

TEMPLE HAZARD MITIGATION PLAN UPDATE 2021

Temple, New Hampshire



FEMA Final Approval: (add date)

Prepared by the:

Town of Temple Hazard Mitigation Work Group

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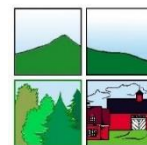
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Executive Summary

The Temple Hazard Mitigation Plan Update 2021 serves as a means to reduce future losses from natural or man-made hazard events before they occur. The Plan was developed by the Temple Hazard Mitigation Work Group.

Potential Hazards in Temple

The Temple Hazard Mitigation Work Group identified the following hazards to be of medium to high risk in Town:

Flooding	Wildfires
Drought	Long-term Utility Outage
Infectious Disease/Pandemic	Hazardous Materials
High Wind/Tornado/Downburst	Known & Emerging Contaminants
Lightning	Transport Accident
Severe Winter Weather	Dam Failure
Tropical Storm/Hurricane	

Critical Facilities

The Temple Hazard Mitigation Work Group identified Critical Facilities as follows:

- Emergency Response Facilities and Services
- Non-Emergency Response Facilities
- Facilities and Populations to Protect
- Potential Resources

Local Programs

The Temple Hazard Mitigation Work Group identified existing programs and practices that will help to mitigate the impact of natural hazards:

- School Evacuation Plan
- Building Codes
- Town Radio System
- Local Road Design Standards
- Local Bridge Maintenance
- Local Road Maintenance
- Town Master Plan
- Mutual Aid
- Fire Pond/Dry Hydrant Maintenance
- Hazmat Spill Program
- Town Safety Awareness Program
- Fire Department
- Building Inspector
- Health Officer
- Emergency Management Plan
- Groundwater Protection Ordinance

Prioritized Hazard Mitigation Strategies

- Prioritize and implement repairs or upgrades to bridges and culverts.
- Set up CODE RED and a link to sign up from the Town's website.
- Establish an Emergency Operations Center.
- Update the Town's website to include emergency information and procedures, and ways to reduce the impact of potential hazards. Consider adding links to the NH HSEM and/or FEMA's websites.
- Establish an emergency shelter. Seek to add an emergency generator.
- Provide outreach material or hold informational session about ways to mitigate the impact of severe hazard events.
- Work with the Public Health Network to coordinate response and mitigation to hazardous scenarios such as an infectious disease outbreak.
- Maintain the agreement with Nashua Mutual Aid HazMat team. Attend meetings as appropriate.
- Provide signage at trail heads regarding fire safety during hiking.
- Review the Winter Storms Operations Plan.
- Continue to implement fire ponds/dry hydrant management in order to provide increased access to, and upkeep of, water sources for fire protection.
- Update the Emergency Operations Plan in 2021.
- Update the capital improvement plan and zoning regulations to provide protection for new and existing structures from flooding and other relevant hazards.
- Install grounding equipment on public structures.
- Perform radon tests in public buildings (air and water).
- To protect the water supply, provide information (speaker presentation or written material) on proper disposal and storage of household hazardous materials & medicines, and well testing for radon and arsenic.
- Install a fire danger/warning sign to inform the public of current conditions.
- Continue annual safety inspections of all Town buildings.
- Obtain a copy of the Emergency Action Plans for the High Hazard Dams.
- Consider the need/interest in becoming a member of the NFIP.
- Assess and remove hazardous trees.
- Create a vulnerable populations list and update annually.

Chapter 1: Introduction

Purpose

The Temple Hazard Mitigation Plan Update 2021 is a planning tool to be used by the Town of Temple, as well as other local, state and federal governments, in their efforts to reduce the effects from natural, technological and human-caused hazards. By maintaining an updated Hazard Mitigation Plan, the Town is eligible to receive grant funding for mitigation projects.

Authority

This Multi-Hazard Mitigation Plan was prepared pursuant to Section 322, Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the Act), herein enacted by Section 104 of the Disaster Mitigation Act of 2000 (DMA) (P.L. 106-390). This Act provides new and revitalized approaches to mitigation planning. Section 322 of DMA 2000 emphasizes the need for State, local and tribal entities to closely coordinate mitigation planning and implementation efforts. The development and periodic update of this plan satisfies the planning requirements of the Disaster Mitigation Act (DMA) of 2000 which amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act).

Funding Source

This plan was funded by the NH Homeland Security and Emergency Management, with a grant from the Federal Emergency Management Agency's (FEMA) Pre-disaster Mitigation Program.

Scope of the Plan

The scope of this plan includes: the identification of past and potential natural, technological and human-caused hazards affecting the Town of Temple, the determination of vulnerability of existing and future structures to the identified potential hazards, and the identification and discussion of new strategies aimed at mitigating the likely effects of potential hazards before they occur.

Methodology

Using the Local Hazard Mitigation Planning Handbook, the Temple Hazard Mitigation Work Group developed the content of the Temple Hazard Mitigation Plan by following tasks set forth in the handbook. The Work Group held monthly meetings, open to the public, in order to develop the plan.

Task 1: Determine the Planning Area & Resources: This task was conducted by Town staff and the Regional Planning Commission. The results of this research were shared with the Work Group and can be found in Chapter 2, "Community Profile".

Task 2: Building the Planning Team: The Emergency Management Director contacted Town officials, department heads, and residents who might wish to volunteer their time and serve on a Work Group.

Task 3: Create an Outreach Program: This task was used throughout the plan and is a vital part of the plan's success. Many of the proposed actions involve a community outreach component for individuals to use as a means to reduce the risk of loss of life and property from future natural, technological and human-caused hazards.

Task 4: Review Community Capabilities: The Work Group brainstormed on the type of hazards and locations that have sustained or could be susceptible to each hazard within the Town. The Work Group then identified and catalogued all of the critical facilities within the Town. The result is found in Chapter 5 with a location map at the end of the plan.

Task 5: Conduct a Risk Assessment: The Work Group conducted several assessments to help determine the gaps in coverage. These include Vulnerability Assessments and Assessing Probability, Severity, and Risk. In addition to the assessments, the existing mitigation strategies were reviewed to determine where gaps in coverage exist and areas that need improvement.

Task 6: Develop a Mitigation Strategy: The Work Group identified plans and policies that are already in place to reduce the effects of man-made and natural hazards. Then the Work Group evaluated the effectiveness of the existing measures to identify where they can be improved. The Work Group developed the Mitigation Action Plan, which is a clear strategy that outlines who is responsible for implementing each project, as well as when and how the actions will be implemented and the funding source.

Task 7: Keep the Plan Current: It is important to the Town of Temple that this plan be monitored and updated annually or after a presidentially declared disaster. Chapter 9 addresses this issue.

Task 8: Review & Adopt the Plan: The Work Group members reviewed and approved each section of the plan as it was completed. After acceptance by the Work Group, the Plan was submitted to the New Hampshire Homeland Security and Emergency Management (HSEM) for review and approval pending adoption. At a public meeting, the Board of Selectmen formally adopted the plan on (add adoption date). The plan was then granted formal approval by HSEM (add approval date by HSEM) and the formal approval letter from FEMA was received on (add date of letter).

Task 9: Create a Safe & Resilient Community: The Work Group discussed the mitigation actions in the Action Plan and the ways in which the implementation of the actions will be beneficial to the community. Annual reviews of the Action Plan by the Work Group are needed to maintain the timeframes identified for completion of activities. Incorporation of the plan into other land use plans and the Capital Improvement Plan help to ensure that the goals of the plan are met. Implementation of the actions prior to a hazardous event can be funded through a variety of resources found at the end of this plan in Appendix D.

A final draft of this plan was made available to the Work Group and the public for review and comment. The document was also provided to HSEM for their review and comment.

Public Work Group Meetings

The first Work Group meeting was held at the Temple Town Hall Annex on March 13, 2020. All remaining meetings were held remotely via Zoom. The dates of the remote meetings were: June 15, 2020, July 8, August 12, September 9, November 5, and December 3, 2020.

An email was sent to each Work Group member, prior to each meeting that contained an agenda (Appendix E) and information to be covered. Meeting announcements were posted on the SWRPC website and in the newsletter to provide widespread outreach.

Public Participation

An article was printed in the Southwest Region Planning Commission Newsletter to inform the members of the community as well as surrounding communities and other interested stakeholders about participating in this plan update. Copies of the newsletter were sent to the 34 towns within the region, the Cheshire County Office, businesses, and other interested parties. It was also available on the Southwest Region Planning Commission website. In addition to the SWRPC newsletter and website, an email of the SWRPC electronic newsletter was sent to more than 450 addresses, including neighboring communities, counties, businesses, and academia. The newsletter contained notices of public meetings and events.

The plan was available for public viewing on the Town website to reach a broad range of interested parties from February 22 to March 15, 2021. A copy of the public notice for the public viewing period is in Appendix E. All input from the public was included in the plan where appropriate.

Resource List for Hazard Mitigation Work Group

Temple's EMD, or designee, reviewed and coordinated with the following agencies in order to determine if any conflicts existed or if there were any potential areas for cooperation. All agencies mentioned below were contacted by Temple's EMD, or designee. All agencies were given the opportunity to attend Work Group meetings or provide valuable input and guidance through virtual meeting, telephone conversation or printed data. Training support has been offered by some of those on this resource list.

New Hampshire Homeland Security and Emergency Management: 33 Hazen Drive Concord, NH 03305	1-800-852-3792
Field Representative: Elizabeth Gilboy State Hazard Mitigation Planner: Kayla Henderson	(603) 223-3613 (603) 271-2231
New Hampshire Department of Transportation: John Kallfelz (District 4), Swanzey, NH 03446	(603) 352-2302
New Hampshire Department of Environmental Services - Dam Bureau: Nancy Baillargeon	(603)271-3406
New Hampshire Office of Planning and Development: Samara Ebinger	(603) 271-1755

Plan Updates

During the planning process, the Work Group reviewed relevant portions of the previous hazard mitigation plan and updated those portions accordingly. Unchanged sections were incorporated into the plan while other sections were amended to reflect changes. Particular attention was given to the previous mitigation strategies that have been completed and to give a status update on those that remain on the list. The original plan was used as a base to begin the update. Amendments were made in each chapter to reflect changes that have occurred during the five-year period. Included in the changes were:

- Ch. 1 – Introduction - updated Methodology, Acknowledgements, Plan Updates, updated goals;
- Ch. 2 - Community Profile - demographics updated;

- Ch. 3 - Assessing Probability, Severity, and Risk - updated risk assessment and valuation;
- Ch. 4 - Hazard Identification - updated past and potential hazards and their locations;
- Ch. 5 - Critical Facilities - updated locations;
- Ch. 6 - Existing Mitigation Strategies and Proposed Improvements - updated chart and other data, updated chart for Status of Previous Mitigation Action Items;
- Ch. 7 - Proposed Mitigation Strategies - updated STAPLEE chart;
- Ch. 8 - Prioritized Implementation Schedule - updated Action Plan;
- Ch. 9 - Adoption, Implementation, Monitoring and Updates - Adoption certificate, updated information;
- Appendices - agendas, resources, updated information.

This update was prepared with assistance from planners at Southwest Region Planning Commission trained in Hazard Mitigation Planning. Data and maps used to prepare this plan are available at their office and should be used in preparing future updates.

Acknowledgements

The Temple Board of Selectmen extends special thanks to the Temple Hazard Mitigation Work Group as follows:

- John Kieley, Temple Emergency Management Director
- Bill Mc Donnell, Temple Emergency Management Director
- Tim Fiske, Temple Road Agent emeritus, Citizen
- George Clark, Temple Fire Chief
- Paul Quinn, Citizen
- Richard Benotti, Citizen

The Temple Board of Selectmen offers thanks to the New Hampshire Homeland Security and Emergency Management for developing the State of New Hampshire Multi-Hazard Mitigation Plan Update 2018 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.

NH HSEM/FEMA Final Approval: (add date)

Hazard Mitigation Goals

The Temple Hazard Mitigation Work Group reviewed the goals set forth in the New Hampshire Hazard Mitigation Plan Update - 2018. The work group generally concurs with those goals and has amended them to better meet the goals of the Town.

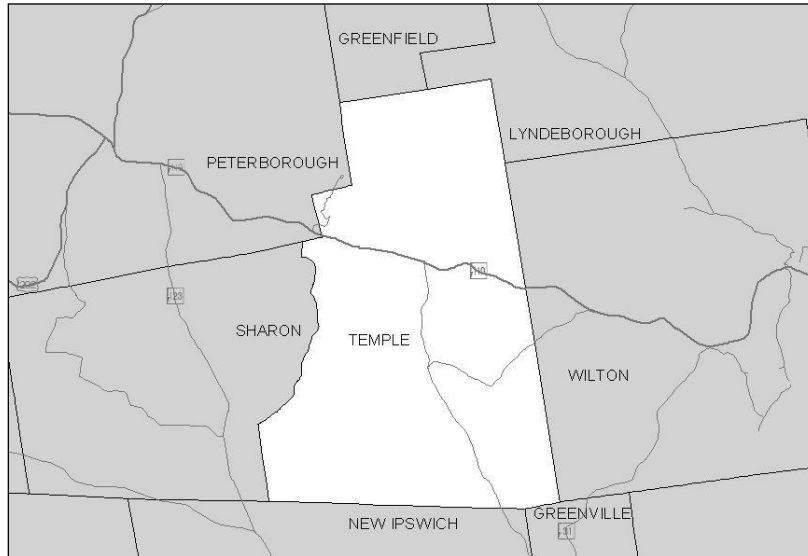
The overall Goals of the Town of Temple with respect to hazard mitigation are stipulated here:

1. To improve upon the protection of the general population, the citizens of the Town of Temple and guests, from all natural, technological and human-caused hazards.
2. To reduce the potential impact of natural, technological and human-caused hazards on the Town of Temple's emergency response services, critical facilities and infrastructure.
3. To reduce the potential impact of natural, technological and human-caused disasters on the Town of Temple's economy, natural resources, historic/cultural treasures, and private property.
4. To improve the Town of Temple's Emergency Preparedness and Disaster Response and Recovery Capability.
5. To reduce the Town of Temple's risk with respect to natural, technological and human-caused hazards through outreach and education.
6. 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.
7. To address the challenges posed by climate change as they pertain to increasing risks in Temple's infrastructure and natural environment.
8. To work in conjunction and cooperation with the State of New Hampshire's Hazard Mitigation Goals and with FEMA.

Chapter 2: Community Profile

Town Overview¹

The Town of Temple is located in southwestern Hillsborough County, in Southwest New Hampshire. Temple is bounded on the north side by Greenfield and Lyndeborough, easterly by Wilton, southerly by New Ipswich and Greenville and westerly by Sharon and Peterborough.



Temple has a land area of approximately 22.3 square miles, or 14,241 acres. Surface water accounts for approximately 185 of this total area.

The Town lies on glacier-carved ground and has a great variety of topographical features, with high ranges and broad valleys. The Wapack Range, of which Temple Mountain and Pack Monadnock are a part, continues up from the mountains of Massachusetts. On the western boundary of the Town is Temple Mountain, which has several peaks that vary in height from 1,907 feet to 2,081 feet. Other hills in Town include Whitcomb Peak, Howard Hill, Quinn Hill, Wilson Hill, Oak Hill, and Fisk Hill. The lowest point in Town is just over 800 feet (in the southeast corner of Town).

Temple is a hill town and as such is the beginning or the source of streams. The ridge of the Wapack Range, which is the Town boundary for much of the western side of Town, is also a watershed or drainage divide. Many streams have their origins just to the east of this high elevation ridge, and flow in a generally eastward direction to the lower elevations on the east side of Town. As these streams eventually empty into the Souhegan River, most of Temple is in the Souhegan River Watershed. A small portion of Temple is part of the Contoocook River Watershed as an area in the southwest corner of Town drains to the west into the Gridley River in the Town of Sharon, which in turn empties into the Contoocook River. Also, a small area in Miller State Park (northeast part of Temple) drains to the west into the Contoocook River.

Many of the streams in Temple are small, unnamed and intermittent. Intermittent streams do not have water flow all year. They generally have water flow in the spring and wet periods of high rainfall, but dry up in

¹ Town of Temple Master Plan

late summer or early fall. There are several perennial streams in Temple. These are the major streams in Town that have water flow all year.

There are three flood control structures in Temple. A fourth structure is just on the Town line in Wilton, but about half of the water impounded behind the dam is in Temple. These structures are earthen dams built by the U.S. Department of Agriculture to store water behind the dams during major storm events to prevent flooding downstream. These three structures in Temple, plus several others in nearby towns, are part of a flood control project in the Souhegan Watershed to prevent flooding in downstream areas. Maintenance and authority of the flood control sites is handled by the State of New Hampshire. The largest site with the most water impounded behind the dam is on the east side of NH 45 in the southern part of Town. This site is also a water supply for Greenville.

There are many small ponds in Temple. Some of the ponds are natural, or have been created by beavers. Many of the ponds are human-made. The reasons for constructing the ponds are varied; some are old farm ponds built for the purpose of providing water for farm animals; others are for wildlife or recreation. Some human-made ponds are fire ponds for fire protection, and some are multipurpose ponds. Most of the ponds are in low depression areas or along streams and are part of a wetland system.

Temple is fortunate that almost all of the surface water in Town originates in Town. Very little water flows into Temple from adjoining towns. This means that the residents have control over the quality of the water in Town.

Temple has an average January temperature of 20.1 degrees Fahrenheit and an average July temperature of 69 degrees Fahrenheit. Average annual precipitation is approximately 44 inches.

Disaster Risk

Temple is prone to a variety of man-made and natural hazards. Severe winter weather and wildfires carry the greatest risk for Temple. The Town is susceptible to receiving large volumes of snow from Nor'easters and other storms. The Town has also received a fair share of damage from ice storms in winter months. Icing of roads poses danger to traveling vehicles. The risk of wildfires results from the large tracks of contiguous forested land in Temple. In most cases, access is an issue because there are not many roads in these forest tracks. High elevation contributes to the risk for both severe weather and wildfires. Severe wind events and hurricane residuals have caused damage to Temple. Over the years unrecorded wind events have caused loss of timber and electricity, particularly in the several high points throughout Town.

Development Trends

Examination of the U.S. Census Data indicates that population grew 72.2% from 1980 to 1990. From 1990 to 2000, population only grew by 8.6%. Temple's population continued to increase in 2010, but at a slower pace than previous decades as demonstrated in Table 1. Temple's population increased 210% between 1970 to 2010. In contrast, Hillsborough County's increase during the same period was 79% and the State of New Hampshire's increase was 78%.

