comprised of wetland soils and another approx. seven percent is surface water.

EXISTING LAND USE IN RINDGE, 1980 AND 1989*

LAND USE	TOTAL ACRES		% OF ACRES IN USE		% OF TOTAL LAND	
	1980	1989	1980	1989	1980	1989
DEVELOPED:						
Residential (single & multi)	930	2103	34.7	55.0	3.7	8.2
Commercial	130	97	4.8	2.5	0.5	0.4
Industrial	10	21	0.3	0.5	0.0	0.1
Public/Institutional	990	950	36.9	24.8	3.9	3.7
Roads and Highways	625	660	23.3	17.2	2.4	2.6
TOTALS	2,685	3,831	100%	100%	10.5%	15.0%
UNDEVELOPED	21,215	20,069			82.9%	78.4%
Water Area	1,700				6.6%	6.6%
TOTAL AREA	25,600				100.0%	100.0%

* Decrease in commercial and public/institutional acreage is due to differences in classification methods.

Source: Rindge Comprehensive Plan, 1980 and Southwest Region Planning commission, 1988, Rindge Master Plan, p2-11.

Residential

Land devoted to residential uses comprises the largest amount of developed acreage in Rindge. Reference to the Existing Land Use Map reveals that the pattern of residential development generally follows the natural features of the land and the existing road network. Today’s residential pattern consists mainly of single family detached dwellings located on various town roads as well as routes 202 and 119.

Agriculture/Vacant Land

Analysis of the present development pattern reveals that agricultural activity has experienced a significant decline in Rindge even though, according to the 1980 Master Plan, the Town once contained some of the most productive farms in the State. Evidence of agricultural activity consisted mainly of hay fields and pastures, and there are only a few active farms still in existence. Numerous vacant areas that were obviously farm fields are currently lying fallow and/or have become overgrown with brush and show evidence of returning to forest land.

Commercial

The greatest concentrations of commercial development are to be found on the southern section of US 202, which is Rindge’s main commercial area. Most of Rindge’s commercial activity is located in this area.

Industrial

There are two areas of industrial uses in town, located in the northwest area along US 202 near the Jaffrey town line and along US 202 south near the Massachusetts state line. There are also a few sand and gravel pits operating in Town.

Recreational

There are many recreational uses in Town. They include the school properties, town and private beaches, Franklin Pierce sports complex, the many private campgrounds and picnic areas, the lakes, and other attractions.

Forest Land

Heavily wooded forest land still covers most of the Town. Most of this land has already been cut for lumber in previous years (dating back to the early 1800s), and so there are no “virgin” stands of timber remaining. Forested land often includes the steeper slopes and wetlands that heretofore have remained undeveloped. These wooded areas still produce timber. They are also important to the town’s landscape because they serve as a recreational resource, provide wildlife habitat, help moderate the climate, and help maintain the rural character of the town.

Roads and Highways

Roads and highways comprise a major portion of a community’s developed land area. In Rindge, the land devoted to the Town and State roads occupies approximately 660 acres or 17.2% of the total developed area (92.92 miles). The land consists of both the traveled road surface and the adjacent right-of-way area.

Public/Institutional Development

Numerous public and private institutional uses are located in Rindge. The 1980 plan showed institutional acreage to be approximately 990 acres. Public facilities include cemeteries, The Old Meeting House, Town Office Building, Rindge Elementary School, Fire Station, Town Forest, Post Office, Wellington Road Recreation Area, State Highway Barn, Annett State Forest, Town Garage, and Solid Waste Transfer Station. Private Facilities include Churches, Franklin Pierce University, Camp Quinapoxet Boy Scout Camp, Camp Monomonac, Hampshire Country School, Cathedral of the Pines Memorial, Meeting School, and Camp Joy.

Rindge is still basically a rural community with three small village centers. The villages of Rindge Center and West Rindge have a fairly concentrated development pattern consisting primarily of residential uses supplemented by commercial (along Route 202) and various public and semi-public uses. The village of East Rindge is strictly a residential neighborhood.

Consideration for Development

The existing topography of Rindge will play a significant role in the location of future land uses such as residential, commercial, and industrial. Rindge contains a significant amount of wetlands and some steep slopes that are not really suitable for development. As a result, development will be oriented to those portions of the Town where such physical constraints will not present significant development problems. Also, developers can use the planned residential development or cluster development concept to mitigate adverse environmental considerations. It is also expected that future development will be oriented to the larger undeveloped land parcels that are scattered throughout the Town.

Analysis of the Natural Features Maps shows that many of these areas are located in close proximity to Routes 119 and 202 and would be easily accessible from these highways. Consequently, it is expected that much of the Town’s future growth will be attracted to, and located in, these highway corridors. It is

expected that the present topography, when coupled with existing soil conditions, will be a major determinant as to where future development will or will not occur in Rindge.

The soils best suited for development in Rindge are the Monadnock, Colton, and Berkshire soils. Most of these soils are on 8-15% slopes and would need erosion and sedimentation control plans when development is proposed on these soils. There is a high permeability rate in the Colton soils and groundwater quality should be a concern for development.

Many of the other soil units in Rindge are rated medium to high for development potential, but many of these soils pose severe restrictions for septic systems due to a restrictive hardpan layer.

Current Development Trends

Overall, land use patterns in Rindge are dominated by single family residential development, with fairly significant retail development along US 202. Within Rindge there are also seasonal lakefront properties as well as a large college (Franklin Pierce University). This general pattern is not expected to change, although the Planning Department is very concerned about increased residential development occurring in the eastern part of town (east of US 202). Agriculture, which continues to be a concern, both for the economic activity as well as for the protection of the prime farmlands, does not play a significant role in the local economy. It is unlikely that this will change in the foreseeable future, due as much to national trends in farming as to anything else.

Significant features of the built environment include the Town Center on Payson Hill Rd., the retail development on US 202, and the Franklin Pierce University campus. Rindge's history and traditions are rich, and much attention - both public and private - is given to preserving these features. With the pending increase in development, this is a good time to review the land use regulations relative to protecting the identity and character of the Town; this includes addressing land use along the roads.

The future of the NH 119 and US 202 retail corridors and Franklin Pierce University will have tremendous impact on the whole town. Attention will need to be paid to the land use regulations to ensure that they support the final goals and plans for these important pieces of property.

Based on data collected and analyzed in the Land Use Analysis chapter of Rindge's Master Plan (2001), certain assumptions can be made in anticipating future development in Rindge.

- If the past 10 years can serve as an indicator, Rindge will continue to see significant increase in population, new homes built, and retail development.
- The road network in and through Rindge will remain unchanged over the next 10-15 years, aside from regular maintenance and improvements. The roads carrying traffic through Rindge, i.e., Routes 119 and 202, will continue to serve as subregional arterials and local collectors.
- Subdivisions will continue to occur in the eastern side of town with mainly single family homes being built on them.

Road Improvements

Providing an adequate thoroughfare and transportation system is the most significant public investment activity in the physical development of a town. The existing transportation network, which in the case of Rindge refers exclusively to the system of roads and highways, has a profound influence on the location and development of various land uses through the Town.

Due to the significant financial commitment required for the improvement and maintenance of the road network, and the direct relationship between land use patterns and traffic circulation with the Town, the

identification and analysis of current transportation needs is crucial to the orderly accommodation of growth and development.

Development in Hazard Areas

Some hazards identified in this plan are regional risks and, as such, all new development falls into a hazard area. The exception to this is flooding. Currently, there are no structures located within the Special Flood Hazard Area (SFHA) in Rindge. According to the Community Information System (CIS) of FEMA, there have been no development permits and no variances granted within the SFHA since 1978, the earliest records kept in the CIS for the Town of Rindge. There are currently 13 flood insurance policies in force for a total value of \$1,598,700, with no claims since 1978.

National Flood Insurance Program (NFIP)

Areas susceptible to flooding present obvious hazards to life and property, and the continued protection of these areas from development is an important responsibility. Rindge participates in the National Flood Insurance Program administered by the Federal Emergency Management Agency (FEMA). FEMA conducted a flood hazard study for Rindge in 1997 and flood hazard areas were identified in the Pool Pond and Contoocook Lake areas, as well as areas along the Millers River and Lake Monomonac. Flood Insurance Rate Map (FIRM) and Flood Hazard Boundary Maps were prepared by FEMA and are available for review at the Rindge Planning Board office.³

³ Rindge Master Plan – 2006, Natural Resources Chapter, p. 3-17, 8.3 Floodplains

CHAPTER III: HAZARD IDENTIFICATION

The following is a list of natural and manmade disasters, and the areas affected by them, that have or could affect the Town of Rindge. These hazards were identified from the State of New Hampshire Hazard Mitigation Plan (2004), the Federal Emergency Management Administration website, and in a brainstorming session with the Hazard Mitigation Planning Committee meeting on May 22, 2006. The *Past and Potential Hazards Map* at the end of this Plan reflects the contents of this list.

Hazards

Riverine Flooding
Flooding- Disaster Declarations
Flooding- Localized areas
Drought
Extreme Heat
Wildfires
Lightning
Tornadoes
Hurricanes
Earthquakes
Severe Wind/Downbursts
Extreme Winter Weather
Hazardous Materials Incidents
Snow Avalanche
Subsidence
Radon
Dams

In order to determine estimated losses due to natural and man made hazards in Rindge, each hazard area was analyzed; results are shown below. Human losses were 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 value of all structures, including exempt structures such as schools and churches, is \$ 552,374,838.00, as of December 1, 2005.⁴ The median value of a home in Rindge is \$114,400 according to the 2000 Census.⁵ 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 which provided more data to estimate the potential losses.

As future development in Rindge is unpredictable at this time, it is uncertain as to how many future structures could be threatened by hazards. Only existing structures are considered.

⁴ NH Department of Revenue Administration

⁵ Median home value from 2000 Census may not fully reflect current median home values. In the event of a hazard incident, a current home value data should be used to estimate losses.

Hazard	Date	Location	Severity Remarks/Description of Areas Impacted
FLOODING- DISASTER DECLARATIONS			
Flood	1927	Southern NH	Damage to Road Network. Caused many roads to wash out.
Flood	March 11-21, 1936	NH State	Damage to Road Network. Flooding caused by simultaneous heavy snowfall totals, heavy rains and warm weather. Run-off from melting snow with rain overflowed the rivers
Flood/ Severe Storm	August 27, 1986	Cheshire, Hillsborough Counties, NH	FEMA Disaster # 771-DR (Presidentially Declared Disaster) \$1,005,000 in damage
Flood / Severe Storm	April 16, 1987	Cheshire, Carroll, Grafton, Hillsborough, Merrimack, Rockingham, & Sullivan Counties, NH	FEMA Disaster Declaration # 789- DR (Presidentially Declared Disaster). Flooding of low-lying areas along river caused by snowmelt and intense rain. \$4,888,889 in damage.
Flood	August 7-11, 1990	Belknap, Carroll, Cheshire, Coos, Grafton, Hillsborough, Merrimack & Sullivan Counties, NH	FEMA Disaster Declaration # 876. Flooding caused by a series of storm events with moderate to heavy rains. \$2,297,777 in damage.
Storms/ Flood	January 3, 1996	Carroll, Cheshire, Coos, Grafton, Merrimack, Sullivan Counties, NH	FEMA Disaster Declaration # 1077-DR. Damage amount \$2,220,384.
Flood	July 2, 1998	Southern NH	FEMA Disaster Declaration # 1231. Severe storms and flooding
Heavy Rain/ Flood	September 18-19, 1999	Belknap, Cheshire, Grafton Counties, NH	FEMA Disaster Declaration # DR-1305-NH. Heavy rains associated with Tropical Storm/Hurricane Floyd.
Severe Storm/ Flood	September 12, 2003	Cheshire and Sullivan Counties, NH	FEMA Disaster Declaration # 1489-DR. Damage amount \$1,300,000.
Flood	October 26th 2005	Cheshire, Grafton, Merrimack, Sullivan, and Hillsborough Counties, NH	FEMA Disaster Declaration # 1610. Severe storms and flooding.
RIVERINE FLOODING- LOW RISK			
Riverine Flooding	Past and Potential Occurrences	Contoocook Lake & Poole Pond	Flooding of the lake and intermittent streams onto US 202 has occurred and has the potential to occur annually in this area due to accumulation of heavy rain, runoff, and construction of beaver dams. This section of US 202 is located in the 100-year floodplain. Although past flooding has occurred along the road, there is no record of damage.

