

Town of Belmont, New Hampshire Hazard Mitigation Plan Update 2020

Prepared by the:

Belmont Hazard Mitigation Update Committee



Belmont Village

Lakes Region Aerial Photos

January 2020

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Town of Belmont, New Hampshire Hazard Mitigation Plan Update

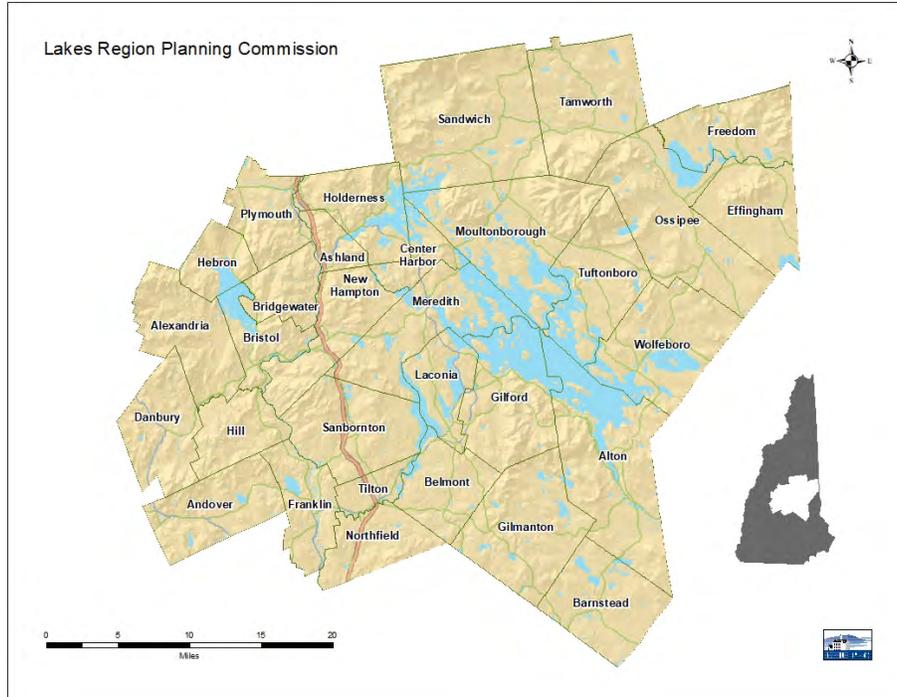
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EXECUTIVE SUMMARY

The *Belmont Hazard Mitigation Plan Update* (the Plan) serves to reduce future losses from natural or man-made hazard events before they occur. The Plan was developed by the Belmont Hazard Mitigation Planning Update Committee (the Committee) with assistance from the Lakes Region Planning Commission and contains statements of policy adopted by the Board of Selectmen in Chapter VI. The Committee focused on the following high- and medium-risk natural, technological, and human-caused hazards:

Natural Hazards		
High Wind Events	Severe Winter Weather	Tropical & Post-Tropical Cyclones
Lightning	Inland Flooding and Dam Failure	Wildfires
Drought	Infectious Diseases	Extreme Temperatures
Technological and Human-Caused Hazards		
Transportation Accident	Long-Term Utility Outage	Terrorism/Violence
Cyber Event	Mass Casualty Incident	Conflagration
Hazardous Materials		

Committee members updated the list of Critical Facilities and the list of existing programs related to hazard mitigation, including the following:

Existing Plans, Regulations and Practices Supporting Hazard Mitigation	
Hazard Mitigation Plan 2014	Wetlands Ordinance, 2004
Code Enforcement	Site Plan Review Regulations, 2018
Zoning Ordinance, 2018	Master Plan, 2002
Flood Plain Ordinance, 2008	School Emergency Plans
Emergency Operations Plan, 2015	Emergency Power
Mutual Aid Agreements	Emergency Response Training and Drills
Belmont Public Water System Emergency Plan 2015	

Of the 27 actions identified in the 2014 plan, 10 were completed, and 3 were considered no longer pertinent and were deleted. The remaining 14 actions are included as part of this plan, either having been deferred in their original format or modified to better address the problem and enhance the likelihood that it will be implemented in the next five years. In its effort to further reduce the vulnerability of the town to future hazards, the committee identified numerous additional actions, resulting in a list of 27 general and hazard-specific **mitigation** actions along with 5 **preparedness** actions. These actions were prioritized based on local factors affecting time frame as well as cost and benefit considerations utilizing the STAPLEE format; however, the overarching priority was determined to be improving communications infrastructure and continuity. Discussions were held regarding how implementation might occur over the next five years. The results of these discussions are summarized in the Implementation Schedule for Mitigation Actions, a table that appears in Chapter IV.