TABLE 1: POPULATION 1970 TO 2010

	1970	1980	1990	2000	2010	% Change 1970-2010
Temple	441	692	1,194	1,297	1,366	210%
Hillsborough County	223,941	276,608	336,073	380,841	400,721	79%
New Hampshire	737,681	920,610	1,109,252	1,235,786	1,316,256	78%
Temple % Change	----	57%	72%	8.6%	5.3%	-----

Source: 2010 US Census Data

The predominant land use in Temple is residential, including single family, two family and multi-family housing. Most of this development is in year-round single-family homes, with some two-family homes and multi-family dwellings spread throughout Town. Residential uses are located throughout Temple, with the greatest concentration of smaller lots located in the southern half of Town.

Several factors have played, and will continue to play, an important role in the development of Temple. These include: Temple Zoning Ordinance; the existing development pattern and availability of land for future development; the present road network; physical factors such as steep slopes, soil conditions, wetlands, and aquifers; and, land set aside for conservation. These factors have an impact, both individually and cumulatively, on where and how development occurs. Residents are increasingly working from home via the internet.

The greatest concentration of land uses and the greatest mixture of these uses occur in the general area considered to be the Village Center, at the intersection of NH 45 and General Miller Highway. The remaining development occurs along road frontage, fairly evenly disbursed around Town.

The proximity of Temple to Manchester, Nashua and Keene, NH, as well as Worcester and Boston, MA may make it an attractive location to commuters looking to live in a small community outside of the more developed regions.

TABLE 2: TEMPLE TOTAL HOUSING UNITS 1970-2010

	1970	1980	1990	2000	2010	% Change 1970-2010
Number of Housing Units	137	252	429	465	542	296%

Source: NH Office of Energy and Planning

As shown in Table 2, Temple has experienced a growth in housing of 296% between 1970 to 2010. The Town greatly outpaced housing growth in Hillsborough County which experienced an increase of 140% during the same time period.

There are many undeveloped large parcels in Temple that have the potential for subdivision and residential or commercial development in the future. However, due to the steep slopes and lack of frontage, mostly in the north and west parts of Town, development in some areas is challenging if not impossible.

Population Projection

Population projections are an important component in planning for the future. Projections are beneficial to help communities begin to plan and budget for Capital Improvement Projects. Since population projections are based on a set of assumptions, changes can be significant if the assumptions used in the calculations are not met. For example, a tropical storm that destroys a large employer or causes infrastructure damages to that facility, can cause a significant economic hardship to the business that may ultimately result in its closure and loss of local employment. This can then result in an outward migration of residents from the community. Therefore, population projections should only be used as a basis to begin planning for the future. The New Hampshire Office of Planning and Development (NH OPD) prepares population projections every five years for each community in New Hampshire. Temple’s population projections out to the year 2040 are shown in Table 3.

TABLE 3: TEMPLE POPULATION PROJECTION 2010-2040

	2010	2015	2020	2025	2030	2035	2040	2010-2040
Temple	1,366	1,380	1,399	1,424	1,451	1,469	1,475	8%

Source: American Community Survey, 5-Year Estimates, BLS

National Flood Insurance Program (NFIP)

Temple is currently not a participating member of the National Flood Insurance Program. Temple has not participated in the NFIP to date due to disagreeing with FEMA mapping showing flood hazard areas given the elevation and topography of Temple. Temple will consider the need/interest of becoming an NFIP member and it will be included as a strategy in the Action Plan in Chapter 8 of this Plan.

The following actions have been taken since the last Hazard Mitigation Plan:

- maintained and replaced culverts;
- increased public awareness of all hazards and ways to reduce the impacts and to be better prepared in the event of a hazardous event.

As the population continues to grow, new development has been outside of hazard prone areas which has helped to protect the residents from any increase in vulnerability of hazards. As the intensity of storms continues to increase though, it is important to review the existing programs and strategies, and improve upon areas that are needed.

Chapter 3: Assessing Probability, Severity and Risk

The Temple Work Group members completed a risk assessment of the types of hazards that could occur in Town. 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* and *High* risk was assigned as shown below. **Appendix B** provides explanations for the risk assessment measures.

Method used for rating impacts, probability of occurrences and overall risk

Impacts: The *Impact* is an estimate generally based on a hazard's effects on humans, property and businesses.

Impact Scoring

- 1 - Inconvenience, reduced service/productivity, minor damages, non-life-threatening injuries.
- 3 - Moderate to major damages, temporary closure and reduced service/productivity, numerous injuries, and deaths.
- 6 - Devastation and significant injuries and deaths, permanent closure and/or relocation of services, long-term effects.

Probability of Occurrence: The *Probability of Occurrence* is a numeric value that represents the likelihood that the given hazard will occur within the next 10 years.

Probability Scoring

- 1 - 33% probability of occurring within 10 years (Low 1-2)
- 3 - 34-66% probability of occurring within 10 years (Medium 3-4)
- 6 - 67-100% probability of occurring within 10 years (High 5-6)

Severity: Severity is calculated by taking the average of the vulnerability for human, business and property impacts of each hazard type.

Risk: Risk is an adjective description (High, Medium, or Low) of the overall threat posed by a hazard over the next 10 years. It is calculated by multiplying the probability of occurrence and severity.

Overall Risk: The *Overall Risk* is a representation of the combined *potential impact* and *probability of occurrence* ratings. This is calculated by multiplying the probability of occurrence rating score by the impact rating score (the average of human, property and business impacts). The goal of identifying the overall risk of each identified hazard is to assist the Town in determining which hazards pose the largest potential threat. The overall risk ratings are broken down and color coded into the following categories:

- White: values 1 - 6, Low Risk
- Yellow: values 7 - 12, Medium Risk
- Red: values 13 - 18, High Risk

TABLE 4: TEMPLE RISK ASSESSMENT

	Threat/Hazard	Classification	Human Impact	Property Impact	Economic/ Business Impact	Average Impact Score	Probability of Occurrence	Overall Risk
Natural Hazards	Avalanche	Low	1	1	1	1	1	1
	Coastal Flooding	Low	1	1	1	1	1	1
	Inland Flooding	Low	2	2	3	2.3	2	5
	Drought	Medium	1	2	2	1.7	6	10
	Earthquake > 4.0	Low	3	3	3	3	1	3
	Extreme Temperatures	Low	1	1	1	1	6	6
	High Wind Events	Medium	2	2	2	2	6	12
	Infectious Disease	High	3	3	3	3	6	18
	Landslide	Low	1	1	1	1	1	1
	Lightning	Medium	1	2	1	1.3	6	8
	Severe Winter Weather	High	3	3	3	3	6	18
	Solar Storms & Space Weather	Low	1	1	1	1	1	1
	Tropical & Hurricanes	High	3	3	3	3	6	18
Wildfire	Medium	3	3	3	3	3	9	
Technological Hazards	Aging Infrastructure	Low	1	1	1	1	1	1
	Conflagration	Low	1	1	1	1	1	1
	Dam Failure	Medium	4	4	4	4	2	8
	Known & Emerging Contaminants	Medium	2	1	2	1.7	6	10
	Hazardous Materials	High	3	3	2	2.7	6	16
	Long-term Utility Outage	High	6	1	6	4.3	3	13
	Radiological	Low	1	1	1	1	1	1
Human-Caused Hazards	Cyber Event	Low	1	1	3	1.7	3	5
	Mass Casualty Incident	Low	6	1	1	2.7	1	3
	Terrorism/Violence	Low	6	1	1	2.7	1	3
	Transport Accident	Medium	6	1	1	2.7	3	8

Chapter 4: Hazard Identification - Past and Potential

The Temple Hazard Mitigation Work Group looked at the type of hazards that could occur within Town. These hazards were identified by using the New Hampshire Hazard Mitigation Plan (2018), the Federal Emergency Management Agency website, the previous Temple Hazard Mitigation Plan, and the Temple Hazard Risk Assessment. From this list, the work group developed a summary for each hazard type to provide information on past and potential events, risk and impact. In some instances, specific locations of hazard events that have occurred within the past five years have been recorded. Estimates of the impact of some of the events is also noted where possible.

This information is only given for the natural hazards identified within this plan. The work group also identified the following technological hazards and human-caused hazards that have occurred in Town or have the potential to occur: known and emerging contaminants, hazardous materials, long-term utility outage, and transport accident. Some of the natural hazards listed in the NH Hazard Mitigation Plan (2018) ranked low in the Temple Hazard Risk Assessment (Chapter 3) and are not included in this chapter. The low-risk natural hazards include: avalanche, coastal flooding, earthquake, extreme temperatures, landslide, and solar storms and space weather. Therefore, this plan will focus on the following hazards:

- Flooding
- Drought
- Infectious Disease/Pandemic
- High Wind/Tornado/Downburst
- Lightning
- Severe Winter Weather
- Tropical Storm/Hurricane
- Wildfires
- Dam Failure

Flooding

Risk: Low

Impact: Low

Future Probability: Low

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.

Floodplains are usually located in lowlands near rivers, and flood on a regular basis. The term 100-year flood does not mean that flood will occur once every 100 years. 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 flood”. What this means is that there is a 1% chance of a flood of that size happening in any year.

Below is a list of specific incidents of localized flooding events. Other events were remembered by Work Group members, but the impact was minor and no documented information was available.

Past Events from 2014 to present:

July 1-2, 2017: There was a FEMA Disaster Declaration #4329 for Grafton County. Heavy rains occurred, but no local impact to Town services and no structural damages, injuries, or death were reported due to this event.

October 29, 2017 to November 1, 2017: Heavy rains occurred, but no local impact to Town services and no structural damages, injuries, or death were reported due to this event.

March 2, 2018: Heavy rains occurred, but no local impact to Town services and no structural damages, injuries, or death were reported due to this event.

Potential Occurrences: Potential annual events due to heavy rains and runoff, especially in the spring.

Potential Impact:

- There is a potential for injuries and loss of life;
- There is potential for structural damage and interruption of services;
- There is potential for flooding of roads due to accumulation of heavy rain and runoff which could cause a delay in the response time of emergency services, so flooding could occur town wide; and
- There is a potential for damage/repair to the road surface.

Drought

Risk: Medium

Impact: Low

Future Probability: High

Droughts are a natural hazard that impacts the entire Town. A greater emphasis is placed on responding to these hazards rather than mitigating for them. Outreach and education on methods of dealing with drought

are important. The severity of droughts can be found by referring to the Palmer Drought Severity Index at: http://www.cpc.ncep.noaa.gov/products/monitoring_and_data/drought.shtml. Below is the Intensity Scale that is used with the Palmer Drought Severity Index to describe the observed impact with each category.

Category	Intensity	Impact
D0	Abnormally Dry	Crop growth is stunted; fire danger is elevated; lawns brown and gardens wilt; surface water levels are lower.
D1	Moderate Drought	Wildfires and brush fires increase; increased use of irrigation for crops; hay and grain yields are lower; honey production declines; trees and fish are stressed making them susceptible to disease; water conservation is recommended.
D2	Severe Drought	Water quality and quantity declines; irrigation ponds are dry and hay crops are impacted causing economic hardship to farms; crop yields and size of fruit are reduced; outdoor burning is limited; air quality is poor; impact on the health of trees and wildlife is observed.
D3	Extreme Drought	Crop loss, farms are stressed and are experiencing a financial impact; extremely reduced flow or ceased flow of water; river temperatures are warm; wildlife disease is increased; many wells are dry; new and deeper wells are needed.
D4	Exceptional Drought	NH has little or no experience in D4, so no impacts have been recorded at this level.

Past Events from 2014 to present:

- Summer of 2018 - drought conditions existed throughout New Hampshire; and
- Summer of 2020 - drought conditions existed throughout New Hampshire. Temple farms saw a reduced crop yield and impacts on some wells.

Potential Occurrences:

- Areas that are most impacted from droughts are farms and residents with wells.

Potential Impact:

- Drought will increase the risk of wildfire, especially in areas of high recreational use and as more timberland is set aside as non-harvested timberland.
- Some private wells may run dry; and
- Minimal impact to Town services.

Extreme Temperatures

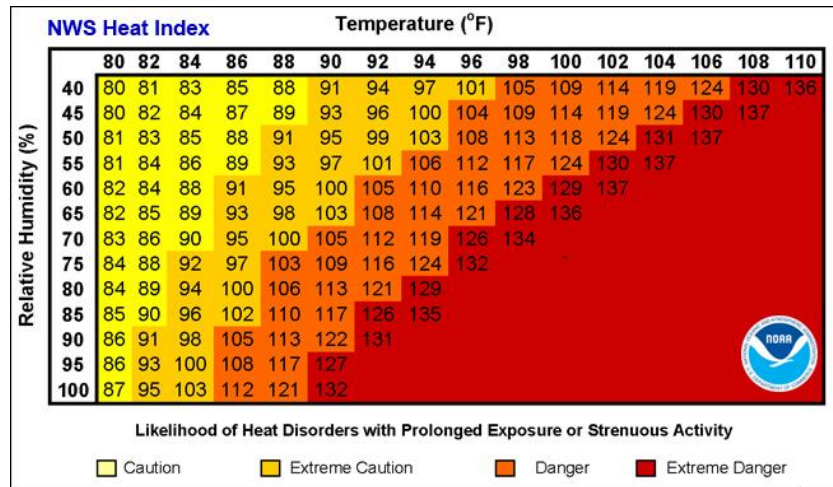
Risk: Low

Impact: Low

Future probability: High

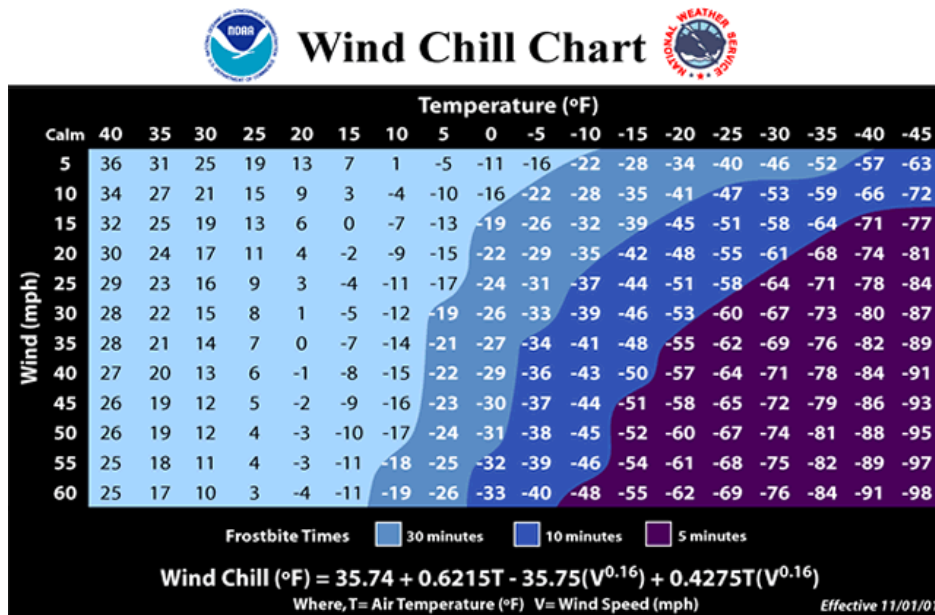
Extreme heat is characterized by abnormally high temperatures and/or longer than average time periods of high temperatures. Although it is an infrequent event, it usually occurs on an annual basis between late July and August and happens town wide. The severity of extreme heat can be dangerous to those residents with medical conditions and the elderly. It is important to have cooling areas and a good supply of water available. The NWS Heat Index is an indicator of the likeliness of heat disorders with prolonged exposure or strenuous activity, especially for those with a history of stroke and heart issues.

Extreme heat can add to the potential for wildfires and depletion of the water supply for firefighting. The Temple Hazard Mitigation Work Group did not recall any impact to the Town services due to this hazard. They also did not recall any death, injuries or structural damage as a result of extreme heat.



Source: The National Weather Service

Extreme Cold events occur during meteorological cold waves, also known as cold snaps that are caused by the southern transport of arctic airmasses into the Northeast. These events are most common in winter months and increase the likelihood of cold disorders in humans and animals that have prolonged exposure to low ambient temperatures. Cold disorders can include frostbite and hypothermia which can eventually lead to death. Extreme cold can also damage or kill crops and animals (wild, farm, or domesticated), potentially presenting a risk to the economy.



Source: The National Weather Service

Past Events:

- There have been no recent events that the Work Group considered to be extreme temperatures;

Potential Occurrences:

- Extreme temperatures are a town-wide event.

Potential Impact:

- Higher elevations are impacted more by extreme temperatures.
- Vulnerable populations are at greater risk.

Infectious Disease

Risk: High

Impact: Medium

Future probability: High

Infectious Disease - Epidemics may be caused by infectious diseases, which can be transmitted through food, water, the environment or person-to-person or animal-to-person; and noninfectious diseases, such as a chemical exposure, that causes increased rates of illness. Infectious diseases that may cause an epidemic can be broadly categorized into the following groups:

- Foodborne (Salmonellosis, E. Coli)
- Water (Cholera, Giardiasis)
- Vaccine Preventable (Measles, Mumps)
- Sexually Transmitted (HIV, Syphilis)
- Person-to-Person (TB, meningitis)
- Arthropod borne (Lyme, West Nile Virus)
- Zoonotic (Rabies, Psittacosis)
- Opportunistic fungal and fungal infections (Candidiasis)

Past Events: New Hampshire COVID-19 PANDEMIC (DR-4516-NH)

Incident Period: January 20, 2020 and continuing

Major Disaster Declaration declared on April 3, 2020

March 2020 to present - The Covid-19 Virus is a worldwide event that has caused many deaths and may result in lasting effects for those who have contracted the virus and survived. This pandemic is still occurring, so data will be forthcoming in the next update of this plan.

There are no specific occurrences of other types of infectious disease that have had an impact on the community.

Potential Occurrences:

- This is a town-wide event; therefore, no specific locations are listed.

Potential Impact: Those with weakened immune systems are at greater risk during these events.

- There is a potential for injury or death;
- There is a potential for injury or death to domestic animals and wildlife;
- There is a potential for risk to waterbodies and wildlife habitat;
- There is a potential for loss of crops and vegetation; and
- There is a potential for economic disparity.

Solar Storm and Space Weather

Risk: Low

Impact: Low

Future probability: High

Past Events:

- This is a hazard that is difficult to detect and the Work Group was not aware of any specific dates of occurrence.

Potential Occurrences:

- There is a concern for disruption in emergency services communications and businesses that rely on the internet.

Potential Impact:

- There is a potential for interruption of service.
- Solar storms and space weather can impact the connections for emergency services. It can also impact the wells and tanks which communicate by radio.