Hazard	Date	Location	Severity Remarks/Description of Areas Impacted
FLOODING- LOCALIZED- MEDIUM RISK			
Flood	Past and Potential Occurrences	Northern Hubbard Pond (map #15)	Floods over road due to heavy rain and spring thaw. Town is at peak of watershed, few flooding events.
Flood	Past and Potential Occurrences	Old New Ipswich Road (map #14)	Beaver Dams cause flooding during heavy rain events due to heavy overflow.
Flood	Past Occurrences	Lake Monomanoc Dam (map #21)	This dam has been recently repaired.
Flood	Past and Potential Occurrences	Mill Pond and Island Pond (map #20)	Hampshire County School owns dam. The state was helping in the repair of the dam when it failed in the summer of 2006. No damage was reported due to the failure.
Flood	Potential Occurrence	Annette Dam (map #19)	Annette dam has been repaired in the last 10 years. It would cause major flooding in Jaffrey if it failed.
Flood	Potential Occurrence	Grassy Pond Road (map #18)	Major event could cause flooding to houses in this location.
Flood	Potential Occurrences	Old Cathedral Road (map #17)	Stream has potential for flooding one house. Beaver dam is causing potential flooding.
DROUGHT- LOW RISK			
Drought	1929-1936	Statewide	Regional. Recurrence Interval 10 to > 25 years
Drought	1939-1944	Statewide	Severe in southeast and moderate elsewhere. Recurrence Interval 10 to > 25 years
Drought	1947-1950	Statewide	Moderate. Recurrence Interval 10 to > 25 years
Drought	1960-1969	Statewide	Regional longest recorded continuous spell of less than normal precipitation. Encompassed most of the Northeastern US. Recurrence Interval > 25 years
Drought	2001-2002	Statewide	Third worst drought on record, exceeded only by the drought of 1956-1966 and 1941-1942.
<p>Rindge has had limited experience with severe drought conditions. Drought will increase the risk of wildfire, especially in areas of high recreational use and forested areas. Forested areas with high fuel content have more potential to burn</p>			

Hazard	Date	Location	Severity Remarks/Description of Areas Impacted
EXTREME HEAT- LOW RISK			
Extreme Heat	July, 1911	New England	11-day heat wave in New Hampshire
Extreme Heat	Late June to September, 1936	North America	Temps to mid 90s in the northeast
Extreme Heat	Late July, 1999	Northeast	13+ days of 90+ degree heat
Extreme Heat	Early August, 2001	New Hampshire	Mid 90s and high humidity
Extreme Heat	August 2-4, 2006	New Hampshire	Regional heat wave and severe storms, New Ipswich provided a cooling center at the Ambulance Bay
Elderly are at risk; however, potential risk is low. Approximately 7.7% of the town population is 65 and over. Quantity of and access to water sources throughout town reduces potential risk			
WILDFIRES- MEDIUM RISK			
Wildfire	Past Occurrence	Eastern Shore of Lake Monomonac	A bottle rocket ignited brush and burned down a cabin and many trees
Wildfire	1926	Village center	Burned down in 1926.
As forested areas are protected through preservation and conservation, debris builds up on the ground, increasing the fuel load and potential wildfire. Entire town - minimal forest fire protection (dependent on on-call firefighters and problems with accessibility). . All forested areas – have high potential for fire, with 6” to 10” of brush creating high fuel load. Peat moss creates possibility of underground fires. Lightning strike areas also prone to wildfires.			
LIGHTNING- MEDIUM- HIGH RISK			
Lightning	Past and Potential Occurrences	Pearly Lake	Lightning strikes at private residences on Pearly Lake.
Lightning	Past and Potential Occurrences	US 202 south	Lightning has struck several times at businesses along US 202
Lightning	Past and Potential Occurrences	Old New Ipswich Rd	Lightning strikes have been reported on the northern portion of this road. Two power lines and many trees destroyed.
Lightning	Past and Potential Occurrences	Bancroft Reservoir	Lightning strikes reported in this area.
Lightning	Past and Potential Occurrences	High Tension power lines	Lightning has struck in the vicinity of the high tension power lines going from Main St. to Goddard Rd
Rindge has experienced several lightning strikes to private properties. High elevations and areas around lakes and wetlands may be more susceptible to lightning strike incidents.			

Hazard	Date	Location	Severity Remarks/Description of Areas Impacted
TORNADOS (1950-2003, Fujita Scale given if known)- LOW-MEDIUM RISK			
Tornado	September 15, 1922	Cheshire County	F2
Tornado	September 13, 1928	Cheshire County	F2- tornado incident followed the approximate route from Franklin Pierce road to Payson Hill Road along NH 119. The tornado caused an estimated \$100,000 (1928 dollars= \$1,066,424 in 2005) mostly in property damage
Tornado	August 13, 1963	Cheshire County	F2
Tornado	June 6, 1963	Cheshire County	F2
Tornado	July 2, 1997	Cheshire County	F1
Tornadoes rarely occur in this part of the country; therefore, assessing damages is difficult. Buildings have not been built to Zone 2, Design Wind Speed Codes. Estimated damages to 10% of structures with 20% damage is \$11,047,498 ⁶ . Estimated cost does not include building contents, land values or damages to utilities. River corridors and hill tops susceptible. 13 incidents of tornadic activity (F1 or less) occurred in Cheshire County between 1959 - 1991			
HURRICANES (Category given if known) and TROPICAL STORMS- LOW-MEDIUM RISK			
Hurricane	August, 1635	n/a	
Hurricane	October 18-19, 1778	n/a	Winds 40-75 mph
Hurricane	October 9, 1804	n/a	
Gale	September 23, 1815	n/a	Winds > 50mph
Hurricane	September 8, 1869	n/a	
Hurricane	September 21, 1938	Southern New England	Flooding caused damage to road network and structures. 13 deaths, 494 injured throughout NH. Disruption of electric and telephone services for weeks. 2 Billion feet of marketable lumber blown down. Total storm losses of \$12,337,643 (1938 dollars). 186 mph maximum winds.
Hurricane (Carol)	August 31, 1954	Southern New England	Category 3, winds 111-130 mph. Extensive tree and crop damage in NH, localized flooding
Hurricane (Edna)	September 11, 1954	Southern New England	Category 3 in Massachusetts. This Hurricane moved off shore but still cost 21 lives and \$40.5 million in damages throughout New England. Following so close to Carol it made recovery difficult for some areas. Heavy rain in New Hampshire
Hurricane (Donna)	September 12, 1960	Southern and Central NH	Category 3 (Category 1 in NH). Heavy flooding in some parts of the State.
Tropical Storm (Daisy)	October 7, 1962	Coastal NH	Heavy swell and flooding along the coast
Tropical Storm (Doria)	August 28, 1971	New Hampshire	Center passed over NH resulting in heavy rain and damaging winds
Hurricane (Belle)	August 10, 1976	Southern New England	Primarily rain with resulting flooding in New Hampshire. Category 1

⁶ 2005 Tax Valuations, from http://www.nh.gov/revenue/property_tax/2005/2005_tax_rate_reports.xls

Hazard	Date	Location	Severity Remarks/Description of Areas Impacted
Hurricane (Gloria)	September, 1985	Southern New England	Category 2, winds 96-110 mph. Electric structures damaged; tree damages. This Hurricane fell apart upon striking Long Island with heavy rains, localized flooding, and minor wind damage in New Hampshire
Hurricane (Bob)	August 19, 1991	Southern New England	Structural and electrical damage in region from fallen trees. 3 persons were killed and \$2.5 million in damages were suffered along coastal New Hampshire. Federal Disaster FEMA-917-DR
Hurricane (Edouard)	September 1, 1996	Southern New England	Winds in NH up to 38 mph and 1 inch of rain along the coast. Roads and electrical lines damaged
Tropical Storm (Floyd)	September 16-18, 1999	Southern New England	FEMA DR-1305-NH. Heavy Rains
Tropical Storm (Tammy)	October 5-13, 2005	East Coast of US	Remnants of Tammy contributed to the October 2005 floods which dropped 20 inches of rain in some places in NH.
<p>Rindge's location in southwestern New Hampshire reduces the risk of extremely high winds that are associated with hurricanes. The Town has experienced small blocks of downed timber and uprooting of trees onto structures. Hurricanes can and do create flooding. Estimated wind damage 5% of the structures with 10% damage is \$2,761,874. Estimated flood damage 10% of the structures with 20% damage is \$11,047,498. Cost of repairing or replacing the roads, bridges, utilities, and contents of structures is not included</p>			
EARTHQUAKES (Magnitude given if known)- LOW-MEDIUM RISK			
Earthquake	1638	Central New Hampshire	6.5-7
Earthquake	October 29, 1727	Off NH/MA coast	Widespread damage Massachusetts to Maine
Earthquake	December 29, 1727	Off NH/MA coast	Widespread damage Massachusetts to Maine
Earthquake	November 18, 1755	Cape Ann, MA	6.0, much damage
Earthquake	1800s	Statewide NH	83 felt earthquakes in New Hampshire
Earthquake	1900s	Statewide NH	200 felt earthquakes in New Hampshire
Earthquake	March 18, 1926	Manchester, NH	Felt in Hillsborough County
Earthquake	December 20, 1940	Ossipee, NH	Both earthquakes of magnitude 5.5, both felt for 400,000 sq miles, structural damage to homes, damage in Boston MA, water main rupture.
Earthquake	December 24, 1940	Ossipee, NH	
Earthquake	December 28, 1947	Dover-Foxcroft, ME	4.5
Earthquake	June 10, 1951	Kingston, RI	4.6
Earthquake	April 26, 1957	Portland, ME	4.7

Hazard	Date	Location	Severity Remarks/Description of Areas Impacted
Earthquake	April 10, 1962	Middlebury, VT	4.2
Earthquake	June 15, 1973	Near NH/Quebec Border, NH	4.8
Earthquake	January 19, 1982	Gaza (west of Laconia), NH	4.5, walls and chimneys cracked, damage up to 15 miles away in Concord
Earthquake	October 20, 1988	Near Berlin, NH	4
Moderate potential for serious damage in older portions of town and around lakes. Structures are mostly of wood frame construction estimated loss 20% of town assessed structural valuation (or \$110,474,968). Costs of repairing or replacing roads, bridges, power lines, telephone lines, or the contents of the structures are not included. Town should consider seismic design in building code			
SEVERE WIND/DOWNBURST- LOW-MEDIUM RISK			
Town at risk - severe localized blasting winds. Structural damage potential. Such events cause small blocks of downed timber. Frequent occurrences in spring and fall.			
EXTREME WINTER WEATHER- LOW-MEDIUM RISK			
Snow Storm	1888	New Hampshire	40 inches fell in the Rindge area
Ice Storm	December 17-20, 1929	New Hampshire	Unprecedented disruption and damage to telephone, telegraph and power system. Comparable to 1998 Ice Storm (see below)
Blizzard	February 14-17, 1958	New Hampshire	20-30 inches of snow in parts of New Hampshire
Snow Storm	March 18-21, 1958	New Hampshire	Up to 22 inches of snow in south central NH
Snow Storm	December 10-13, 1960	New Hampshire	Up to 17 inches of snow in southern NH
Snow Storm	January 18-20, 1961	New Hampshire	Up to 25 inches of snow in southern NH
Snow Storm	February 2-5, 1961	New Hampshire	Up to 18 inches of snow in southern NH
Snow Storm	January 11-16, 1964	New Hampshire	Up to 12 inches of snow in southern NH
Blizzard	January 29-31, 1966	New Hampshire	3rd and most severe storm of 3 that occurred over a 10-day period. Up to 10 inches of snow across central NH
Snow Storm	December 26-28, 1969	New Hampshire	Up to 41 inches of snow in west central NH
Snow Storm	February 18-20, 1972	New Hampshire	Up to 19 inches of snow in southern NH
Snow Storm	January 19-21, 1978	New Hampshire	Up to 16 inches of snow in southern NH
Blizzard	February 5-7, 1978	New Hampshire	New England-wide. Up to 25 in of snow in central NH
Snow Storm	February, 1979	New Hampshire	President's Day storm
Ice Storm	January 8-25, 1979	New Hampshire	Major disruptions to power and transportation
Snow Storm	April 5-7, 1982	New Hampshire	Up to 18 inches of snow in southern NH
Ice Storm	February 14, 1986	New Hampshire	Fiercest ice storm in 30 yrs in the higher elevations in the Monadnock region. It covered a swath about 10 miles wide from the MA border to New London NH
Extreme Cold	Nov- Dec, 1988	New Hampshire	Temperature was below 0 degrees F for a month

Hazard	Date	Location	Severity Remarks/Description of Areas Impacted
Ice Storm	March 3-6, 1991	New Hampshire	Numerous outages from ice-laden power lines in southern NH
Ice Storm	January 15, 1998	New Hampshire	Federal disaster declaration DR-1199-NH, 20 major road closures, 67,586 without electricity, 2,310 without phone service, \$17+ million in damages to Public Service of NH alone. The incident affected the entire town except for a portion in the southern part. No damage to structures was caused by the incident. See Appendix G for affected areas map.
Snow Storm	March/April 2001	New Hampshire	Several multiple-foot snow events.

Three types of winter events are heavy snow, ice storms and extreme cold. Occasionally heavy snow will collapse buildings. Ice storms have disrupted power and communication services. Timberland has been severely damaged. Extreme cold affects the elderly. Rindge's recent history has not recorded any loss of life due to the extreme winter weather. These random events are difficult to set a cost to repair or replace any of the structures or utilities affected. Elderly are affected by extreme weather.

HAZARDOUS MATERIALS SPILLS- LOW-MEDIUM RISK

Public transportation of chemicals and bio-hazardous materials through town on NH 119 is a concern. Hazardous materials are also stored at the fireworks store and storage facility on US 202 north. There are three gas stations on NH 119, as well as a marina on the southern point of Lake Monomonac

SNOW AVALANCHE- LOW RISK

If a snow avalanche were to occur, it could cause damage to roads, bridges, utilities, houses, and other structures. The town does not have steep slopes capable of causing avalanches. The Town has no history of snow avalanche events. If information becomes available regarding vulnerable risk locations or avalanche occurrences, the plan will amended accordingly

SUBSIDENCE- LOW RISK

Subsidence	Past and Potential Occurrences	US 202	Subsidence has occurred and has potential to occur in an area along US 202 on the Jaffrey Town Line. The road in this area is slowly settling, and it does not seem like a rapid and catastrophic failure could happen
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Predictable areas susceptible to subsidence could be along old river channels, quarries or old land fills.