CHAPTER I: PLANNING PROCESS

A. BACKGROUND

Municipalities are required to have an approved hazard mitigation plan as a condition of receiving hazard mitigation assistance funding as well as some other federal funding programs. Such plans are locally developed and adopted and approved by the Federal Emergency Management Agency (FEMA). Funds from these grants are to be used for hazard mitigation projects and actions that will ultimately reduce and mitigate future losses from natural or human hazard events. The NH Department of Safety's Division of Homeland Security and Emergency Management (HSEM) makes funding available to assist municipalities with plan development and update. Municipalities are provided the opportunity to select a contractor. The plan development process generally followed the steps outlined in FEMA's *Local Mitigation Planning Handbook (2013)*.

B. AUTHORITY

The Belmont Hazard Mitigation Plan was prepared pursuant to Section 322, Mitigation Planning of the Robert T. Stafford Disaster Relief and Emergency Assistance Act and Section 104 of the Disaster Mitigation Act (DMA) of 2000. Section 322 of DMA 2000 emphasizes the need for state, local and tribal entities to closely coordinate mitigation planning and implementation efforts.

C. FUNDING SOURCE

The New Hampshire Department of Safety's Homeland Security and Emergency Management (NH HSEM) funded the Plan through a Pre-Disaster Mitigation grant with matching funds from the Lakes Region Planning Commission.

D. PURPOSE

The Belmont Hazard Mitigation Plan is a planning tool to be used by the town of Belmont, as well as other local, state, and federal government entities, in their efforts to reduce the negative effects from natural and human-related hazards. The Plan contains statements of policy as outlined in the Implementation Schedule for Mitigation Actions and in Chapter V Plan Adoption and Monitoring. All other sections of this plan provide support and documentation for informational purposes only and are not included as a statement of policy.

E. SCOPE OF PLAN

The scope of this Plan includes the identification of natural hazards affecting the town of Belmont, as identified by the committee. The committee also chose to include some technological and human-caused hazards in this update.

F. METHODOLOGY

The Lakes Region Planning Commission (LRPC) met with the Belmont Emergency Management Director (EMD) and other town officials in October 2019 to initiate the town's Hazard Mitigation

Plan update. The EMD established the membership of the Belmont Hazard Mitigation Update Committee in October 2019. The committee consisted of representatives from the Police, Fire, Public Works, and Land Use departments, town administration, and the governing body. All meetings were open to the public.

Using FEMA's *Local Mitigation Planning Handbook (2013)* as guidance, the committee reviewed and updated various elements of the town's 2014 Hazard Mitigation Plan. The LRPC planner and the committee reviewed and referenced a variety of plans, studies, reports, and technical information during the development of this Plan Update; a list of these resources can be found in Appendix A. Updated data on property valuation was provided by the Town Administrator. Updated information on development trends was provided by the Town Planner.

The committee held meetings in October, November and December 2019. The following timeline shows the dates and corresponding committee actions. The planning team reviewed each section of the plan, and LRPC provided updated information on hazards in New Hampshire. Each section of the existing plan was revised and, in some cases, reformatted in order to develop a more comprehensive document.