Tornado, Downburst, High Wind

Risk: Medium

Impact: Low

Future probability: High

Risk from tornados is considered to be high in Hillsborough County. The Enhanced Fujita Scale is used to determine the intensity of tornadoes. Most tornadoes are in the F0 to F2 Class. Building to modern wind standards provides significant property protection from these hazard events. New Hampshire is located within Zone 2 for Design Wind Speed for Community Shelters, which is 160 mph, and is also noted as being within a hurricane susceptible region.

Past Events (regional): The southwestern portion of the state is considered a special wind hazard area as demonstrated by the high proportion of tornadoes and severe wind events that are experienced in this region annually. On July 3, 1997 several tornadoes struck this section of the state. An F1 tornado caused severe tree loss in Swanzey, destroying a building and damaging the stables at the Cheshire Fairgrounds. Although outside the southwest region, the 2008 Barnstead Tornado caused significant damage and also involved loss of life. Therefore, this is a real hazard and the damage it could inflict should not to be taken lightly.

Locally, the Work Group noted that there were several high wind events that occurred between 2016-2017 that caused downed trees and minor power outages to individual homes, but no record of structural damage or injuries. The Work Group also noted that the frequency of severe wind events has increased over the past few years. Proactive measures to cut tree branches from roadways and near powerlines has reduced the impact to Town services and power losses.

Potential Occurrences:

- River corridors and hill tops are more susceptible; and
- This is a town-wide event; therefore, no specific locations are listed.

Potential Impact:

- There is a potential for structural damage;
- There is a potential for loss of life and property as well as disruption of utility service; and
- Such events cause small blocks of downed timber.

The Enhance Fajita Scale is used to rate the intensity of a tornado by examining the damage caused by the tornado once it has passed.

EF-0: Wind speed 65-85 mph.; frequency 53.5%. Minor damage.

EF-1: Wind speed 86-101 mph.; frequency 31.6%. Moderate damage.

EF-2: Wind speed 111-135 mph.; frequency 10.0%. Considerable damage.

EF-3: Wind speed 136-165 mph.; frequency 3.4%. Severe damage.

EF-4: Wind speed 166-200 mph.; frequency 0.7%. Extreme damage.

EF-5: Wind speed >200 mph.; frequency 0.1%. Total destruction.

Lightning

Risk: Medium

Impact: Low

Future probability: High

Lightning is a natural hazard that is unpredictable. It could strike anywhere during a storm and potentially start a forest fire, especially in periods of drought. High elevations and areas around waterbodies may be

AL	Cloud & Storm Development	Lightning Strikes/15 min
1	No thunderstorms.	-
2	Cumulus clouds are common but few reach the towering cumulus stage. A single thunderstorm must be confirmed in the observation area. Light rain will occasionally reach the ground. Lightning is very infrequent.	1-8
3	Towering cumulus covers less than two-tenths of the sky. Thunderstorms are few, but two to three must occur within the observation area. Light to moderate rain will reach the ground, and lightning is infrequent.	9-15
4	Towering cumulus covers two to three-tenths of the sky. Thunderstorms are scattered and more than 3 must occur within the observation area. Moderate rain is common & lightning is frequent.	16-25
5	Towering cumulus and thunderstorms are numerous. They cover more than three-tenths and occasionally obscure the sky. Rain is moderate to heavy and lightning is frequent and intense.	>25
6	Similar to LAL 3 except thunderstorms are dry.	9-15

more susceptible to lightning strike incidents. The table below categorizes lightning hazards according to the Lightning Activity Level (LAL) using cloud conditions and precipitation, and an estimate of lightning strikes per every 15 minutes.

Past Events:

- Several occurrences of lightning strikes have been recorded in Temple including four structural fires between 1993 and 2006; and
- The Fire Station/Town Office has been struck several times in prior years, but have not resulted in structural damage, injury or death.
- The cemetery has been struck by lightning in prior years causing damage to trees, but there was no impact to town services.
- There have not been any recent recordings of lightning impacting the Town.

Potential Occurrences:

- Lightning could occur anywhere, therefore, no specific locations are identified;
- Antennas and satellites, church steeples, cupolas, and other upward protruding architectural features are at greater risk for lightning strikes; and
- Hikers, fisherman and boaters are at risk during lightning events and should seek safe shelter.

Potential Impact:

- Forested areas with a high fuel load are a high risk for forest fire during lightning storms;

- Telephone and power outages often occur when transformers are hit by lightning or when a tree gets struck and falls onto the lines;
- There is a potential for damage to structures; and
- There is a potential for injury or death.

Severe Winter Weather

Risk: High

Impact: Medium

Future probability: High

Three types of winter events that cause concern are heavy snow, ice storms and extreme cold. Temple'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.

To help prepare for these events, the Sperry Piltz Ice Accumulation Index was created and can be viewed on the next page.

ICE DAMAGE INDEX	DAMAGE AND IMPACT DESCRIPTIONS
0	Minimal risk of damage to exposed utility systems; no alerts or advisories needed for crews, few outages.
1	Some isolated or localized utility interruptions are possible, typically lasting only a few hours. Roads and bridges may become slick and hazardous.
2	Scattered utility interruptions expected, typically lasting 12 to 24 hours. Roads and travel conditions may be extremely hazardous due to ice accumulation.
3	Numerous utility interruptions with some damage to main feeder lines and equipment expected. Tree limb damage is excessive. Outages lasting 1-5 days.
4	Prolonged and widespread utility interruptions with extensive damage to main distribution feeder lines and some high voltage transmission lines/structures. Outages lasting 5-10 days.
5	Catastrophic damage to entire exposed utility systems, including both distribution and transmission networks. Outages could last several weeks in some areas. Shelters needed.

Past Events from 2014 to present:

- January 26-29, 2015 - There were several successive snow storms with more than 10" each resulting in FEMA Disaster Declaration #DR-4209 to provide assistance to communities in Hillsborough, Rockingham, and Strafford Counties. There was no local impact to the Town other than snow removal.
- March 14-15, 2017 - Heavy snow and wind occurred throughout the state. There was no local impact.
- March 13-14, 2018 - Heavy snow storm but no local impact. FEMA Disaster Declaration # DR-4371 for Carroll, Strafford and Rockingham Counties.

Potential Occurrences:

- This is a town-wide event; therefore, no specific locations are listed.

Potential Impact:

- There is a potential for interruption of service;
- There is a potential of damage to structures; and
- There is a potential for injury or death;

Tropical Storm/Hurricane

Risk: High

Impact: Medium

Future probability: High

There is concern for tropical storms and hurricanes to impact Temple. Temple's inland location in southwestern New Hampshire reduces the risk of extreme high winds that are associated with hurricanes. A major hurricane can cause significant damage to a community. Most of the damage is caused by high water and high winds.

To help categorize the extent of these events the Saffir-Simpson Hurricane Wind Scale is used. It is a rating system from 1 to 5 based on a hurricane's sustained wind speed. This scale estimates potential property damage. Hurricanes reaching Category 3 and higher are considered major hurricanes because of their potential for significant loss of life and damage. Category 1 and 2 storms are still dangerous, and require preventative measures.

Category 1

Wind Speed: 74 - 95 mph, 64 - 82 kts

Very dangerous winds will produce some damage: Extensive damage to power lines and poles likely will result in power outages that could last a few to several days

Category 2

Wind Speed: 96 - 110 mph, 83 - 95 kts

Extremely dangerous winds will cause extensive damage: Near-total power loss is expected with outages that could last from several days to weeks.

Category 3

Wind Speed: 111 - 129 mph, 96 - 112 kts

Devastating damage will occur: Electricity and water will be unavailable for several days to weeks after the storm passes.

Category 4

Wind Speed: 130 - 156 mph, 113 - 136 kts

Catastrophic damage will occur: Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

Category 5

Wind Speed: 157 mph or higher, 137 kts or higher

Catastrophic damage will occur: Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

Source: <http://www.nhc.noaa.gov/aboutsshws.php>

Past Events from 2014 to present:

- The Town has experienced small blocks of downed timber and uprooting of trees onto structures in past years, however, there have been no recent occurrences of tropical storms or hurricanes in the past five years that have impacted Temple.

Potential Occurrences:

- River corridors and hill tops are more susceptible; and
- This is a town wide event; therefore, no specific locations are listed.

Potential Impact:

- There is a potential for injury or death;
- There is a potential for structural damage and disruption of utility service; and
- There is a potential for flooding of evacuation routes and other roads.

Wildfire

Risk: Medium

Impact: Medium

Future probability: Medium

The whole Town is at risk for wildfires. There is a substantial amount of debris on the ground from the Ice Storms of 1998 and 2008, wind shears, heavy winds, and logging practices. As timber harvesting is reduced, wood roads close and debris builds up on the ground, the potential for wildfire increases town-wide.

Past Events from 2014 to present:

- No significant fires greater than 1 acre have occurred, however small brush fires have occurred along roadsides likely due to improper disposal of cigarettes. No injuries or structural damage occurred during these incidents; and
- There have been several brush fires along local roads that have not been recorded.

Potential Occurrences:

- The potential for a wildfire is higher in the forested areas of Temple; and
- A lack of direct access to many remote areas within Town adds to the danger.

Potential Impact:

- There is a potential for the risk of life and property loss;
- There is a potential for loss of wildlife habitat and timber; and
- There is a potential for disruption of utility service.

Wildfires are classified according to size: Class A - one-fourth acre or less; Class B - greater than one-fourth acre, but less than 10 acres; Class C - 10 acres or more, but less than 100 acres; Class D - 100 acres or more, but less than 300 acres; Class E - 300 acres or more, but less than 1,000 acres; Class F - 1,000 acres or more, but less than 5,000 acres; Class G - 5,000 acres or more. The wildfires in Temple have mostly been small in nature and caused by lightning strikes (Class A or B).

Technological Hazards

Dam Failure

Risk: Medium

Impact: Medium

Future probability: Low

Past Events from 2014 to present:

- There have been no occurrences of dam failure or breach in the past 5 years.

Potential Occurrences: High Hazard Dams

- Souhegan River Site 26 Dam
- Souhegan River Site 12A South Dam

- Souhegan River Site 25B Dam
- Souhegan River Site 12A North Dike

Potential Impact:

- There is a potential for the risk of life and property loss;
- There is a potential for loss of wildlife habitat and timber; and
- There is a potential for disruption of utility service.

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

Detailed description of Hazard Classification terms:

Non-Menace structure means a dam that is not a menace because it is in a location and of a size that failure or misoperation of the dam would not result in probable loss of life or loss to property, provided the dam is: less than six feet in height if it has a storage capacity greater than 50 acre-feet; or less than 25 feet in height if it has a storage capacity of 15 to 50 acre-feet.

Low Hazard structure means a dam that has a low hazard potential because it is in a location and of a size that failure or misoperation of the dam would result in any of the following: low economic loss to structures or property; structural damage to a town or city road or private road accessing property; the release of liquid industrial, agricultural, or commercial wastes, septage, or contaminated sediment; and reversible environmental losses to environmentally-sensitive sites.

Significant Hazard structure means a dam that has a significant hazard potential because it is in a location and of a size that failure or misoperation of the dam would result in any of the following: major economic loss to structures or property; structural damage to a Class I or Class II; and major environmental losses.

High Hazard means a dam that has a high hazard potential because it is in a location and of a size that failure or misoperation of the dam would result in probable loss of human life as a result of water levels and velocities.

Dam #	Hazard Classification	Name	Height	Impoundment
D234001	NM	TEMPLE BROOK	10	2
D234004	L	LEIGHTON POND DAM	10	2
D234005	NM	FIRE POND	7	0.1
D234006	NM	FIRE POND	6	0.3
D234007	NM	FARM POND DAM	18	1.74
D234008	H	SOUHEGAN RIVER SITE 26 DAM	79	4
D234011	H	SOUHEGAN RIVER SITE 12A SOUTH	37.7	108
D234012	H	SOUHEGAN RIVER SITE 25B DAM	74	5.5
D234014	NM	WILDLIFE POND DAM	11	0.5
D234015	NM	WILDLIFE POND DAM	15	1
D234016	H	SOUHEGAN RIVER SITE 12A NORTH DIKE	38.7	108
D234017	NM	ROBBINS RECREATION POND	6	0.5
D234018	NM	TEMPLE MOUNTAIN SKI CORP DAM	12	0.75
D234019	NM	CROMWELL DAM	15	0.65
D234021	NM	GREENVILLE ALUM LAGOON	13	0.26

Source: NH Dam Bureau 2020

The Town is not aware of any studies or reports of these dams, however, a mitigation action has been included on page 41 to obtain a copy of the Emergency Action Plan for all of the high hazard dams.

Chapter 5: 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

The Critical Facilities List for the Town of Temple has been identified using the following four categories:

Category 1 - Emergency Response Facilities & Services:

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

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 Temple.

Category 3 - Facilities/Populations to Protect:

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

Category 4 - Potential Resources:

Contains facilities that provide potential resources for services or supplies.

TABLE 5: CRITICAL FACILITIES

Type of Critical Facility	Name	Address	Comments
Category 1 - Emergency Response Facilities & Services			
Emergency Operations Center	To be established	To be established	To be established
Highway Department	Highway Department	7 Main Street	
Helicopter Landing Sites	Temple Elementary School	830 NH 45	Unofficial helicopter landing site
	Temple Mountain State Reservation parking lot	NH 101	Unofficial helicopter landing site
	Other locations	Other locations	Other locations available as needed.
Hospitals	Monadnock Community Hospital	Peterborough, NH	10 Minutes away
	St. Joseph's Hospital	Nashua, NH	40 Minutes away
Water & Sewer Departments	Greenville Water Treatment Plant (in Temple)	800 NH 45	
Town Offices	Town Offices	423 NH 45	
Town Hall	Town Hall	9 Main Street	
Fire Station	Fire Station	423 NH 45	
Police Station	Police Station	38 Main St Greenville, NH	Combined Temple and Greenville

Category 1 - Emergency Response Facilities & Services - continued			
Type of Critical Facility	Name	Address	Comments
Primary Evacuation Routes	NH 45, NH 101 and General Miller Highway		
Water Sources	Town-wide	See Map	There are approx. 25 locations of dry hydrants, fire ponds and pressurized hydrants throughout Town.
Warming Station	Temple Elementary School	830 NH RT 45	Available if needed.
Category 2 - Non-Emergency Response Facilities			
Water Infrastructure	Center of Town		Public water
Secondary Evacuation Routes	Hadley Highway, West Rd, Webster Hwy, North Rd, Colburn Rd, other roads that lead out of Town		
Category 3 - Facilities/Populations to Protect			
Special Needs Populations	Lukas Community for Developmentally Disabled	37 Memorial Highway	4 Structures; 40 residents total including care givers
	Four Winds Foundation	32 Colburn Road	3 residents
	Tobias Foundation	75 Birch Hill Road	2 Structures; 6 residents including caregivers
Apartment Building	Temple Cabins	Cabins Road	
	Viocal LLC	16 Spofford Gap Lane	
	Temple Forest Monastery	32 Derbyshire Lane	
	Birchwood Inn	340 NH-RT 45	
	Apartments	23 Hadley Highway	
Hazmat Storage	Wheeland's Auto	18 NH RT 45	automotive
	DRG Autobody Repair and Services	14 Leighton Lane	automotive
	Integrity Auto Service	120 Mansfield Road	automotive
	West Road junkyard	West Road	
	Mazza Junkyard and Auto Repair	3 Walter Mazza Drive	automotive
Library	Temple Public Library	5 Main Street	

Type of Critical Facility	Name	Address	Comments
Category 3 - Facilities/Populations to Protect			
Recreation Areas/Parks	Temple Glass Works	West Road	
	Temple Ball Field	General Miller Highway 42°48'54.4"N 71°50'09.7"W 42.815118, -71.836021	120 persons/week spring - fall
	Hildebrand Tennis, Basketball Courts, Playground	General Miller Highway 42°48'53.5"N 71°50'08.1"W 42.814850, -71.835581	25-30 persons/week spring - fall
	Temple Common	Village Center 42°49'10.4"N 71°51'03.3"W 42.819564, -71.850902	concerts, festivals
	Chris A. Weston Memorial Conservation Land	East of intersection of NH RT 45 and Peterborough Road	
	Heals Tract	East Road	
	Miller State Park	NH 101	nature hikes
	Wapack Trail	Runs along western side of Town	nature hikes
	Temple Town Forest	North Road at Lyndeborough Townline	nature hikes
	Temple Mountain State Reservation	NH 101 at Peterborough Townline	nature hikes
	White (Kendall) Ledges	Northwest of Kendall Road	nature hikes
		Temple Elementary School playground	830 NH 45
Schools	Temple Elementary School	830 NH 45	
Churches	Temple Congregational Church	17 Main Street	
Historic Buildings/ Sites	Temple Common/Village Center	Main Street	
Post Office	Post Office/Village Store	19 Main Street	
Employment Centers	RE Granite	NH 101 east of Powers Road	6 employees
	Viocal, LLC.	16 Spofford Gap	3 - 4 employees
	Wheeland's Auto	18 NH 45	
Category 4 - Potential Resources			
Food & Water	Village Store	19 Main Street	Basic supplies
Emergency Supplies and Services (for emergency responders)	Temple Fire Station	423 NH 45	Limited supplies
	Monadnock Community Hospital	Peterborough	hospital
	Cheshire Medical Center	Keene	hospital
	St. Joseph's Hospital	Nashua	hospital
	Southern NH Medical Center	Nashua	hospital

Type of Critical Facility	Name	Address	Comments
Category 4 - Potential Resources - Continued			
Gas/Diesel	Highway Garage	7 Main Street	Not public
	Village Store	19 Main Street	public
Miscellaneous Resources	Emergency Broadcast and Television: WMUR		
	Transportation: Local contractors, National Guard		
	Beds, Cots, Blankets: Red Cross, National Guard		

Chapter 6: Existing Mitigation Strategies

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

Effectiveness Categories

High - An existing protection that often exceeds expectations for the purpose of mitigating hazards;

Moderate - Meets the general expectations;

Low - Needs improvements;

Unknown - New or untested strategy with lack of information to determine the effectiveness.

