TOWN OF GILFORD, NH
Hazard Mitigation Plan Update 2018

Town Adoption Date: June 13, 2018
FEMA Approval Date: July 13, 2018

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Original Edition: June 26, 2013
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Chapter 1
INTRODUCTION

Authority

This Hazard Mitigation Plan was prepared in accordance with the Disaster Mitigation Act of 2000 (DMA), Section 322, Mitigation Planning. Accordingly, this Hazard Mitigation Plan will be referred to as the "Plan".

Funding Source

This Plan was funded by the NH Homeland Security and Emergency Management (HSEM) through a Pre-Disaster Mitigation (PDM) grant, with matching funds by the Town of Gilford.

Purpose

This Hazard Mitigation Plan is a planning tool to be used by the Town of Gilford, as well as other local, state and federal governments, in their effort to reduce the effects from natural and man-made hazards.

Introduction

On October 30, 2000 the President signed into law the Disaster Mitigation Act of 2000 (DMA 2000). The ultimate purpose of DMA 2000 is to:

- Establish a national disaster hazard mitigation program that will reduce loss of life and property, human suffering, economic disruption, and disaster assistance costs resulting from disasters, and
- Provide a source of pre-disaster hazard mitigation funding that will assist State and local governments in accomplishing that purpose.

DMA 2000 amends the Robert T. Stafford Disaster Relief and Emergency Assistance Act by, among other things, adding a new section, 322 – Mitigation Planning. This places new emphasis on local mitigation planning. **It requires local governments to prepare and adopt jurisdiction-wide hazard mitigation plans as a condition of receiving Hazard Mitigation Assistance (HMA) grants.** Local governments must review and if necessary, update the mitigation plan every five years to continue program eligibility. However, it is recommended that this Plan be reviewed/updated annually or after a hazard event to be consistent with Chapter 7.

<u>Why Develop a Mitigation Plan?</u>

The full cost of the damage resulting from natural hazards – personal suffering, loss of lives, disruption of the economy, loss of tax base – is difficult to measure. Our State is subject to many types of natural hazards: floods, hurricanes, severe winter weather, earthquakes, tornadoes, downbursts, and wildfires, all of which can have significant economic and social impacts. Some, such as hurricanes, are seasonal and strike in predictable locations. Others, such as floods, can occur anytime of the year and almost anywhere in the State.

Scope of the Plan

The scope of this Plan includes the identification of natural hazards affecting the town, as identified by the Hazard Mitigation Planning Committee. The hazards reviewed under the scope of this plan include those that are outlined in the State of New Hampshire's Multi-Hazard Mitigation Plan Update 2013. However, the Committee chose not to include avalanche, landslide, radon or subsidence in this plan, due to no history or risk of these hazards in the Town.

Dam Failure	**Flooding**	**Lightning/Thunder**
Drought	**Hail**	**Tornado/Downburst**
Extreme Heat	**Hurricane**	**Winter Weather**
Earthquake	**Human Caused Hazards**	**Wild/Forest Fire**

Methodology

During the 2018 Update, the Hazard Mitigation Planning Committee with the assistance of Hubbard Consulting LLC held a total of 4 meetings on November 3, 2017, November 17, 2017, December 15, 2017 and January 26, 2018. Public notices were posted at the Town Office, Town Website, Post Office and Library inviting members of all town departments and boards, surrounding communities, businesses, academia, State agencies and non-profit agencies. In addition, email notifications were sent to adjacent communities, the Lakes Region Planning Commission, the Chamber of Commerce and the NH HSEM. There were no members of the general public that attended the committee meetings. The Emergency Management Directors from surrounding towns were notified of the Plan Update and asked to comment on the Plan (see Appendix B). The committee analyzed and revised the following sections of the Plan and provided input to update them: Chapters 1, 2, 3, 4, 5, 6 and 7. After acceptance by the committee, the Plan was submitted to the NH HSEM for formal Approval. The Board of Selectmen formally adopted the plan on June 13, 2018. FEMA approved the plan on July 13, 2018.

The committee developed this Plan as a result of the above meetings and the following planning process.

Step 1: Form a Hazard Mitigation Planning Committee

Prior to the first public information meeting the Emergency Management Director contacted town department heads to serve on the committee. In addition, a press release was published in the town office, post office and town website inviting residents, businesses, neighboring communities, academia and other private non-profit interests to participate in the planning process. Finally, an email invitation was sent to EMDs of surrounding towns, State Agencies, Regional Planning Commission and the local Chamber of Commerce (See Appendix B). The Committee Members consisted of town staff.

Step 2: Set Hazard Mitigation Goals and Objectives

At the first working meeting the committee reviewed and made minor revisions to the town's Hazard Mitigation Goals. The Hazard Mitigation Goals were adapted from the State's Multi-Hazard Mitigation Plan Update 2013. This first step is extremely important in helping the committee understand the purpose of the Plan and the direction it should go. (See the end of this chapter for the "Hazard Mitigation Goals of the Town of Gilford, NH".)

Step 3: Hazard Identification

The Committee members identified natural hazards and human-caused hazards that have or could potentially affect the Town of Gilford. The results of this step can be found in Chapters 2 and 3.

Step 4: Critical Facilities Analysis

The committee members updated the Critical Facilities List for the town. The Critical Facilities List is divided into 3 sections: Facilities needed for Emergency Response; Facilities not necessary for emergency response; and places and populations to protect in the event of a disaster. The results of this step can be found in Chapter 4.

Step 5: Capability Assessment

The committee members identified what plans and policies are already in place to reduce the effects of hazards. The results of this step can be found in Chapter 5. Many of these plans and technical reports were reviewed and incorporated during the planning process, including the Gilford Emergency Operations Plan (2013) and the Gilford Master Plan (2004).

Step 6: Develop Objectives

The Committee identified "Problem Statements" for each of the hazards identified earlier in the planning process. All of the hazards have at least one problem statement associated with them (See Problem Statement in Appendix B). These problem statements were then utilized as objectives in developing mitigation projects, as described in the next step.

Step 7: Develop Specific Mitigation Measures

As a result of the problem statements identified in step 6, the committee brainstormed specific projects or mitigation measures to address each hazard. The Committee Members used the "*Mitigation Project Identification Worksheet*", as shown in Appendix B, to identify mitigation projects that directly address the hazards affecting the community. Finally, the committee prioritized the top priority projects and listed them in the Mitigation Action Plan found at the end of Chapter 6.

Step 8: Adopt and Implement the Plan

After acceptance by the committee the Plan was submitted to the NH Homeland Security and Emergency Management for formal Approval. The Board of Selectmen formally adopted the Plan on June 13, 2018. The letter of approval from NH HSEM can be found in Appendix C.

With respect to any ongoing mitigation projects, the lead and support agencies/people for such activity will be tasked with implementing the Plan's mitigation projects. The committee approved the "Prioritized Mitigation Projects" list, which identifies responsibility, funding/support and a timeframe for each of the prioritized projects. The Emergency Management Director should be tasked with requesting annual reports as to the progress of each project.

Step 9: Monitor and Update the Plan

It is important that this plan be monitored and updated annually or after a presidentially declared disaster. Chapter 7 specifically addresses this issue.

Hazard Mitigation Goals
Town of Gilford, NH

During the 2018 update, the Committee reviewed the 2013 Gilford Hazard Mitigation Plan goals and made no revisions. The Goals were not modified for any substantial content, as there has not been any substantial change in development. The goals for the Town of Gilford are as follows:

Goal I: Community and Resource Protection

Reduce the potential impact of natural and manmade disasters on the town's residents and visitors, as well as its critical facilities, property, economy, and natural resources, while improving the emergency communication, alert, and response systems.

Goal II: Outreach and Education

Improve public awareness of the impacts of potential hazards, hazard preparedness and increasingly severe weather events, while increasing the public's involvement in emergency response and recovery.

Goal III: Coordination and Communication

Ensure plans are in place to address various emergency situations and that regular communication occurs between various departments and with local, regional, and state officials; thereby ensuring that those involved are aware of their responsibilities.

Goal IV: Damage Prevention

Minimize the damage and public expense which might be caused to public and private buildings and infrastructure due to natural and manmade hazards; and to address the challenges posed by increasingly severe weather events.

Hazard Mitigation Planning Committee 2018

The Gilford Hazard Mitigation Committee was comprised of the following individuals who met from November 2017 to January 2018.

Name	Title/Affiliation
Dee Chitty	Gilford Buildings and Grounds
Tim Bartlett	Gilford School District
Stephen Carrier	Gilford Fire Chief/EMD
Jane Hubbard	Hubbard Consulting LLC
Dave Andrade	Gilford Code Enforcement
John Ayer	Gilford Planning Department
Scott Dunn	Gilford Town Administrator
Brad Ober	Gilford Fire Department

The committee members listed above participated in monthly committee meetings, provided departmental information, contributed in their field of expertise, reviewed and commented on committee meeting minutes, reviewed drafts of the Plan and worked together to identify and prioritize mitigation projects.

Many thanks to all the hard work and effort from each and every one of you. This plan would not exist without your knowledge and experience.

Thank you!

Chapter 2
COMMUNITY PROFILE

Community Description

The town of Gilford is located in the central portion of Belknap County, in the Lakes Region of New Hampshire. Gilford shares boundaries with Alton to the east, Gilmanton to the south, and Belmont to the southwest. Gilford's western boundary abuts the city of Laconia. The northern portion of Gilford incorporates Lake Winnipesaukee and more than half a dozen of the lake's larger islands.

Gilford consists of 38.8 square miles (24,832 acres) of land and 14.7 square miles (9,408 acres) of water.1 Gilford is part of the Merrimack River watershed. Lake Winnipesaukee dominates the northern portion of the town and the Gunstock, Black, Jewett, Poorfarm, and Meadow Brooks flow through town. Jewett and Black Brooks flow west into Laconia's Opechee and Paugus Bays. The other three brooks flow north and east into Lake Winnipesaukee. While Lake Winnipesaukee is the focal point of the northern section of Gilford, the Belknap

Mountains dominate the eastern and southern portions of town. Peaks include Belknap (3,821'), Gunstock (2,245'), and Piper (2,041') Mountains along with and Mount Rowe (1,680'). Forty percent of Gilford's land has greater than a 15% slope, and eighteen percent of the land has slope greater than 25%. To the west and north of the mountains the landscape is a mix of rolling hills and wetlands.

Governor's Island is home to many year-round and seasonal residents; it can be reached by a bridge in Laconia. There are several other wooded islands in the lake that are part of the town of Gilford and home to seasonal residents.

National Flood Insurance Program (NFIP)

Floodplains for this Plan are defined as the 100-year and 500-year flood hazard zones, as depicted on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM). The current effective flood maps are dated May 4, 1992. Gilford participates in the National Flood Insurance Program (NFIP) administered by FEMA. In order to enable landowners to qualify for federally insured flood insurance, the Town, in its administration of site plan review, subdivision regulations and zoning, must regulate development in the floodplain using federal standards.

The Town's existing ordinance meets the minimum requirements of the NFIP, according to the latest Community Assistance Visit. The Town will continue to maintain procedures and regulations that are in compliance with the NFIP by conducting Community Assistance Visits (CAVs) and Community Assistance Contacts (CAC) with the Office of Strategic Initiative and updating the Floodplain Ordinance as federal requirements are updated. The last CAV was conducted on August 10, 2012. The town is currently participating in the National Flood Insurance Program (NFIP), as of June 19, 1989.

National Flood Insurance Policies	Policies in Force	Insurance in Force	Number of Closed Paid Losses	$ of Paid Losses
Single Family	32			
2-4 Family	0			
All Other Residential	1			
Non Residential	7			
Total	40	8,705,000	4	$32,933
Note: There are no repetitive flood loss properties in the Town of Gilford				

Disaster Risk

Gilford is prone to a variety of natural hazards. These include: flooding, dam breach, severe wind events (downbursts, hurricanes, and tornadic activity), wildfire, drought, earthquake, lightning/thunder, hail, extreme heat, and severe winter weather, in addition to man-made hazards. The following table summarizes the impact and probability of natural and man-made hazards.