Committee Meetings

October 25, 2019 *Introductory Committee Meeting:*

- Overview of Plan update process and objectives
- Establish committee membership, meeting schedule, and Plan completion date
- Assign information gathering tasks

November 4, 2019: *Committee meeting:*

- Review and update Critical Facilities list
- Review preliminary Critical Facilities and Natural Hazards map
- Identify Natural Hazards impacting Belmont
- Discuss Technological and Human-Caused Hazards

November 18, 2019: *Committee meeting:*

- Update Mitigation Goals from 2014 Plan
- Discuss status and effectiveness of 2014 Plan Mitigation Actions
- Propose new Mitigation Actions

December 3, 2019: *Committee meeting:*

- Discuss drafts of Natural Hazards and Technological/Human-Caused Hazards sections
- Review 2020 Plan Mitigation Actions and cost estimates
- STAPLEE cost-benefit analysis of 2020 Plan Mitigation Actions
- Establish implementation plan for 2020 Plan Mitigation Actions

December 13-16, 2019: *Committee review of 2020 Plan draft*

- Draft made available for public comment, including online at www.belmontnh.org

Public Involvement

Opportunities for public input occurred at each Hazard Mitigation Plan Update Committee meeting, although no members of the public attended. The public was encouraged to attend all meetings through public notifications and postings on the town's website (Appendix C). The first draft of the Plan update was also posted on the town's website and the public was invited to comment on it. A press release was distributed to regional media announcing the public comment period (Appendix C). This provided an opportunity for local and regional businesses, organizations, agencies, educational and health institutions in Belmont and surrounding towns to review and comment on the plan update. In addition, the EMD notified EMDs and Fire Chiefs in neighboring municipalities (Laconia, Gilford, Gilmanton, Northfield, Tilton, and Sanbornton) of the plan update process and invited them to participate. None participated during committee meetings.

G. ACKNOWLEDGMENTS

Special thanks to the Hazard Mitigation Plan Update Committee for their time and effort in updating this Plan:

Michael Newhall	Belmont Emergency Management Director and Fire Chief
Sarah Weeks	Belmont Fire Department Administrative Assistant
K. Jeanne Beaudin	Belmont Town Administrator
Alicia Jipson	Belmont Assistant Town Administrator
Sgt. Evan Boulanger	Belmont Police Department
Craig Clairmont	Belmont Public Works Director
Dari Sassan	Belmont Town Planner
Rick Ball	Belmont Land Use Technician
Ruth Mooney	Belmont Board of Selectmen, Chairperson

Additional assistance was provided by:

Julia Chase	NH Division of Homeland Security and Emergency Management
Kayla Henderson	NH Division of Homeland Security and Emergency Management
Alexx Monastiero	NH Division of Homeland Security and Emergency Management
Samara Ebinger	NH Office of Strategic Initiatives
Jennifer Gilbert	State Floodplain Coordinator, NH Office of Strategic Initiatives
Henry Casey	Intern, Lakes Region Planning Commission
Susan Slack	Principal Planner, Lakes Region Planning Commission

CHAPTER II: COMMUNITY PROFILE

GEOGRAPHY

The town of Belmont is located in the south-central portion of Belknap County, in the Lakes Region of New Hampshire. The town is bounded to the north by Gilford and Laconia, easterly by Gilmanton, westerly by Sanbornton and Tilton and southerly by Northfield and Canterbury. From 1960 to 1990, Belmont experienced a remarkable growth, nearly tripling its population from 1,953 to 5,796. From 1990 to 2000, Belmont's growth slowed to a rate of around 15% and from 2000 to 2010 that rate of growth slowed to just below 10%, resulting in a 2010 population of 7,356 with a moderate influx of seasonal inhabitants. Between 2010 and 2018,

Belmont's population growth slowed, like much of New Hampshire, increasing by 0.7% from 7,356 to 7,365.

Belmont consists of 31.9 square miles (20,427 acres) of which there are approximately 1,248 acres of water. The most prominent surface waters are Lake Winnisquam, Silver Lake, Sargent Lake, and the Winnepesaukee and Tioga Rivers, as well as Badger Brook. The Winnepesaukee River flows along the northwestern edge of Belmont, taking water from Lake Winnepesaukee to Winnisquam and Silver Lakes, then flowing into the Upper Merrimack River. The Tioga River flows east to west across Belmont passing through downtown. Badger Brook is the outlet of both Sargent Lake (43 acres) and Gilmanton's Sawyer Lake (81 acres). Most of Belmont is part of the Winnepesaukee River watershed.