Existing Mitigation Strategies and Proposed Improvements

Existing Protection	Area Covered	Responsible Local Agent	Effectiveness	Proposed Improvements/Comments
<u>School Evacuation Plan</u> - Designated plan to evacuate the school in the case of an emergency.	Elementary School	School Board	High	The police and fire departments should continue to get together with the school to test and update the plan.
<u>Building Codes</u> - The Town has adopted the provisions of the NH Life Safety Code and the NH State Building Code.	Town-wide	Building Inspector and Selectmen	High	Temple uses the NH State Building Code. The Town also has adopted residential building codes.
<u>Town Radio System</u> - Police, Fire, Emergency Management, and Highway Departments have radios and/or cell phones.	Town-wide	EMD, Police, Fire, Highway Depts.	High	While there are some dead spots in Temple, generally cell phones work where radios do not, and vice versa. The fire and police departments have new digital radios, both mobile and portable, to enable cross-dept. communications. The highway dept. uses cell phones for communication. The coverage is currently being evaluated.
<u>Local Road Design Standards</u> Standards set by the Town to ensure a constant construction benchmark.	Town-wide	Planning Board & Highway Dept.	High	Standards should be updated as technology and methods change.
<u>Local Bridge Maintenance</u> - All local bridges in the Town are inspected every other year by the NHDOT.	Town-wide	Highway Dept.	Moderate	There is an on-going need for funding repair and replacement projects.
<u>Local Road Maintenance</u> - The Town allocates annual funds to various roadway projects such as resurfacing, culvert replacement and repair.	Town-wide	Highway Dep.	High	The Town is participating in the Road Surface Management Program to have a 10-year plan.

Existing Protection	Area Covered	Responsible Local Agent	Effective-ness	Proposed Improvements/Comments
<u>Town Master Plan</u> - 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.	Town-wide	Planning Board	Moderate	Some chapters were updated in 2018.
<u>Mutual Aid</u> - Provides assistance to all aspects of the Town's emergency management services. Southwest Mutual Aid Response Team (SMART) provides services to the Town.	Town-wide	Emergency Management Director, Fire Chief, Road Agent, Police Chief.	High	Temple has mutual aid agreements with all abutting towns. Temple also has a mutual agreement with the State Highway Department.
<u>Fire Pond/ Dry Hydrant Maintenance</u> - Every year, systems are flushed and cleared.	Town-wide	Fire Department	High	Look for funding sources to make repairs or to replace fire ponds and dry hydrants.
<u>Hazmat Spill Program</u> - Personnel in the Fire Dept received regular training for handling hazardous materials spills. Southwest Mutual Aid Response Team (SMART) provides services to the Town when needed.	Town-wide	Fire Department	High	On-going training done at the Fire Department. Most firefighters are certified through the National Fire Academy.
<u>Town Safety Awareness Program</u> - The Fire Dept, Police and Ambulance visit the school, and children visit the station to learn about fire prevention and health safety.	Town-wide	Police and Fire Department Ambulance	High	Outreach and education is important to the success of the program.
<u>Fire Inspecting</u> - Routinely inspects handicap homes and foster homes. Single family residential homes are inspected on a per-request basis.	Town-wide	Fire Chief	High	The school gets yearly inspections.
<u>Building Inspector</u> - Inspects new and remodeled buildings.	Town-wide	Building Inspector	Moderate	Inspects new and remodeled buildings.
<u>Health Officer</u> - Routinely inspects all new and failed septic systems throughout the Town.	Town-wide	Health Officer	High	Continuing to inspect failed systems given the importance to Temple's aquifers and waterways despite NH DES downplaying importance.

Existing Protection	Area Covered	Responsible Local Agent	Effectiveness	Proposed Improvements/Comments
<u>Emergency Operations Plan</u> Adopted in 2015, this plan established protocol for all Town departments in the event of a hazardous event.	Town-wide	Fire Chief	High	An update is needed. Begin discussion with the NH HSEM Field Representative to seek funding for an update in 2021.
<u>Groundwater Protection Ordinance</u> - An ordinance intended to protect the drinking water resources.	Town-wide	Planning Board	Unknown	Most residents understand the ordinance and are generally compliant.

Status of Previous Mitigation Strategies/Actions

The Hazard Mitigation Work Group reviewed each Mitigation Action Item from the previous plan to determine the status of the proposed actions. A status of **completed, deferred, or deleted** is recorded in the table below.

Mitigation Action	Status
Continue to implement the Bridge & Culvert Maintenance Program.	Completed. Continue into new action plan.
Update the Town's website to include emergency information and procedures, and ways to reduce the effects of potential hazards.	Completed. Continue into new action plan.
Install a fire danger/warning sign to inform the public of current conditions.	Being implemented. Add to Action Plan.
Install grounding equipment on public structures.	Being evaluated. Add to Action Plan.
Provide outreach material or hold informational session about ways to mitigate the effects of severe weather events of all hazards.	Completed. Continue into new action plan.
Perform radon tests in public buildings (air and water).	Defer
To protect the water supply, provide information (speaker presentation or written material) regarding proper disposal and storage of household hazardous materials & medicines, and well testing for radon and arsenic.	Defer
Incorporate this Plan into the Master Plan as an appendix.	Delete
Provide pamphlets at trail heads regarding fire safety during hiking.	Defer
Continue to implement and review the Winter Storms Operations Plan.	Completed. Continue into new action plan.
Continue annual safety inspections of all Town buildings.	Completed. Continue into new action plan.
Create vulnerable populations list and update annually.	Defer
Implement a fire ponds/dry hydrant management plan in order to provide increased access to and upkeep of water sources for fire protection.	Not a written plan, but an on-going process.
Develop a Town Warning System (i.e. Reverse 911, Code Red, Wireless Emergency Alerts, etc.).	Being implemented. Add to Action Plan.
Update the Emergency Operations Plan.	Defer. Updating in 2021-22.
Evaluate the written policy for Fire Department protocol for hazmat spills.	Complete. Temple has adopted the SMART protocols.
Review current and future needs for emergency backup power.	Complete
Continue to update the capital improvement plan and zoning regulations to provide protection for new and existing structures from flooding and other relevant hazards.	Completed and on-going.
Implement the hazard tree program and revise when needed.	Completed. Continue into new action plan.
Consider requesting residents to participate in voluntary water conservation during periods of drought.	Delete
Consider a location for a cooling center during periods of extreme heat.	Delete

Chapter 7: Existing and Potential Mitigation Strategies, Identifying Gaps in Coverage

The following programs and activities are aimed at mitigating the effects of the identified potential hazards. As more information becomes available for other hazards that may have the potential to impact the Town of Temple, additional projects will be added to the Hazard Mitigation Plan. The identified projects are not only meant to address reducing the effects of hazards on existing buildings and infrastructure, but also to address reducing the effects of hazards on new buildings and infrastructure.

As the population continues to grow, new development has been outside of the flood prone areas which has helped to protect the residents from any increase in vulnerability of hazards. As the intensity of storms continues to increase though, it is important to review the existing programs and strategies, and improve upon areas that are needed.

In addition to the programs and activities that Temple is currently undertaking to protect its residents and property from hazardous events, a number of additional strategies were identified by the Temple Hazard Mitigation Work Group for consideration. The process of compiling a comprehensive list of all mitigation strategies currently in place helped the Work Group identify gaps in the existing coverage and discuss improvements which could be made.

Strategies were identified for each hazard type that was ranked as a medium or high-risk potential in the Risk Assessment (Chapter 3) using the following categories:

- Prevention (programs and policies)
- Property Protection
- Emergency Services
- Public Information

Hazard Type	Prevention/Programs and Policies	Property Protection	Emergency Services	Public Information
Flooding	Consider the need/interest in becoming a member of the NFIP.	Continue to update the capital improvement plan and zoning regulations to provide protection for new and existing structures from flooding and other relevant hazards where necessary.		Conduct a workshop for providing information on ways to reduce the impact of hazards and to make emergency preparedness kits.
	Continue implementation to upgrade culverts based on data from the Temple Road/Stream Crossing (2013) done by SWRPC and others.			
Drought	Establish a Water Conservation Plan.			Provide information to residents on water conservation/drought resistant landscaping.
High Wind Events (Tornados, Downbursts)		Require tie-downs for structures (such as sheds).		Provide information for residents to understand ways to mitigation potential damage during a high wind event.

Hazard Type	Prevention	Property Protection	Emergency Services	Public Information
Infectious Disease	Develop a protocol for determining closures and measures needed to protect the public.		Equip the EOC and shelters with sufficient materials to handle a wide-spread infectious disease event.	Conduct a workshop for providing information on ways to reduce the impact of hazards and to make emergency preparedness kits.
Lightning		Install grounding equipment on public & historic buildings.		Provide outreach material on safety during lightning and storm events.
Severe Winter Weather	Update the Winter Storms Operations Plan as needed.	Coordinate with Eversource to trim tree branches near power lines.	Review current and future needs for emergency backup power.	Provide information to residents about the proper use of generators and the importance of maintaining the heating system to prevent carbon monoxide poisoning and fires.
		Trim tree branches near critical facilities, Town structures, and roadways.	Update the vulnerable populations list annually.	
Hurricanes/ Tropical Storms		Consider requirement for new construction to withstand severe wind speeds.	Update the vulnerable populations list annually.	Provide information for residents to understand ways to mitigate potential damage during a hurricane.
Wild Fires	Install fire danger/risk level sign.	Continue to maintain operability of fire ponds & dry hydrants.		Continue Fire Prevention Week with information at the school. Consider a public information event.
	Add signage at trailheads.			
Extreme Temperatures	Create and maintain a list of elderly and special needs populations.		Determine a location for a designated cooling center. Consider approaching the Congregational Church of Temple as a potential option.	Provide information to residents about extreme heat.
Dam Failure		Obtain a copy of the Emergency Action Plans for the High Hazard Dams		Provide information to residents of evacuation routes.
Known & Emerging Contaminants	Assure junkyards are in compliance with Town ordinances and State law.	Identify and monitor junk yards for potential groundwater contamination.		
Hazardous Materials			Maintain the agreement with Souhegan Mutual Aid HazMat team. Attend meetings as appropriate.	Provide outreach materials and notification of disposal opportunities.
Long-term Utility Outage			Equip the EOC and shelters with sufficient materials to handle a long-term utility outage.	Provide information to residents about the proper use of generators and the importance of maintaining the heating system to prevent carbon monoxide poisoning and fires.

Hazard Type	Prevention	Property Protection	Emergency Services	Public Information
Transport Accident			Maintain the agreement with Souhegan Mutual Aid HazMat team. Attend meetings as appropriate.	Coordinate with surrounding towns to set up detour signage in the event of road closures.
All Hazards	Create and maintain a list of special needs populations in Town.		Create an evacuation policy for residents and test it (for Hazmat spill or fire). Establish and equip location for the EOC.	Provide public informational awareness program.

In addition to the mitigation strategies proposed generally for each hazard type as indicated above, the Work Group brainstormed actions for specific potential hazard areas identified in Chapter 4. In these cases, the Work Group felt that the risk to the location was so great, mitigation actions could be geared directly to mitigating hazards at that location.

Prioritization of Proposed Mitigation Strategies - STAPLEE Method

Using a similar methodology as the previous plan, new actions were identified based on the updated risk assessment and capability assessment. The new actions were prioritized in combination with the actions carried forward from the previous plan.

The goal of each strategy identified in the previous table is reduction or prevention of damage from a hazard event. In order to determine their effectiveness in accomplishing this goal, a set of criteria was applied to each strategy. The STAPLEE method analyzes the Social, Technical, Administrative, Political, Legal, Economic, and Environmental aspects of a project and is commonly used by public administration officials and planners for making planning decisions. The following questions were asked about the proposed mitigation strategies and discussed in the table:

- **Social:** Is the proposed strategy socially acceptable to the community? Are there equity issues involved that would mean that one segment of the community is treated unfairly?
- **Technical:** Will the proposed strategy work? Will it create more problems than it solves?
- **Administrative:** Can the community implement the strategy? Is there someone to coordinate and lead the effort?
- **Political:** Is the strategy politically acceptable? Is there public support both to implement and to maintain the project?
- **Legal:** Is the community authorized to implement the proposed strategy? Is there a clear legal basis or precedent for this activity?
- **Economic:** What are the costs and benefits of this strategy? Does the cost seem reasonable for the size of the problem and the likely benefits?

- **Environmental:** How will the strategy impact the environment? Will the strategy need environmental regulatory approvals?

Each mitigation strategy was evaluated and assigned a score (Good = 3, Average = 2, Poor = 1) based on the above criteria. An evaluation chart with total scores for each strategy can be found in the table below. Each strategy was evaluated and prioritized according to the final score. The highest scoring strategies were determined to be of most importance, economically, socially, environmentally, and politically.

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

STAPLEE RANKING MATRIX

Mitigation Strategy	Is it Socially acceptable?	Is it Technically feasible & potentially successful?	Is it Administratively workable?	Is it Politically acceptable?	Is there Legal authority to implement?	Is it Economically beneficial?	Is it Environ-mentally beneficial?	Total Score
Prioritize and implement repairs or upgrades to bridges and culverts.	3	3	3	3	3	3	3	21
Set up CODE RED and a link to sign up from the Town’s website.	3	3	3	3	3	3	3	21
Establish an Emergency Operations Center.	3	3	3	3	3	3	3	21
Update the Town’s website to include emergency information and procedures, and ways to reduce the impact of potential hazards. Consider adding links to the NH HSEM and/or FEMA’s websites.	3	3	3	3	3	3	3	21
Establish an emergency shelter. Seek to add an emergency generator.	3	3	3	3	3	3	3	21
Provide outreach material or hold informational session about ways to mitigate the impact of severe hazard events.	3	3	3	3	3	3	3	21
Work with the Public Health Network to coordinate response and mitigation to hazardous scenarios such as an infectious disease outbreak.	3	3	3	3	3	3	3	21
Maintain the agreement with Nashua Mutual Aid HazMat team. Attend meetings as appropriate.	3	3	3	3	3	3	3	21
Provide signage at trail heads regarding fire safety during hiking.	3	3	3	3	3	3	3	21

Mitigation Strategy	Is it Socially acceptable?	Is it Technically feasible & potentially successful?	Is it Administratively workable?	Is it Politically acceptable?	Is there Legal authority to implement?	Is it Economically beneficial?	Is it Environ-mentally beneficial?	Total Score
Review the Winter Storms Operations Plan.	3	3	3	3	3	3	3	21
Continue to implement fire ponds/dry hydrant management in order to provide increased access to, and upkeep of, water sources for fire protection.	3	3	3	3	3	3	3	21
Update the Emergency Operations Plan in 2021.	3	3	3	3	3	3	3	21
Update the capital improvement plan and zoning regulations to provide protection for new and existing structures from flooding and other relevant hazards.	3	3	3	3	3	3	3	21
Install grounding equipment on public structures.	3	3	3	3	3	3	3	21
Perform radon tests in public buildings (air and water).	3	3	3	3	3	3	3	21
To protect the water supply, provide information (speaker presentation or written material) regarding proper disposal and storage of household hazardous materials & medicines, and well testing for radon and arsenic.	3	3	3	3	3	3	3	21
Install a fire danger/warning sign to inform the public of current conditions.	3	3	3	3	3	3	3	21
Continue annual safety inspections of all Town buildings.	3	3	3	3	3	3	3	21
Obtain a copy of the Emergency Action Plans for the High Hazard Dams.	3	3	3	3	3	3	3	21
Consider the need/interest in becoming a member of the NFIP.	3	3	3	3	3	3	3	21
Assess and remove hazardous trees.	2	3	3	2	3	3	3	19
Create a vulnerable populations list and update annually.	1	3	1	1	3	3	3	15

Chapter 8: Prioritized Implementation Schedule and Action Plan

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?

As additional information becomes available regarding project leadership, timeline, funding sources, and/or cost estimates, the plan will be reviewed and amended accordingly.

Once the plan is formally approved by FEMA, the Town will begin working on the actions listed below with an estimated completion date as noted.

The Work Group created a prioritized schedule for implementation of the plan. The following terms are used to provide a general timeframe to complete the actions: Short-term: 1 - 2 years; Mid-term: 3 - 4 years; Long-term: 4 - 5 years. Some actions do not have a completion date and are considered to be ongoing actions that will continue through the duration of the plan.

ACTION/IMPLEMENTATION PLAN

Mitigation Action	Who (Leadership)	When (Deadline)	How (Estimated Cost and Funding Source)
Prioritize and implement repairs or upgrades to bridges and culverts.	Road Agent	Short-term	Town budget/grants
Set up CODE RED and a link to sign up from the Town's website.	EMD	Short-term	State funding (E911)
Establish an Emergency Operations Center.	EMD	Short-term	Town budget/grants
Update the Town's website to include emergency information and procedures, and ways to reduce the impact of potential hazards. Consider adding links to the NH HSEM and/or FEMA's websites.	EMD	Short-term	Town budget Under \$100
Establish an emergency shelter. Seek to add an emergency generator.	EMD	Short-term	Town budget/grants.
Provide outreach material or hold informational session about ways to mitigate the impact of severe hazard events.	Fire Chief, Police Chief, Road Agent	Short-term	Town budget/grants. Under \$1,000

Mitigation Action	Who (Leadership)	When (Deadline)	How (Estimated Cost and Funding Source)
Work with the Public Health Network to coordinate response and mitigation to hazardous scenarios such as an infectious disease outbreak.	EMD, Fire Chief, Health Officer	Short-term	Town budget/grants. Under \$500
Maintain the agreement with Nashua Mutual Aid HazMat team. Attend meetings as appropriate.	Fire Chief	Short-term	Town budget
Provide signage at trail heads regarding fire safety during hiking.	EMD	Short-term	Town budget/grants
Review the Winter Storms Operations Plan.	Road Agent	Short-term	Town budget
Continue to implement fire ponds/dry hydrant management in order to provide increased access to, and upkeep of, water sources for fire protection.	Fire Chief	Short-term	Town budget/grants. Under \$500
Update the Emergency Operations Plan in 2021.	Fire Chief	Short-term	NH HSEM Grants
Update the capital improvement plan and zoning regulations to provide protection for new and existing structures from flooding and other relevant hazards.	CIP Committee and Planning Board	Short-term	Town budget Under \$500
Install grounding equipment on public structures.	Board of Selectmen	Mid-term	Town budget.
Perform radon tests in public buildings (air and water).	Board of Selectmen	Mid-term	Town budget.
To protect the water supply, provide information (speaker presentation or written material) on proper disposal and storage of household hazardous materials & medicines, and well testing for radon and arsenic.	Board of Selectmen	Short-term	Town budget.
Install a fire danger/warning sign to inform the public of current conditions.	Fire Chief	Short-term	Town budget/grants.
Continue annual safety inspections of all Town buildings.	Fire Chief	Short-term	Town budget.
Obtain a copy of the Emergency Action Plans for the High Hazard Dams.	Emergency Management Director	Mid-Term	Town budget. Under \$100
Consider the need/interest in becoming a member of the NFIP.	Emergency Management Director	Mid-Term	Town budget.
Assess and remove hazardous trees.	Road Agent	Long-term	Town budget. Under \$5,000
Create a vulnerable populations list and update annually.	Board of Selectmen	Long-term	Town budget. Under \$100

Chapter 9: Adoption, Implementation, Monitoring & Update

Adoption

The Temple Board of Selectmen adopted the Temple Hazard Mitigation Plan on (add date of adoption). 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 Plan” in Chapter 8 and in the “Monitoring & Updates” sub-section contained in this Chapter. All other sections of this Plan are supporting documentation for information purposes only and are not included as the statement of policy.