Natural & Human Caused Hazards	Comments	**Impact** Impact on life, property, business 0: None 1: Minimal 2: Moderate 3: Severe	**Probability*** *In 25 years* Likelihood this will occur 0: None 1: Low 2: Moderate 3: High	**Risk** *Severity x Probability* 0-3: Low 4-6: Moderate 7-9 High
Flood		3	3	**9**
Severe Winter Weather	Electrical infrastructure	3	3	**9**
Hurricane		3	2	**6**
Multiple Vehicle Accident		2	3	**6**
Aircraft Accident	Neighborhoods in flight path	3	2	**6**
Terrorism		3	2	**6**
Thunderstorm / Lightning		2	2	**4**
Hazmat Transport		2	2	**4**
Special Events	Number of events is increasing	2	2	**4**
Wildfire		3	1	**3**
Tornado/Downburst		3	1	**3**
Pandemic	Staff reductions	3	1	**3**
Conflagration	Lakeshore Park	2	1	**2**
Earthquake		2	1	**2**
Boating Accident		2	1	**2**
Drinking Water Contamination	Private wells	2	1	**2**
Drought		2	1	**2**
Radioactive Event	Gilford is a receiver town	1	1	**1**
Dam Failure		1	1	**1**
Extreme Heat	Extra power usage, especially by the elderly.	1	1	**1**
Hail	Agriculture/Property	1	1	**1**

CALCULATING POTENTIAL LOSS

It is difficult to determine the amount of damage that could be caused by natural or human-caused hazards because the damage will depend on the hazard's extent and severity, making each hazard event somewhat unique. Therefore, to calculate potential economic loss, we have assumed that structures impacted by hazards could result in damage of either 1% or 5% of the assessed value.

Based on this assumption, the potential loss from any of the identified hazards would range from $27,943,156 (1%) or $139,715,782 (5%) based on the 2017 town valuations which lists the assessed value of all structures in Gilford to be $2,794,315,647. (See table below). Human loss of life was not included in the potential loss estimates, but could be expected to occur, depending on the severity and type of the hazard.

ASSESSED VALUE OF ALL STRUCTURES			
Type	**2017Value**	**1% Damage**	**5% Damage**
Residential	886,691,955	8,866,920	44,334,598
Manufactured Housing	19,625,000	196,250	981,250
Commercial	133,480,300	1,334,803	6,674,015
Tax Exempt	1,745,286,522	17,452,865	87,264,326
Utilities	9,231,870	92,319	461,594
Total	**2,794,315,647**	**27,943,156**	**139,715,782**
Source: NH DRA 2017 MS-1			

CURRENT DEVELOPMENT TRENDS [1]

According to the NH Employment Security website, "Population change for Gilford totaled 5,097 over 55 years, from 2,043 in 1960 to 7,140 in 2015. The largest decennial percent change was a 58 percent increase between 1960 and 1970, followed by increases of 50 and 24 percent, respectively over the next two decades. The 2015 Census estimate for Gilford was 7,140 residents, which ranked 44th among New Hampshire's incorporated cities and towns." The minimal amount of growth over the last 15 years does not require any changes to priorities of this Plan.

Current projections from the New Hampshire Office of Strategic Initiative (NH OSI) show the population growth rate will gradually increase over the next twenty years, where the year-round population in 2040 is projected to be 7,621.

Gilford Population Projection	
Year	**Population**
2020	7,200
2025	7,268
2030	7,385
2040	7,621

[1] 2010 US Census Data

Residential Building Permits Issued	
Time Period	**# of Permits**
2013	25
2014	22
2015	47
2016	34
2017	36

According to the 2004 Gilford Master Plan, "Gilford continues to grow…..Gilford is a classic New England small town with a quaint village, small-town feel, active farms, and tree-covered rolling hills. To many people, these are very appealing traits in a community. Both the excellent quality of Gilford schools and the low crime rate attract many families. The natural setting, rural atmosphere, beautiful views, proximity to Lake Winnipesaukee, and availability of recreational opportunities continue to draw people…..Additionally, many property owners are converting their seasonal homes to year-round homes, thereby further swelling the permanent population."

Commercial development, including a couple of "big box stores", has been occurring in Gilford, primarily along the border with Laconia, along US Route 3 and NH Route 11 A (McIntyre Circle), and in the Industrial Park. There has been an increase in the number of events at the Meadowbrook pavilion. The runway at the airport was recently extended to be able to accommodate planes as large as a DC-9. Anticipated changes include the continued transition of Gunstock Mountain Resort to a four-season facility and the Meadowbrook pavilion recently expanded from 4,500 to 9,800 seats.

FUTURE DEVELOPMENT

Gilford Population Growth	
Year	**Population**
2015	7,140
2010	7,126
2000	6,836
1990	6,016
1980	4,841
1970	3,219
Source:http://www.nhes.nh.gov/elmi/products/cp/profiles-htm/Gilford.htm	

As identified in the Vision Statement of the 2004 Gilford Master Plan, "Gilford will continue to be a slowly growing rural community where residents and visitors enjoy an abundance of natural resources and recreational amenities. It will continue to include both full-time residents and a large number of part-time/vacation residents whose permanent homes are in other towns and other states. Gilford will continue to be a community where residents and visitors are enriched by cultural, historical, and educational opportunities. Gilford will continue to accommodate and be a good location for business including agricultural, retail, tourism, home-based, office, and manufacturing businesses. Gilford will continue to be sensitive to and protective of the strong points that have historically defined her character while improving their value to individuals, the community, and the region. Gilford will work to implement the principles of smart growth to help achieve this vision."

The Hazard Mitigation Planning Committee utilized the 2004 Master Plan to review and incorporate development changes. However, due to no substantial changes in development, there were no changes in priorities made to the Plan. Consequently, the Town's overall vulnerability to the identified hazards has remained the same.

Chapter 3
HAZARD IDENTIFICATION

FLOODING

Probability: High

Definition:
Flooding is the temporary overflow of water onto land that is not normally covered by water. Flooding results from the overflow of major rivers and tributaries, storm surges, and/or inadequate local drainage. Flooding events considered in this Plan include 100-year and 500-year floodplain events, rapid snow pack melt and ice jams.

Location:
Flooding occurs in the 100-year floodplain as designated on the FEMA Flood Insurance Rate Map. These 100-year floodplain areas primarily include Lake Winnipesaukee, Black Brook, Gunstock Brook and other minor tributaries. The potential is moderate, and the impact historically is minimal to structures but moderate to infrastructure such as culverts and roads.

The state of New Hampshire controls the water level on Lake Winnipesaukee through operation of the Elm Street Dam in Laconia. Continual monitoring of the lake's water level helps to minimize the risk of shoreline flooding. Gunstock Brook was the subject of a floodplain management study. While erosion problems were addressed through a 1995 demonstration project which addressed prominent flooding and erosion issues on Gunstock Brook, the committee noted that there are still issues with erosion and sedimentation related to maintenance by private landowners. A stream assessment study of Gunstock Brook to gain a better understanding of its erosion and sedimentation patterns was finalized in July 201248. The lower portion of the brook runs along NH 11B, an evacuation route. Other areas susceptible to flooding are NH Route 11 between Gunstock Meadows and Airport Road (evacuation route), McIntyre Circle (commercial activity), and a small residential area at the end of Bickford Road. The impacts of flooding in Gilford are usually limited to roads – limited emergency access and ability to evacuate and damage due to erosion. There may also be some lost business in the McIntyre Circle commercial area.

Impact:
The extent of damage caused by any flood depends on the depth and duration of flooding, the topography of the area flooded, velocity of flow, rate of rise, and the amount and form of development in the floodplain. Most of the past flooding events result in erosion and damage to culverts and roads throughout town.

Extent:
FEMA defines flood hazards by the 100-year and 500-year flood events. A 100-year flood event is defined as flood event having a 1% chance of being equaled or exceeded in any given year. The 500-year flood event is defined as flood event having a .2% chance of being equaled or exceeded in any given year. The Town of Gilford Flood Insurance Rate Maps (FIRM) identify both an A and AE zones. A zones are subject to the 100-year flood, however because there have been no detailed hydraulic studies, there is no Base Flood

Elevation (BFE) determined for these zones. The AE zones are subject to the 100-year flood and have BFEs delineated on the FIRM.

Previous Occurrence:

Oct 15, 2005: Heavy rain fell over NH due to the rapid development of surface low pressure well to the southeast of New England. Rainfall amounts ranged from 3 inches in southern NH up to 9.26 inches at Pinkham Notch. This resulting flooding of small rivers and streams caused additional damage to roads that had been damaged earlier in the month.

May 13, 2006: Over 12 inches of rain fell in Belknap County, in some locations in a 72 hour period. Homes and businesses were damaged extensively. Many roads were washed out and impassable. Some bridges were damaged or destroyed.

August 10, 2008: 3 inches of rain caused small stream flooding in Gilford.

August 28, 2011 (FEMA Declared Disaster #4026): Hurricane Irene made landfall across western Long Island, NY and was downgraded to a Tropical Storm as it moved into and through New England. The storm brought a prolonged period of strong and gusty winds and heavy rain to the state. The high winds snapped or uprooted numerous trees throughout the state causing more than 160,000 customers to lose electrical and/or communication services. The heavy rains caused rivers and streams throughout the state to flood causing damage to bridges, roads, and property. Rainfall amounts across the state ranged from 1.5 to 3 inches across southeastern New Hampshire with 3 to 6 inches across most of the remainder of the State.

October 29, 2012 (FEMA Declared Disaster #4095 on 11/28/12): Hurricane Sandy remnant winds across much of the State generally gusted from 40 to 70 mph Monday and Monday night. These strong and persistent winds combined with the powerful gusts to down numerous trees throughout the State and caused widespread power outages, especially across southern New Hampshire. The most significant hydrological impact from the storm was due to the band of heavy rain that fell between Monday afternoon and Tuesday morning. Across the State, this band produced 1 to 3 inches of rain in about a 6- to 12-hour period. This amount of heavy rain in the short duration caused some road washouts in the State. High winds associated with the remnants of Sandy knocked down trees and branches and caused widespread power outages causing an estimated $200,000 in damages. There was minimal impact in the Town of Gilford.

June 19, 2017: A very moist air mass was in place across the region on the afternoon of July 19th as a cold front approached from the west.. A strong, low-level jet of 50 knots and flow that was nearly parallel to the front caused storms to train across the area, adding to the flash flood risk. Numerous reports of wind damage and flash flooding were received during this event. Two to three inches of rain in 3 hours caused numerous flooded roads and road washouts in Gilford.

October 29, 2017: An area of low pressure over the southeastern United States on the morning of Sunday, October 29th, intensified rapidly Sunday night and Monday, October 30, as it moved northward and moisture and energy from the remnants of Tropical Storm Philippe merged with the storm. Heavy rain accompanied high winds over New Hampshire leading to both flash flooding and main-stem river flooding. The highest rainfall amounts were observed in the White Mountains. While the high winds and heavy rain ended during the morning of the 30th, flooding persisted into the late afternoon of November 1st. Rainfall amounts generally ranged from 2 to 5 inches across New Hampshire. Most of this rain fell within a 10-hour period from late Sunday evening through early Monday morning. By Wednesday evening, November 1st, all flooding had subsided. Power restoration efforts in the hardest hit areas across New Hampshire persisted for much of the week.