Belmont's topography features a series of rolling hills strung out in a northeast to southwest direction. There is a significant wetlands complex in the western corner of town, and it sits atop a large aquifer, which provides drinking water for parts of Belmont, Northfield, and Tilton.

SERVICES

A three-member Board of Selectmen governs the town of Belmont. The town employs a Town Administrator, Planner, Land Use Technician, and Building Inspector/Code Enforcement Officer/Health Officer. Belmont's full-time Police Chief oversees a staff of 22. Belmont's full-time Fire Chief, who also serves as the Emergency Management Director, oversees a staff of 37. The town has a full-time rescue squad, providing 24-hour ambulance coverage for the town.

The Department of Public Works maintains 57 miles of asphalt road and 10 miles of gravel road. Belmont's electric service is provided by both the NH Electric Cooperative and by Eversource. While many Belmont residents get their drinking water from private wells, a municipal water department delivers clean water to around 650 service connections, serving over 1,600 people.

Lakes Region General Hospital and the Laconia Clinic are located seven miles north of Belmont in Laconia. Franklin Regional Hospital is nine miles to the west, and Concord Hospital is 26 miles to the south. There are medical offices in the Belmont Mill in downtown Belmont.

WEATHER CONDITIONS

Belmont's temperatures and precipitation vary a great deal. January temperatures range from an average high of 30° F to an average low of 10° F. July temperatures range from an average high of 80° F to an average low of 58° F. Annual precipitation averages 44 inches, including about 56 inches of snow (equivalent of about 6 inches of rain).¹

LAND USE AND DEVELOPMENT TRENDS

According to projections from the New Hampshire Office of Strategic Initiatives, the population of Belmont will continue to rise but at a slower rate than before.

Belmont's Population

Census Year	1970	1980	1990	2000	2010	2020
Population	2,493	4,026	5,796	6,716	7,356	7,404
Avg. Annual Growth Rate	---	6.1%	4.4%	1.6%	1.0%	0.65%

According to the American Community Survey five-year estimate (2013-2017), the number of housing units in Belmont 3,621 (2,799 units occupied). The 2010 Census indicated a total of 495 seasonal units exist. The current number of seasonal units has not been estimated and will not be available until after the 2020 Census. However, for the sake of comparison, the 2010 Census indicated that Belmont had approximately one-half of the seasonal dwelling units as a percentage of total units (14%) than the average for Belknap County (28%).

Subdivision and Land Use

Since the last Hazard Mitigation Plan, which was based on subdivisions through 2014, 24 new lots/units have been created through subdivision approval averaging 4.6 per year during this period. From 2014 through 2018, two subdivision lots were created, one in 2015 (BMFGN Development) and another in 2018 (McDonald). BMFGN Development is a 4-lot subdivision on Farrarville Road while McDonald is a 10-lot subdivision on Plummer Hill and Leavitt Roads. During this same period new dwelling unit growth is much less than past years in total numbers. The average per year from 2014 to 2018 was 8 housing unit permits with the highest number of permits (11) issued in both 2015 and 2017.

Since the 2003 Hazard Mitigation Plan, 171 new lots/units have been created through subdivision approval. With the exception of 24 lots created on Daniel Webster Highway, 10 on Horne Road and

¹ Lakeport Station (ID# GHCND:USC00274480) 1981-2010, NOAA.gov

31 units of multi-family on Province Road, the major developments continue to occur on and around the Brown Hill Road area.

Additionally, during the same time period, 118 lots/sites were granted final approval. With the exception of 18 lots on Mile Hill Road, all of the approved developments were also in the area of Brown Hill, Province, and Durrell Mountain Roads.

Between 1992 and 2002 Belmont averaged approximately 50 new residential permits per year. This average fell to 30 for the years 2003 to 2010, and actually below 10 per year from 2008 to 2012. The annual average for Commercial/Industrial permits rose from three between 1992 and 2002 to six between 2003 and 2010.