A copy of the public hearing notice for the Board of Selectmen meeting at which the plan was adopted is included in **Appendix F**. The plan was available to the public via a hard copy at the Town offices prior to the Selectmen meeting. Any comments were considered and addressed prior to adoption of the plan.

Implementation of the Plan through Existing Programs

In addition to work by the Hazard Mitigation Work Group and Town departments, several other mechanisms exist which will ensure that the Temple Hazard Mitigation Plan receives the attention it requires for satisfactory use. Ordinances were approved and projects were put into the Capital Improvement Program to implement some actions that will reduce the risk of loss of life and property due to future hazards. A study was also conducted to assess the road-stream crossings in Temple. These are listed in greater detail below:

Master Plan

Implementation of the Master Plan has been ongoing since its most recent adoption in 2003. The Planning Board is considering a revision of sections of the Master Plan. Where appropriate, recommendations from the Temple Hazard Mitigation Plan will be inserted into future updates of the Master Plan. The Local Hazard Mitigation Work Group will oversee the process to begin working with the Planning Board to recommend that the Temple Hazard Mitigation Plan is added to the appendix of the Master Plan.

Zoning Ordinance and Regulations

The Planning Board adopted a Steep Slopes regulation for driveways as a means of stormwater management. In addition, the Town adopted a Wetlands Protection ordinance and an Aquifer Protection ordinance in 2013.

Capital Improvement Program

The Town updates the Capital Improvement Plan (CIP) annually. The 2021 through 2030 plan is being developed at the time of this writing. This Hazard Mitigation Plan will be considered as the CIP is updated.

Temple Road/Stream Crossing Study

Southwest Region Planning Commission performed a Road/Stream Crossing Study for the Town of Temple with funding from the NH Department of Transportation (NHDOT). This study was conducted in an effort to plan for and prevent future flooding. The study assessed the road-stream crossings for their ability to withstand the impacts of increased or irregular flow conditions. This project was initiated in response to the recent history of severe storm events and the damage that has been done to transportation infrastructure in the Region.

Continued Public Involvement

On behalf of the Hazard Mitigation Work Group, 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 may be utilized for public involvement include:

- Provide invitations to Budget Committee members;
- Provide invitations to Town department heads;
- Post notices of meetings and flyers at the Town offices, store, Town hall, and Town website,

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 Temple Hazard Mitigation Plan. These outreach activities will be undertaken during the Plan's annual review and during any Hazard Mitigation Work Group meetings the Board of Selectmen calls to order. For all meetings regarding the Hazard Mitigation Plan, the public will be noticed and the meetings will be open to the public.

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 8), the Town Hazard Mitigation Work Group will revisit the Temple 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 are 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 Temple 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.

Monitoring of the plan shall include periodic reports, meetings, site visits, and phone calls. The projects identified in this plan will be evaluated to make sure they are still applicable and practical. When the plan is evaluated, any changes should be incorporated into the plan in the annual update.

Appendix F is meant to assist in the monitoring and evaluation of the plan on an ongoing basis.

The Town of Temple, 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.

This plan received FEMA final approval on **(add FEMA date)**

(Insert signed adoption certificate)

Appendices

Appendix A: Hazard Descriptions

Natural Hazards

Avalanche: An 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 snow, ice, water, soil, rocks, and trees. An avalanche can be comparable to a landslide; only with snow instead of earth. Natural and human-caused snow avalanches most often result from structural weaknesses of mountainside and unstable snow and ice formations. Heavy snowfall followed by high winds often create areas of unstable snow accumulations that can be set in motion by human activities, such as hiking, ice climbing, skiing, and snowboarding.

Inland Flooding: Inland flooding is generally defined as a high flow, overflow, or inundation by water, which causes or threatens damage. Flooding results from the overflow of rivers, their tributaries and streams primarily from high precipitation events. Flash flooding is defined as a flow with a rapid rise in water level and extreme velocities in a river or stream, beginning within six hours of the causative event (e.g., intense rainfall, dam failure, ice jam). Ongoing flooding can intensify to flash flooding in cases where intense rainfall results in a rapid surge of rising flood waters. Because of New Hampshire's steep terrain in the headwaters of watersheds, particularly outside of the coastal plain, flash floods also lead to river bank and bed erosion. Extreme precipitation events in recent years, such as Tropical Storm Irene, have led to buildings on the edges of streambanks becoming at risk to river erosion, or culvert failures. The National Flood Insurance Program (NFIP) has a more specific definition of flooding, which can also be considered and used when looking at floodplain and floodplain mapping.

A flood is defined by the NFIP as:

- A general and temporary condition of partial or complete inundation of 2 or more acres of normally dry land area or of 2 or more properties (at least 1 of which is the policyholder's property) from:
 - o Overflow of inland or tidal waters
 - o Unusual and rapid accumulation or runoff of surface waters from any source
 - o Mudflow
- Collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels that result in a flood as defined above.

Areas that have been identified as part of the 1% annual chance floodplain in support of the NFIP simply represent those areas for which mapping has been performed. With sufficient rainfall, snowmelt, or through the result of ice jam formation or in the event of dam failure, all areas that are floodplain adjacent to rivers and streams are prone to flood inundation. Developed areas are susceptible to poor drainage flooding during episodes of heavy rain that falls within a short duration. Such flooding is the result of the concentration of impervious surfaces where the amount of concrete, asphalt, rooftops, and other minimally or non-porous materials concentrates flow to stormwater systems that, during heavy rain, cannot always handle the input, causing flooding conditions on streets and parking lots.

Drought: A drought is basically the absence of water in an area that occurs slowly due to below-average precipitation over an extended period, resulting in low stream flows, low surface water, and low groundwater levels. Mitigation for drought is difficult, however, preparedness can help to reduce the impacts that a drought can have. During a drought, water stored in aquifers and surface reservoirs becomes increasingly important to offset the lack of rain, especially in areas of high agricultural production. Conservation of water usage prior to, and during a drought can help reduce the potential water shortages that often occur during a drought.

Earthquakes: The United States Geological Survey (USGS) defines an earthquake as a sudden slip on a fault. Tectonic plates are always slowly moving, but can get stuck on edges due to friction. When the stress on the plates overcomes the friction, there is an earthquake that releases an energy wave that travels through the earth's crust. The earthquake hazard is anything associated with an earthquake that may affect the normal activities of people; such as, surface faulting, ground shaking, landslides, tsunamis, structural

damage, etc. There are two primary ways in which earthquakes are measured, magnitude (the size of the earthquake) and intensity (measure of the shaking and damage, which can vary from location to location). Magnitude is measured in the Moment Magnitude scale (based off the obsolete Richter scale). The Modified Mercalli Intensity (MMI) classifies the perceived feeling of the earthquake.

Extreme Temperatures: Extreme temperatures are a period of prolonged and/or excessive hot or cold that presents a danger to human health and life.

Extreme heat is characterized by abnormally high temperatures and/or longer than average time periods of high temperatures. These event conditions are typically infrequent. When they do occur, however, they are usually in late July and August. The severity of extreme heat can be dangerous to those residents with medical conditions and the older population. It is important to have cooling areas and a good supply of water available. Extreme heat can add to the potential for wildfires and depletion of the water supply for firefighting. Extreme heat can also damage or kill crops and animals (wild, farm, or domesticated), potentially presenting a risk to the economy.

The National Weather Service (NWS) provides the following definitions (northeast ranges):

- **Heat Advisory:** Two or more consecutive hours of Heat Index values of 95-99 degrees Fahrenheit for two or more days OR any duration of Heat Index values of 100-104 degrees Fahrenheit. A Heat Advisory is issued within 12 hours of the onset of extremely dangerous heat conditions.
- **Excessive Heat Warning:** Two or more hours with Heat Index values of 105 degrees Fahrenheit or greater. An Excessive Heat Warning is issued within 12 hours of the onset of extremely dangerous heat conditions.
- **Excessive Heat Watches:** Heat watches are issued when conditions are favorable for an excessive heat event in the next 24 to 72 hours. A Watch is used when the risk of a heat wave has increased but its occurrence and timing is still uncertain.
- **Excessive Heat Outlooks:** Issued when the potential exists for an excessive heat event in the next 3-7 days. An Outlook provides information to those who need considerable lead-time to prepare for the event.

Extreme Cold events occur during meteorological cold waves, also known as cold snaps that are caused by the southern transport of arctic air masses into the Northeast. These events are most common in winter months and increase the likelihood of cold disorders in humans and animals that have prolonged exposure to low ambient temperatures. Cold disorders can include frostbite and hypothermia which can eventually lead to death. Extreme cold can also damage or kill crops and animals (wild, farm, or domesticated), potentially presenting a risk to the economy.

The National Weather Service provides the following definitions (northeast ranges):

- **Wind Chill Watch:** NWS issues a wind chill watch when dangerously cold wind chill values are possible. As with a warning, adjust your plans to avoid being outside during the coldest parts of the day. Make sure your car has at least a half a tank of gas, and update your winter survival kit.
- **Wind Chill Advisory:** NWS issues a wind chill advisory when seasonably cold wind chill values but not extremely cold values are expected or occurring. Be sure you and your loved ones' dress appropriately and cover exposed skin when venturing outdoors. A Wind Chill Advisory is issued for New Hampshire if wind chill values are expected to be -20°F to -29°F and winds are greater than 5 mph.
- **Wind Chill Warning:** NWS issues a wind chill warning when dangerously cold wind chill values are expected or occurring. A Wind Chill Advisory is issued for New Hampshire if wind chill values are expected to be -30°F and winds are greater than 5 mph.
- **Freeze Watch:** NWS issues a freeze watch when there is a potential for significant, widespread freezing temperatures within the next 24-36 hours. A freeze watch is issued in the autumn until the end of the growing season and in the spring at the start of the growing season.

- **Frost Advisory:** A frost advisory means areas of frost are expected or occurring, posing a threat to sensitive vegetation.
- **Freeze Warning:** When temperatures are forecasted to go below 32°F for a long period of time, NWS issues a freeze warning. This temperature threshold kills some types of commercial crops and residential plants.
- **Hard Freeze Warning:** NWS issues a hard freeze warning when temperatures are expected to drop below 28°F for an extended period of time, killing most types of commercial crops and residential plants.

High Wind Events: The State of New Hampshire experiences two types of high wind events that may result from other severe storms and may occur at any time of the year:

Tornadoes: A tornado is a narrow, violently rotating column of air that extends from the base of a thunderstorm to the ground. Because wind is invisible, it is hard to see a tornado unless it forms a condensation funnel made up of water droplets, dust and debris. Tornadoes are the most violent of all atmospheric storms.

Straight-line winds: This term describes any thunderstorm wind that is not associated with rotation, and is usually used to differentiate from tornadic winds. There are several sub-types of straight-line winds:

- **Downdraft** - small-scale column of air that rapidly sinks towards the ground.
- **Downburst** - result of a downdraft, referred to as a macroburst when the area affected is greater than 2.5 miles and microburst when less than 2.5 miles.
- **Gust Front** - leading edge of rain-cooled air that clashes with warmer thunderstorm inflow. Characterized by wind shift, temperature drop and gusty winds in front of a thunderstorm.
- **Derecho** - widespread, long-lived wind storm that is associated with a band of rapidly moving showers or thunderstorms. A typical derecho consists of numerous microbursts, downbursts and downburst clusters. By definition, if the wind damage swath extends more than 240 miles and includes wind gusts of at least 58 mph or greater along most of its length, then the event may be classified as a derecho.

Infectious Disease/Pandemic: Infectious diseases are illnesses caused by organisms - such as bacteria, viruses, fungi or parasites. Many organisms live in and on our bodies. They're normally harmless or even helpful, but under certain conditions, some organisms may cause disease. Some infectious diseases can be passed from person to person, some are transmitted by bites from insects or animals and others are acquired by ingesting contaminated food or water or being exposed to organisms in the environment. Signs and symptoms vary depending on the organism causing the infection, but often include fever and fatigue. Mild infections get better on their own without treatment, while some are life-threatening infections and may require hospitalization. Wide-spread infectious diseases may cause mass causality regionally and world-wide.

Landslide: A landslide is the downward or outward movement of earth materials on a slope that is reacting to a combination of the force of gravity and a predisposed weakness in the material that allows the sliding process to initiate. The broad classification of landslides includes mudflows, mudslides, debris flows, rockslides, debris avalanches, debris slides, and earth flows. Landslides may be formed when a layer of soil atop a slope becomes saturated by significant precipitation and slides along a more cohesive layer of soil or rock. Although gravity becomes the primary reason for a landslide once a slope has become weak through a process such as the one just described, other causes can include:

- Erosion by rivers or the ocean that creates over-steepened slopes through erosion of the slope's base. In the case of rivers, this can occur as a result of flash flooding.
- Rock and soil slopes are weakened through saturation by snowmelt or heavy rains.
- Earthquake creates stress that makes weak slopes fail - earthquakes of 4.0 magnitude and greater have been known to trigger landslides.
- Wildfires (loss of vegetation).

- Excess weight from accumulation of rain or snow, stockpiling of rock or ore and other material.

Lightning: Lightning is a visible electric discharge produced by a thunderstorm. Thunder always accompanies lightning, but may or may not be heard depending on the position of the observer. As lightning passes through the air, it heats the air to a temperature of 18,000-60,000 degrees Fahrenheit. This causes the air to rapidly expand and contract creating a sound wave known as thunder. Thunder can be heard up to 10 miles away from the strike. At longer distances thunder sounds like a low rumble as the higher frequency sounds are absorbed by the environment.

Severe Winter Weather: The State of New Hampshire experiences four types of severe weather during the winter months, which usually bring snow, high winds and/or rain depending on temperatures.

Heavy snow - Heavy snow is generally defined as:

- Snowfall accumulating to 4" or more in depth in 12 hours or less; or
- Snowfall accumulating to 6" or more in depth in 24 hours or less.

Blizzard - A blizzard is a snowstorm with the following conditions that is expected to prevail for a period of 3 hours or longer:

- Sustained wind or frequent gusts to 35mph or greater and considerable falling and/or blowing snow that frequently reduces visibility to less than ¼ mile.

Nor'easter - A Nor'easter is a large cyclonic storm that tracks north/northeastward along the East Coast of North America. It is so named due to the northeasterly prevailing wind direction that occurs during the storm. While these storms may occur at any time of the year, they are most frequent and severe during the months of September through April. Nor'easters usually develop off the east coast between Georgia and New Jersey, travel northeastward, and intensify in the New England region. Nor'easters nearly always bring precipitation in the form of heavy rain and/or snow, as well as gale force winds, rough seas, and coastal flooding.

Ice Storm - Ice storms typically occur with warm frontal boundaries, where warm air rises up and over a shallow mass of cold air near the earth's surface. When snow falls from clouds near just north of the warm frontal boundary, it will fall through the deep warm layer aloft first and melt completely into a liquid water droplet. As it passes through the shallow cold layer near the surface, the water droplet cools to the point of being supercooled (a liquid raindrop that remains a liquid at the freezing point). When these supercooled water droplets make contact with freezing surfaces on the ground, such as streets and walkways, they freeze on contact forming layers of ice. This process of freezing rain, when persistent over a long period of time, will form layers that may exceed over an inch thick in extreme cases. Any accumulation of ice can present hazards; however, significant accumulations of ice (1/4" or greater) can pull down trees and utility lines resulting in loss of power and communications. Walking and driving also becomes very dangerous to almost impossible during an ice storm.

Solar Storms and Space Weather: The term space weather is relatively new and describes the dynamic conditions in the Earth's outer space environment, similar to how the terms "climate" and "weather" refer to the conditions in the Earth's lower atmosphere. Space weather includes any and all conditions and events on the sun, in the solar wind, in near-Earth space, and in our upper atmosphere that can affect space-borne and ground based technological systems.

The entire State of New Hampshire is at risk for solar storms and space weather. Space weather affects Earth due to the sun sending energy across the Earth in the form of light and electrically charged particles and magnetic fields. Although space weather has occurred since the beginning of time, little was understood about the causes and impacts of these instances on the planet. As society becomes increasingly reliant on electronics and technology, the hazards presented by space weather are not to be underestimated. The magnetic disturbances that solar storms can bring can disrupt communications, damage or destroy electronic components, corrode gas and oil pipelines, and cause significant damage to spacecraft and satellites. Radio operators have long been aware of the effects of space weather and how it impacts radio communications, especially those in the High Frequency (HF) band (3-30MHz). Depending on atmospheric conditions from space weather, radio signals can be partially or completely blocked.

Hurricane and Tropical Storm: 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. *Tropical Storms* are typically storms that have been downgraded from a hurricane as it reaches further inland. These storms often have large amounts of rain and severe wind, but wind speeds do not reach the level to be classified as a hurricane.

Wildfire: A wildfire is any non-structural fire, other than prescribed fire, that occurs in the Wildland. Wildland here is defined as consisting of vegetation or natural fuels. Wildfires can be referred to as brushfires, wildland fires, or grass fires depending on the location and what is burning.

Technological Hazards

Aging Infrastructure: The continued regression of the public physical systems including, but not limited to roads and bridges, culverts, utilities, water, and sewage.

Conflagration: A large and destructive fire that threatens human life, animal life, health, and/or property. It may also be described as a blaze or simply a (large) fire. A conflagration can begin accidentally, be naturally caused (wildfire), or intentionally created (arson). Conflagrations have the potential to cause loss of life, property devastation/destruction and potential negative economic impacts.

Dam Failure: Dam failure is defined as the sudden, rapid, and uncontrolled release of impounded water.

Known & Emerging Contaminants: Contaminants in drinking water include naturally occurring contaminants associated with the geology in a given region and known man-made contaminants associated with nearby land use activities. Some contaminants are considered emerging contaminants.

Man-made Contaminants - Man-made chemicals that have been historically recognized to impact some groundwater and surface water sources of drinking water include volatile organic compounds, pesticides, semi-volatile compounds, radionuclides, nitrates/nitrites, metals, and radionuclides.