WINTER WEATHER

Probability: High

Definition:
Heavy Snow Storms: A winter storm can range from moderate snow to blizzard conditions. Blizzard conditions are considered blinding wind-driven snow over 35 mph that lasts several days. A severe winter storm deposits four or more inches of snow during a 12-hour period or six inches of snow during a 24-hour period. **Ice Storms**: An ice storm involves rain that freezes upon impact. Ice coating at least one-fourth inch in thickness is heavy enough to damage trees, overhead wires and similar objects.
Blizzard: A blizzard is a violent snowstorm with winds blowing at a minimum speed of 35 miles (56 kilometers) per hour and visibility of less than one-quarter mile (400 meters) for three hours. **Nor'Easter**: A Nor'easter is a large weather system traveling from south to north, passing along the coast. As the storm's intensity increases, the resulting counterclockwise winds impacted the coast and inland areas in a Northeasterly direction. Winds from a Nor'easter can meet or exceed hurricane force winds.

Location:
There is a town-wide vulnerability to severe winter weather. Nor'easters (wind), Ice Storms, Heavy Snow Accumulations and Severe Cold can occur at any place within the town and generally affect the entire town when it happens. The higher elevations are more likely to experience snow or ice before the lower terrain.

Impact:
Heavy snow accumulations (generally considered one that deposits six or more inches of snow in a 12-hour period) especially those associated with nor'easters can have a significant affect on the Town, including extended power outages, road closures, collapsed roofs and increased snow removal costs. During ice storms, ice forms on cold surfaces, such as trees and power lines, and may continue to form until the ice is quite deep, as much as several inches thick. Ice damage results in power outages, road closures and forest damage. Ice on the roads can be the most difficult for a rapid emergency response. Private roads are difficult for emergency response vehicles due to restricted access during winter.

Extent:
NOAA's National Climatic Data Center produced the Regional Snowfall Index (RSI) for significant snowstorms that impact the eastern two thirds of the U.S. The RSI ranks snowstorm impacts on a scale from 1 to 5, similar to the Fujita scale for tornadoes or the Saffir-Simpson scale for hurricanes. In addition, the National Weather Service developed and utilizes the Sperry-Piltz Ice Accumulation Index (SPIA) to forecast the impact of an ice storm. The index below ranges from an ice storm rated as "0" which has little impact, to an index rating of 5 that has catastrophic damage to exposed utility systems.

CATEGORY	RSI VALUE	DESCRIPTION
1	1–3	Notable
2	3–6	Significant
3	6–10	Major
4	10–18	Crippling
5	18.0+	Extreme

Previous Occurrence:

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 & widespread utility interruptions with extensive damage to main distribution feeder lines & 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.

December 17-20, 1929: Unprecedented disruption and damage to telephone, telegraph and power system. Comparable to 1998 Ice Storm.

December 26-28, 1969: Third and most severe storm of 3 that occurred over a 10-day period. Up to 10 inches of snow across central NH.

February 5-7, 1978: Events accumulations to 28" in northeast New Hampshire, 25" in west central New Hampshire and 33" along coastal New Hampshire. Hurricane-force winds and record-breaking snowfall made this storm one of the more intense to occur this century across parts of the northeastern US.

January 15, 1998: Federal disaster declaration DR-1199- NH, 20 major road closures, 67,586 without electricity, 2,310 without phone service, $17+ million in damages to Public Service of NH alone

December 11, 2008: A major winter storm brought a mixture of snow, sleet, and freezing rain to New Hampshire from the morning of December 11th to the morning of December 12th. The greatest impact in the state was in southern and central New Hampshire where a significant ice storm occurred. Following the ice storm, recovery and restoration efforts were negatively impacted by additional winter weather events that passed through the state. The weight of the ice caused branches to snap, and trees to either snap or uproot, and brought down power lines and poles across the region. About 400 thousand utility customers lost power during the event, with some customers without power for two weeks. Property damage across northern, central and southeastern New Hampshire was estimated at over $5 million.

October 29-30,2011 (FEMA Declared Disaster #4049 on 12/5/11): The storm brought a heavy, wet snow to southern and central New Hampshire. The combination of the heavy wet snow and leaves still on the trees caused numerous trees and branches to snap and fall, causing widespread power outages. About 315,000 customers lost power during the storm, mostly across the southeastern part of the state. Some customers were without electrical service for almost a week. In Rockingham County, trained weather spotters reported 14.3 inches in Northwood and 13.5 inches in Deerfield.

February 8-9, 2013 (FEMA Disaster Declaration DR-4105): An historic winter storm deposited tremendous amounts of snow over all of southern New England from February 8 to Saturday, February 9. What made this an amazing storm was the widespread coverage of heavy snowfall. Most locations received 2 to 2.5 feet of snow! A stationary band of even heavier snowfall persisted from southwest NH through central MA and on to the southwest across central and western CT. In those areas, reports averaged closer to 2.5 to 3 feet. Isolated thunderstorms were common across the entire region during the height of the storm. The band of heaviest snowfall, with 3 to 5 inches per hour for several hours, extended from southwest NH to central and western CT.

February 18, 2014: An area of low pressure moving east from the Great Lakes combined with a developing low in the Gulf of Maine to produce heavy snow across the southeastern part of the State. Snowfall amounts generally ranged from 6 to 14 inches with locally higher amounts across parts of Merrimack and Belknap Counties.

November 26, 2014: An area of low pressure developed off the Carolina coast on the morning of the 26th and raced rapidly up the eastern seaboard during the day to Nova Scotia by the morning of the 27th. The low brought heavy snow to all of New Hampshire

with a mixture of precipitation along the coast. Snowfall amounts generally ranged from 4 to 8 inches in the northern mountains to 10 to 15 inches across portions of Sullivan, Grafton, Belknap, and Carroll Counties, to 4 to 8 inches across the southeastern part of the state. A regional shelter was opened in neighboring City of Laconia and the Gilford EOC was partially activated.

January 26, 2015: An area of low pressure developed off the Delmarva peninsula on Monday, January 26th, and intensified rapidly as it moved slowly northward through the 27th. Snow spread northward across the region Monday night and became heavy on Tuesday, the 27th. Winds became strong during the day Tuesday leading to blizzard conditions at times along and inland from the coast. The snow persisted into Tuesday night in many areas with blowing and drifting snow. Snowfall amounts ranged from 10 to more than 30 inches across much of the southeastern part of the state.

March 14, 2017 (FEMA Disaster Declaration Disaster #4316): The storm brought heavy snow to all of New Hampshire with high winds leading to blizzard or near blizzard conditions across much of central and southern portions of the State. High winds and/or heavy wet snow downed trees and created numerous power outages across southeastern portions of the State. Snow began around 4 am in the southwestern corner of the State on the 14th and spread rapidly northeast. By 11 am, snow was falling throughout the entire state. The snow became very heavy throughout the State during the late morning and afternoon. Winds also increased during the afternoon leading to blizzard conditions in parts of the State. Snowfall amounts across New Hampshire ranged from about 12 to 20 inches. The heavy snow combined with the strong winds lead to whiteout conditions in many areas. Farther inland, across Belknap and Carrol Counties, the strong winds downed trees onto roads and wires leading to blocked roads and power outages.

HURRICANE

Probability: Moderate

Definition:

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 the storm may extend over 400 miles. High winds are a primary cause of hurricane-inflicted loss of life and property damage. The Saffir-Simpson Hurricane Wind Scale is a 1 to 5 rating 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, however, and require preventative measures.

Location:

When hurricane events occur in Gilford they affect the entire town. Certainly, the heavy rainfall associated with hurricanes will impact the 100-year floodplain, but the high winds can have an impact on the whole town.

Impact:

New Hampshire’s exposure to direct and indirect impacts from hurricanes is real, but modest, as compared to other states in the region. That being said, the probability of hurricanes occurring in Gilford is possible. The largest impact is on the floodplain areas

due to heavy rains. High winds cause trees to fall thereby causing power outages, structural damage to buildings, road closures and debris management issues.

Extent:
Wind speeds within hurricanes may reach 250 miles per hour in a Category 5 hurricane, as measured on the Saffir-Simpson Hurricane Scale. Tropical depressions are considered to be of hurricane force when winds reach 74 miles per hour. Damage resulting from winds of this force can be substantial, especially considering the duration of the event, which may last for many hours.

Category	Wind Speed (mph)	Damage at Landfall
1	74-95	Minimal
2	96-110	Moderate
3	111-130	Extensive
4	131-155	Extreme
5	> 155	Catastrophic

Previous Occurrence:
August 19, 1991 (FEMA Declared Disaster #917): Hurricane Bob affected southern and central New Hampshire. The center passed over NH, resulting in heavy rain and damaging winds.
September 16-18, 1999: Tropical Storm Floyd brought heavy rain to southern New England.
August 28, 2011 (FEMA Declared Disaster #4026): Hurricane Irene made landfall across western Long Island, NY and was downgraded to a Tropical Storm as it moved into and through New England. The storm brought a prolonged period of strong and gusty winds and heavy rain to the state. The high winds snapped or uprooted numerous trees throughout the state causing more than 160,000 customers to lose electrical and/or communication services. The heavy rains caused rivers and streams throughout the state to flood causing damage to bridges, roads, and property. Rainfall amounts across the state ranged from 1.5 to 3 inches across southeastern New Hampshire with 3 to 6 inches across most of the remainder of the State. The impact to Gilford was minimal, with scattered power outages.
October 29, 2012 (FEMA Declared Disaster #4095 on 11/28/12): Winds across much of the State generally gusted from 40 to 70 mph Monday and Monday night as a result of the remnants of Hurricane Sandy. These strong and persistent winds combined with the powerful gusts to down numerous trees throughout the State and caused widespread power outages, especially across southern New Hampshire. The most significant hydrological impact from the storm was due to the band of heavy rain that fell between Monday afternoon and Tuesday morning. Across the State, this band produced 1 to 3 inches of rain in about a 6- to 12-hour period. This amount of heavy rain in the short duration caused some road washouts in the State. High winds associated with the remnants of Sandy knocked down trees and branches and caused widespread power outages causing an estimated $200,000 in damages. The Town incurred little damage.

LIGHTNING

Probability: Moderate

Definition:
By definition, all thunderstorms contain lightning. Lightning is a giant spark of electricity that occurs within the atmosphere, or between the atmosphere and the ground. As lightning passes through the air, it heats the air to a temperature of 50,000 F, considerably hotter than the surface of the Sun.

Location:
The entire town is at moderate risk to lightning hazard. The higher elevation areas have an increased probability, however lightning strikes can occur anywhere in the Town.

Impact:
Residents and visitors to the New Hampshire area are more vulnerable to being struck by lightning because of the activities with which they are involved, particularly on those warm summer days when lightning is most likely to occur. Often, many people are outside enjoying the variety of recreational activities that attract people to New England during the summer when the vulnerability to lightning strike is highest. More likely to be affected are structures and utilities, often resulting in structure fires and power outages.

Extent:
The National Oceanographic Atmospheric Administration (NOAA) defines the extent of lightning activity with a LAL scale as shown in the table below.

LAL 1	No Thunderstorms
LAL 2	Isolated thunderstorms. Light rain will occasionally reach the ground. Lightning is very infrequent. 1 to 5 cloud ground strikes in a 5-minute period.
LAL 3	Widely scattered thunderstorms. Light to moderate rain will reach the ground. Lightning is infrequent, 6 to 10 cloud to ground strikes in a 5-minute period.
LAL 4	Scattered thunderstorms. Moderate rain is commonly produced. Lightning is frequent, 11 to 15 cloud to ground strikes in a 5-minute period.
LAL 5	Numerous thunderstorms. Rainfall is moderate to heavy. Lightning is frequent and intense, greater than 15 cloud to ground strikes in a 5-minute period.
LAL 6	Dry lightning (same as LAL 3 but without rain). This type of lightning has the potential for extreme fire activity and is normally highlighted in fire weather forecasts with a Red Flag Warning.

Previous Occurrence:
July 9, 1996: Lightning started a fire that caused $20,000 damage to a home in Gilford.
July 29, 2000: Three people were struck by lightning inside nearby homes on the shores of Lake Winnipesaukee. Two of the victims were transported to a local hospital. One of the victims was standing by the sink while another was changing the channel on his television. The third victim was struck in the forehead.