RADON- LOW RISK

Summary Table of Short-term Indoor Radon Test Results in NH's Radon Database (5/7/99)

County	# Tests	G. Mean	Maximum	% > 4.0 pCi/l	% > 12.0 pCi/l
Belknap	744	1.3	22.3	14.4	1.3
Carroll	1042	3.5	478.9	45.4	18
CHESHIRE	964	1.3	131.2	15.6	2.3
Coos	1072	3.2	261.5	41	17
Grafton	1286	2.0	174.3	23.2	5.2
Hillsborough	2741	2.1	202.3	29.6	6.8
Merrimack	1961	2.0	152.8	25.2	6
Rockingham	3909	3.0	155.3	40	9.5
Strafford	1645	3.4	122.8	44	13
Sullivan	466	1.4	29.4	15.7	2.1
STATEWIDE	15860	2.4	478.9	32.4	8.6

No known records of illness can be attributed to radon. However, Rindge residents should be aware that radon is present. Houses with granite and dirt cellars are at increased risk

MAN MADE HAZARDS- DAMS- LOW RISK

The State of New Hampshire classifies dams into the following four categories:

NM – Non-menace S – Significant hazard Blank- Non-Active

L – Low hazard H – High Hazard

Generally, all Class H dams need to have Emergency Action Plans, and most Class S dams also require them. According to the Department Of Environmental Services Dam Bureau, there are four Class S dams and three Class H dams in Rindge, for which an Emergency Action Plan is required and an inundation zone has been delineated.

Dam #	Hazard	Name	Dam Owner	Height(ft)	Impound(ac)
203.01	S	Lower Damon Reservoir Dam	Damon Realty	15	24.5
203.02	L	Damon Upper Reservoir Dam	Mr. John Hunt	9	49
203.03	L	Pearly Pond Dam	Pearly Lake Assoc.	7	210
203.04	NM	Robbins Pond Dam	Mr Fred Dodd	5.98	45
203.05		Robbins Pond Dam	Unk.	14	
203.06	NM	Hale Dam	Mr. Ed Stevens	12	1
203.07		Sweeney Dam	Unk.	8	
203.08	NM	Contoocook River IV	Mr. Fran Berger	10	0.3
203.09	NM	Contoocook River V	Mr. Richard Smith	6	1
203.10	S	Island Pond Dam	Hampshire Country School	16	32
203.11	L	Mill Pond Dam	Hampshire Country School	20	5
203.12		Miller River Dam	Mr. Dallas Norcross		
203.13	NM	Miller River Dam	Mrs. Peregrine White	13	6.5
203.14		Miller River III Dam	Stoddard Main Co.		
203.15	L	Bancroft Reservoir Dam	Unk.	15	36
203.16		Converse Meadow Pond Dam	Mr. John B. Rice	5	33.2
203.17		Conversville Reservoir	Mr. John B. Rice		
203.18	S	Hubbard Pond	NH Water Division	8	187
203.19		Hubbard Pond Inlet Dam	Mr. Frank Robbins		
203.20		Holding Pond Dam	Mr. Frank Robbins		
203.21	NM	Rugg Pond Dam	Huber Gunhild Tibbetts	5	9
203.22	L	Crowcroft Pond Dam	Cropond Inc.	10	65
203.23	NM	Tarbell Brook Dam	Ms. Linda Harmon	10	1
203.24		Tarbell Brook Dam	Mr. Benton Rice		
203.25		Recreation Pond Dam	Mr. John B. Rice		
203.26		Tarbell Brook Dam	Ms. Susan Dickinson		
203.27		Toy Shop Dam	Mr. A J Wellington		
203.28		Grassy Pond Dam	Town of Rindge	4	99
203.29	NM	Bullet Pond Dam	Town of Jaffrey	4	50
203.30		Emerson Pond Dam	Unk.		
203.31		Emerson Pond Brook Dam	Mr. Harris Rice	15	
203.32		Emerson Pond Brook Dam	Unk.		
203.33		Miller River Dam	E.I. Wellington	10	
203.34		Miller River Dam	Unk.	11	
203.35		Nameless Brook Dam	Unk.		
203.36	NM	Ice Pond Dam	Society for Prot. Of NH Forests	6	2
203.37		Inlet Pond Dam	Town of Jaffrey	4	
203.38		Miller Pond Dam	Unk.	8	
203.39		Contoocook Lake Dam	BSHN Properties		0.5
203.40	NM	Speckhams Dam	Mr. Joseph Connolly	6	0.19
203.41	L	Stump Pond Dam	Hampshire Country School	8	15

Dam #	Hazard	Name	Dam Owner	Height(ft)	Impound(ac)
203.42	NM	Pool Pond Dam	NH DOT	4	144
203.43		Unnamed Stream Dam	Unk.		
203.44	L	Van Dyke Dam	Mr. Robert Van Dyke	8	18
203.45	NM	Tarbell Brook Dam	Mr. Richard Whicker	8	2
203.46	NM	Cheshire Marketplace Dam	Market Basket, Inc.	9	0.5

Source: Dam information provided by the NH Dam Bureau in 2006 and will be verified by Town officials

Chapter IV: Assessing Probability, Severity and Risk Estimating Potential Losses

The Committee members completed Risk Assessment Worksheets for all of the types hazards identified in Chapter III. The process involved assigning Low, Medium, or High values (numerically 1, 2 or 3) to each hazard type for its possible impact to Human, Property, and Business factors. (A score of zero was given if the hazard was non-applicable). To assess probability, a 1, 2, or 3 value was assigned to each hazard type with respect to the likelihood that the hazard would occur in the next 25 years. The Severity was calculated by determining the average of the Human, Property, and Business impacts. Risk was calculated by multiplying severity by probability. Low-Medium-High risk was assigned as shown below. Estimated potential losses and areas of greatest risk are included in the table below.

	0-1.9- Low	2.0-3.9- Low-Med	4-5.9- Med	6-7.9- Med-High	8-9- High				
	Human Impact	Property Impact	Business Impact	Probability	Severity	Risk	Risk	Estimated Potential Losses⁷ (Dollars)	Areas of Greatest Risk
	Probability of death or injury	Physical Losses and damages	Interruption of Service	likelihood this will occur in 25 years	Avg. of Human/Property/Business	Severity x Probability (Relative Threat)			
Flooding	1	3	2	2	2.00	4.00	Med	n/a	Along rivers
Riverine Flooding	0	2	1	1	1.00	1.00	Low	n/a	Near waterbodies
Drought	0	1	1	1	0.67	0.67	Low	n/a	Town-wide
Extreme Heat	1	0	1	1	0.67	0.67	Low	n/a	Elderly, Town-wide
Wild Fire	3	3	2	2	2.67	5.33	Med	n/a	Forested areas
Lightning	2	3	2	3	2.33	7.00	Med-High	n/a	Town-wide; High Elevation, power lines
Tornado	2	3	3	1	2.67	2.67	Low-Med	11,047,997	Town-wide
Hurricane	2	3	3	2	2.67	5.33	Low-Med	13,809,372	Town-wide
Earthquake	2	2	2	1	2.00	2.00	Low-Med	110,479,968	Town-wide
Subsidence	1	1	1	1	1.00	1.00	Low	n/a	US 202 @ Jaffrey TL
Radon	1	2	0	3	1.00	3.00	Low	n/a	Town-wide
Severe Wind	2	3	2	3	2.33	7.00	Low-Med	n/a	Town-wide
Extreme Winter Weather	2	3	2	3	2.33	7.00	Low-Med	n/a	Town-wide; High Elevation Areas
Avalanche	1	1	1	0	1.00	0.00	Low	n/a	Town-wide
HazMat Spills	3	3	3	3	3.00	9.00	Low-Med	n/a	Fuel depots, gas stations, transfer station
Dam Failure	1	2	1	2	1.33	2.67	Low	n/a	Hampshire School Dam
Landslides	1	1	1	0	1.00	0.00	Low	n/a	Along steep slopes

CHAPTER V CRITICAL FACILITIES

A Critical Facility is defined as a building, structure, or location which:

- Is vital to the hazard response effort
- Maintains an existing level of protection from hazards for the community
- Would create a secondary disaster if a hazard were to impact it

Critical Facilities Within Hazard Areas

Hazards identified in this plan are regional risks and, as such, all critical facilities fall into the hazard area. The exception to this is flooding. There are three identified critical facilities that fall within the 100-year floodplain. These are Camp Crescent on Monomonac Lake, Advent Church (off South Woodbound Rd) and the Little Michigan sewage service zone on Lake Contoocook.

The Critical Facilities List for the Town of Rindge has been identified through discussions of the Hazard Mitigation Committee. Rindge's Hazard Mitigation Committee has divided 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 Rindge. 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 Map at the end of this Plan identifies these facilities. A table at the end of this section identifies critical facilities located in potential hazard areas.

Category 1 - Emergency Response Services:

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

1. Emergency Operations Center

Rindge Police and Fire Station - 150 Main Street

2. Fire Station

150 Main Street

3. Police Station

158 Main Street

4. Emergency Fuel Facilities

State Highway Garage (NH Department of Transportation Shed) on Rt. 119

5. Emergency Electrical Power Facility

Emergency Generator at Police Station (158 Main Street)

6. Emergency Shelters

Rindge Memorial School and Franklin Pierce University.

7. Dry Hydrants - Fire Ponds - Water Sources

Numerous locations; see Critical Facilities Map at back of Plan

8. Primary Evacuation Routes

US 202
NH 119

9. Bridges Located on Primary Evacuation Routes

US 202, one bridge located on Jaffrey Town Line

10. Town Garage/Transfer Station

Same as Highway Garage, located at 113 Main St.

11. Communications

Keene Mutual Aid dispatch system
Cheshire Sheriff's department dispatch system
State of New Hampshire Troop C dispatch system

12. Hospitals

Cheshire Medical Center (to the west in Keene)
Monadnock Community Hospital (located to the east in Peterborough)
Hospital in Gardner, MA (located to the South)

13. Helicopter Landing Sites

Parking Lot of Cathedral of the Pines (located off of NH 119)
Franklin Pierce University athletic fields

14. Water & Sewer Departments/Utilities

Little Michigan area of town, located on the North Shore of Poole Pond, served by the Town of Jaffrey Sewer System.

Category 2 - Non Emergency Response Facilities:

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

1. Water Supply

Lakes and Ponds (Poole Pond, Pearly Lake, Grassy Pond, Bullet Pond, Lake Monomonac, and various other surface waters)

2. Sewer Infrastructure

Private Sewer System for Franklin Pierce University (owned and operated by the college)

3. Problem Culverts

Due to the large quantities of water throughout the Town, there are many potential problem culverts maintained by the Town and the State. The Highway Foreman identified the following:

- Robbins Rd. to Winchendon
- East Monomonac Rd. to Winchendon
- Abel Rd. to Fitzwilliam
- Fitzgerald Road
- Old New Ipswich Road
- Wellington Rd. to US 202
- Hampshire Road

4. Transfer Station

Same as Highway Garage, located at 113 Main St.

5. Secondary Evacuation Routes

- Forristall Rd. and Middle Winchendon Rd.
- Cathedral Rd. into Jaffrey
- Main St. onto US 202 South to Winchendon

6. Bridges on Secondary Evacuation Routes

None

Category 3 - Facilities/Populations to Protect:

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

1. Special Needs Populations

The Hampshire Country School is located in Rindge near the New Ipswich Town Line, on Mill Pond. The School is dedicated to young boys with Asperger's Syndrome and other non-verbal learning disabilities, the school usually houses 25 children.

Many residents in Rindge may have disabilities or impairments which make them a priority in the event of a disaster. List should be available at the Emergency Operations Center and may include:

- Oxygen-dependent people
- People on a lifeline
- People assisted by Home Health
- Shut-ins and disabled
- Mentally challenged
- Elderly
- Hearing impaired
- Sight impaired

2. Recreation Areas

- Memorial School Athletic Fields
- Town Recreational Fields (ball fields, tennis courts, soccer fields)
- Meeting House and common
- Franklin Pierce University Athletic Fields
- Cathedral of the Pines
- Camp Wildwood (Mass. Audubon) on Old New Ipswich Road

3. Schools

- Rindge Memorial School
- Meeting School
- Heritage Christian School
- Franklin Pierce University

4. Day Cares

- Private daycare facilities are located at the following locations
 - Cathedral Road
 - Hubbard Hill Road

5. Churches

- Meeting House Congregational Church (Payson Hill Rd.)
- West Rindge Methodist Church/Vineyard Church (US 202)
- Monadnock Full Gospel Church (US 202)
- North St. Baptist Church
- Advent Lutheran Church (US 202 & Corner County Road)

6. Historic Buildings/Sites

Meeting House (Payson Hill Rd.)
Cathedral of the Pines (Cathedral Rd.)
Historic Society Museum (School St.)