Emerging Contaminants - *Emerging contaminants* are chemicals that historically have not been monitored in drinking water due to the lack of laboratory capabilities to detect the compounds or a lack of knowledge about the use of certain compounds and their potential to cause human health impacts. Emerging contaminants have been detected in surface and groundwater that are sources of drinking water in the State of New Hampshire. The latest incidents in New Hampshire to garner widespread media and public attention were related to the discovery of poly and perfluoroalkyl substances, more commonly referred to as PFAS. Historically, other emerging contaminants have spiked public concern, including Methyl Tertiary Butyl Ether (MtBE), which is a manufactured chemical used to increase the octane rating of gasoline. MtBE degrades slowly and is highly soluble in water, allowing it to spread further and last longer in groundwater than many other contaminants.

Hazardous Materials: A hazardous material is any item or agent (biological, chemical, radiological, and/or physical), which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors. Hazardous materials spills or releases can cause damage or 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.

Long-term Utility Outage: A long-term utility outage is defined as a prolonged absence of any type of public utility that is caused by infrastructure failure, cyber-attack, supply depletion, distribution disruption, water source contamination, or a natural, human-caused or technological disaster. This plan considers a long-term utility outage as one lasting two weeks more, or a prolonged outage that causes extreme cascading impacts.

Radiological: Radiological hazards can range from relatively localized incidents involving small amounts of radioactive materials to large-scale catastrophic events. Smaller sources of radiation hazards may be found in medical facilities, industrial and laboratory facilities where radioactive materials and/or radiation producing devices are used. Some radiation is produced naturally from decomposition of radioactive isotopes in soils and underlying strata.

Human-Caused Hazards

Cyber Event: The Department of Homeland Security (DHS) defines a cyber incident as an event occurring on or conducted through a computer network that actually or imminently jeopardizes the confidentiality, integrity, or availability of computers, information or communications systems or networks, physical or virtual infrastructure controlled by computers or information systems.

Mass Casualty Incident: Any large number of casualties (sick, injured, or dead) produced in a relatively short period of time, usually as the result of a single incident such as a military aircraft accident, hurricane, flood, earthquake, or armed attack that exceeds local logistic support capabilities.

Terrorism/Violence: Premeditated, politically motivated violence perpetrated against noncombatant targets by subnational groups or clandestine agents.

Transport Accident: A transport accident is any accident that occurs during transportation that has multiple injuries or deaths, or has significant impact to the roadways and surrounding area. Specifically, for this plan, it refers to an aviation, tractor trailer, or vehicle accident.

Appendix B: Risk Assessment

Risk Assessment

The Hazard Mitigation Working Group met to discuss the Towns' risk assessment and assign rating scores. Consideration was given to climate change, current capabilities, Town assets and critical infrastructure, and previous occurrences when determining the scale of impacts and overall risk. The following terms were used to analyze the hazards:

Impacts: The *Impact* is an estimate generally based on a hazard's effects on humans, property and businesses. The Working Group determined the impact rating for each of the previously identified hazards. The average impact score was calculated by computing the average of the human, property and business impact scores. The impact ratings were broken down into the following categories:

Impact Scoring

- 1 - Inconvenience, reduced service/productivity, minor damages, non-life-threatening injuries.
- 3 - Moderate to major damages, temporary closure and reduced service/productivity, numerous injuries and deaths.
- 6 - Devastation and significant injuries and deaths, permanent closure and/or relocation of services, long-term effects.

Probability of Occurrence: The *Probability of Occurrence* is a numeric value that represents the likelihood that the given hazard will occur within the next 10 years. This value was chosen based on historical information. The Working Group determined the probability of occurrence rating for each of the previously identified hazards. The probability of occurrence ratings was broken into the following categories:

Low: There is little likelihood that this event will occur within the next 10 years (1 event in 10 years).

Medium: There is moderate likelihood that this event will occur within the next 10 years (1-2 events each 5-10 years).

High: There is great likelihood that this event will occur within the next 10 years (1-2 events each year).

Probability Scoring

- 1 - 33% probability of occurring within 10 years (Low)
- 3 - 34-66% probability of occurring within 10 years (Medium)
- 6 - 67-100% probability of occurring within 10 years (High)

Severity - Severity is calculated by taking the average of the vulnerability for human, business and property impacts of each hazard type.

Risk - Risk is an adjective description (High, Medium, or Low) of the overall threat posed by a hazard over the next 10 years. It is calculated by multiplying the probability of occurrence and severity.

Low: There is little potential for a disaster during the next 10 years. The threat is such as to warrant no special effort to prepare for, respond to, recover from, or mitigate against this hazard. This hazard does not need to be specifically addressed in the Town's emergency management training and exercise program except as generally dealt with during hazard awareness training.

Medium: There is moderate potential for a disaster of less than major proportions during the next 10 years. The threat is great enough to warrant modest effort to prepare for, respond to, recover from, and mitigate against this hazard. This hazard should be included in the Town's emergency management training and exercise program.

High: Risks that are considered to be high were likely ranked so due to (1) a strong potential for a disaster of major proportions during the next 10 years; or (2) history suggests the occurrence of multiple disasters of moderate proportions during the next 10 years. The threat is significant enough to warrant major program effort to prepare for, respond to, recover from, and mitigate against this hazard. This hazard should be a major focus of the Towns' emergency management training and exercise program.

Overall Risk: The *Overall Risk* is a representation of the combined *potential impact* and *probability of occurrence* ratings. This is calculated by multiplying the probability of occurrence rating score by the impact rating score (the average of human, property and business impacts). The goal of identifying the overall risk of each identified hazard is to assist the Town in determining which hazards pose the largest potential threat. The overall risk ratings are broken down and color coded into the following categories:

White: values 1 - 6, Low Risk

Yellow: values 7 - 12, Medium Risk

Red: values 13 - 18, High Risk

Appendix C: Resources

Resources Used in the Preparation of this Plan

NH HSEM’s State of New Hampshire Natural Hazards Mitigation Plan (2018)
 FEMA’s Understanding Your Risks: Identifying Hazards and Estimating Losses
 Local Mitigation Planning Handbook
 Town of Temple, NH’s Master Plan

Agencies

New Hampshire Homeland Security and Emergency Management (HSEM)	271-2231
Field Representative Hillsborough County: Liz Gilboy.....	603-223-3613
Mitigation Officer: Kayla Henderson.....	271-2231
Mitigation Planner: Meaghan Wells	223-3655
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
NH Department of Cultural Resources:	
Division of Historical Resources	271-3483
NH Department of Environmental Services:	
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 Planning and Development (OSI)	271-2155
NH Municipal Association	224-7447
NH Fish and Game Department	
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:	
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
NOAA: 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 HSEM
406 Public Assistance and Hazard Mitigation.....	NH HSEM
Community Development Block Grant (CDBG)	NH HSEM, NH OPD, also refer to RPC
Dam Safety Program	NH Department of Environmental Services (DES)
Emergency Generators Program by NESEC [‡]	NH HSEM
Emergency Watershed Protection (EWP) Program.....	USDA, Natural Resources Conservation Service
Flood Mitigation Assistance Program (FMAP)	NH HSEM, NH OPD
Flood Plain Management Services (FPMS)	US Army Corps of Engineers
Mitigation Assistance Planning (MAP)	NH HSEM
Mutual Aid for Public Works	NH Municipal Association
National Flood Insurance Program (NFIP) [†]	NH OPD, NH HSEM
Power of Prevention Grant by NESEC [‡]	NH HSEM
Project Impact	NH HSEM
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 HSEM for more information or visit the Consortium’s website at <http://www.nesec.org/index.cfm>.

[†] 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 Planning and Development can provide additional information regarding participation in the NFIP-CRS Program.

FEMA Region 1 Mitigation Planning Webliography

Hazard Mitigation is sustained action taken to reduce or eliminate risk to people and their property from natural hazards over the longest possible term.

REGULATORY INFORMATION

Final Rule

44 CFR 201.6

<http://www.fema.gov/pdf/help/fr02-4321.pdf>

Disaster Mitigation Act of 2000 (DMA 2K)

<http://www.fema.gov/library/viewRecord.do?id=1935>

DISASTERS AND NATURAL HAZARDS INFORMATION

FEMA-How to deal with specific hazards

<http://www.ready.gov/natural-disasters>

Natural Hazards Center at the University of Colorado

<http://www.colorado.edu/hazards>

National Oceanic and Atmospheric Administration (NOAA): Information on various projects and research on climate and weather.

<http://www.websites.noaa.gov>

National Climatic Data Center active archive of weather data.

<http://lwf.ncdc.noaa.gov/oa/ncdc.html>

Northeast Snowfall Impact Scale

<http://www.erh.noaa.gov/rnk/Newsletter/Fall%202007/NESIS.htm>

Weekend Snowstorm Strikes The Northeast Corridor Classified As A Category 3 "Major" Storm

<http://www.publicaffairs.noaa.gov/releases2006/feb06/noaa06-023.html>

FLOOD RELATED HAZARDS

FEMA Coastal Flood Hazard Analysis & Mapping

<http://www.fema.gov/national-flood-insurance-program-0/fema-coastal-flood-hazard-analyses-and-mapping-1>

Floodsmart

<http://www.floodsmart.gov/floodsmart/>

National Flood Insurance Program (NFIP)

<http://www.fema.gov/nfip>

Digital quality Level 3 Flood Maps

<http://msc.fema.gov/MSK/statemap.htm>

Flood Map Modernization

<http://www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/map-modernization>

Reducing Damage from Localized Flooding: A Guide for Communities, 2005 FEMA 511
<http://www.fema.gov/library/viewRecord.do?id=1448>

FIRE RELATED HAZARDS

Firewise
<http://www.firewise.org>

NOAA Fire Event Satellite Photos
<http://www.osei.noaa.gov/Events/Fires>

U.S. Forest Service, USDA
<http://www.fs.fed.us/land/wfas/welcome.htm>

Wildfire Hazards – A National Threat
<http://pubs.usgs.gov/fs/2006/3015/2006-3015.pdf>

GEOLOGIC RELATED HAZARDS

USGS Topographic Maps
<http://topomaps.usgs.gov/>

Building Seismic Safety Council
<http://www.nibs.org/?page=bssc>

Earthquake hazard history by state
<http://earthquake.usgs.gov/earthquakes/states/>

USGS data on earthquakes
<http://earthquake.usgs.gov/monitoring/deformation/data/download/>

USGS Earthquake homepage
<http://quake.wr.usgs.gov>

National Cooperative Geologic Mapping Program (NCGMP)
<http://ncgmp.usgs.gov/>

Landslide Overview Map of the Conterminous United States
<http://landslides.usgs.gov/learning/nationalmap/>

Kafka, Alan L. 2008. Why Does the Earth Quake in New England? Boston College, Weston Observatory, Department of Geology and Geophysics
http://www2.bc.edu/~kafka/Why_Quakes/why_quakes.html

Map and Geographic Information Center, 2010, "Connecticut GIS Data", University of Connecticut
http://magic.lib.uconn.edu/connecticut_data.html

2012 Maine earthquake
http://www.huffingtonpost.com/2012/10/17/maine-earthquake-2012-new-england_n_1972555.html

WIND-RELATED HAZARDS

ATC Wind Speed Web Site

<http://www.atcouncil.org/windspeed/index.php>

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U.S. Wind Zone Maps

<http://www.fema.gov/safe-rooms/wind-zones-united-states>

Tornado Project Online

<http://www.tornadoproject.com/>

National Hurricane Center

<http://www.nhc.noaa.gov>

Community Hurricane Preparedness Tutorial

<http://meted.ucar.edu/hurricane/chp/hp.htm>

National Severe Storms Laboratory, 2009, "Tornado Basics",

http://www.nssl.noaa.gov/primer/tornado/tor_basics.html

DETERMINING RISK AND VULNERABILITY

HAZUS

<http://www.hazus.org>

FEMA Hazus Average Annualized Loss Viewer

<http://fema.maps.arcgis.com/home/webmap/viewer.html?webmap=cb8228309e9d405ca6b4db6027df36d9&extent=-139.0898,7.6266,-48.2109,62.6754>

Vulnerability Assessment Tutorial: On-line tutorial for local risk and vulnerability assessment

<http://www.csc.noaa.gov/products/nchaz/htm/mitigate.htm>

Case Study: an example of a completed risk and vulnerability assessment

<http://www.csc.noaa.gov/products/nchaz/htm/case.htm>

GEOGRAPHIC INFORMATION SYSTEMS (GIS) AND MAPPING

The National Spatial Data Infrastructure & Clearinghouse (NSDI) and Federal Geographic Data Committee (FGDC) Source for information on producing and sharing geographic data

<http://www.fgdc.gov>

The OpenGIS Consortium Industry source for developing standards and specifications for GIS data

<http://www.opengis.org>

Northeast States Emergency Consortium (NESEC): Provides information on various hazards, funding resources, and other information

<http://www.nesec.org>

US Dept of the Interior Geospatial Emergency Management System (IGEMS) provides the public with both an overview and more specific information on current natural hazard events. It is supported by the Department of the Interior Office of Emergency Management.

<http://igems.doi.gov/>

FEMA GeoPlatform: Geospatial data and analytics in support of emergency management

<http://fema.maps.arcgis.com/home/index.html>

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DATA GATHERING

National Information Sharing Consortium (NISC): brings together data owners, custodians, and users in the fields of homeland security, public safety, and emergency management and response. Members leverage efforts related to the governance, development, and sharing of situational awareness and incident management resources, tools, and best practices <http://nisconsortium.org/>

The Hydrologic Engineering Center (HEC), an organization within the Institute for Water Resources, is the designated Center of Expertise for the US Army Corps of Engineers

<http://www.hec.usace.army.mil/>

National Water & Climate Center

<http://www.wcc.nrcs.usda.gov/>

WinTR-55 Watershed Hydrology

<http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/water/?&cid=stelprdb1042901>

USACE Hydrologic Engineering Center (HEC)

<http://www.hec.usace.army.mil/software/>

Stormwater Manager's Resource Center SMRC

<http://www.stormwatercenter.net>

USGS Current Water Data for the Nation

<http://waterdata.usgs.gov/nwis/rt>

USGS Water Data for the Nation

<http://waterdata.usgs.gov/nwis/>

Topography Maps and Aerial photos

<http://www.terraserver.com/view.asp?tid=142>

National Register of Historic Places

<http://www.nps.gov/nr/about.htm>

National Wetlands Inventory

<http://www.fws.gov/wetlands/>

ICLUS Data for Northeast Region

http://www.epa.gov/ncea/global/iclus/inclus_nca_northeast.htm

PLANNING

American Planning Association

<http://www.planning.org>

Planners Web - Provides city and regional planning resources

<http://www.plannersweb.com>

FEMA RESOURCES

Federal Emergency Management Agency (FEMA)

www.fema.gov

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National Mitigation Framework

<http://www.fema.gov/national-mitigation-framework>

Federal Insurance and Mitigation Administration (FIMA)

<http://www.fema.gov/fima>

Community Rating System (CRS) <http://www.fema.gov/national-flood-insurance-program/national-flood-insurance-program-community-rating-system>

FEMA Building Science

<http://www.fema.gov/building-science>

National Flood Insurance Program (NFIP)

<http://www.fema.gov/national-flood-insurance-program>

Floodplain Management & Community Assistance Program

<http://www.fema.gov/floodplain-management>

Increased Cost of Compliance (ICC): ICC coverage allows homeowners whose structures have been repeatedly or substantially damaged to cover the cost of elevation and design requirements for rebuilding with their flood insurance claim up to a maximum of \$30,000.

<http://www.fema.gov/national-flood-insurance-program-2/increased-cost-compliance-coverage>

National Disaster Recovery Framework

<http://www.fema.gov/national-disaster-recovery-framework>

Computer Sciences Corporation: contracted by FIMA as the NFIP Statistical Agent, CSC provides information and assistance on flood insurance to lenders, insurance agents and communities

www.csc.com

Integrating the Local Natural Hazard Mitigation Plan into a Community's Comprehensive Plan: A Guidebook for Local Governments

<https://www.fema.gov/ar/media-library/assets/documents/89725>

Mitigation Best Practices Portfolio

<http://www.fema.gov/mitigation-best-practices-portfolio>

FEMA Multi-Hazard Mitigation Planning Website
<http://www.fema.gov/multi-hazard-mitigation-planning>

FEMA Resources Page <http://www.fema.gov/plan/mitplanning/resources.shtm>

Local Mitigation Plan Review Guide <http://www.fema.gov/library/viewRecord.do?id=4859>

Local Mitigation Planning Handbook complements and liberally references the Local Mitigation Plan Review Guide above
<http://www.fema.gov/library/viewRecord.do?id=7209>

HAZUS
<http://www.fema.gov/protecting-our-communities/hazus>

Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards
<http://www.fema.gov/library/viewRecord.do?id=6938>

Integrating Hazard Mitigation Into Local Planning: Case Studies and Tools for Community Officials
<http://www.fema.gov/library/viewRecord.do?id=7130>

Mitigation Planning for Local and Tribal Communities
Independent Study Course
<http://training.fema.gov/EMIWeb/IS/is318.asp>

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OTHER FEDERAL RESOURCES

U.S. Army Corps of Engineers: Provides funding for floodplain management planning and technical assistance and other water resources issues. www.nae.usace.army.mil

Natural Resources Conservation Service: Technical assistance to individual land owners, groups of landowners, communities, and soil and water conservation districts. www.nrcs.usda.gov

NOAA Coastal Services Center <http://www.csc.noaa.gov/>

Rural Economic and Community Development: Technical assistance to rural areas and smaller communities in rural areas on financing public works projects. www.rurdev.usda.gov

Farm Service Agency: Manages the Wetlands Reserve Program (useful in open space or acquisition projects by purchasing easements on wetlands properties) and farmland set aside programs www.fsa.usda.gov

National Weather Service: Prepares and issues flood, severe weather and coastal storm warnings. Staff hydrologists can work with communities on flood warning issues; can give technical assistance in preparing flood-warning plans. www.weather.gov

Economic Development Administration (EDA): Assists communities with technical assistance for economic development planning www.osec.doc.gov/eda/default.htm

National Park Service: Technical assistance with open space preservation planning; can help facilitate meetings and identify non-structural options for floodplain redevelopment. www.nps.gov

Fish and Wildlife Services: Can provide technical and financial assistance to restore wetlands and riparian habitats. www.fws.gov

Department of Housing & Urban Development www.hud.gov

Small Business Administration: SBA can provide additional low-interest funds (up to 20% above what an eligible applicant would qualify for) to install mitigation measures. They can also loan the cost of bringing a damaged property up to state or local code requirements. www.sba.gov/disaster

Environmental Protection Agency www.epa.gov

Sustainability/Adaptation/Climate Change

Why the Emergency Management Community Should be Concerned about Climate Change: A discussion of the impact of climate change on selected natural hazards

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<http://www.cna.org/sites/default/files/research/WEB%2007%2029%2010.1%20Climate%20Change%20and%20the%20Emergency%20Management%20Community.pdf>

Resilient Sustainable Communities: Integrating Hazard Mitigation& Sustainability into Land Use

<http://www.earth.columbia.edu/sitefiles/file/education/documents/2013/Resilient-Sustainable-Communities-Report.pdf>

U.S. EPA

<http://www.epa.gov/climatechange/>

NOAA National Ocean Service (NOS)

<http://oceanservice.noaa.gov/>

The Northeast Climate Research Center (NRCC) folks were heavily involved in climate data in the NCA, below. They have a wealth of historic climate data and weather information, trends, etc.