TORNADO/DOWNBURST

Probability: Low

Definition:
A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud. These events are spawned by thunderstorms and occasionally by hurricanes. They may also occur singularly or in multiples. A downburst is a severe, localized wind blasting down from a thunderstorm. These "straight line" winds are distinguishable from tornadic activity by the pattern of destruction and debris. Downbursts fall into two categories: Microburst which covers an area less than 2.5 miles in diameter; and Macroburst which covers an area at least 2.5 miles in diameter.

Location:
Severe wind events (downburst, tornadoes or high winds associated with thunderstorms) can occur anywhere in Gilford. Generally, the higher elevations are more susceptible as well as more vulnerable due to the fact that they are home to emergency response/mutual aid towers. Due to the sporadic nature of tornados and severe wind events, they could occur anywhere in the Town of Gilford.

Impact:
Depending on the size and location of these events, the destruction to property may be devastating. Several of the more significant and recent events within southern New Hampshire have caused several millions of dollars in damage and at least 5 fatalities. An F-2 Tornado, according to the Fujita scale, maintains wind speeds from 13-157 mph. A tornado occurring in Gilford would cause considerable damage. Roofs could be torn off frame houses; mobile homes demolished; large trees snapped or uprooted; and light object missiles would be generated as a result of an F-2 Tornado.

Extent:
According to the Enhanced Fujita scale, which rates tornado intensity, an EF-2 tornado maintains wind speeds from 111-135 mph and can cause considerable damage. Roofs could be torn off frame houses; mobile homes demolished; large trees snapped or uprooted; and light object missiles would be generated as a result of an EF-2 Tornado.

EF 0	65-85 mph
EF 1	86-110 mph
EF 2	111-135 mph
EF 3	136-165 mph
EF 4	166-200 mph
EF 5	Over 200 mph

Previous Occurrence:
July 24, 2008:
November 24, 2013: Strong winds developed behind an arctic cold front during the afternoon of the 24th. Winds gusted to between 40 and 50 mph across much of New Hampshire. Snapped trees and branches caused power outages throughout the region. Power companies reported that about 30,000 customers lost electrical service. In Laconia, one tree company worker was struck and killed by a tree as he was working to remove another tree from a roadway. In Concord where winds gusted to 58 mph, a large fiber communications cable fell across I-93 blocking the interstate highway for three hours.
July 3, 2014: A warm and very humid air mass remained in place across the region on the afternoon of July 3rd. A slow moving cold front to the west of the area triggered afternoon convection which quickly became severe. Large hail and damaging winds affected a large portion of the forecast area. A severe thunderstorm downed trees and wires in Gilford.

July 4, 2014: A waterspout touched down briefly on Lake Winnipesaukee during the evening of July 4. The public provided local media with pictures of the waterspout as it formed and dissipated over the lake. No damage was reported.
July 28, 2014: Low pressure moving northeast through the region brought tropical moisture and high shear values with it. Strong convection produced wind damage along with some flash flooding. A severe thunderstorm produced 1 inch hail in Gilford.

DROUGHT

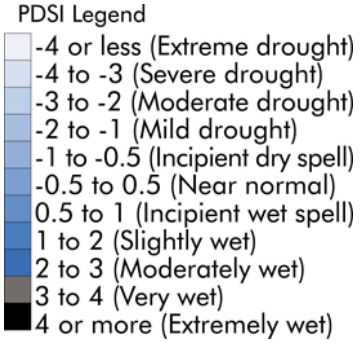
Probability: Low

Definition:
Drought is a deficiency in precipitation over an extended period, usually a season or more, resulting in a water shortage causing adverse impacts on vegetation, animals, and/or people.

Location:
Droughts are difficult to define geographically. Due to their widespread nature a drought would affect the entire Town. However, a drought can affect fire suppression in those areas that do not have access to water for fire suppression.

Impact:
A drought is defined as a long period of abnormally low precipitation, especially one that adversely affects growing or living conditions. Droughts are not as damaging to the Town as floods or winter weather. However, a severe drought can affect public water supply, increase the probability of fires, and impede fire suppression. Those areas with minimal fire protection are at a higher risk because of a prolonged drought.

Extent:
The Palmer Drought Severity Index (PDSI) was devised in 1965 and was the first drought indicator to assess moisture status comprehensively. It uses temperature and precipitation data to calculate water supply and demand, incorporates soil moisture, and is considered most effective for un-irrigated cropland. It primarily reflects long-term drought and has been used extensively to initiate drought relief. It is more complex than the SPI and the Drought Monitor.



Previous Occurrence:
According to the State of New Hampshire Multi-Hazard Mitigation Plan Update 2013, the southern portion of NH experienced droughts in 1957, 1963, 1965, 1966, 1970, 2001, and 2010. The statewide drought of 2001/02 had a minimal impact on water sources for fire protection in Gilford. Most recently, according to www.drought.gov, almost 45% of the State of New Hampshire was in a severe drought at the beginning of 2017. However, as of May 2017, no part of the State was experiencing drought conditions. The Town of Gilford had no significant impact because of the 2017 drought.

WILDFIRE

Probability: Low

Definition:
Any free burning uncontainable wild land fire not prescribed for the area which consumes the natural fuels and spreads in response to its environment.

Location:
The Ice Storms of 1998 and 2008 left a significant amount of woody debris in the forests of the region and may fuel future Wildfires similar to the debris caused by the Hurricane of 1938. Fires in New Hampshire are predominantly human-caused, and roughly half of the total fire activity is in the most populous three southern counties. The proximity of many populated areas to the forested lands exposes these areas and their populations to the potential impact of wildfire. In addition, the potential for wildfires increases during a prolonged drought.

While the entire town is susceptible to wildfire, Gunstock Acres development is more vulnerable due to steep slopes and vast woodlands, with limited vehicular access, along with densely populated housing. Gilford does have a substantial number of dry hydrants; however, there is only one such hydrant for all of the Gunstock Acres development. The islands in the region also pose a unique fire safety concern given that access is limited and most of the islands are predominately wooded with residential development. Most of the residential development on the islands is situated on the shores, and inland fire fighting capabilities are often limited.

Impact:
Fires in New Hampshire are predominantly human-caused, and roughly half of the total fire activity is in the most populous three southern counties. The proximity of many populated areas to the forested lands exposes these areas and their populations to the potential impact of wildfire. The estimated impact to structures could be derived from the information included in the critical facilities in Chapter 4.

Extent:
The extent of damage to structures and the general populations will vary depending on climate, warning, and the time of year. Even the time of day could affect the extent, as there is an increase of recreational hikers and tourists during the daytime. The National Wildfire Coordinating Group (NWCG) classifies a wildfire into one of several ranges of fire, based upon the number of acres burned. The following list provides NWCG's scale for wildfire values:

Value	Description
A	Up to .25 acres
B	0.26 to 9.9 Acres
C	10.0 to 99.9 Acres
D	100 to 299 Acres
E	300 to 999 Acres
F	1000 to 4999 Acres
G	5000 to 9999 Acres
H	10000 to 49999 Acres
I	50000 to 99999 Acres
J	100000 to 499999 Acres
K	500000 to 999999 Acres
L	1000000 + Acres

Previous Occurrence:
There are no significant recorded wildfires in the Town of Gilford. However, Belknap County has experienced numerous small wildfires over the last several decades.

DAM FAILURE

Probability: Low

Definition:
According to the NH Department of Environmental Services (DES), a dam is any artificial barrier which impounds or diverts water which: has a height of 6 feet or more; or is located at the outlet of a great pond, regardless of height or storage; or is an artificial barrier which impounds liquid Industrial or liquid commercial wastes, or septage or sewage, regardless of height or storage.

Location:
There are 3 Low Hazard dams located in Gilford: Gunstock snowmaking dam on a tributary to Poor Farm Brook; Pheasant Ridge Pond Dam on a unnamed stream and Cobble Mountain Dam on Poor Farm Brook.

Impact:
A dam failure or breech could occur due to extreme rainfall amounts and/or a human caused incident. A failure or breech would result in rapid loss of water that is normally held by the dam resulting in an inundation downstream. The impact of a dam failure at Village Pond or Sand pond would impact culverts, roads and/or structures.

Extent:
NH Department of Environmental Services categorizes Dams into one of four classifications, which are differentiated by the degree of potential damages that a failure of the dam is expected to cause. The classifications are designated as non-menace, low hazard, significant hazard and high hazard and Gilford only has 3 Low Hazard dams. A Low Hazard structure is a dam that has a low hazard potential because it is in a location and of a size that failure or mis operation of the dam would result in any of the following: No possible loss of life; Low economic loss to structures or property; Structural damage to a town or city road or private road accessing property other than the dam owner's that could render the road impassable or otherwise interrupt public safety services; The release of liquid industrial, agricultural, or commercial wastes, septage, or contaminated sediment if the storage capacity is less than two-acre-feet and is located more than 250 feet from a water body or water course; or Reversible environmental losses to environmentally-sensitive sites.

Previous Occurrence:
There are no recorded dam failures.

EXTREME HEAT

Probability: Low

Definition:
A Heat Wave is a "Prolonged period of excessive heat, often combined with excessive humidity." Heat kills by pushing the human body beyond its limits. In extreme heat and high humidity, evaporation is slowed and the body must work extra hard to maintain a normal temperature.

Location:
Extreme heat events are difficult to define geographically. Due to their widespread nature, a period of extreme heat would affect the entire town.

Impact:
A heat wave is defined as 3 or more consecutive days of 90 degrees or higher. Extreme heat conditions may impact the health of residents and visitors. Facilities without generators and air-conditioners that house the elderly and disabled are very susceptible to human health issues. Utilities are also vulnerable as the demand for air-condition rises. Prolonged high temperature has also been associated with civil unrest.

Extent:
According to OSHA, the risk of heat-related illness becomes greater as the weather gets hotter and more humid. This situation is particularly serious when hot weather arrives suddenly early in the season, before workers have had a chance to adapt to warm weather. This table provides guidelines for the risk related to extreme heat.

Heat Index	Risk Level	Protective Measures
Less than 91°F	Lower (Caution)	Basic heat safety and planning
91° to 103°F	Moderate	Implement precautions and heighten awareness
103° to 115°F	High	Additional precautions to protect workers
Greater than 115°F	Very High to Extreme	Triggers even more aggressive protective measures

Previous Occurrence:
August 2001: Mid 90s and high humidity.
August 2006: Regional heat wave and severe storms.

EARTHQUAKE

Probability: Low

Definition:
An earthquake is a rapid shaking of the earth caused by the breaking and shifting of rock beneath the earth's surface. Larger earthquakes usually begin with slight tremors but rapidly take the form of one or more violent shocks, and end in vibrations of gradually diminishing force called aftershocks. The magnitude and intensity of an earthquake is determined by the use of scales such as the Richter scale and Mercalli scale.

Location:
According to the State of New Hampshire Multi-Hazard Mitigation Plan Update 2013, New Hampshire is considered to lie in an area of "Moderate" seismic activity with respect to other areas of the United States and is bordered to the North and Southwest by areas of "Major" activity. Generally, the entire Town is at risk to earthquakes.

Impact:
Earthquakes can cause buildings and bridges to collapse, disrupt gas, electric and phone lines, and often cause landslides, flash floods, fires, and avalanches. It is assumed that all the buildings in the Town have not been designed to withstand seismic activity. More specifically, the older historic buildings that are constructed of non-reinforced masonry are especially vulnerable to any moderate sized earthquake. In addition, utilities (water, gas, etc.) are susceptible to earthquake damage. Gilford has experienced the effect of small to moderate earthquakes that had minor to no effect on the town's infrastructure.

Extent:
Earthquakes with a magnitude of 2.0 to 4.9 on the Richter scale are considered minor to light, and those 5.0 to 6.9 are considered moderate to strong. However, if a large (6+ on the Richter Scale) occurred in or around the town, it is assumed that structural damage would be moderate to severe.