7. Major Employment Centers

Franklin Pierce University
Cheshire Market Place
Wal-Mart/Hannaford's Plaza
Dunkin Donuts/KFC- Phase 10 Plaza
Fogg's Mini Mart Plaza
Sears Drive
Sepco Building on NH 119 (10-12 businesses)
Canterbury Square retail on NH 119/Main St.
Lilly's on the Pond on NH 202
East Rindge Village
Atlas Fireworks (various businesses)

8. Apartment Complexes

Franklin Pierce University (dormitories)
Hasbrook Apartments (Payson Hill Rd.)
Meadow View (Taggart) Apartments (Meadow View Rd.)
Cromwell Court Condominiums (US 202)
Carriage House Apartments
Renaissance Senior Housing

9. Post Office

The Post Office is located on Route 119

10. Hazardous Material Storage

Atlas Fireworks store (multi-tenant building)
Fogg's Corner - Diesel, Propane, Heating Oil
Franklin Pierce Sewage Treatment Plant
Fireworks storage area off of US 202
Gas Station on NH 119 just west of Payson Hill Rd.
Gas Station on NH 119 west of Payson Hill Rd.
North of the Border boat landing on Lake Monomonac
Wal-Mart (paints, cleaning chemicals, etc.)

Category 4 - Potential Resources:

Contains facilities that provide potential resources for services or supplies.

1. Food

Food Pantry
Woodbound Inn
Wal-Mart (sundries store on US 202)
Market Basket (Grocery Store on US 202)
Hannaford's
KFC/TacoBell
Pizza Haven
North of the Border

Additional Information

The Hazard Mitigation Committee identified several campgrounds and trailer parks which should also be included in this list. They include:

Monadnock Park Trailer Homes
 Camp Wildwood
 Toahnipi Campground

Crescent Beach Campground
 Camp Joy
 Woodmore Campground

Critical Facilities and Evacuation Routes Potentially Affected by Hazard Areas

Hazard Type	Hazard Area	Critical Facilities Affected	Evacuation Routes Affected
Flooding	Contoocook Lake	Advent Church (off South Woodbound Rd)	US 202 (northern section into Jaffrey)
	Contoocook Lake	Little Michigan (served by public sewage)	
	Lake Monomonac	Crescent Beach Campground	
	Dams on Mill Creek	none affected	NH 119
Wildfire	All forested areas, nature conservancies	Many camp grounds	none
Lightning	US 202 south	Retail stores in US 202 corridor	None
Subsidence	Jaffrey Town Line	none affected	US 202
Hazardous Materials	Northern US 202 (fireworks store and storage facility)	None	US 202
Hazardous Materials	Gas stations on NH 119	None	US 202/NH 119
Hazardous Materials	Franklin Pierce University Waste Treatment Plant	All Franklin Pierce emergency facilities	none

(Critical Facilities Map Located In Back of Plan)

CHAPTER VI: EXISTING MITIGATION STRATEGIES & PROPOSED IMPROVEMENTS

This step involves identifying existing mitigation strategies and Town programs and evaluate their effectiveness. This section outlines those programs and recommends improvements to ensure the highest quality emergency services possible.

Existing Mitigation Strategies and Proposed Improvements

Existing Protection	Description /Area Covered	Responsible Local Agent	Effectiveness	Proposed Improvements
School Evacuation Plan - Rindge Memorial School and Franklin Pierce University have evacuation plans in place. The other schools in town have small plans in place. The schools are primarily responsible for having a plan in place and conducting at least 10 fire drills every year. The fire department provides feedback on the plans and the drills	Fire and Emergency Evacuation Plan	Schools	Good	Rindge Memorial and Franklin Pierce have in-depth plans. Other schools have smaller plans. Fire Dept. comments on plans.
Town-Adopted Building Code - Rindge maintains a code enforcement officer and has adopted provisions of the NH Life Safety Code and the NH State Building Code. Rindge has also adopted provisions of the International Building Codes for one and two family residential structures. Current program is working. Operate under State Building Codes RSA 155-A with increased restrictions & International Residential Building Codes	Whole Town	Code Enforcement Officer /Selectmen	Good	Develop comprehensive and coordinated fire sprinkler standard since NFPA contains only minimal standards. Develop fire protection ordinance to have a locally defined set of standards
Code Enforcement Officer - The Fire Chief and Code Enforcement Officer jointly enforce building codes and review building permit applications. The Code Enforcement Officer also enforces zoning ordinances and reviews applications.	Enforces Building Code and Zoning Ordinance Town-Wide	Fire Chief and Code Enforcement Officer	Fair	The Fire Chief has expressed that in the case of big-box stores, it is difficult to determine whether adequate fire suppression capacity is being met without having access to complete building plans and list of materials (fuel load) to be contained in building
Emergency Management Plan - The town's Emergency Management Plan, adopted in 1994 establishes protocols for all town departments in the event of an emergency. The plan has since been updated	Town-Wide Emergency Response Plan	Emergency Management Director	Good	Updated as required
Health Officer - The town has a Health Officer and a Deputy Health Officer. The Health Officer provides mostly informational resources related to septic systems, wells, etc. These positions are appointed by the town.	Inspects Failed Septic Systems, Wells, etc.	Health Officer, and Deputy Health Officer	Fair	Health Officer is only part time volunteer. Additional capacity needed to deal with threats to recreational lakes.
Fire Inspector - The Fire Chief annually inspects all commercial, rental, and foster home buildings. Single family homes are inspected on a per-request basis	Commercial, rental & foster homes	Fire Chief	Good	Annual inspections

Existing Protection	Description /Area Covered	Responsible Local Agent	Effectiveness	Recommended Changes - Actions
Emergency Back-up Power Program - The Fire and Police Departments have a generator for emergency back-up power at the Fire Station. Town Hall is being updated with a new backup system, and the Highway Department does not have any back-up power but would like to eventually receive it	Fire and Police Department have backup generators.	Fire Chief Selectmen	Fair	Project underway to provide backup power to Town Hall, Franklin Pierce University and Rindge Memorial as part of Emergency Shelter development. Phone system does not work in Town Hall when power is out.
Local Road Design Standards - Standards are set by the planning board, Highway Department and the Selectmen to ensure a constant construction benchmark	Design Specs/Dead End & Cul de Sacs/Town Existing Road Upgrade Specs	Hwy Dept., Selectmen, & Planning Board	Good	Design Specs/Dead End & Cul de Sacs/Town Existing Road Upgrade Specs
Local Bridge Maintenance Program - Bridges located on State routes in Rindge are inspected annually and maintained by the NH Department of Transportation. Guidelines and schedules for annual upkeep are established by NH DOT. Rindge does not have many locally owned bridges, but those that fall in the local jurisdiction do receive general repairs on an as-needed basis	NH DOT Inspects and Does Work Town-wide	NHDOT, Highway Department	Good	none
Local Road Maintenance Program - A road committee oversees road maintenance needs on a monthly basis; using a roadway surface management system, projects are prioritized and entered into a maintenance program.. Rindge allocates approximately \$280,000 each year to various roadway projects, such as resurfacing, culvert replacement and repair	Local roads/Town Wide	Highway Department	Good	Use roadway management system to allocate \$280,000 annually to maintenance and rehabilitation
Tree Maintenance Program - The Highway Department does 90% of the removal of hazardous trees along the roadside	Town Wide	Highway Department	Good	Remove dead trees along roads.
Winter Storms Operations Plan - The Fire Department, Police Department, and Highway Department coordinate during winter storms to keep the local highways and roads open and accessible. Radio communication provides the link that allows for crews to patrol various sections of town simultaneously and to provide 24-hour patrols during severe weather. This setup works well for the town	Whole Town	Fire, Police, and Highway Departments	Good	none
Town Master Plan - A Guidance document to ensure that overall development in town is sustainable, meeting the needs of the citizens by setting forth steps and guidelines for a sound living environment through well planned growth. The Planning Board and Planning Department are currently working on a major update of the Master Plan	Update 2001/Town Wide	Planning Board, Planning Department	Good	Update as needed
Steep Slopes Protection - The Town has some Steep Slopes requirements in the Driveway Regulations.	Town-Wide	Code Enforcement Officer, Planning Board	Good	Improve current regulations

Existing Protection	Description /Area Covered	Responsible Local Agent	Effectiveness	Recommended Changes - Actions
<p>Mutual Aid - Provides assistance to all aspects of Rindge’s Emergency Management Services in town. Southwest New Hampshire Fire Mutual Aid (SWNHFMMA) and the Cheshire County Sheriff’s Department provide mutual aid to Rindge. SWNHFMMA serves 83 cities and towns and the Cheshire County Sheriff’s Department serves all communities within Cheshire County. The Sheriff’s Department also provides dispatching services for the Police Department.</p> <p>Other Mutual Aid - Rindge has an agreement with New Ipswich for police services and road maintenance. They also have an agreement in place with Jaffrey for road maintenance for some roads in Little Michigan area of the Town</p>	<p>Provides assistance to all aspects of Rindge Emergency Management Services/ Highway Department/w hole town</p>	<p>Fire Chief, Police Chief, Emergency Management Director, Highway Department and Selectmen</p>	<p>Good</p>	<p>Fire Dept. – SWNHFMMA coordinates mutual aid with 83 regional communities; Police Dept. – Cheshire County Sheriff’s Dept. provides service to all Cheshire County communities;</p> <p>Highway Dept. has verbal agreements with neighboring towns of New Ipswich and Jaffrey, PD with town of New Ipswich.</p>
<p>Fire Dry Hydrant Management Plan - This designates a maintenance schedule for the local dry hydrants used by the Fire Department for water supply for fire prevention and suppression. The Fire Department is responsible for this plan, and they take advantage of low water opportunities to perform the work or install new hydrants. The Highway Department is responsible for keeping the hydrants accessible. Each hydrant is maintained twice a year.</p>	<p>Location and Maintenance of Dry Hydrants</p>	<p>Fire Chief</p>	<p>Fair</p>	<p>This plan works well, but the Fire Department would like to have more hydrants installed</p>
<p>Hazardous Materials Spill Prevention Control and Counter Measures Plan - This plan is on hand with the Fire Department in the event that there is an incident. Personnel in the Fire Department and Highway Department receive regular training for handling hazardous materials spills. SWNHFMMA’s Haz-Mat Team is called upon in the event of a major spill. This plan works excellently</p>	<p>Fire, Police, and Highway Departments</p>	<p>Fire Chief, Highway Department & SWNHFMMA</p>	<p>Good</p>	<p>Plan is held by Fire Chief. Departments receive frequent training. SWNHFMMA HazMat Team provides backup.</p>
<p>Town Warning System - The town does not have a Town Warning System. The town would like to have a reverse 911 System. There is currently one siren in town, and one siren at the Wildwood Camp that signals when a camper has gone missing</p>	<p>Siren located at Fire Hall, another siren located in Wildwood Camp.</p>	<p>Fire and Police Departments</p>	<p>Poor</p>	<p>Create Reverse 911 system, update siren and provide education on its meaning.</p>
<p>Erosion and Sedimentation Plan - E&S plans are established by the state for erosion and sediment control. The Town of Rindge has established stormwater controls more stringent than those of the State for commercial and multi-family developments. The Code Enforcement Officer is responsible for enforcement, but this is difficult due to the lack of continued on-the-job training in environmental sciences</p>	<p>State & local guidelines for roads and soil erosion/Whole town</p>	<p>NH DES, Planning Board, & Code Enforcement Officer</p>	<p>Good</p>	<p>More training required for Code Enforcement officer in areas of environmental sciences.</p>
<p>Wetlands Protection - The Town has adopted a Wetlands Ordinance that imposes certain restrictions on building within 50’ of a wetland</p>	<p>Town Wide</p>	<p>NH DES; Code Enforcement Officer, Planning Board</p>	<p>Good</p>	<p>none</p>

Existing Protection	Description /Area Covered	Responsible Local Agent	Effectiveness	Recommended Changes - Actions
Town Radio System - The existing radio system for emergency responders includes analog and digital radios for the Police Department and analog and digital radios for the Fire and Highway Departments. SWNHFMA provides town-wide alert to emergency responders in the event of an incident. The system works well overall	Town wide Frequency	Police, Fire, and Highway Departments	Average	Town is seeking to acquire second frequency
Shoreland Protection- Designates a protective buffer along all surface waters in town. No local ordinance enacted. Town relies on the State's Shoreland Protection Act	All surface waters	Code Enforcement Officer, NH DES	Good	none
Town-Sponsored Safety Awareness Program - The Fire Department provides annual fire prevention and health safety trainings classes and presentations at the local schools. Local residents may request a fire inspection of their residences if they wish	Town-Wide Safety Training	Fire Department	Good	none
Ambulance Service - The Town currently has ambulance service from Jaffrey/Rindge Memorial. The service provided has been improving and adequately serves the needs of the community	Jaffrey/Rindge Memorial Ambulance Service – Town wide	N/A	Good	none
Radiological Evacuation Plan - Town does not have a radiological evacuation plan since it is located outside the 10 mile Vermont Yankee emergency zone. The town has received radiological monitors, but has never received training for them	None	Emergency Management Director;	Poor	Training on use of radiological meters and inclusion of evacuation routes

Preliminary Prioritization

The Rindge Hazard Mitigation Team ranked each of the above Mitigation Strategies and Town programs, as shown in the following table, for its effectiveness related to the critical evaluation factors listed below. A numerical value of 3, good (or yes), was determined as the highest rating with 2 corresponding with average (or maybe) and 1 as poor (or no). Actions of highest priority are those with the highest total ranking score. The highest possible score is 42.