Although the growth of new residential housing units has fallen, the existence of several approved residential subdivisions with newly created building sites that remain currently unbuilt will play a major factor in possible future development activity dependent primarily on the economy.

In the past five years, development has occurred along Daniel Webster Highway (US 3) and Laconia Road (NH 106). The majority of residential development continues the trend of occurring in the Brown Hill Road and Province Road areas. It is important that emergency services access and availability remain viable in these areas. In terms of industrial/commercial development, quarrying to produce aggregate is a recent trend as easily mined gravel becomes scarcer.

The table below shows the Average Annual Daily Traffic (AADT) volume on selected state and local roads Traffic Volume Reports from the NH Department of Transportation (NHDOT) in terms of vehicles per day (VPD). Thirteen of the 15 locations show an increase in vehicle traffic between 2014 and 2018. NH 106 (Laconia Road) saw an increase of over 2,500 VPD (12,000 VPD in 2015 to 14,618 VPD in 2018). The two locations with lower traffic volumes (just under 100 VPD) were over the Tioga River at Church Street and Brown Hill Road.

Location ID	Location	2014	2015	2016	2017	2018
22039022	US 3/NH 11 (DANIEL WEBSTER HWY) WEST OF UNION RD (SB-NB) (21039023-21039024)	17,633	17,737	18,200	18,142	17,715
62039052	NH 107 (PROVINCE RD) AT LACONIA TL	3,454	3,530	3,961	4,036	4,097
62039053	NH 140 (GILMANTON RD) AT GILMANTON TL	3,000	3,066	3,155	3,475	3,527
82039011	NH 106 (LACONIA RD) AT GILMANTON TL	8,128	8,307	2,609	8,105	8,227
82039012	NH 106 (LACONIA RD) NORTH OF STONE RD	*	*	*	*	*
82039015	NH 140 (DEPOT ST) WEST OF JOHNSON ST	7,010	7,164	7,394	7,534	7,647

82039016	NH 140 (MAIN ST) EAST OF SPRING ST	*	*	*	*	*
82039017	NH 106 (LACONIA RD) NORTH OF MAIN ST	*	*	*	*	*
82039048	NH 11A (COURT ST) AT LACONIA TL	14,224	14,537	14,883	15,166	15,393
82039049	MILE HILL RD AT LACONIA TL	*	*	*	*	*
82039050	NH 106 (LACONIA RD) AT LACONIA TL	*	12,000	12,348	12,583	14,618
82039051	NH 107 (PROVINCE RD) SOUTH OF MIDDLE ROUTE RD	2,500	2,555	2,629	2,788	2,830
82039055	SHAKER RD AT NORTHFIELD TL	870	889	915	1,081	1,097
82039057	TUCKER SHORE RD WEST OF HORSESHOE DRIVE	*	*	*	*	*
82039058	UNION RD OVER DURGIN BROOK	*	2,000	2,058	2,097	2,042
82039060	SOUTH RD OVER BELMONT RIVER	*	740	761	775	781
82039061	NH 140 (GILMANTON RD) EAST OF NH 106 (EB-WB) (81039013-81039014)	3,200	3,270	3,365	4,093	4,154
82039062	US 3/NH 11 (DANIEL WEBSTER HWY) SOUTH OF DURETTE DRIVE	*	*	*	*	*
82039063	CHURCH ST OVER TIOGA RIVER	1,700	1,600	1,646	1,677	1,631
82039064	BROWN HILL RD OVER TIOGA RIVER	*	1,200	1,235	1,258	1,152
82039065	NH 106 (LACONIA RD) NORTH OF BROWN HILL RD (SB-NB) (81039066-81039067)	11,000	11,242	11,568	11,788	12,534
82403012	US 3/NH 11 (LACONIA RD) AT BELMONT TL	*	*	*	*	*

Future Development

The town's Master Plan has not been updated since 2002. The Capital Improvements Plan is updated annually. No permanent Growth Management Plan was adopted by the Town as a result of the fast-paced growth of the 1980s and 1990s and it is evident that the growth rate of the 1980s and 1990s was not carried forward into the first decade of the 21st century. Areas of potential future development in the next five years include along Daniel Webster Highway (US 3), Mile Hill Road, and Hurricane Road.