Richter Scale	Magnitude Earthquake Effects
2.5 or less	Usually not felt but can be recorded by seismograph.
2.5 to 5.4	Often felt, but only causes minor damage.
5.5 to 6.0	Slight damage to buildings and other structures.
6.1 to 6.9	May cause a lot of damage in very populated areas.
7.0 to 7.9	Major earthquake. Serious damage.
8.0 or greater	Great earthquake. Can totally destroy communities near the epicenter.

Previous Occurrence:
The Town of Gilford has not experienced any damaging earthquakes. However, the following table summarizes earthquakes of 2.5 magnitude or greater that have occurred in New Hampshire and New England:

Location	Date	Magnitude
Ossipee, NH	December 20, 1940	5.5
Ossipee, NH	December 24, 1940	5.5
Dover-Foxcroft, ME	December 28, 1947	4.5
Kingston, RI	June 10, 1951	4.6
Portland, ME	April 26, 1957	4.7
Middlebury, VT	April 10, 1962	4.2
Near NH Quebec Border, NH	June 15, 1973	4.8
West of Laconia, NH	Jan. 19, 1982	4.5
Ontario-Quebec Border	June 23, 2010	5.0
Boscawen, NH	September 26, 2010	3.1
Virginia	August 23, 2011	5.8
Southern Maine	October 16, 2012	4.0
Contoocook, NH	March 21, 2016	2.9

AVALANCHE and LANDSLIDE

Due to no history or risk of these hazards within the Town of Gilford, the Committee chose not to recognize these hazards in this Plan.

Chapter 4
CRITICAL FACILITIES

Introduction

The Critical Facilities List for the Town of Gilford has been identified by the Gilford Hazard Mitigation Planning Committee. A critical facility is defined as a building, structure or location which is: vital to the emergency response; maintains an existing level of protection from hazards within the community and would create a secondary disaster if a hazard were to impact it. The Critical Facilities List for the Town of Gilford has been identified using the following categories:

CATEGORY 1 (Emergency Response Facilities and Services)

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

CATEGORY 2 (Non-Emergency Response Facilities)

- The Town has identified these facilities as non-emergency response facilities; however, they are considered essential in the everyday operations of Gilford.

CATEGORY 3 (Populations & Places to Protect)

- People and facilities that need to be protected in the event of a disaster.

Gilford Critical Facilities & Values					
Facility/Infrastructure	**Location**	**Owner**	**Assessed Value**	**Notes**	**Generator**
Category 1: Primary Response Facilities					
Town Hall	47 Cherry Valley Road	Town of Gilford	$2,035,065		Yes
Police Station	47 Cherry Valley Road	Town of Gilford	(included in Town Hall)		Yes
Fire Station	39 Cherry Valley Road	Town of Gilford	$656,800		Yes
Department of Public Works	55 Cherry Valley Road	Town of Gilford	$346,930		Yes
Gilford High School	88 Alvah Wilson Road	SAU 73	$19,062,600	Red Cross shelter	Yes
Stone cellar Gunstock Recreation Area	719 Cherry Valley Road	Belknap County	(see Gunstock below)	Shelter	Yes
Laconia Middle School	150 McGrath St.Laconia	SAU 30	Not in Gilford	Regional shelter	Yes
Library	31 Potter Hill Road	Town of Gilford	$2,275,400	cooling/warming	No
Gilford Youth Center	19 Potter Hill Road	Non-Profit	$825,700	Evac center for school	No
Category 2: Secondary Response Facilities					
Town Docks	Dock Road	Town of Gilford	$258,670		
Airport	65 Aviation Drive	Laconia Airport	$4,054,840		
Sewer Pumping Stations, 3 locations		Town/State	n/a		
Belknap Mtn. Transmitter	Belknap Mountain	NH State Police	$88,200		
Cell towers	Mt. Row & Belknap Mt.	Private	$144,700		
Electrical Substations	Eversource Rt. 11	Private	$23,500		
Telephone Facility @ Sawyer Meadows	Fairpoint	Private	$76,000		
Transmission lines	Near Business Park	Private	$5,603,000 (2013 value)		
Hillside Medical Park	Maple Street	Private	$6,368,920	Medical Supplies	
CVS	1371 Lakeshore Road	Private	$1,018,600	Medical Supplies	
Shaw's	1400 Lakeshore Road	Private	$4,685,220	Medical Supplies	
WalMart	1458 Lakeshore Road	Private	$11,222,200	Medical Supplies	
Hannaford	1425 Lakeshore Road	Private	$3,935,600	Medical Supplies	

Gilford Critical Facilities & Values					
Facility/Infrastructure	**Location**	**Owner**	**Assessed Value**	**Notes**	**Generator**
Category 3: Populations and Places to Protect					
Gilford High School (shelter)	88 Alvah Wilson Road	SAU 73	$19,062,600	High Population	Yes
Gilford Elementary School	78 Belknap Mountain Rd	SAU 73	$4,360,640	High Population	
Gilford Middle School	72 Alvah Wilson Road	SAU 73	(included w/ High School)	High Population	
Meadowbrook Farm - seasonal	Meadowbrook Lane	Private	$4,365,500	High Population	
Gunstock (seasonal)	719 Cherry Valley Road	Private	$4,576,500	High Population	
Gilford Library	31 Potter Hill Road	Town of Gilford	$2,275,400		
Under His Wings Preschool	401 Gilford Ave	Private	$121,900	Daycare	
Miss Joanna's	72 Pinecrest Drive	Private	$213,700	Daycare	
Little Learners	133 Saltmarsh Pond Rd	Private	$169,100	Daycare	
Village Nursery	19 Potter Hill Road	Private	$137,050	Daycare	
Children's Garden	546 Morrill Street	Private	$171,800	Daycare	
York Village	York village Way	Private	Varies	Elderly	
Wesley Woods	Wesley Way	Private	Varies	Elderly	
Lake Breeze	9 Sargent's Place	Private	Varies	Mobile Home	
Mt. View Housing Coop	23 Liscom Circle	Private	Varies	Mobile Home	
Wood Smoke Meadow	365 Old Lakeshore Road	Private	Varies	Mobile Home	
Sargent's	7 Sargent Place	Private	Varies	Mobile Home	
Lakes Region Mobile Home Coop.	303 Old Lakeshore Road	Private	Varies	Mobile Home	
Edge of the Woods	320 Old Lakeshore Road	Private	Varies	Mobile Home	
Old Lake Shore Co-op	343 Old Lakeshore Road	Private	Varies	Mobile Home	

Chapter 5
CAPABILITY ASSESSMENT

The following is a list of current policies and regulations adopted by the Town of Gilford that protect people and property from natural and man-made hazards. The Town reviewed and incorporated mitigation strategies into these policies and regulations, as appropriate. The table includes a description of the policy/regulation, the responsible agent, the policy's effectiveness and recommended strategies to improve mitigation efforts.

Integration of Mitigation Priorities into Planning and Regulatory Tools

The Town should conduct periodic review of these regulations and this Hazard Mitigation Plan. Reviewing these plans on a regular basis will ensure the integration of mitigation strategies. This review will continue to be a priority of the Gilford Emergency Management Director and will likely include yearly requests in the annual budget process. Moreover, as suggested in the onset of this document, this *Plan* is a planning tool to be used by the Town of Gilford, as well as other local, state, and federal governments, in the effort to reduce future losses from natural and/or man-made hazardous events before they occur. Under the Prioritized Mitigation Projects *Action Plan* (found in Chapter 6), all parties listed under the Responsibility/Oversight category shall also review this listing annually, and consider the listed (and updated) mitigation projects within their annual budget requests.

Gilford, NH Existing Protection Matrix				
Existing Protection	**Description**	**Responsible Agent**	**Effectiveness* *Poor/Average/Exc.***	**Recommended Changes**
Emergency Operations Plan	The Town maintains an EOP that meets the recommendations by the NH Homeland Security Emergency Management. This plan identifies the response procedures and capabilities of the Town of Gilford in the event of a natural or man-made disaster.	Emergency Management Director (EMD)	Average	Update in 2018
Zoning Ordinance	Gilford has enacted a zoning ordinance and map to protect the health, safety and welfare of the residents of the town from the effects of ill considered and indiscriminate use of land.	Planning & Land Use Department	Average	Updated annually
State Building Code	The town complies with the State of New Hampshire Building Code which incorporates the IBC, IPC and NFPA. Currently there is a Part -time building inspector to enforce the standards.	Planning & Land Use Department	Average	
Floodplain Ordinance	The minimum National Flood Insurance Program (NFIP) requirements have been adopted as part of the Town's Zoning Ordinance. This regulates all new and substantially improved structures located in the 100-year floodplain, as identified on the FEMA Flood Maps.	Planning & Land Use Department	Average	
Elevation Certificates Maintained	Elevation certificates are required for any new development or substantial improvement to substantially damaged properties located in the Special Flood Hazard Areas (designated 100-year floodplain), Gilford's Building Inspector require Elevation Certificates for construction in the 100-year floodplain.	Building Inspector	Average	
Community Rating System	The town is currently not participating in the CRS. The CRS provides Flood Insurance Premium reductions based on the reduced flood risk resulting from community activities.	Building Inspector	Average	
Fire Prevention Codes	Intended to ensure a minimum level of fire safety protection to life and property. Town wide, prior to issuance of Certificate of Occupancy.	Fire Department	Average	

Gilford, NH Existing Protection Matrix				
Existing Protection	**Description**	**Responsible Agent**	**Effectiveness* *Poor/Average/Exc.***	**Recommended Changes**
Emergency Warning System	The Town utilizes the State Emergency Notification System through E-911 as well as Nixel, Local Cable and the Town website.	EMD	Average	
Non-Residential Site Plan Approval	Evaluation criteria include methods of surface water drainage, effects on or from the natural environment, and adequacy of water supply according to fire department requirements.	Planning & Land Use Department	Average	
Sedimentation & Erosion Control Plan	Addresses retention and protection of natural vegetation and accommodation of increased runoff from development.	Planning & Land Use Department	Average	
Excavation Regulations	Sand and gravel excavation requires provisions for re-sloping for stabilization and re- vegetation. On- and off-site erosion and siltation are addressed.	Planning & Land Use Department	Average	
Road Design Standards	Gilford Subdivision and Site Plan Regulations include road design standards that control the amount and retention of storm water runoff as well as cul-de-sac requirements for emergency vehicle access.	Public Works Department	Poor	Update
Storm Drain / Culvert Maintenance	The Gilford Public Works Department and the State DOT clean the drainage basins once a year and after major flooding events. Culverts are repaired as needed.	Gilford Public Works / NH DOT	Poor	Needs better record keeping.
Wetlands District	The Zoning Ordinance contains wetland buffer regulations. Intended to prevent development of structures and land uses on naturally occurring wetlands. Addresses flood protection and maintenance of natural areas.	Planning & Land Use Department	Average	
Steep Slopes	Development of slopes greater than 15 percent may be prohibited or limited. Acknowledges slopes greater than 15 percent in elevations greater than 1,300' are especially subject to erosion and excess runoff.	Planning & Land Use Department	Average	
Hazardous Materials Plan / Team	There is one facility on Lilly Pond with Hazardous Material that warrant a Hazardous Material Plan. The regional HazMat response team serves the town.	Fire Department	Average	Aquifer protection district restricts hazmat.

Gilford, NH Existing Protection Matrix				
Existing Protection	**Description**	**Responsible Agent**	**Effectiveness* *Poor/Average/Exc.***	**Recommended Changes**
Public Education Programs	Gilford Fire and Rescue offer school and public education programs and conducts commercial and residential fire safety inspections. Gilford Police runs the DARE program and has an SRO in the schools.	Fire and Police	Average	
Master Plan	The Master Plan serves as the guiding document for future development and serves as the basis for other responsibilities of the Planning Board as it strives to preserve and enhance the quality of life of all residents in Gilford. The Master Plan was last update in 2004.	Planning Board	Average	
CEMPS	Gilford School District has participated and received training in the Comprehensive Emergency Management Program for Schools through the NH HSEM.	Gilford School District	Average	
Winnipesaukee Regional Public Health Network	The Town of Gilford participates in the Winnipesaukee Regional Public Health Network which works to assure coordinated and comprehensive delivery of essential public health services and serves as a local liaison with state agencies involved in the public's health and safety.	Gilford EMD & Health Officer	Average	
VIPS	Volunteers In Police Service (VIPS) provides support and resources for agencies interested in developing or enhancing a volunteer program and for citizens who wish to volunteer their time and skills with a community law enforcement agency.	Gilford Police Department	Average	

*****Effectiveness terms are defined as:

Poor: Outdated and/or ineffective and needs to be reviewed/updated.
Average: Meets minimum requirements and may require potential reviews/updates.
Excellent: Regulations meets all requirements and requires no reviews/updates.