- Ability to reduce disaster damage
- Contributes to other community goals
- Ability to benefit the environment
- Need for regulation
- Ability to save/protect historic structures
- Ability to achieve other community objectives
- Ability for quick implementation
- Level of social acceptability
- Technical feasibility/potential success
- Administratively feasible
- Level of political acceptability
- Legal authority to implement
- Positive cost/benefit review for local economy
- Whether there are environmental approvals required

Recommended Improvements Ranking

Rank	Recommended Improvements Legend: 3 = Good 2 = Average 1 = Poor *If no approvals are required, rank is 3. If approvals are, rank is 1.	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?	Cost/Benefit Review	Are other Environmental approvals required*?	TOTAL
1	Buy additional radio frequencies and 2 repeaters (radio interoperability)	3	3	3	3	1	3	2	3	3	3	3	3	3	3	39
2	More dry hydrants	3	3	3	3	1	3	2	3	3	3	3	3	3	2	38
2	Coordination w/Yankee evacuation (State)	3	3	3	3	1	3	2	3	2	3	3	3	3	3	38
3	Expand regular surface water testing	3	3	3	3	1	3	2	3	2	2	3	3	3	3	37
3	Reverse 911	3	3	2	3	1	3	1	3	3	3	3	3	3	3	37
3	RMS School should have backup power	2	3	2	3	1	3	2	3	3	3	3	3	3	3	37
3	Franklin Pierce Shelter back up power	2	3	2	3	1	3	2	3	3	3	3	3	3	3	37
3	Power back up for Town Hall	2	3	2	3	1	3	2	3	3	3	3	3	3	3	37
4	Radiological training for monitors	2	3	2	3	1	2	2	3	3	2	3	3	3	3	35
4	Public education re: warning signals, cold weather	2	3	2	3	1	3	2	3	2	2	3	3	3	3	35
4	New fire codes for commercial buildings (more stringent sprinklers)	3	3	2	3	1	2	2	2	3	3	2	3	3	3	35
5	Code enforcement – environmental training for health officer	2	3	3	3	1	3	1	2	3	2	1	3	2	2	31
5	Erosion Sediment Control ordinance	2	3	3	3	1	3	2	2	1	1	2	3	2	3	31

CHAPTER VII MITIGATION STRATEGIES

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

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

With these in mind, the Committee reviewed their overall goals and the hazards, both man-made and natural, as identified in Chapter III. The Committee created a list of possible projects from the types of hazards for which Rindge is at risk. These non-prioritized items are in the directory below. A prioritized list and implementation schedule is included in the next chapter.

Preventative (Programs/Policies):

- Continue mutual aid pacts with surrounding communities to share resources in order to be better prepared for emergency situations.
- Coordinate with state agencies to resolve radio jams of Mutual Aid frequency during Vermont Yankee drills.
- Prepare emergency transportation plan for the evacuation of special needs populations during disaster events.
- Coordinate neighborhood level plans with one town representative designated to each town (preferably one in which they live).
- Compile list of volunteers and private resources (snowmobiles, ATVs, etc...)
- Implement Septic System ordinance.
- (see Chapter VI for improvements to existing mitigation measures).

Training:

- No additional training needed at this time (see Chapter V for improvements to existing mitigation measures).

Public Education & Information:

- Detours - Provide the public with information on evacuation procedures, evacuation routes, and emergency shelters (see also Equipment Purchase).
- No additional measures at this time (see Chapter VI for improvements to existing mitigation measures).

Engineering:

- Provide power back-up for US 202/NH 119 intersection, so that when power goes out, police officers do not have to be diverted for traffic control.
- Provide public sewer around lakes to prevent contamination from septic systems.

Property Protection:

- Implement sandbag program, whereas materials and tools would be stockpiled at the Highway garage, and volunteers would be on stand-by to fill and distribute sandbags in case of an emergency.

Structural Projects:

None at this time.

Equipment Purchases:

- Purchase portable generators to power homes of special needs population during power outages and to powers sump pumps.
- Purchase portable pumps to pump out flooded basements and houses.
- Detours - Acquire cones, barriers, and detour signs to use when roadways are closed (see also Public Education & Information).
- Acquire ATVs (Rhinos) and boats for rescue and forest fire fighting.
- Acquire CB & Ham radio for Emergency Operations Center.
- Acquire excavator for Public Works department.

Preliminary Prioritization

The Rindge Hazard Mitigation Team ranked each of the above Mitigation Strategies and Town programs, as shown in the following table, for its effectiveness related to the critical evaluation factors listed below. A numerical value of 3, good (or yes), was determined as the highest rating with 2 corresponding with average (or maybe) and 1 as poor (or no). Actions of highest priority are those with the highest total ranking score. The highest possible score is 42.

- | | |
|--|---|
| <ul style="list-style-type: none">• Ability to reduce disaster damage• Contributes to other community goals• Ability to benefit the environment• Need for regulation• Ability to save/protect historic structures• Ability to achieve other community objectives• Ability for quick implementation | <ul style="list-style-type: none">• Level of social acceptability• Technical feasibility/potential success• Administratively feasible• Level of political acceptability• Legal authority to implement• Positive cost/benefit review for local economy• Whether there are environmental approvals required |
|--|---|

Mitigation Strategies Ranking

Rank	New Proposed Mitigation 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 replicable?	Is it Administratively workable?	Is it Politically acceptable?	Is there Legal authority to implement?	Cost/Benefit Review	Are other Environmental approvals required*?	TOTAL
	Legend: 3 = Good 2 = Average 1 = Poor *If no approvals are required, rank is 3. If approvals are, rank is 1.															
1	Sandbag program (stockpile materials& volunteers)	3	3	3	3	3	3	2	3	3	2	3	3	3	3	40
2	Portable generators for sumps and houses	3	3	2	3	2	3	2	3	3	3	3	3	3	3	39
2	Portable Pumps	3	3	2	3	2	3	2	3	3	3	3	3	3	3	39
2	Detours – Acquire cones, barriers etc. & Public education	3	3	3	3	1	3	2	3	3	3	3	3	3	3	39
3	Conduct survey of residents regarding vulnerability and volunteer opportunities	3	3	1	3	1	3	3	3	3	3	3	3	3	3	38
3	ATV's (Rhinos) & Boats for rescue	3	3	3	3	1	3	2	3	3	3	3	3	2	3	38
4	Power back up for 119/202 intersection	3	3	2	2	1	3	2	3	3	3	3	3	3	3	37
4	Acquire CB & HAM radio for Emergency Ops Ctr	2	3	2	3	1	3	2	3	3	3	3	3	3	3	37
5	Resolve Mutual Aid radio jams during Yankee drills	3	3	2	3	1	3	2	3	2	2	3	3	3	3	36
5	Emergency Transportation Plan for moving people	3	3	2	3	1	3	2	3	2	2	3	3	3	3	36
5	Neighborhood level plans, with town coordinator designated to each	3	3	2	3	1	3	2	3	2	2	3	3	3	3	36
6	Coordination of volunteers and private resources (snowmobiles, atvs)	2	3	2	3	1	3	2	3	2	2	3	3	3	3	35
6	Securing supplies with retail stores	3	3	1	3	1	3	2	3	2	2	3	3	3	3	35
6	Coordinate School Superintendent w/ FD & PD re: days off & trouble students	2	3	2	3	1	3	2	3	2	2	3	3	3	3	35
7	Implement septic system ordinance	3	3	3	3	1	3	1	2	2	1	2	3	3	3	33
8	Excavator for Public Works	2	3	2	3	1	3	2	2	3	2	2	3	1	3	32
9	Public sewage around lake (such as little Michigan)	3	3	3	3	1	3	1	1	2	1	2	3	2	2	30

POTENTIAL HAZARD LOCATION MITIGATION ACTIONS

The Rindge Hazard Mitigation Committee identified mitigation actions for the locations identified as possible future hazard areas identified in Chapter III. The Potential Hazard Actions Matrix on the following page identifies these proposed mitigation actions. The matrix includes the hazard type (Column 1), location (Column 2), objective (Column 3), risk(s) (Column 4), mitigation actions (Column 5), and comments (Column 6). Mitigation actions identified in the matrix are further considered in Chapter VII, and where determined feasible, have been integrated into the Hazard Mitigation Implementation Schedule.

The Hazard Mitigation Committee made it a priority to focus the town's hazard mitigation efforts on hazards most likely to affect the community. Therefore, some hazards which have the potential to occur town-wide, but are unpredictable in terms of when, where, and how it would affect the community if it did occur, may not have identified mitigation strategies. The Committee agreed that potential mitigation strategies for each hazard type should be further considered during the annual review of the plan.

Preliminary Prioritization

The Rindge Hazard Mitigation Team ranked each of the above Mitigation Strategies and Town programs, as shown in the following table, for its effectiveness related to the critical evaluation factors listed below. A numerical value of 3, good (or yes), was determined as the highest rating with 2 corresponding with average (or maybe) and 1 as poor (or no). Actions of highest priority are those with the highest total ranking score. The highest possible score is 42.

- Ability to reduce disaster damage
- Contributes to other community goals
- Ability to benefit the environment
- Need for regulation
- Ability to save/protect historic structures
- Ability to achieve other community objectives
- Ability for quick implementation
- Level of social acceptability
- Technical feasibility/potential success
- Administratively feasible
- Level of political acceptability
- Legal authority to implement
- Positive cost/benefit review for local economy
- Whether there are environmental approvals required

Potential Hazard Actions Matrix

Hazard Type	Location	Objective	Risk(s)	Mitigation Actions	Comments
Riverine Flooding/ Dams	Many dams throughout town	Reduce threat posed by dam breaches	Many possible structures	Update dam GIS layer to include all dams. Make official current policy of having PW Director check all dams when state sends deficiency letters.	In Progress
Flooding due to Beaver Dams	All lakes and streams in town	Reduce flooding threat posed by beaver dams.	Medium-High risk to many lakefront structures and roads	Continue catch and release program to control beaver populations.	In Progress
Flooding	Old New Ipswich road	Reduce annual threat to driver safety, access to homes, and access to evacuation routes caused by potential flooding on the road.	Medium risk to culvert and road	Fix the culvert	Place project on CIP
Wildfires	All conservation lands and property on Current Use	Reduce annual threat of forest fire by reducing fuel load through program of active forest management	Medium-High risk to various properties in and around forests	Institute forest management plans for properties under conservation	Conservation Commission should be in charge of this item
Hazardous Materials	Fireworks storage at construction site on US 202 North	Secure site to prevent casualties	Medium-High risk of personal injury	Ask property owner to add fencing around storage of explosives	Fire chief should have informal conversation w/property owner
	All fuel stations in town	Prevent spills of fuels into wetlands and groundwater	Medium risk to the drinking water supply	Require on site booms and spill prevention measures as well as training for employees and frequent inspections	
Drought	Town-wide	n/a	Low-Medium	This town-wide issue is unpredictable in terms of when, where, and how it would affect the community. No mitigation strategies are proposed at this time.	
Extreme Heat	Town-wide	n/a	Low	This town-wide issue is unpredictable in terms of when, where, and how it would affect the community. No mitigation strategies are proposed at this time.	
Radon Air/Water	Town-wide	n/a	Low	This town-wide issue is unpredictable in terms of when, where, and how it would affect the community. No mitigation strategies are proposed at this time.	
Tornado	Town-wide	n/a	Med-High	This town-wide issue is unpredictable in terms of when, where, and how it would affect the community. No mitigation strategies are proposed at this time.	
Subsidence	US 202 North	n/a	Low risk to roadway	US 202 is a state maintained road. Subsidence and drainage issues are well known to NH DOT. No mitigation strategies are proposed at this time.	
Hurricane	Town-wide	n/a	Medium	This town-wide issue is unpredictable in terms of when, where, and how it would affect the community. No mitigation strategies are proposed at this time.	
Earthquakes	Town-wide	n/a	Medium	This town-wide issue is unpredictable in terms of when, where, and how it would affect the community. No mitigation strategies are proposed at this time.	

Potential Hazard Actions Matrix

Hazard Type	Location	Objective	Risk(s)	Mitigation Actions	Comments
Severe Wind/ Downburst	Town-wide	n/a	Low	This town-wide issue is unpredictable in terms of when, where, and how it would affect the community. No mitigation strategies are proposed at this time.	
Lightning Strikes	Town-wide	n/a	Med-High	This town-wide issue is unpredictable in terms of when, where, and how it would affect the community. No mitigation strategies are proposed at this time.	
Extreme Winter Weather	Franklin Pierce University Road	Prevent a potential life safety issue due to drifting snow across roadway.	Low	Replant landscaping along roadway as indicated in siteplan of new condominiums. Currently, an ineffective snow fence is being placed by FP.	Negotiation between town and college.

Potential Hazards Actions Ranking

Rank	New Proposed Mitigation 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?	Cost/Benefit Review	Are other Environmental approvals required*?	TOTAL
1	Beaver control program	3	3	3	3	3	3	3	2	3	3	2	3	2	3	39
2	Fuel spill containment booms, training, and inspection of gas stations	3	3	3	3	1	3	2	3	2	3	3	2	3	3	37
2	Fix Culvert on Old New Ipswich Road	3	3	2	3	1	3	3	3	3	3	3	3	1	3	37
3	Dam inspection policy	3	2	2	3	2	2	3	3	3	3	2	3	1	3	35
4	Forest Management to prevent forest fires	3	3	3	3	1	3	1	1	2	2	2	3	2	3	32
5	Snowfencing/landscaping to prevent white-outs on road	2	2	3	3	1	2	1	3	3	2	2	3	1	3	31
6	Security fence around explosive storage area	3	1	3	3	1	1	1	3	2	2	3	2	2	3	30

CHAPTER VIII: PRIORITIZED IMPLEMENTATION SCHEDULE AND ACTION PLAN

Summary of Critical Evaluation

The Rindge Hazard Mitigation Committee reviewed each of the actions identified in the Summary of Recommended Improvements in Chapter VI, as well as mitigation strategies from the brainstorm and Potential Hazard Actions Matrix in Chapter VII using the following factors to prioritize mitigation projects:

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

An additional factor that is not considered here but should be considered by the Committee on a project-by-project basis is the ability to find funding.