<http://www.nrcc.cornell.edu/>

NOAA RISA for the Northeast (Regional Integrated Sciences and Assessments) <http://ccrun.org/home>

Community and Regional Resilience: Perspectives from hazards, disasters, and emergency management http://www.resilientus.org/library/FINAL_CUTTER_9-25-08_1223482309.pdf

National Fish, Wildlife and Plants Climate Adaptation Strategy www.wildlifeadaptationstrategy.gov
ICLEI Local Governments for Sustainability <http://www.icleiusa.org/>

Kresge Foundation Survey
<http://www.kresge.org/news/survey-finds-communities-northeast-are-trying-plan-for-changes-climate-need-help-0>

New England's Sustainable Knowledge Corridor <http://www.sustainableknowledgecorridor.org/site/>

The Strategic Foresight Initiative (SFI)
http://www.fema.gov/pdf/about/programs/oppa/findings_051111.pdf

Northeast Climate Choices http://www.climatechoices.org/ne/resources_ne/nereport.html

Northeast Climate Impacts Assessment <http://www.northeastclimateimpacts.org/>

Draft National Climate Assessment Northeast Chapter released early 2013 <http://ncadac.globalchange.gov/>

Northeast Chapter of the National Climate Assessment of 2009:
<http://www.globalchange.gov/images/cir/pdf/northeast.pdf>

ClimateNE
www.climatenortheast.com

Scenarios for Climate Assessment and Adaptation <http://scenarios.globalchange.gov/>

Northeast Climate Science Center <http://necsc.umass.edu/>

FEMA Climate Change Adaptation and Emergency Management
<https://www.llis.dhs.gov/content/climate-change-adaptation-and-emergency-management-0>

Climate Central <http://www.climatecentral.org>

OTHER RESOURCES

New England States Emergency Consortium (NESEC): NESEC conducts public awareness and education programs on natural disaster and emergency management activities throughout New England. Resources are available on earthquake preparedness, mitigation, and hurricane safety.
www.nesec.org

Association of State Floodplain Managers (ASFPM): ASFPM has developed a series of technical and topical research papers, and a series of proceedings from their annual conferences.
www.floods.org

National Voluntary Organizations Active in Disaster (VOAD) is a non-profit, nonpartisan membership organization that serves as the forum where organizations share knowledge and resources throughout the disaster cycle - preparation, response, recovery and mitigation. <http://www.nvoad.org/>

ADDITIONAL 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.
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://disasterfinder.gsfc.nasa.gov/DisasterManagement/ /	Searchable database of sites that encompass a wide range of natural disasters.
NASA Natural Disaster Reference Database	http://ftpwww.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://waterdata.usgs.gov/nwis/rt	Provisional hydrological data
Dartmouth Flood Observatory	http://www.dartmouth.edu/~floods	Observations of flooding situations.
FEMA, National Flood Insurance Program, Community Status Book	http://www.fema.gov/about/programs/nfip/index.shtm	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://thunder.msfc.nasa.gov/research.html	Space-based sensor of lightning strikes
LLNL Geologic & Atmospheric Hazards	http://www.llnl.gov/hmc/	General hazard information developed for the Dept. of Energy.
The Tornado Project Online	http://www.tornadoproject.com/	Information on tornadoes, including details of recent impacts.
National Severe Storms Laboratory	http://www.nssl.noaa.gov/	Information about and tracking of severe storms.
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 D: Hazard Mitigation Resource Profiles

The following are resources that can be used in Hazard Mitigation projects:

U.S. Army Corps of Engineers

Contacts:

John Kennelly, Chief, Special Studies Section (for Flood Plain Management Services activities),
Phone: (978) 318-8505, Fax: (978) 318-8080, E-mail: John.R.Kennelly@usace.army.mil

Mike Keegan, Chief, Project Planning Section (for Section 14, 103, and 205 authorities),
Phone: (978) 318-8087, Fax: (978)318-8080, E-mail: Michael.F.Keegan@usace.army.mil

Address: US Army Corps of Engineers
New England District
696 Virginia Road
Concord, Massachusetts 01742-2751

Description and Mission:

The Corps of Engineers is a multi-disciplinary engineering and environmental organization that has been identifying and meeting the water resources needs of the nation. These needs have been in the areas of flood damage reduction, flood plain information and management, navigation, shore protection, environmental restoration, water supply, streambank protection, recreation, and fish and wildlife resources conservation, as well as technical assistance in other water resources areas.

The New England District (NAE) of the Corps of Engineers is responsible for managing the Corps' civil responsibilities in a 66,000 square-mile region encompassing the six New England states east of the Lake Champlain drainage basin. The District and its leadership are headquartered in Concord, Massachusetts. The missions of the New England District are many and varied. They include:

- flood damage reduction
- navigation improvements and maintenance
- natural resource management
- streambank and shoreline protection
- disaster assistance
- environmental remediation and engineering
- engineering and construction management support to other agencies

Flood Mitigation Involvement:

As a result of the catastrophic floods in 1936, 1938 and 1955, the Corps was called upon to undertake a comprehensive flood damage reduction program. Since then the Corps has built many flood control structures throughout New England. These include 35 dams and reservoirs, five hurricane protection barriers (two are operated by the Corps) and approximately 60 local flood protection projects. The New England District has also completed two nonstructural projects involving the relocation of flood prone property and the acquisition of natural flood storage areas. The Corps also provides technical assistance to states and municipalities in locally constructed

flood damage mitigation projects and to promote wise and informed use of floodplain and natural retention areas in order to minimize potential future flood damages.

Mitigation Goals and Objectives:

The New England District has two primary mitigation objectives with respect to flood damage reduction. The first objective is the operation and maintenance of the 35 flood control reservoirs and two hurricane barriers that provide protection to the Connecticut, Merrimack, Thames, Naugatuck, and Blackstone River Basins. The second objective is to continue to work with the states and communities in New England to address flooding problems affecting the region.

Projects Desired:

The Corps of Engineers has several programs available under its Civil Works authorities to address flooding problems. These programs provide assistance either through the construction of structural and nonstructural projects to mitigate the flooding problem or by providing technical information to assist mitigation performed at the state or local level. Flood damage reduction projects constructed by the Corps of Engineers must demonstrate, based on current Federal guidelines, that the flood damages prevented by the project's construction exceed its total cost. The Corps must also demonstrate that the 10-year frequency flood discharge at the point of concern is equal to or greater than 800 cubic-feet per second (cfs). Technical assistance provided by the Corps does not need to meet the above criteria.

COE Resources with Respect to Hazard Mitigation:

The New England Division assists in meeting national, regional and local needs through a variety of means. Congressionally authorized water resources investigations have resulted in the planning, design and implementation of many flood control and flood damage reduction projects. Work conducted under a Congressional authorization can be extensive and there is currently no monetary limit of funding. Typically, there is a 1-2 year minimum delay in the identification of a proposed investigation and the funding of that work. The first phase of study, the Reconnaissance investigation, is 100 percent Federally funded and must be completed within twelve months. The second phase, the Feasibility investigations, must be cost-shared with a local sponsor where the sponsor provides 50 percent of the cost of the feasibility study. Congress in a Water Resources Development Act must specifically authorize construction of any project resulting from a General Investigation study. The cost of implementation for flood damage reduction projects is generally 65 percent Federal and 35 percent non-Federal.

Through the Continuing Authorities Programs of the Corps many structural and non-structural local protection project reducing or eliminating damages from flooding have been constructed. Investigations initiated under the Corps Continuing Authorities do not require specific congressional authorization are initiated simply with a request from the State or community to the New England District. The following is a list of Continuing Authorities applicable to flood mitigation:

Section 14 - Emergency Stream Bank & Shoreline Protection: This work consists of evaluating alternatives to provide emergency protection to public facilities, such as highways and bridges that are threatened due to erosion. The current Federal limit on Section 14 projects is \$500,000. The local sponsor is required to provide 25 percent of the cost of developing plans and specifications and of construction.

Section 103 - Beach Erosion: Investigations conducted under this authority are to determine methods of protecting public facilities that have been threatened by beach erosion. Currently there is a Federal limit of \$2,000,000 and the local sponsor is required to contribute 35 percent of plans, specifications and construction. The local sponsor is also required to cost-share equally the cost of the feasibility investigation that exceeds \$100,000. The first \$100,000 is at full Federal expense.

Section 205 - Flood Damage Reduction: Investigations are conducted under this program to assist local communities to identify flooding problems and to formulate and construct alternatives for flood damage reduction. The local sponsor is required to cost-share equally in the cost of the feasibility investigation that exceeds \$100,000 and the Federal limit is \$5,000,000. The local sponsor is required to contribute 25 percent of the cost of plans, specifications and construction.

Section 208 - Snagging and Clearing: This emergency program is designed to reduce flood damage potential by identifying and removing obstructions that contribute to flooding by causing higher flood stages in the floodways. The Federal limit under this program is \$500,000 and the local sponsor is required to contribute 25 percent of the cost of plans, specifications and construction.

The New England Division also has two Planning Assistance Programs, which provide opportunities for the States to obtain assistance in addressing water resource issues. These programs are the Section 22, Planning Assistance to the States (PAS) program and the Section 206, Flood Plain Management Services (FPMS) program.

Planning Assistance to States Program (PAS): The Planning Assistance to States Program is designed to assist the States in developing comprehensive plans to meet State planning goals. The program is extremely flexible in the type and the methodology of investigations. Studies conducted under the PAS program require a 50/50 cost share with a local sponsor. The existing funding limits are \$300,000 per state and a national budget not to exceed \$5,000,000.

Flood Plain Management Services (FPMS): The FPMS Program is designed for the Corps to assist States and local communities in improving management of flood plains by performing technical assistance and conducting special investigations. Cost recovery has been implemented in this program effective in FY 1991. Under cost recovery, assistance provided to Federal agencies and private interests must be fully reimbursed by those customers. States and local communities are still provided technical assistance at 100 percent Federal cost. One of the major efforts being conducted under the FPMS program at this time is the preparation of Hurricane Evacuation Studies. These studies are jointly funded with the Federal Emergency Management Agency.

Ice Engineering Research Division
U.S. Army Cold Regions Research and Engineering Laboratory

Contact:
Dr. J-C Tatinclaux, Chief, Ice Engineering Research Division
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E-mail: Jean-Claude.Tatinclaux@cr102.usace.army.mil
Website: <http://www.crrel.usace.army.mil/ierd/>

Address: US Army Cold Regions Research and Engineering Laboratory
Ice Engineering Research Division

72 Lyme Road
Hanover, NH 03755-1290

Description and Mission:

The US Army Cold Regions Research and Engineering Laboratory (CRREL) is a Corps of Engineers' research laboratory that is dedicated to multi-disciplinary engineering and research that addresses the problems and opportunities unique to the world's cold regions. CRREL exists largely to solve the technical problems that develop in cold regions, especially those related to construction, transport, and military operations. Most of these problems are caused by falling and blowing snow, snow on the ground, ice in the air and in the ground, river ice, ice on seas and lakes, and ice effects on manmade materials. CRREL serves the Corps of Engineers and its clients in three main areas:

- Traditional military engineering, which deals with problems that arise during conflict;
- Military construction and operations technology, i.e., the building and maintenance of military bases, airfields, roads, ports, and other facilities; and
- Civil works, which involves the Corps in such things as flood protection, navigation on inland waterways and coastal engineering.

CRREL also deals with cold regions problems for the other defense services, for civilian agencies of the federal government, and to some extent for state agencies, municipalities and private industry.

CRREL's Ice Engineering Research Division (IERD) was created to research, analyze and solve ice problems in and around water bodies, including ice jam flooding and ice accumulation in lock chambers, to ice buildup at water intakes and the destructive forces that moving ice exerts on riverine or coastal structures. In cooperation with the New England District (NAE) of the Corps of Engineers (located in Concord, MA), IERD personnel provide technical assistance before, during and after ice jam flood emergencies. IERD research has resulted in the design and construction of a number of low-cost ice control structures as well as nonstructural mitigation measures. IERD also provides instruction on dealing with river ice problems to local emergency management agencies.

Flood Mitigation Involvement:

IERD is frequently called upon by the various Corps Districts to provide technical assistance to states and municipalities in the form of emergency mitigation. IERD is also involved with Corps and local agencies in developing locally constructed flood damage mitigation projects and promoting wise and informed use of floodplain areas in order to minimize potential future flood damages.

Mitigation Goals and Objectives:

The IERD has two primary mitigation objectives with respect to flood damage reduction. The first objective is to work with the Corps and other federal, state and local agencies to design and implement ice control methods to reduce ice-related flood potential. The second is to work with the states and communities nationwide as well as in New England to address ice-related emergency flooding problems affecting the region.

Projects Desired:

CRREL and IERD are a national resource ready to apply our unique facilities and capabilities to solve problems and conduct innovative, state-of-the-art research and

technical support. There are a number of mechanisms that enable IERD and the rest of CRREL to partner with various Federal, non-DoD and private sector entities. The Federal Technology Transfer Act of 1986 (15 USC 3710a) allows CRREL to collaborate with any non-Federal partner on research and technical support consistent with the mission of the laboratory. The Intergovernmental Cooperation Act (31 USC 6505) lets CRREL work with state and local governments on a broad range of reimbursable projects. Under the "Authority to Sell" (10 USC 2539b), CRREL can provide test and evaluation services to the states and the private sector. This includes the testing and evaluation of materials, equipment, models, computer software, and other items. The laboratory can also provide support to other Federal agencies via the Economy in Government Act (31 USC 1535) through MOUs/MOAs that establish a framework for the partnership and provide a concise description of the planned work. CRREL's 35 active Cooperative Research and Development Agreements (CRADAs) with industry and academia and 17 Intergovernmental Cooperation Agreements with states and local governments in 1998 demonstrate a robust program in this area and the relevance of CRREL's research to many segments of American society beyond DoD.

The Corps of Engineers has several programs available under its Civil Works authorities to address flooding problems. These programs provide assistance either through the construction of structural and nonstructural projects to mitigate the flooding problem or by providing technical information to assist mitigation performed at the state or local level. Flood damage reduction projects constructed by the Corps of Engineers must demonstrate, based on current Federal guidelines, that the flood damages prevented by the project's construction exceed its total cost. The Corps must also demonstrate that the 10-year frequency flood discharge at the point of concern is equal to or greater than 800 cubic-feet per second (cfs). Technical assistance provided by the Corps does not need to meet the above criteria. Through the Corps, IERD has been involved in Section 205 Flood Damage Reduction program, Section 22 Planning Assistance to States Program (PAS)) projects, the Section 206 Flood Plain Management Services (FPMS) program funded jointly with FEMA, and numerous instances of technical assistance.

CRREL IERD Resources with Respect to Hazard Mitigation:

Corps: CRREL works jointly with the Corps' New England Division to address regional and local ice-related hazard mitigation needs through a variety of means. Congressionally authorized water resources investigations have resulted in the planning, design and implementation of many flood control and flood damage reduction projects. Work conducted under a Congressional authorization can be extensive and there is currently no monetary limit of funding. Typically there is a 1-2 year minimum delay in the identification of a proposed investigation and the funding of that work. The first phase of study, the Reconnaissance investigation, is 100 percent Federally funded and must be completed within twelve months. The second phase, the Feasibility investigations, must be cost-shared with a local sponsor where the sponsor provides 50 percent of the cost of the feasibility study. Congress in a Water Resources Development Act must specifically authorize construction of any project resulting from a General Investigation study. The cost of implementation for flood damage reduction projects is generally 65 percent Federal and 35 percent non-Federal.

Through the Continuing Authorities Programs of the Corps many structural and non-structural local protection project reducing or eliminating damages from flooding have been constructed. Investigations initiated under the Corps Continuing Authorities do not require specific congressional authorization are initiated simply with a request from the State or community to the New England District. The following is a list of Continuing Authorities applicable to flood mitigation:

Section 205 - Flood Damage Reduction: Investigations are conducted under this program to assist local communities to identify flooding problems and to formulate and construct alternatives for flood damage reduction. The local sponsor is required to cost-share equally in the cost of the feasibility investigation that exceeds \$100,000 and the Federal limit is \$5,000,000. The local sponsor is required to contribute 25 percent of the cost of plans, specifications and construction.

Section 22 - Planning Assistance to States Program (PAS): The Planning Assistance to States Program is designed to assist the States in developing comprehensive plans to meet State planning goals. The program is extremely flexible in the type and the methodology of investigations. Studies conducted under the PAS program require a 50/50 cost share with a local sponsor. The existing funding limits are \$300,000 per state and a national budget not to exceed \$5,000,000.

Section 206 - Flood Plain Management Services (FPMS): The FPMS Program is designed for the Corps to assist States and local communities improve management of flood plains by performing technical assistance and conducting special investigations. Cost recovery has been implemented in this program effective in FY 1991. Under cost recovery, assistance provided to Federal agencies and private interests must be fully reimbursed by those customers. States and local communities are still provided technical assistance at 100 percent Federal cost. One of the major efforts being conducted under the FPMS program at this time is the preparation of Hurricane Evacuation Studies. These studies are jointly funded with the Federal Emergency Management Agency.

Personnel:

IERD was created to research, analyze and solve ice problems in and around water bodies. The technical experience of the staff and their in-depth research and field capabilities combine with CRREL's unique Ice Engineering Facility to form one of the premier ice engineering organizations in the world. IERD has a staff of 15 engineers and technicians experienced in technical analyses, methods and engineering solutions to ice problems -- that is, any situation where the effects of ice cause flooding, increase operational and maintenance requirements of water control projects, impede navigation, or adversely impact the environment in cold regions.

Equipment and Facilities:

The Ice Engineering Facility was built to increase the research capabilities of the U.S. Army Cold Regions Research and Engineering Laboratory. It is a two-story building approximately 160 by 210 feet containing three primary cold spaces: the test Basin, Flume, and Research Area. They have recently designed and built a new

Wind Tunnel Facility. In addition, there is a machine room in the basement, an instrumentation corridor separating the flume and test basin spaces, a shop/storage area, and one sample-storage cold room.