Chapter 6
MITIGATION PROJECTS

Hazard Identification

The Committee utilized the *Hazard Identification Worksheet*, as shown in Appendix B, to identify potential hazards, the historical occurrence, locations, assets at risk and the probability of each hazard. The results of this process can be found in Chapters 2 and 3.

Problem Statements

From the Hazard Identification process the Committee developed a list of Problem Statements for each Hazard (see Appendix B). Based on the hazards and risks within the town, the Committee summarized the 'problems' associated for every hazard identified. These problem statements allowed the Committee to identify mitigation alternatives during the project identification step described below.

Goals Identified

During the 2018 update, the Committee reviewed the 2013 Gilford Hazard Mitigation Plan goals and made no revisions. The Goals were not modified for any substantial content, as there has not been any substantial change in development.

Project Identification

Using the *Mitigation Project Identification Worksheet* (see Appendix B) as a guide, the Committee members identified mitigation projects for each problem Statement. Specific objectives included: Prevention, Property Protection, Public Education, Natural Resource Protection, Emergency Services and Structural Projects.

This process resulted in the *Mitigation Project Identification Matrix*. For illustrative purposes the table below is an excerpt from the *Matrix* included in Appendix B. In this *Matrix*, the committee was able to determine a basic benefit/cost by using the STAPLEE method. For each project identified, the committee considered the STAPLEE Criteria (Social, Technical, Administrative, Political, Legal, Economic and Environmental) to guide their decision in prioritizing the projects. One component of STAPLEE is the Economic criteria which aided the committee in determining whether the benefits outweigh the costs.

Hazard	Problem Statement	Mitigation Project *(Objectives: Prevention /Property Protection/ Public Educ./ Nat.Resource /Emerg.Serv / Structural)*	Social	Technical	Administrative	Political	Legal	Economic	Environments
Flood	Heavy rains cause erosion, debris backup and damage to culverts, ditches and roads.	Upgrade and maintain culverts as needed to reduce the likelihood of back up or washout.	+	+	+	+	+	+	+

Completed Projects since 2013

The Town of Gilford completed the latest version of this plan in 2013. Since that time, the town has completed the projects listed below. These completed projects are not included in the 2018 edition of the Hazard Mitigation plan. In addition, the Committee added new projects to the Mitigation Action Plan, all of which are included in the Action Plan.

Completed Projects since 2013
1. Work with NH DOT to repair the state Red-Listed bridge in town (US 3/NH 11 Bypass over NH 11A).
2. Review and distribute educational materials that inform the public about leading human-wildlife interaction risks such as rabies, Lyme disease, and EEE.
3. Upgrade the Police Department's radio communications capacity.
4. Implement the recommendations from the NH Route 11 & Belknap Mountain Road Safety Study
5. Work with NH DES and landowners to ensure that all aspects of the contaminated site on Liberty Hill Road are mitigated.
6. Develop and implement a system to notify the public in the event of transportation slow-downs or detours, especially regarding bad weather or a pandemic.
7. Address sections of road that frequently washout or flood (NH Route 11A east of the Town Hall).
Deleted Projects since 2013
1. “Require the development of an Emergency Action Plan as a condition for an Event Permit.” Was deleted because all special event permits require a review by Police and Fire.
2. “Establish and maintain a special needs population listing and establish contact procedures in the event of prolonged power outages.” Was deleted because it is difficult to maintain because of HIPA regulations, and the Town can utilize the regional Public Health Network to support for special needs populations during emergencies.
3. “Work with NH F&G and homeowners to address beaver dams.” Was deleted because it is not an actionable project.
4. “Partner with NH DOT to address turning safety issues on US Route 3 between Lowe's and Wal-Mart.” Was deleted because it is not a big concern. There is a center lane turn that is sufficient.

5. "Address sections of road that frequently washout or flood (NH Route 11B between NH Routes 11 and 11A)." was deleted because it is no longer a problem.
6. "Address sections of road that frequently washout or flood (McIntire Circle (US 3 Business at Laconia city line))." was deleted because it is no longer a problem.
Continuing Projects since 2013 *(Note: these projects were identified by the committee as either on-going or annual projects that they wanted to maintain or were just simply not started because the responsible department simply did not initiate action.)*
1. Develop an all-hazards debris management plan.
2. Work with NH DOT to address NH Route 11A and 11B intersection - safety issues
3. Conduct education and outreach to encourage the use of the FireWise program, beginning with island residents.
4. Upgrade culverts as needed to reduce the likelihood of back up or washout.
5. Develop a stream maintenance program for Black, Gunstock, and Poor Farm Brooks, including state and municipal responsibilities and education/ outreach to riparian landowners.
6. Ensure that the firefighting and fuel containment capabilities at the airport are adequate to address the needs of the current aircraft.
7. Work with E-911 to ensure that all residence have a unique E-911 address, include trailers in the town's mobile home parks.
8. Work with Meadowbrook Farms to establish an alternative emergency evacuation route and to improve pedestrian access and safety to their site.
9. Develop and implement a public education program regarding all- hazard mitigation.
10. Repair the one municipal Red-Listed bridge in town along Old Lakeshore Road.
11. Create an inventory and map all culverts and catch basins in town.
12. *Address fire mitigation through hydrants and water availability (formally 'Improve firefighting water supplies")*

2018 Prioritized Mitigation Projects:

In 2018, each committee member reviewed the updated list of Mitigation Projects. After careful evaluation, the committee ranked the projects by voting for half of the projects. The project that received the most votes was ranked as the highest priority and the project receiving the least amount of votes received the lowest priority. (See Prioritized Mitigation Projects in Appendix B.) The committee was able to determine a basic benefit/cost by using the STAPLEE method. For each project identified, the committee considered the STAPLEE Criteria (Social, Technical, Administrative, Political, Legal, Economic and Environmental) to guide their decision in prioritizing the projects. The prioritized projects are identified in the Mitigation Action Plan.

There have been no significant changes to mitigation priorities for the Town of Gilford. The Town has not experienced any changes in resources, new hazard impacts, or development patterns that merit changes to mitigation priorities. The

Hazard Mitigation Committee identified new projects as described below and prioritized them as discussed above.

Incorporating Mitigation Into Local Planning

In order for the requirements of this plan to be effective, it is essential that the Town of Gilford incorporate the strategies and actions into its planning process. Educating employees working within the Town Departments along with members of the various Boards on the provisions of the plan is critical for ensuring that disaster preparedness and risk mitigation become part of their planning process when holding discussions, making decisions, and developing plans and Standard Operating Procedures (SOPs). As noted above, information outreach is a high priority action item that will impact more than just Town employees and Board members. Since interested citizens attend various Town meetings where decisions are made, having a community base that understands the importance of disaster mitigation planning will also assist in ensuring that future plans and actions integrate the requirements found in this plan.

The Board of Selectmen will instruct the Town Departments to review their SOPs and ensure that where appropriate, the requirements of this plan are integrated into those procedures. They will also coordinate with both the Zoning Board and the Planning Board to ensure that risk mitigation planning continues to be a part of their recommendation/decision process in order to fulfill the goals and objectives outlined in this plan.

Since the last update of this Plan in 2013, the Town incorporated Hazard Mitigation Planning into the following documents:

- Gilford Emergency Operations Plan (EOP) – The EOP is designed to allow the Town to respond more effectively to disasters as well as mitigate the risk to people and property. The EOP was updated in 2013 and was reviewed to ensure that where appropriate, specific mitigation actions outlined in the HMP were also addressed in the EOP.

Mitigation Action Plan

The projects identified in 2013 included preparedness projects as well as mitigation projects. During the 2018 update, the committee separated mitigation projects from preparedness projects (a.k.a Non-Mitigation). Both mitigation and non-mitigation projects are compiled in the Mitigation Action Plan found on Page 6-4 which identifies Responsibility, Funding, Time frame, Hazards Addressed and the Priority for each mitigation project.

Mitigation Action Plan - Gilford, NH						
Mitigation Action	**Responsibility/ Oversight**	**Funding/ Support**	**Timeframe***	**Hazards Addressed**	**Estimated Cost**	**Priority**
1. Address fire mitigation through hydrants and water availability.	Fire Department	Town Budget & Developers	Ongoing	Drought, Wildfire	$20,000 / year	High
2. Conduct education and outreach to encourage the use of the FireWise program, beginning with island residents (27 islands with 211 residents).	Fire Department	Town Budget & Div. of Forests and Lands	Short Term	Drought, Wildfire	$500	High
3. Develop and implement a public education program regarding all-hazard mitigation.	EMD	Town Budget / EMPG	Ongoing	All Hazards	$500	High
4. Promote existing public notification methods for the public.	EMD	Town Budget / EMPG	Ongoing	All Hazards	$500	High
5. Upgrade and maintain culverts as needed to reduce the likelihood of back up or washout.	DPW	Town Budget / Grants	Medium	Flood, Hurricane	$0 / Staff time	High
6. Develop a stream maintenance program for Black, Gunstock, and Poor Farm Brooks, including state and municipal responsibilities and education/ outreach to riparian landowners.	Gilford Conservation Commission	Town Budget & Grants	Long Term	Flood, Hurricane	$50,000	Medium
7. Educate homeowners on how to protect buildings during severe wind events.	EMD	Town Budget / EMPG	Ongoing	Severe Wind Hurricane	$500	Medium
8. Educate the public on lightning protections systems such as lightning rods and grounding structures.	EMD	Town Budget / EMPG	Ongoing	Lightning	$500	Medium
9. Organize outreach to vulnerable populations, including promoting accessible heating or cooling centers.	EMD	Town Budget / EMPG	Ongoing	Extreme Heat, Winter Weather	$500	Medium
10. Continue to implement an inspection and maintenance program of locally owned dams.	NH DES	NH DES & Local DPW budget	Ongoing	Dam Failure	$0	Low

Mitigation Action Plan - Gilford, NH						
Mitigation Action	**Responsibility/ Oversight**	**Funding/ Support**	**Timeframe***	**Hazards Addressed**	**Estimated Cost**	**Priority**
11. Educate the public on seismic retrofitting, window film and earthquake protection.	EMD	Town Budget / EMPG	Ongoing	Earthquake	$500	Low
NON-MITIGATION PROJECTS						
1. Create an inventory and map all culverts and catch basins in town.	DPW	Town Budget / LRPC	Medium Term	Flood, Hurricane	$5,000	High
2. Work with E-911 to ensure that all residence have a unique E-911 address, include trailers in the town's mobile home parks.	Planning / Fire	Dept. of Safety / E-911	Medium Term	All Hazards	$0	High
3. Work with NH DOT to address NH Route 11A and 11B intersection - safety issues	Board of Selectmen / NH DOT	NH DOT	Long Term		Will depend on the fix.	Medium
4. Purchase a generator for the library and elementary school.	SAU / Library	School Budget / Town Budget	Medium Term	All Hazards	$100,000 – $200,000	Medium
5. Ensure that the firefighting and fuel containment capabilities at the airport are adequate to address the needs of the current aircraft.	Fire Department	Laconia Airport Authority	Medium Term	Human Caused	$0	Medium
6. Investigate expanding the Laconia water system into Gilford, especially to the School and other public buildings.	Planning / Board of Selectmen	Laconia Waterworks	Long Term	Drought	$0	Medium
7. Work with Meadowbrook Farms to improve pedestrian access and safety to their site.	Police Department	Private	Ongoing	All Hazards	$0	Medium
8. Repair the one municipal Red-Listed bridge in town along Old Lakeshore Road.	NH DOT / Board of Selectmen	Town Budget / NH DOT Bridge Grant	Short Term	Flooding	$1,100,00	Low
9. Develop an all-hazards debris management plan.	DPW & Building Inspector	HSEM	Short Term	All Hazard	$0	Low

*Timeframe: Short Term=1 year or less, or ongoing Medium Term=2-3 years Long Term=4-5 years
* Ongoing: Projects that are reviewed and implemented on a daily, monthly or annual basis.