Implementation Schedule and Action Plan

The Rindge Hazard Mitigation Committee developed an action plan that outlines who is responsible for implementing each of the prioritized strategies determined in the previous chapters, as well as when and how the actions will be implemented. The following questions were asked to develop an implementation schedule for the identified priority mitigation strategies:

WHO? Who will lead the implementation efforts? Who will put together funding requests and applications?

WHEN? When will these actions be implemented, and in what order?

HOW? How will the community fund these projects? How will the community implement these projects? What resources will be needed to implement these projects?

Each strategy's total score from the ranking process is included in the table. As additional information becomes available regarding project leadership, timeline, funding sources, and/or cost estimates, the Plan will be reviewed and amended accordingly.

**PRIORITIZED IMPLEMENTATION SCHEDULE
(ACTION PLAN)
IMPLEMENTATION STRATEGY FOR PRIORITY MITIGATION ACTIONS**

The Rindge Hazard Mitigation Committee created the following prioritized schedule for implementation:

Mitigation Action	Who (Leadership)	When (Deadline)	How (Funding Source)	Cost (Estimated)
Chapter VI, Recommended Improvements:				
Buy additional radio frequencies and 2 repeaters (radio interoperability)	Police Chief	Ongoing	Applied from grant from Homeland Security, waiting for FCC	\$5-\$10,000 each \$90/year/frequency for 5 years
More dry hydrants	Fire Chief/EMD	Ongoing, 2/year 12 new hydrants total	DF Operations line item	\$1,000 each
Coordination w/Yankee evacuation (State)	Fire Chief/EMD Coordinate w/State Representative, BOEM Field Reps	ASAP	N/A	\$0
Expand regular surface water testing	Health Officer and Planning Department, coordinate w/Lake Associations	Summer/Spring 2007	Town Funds/Associations	\$2,000/year \$100/test x 20/year
Reverse 911	Police Department	5 years	Grant/Town Match Part of County System	\$10,000+
RMS School should have backup power	Principal & EMD	November Budget Process	Town/School grants & budget	\$60-\$70,000
Franklin Pierce Shelter back up power	EMD & Franklin Pierce Emergency Management Committee	Part of overall FP plan due Dec. 31 st , 2006 Implement over 3-4 years	Town & College Grants	\$150-\$200,000
Power back up for Town Hall	Town Administrator & EMD	1 year	50/50 Town/Grant	\$32,000
Radiological training for monitors	EMD	End of Year	N/A	\$0
Public education re: warning signals, cold weather	EMD/Town Administrator/Schools	1 Year	Emergency Management Line Item	\$500

IMPLEMENTATION STRATEGY FOR PRIORITY MITIGATION ACTIONS CON'T

MITIGATION ACTION	WHO (LEADERSHIP)	WHEN (DEADLINE)	HOW (FUNDING SOURCE)	COST (ESTIMATED)
New fire codes for commercial buildings (more stringent sprinklers)	Fire Chief & State Fire Marshal	Town Meeting	N/A	\$0
Code enforcement –environmental training for health officer	Town Administrator	3-5 Years	N/A	\$35,000/year
Erosion Sediment Control ordinance	Town Planner	Town Meeting	N/A	\$0
Chapter VII – Mitigation actions				
Sandbag program (stockpile materials & volunteers)	Public Works Director	Town Meeting	State supply of sandbags, Town Funded	\$500
Portable generators for sumps and special needs populations	Fire Chief/Director of Public Life and Safety	Acquire 2/year over 3 year period	Town Funds, State Grants, Public Donations	\$750/Generator \$4,500 Total
Portable Pumps for Basements and Buildings	Public Works Director	1/year over 2 years	Town Funds/Grants	\$1,500 each \$3,000 Total
Detours – Acquire cones, barriers etc. & Public education	PD, FD, and Public Works	Ongoing (acquire piecemeal)	Town Funds/Grants Check w/New Ipswich on how they got theirs	\$1,500
Conduct survey of residents regarding vulnerability and volunteer opportunities	Town Administrator & Planning Director	ASAP	Emergency Line Item	\$300
ATV's (Rhinos) & Boats for rescue	FD & PD	One Year	Rhino – Grant Boat – Fundraiser through Mondadnock Fire Chiefs	\$35,000 Boat \$10,000 Rhino
Power back up for 119/202 intersection	Police Chief	End of Year	DOT & Town	\$5,000
Acquire CB & HAM radio for Emergency Ops Center	EMD	Town Meeting	Town	\$5,000
Resolve Mutual Aid radio jams during Yankee drills	FD & PD	ASAP	N/a	N/A
Emergency Transportation Plan for moving people	EMD	ASAP	Existing Funds	Unknown
Neighborhood level plans, with town coordinator designated to each	EMD & Neighborhood Associations	1-2 years	Existing Funds	Unknown

IMPLEMENTATION STRATEGY FOR PRIORITY MITIGATION ACTIONS CON'T

MITIGATION ACTION	WHO (LEADERSHIP)	WHEN (DEADLINE)	HOW (FUNDING SOURCE)	COST (ESTIMATED)
Coordination of volunteers and private resources (snowmobiles, atvs)	EMD	After Surveys 6 months	N/A	Minimal
Securing supplies with retail stores	EMD	1 Year	N/A	\$0
Coordinate School Superintendent w/ FD & PD re: days off & trouble students	PD & School Principal	Ongoing	N/A	\$0
Implement septic system ordinance	Health Officer/Town Planner	Town Meeting	N/A	\$0
Excavator for Public Works	Public Works Director	5+ Years	CIP Town	\$150,000
Public sewage around lake (such as little Michigan)	Town Planner/health Officer	15+ Years	Bonds	?
Chapter VII – Potential Hazards Action				
Beaver control program	Public Works Director	Ongoing	Operating Budget	\$1,200/year (about \$100/beaver)
Fuel spill containment booms, training, and inspection of gas stations	Code Enforcement Officer & Planning Dept.	Town Meeting	Town Budget	N/A
Fix Culvert on Old New Ipswich Road	Public Works Director	Fall 2007	Road Construction Funds	\$1,000
Dam inspection policy	Town Administrator & Public Works Director	Ongoing	Part of current work- Existing funding	negligible
Forest Management to prevent forest fires	Conservation Commission (w/EMD)	Spring 2007	Conservation Funds from Current Use	\$8,000
Snowfencing/landscaping to prevent white-outs on road	Town Planner	Town/Gown Meeting	N/A	\$0
Security fence around explosive storage area	Fire Chief	ASAP	N/A	\$0

CHAPTER IX ADOPTION, IMPLEMENTATION, MONITORING & UPDATE

ADOPTION

The Rindge Board of Selectmen adopted the *Rindge Hazard Mitigation Plan* on [REDACTED]. A copy of the resolution can be found at the end of this chapter. Adopted policy addresses the actions for implementation set forth in the chart “Implementation Strategy for Priority Mitigation Actions” in Chapter VII and in the “Monitoring & Updates” sub-section contained in this Chapter VIII. All other sections of this *Plan* are supporting documentation for information purposes only and are not included as the statement of policy.

MONITORING & UPDATES

Recognizing that many mitigation projects are ongoing, and that while in the implementation stage communities may suffer budget cuts, experience staff turnover, or projects may fail altogether, a good plan needs to provide for periodic monitoring and evaluation of its successes and failures and allow for updates of the Plan where necessary.

In order to track progress and update the Mitigation Strategies identified in the *Action Plan* (Chapter VII), the Town Hazard Mitigation Team will revisit the Rindge Hazard Mitigation Plan annually, or after a hazard event. The Emergency Management Director is responsible for initiating this review and needs to consult with the Board of Selectmen and other key local officials. Changes should be made to the Plan to accommodate for projects that have failed or are not considered feasible after a review for their consistency with the timeframe, the community’s priorities, and funding resources. Priorities that did not make the implementation list, but identified as potential mitigation strategies, should be reviewed as well during the monitoring and update of this Plan to determine feasibility of future implementation. In keeping with the process of adopting the 2006 Rindge Hazard Mitigation Plan, a public hearing to receive public comment on Plan maintenance and updating will be held during the annual review period and the final product adopted by the Board of Selectmen appropriately.

The Town of Rindge, NH Hazard Mitigation Plan must be reviewed, revised as appropriate, and resubmitted to FEMA for approval every five years in order to maintain eligibility for Pre-Disaster Mitigation Competitive (PDM-C) and Hazard Mitigation Grant Program project grants.

IMPLEMENTATION OF THE PLAN THROUGH EXISTING PROGRAMS

In addition to work by the Hazard Mitigation Committee and town departments, several other mechanisms exist which will ensure that the Rindge Hazard Mitigation Plan receives the attention it requires for satisfactory use.

Master Plan

Implementation of the Master Plan has been ongoing since its most recent update in 2001. Recommendations from the Rindge Hazard Mitigation Plan will be considered for insertion into future updates of the Master Plan. The Planning Board will consider the Plan as an amendment to its Master Plan. The Local Hazard Mitigation Committee will oversee the process to begin working with the Planning Board to ensure that the Rindge Hazard Mitigation Plan is adopted as a Chapter of the Master Plan.

Zoning Ordinance and Regulations

Some of the implementation strategies proposed involve revisions to the Subdivision Regulations and/or the Site Plan Review Regulations as well as the Zoning Ordinance. The Local Hazard Mitigation Committee will oversee the process to begin working with the Planning Board to develop appropriate language for the recommended modifications.

Continued Public Involvement

On behalf of the Hazard Mitigation Committee, the Emergency Management Director (EMD), under direction of the Board of Selectmen, will be responsible for ensuring that town departments and the public have adequate opportunity to participate in the planning process. Administrative staff may be utilized to assist with the public involvement process. For the yearly update process, techniques that will be utilized for public involvement include:

- Provide personal invitations to Budget Committee members;
- Provide personal invitations to town department heads;
- Post notices of meetings at the Town Office, Library, and local businesses;
- Post flyers of the project at the Town Office, Library, and local businesses; and
- Submit newspaper articles for publication to the Keene Sentinel and the Monadnock Ledger.

A number of Implementation Action items which will be undertaken relate to public education and involvement. Additionally, members of the public including area business owners, schools, communities, and organizations will be invited to participate in the yearly process of updating the Rindge Hazard Mitigation Plan. These outreach activities will be undertaken during the Plan's annual review and during any Hazard Mitigation Committee meetings the Board of Selectmen calls to order.

CERTIFICATE OF ADOPTION
TOWN OF RINDGE, NEW HAMPSHIRE
BOARD OF SELECTMEN
A RESOLUTION ADOPTING THE RINDGE
HAZARD MITIGATION PLAN

WHEREAS, the Town of Rindge established a Committee to prepare the Rindge Hazard Mitigation plan; and

WHEREAS, several public planning meetings were held between [redacted] and [redacted] regarding the development and review of the Rindge Hazard Mitigation Plan; and

WHEREAS, the Rindge Hazard Mitigation Plan contains several potential future projects to mitigate hazard damage in the Town of Rindge; and

WHEREAS, a duly-noticed public hearing was held by the Rindge Board of Selectmen on [redacted] to formally approve and adopt the Rindge Hazard Mitigation Plan.

NOW, THEREFORE BE IT RESOLVED that the Rindge Board of Selectmen adopts the Rindge Hazard Mitigation Plan.

ADOPTED AND SIGNED this [redacted]

Arthur C. Fiorelli
Rindge Board of Selectmen

Timothy Halliday
Rindge Board of Selectmen

Patricia Lang Barry
Rindge Board of Selectmen

ATTEST

APPENDICES

APENDIX A
HAZARD DESCRIPTIONS

The following list describes hazards that have occurred or have the potential to occur in the Town of Rindge. The descriptions provided are those used in the State of NH Hazard Mitigation Plan (2000).

Flooding

Floods are defined as a temporary overflow of water onto lands that are not normally covered by water. Flooding results from the overflow of major rivers and tributaries, storm surges, and/or inadequate local drainage. Floods can cause loss of life, property damage, crop/livestock damage, and water supply contamination. Floods can also disrupt travel routes on roads and bridges. Inland floods are most likely to occur in the spring due to the increase in rainfall and melting of snow; however, floods can occur at any time of the year. A sudden thaw in the winter or a major downpour in the summer can cause flooding because there is suddenly a lot of water in one place with nowhere to go.

100-year Floodplain Events

- Floodplains are usually located in lowlands near rivers, and flood on a regular basis. The term 100-year flood does not mean that a flood will occur once every 100 years. Rather, it is a statement of probability that scientists and engineers use to describe how one flood compares to others that are likely to occur. It is more accurate to use the phrase “1% annual chance of flood.” What this means is that there is a 1% chance of a flood of that size happening in a year.