The Test Basin was designed primarily for large-scale work on ice forces on structures, such as drill platforms and bridge piers, and for tests using model icebreakers. The Basin is 30 feet wide, 8 feet deep and 120 feet long. The room is designed to operate at any temperatures between +65° and -10°F with very even temperature distribution, which results in uniform ice thickness. Other studies conducted in the Test Basin concern the formation of ice pressure ridges, ice problems in and around navigation locks and vertical uplift forces.

The Flume is situated in a room where the temperature can be regulated between +65° and -20° F. The Flume is 2 by 4 feet in cross section and 120 feet long. It can tilt from +2° to -1° slope, have a flow capacity of nearly 14 cubic feet per second and have a refrigerated bottom. Some other studies conducted in the Flume are the formation of ice covers and frazil ice, the hydraulics of ice-covered rivers, the formation of ice jams, and the effect of ice covers on sediment transport and scour.

Possibly the most versatile portion of the Ice Engineering Facility is the Research Area. This room is 80 by 160 feet clear span and has a temperature range of +65° to -10°F. Piping capable of providing a flow of 1, 2, 4 or 8 cubic feet per second is located on one side of the room, and a large drain trough is on the other. The floor is designed for loads up to 400 pounds per square foot. Models of reaches can be constructed in this area to test ways to alleviate ice jams through channel modification. Tests of the bearing capacity of large ice sheets and cold-testing of vehicles and structures are a few of the other potential uses of this space. Tests conducted in this room will help to alleviate much of the flooding caused by ice jams.

USDA, Natural Resources Conservation Service

Contacts:

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Edward Hansalik, Civil Engineer; Phone: (603) 868-7581, Fax: (603) 868-5301
E-mail: ehansalik@nh.usda.gov

Address: Federal Building
2 Madbury Road
Durham, NH 03824

Description and Mission:

The Natural Resources Conservation Service (NRCS) is a Federal agency within the US Department of Agriculture. The mission of the NRCS is to help people conserve, improve and sustain our natural resources and environment. NRCS, formerly the Soil Conservation Service, is the lead federal agency for conservation on private land. NRCS provides conservation technical assistance through local

conservation districts and Resource Conservation and Development (RC&D) Councils to individuals, communities, watershed groups, tribal governments, federal, state, and local agencies, and others. NRCS has an interdisciplinary staff of professional engineers, planners, biologists, foresters, agronomists, and soil scientists working together to provide the necessary technical assistance to solve resource or environmental problems. NRCS products typically include conservation plans, study reports, engineering designs, and resource maps.

Authorities and Funding:

NRCS state and field offices derive funding from two possible sources, direct Federal appropriations and reimbursable agreements with agencies and units of government. NRCS manages several programs; Environmental Quality Incentive Program (EQIP), Wildlife Habitat Incentives Program (WHIP), Wetland Reserve Program (WRP), Forestry Incentives Program (FIP), and Farmland Protection Program (FPP) which provide cost-share assistance to landowners and users (primarily agricultural or forestry land) to install conservation practices to restore and protect natural resources. NRCS can also provide technical assistance ranging from preliminary reviews to complete detail designs to landowners/users solving resource problems even if financial assistance is not being provided for the installation of conservation practices. This assistance is dependent on staff availability and priorities.

NRCS also manages the Emergency Watershed Protection (EWP) program, which can provide financial and technical assistance to units of government and groups to repair damages sustained from a natural disaster (flood, fire, hurricane, tornado) creating an imminent hazard to life and property. The restoration efforts must be environmentally and economically cost effective and typically includes clearing debris from clogged stream channels, stabilizing eroded stream banks and restoring vegetation for stabilization purposes. NRCS can also provide technical assistance to watershed associations or groups to develop comprehensive plans for improving or protecting the watershed environment (water quality, flood reduction, wildlife habitat).

Mitigation Involvement:

The NRCS can provide technical assistance to conduct inventories, to complete watershed or site-specific plans, or to develop detail engineering and construction designs for conservation applications that will help reduce future damages from natural disasters. Some examples of past mitigation efforts include: floodplain management studies for towns, site assessments of stream flow impairments, stabilization designs to protect structures which could sustain severe damages from another storm event, and small watershed plans addressing flooding problems. Some of these products can be provided through other conservation assistance efforts. However, the major jobs would require a reimbursable agreement with the state or towns to complete the work.

Mitigation Goals and Objectives:

With respect to hazard mitigation, the goal of the NRCS in New Hampshire is to meet the needs of the State and local governments by providing timely technical assistance to support recovery and restoration efforts. NRCS can contribute this

technical assistance by interacting directly with NH HSEM at the state level and having field staff working directly with Town Emergency Management officials at the local level. Short-term goals are to establish contacts with local officials and the conservation districts at the field office level to facilitate quicker response times. Intermediate and long-term objectives are to improve the cooperative efforts of working with NH HSEM and establish additional contacts for providing timely technical assistance at the local level.

Projects/Planning Desired:

NRCS would like to work with local watershed associations to develop comprehensive plans addressing resource and environmental needs and opportunities in the priority watersheds as identified in the Unified Watershed Assessment. These plans can provide the basis for targeting and requesting special funding to meet the needs of the local watershed association. Technical assistance for planning and designing along with public information dissemination are the typical activities the agency can provide in this effort.

NRCS Resources with respect to Hazard Mitigation

Personnel:

NRCS in New Hampshire has a workforce of 45 staff members along with 5 multi-state staff members. Approximately 22 staff members consisting of engineers, biologists, foresters, conservation planners, and technicians are available to provide some assistance in mitigation efforts. Support staff of a GIS specialist, computer specialist and public information specialist could assist in providing information for public outreach. This staff is available to provide limited assistance under present program funding authorities. However, larger projects would require reimbursement for planning and design assistance.

Equipment, Physical Facilities and Other Capabilities:

All of the field offices and State office have computers and access to the internet. All of the field offices have survey equipment and all engineers have the use of CADD software. All field offices have access to small meeting rooms and access to the Federal Telecommunications System. Government vehicles are located at all field offices for use by government employees and could be made available in emergencies.

Northeast States Emergency Consortium (NESEC)

Contacts:

Edward S. Fratto, Executive Director: Phone: (781) 224-9876, Fax: (781) 224-4350

E-Mail: www.nesec.org

Kristin M. O'Brien, Assistant Executive Director: Phone: (781) 224-9876 ; e-mail: www.nesec.org

Address: Northeast States Emergency Consortium
419 Main Street, Suite 5

Wakefield, MA 01880

Organization Description:

The Northeast States Emergency Consortium, Inc. (NESEC) is a 501(c)(3) not-for-profit natural disaster mitigation and emergency management organization, located in Wakefield, Massachusetts. NESEC is the only multi-hazard consortium of its kind in the country and is supported and funded by the Federal Emergency Management Agency (FEMA). The eight Northeast States of Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont form the consortium. NESEC has a full-time Executive Director, and Assistant. It is governed by a Board of Directors. The Board is comprised of the Directors of the State Emergency Management Agencies from each of the six New England States and the States of New York and New Jersey.

Organization Mission:

NESEC works in partnership with government and private organizations to reduce losses of life and property from natural disasters in the Northeast United States. The Northeast States are vulnerable to most of the natural hazards, including hurricanes, earthquakes, coastal and inland flooding, tornadoes and micro-bursts, forest fires, drought, lightning, blizzards, and other forms of severe weather. Our developed urban areas and the desire to build and live on waterfront property have increased our degree of risk from natural hazards.

Mitigation Programs:

Grants: NESEC raises funds from government and private sources to support local mitigation projects. These funds are awarded on a competitive basis in the form of grants in the range of \$500-5,000. The name of this program is called the **Power of Prevention**. All grant programs are administered in cooperation with the New Hampshire Homeland Security and Emergency Management (NH HSEM). Communities interested in participating should contact NH HSEM.

HAZUS: NESEC assists FEMA PROJECT IMPACT Communities in the use of HAZUS as a planning platform for incorporating multi-hazard disaster prevention initiatives. NESEC can produce a HAZUS report using default data for each of the initial PROJECT IMPACT Communities. Priority is given to PROJECT IMPACT communities; however, assistance may be provided to other communities as resources allow. This report provides an excellent starting point for communities wishing to utilize HAZUS to identify potential hazards. The NESEC HAZUS Report is multi-hazard and usually contains information on earthquakes, tornadoes, flood and wind.

There is no fee or charge for producing the default HAZUS Report and meeting with the community to discuss the results. All HAZUS support is arranged in cooperation with the New Hampshire Homeland Security and Emergency Management (NH HSEM). Communities interested in participating should contact NH HSEM.

Emergency Generators: NESEC assists communities to establish a partnership with their electric utilities and service companies. The partnership would conduct an energy efficiency audit of the community, recommend cost saving measures, and

implement a cost saving plan. Monthly savings could be used to fund emergency generator(s) for local critical facilities. The utility or energy service company could then lease, install, and maintain generator(s) in a community.

The community would pay a monthly charge for the lease agreement. This charge would not exceed the savings derived through energy efficiency measures, so there would be no capital outlay or additional cost to the community. In fact, some communities may be able to reduce their monthly electric bills in an amount that exceeds the cost of the generator(s) lease agreement.

Monthly savings and utility participation will vary from state to state and community-to-community depending on present electric power usage and efficiency measures and deregulation. There is no fee or charge for assisting communities in establishing partnerships with electric utilities. NESEC assistance will be provided as resources allow. All emergency generator support is arranged in cooperation with the New Hampshire Homeland Security and Emergency Management (NH HSEM). Communities interested in participating should contact NH HSEM.

Federal Mitigation Grant Programs

Pre-Disaster Mitigation Grant Program

The Pre-Disaster Mitigation (PDM) program provides funds to states, territories, tribal governments, communities, and universities for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event. Funding these plans and projects reduces overall risks to the population and structures, while also reducing reliance on funding from actual disaster declarations. PDM grants are to be awarded on a competitive basis and without reference to state allocations, quotas, or other formula-based allocation of funds. <http://www.fema.gov/government/grant/pdm/index.shtm>

Hazard Mitigation Grant Program

The Hazard Mitigation Grant Program (HMGP) provides grants to States and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

<http://www.fema.gov/government/grant/hmgrp/index.shtm>

Flood Mitigation Assistance Program

The Flood Mitigation Assistance (FMA) program was created as part of the National Flood Insurance Reform Act of 1994 (42 U.S.C. 4101) with the goal of reducing or eliminating claims under the [National Flood Insurance Program](#).

FEMA provides FMA funds to assist states and communities in implementing measures that reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes and other structures insurable under the National Flood Insurance Program.

Appendix E: Documentation of the Planning Process

Temple Hazard Mitigation Plan Update

Work Group

Meeting #1

AGENDA

March 13, 2020

2:00 p.m.

**Temple Town Hall Annex
Temple, NH 03084**

- 1. Introduction**
 - a. Discuss the addition of recently added hazards to the State Hazard Mitigation Plan
- 2. Status of Previous Hazard Mitigation Actions**
 - a. Review the Action Plan from the existing Hazard Mitigation Plan to determine what has been completed, deleted, or deferred to the updated plan
- 3. Identify Past and Potential Hazards**
 - a. Review each hazard type and other information on the chart provided in the existing plan (Chapter III)
 - b. Add any new hazards that have occurred since the previous plan was adopted
 - c. Add any “potential hazard” concerns
- 4. Risk Assessment**
 - a. Determine the *Impact*, *Probability* and *Overall Risk* of each potential hazard
- 5. Next Meeting - to be determined**

Name	Title/Affiliation	Email
John Kieley	Emergency Management Director	johnkieley574@gmail.com
George Clark	Fire Chief	tvfdc1@gmail.com
Lisa Murphy	SWRPC	lmurphy@swrpc.org

Temple Hazard Mitigation Work Group

March 13, 2020

Meeting 1

Sign-in Sheet

Temple Hazard Mitigation Plan Update

Work Group

Meeting #2

AGENDA

June 15, 2020

2:00 p.m.

To join this Zoom Meeting click:

<https://bit.ly/June15THMWG20>

Meeting ID: 810 1465 6278

Password: 538578

Or by phone: (646) 558-8656 or (301) 715-8592

1. Introduction

- b. Brief introduction to the new members about the plan update.

2. Identify Past and Potential Hazards

- b. Review each hazard type and other information on the chart provided in the existing plan (Chapter III).
- b. Add any new hazards that have occurred since the previous plan was adopted.
- c. Add any “potential hazard” concerns.

3. Risk Assessment

- a. Share the results of the risk assessment from the previous meeting.
- b. Make edits if needed.

4. Existing Mitigation Strategies

- a. Review the list of mitigation strategies identified in Chapter VII of the current plan.
- b. Determine gaps and edit as needed.

5. Next Meeting – Discuss date and time.

Name	Title/Affiliation	Email
John Kieley	Emergency Management Director	johnkieley574@gmail.com
George Clark	Fire Chief	tvfdc1@gmail.com
Tim Fiske	Road Agent	tfiskeconst@gmail.com
Paul Quin	Citizen	pquinn349@aol.com
Dick Benotti	Citizen	itone062@gmail.com
Liz Gilboy	NH HSEM	Elizabeth.K.Gilboy@DOS.NH.GOV
Lisa Murphy	SWRPC	lmurphy@swrpc.org

Temple Hazard Mitigation Work Group

June 15, 2020

Meeting 2

Sign-in Sheet

Temple Hazard Mitigation Plan Update

Meeting #3

AGENDA

**July 8, 2020
2:00 p.m.**

To join this Zoom Meeting click:

<https://bit.ly/July20THMWG>

**Meeting ID: 821 1399 3328
Password: 405 838**

Telephone: (646) 558-8656 or (312) 626-6799

1. Hazard Mitigation Goals
 - a. Determine the goals for the updated hazard mitigation plan.
2. Identify Potential Hazard Areas/Areas of Concern
 - a. Discuss any areas of concern for future hazard events or occurrences.
3. Identify Gaps in Coverage
 - a. Review the existing coverage for mitigation strategies and identify gaps.
4. Potential Date for Next Meeting - Wednesday, July 29th at 2:00 p.m.

Name	Title/Affiliation	Email
John Kieley	Emergency Management Director	johnkieley574@gmail.com
George Clark	Fire Chief	tvfde1@gmail.com
Tim Fiske	Road Agent	tfiskeconst@gmail.com
Paul Quin	Citizen	pquinn349@aol.com
Dick Benotti	Citizen	itone062@gmail.com
Kayla Henderson	NH HSEM	Kayla.Henderson@dos.nh.gov
Liz Gilboy	NH HSEM	Elizabeth.K.Gilboy@dos.nh.gov
Lisa Murphy	SWRPC	lmurphy@swrpc.org

Temple Hazard Mitigation Work Group
July 8, 2020
Meeting 3

Sign-in Sheet

Temple Hazard Mitigation Plan Update

Meeting #4

AGENDA

August 12, 2020

2:00 p.m.

To join this Zoom Meeting click:

<https://bit.ly/July29THMPWG20>

Meeting ID: 863 5189 7709

Password: 379759

Telephone: (646) 558-8656 or (312) 626-6799

1. Hazard Mitigation Goals
 - a. Determine the goals for the updated hazard mitigation plan.
2. Identify Potential Hazard Areas/Areas of Concern
 - a. Discuss any areas of concern for future hazard events or occurrences.
3. Identify Mitigation Actions for Each Hazard
 - a. Identify specific locations to be added to the Action Plan.
4. Potential Date for Next Meeting: TBD

Name	Title/Affiliation	Email
John Kieley	Emergency Management Director	johnkieley574@gmail.com
George Clark	Fire Chief	tvfdcl@gmail.com
Tim Fiske	Road Agent	tfiskeconst@gmail.com
Dick Benotti	Citizen	itone062@gmail.com
Kayla Henderson	NH HSEM	Kayla.Henderson@dos.nh.gov
Liz Gilboy	NH HSEM	Elizabeth.K.Gilboy@dos.nh.gov
Lisa Murphy	SWRPC	lmurphy@swrpc.org

Temple Hazard Mitigation Work Group

August 12, 2020

Meeting 4

Sign-in Sheet

Temple Hazard Mitigation Plan Update

Meeting #5

AGENDA

September 9, 2020

2:00 p.m.

To join this Zoom Meeting click: <https://bit.ly/Sept9THMWG20>

Meeting ID: 828 0171 5165

Or by phone: (646) 558-8656

- 1. Action Plan**
 - b. Complete the chart that identifies the Who, When and Funding for each mitigation strategy.
- 2. Community Profile**
 - a. Review the town profile information for accuracy.
- 3. Potential Date for Next Meeting: October 21, 2020 at 2:00 p.m.**

Name	Title/Affiliation	Email
John Kieley	Emergency Management Director	johnkieley574@gmail.com
George Clark	Fire Chief	tvfdc1@gmail.com
Tim Fiske	Road Agent	tfiskeconst@gmail.com
Dick Benotti	Citizen	itone062@gmail.com
Liz Gilboy	NH HSEM	Elizabeth.K.Gilboy@dos.nh.gov
Lisa Murphy	SWRPC	lmurphy@swrpc.org

Temple Hazard Mitigation Work Group
September 9, 2020
Meeting 5

Sign-in Sheet

Temple Hazard Mitigation Plan Update

Meeting #6

AGENDA

October 28, 2020

4:30 p.m.

Join Zoom Meeting

<http://bit.ly/Oct28THMPU20>

Meeting ID: 868 2155 1838

Passcode: 225 410

Join by Telephone: 1-646-558-8656

- I. Review the Draft Plan**
 - a. Make final edits to the draft plan.
- 2. Discuss the Next Steps**

Name	Title/Affiliation	Email
John Kieley	Emergency Management Director	johnkieley574@gmail.com
George Clark	Fire Chief	tvfdc1@gmail.com
Lisa Murphy	SWRPC	lmurphy@swrpc.org

Temple Hazard Mitigation Work Group
October 28, 2020
Meeting 6
Sign-in Sheet

Temple Public Viewing Period: February 22 to March 15, 2021



Temple Hazard Mitigation Plan Update 2021

POSTED ON: FEBRUARY 22, 2021 - 1:30PM

Attachment

[templedraft 2021.pdf](#)

423 Route 45, PO Box 191
Temple, NH 03084
(603) 878-2536

Appendix F: 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.

Hazard Mitigation Plan- Project Status

Project Title	Page # in Plan	Date of Project Completion	Comments