Chapter 7
ADOPTION, IMPLEMENTATION, MONITORING

Adoption

The Gilford Selectmen by majority vote officially adopted the *Gilford Hazard Mitigation Plan 2018 Update* on June 13, 2018. This plan identified Mitigation Actions to be implemented as outlined in Chapter 6.

Implementation

There were 11 mitigation projects that were prioritized by the Committee. For each project the Committee identified who, when and how they would be implemented. Please refer to the "Action Plan" in Chapter 6 for a description of the timeframe and persons or departments responsible for implementation of the Prioritized Projects.

It will be the future responsibility of the Emergency Management Director to ensure implementation of these Prioritized Projects.

Monitoring & Updates

The *Gilford Hazard Mitigation Plan 2018 Update* must be reviewed, evaluated and updated at least once every five years. The Emergency Management Director is responsible for initiating this review and needs to consult with members of the Gilford Emergency Management Committee, in order to track progress and update the Prioritized List in Chapter 6. The EMD will ensure the following:

- The Hazard Analysis will be evaluated for accuracy.
- Projects completed will be evaluated to determine if they met their objective.
- Projects not completed since the last updated will be reviewed to determine feasibility of future implementation.
- New projects will be identified and included in future updates as needed.
- The public, members of the Committee and State and non-profit agencies, will continue to be invited and involved during this process.
- In keeping with the process of adopting the 2018 Gilford Hazard Mitigation Plan, a public hearing to receive public comment will be held. This will require the posting of two public notices, and where appropriate by posting a notice on the town's Web Site.
- Updates to the *Plan* may be adopted subsequent to a public meeting or hearing by the Gilford Board of Selectmen.
- Once every five years, the EMD will submit an updated plan to FEMA for approval.

Annual Hazard Mitigation Plan Update, Monitor & Evaluate Schedule and Public Involvement			
Meeting Schedule	**Task**	**Town of Gilford Responsibilities**	**Public Involvement** (neighboring communities)
Annually or as needed	Assess current status of funding for mitigation projects. Discuss any new projects/plans that should be obtained for your community.	Dept. heads and Board of Selectmen to locate and apply for sources of funding and implement the proposed strategies and plans.	Residents, businesses, and neighboring / watershed communities.
Annually or as needed	Meet to discuss the Hazard Mitigation Plan content and any updates needed for the plan	Department Heads or other agencies.	Residents, businesses, and neighboring / watershed communities.
Annually or as needed	Discussion and evaluation of Training Programs and public outreach efforts. New public outreach methods discussed.	Department Heads or other agencies.	Residents, businesses, and neighboring / watershed communities.

CERTIFICATION OF ADOPTION

TOWN OF GILFORD, NH
47 Cherry Valley Road, Gilford, NH 03249
June 13, 2018

A RESOLUTION ADOPTING THE TOWN OF GILFORD, NH HAZARD MITIGATION PLAN UPDATE 2018

WHEREAS, the Town of Gilford, NH has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of - only those natural hazards profiled in the plan (i.e. *flooding, thunderstorm, high wind, winter storms, earthquakes, and dam failure)*, resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Gilford, NH, has developed and received conditional approval from the NH Homeland Security and Emergency Management for its Hazard Mitigation Plan Update 2018 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held between November 2017 and January 2018 regarding the development and review of the Hazard Mitigation Plan Update 2018; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Gilford, NH; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Gilford, NH, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Gilford, NH eligible for funding to alleviate the impacts of future hazards; now therefore be it RESOLVED by the Board of Selectmen: The Plan is hereby adopted as an official plan of the Town of Gilford, NH

1. The respective official identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
2. Future revisions and Plan maintenance required by 44 CFR 201.6, FEMA and NH HSEM are hereby adopted as part of this resolution for a period of five (5) years from the date of this resolution.
3. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen by April 1st of each year.

Adopted, this 13th day of June, 2018.

Selectman

Selectman

Selectman

ACRONYMNS

BMP – Best Management Practices
CDBG - Community Development Block Grant
CRS – Community Rating System
DES – Department of Environmental Services
DHS – Department of Homeland Security
DMA – Disaster Mitigation Act
DOT – Department of Transportation
EAP – Emergency Action Plan
EMD – Emergency Management Director
EMPG – Emergency Management Performance Grant
EMS – Emergency Medical Services
EOC – Emergency Operations Center
EOP – Emergency Operations Plan
FEMA – Federal Emergency Management Agency
FIRM – Flood Insurance Related Maps
FMA – Flood Mitigation Assistance Program
GIS – Geographic Information System
HAZMAT – Hazardous Material
HMGP – Hazard Mitigation Grant Program
HSEM – Homeland Security and Emergency Management
ICC – International Code Council
NFIP – National Flood Insurance Program
NH HSEM – NH Homeland Security and Emergency Management
OSI – Office of Strategic Initiatives
PDM – Pre-Disaster Mitigation
RC&D – Resource Conservation and Development
USGS – United State Geological Survey

APPENDICES

APPENDIX A

Hazard Mitigation Resources

♦ HAZARD MITIGATION GRANT PROGRAM - "Section 404 Mitigation"

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

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

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

Eligible Subgrantees include:

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

Minimum Project Criteria

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

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

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

♦ FLOOD MITIGATION ASSISTANCE (FMA) PROGRAM

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

Flood Mitigation Assistance Program

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

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

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

Eligible Projects

(44 CFR Part 78)

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

♦ PRE-DISASTER MITIGATION PROGRAM (PDM)

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

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

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

Eligible projects include:

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

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

♦ COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM

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

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

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

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

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

Community Development Block Grant

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

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

WEBSITES FOR MITIGATION RESOURCES	
American Planning Association	http://planning.org
Community Rating System	http://www.fema.gov/national-flood-insurance-program-community-rating-system
FEMA Mitigation Planning	http://www.fema.gov/multi-hazard-mitigation-planning
FEMA Public Assistance Program	https://www.fema.gov/public-assistance-local-state-tribal-and-non-profit
Flood Mitigation Assistance Program	http://www.fema.gov/flood-mitigation-assistance-program
Hazard Mitigation Grant Program	http://www.fema.gov/hazard-mitigation-grant-program
HAZUS and HAZUS–MH	https://www.fema.gov/hazus
Mitigation Success Stories	http://www.fema.gov/mitigation-best-practices-portfolio
National Flood Insurance Program	http://www.fema.gov/nfip
National Hurricane Program	http://www.fema.gov/hazards/hurricanes/nhp.shtm
NOAA Storm Events	http://www.ncdc.noaa.gov/stormevents/
NH Homeland Security & Emergency Management	http://www.nh.gov/safety/divisions/hsem/
Pre-Disaster Mitigation Program	https://www.fema.gov/pre-disaster-mitigation-grant-program
Small Business Administration	http://www.sba.gov/disaster
U.S. Army Corps of Engineers	http://www.usace.army.mil
U.S. Department of Agriculture (USDA)	http://www.usda.gov/da/disaster/nda.htm
USDA , Natural Resources Conservation Service	http://www.nrcs.usda.gov
U.S. Department of Housing and Urban Development	http://portal.hud.gov/hudportal/HUD

APPENDIX B

Documentation of Planning Process

Including:

Agendas
Attendance Sheets
Public Notices / Email Notices
Problem Statements
Mitigation Project Identification Matrix
Prioritized Mitigation Projects

Gilford, NH
Hazard Mitigation Plan

November 3, 2017
Committee/Public Meeting
AGENDA

1. Introductions

2. Review/Update Goals

3. Review/Update Hazard History

4. Review/Update Risk Matrix

5. MISC:
   a. Any significant changes in development since fall of 2010, especially in hazard prone areas?
   b. Participation/activities in NFIP since 2010?
   c. Was the HMP incorporated into other planning mechanisms? If not, why?

6. Review for next meeting:

   Update Critical Facilities (Chap. 4)
   Update Capability Assessment (Chap.5)
   Distribute Sample Mitigation Projects

ATTENDEES

Name	**Title/Affiliation**
Brad Ober	Gilford Fire & Rescue
David Andrade	Gilford Code Enforcement
Dee Chitty	Gilford Buildings & Grounds
John Ayer	Gilford Planning & Land Use
Scott Dunn	Gilford Town Administrator
Steve Carrier	Gilford Fire & Rescue

Gilford, NH
Hazard Mitigation Plan

November 17, 2017

Committee/Public Meeting
AGENDA

1. Review Problem Statements

2. Update Critical Facilities

3. Update Capability Assessment

4. Discuss Mitigation Projects

5. Review for next meeting:

   Identify NEW Mitigation Projects

ATTENDEES

Name	**Title/Affiliation**
John Ayer	Gilford Planning & Land Use
Scott Dunn	Gilford Town Administrator
Steve Carrier	Gilford Fire & Rescue

Gilford, NH
Hazard Mitigation Plan

December 15, 2017

Committee/Public Meeting
AGENDA

1. Review STAPLEE Criteria and FEMA Mitigation Ideas manual

2. Identify NEW mitigation projects using the 'Problem Statements to Projects' Worksheet

3. Next Meeting:
    a. Prioritize Mitigation Projects
    b. Complete the Mitigation Action Plan

ATTENDEES

Name	**Title/Affiliation**
David Andrade	Gilford Code Enforcement
Dee Chitty	Gilford Buildings & Grounds
John Ayer	Gilford Planning & Land Use
Scott Dunn	Gilford Town Administrator
Steve Carrier	Gilford Fire & Rescue
Tim Bartlett	Gilford Fire & Rescue

Gilford, NH
Hazard Mitigation Plan

January 26, 2018

Committee/Public Meeting
AGENDA

1. Vote/Prioritize Mitigation Projects

2. Complete the Mitigation Action Plan

Next Meeting:

Review FINAL DRAFT of the Mitigation Plan via email (in person if needed.

ATTENDEES

Name	**Title/Affiliation**
Brad Ober	Gilford Fire & Rescue
David Andrade	Gilford Code Enforcement
John Ayer	Gilford Planning & Land Use
Steve Carrier	Gilford Fire & Rescue

PUBLIC NOTICE TO THE RESIDENTS OF GILFORD, NH

PUBLIC NOTICE

November 3, 2017 10:00am to 11:30am
Gilford Fire & Rescue
Gilford, NH

The Town of Gilford, with the local Hazard Mitigation Planning Committee, is working to update Gilford's *Hazard Mitigation Plan.* The *Plan* identifies potential natural and man-made hazards throughout the town and various projects and/or strategies to mitigate their effects. The President signed into law, the Disaster Mitigation Act of 2000 (DMA). The Act requires all local governments to prepare and adopt jurisdiction-wide hazard mitigation plans as a condition of receiving Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation (PDM) project grants.

All residents, neighboring communities, businesses, and interested parties are formally invited to participate in the plan update process.

For more information, please contact Chief Steve Carrier at: scarrier@gilfordnh.org

The above notice was posted at the Town Office, Gilford Post Office and Library. In addition, email notices were sent to neighboring towns, chamber of commerce and the regional planning commission, as shown below.