Rapid Snow Pack Melt

- Warm temperatures and heavy rains cause rapid snowmelt. Quickly melting snow coupled with moderate to heavy rains are prime conditions for flooding.

River Ice Jams

- Rising waters in early spring breaks ice into chunks, which float downstream and often pile up, causing flooding. Small rivers and streams pose special flooding risks because they are easily blocked by jams. Ice collecting in river bends and against structures presents significant flooding threats to bridges, roads, and the surrounding lands.

Severe Storms

- Flooding associated with severe storms can inflict heavy damage to property. Heavy rains during severe storms are a common cause of inland flooding.

Beaver Dams and Lodging

- Flooding associated with beaver dams and lodging can cause road flooding or flooding damage to property.

Drought

A drought is defined as a long period of abnormally low precipitation, especially one that adversely affects growing or living conditions. Droughts are rare in New Hampshire. They generally are not as damaging and disruptive as floods and are more difficult to define. The effect of droughts is indicated through measurements of soil moisture, groundwater levels, and stream-flow. However, not all of these indicators will be minimal during a drought. For example, frequent minor rainstorms can replenish the soil moisture without raising ground-water levels or increasing stream-flow. Low stream-flow correlates with low ground-water levels because ground-water discharge to streams and rivers maintains stream-flow during extended dry periods. Low stream-flow and low ground-water levels commonly cause diminished water supply.

Extreme Heat

Extreme heat is characterized by abnormally high temperatures and/or longer than average time periods of high temperatures. These event conditions may impact the health of both humans and livestock. The State Hazard Mitigation Team is conducting additional research to more accurately characterize extreme heat hazards.

Wildfire

Wildfire is defined as an uncontrolled and rapidly spreading fire.

Forest Fires and Grass Fires

- A forest fire is an uncontrolled fire in a woody area. They often occur during drought and when woody debris on the forest floor is readily available to fuel the fire. Grass fires are uncontrolled fires in grassy areas.

Earthquake

New England is considered a moderate risk earthquake zone. An earthquake is a rapid shaking of the earth caused by the breaking and shifting of rock beneath the earth's surface. Earthquakes can cause buildings and bridges to collapse, disrupt gas, electric, water and phone lines, and often cause landslides, flash floods, fires, and avalanches. 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. The underground point of origin of an earthquake is called its focus; the point on the surface directly above the focus is the epicenter. The magnitude and intensity of an earthquake is determined by the use of scales such as the Richter scale and Mercalli scale.

Subsidence

The collapse of the Earth's surface elevation due to the removal of subsurface support. Events range from broad regional lowering of the land surface that occurs over long periods of time, to sudden localized collapse.

Radon

Radon is a naturally occurring radioactive gas with carcinogenic properties. The gas is a common problem in many states, including New Hampshire. Data collected by the NH Office of Community and Public Health's Bureau of Radiological Health indicates that one third of the houses in New Hampshire have indoor radon levels that exceed the U.S. Environmental Protection Agency's "action level" of four Pico curies per liter for at least some portion of the year. Radon may also enter homes dissolved in drinking water from drilled wells. A higher level of radon in water from individual drilled wells is a common occurrence in New Hampshire.

Tornado

A tornado is a violent windstorm characterized by a twisting, funnel shaped cloud. They develop when cool air overrides a layer of warm air, causing the warm air to rise rapidly. The atmospheric conditions required for the formation of a tornado include great thermal instability, high humidity, and the convergence of warm, moist air at low levels with cooler, drier air aloft. Most tornadoes remain suspended in the atmosphere, but if they touch down they become a force of destruction.

Tornadoes produce the most violent winds on earth, at speeds of 280 mph or more. In addition, tornadoes can travel at a forward speed of up to 70 mph. Damage paths can be in excess of one mile wide and 50 miles long. Violent winds and debris slamming into buildings cause the most structural damage.

The Fujita Scale is the standard scale for rating the severity of a tornado as measured by the damage it causes. A tornado is usually accompanied by thunder, lightning, heavy rain, and a loud "freight train" noise. In comparison to a hurricane, a tornado covers a much smaller area but can be more violent and destructive.

Hurricane

A hurricane is a tropical cyclone in which winds reach speeds of 74 miles per hour or more and blow in a large spiral around a relatively calm center. The eye of the storm is usually 20-30 miles wide and may extend over 400 miles. High winds and flooding are primary causes of hurricane-inflicted loss of life and property damage.

Severe Wind

Significantly high winds occur especially during tornadoes, hurricanes, winter storms and thunderstorms. Falling objects and downed power lines are dangerous risks associated with high winds. In addition, property damage and downed trees are common during severe wind occurrences.

Downburst

- A downburst is a severe, localized wind blasting down from a thunderstorm. These “straight line” winds are distinguishable from tornadic activity by the pattern of destruction and debris. Downbursts fall into two categories:
 - Microburst, which covers an area less than 2.5 miles in diameter, and
 - Macroburst, which covers an area at least 2.5 miles in diameter.

Lightning

Lightning is a giant spark of electricity that occurs within the atmosphere or between the atmosphere and the ground. As lightning passes through the air, it heats the air to a temperature of about 50,000 degrees Fahrenheit, considerably hotter than the surface of the sun. Fires are a likely result of lightning strikes, and lightning strikes can cause death, injury, and property damage.

Extreme Winter Weather

Ice and snow events typically occur during the winter months and can cause loss of life, property damage and tree damage.

Heavy Snow Storms

- A winter storm can range from moderate snow to blizzard conditions. Blizzard conditions are considered blinding, wind-driven snow over 35 mph that lasts several days. A severe winter storm deposits four or more inches of snow during a 12-hour period or six inches of snow during a 24-hour period.

Ice Storms

- An ice storm involves rain, which freezes on impact. Ice coating at least one-fourth inch of thickness is heavy enough to damage trees, overhead wires and similar objects. Ice storms often produce widespread power outages.

Nor'easter

- A Nor'easter is a large weather system traveling from South to North passing along or near the seacoast. As the storm approaches New England and its intensity becomes increasingly apparent, the resulting counterclockwise cyclonic winds impact the coast and inland areas from a Northeasterly direction. The sustained winds may meet or exceed hurricane force, with larger bursts, and may exceed hurricane events by many hours (or days) in terms of duration.

Snow Avalanches

A snow avalanche is a slope failure consisting of a mass of rapidly moving, fluidized snow that slides down a mountainside. The flow can be composed of ice, water, soil, rock and trees.

Man-Made Hazards

Hazardous Materials

- Hazardous materials spills or releases can cause damage of loss to life and property. Short or long-term evacuation of local residents and businesses may be required, depending on the nature and extent of the incident.

Dam Breach and Failure

- Dam failure results in rapid loss of water that is normally held by the dam. These kinds of floods are extremely dangerous and pose a significant threat to both life and property.

APPENDIX B: **RESOURCES**

RESOURCES USED IN THE PREPARATION OF THIS PLAN

NH BEM'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 (10/02)

BEM's Hazard Mitigation Plan for New Hampshire Communities (12/97 draft document)

BEM / NH OEP's Flood Insurance Handbook (4/94)

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

FEMA's Understanding Your Risks: Identifying Hazards and Estimating Losses, August 2001

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 final draft)

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

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

Town of Rindge, NH's Master Plan (2001 update)

Agencies

New Hampshire Bureau of Emergency Management (BEM)	271-2231	
Hazard Mitigation Section	271-2231	
Federal Emergency Management Agency (FEMA)	(877) 336-2734	
NH Regional Planning Commissions:		
Central NH Regional Planning Commission	226-6020	
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:		
Governor's Office of Energy and Community Services	271-2611	
New Hampshire Office of Energy and Planning	271-2155	
NH Department of Cultural Resources:		271-2540
Division of Historical Resources	271-3483	
NH Department of Environmental Services:		271-3503
Air Resources	271-1370	
Air Toxins Control Program	271-0901	
Asbestos Program	271-1373	
Childhood Lead Poisoning Prevention Program	271-5733	
Environmental Health Tracking Program	271-4072	
Environmental Toxicology Program	271-3994	
Health Risk Assessment Program	271-6909	
Indoor Air Quality Program	271-3911	
Occupational Health and Safety Program	271-2024	
Radon Program	271-4764	
Geology Unit	271-3503	
Pollution Preventive Program	271-6460	
Waste Management	271-2900	
Water Supply and Pollution Control	271-3414	
Rivers Management and Protection Program	271-8801	
NH Office of Energy & Planning (OEP)	271-2155	
NH Municipal Association	224-7447	
NH Fish and Game Department	271-3421	
Region 1, Lancaster	788-3164	
Region 2, New Hampton	744-5470	
Region 3, Durham	868-1095	
Region 4, Keene	352-9669	
NH Department of Resources and Economic Development:		271-2411
Economic Development	271-2629	
Travel and Tourism	271-6870	
Division of Forests and Lands	271-2214	

Division of Parks and Recreation	271-3556
Design, Development, and Maintenance	271-2411
NH Department of Transportation	271-3734
Northeast States Emergency Consortium, Inc. (NESEC).....	(781) 224-9876
US Department of Commerce:	(202) 482-2000
National Oceanic and Atmospheric Administration:	
National Weather Service; Taunton, Massachusetts	(508) 824-5116
US Department of the Interior:	202-208-3100
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
Cheshire County, Walpole.....	756-2988
Sullivan County, Newport	863-4297
Hillsborough County, Milford.....	673-2409 Ext. #4

Mitigation Funding Resources

404 Hazard Mitigation Grant Program (HMGP).....	NH Bureau of Emergency Management
406 Public Assistance and Hazard Mitigation.....	NH Bureau of Emergency Management
Community Development Block Grant (CDBG)	NH BEM, NH OSP, also refer to RPC
Dam Safety Program	NH Department of Environmental Services
Disaster Preparedness Improvement Grant (DPIG)	NH Bureau of Emergency Management
Emergency Generators Program by NESEC [‡]	NH Bureau of Emergency Management
Emergency Watershed Protection (EWP) Program.....	USDA, Natural Resources Conservation Service
Flood Mitigation Assistance Program (FMAP)	NH BEM, NH OEP
Flood Plain Management Services (FPMS)	US Army Corps of Engineers
Mitigation Assistance Planning (MAP).....	NH Bureau of Emergency Management
Mutual Aid for Public Works.....	NH Municipal Association
National Flood Insurance Program (NFIP) [†]	NH OSP, NH BEM
Power of Prevention Grant by NESEC [‡]	NH Bureau of Emergency Management
Project Impact	NH Bureau 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 BEM 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 Energy & Planning can provide additional information regarding participation in the NFIP-CRS Program.

Websites

Sponsor	Internet Address	Summary of Contents
Natural Hazards Research Center, U. of Colorado	http://www.colorado.edu/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://www.wep.es.llnl.gov/www/wep/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.iaaa.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 C:
HAZARD MITIGATION
RESOURCE PROFILES

The following are fact sheets about the various hazard mitigation grant programs

◆ HAZARD MITIGATION GRANT PROGRAM (cont...)

What types of projects can be funded by the HMGP?

HMGP funds may be used to fund projects that will reduce or eliminate the losses from future disasters. Projects must provide a long-term solution to a problem, for example, elevation of a home to reduce the risk of flood damages as opposed to buying sandbags and pumps to fight the flood. In addition, a project's potential savings must be more than the cost of implementing the project. Funds may be used to protect either public or private property or to purchase property that has been subjected to, or is in danger of, repetitive damage. Examples of projects include, but are not limited to:

- Acquisition of real property for willing sellers and demolition or relocation of buildings to convert the property to open space use
- Retrofitting structures and facilities to minimize damages from high winds, earthquake, flood, wildfire, or other natural hazards
- Elevation of flood prone structures
- Development and initial implementation of vegetative management programs
- Minor flood control projects that do not duplicate the flood prevention activities of other Federal agencies
- Localized flood control projects, such as certain ring levees and floodwall systems, that are designed specifically to protect critical facilities
- Post-disaster building code related activities that support building code officials during the reconstruction process

What are the minimum project criteria?

There are five issues you must consider when determining the eligibility of a proposed project.

- Does your project conform to your State's Hazard Mitigation Plan?
- Does your project provide a beneficial impact on the disaster area, i.e. the State?
- Does your application meet the environmental requirements?
- Does your project solve a problem independently?
- Is your project cost-effective?

◆ COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM

Title 1 of the Housing and Community Development Act of 1974 authorized the Community Development Block Grant (CDBG) program. The primary purpose of the CDBG program is the development of viable communities by providing decent housing, suitable living environments, and expanding economic opportunities, principally for low and moderate income people. The program is sponsored by the US Department of Housing and Urban Development (HUD) and the New Hampshire program is administered through the Community Development Finance Authority (CDFA).

Typically, each year the New Hampshire CDBG program receives approximately \$10 million from HUD to use towards the CDBG Programs: Housing, Public Facilities, Economic Development, Feasibility Studies, and Emergencies and Unanticipated Events. Since 1983, over 773 grants and over \$188 million have been funded throughout New Hampshire.

Any municipality or county, other than entitlement communities of Rochester, Dover, Portsmouth, Manchester, and Nashua, is eligible to apply to CDFA for CDBG funding. A nonprofit agency may also apply through its municipality or county as a sub-recipient of CDBG money. All eligible municipalities and counties can apply for up to \$500,000 in CDBG funds per year. Entitlement communities are those communities that, due to their population, receive CDBG money directly from HUD as a special set-aside.

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.

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.

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 OEP/NFIP Program
 - NH OEP Coastal Program
- NH DRED Division of Forests and Lands
- NH DES Water Resources Division – Dam Safety Program
 - NH DES Wetlands Program
 - NH DES Shoreland Protection Program

APPENDIX D: **MATRIX OF FEDERAL ALL-** **HAZARDS GRANTS**

This matrix provides information about key all-hazards grant programs from the Departments of Homeland Security, Justice, Transportation, Health and Human Services, and Education under which state, local, and tribal governments, first responders, and the public are eligible to receive preparedness, response, recovery, mitigation, and prevention assistance.

**FEDERAL PREPAREDNESS GRANT PROGRAMS AS REPORTED TO DHS/FEMA NIMS
INTEGRATION CENTER**

Organization	Grant Programs Identified
Environmental Protection Agency (EPA)	<ol style="list-style-type: none"> 1. Security Enhancement and Emergency Preparedness Planning at Water Utilities 2. EPA Grant and Contract Vehicles to move funding from DHS to localities for the regular retrieval of Bio Watch sampling filters and delivery for analysis
Nuclear Regulatory Commission (NRC)	<ol style="list-style-type: none"> 1. NRC provides pharmaceutical intervention to states with populations within the 10-mile emergency planning zone of Commercial nuclear power plants.
Department of Justice (DOJ)	<ol style="list-style-type: none"> 1. State Domestic Preparedness Equipment Support Program 2. Antiterrorism and Emergency Assistance Program 3. Domestic Antiterrorism Technology Development Program 4. COPS Interoperable Communications Technology Program
Department of Agriculture (USDA)	<ol style="list-style-type: none"> 1. State Fire Assistance 2. Volunteer Fire Assistance 3. First Responder Initiative
Department of Energy (DOE)	<ol style="list-style-type: none"> 1. Working Agreement: DOE, the Shoshone-Bannock Tribes and the Idaho National Engineering and Environmental Laboratory 2. Environmental oversight and Monitoring Agreement: Office of Nuclear Energy and the State of Idaho 3. Agreement-in-Principle: Waste Isolation Pilot Plant (DOE), the Western Governors Association and the State of Idaho 4. Office of Civilian Radioactive Waste Management Training Program 5. Agreement-in-Principle with the State of Texas Energy Conservation Office 6. Agreement-in-Principle with the six counties and the State of Nevada 7. S.C. Emergency Management Division Agreement-in-Principle Grants 8. S.C. Dept. of Health and Environmental Control Agreement-in-Principle Grants 9. Georgia Emergency Management Division Agreement-in-Principle Grants 10. Cooperative Agreement: Western Governors Association, Southern States Energy Board, mid-West and North East Council of State Governors 11. Office of River Protection Grant 12. Memorandum of Understanding (MOU): DOE and City of Miamisburg 13. Ohio Field Office MOU with West Valley, N.Y., Volunteer Hose Company
Tennessee Valley Authority (TVA)	<ol style="list-style-type: none"> 1. Supplemental Agreements: Tennessee Emergency Management Agency and Alabama Emergency Management Agency, for off-site support of nuclear power plant radiological emergency plans
Environmental Protection Agency (EPA)	<ol style="list-style-type: none"> 1. Security Enhancement and Emergency Preparedness Planning at Water Utilities 2. EPA Grant and Contract Vehicles to move funding from DHS to localities for the regular retrieval of Bio Watch sampling filters and delivery for analysis
Nuclear Regulatory Commission (NRC)	<ol style="list-style-type: none"> 1. NRC provides pharmaceutical intervention to states with populations within the 10-mile emergency planning zone of Commercial nuclear power plants.
Department of Justice (DOJ)	<ol style="list-style-type: none"> 1. State Domestic Preparedness Equipment Support Program 2. Antiterrorism and Emergency Assistance Program 3. Domestic Antiterrorism Technology Development Program 4. COPS Interoperable Communications Technology Program

**FEDERAL PREPAREDNESS GRANT PROGRAMS AS
REPORTED TO DHS/FEMA NIMS INTEGRATION CENTER**

Organization	Grant Programs Identified
Department of Agriculture (USDA)	<ol style="list-style-type: none"> 1. State Fire Assistance 2. Volunteer Fire Assistance 3. First Responder Initiative
Department of Energy (DOE)	<ol style="list-style-type: none"> 1. Working Agreement: DOE, the Shoshone-Bannock Tribes and the Idaho National Engineering and Environmental Laboratory 2. Environmental oversight and Monitoring Agreement: Office of Nuclear Energy and the State of Idaho 3. Agreement-in-Principle: Waste Isolation Pilot Plant (DOE), the Western Governors Association and the State of Idaho 4. Office of Civilian Radioactive Waste Management Training Program 5. Agreement-in-Principle with the State of Texas Energy Conservation Office 6. Agreement-in-Principle with the six counties and the State of Nevada 7. S.C. Emergency Management Division Agreement-in-Principle Grants 8. S.C. Dept. of Health and Environmental Control Agreement-in-Principle Grants 9. Georgia Emergency Management Division Agreement-in-Principle Grants 10. Cooperative Agreement: Western Governors Association, Southern States Energy Board, mid-West and North East Council of State Governors 11. Office of River Protection Grant 12. Memorandum of Understanding (MOU): DOE and City of Miamisburg 13. Ohio Field Office MOU with West Valley, N.Y., Volunteer Hose Company
Tennessee Valley Authority (TVA)	<ol style="list-style-type: none"> 1. Supplemental Agreements: Tennessee Emergency Management Agency and Alabama Emergency Management Agency, for off-site support of nuclear power plant radiological emergency plans
Department of Education	<ol style="list-style-type: none"> 1. School Emergency Response and Crisis Management Plan Discretionary Grant Program
Department of Homeland Security (DHS)	<ol style="list-style-type: none"> 1. State Homeland Security Grant Program 2. Assistance to Firefighters Grant Program 3. Interoperable Communications Equipment Grant 4. SARA Title III Training Program 5. Urban Search and Rescue 6. State and Local Emergency Operation Centers 7. Community Emergency Response Teams 8. Emergency Management Performance Grants 8. Chemical Stockpile Emergency preparedness Program 10. State and Local Emergency operations Planning Grants 11. Citizen Corps 12. Metropolitan Medical Response System 13. National Fire Academy Training Grants 14. First Responder Grants

**FEDERAL PREPAREDNESS GRANT PROGRAMS AS
REPORTED TO DHS/FEMA NIMS INTEGRATION CENTER**

Organization	Grant Programs Identified
Department of Health and Human Services (HHS)	<ol style="list-style-type: none"> 1. Public Health and Social Services Emergency Fund 2. State Rural Hospital Flexibility Program 3. EMS for Children 4. Superfund Hazardous Substances Basic Research and Education 5. Metropolitan Medical Response System 6. Immunization Research, Demonstration, Public Information and Education 7. Surveillance of Hazardous Substance Emergency Events 8. Human Health Studies, Applied Research and Development 9. Immunization Grants 10. Bioterrorism Preparedness Programs
Department of the Interior (DOI)	<ol style="list-style-type: none"> 1. Rural Fire Assistance Program 2. Earthquake Hazards Reduction Program 3. Volcano Hazards Reduction Program
Department of Transportation (DOT)	<ol style="list-style-type: none"> 1. Hazardous Materials Emergency Preparedness Training and Planning Grants 2. Airport Improvement Program 3. Satellite-based Mobile Communications Tracking System for Hazardous Materials 4. Un-tethered Trailer Tracking and Security Project 5. Operation Respond 6. Port Security Grant Program 7. Maritime Transportation Security Act Training 8. Ready Reserve Force 9. Priority Use and Allocation of Shipping Service, Containers and Chassis; Port Facilities, Services for National Security and National Defense Related Operations

AUGUST 2005

APPENDIX E
DOCUMENTATION OF THE
PLANNING PROCESS

Rindge Hazard Mitigation Team

Meeting #1

AGENDA

April 20, 2006

7:00 p.m.

Rindge Town Offices

1) Introduction

2) Purpose of Committee

- Why selected to serve on Committee
- What we are doing and why

3) What is Hazard Mitigation Planning?

- PowerPoint Presentation on Hazard Mitigation

4) Step 1: Organize Hazard Mitigation Team

- Establish a chairperson/point of contact

5) What must we do to prepare a Hazard Mitigation Plan?

- Explain/set milestones (approximate number of committee meetings)
- Agree on next committee meeting date

6) Question and Answer Period

7) Set Goals for Next Meeting

Rindge Hazard Mitigation Team

Meeting #2

AGENDA

May 22, 2006

7:00 p.m.

Rindge Town Offices

1) Step 2: Identify Hazards (past and potential) on Base Map

- What are the hazards?
- What is at risk from those hazards?

2) Develop Base Map with Critical Facilities

- Identify Critical Facilities on Base Map. Please refer to enclosed packet for descriptions of facilities to be included.

3) Question and Answer Period

4) Set Goals for Next Meeting

Rindge Hazard Mitigation Team

Meeting #3

AGENDA

June 6, 2006

10:00 a.m.

Rindge Town Offices

1) Review and finish Step 2: Identifying Hazards

- Past and Potential
- Critical Facilities

2) Step 3: Assessing Vulnerability

- Estimating Potential Losses

3) Step 4: Analyzing Development Trends

- Looking at Community Change
- Review Development Regulations for Development Management
- Map Out Development Patterns

4) Step 5: Existing Mitigation Strategies

- Identifying What's in Place
- What are we Already Doing?
- Identify gaps in Current Protection

5) Question and Answer Period

6) Set Goals for Next Meeting

Rindge Hazard Mitigation Team

Meeting #4

AGENDA

July 11, 2006

10:00 a.m.

Rindge Town Offices

1) Review Step 5: Identifying Plans in Place

- Where are the gaps?
- What are we already doing?

2) Step 6, Part 1: Brainstorming Mitigation Actions

- What actions can be taken?
- Evaluating Action Feasibility

3) Step 6, Part 2: Potential Hazards Action Matrix

- Identify objectives and actions for mitigating potential hazards identified in Step 2

Evaluate Actions -“What is Feasible?”

- Fill out the Evaluation Chart for each action.
Grade/Rank the actions according to the Evaluation Chart
- Match the action against the STAPLEE criteria
Grade/Rank the actions according to the STAPLEE criteria

4) Step 7: Select Actions (Establishing Priorities)

Further refine the list of mitigation objectives developed in Steps 5 & 6 that are appropriate to your community and prioritize them in order of importance.

- Establish a minimum acceptable level for actions.
- Select actions which best suit community’s needs.
- Prioritize actions
- Include actions that can be implemented quickly

5) Question and Answer Period

6) Set Goals for Next Meeting

Rindge Hazard Mitigation Team

Meeting #5

AGENDA

August 8, 2006

10:00 a.m.

Rindge Town Offices

1) Review Step 6: Potential Mitigation Actions

- What actions could be taking?
- Evaluating Potential Actions?

2) Step 7: Select Actions (Establishing Priorities)

Further refine the list of mitigation objectives developed in Steps 5 & 6 that are appropriate to your community and prioritize them in order of importance.

- Establish a minimum acceptable level for actions.
- Select actions which best suit community's needs.
- Prioritize actions
- Include actions that can be implemented quickly

3) Step 8: Develop a Strategy (How do we Implement Actions?)

The Committee will develop a strategy that outlines:

- Who is responsible for implementing each prioritized action.
- When these actions will be implemented.
- How the community will fund the projects.

4) Question and Answer Period

5) Set Goals for Next Meeting

Rindge Hazard Mitigation Team

Meeting #6

AGENDA

September 19, 2006

10:00 a.m.

Rindge Town Offices

1. Review and Complete

- Step 7 - Establishing Priorities.
- Step 8 - Implementation Strategies

2. Review and Revise as necessary previous steps

Review prior steps and collect any information which might have been overlooked. We will review the information collected and the maps created.

3. Discuss next steps

Next steps will include review of draft plan by Committee, review by FEMA, and adoption of plan by Board of Selectmen.

4. Question and Answer Period

5. Adjourn

Rindge Hazard Mitigation Team

Meeting #7

AGENDA

November 2, 2006

- 1) **Review & Revise as necessary final draft of the *Rindge Hazard Mitigation Plan***
- 2) **Discuss next steps for the *Rindge Hazard Mitigation Plan* including FEMA review and adoption by the Board of Selectmen.**

APPENDIX F
PUBLIC RELATIONS

TOWN OF RINDGE

Office of the Selectmen

PUBLIC NOTICE

**The Hazard Mitigation Committee
will be holding a public meeting at the
Rindge Town Office on**

**Thursday, April 20
7:00 p.m.**

TOWN OF RINDGE
Office of the Selectmen

PUBLIC NOTICE

**The Hazard Mitigation Committee
will be holding a public meeting at the
Rindge Town Office on**

**Monday, May 22
7:00 p.m.**

TOWN OF RINDGE
Office of the Selectmen

PUBLIC NOTICE

**The Hazard Mitigation Committee
will be holding a public meeting at the
Rindge Town Office on**

**Tuesday, July 11
10:00 a.m.**

APPENDIX G

PROJECT STATUS SHEETS

The following form can be used to keep track of projects identified in the hazard mitigation plan that are in progress or that have been completed.