The following was emailed on 10/24/17, 11/14/17 and 11/30/17:

The Town of Gilford, NH is in the process of updating its Hazard Mitigation Plan. This Plan is a tool to be used by the Town, as well as other local, state and federal governments, to reduce the effects of natural and man-made hazards. Our communities and organizations share common hazards which do not respect governmental boundaries. Therefore, we are personally inviting you to participate in the planning process to update the Town's Hazard Mitigation Plan.

We encourage you to attend the first Committee meeting on November 3, 2017 at 10:00am at the Gilford Town Office. If you are unable to attend this meeting you may access a copy of the planning documents and/or comment on hazard mitigation issues by emailing Jane Hubbard with Hubbard Consulting LLC at jhubb_99@yahoo.com or at 603-848-8801. For further information on mitigation planning, we are attaching a fact sheet. We look forward to hearing your ideas on how to mitigate future hazards for the community.

Thank you, on behalf of the Town of Gilford,
Jane Hubbard

Alton EMD/Police Chief
Ryan Heath
police@alton.nh.gov

Belmont EMD/Fire Chief
Kenneth Erickson
bfdchief@belmontnh.org

Gilmanton EMD/Fire Chief
Joe Hempel
firechief@gilmantonnh.org

Laconia EMD/Fire Chief
Ken Ercikson
lfdchief@laconianh.gov

Meredith EMD/Police Chief
Kevin Morrow
kmorrow@meredithnh.org

Moultonborough EMD/Fire Chief
David Bengtson
moultonborofirechief@gmail.com

Tuftonboro EMD/Fire Chief
Adam Thompson
Firedept@tuftonboro.org

Lakes Region Planning Commission
jhayes@lakesrpc.org

Lakes Region Chamber of Commerce
kgifford@lakesregionchamber.org

SAU #73
Kirk Beitler, Superintendent
kbeitler@sau73.org

Winnipesaukee Regional Public Health Network
Shelley Carita
scarita@pphnh.org

Shawna-Leigh Morton
NH HSEM Field Rep
Shawnaleigh.morton@dos.nh.gov

Jennifer Gilbert, NFIP Coord.
Office of Energy & Planning
jennifer.gilbert@nh.gov

Hazard	Problem Statements	Projects *RED is NOT Mitigation* ***BOLD are existing projects from last edition of plan***	Social	Technical	Administrative	Political	Legal	Economic	Environment
Dam Failure	There are some low hazard dams that, if breached, could cause minor damage to downstream property.	Continue to implement an inspection and maintenance program of locally owned dams.	+	+	+	+	+	+	+
Drought	An extended drought increases the probability of fires and may hinder fire suppression to those areas relying on dry-hydrants in local water-bodies.	**Address fire mitigation through hydrants and water availability.**	+	+	+	+	+	+	+
	Private and community wells dry-up during periods of drought.	**Investigate expanding the Laconia water system into Gilford, especially to the School and other public buildings.**	+	+	-	-	+	-	+
Earthquake	Critical facilities that are made of un-reinforced masonry are susceptible to earthquake damage.	Educate the public on seismic retrofitting, window film and earthquake protection.	+	+	+	+	+	+	+
	Residential/commercial structures that are un-reinforced masonry are susceptible to earthquake damage.								
Extreme Heat	There are special needs populations that may need assistance during prolonged periods of extreme heat.	**Develop and implement a public education program regarding all- hazard mitigation.**	+	+	+	+	+	+	+
		Orgainze outreach to vulnerable populations, including promoting accessible heating or cooling centers.	+	+	+	+	+	+	+
Flooding	Heavy rains cause erosion, debris backup and damage to culverts, ditches and roads.	**Upgrade and maintain culverts as needed to reduce the likelihood of back up or washout.**	+	+	+	+	+	-	+
		Develop a stream maintenance program for Black, Gunstock, and Poor Farm Brooks, including state and municipal responsibilities and education/ outreach to riparian landowners.	+	+	+	+	+	+	+
		Create an inventory and map all culverts and catch basins in town.	+	+	+	+	+	+	+
	Flooding can cause damage to public and private structures.								

Hazard	Problem Statements	Projects *RED is NOT Mitigation* ***BOLD are existing projects from last edition of plan***	Social	Technical	Administrative	Political	Legal	Economic	Environment
	Flooded and closed roads impede emergency response.								
Hurricane	Wind damage results in blocked roads, downed trees, wires and utilities which can impact emergency access, communications, electricity and information technology.	Purchase a generator for the library and elementary school.	+	+	+	+	+	-	+
		Promote existing public notification methods for the public.	+	+	+	+	+	+	+
	Damage from hurricane can require a complex debris management plan.	Develop an all-hazards debris management plan.	+	+	+	+	+	+	+
	Heavy rains cause erosion, and damage culverts and roads.	**Upgrade and maintain culverts as needed to reduce the likelihood of back up or washout.**	+	+	+	+	+	-	+
Lightning	Structural fires and forest fires can result from lightning strikes.	Educate the public on lightning protections systems such as lightning rods and grounding structures.	+	+	+	+	+	+	+
	Critical facilities are at risk to lightning strikes.								
Severe Wind *(Tornado /Downburst)*	Wind damage results in downed utilities which can negatively impact emergency communications (Mt. Rowe and Belknap Mt.)								
	Critical facilities and other structures are at risk to severe wind (downburst, tornado) damage.	Educate homeowners on how to protect buildings during severe wind events.	+	+	+	+	+	+	+
Wild/Forest Fire	Conservation, timber, residential, forested areas are at risk to forest fire.	**Address fire mitigation through hydrants and water availability.**	+	+	+	+	+	+	+
	Urban-Wildland interface areas are at risk to forest fire.	**Conduct education and outreach to encourage the use of the FireWise program, beginning with island residents (27 islands with 211 residents).**	+	+	+	+	+	+	+
	Ice storms down trees and wires and disrupt communication services.								

Hazard	Problem Statements	Projects *RED is NOT Mitigation* ***BOLD are existing projects from last edition of plan***	Social	Technical	Administrative	Political	Legal	Economic	Environment
Severe Winter Weather	Wind from blizzards and nor'easters results in downed utilities which can impact emergency communication, information technology and result in prolonged power outages.								
	Severe weather can limit emergency responder access and limit access for snow removal.	Work with NH DOT to address NH Route 11A and 11B intersection - safety issues	+	+	-	+	+	+	+
	Some structures are susceptible to collapse due to heavy snow loads.								
	Schools and individual residents (especially the elderly) are at risk due to lack of heat and water during power outages.	Educate homeowners on how to protect buildings during severe wind events.	+	+	+	+	+	+	+
		Organize outreach to vulnerable populations, including promoting accessible heating or cooling centers.	+	+	+	+	+	+	+
Other		Ensure that the firefighting and fuel containment capabilities at the airport are adequate to address the needs of the current aircraft.	+	+	+	+	+	+	+
		Work with E-911 to ensure that all residence have a unique E-911 address, include trailers in the town's mobile home parks.	+	+	+	+	+	+	+
		Work with Meadowbrook Farms to improve pedestrian access and safety to their site.	+	+	+	+	+	+	+
		Repair the one municipal Red-Listed bridge in town along Old Lakeshore Road.	+	+	+	+	+	-	+

For purposes of prioritizing the mitigation projects listed in the table below, each committee member should **vote for half of the projects (total of 6) by placing a check mark in the "# of votes" column.** The projects will be prioritized based upon the total number of votes received for each project.

PRIORITZED MITIGATION PROJECTS	***# OF VOTES***
1. Address fire mitigation through hydrants and water availability.	3 High
2. Conduct education and outreach to encourage the use of the FireWise program, beginning with island residents (27 islands with 211 residents).	4 High
3. Continue to implement an inspection and maintenance program of locally owned dams.	0 Low
4. Develop a stream maintenance program for Black, Gunstock, and Poor Farm Brooks, including state and municipal responsibilities and education/ outreach to riparian landowners.	2 Medium
5. Develop and implement a public education program regarding all- hazard mitigation.	3 high
6. Educate homeowners on how to protect buildings during severe wind events.	2 Medium
7. Educate the public on lightning protections systems such as lightning rods and grounding structures.	1 Medium
8. Educate the public on seismic retrofitting, window film and earthquake protection.	0 Low
9. Organize outreach to vulnerable populations, including promoting accessible heating or cooling centers.	2 Medium
10. Promote existing public notification methods for the public.	3 high
11. Upgrade and maintain culverts as needed to reduce the likelihood of back up or washout.	4 High

For purposes of prioritizing the NON-mitigation projects listed in the table below, each committee member should **vote for half of the projects (total of 5) by placing a check mark in the "# of votes" column.** The projects will be prioritized based upon the total number of votes received for each project.

PRIORITZED NON-MITIGATION PROJECTS	***# OF VOTES***
1. Purchase a generator for the library and elementary school.	2 Medium
2. Create an inventory and map all culverts and catch basins in town.	4 High
3. Develop an all-hazards debris management plan.	0 Low
4. Ensure that the firefighting and fuel containment capabilities at the airport are adequate to address the needs of the current aircraft.	3 Medium
5. Investigate expanding the Laconia water system into Gilford, especially to the School and other public buildings.	3 Medium
6. Repair the one municipal Red-Listed bridge in town along Old Lakeshore Road.	0 Low
7. Work with E-911 to ensure that all residence have a unique E-911 address, include trailers in the town's mobile home parks.	4 High
8. Work with Meadowbrook Farms to improve pedestrian access and safety to their site.	2 Medium
9. Work with NH DOT to address NH Route 11A and 11B intersection - safety issues	2 Medium

Priority: __0_# Low _1-2__# Medium _3-4__# High

__4___ voters total

APPENDIX C

Approval Letter from FEMA

U.S. Department of Homeland Security
FEMA Region I
99 High Street, Sixth Floor
Boston, MA 02110-2132

FEMA

JUL 17 2018

Whitney Welch
State Hazard Mitigation Officer
NH Department of Safety
Homeland Security and Emergency Management
33 Hazen Drive
Concord, NH 03303

Dear Ms. Welch:

We would like to acknowledge the Town of Gilford and the State of New Hampshire for their dedication and commitment to mitigation planning.

As outlined in the FEMA-State Agreement for FEMA-DR-4316 your office has been delegated the authority to review and approve local mitigation plans under the Program Administration by States Pilot Program. On **July 13, 2018** our Agency was notified that your office completed its review of the Town of Gilford, NH Hazard Mitigation Plan Update 2018 and determined it meets the requirements of 44 C.F.R. Pt. 201.

With this plan approval, the Town of Gilford is eligible to apply to New Hampshire Homeland Security and Emergency Management for mitigation grants administered by FEMA. Requests for mitigation funding will be evaluated individually according to the specific eligibility requirements identified for each of these programs. A specific mitigation activity or project identified in your community's plan may not meet the eligibility requirements for FEMA funding; even eligible mitigation activities or projects are not automatically approved.

Approved mitigation plans are eligible for points under the National Flood Insurance Program's Community Rating System (CRS). Complete information regarding the CRS can be found at http://www.fema.gov/national-flood-insurance-program-community-rating-system, or through your local floodplain administrator.

The Town of Gilford, NH Hazard Mitigation Plan Update 2018 must be reviewed, revised as appropriate, and resubmitted to New Hampshire Homeland Security and Emergency Management for approval within **five years of the plan approval date of July 13, 2018** in order to maintain eligibility for mitigation grant funding. We encourage the Town to continually update the plan's assessment of vulnerability, adhere to its maintenance schedule, and implement, when possible, the mitigation actions proposed in the plan.

JUL 17 2018

Whitney Welch
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Once again, thank you for your continued dedication to public service demonstrated by preparing and adopting a strategy for reducing future disaster losses. Should you have any questions, please do not hesitate to contact Melissa Surette at (617) 956-7559.

Sincerely,
Mark F. Gallagher for
Douglas F. Wolcott Jr.
Acting Deputy Regional Administrator

PFF: ms

cc: Fallon Reed, Chief of Planning, New Hampshire
Kayla Henderson, Hazard Mitigation Planner, New Hampshire
Jennifer Gilbert, New Hampshire State NFIP Coordinator