While there has been some new development in Belmont since the 2014 Plan, the rate of growth is slower than it has been in past decades. Overall, with the slower pace of growth in recent years, Belmont's vulnerability to hazards has decreased since 2014.

CHAPTER III: RISK & VULNERABILITY ASSESSMENT

A. INVENTORY ASSETS

The list of critical infrastructures for the town of Belmont was updated by the committee. The critical infrastructure list is divided into three categories, 1) Emergency Response Facilities; 2) Not Necessary for Emergency Response Facilities; 3) Facilities and Populations to Protect. The first category contains facilities essential in a hazard event, including the Emergency Operation Centers. The second contains valuable resources that would become vital to disaster recovery. The third category is a list of facilities and populations that could require protection during and following a disaster.

Critical Facilities

<i>Classification</i> ▼	<i>Title</i> ▼	<i>Address</i> ▼
Emergency Response Facilities		
Command & Control		
Emergency Command Center (ECC)-Primary	Fire Station	14 Gilmanton Road
Emergency Command Center (ECC)-Secondary	Police Station	16 Fuller Street
Alternate	Town Offices	143 Main Street
Alternate	Public Works	149 Hurricane Road
Alternate	Corner Meeting House	16 Sargent Street
Primary Evacuation & Transportation Routes		
Bridges & Culverts	Tioga @ Laconia Road	Laconia Road
Bridges & Culverts	Mosquito Bridge	Daniel Webster Highway
Bridges & Culverts	Badger Brook Bridge	Sargent Lake Road
Bridges & Culverts	Shaker Road Bridge (Badger Brook)	Shaker Road
Bridges & Culverts	Lochmere Bridge	Grey Rocks Road
Bridges & Culverts	Depot Street Bridge	Depot Street
Bridges & Culverts	Church Street Bridge	Church Street
Bridges & Culverts	South Road Bridge	South Road
Bridges & Culverts	Tioga @ Brown Hill Road	Brown Hill Road
Bridges & Culverts	Tioga @ Province Road	Province Road
Routes	NH Route 106 (Laconia Road)	
Routes	NH Route 140 (Depot Street)	
Routes	NH Route 140 (Gilmanton Road)	
Routes	NH Route 107 (Province Road)	
Routes	US/NH Routes 3/11 (Daniel Webster Highway)	
Critical Intersections	Seavey Rd/Church Street	Seavey Rd/Church Street
Critical Intersections	Seavey Rd/Laconia Rd	Seavey Rd/Laconia Rd

<i>Classification</i> ▼	<i>Title</i> ▼	<i>Address</i> ▼
Critical Intersections	Laconia Road/Gilmanton Road	Laconia Road/Gilmanton Road
Potential Shelters		
Schools	Belmont Elementary	26 Gilmanton Road
Schools	Belmont Middle	38 School Street
Schools	Belmont High	255 Seavey Road
Town Buildings	Corner Meeting House	16 Sargent Street
Emergency Medical Services		
Ambulance and EMT	Belmont Fire Dept	14 Gilmanton Road
Clear Choice MD	Urgent Care Center	96 D. Webster HWY
Convenient MD	Urgent Care Center	77 D. Webster HWY
Belknap Family Health Center	Medical Center	8 Corporate Drive
Fire & Chemical Suppression (see Appendix D)		
Communications (see Appendix D)		
Potential Helicopter Land Zones (see Appendix D)		
Not Necessary for Emergency Response Facilities		
Water (see Appendix D)		
Utilities (see Appendix D)		
Fuel Storage Facilities (see Appendix D)		
Facilities & Populations to Protect (see Appendix D)		

The Town Administrator provided the structural value (2019) of about a dozen specific critical facilities.

Value of Critical Facilities (Structure only)

Main Fire Station	\$701,800	Lakes Region Casino	\$1,516,700
Public Works Facilities	\$661,100	Town Offices	\$485,800
Police Station	\$485,800	Corner Meeting House	\$328,200
Public Library	\$231,800	Belmont Elementary School	\$4,664,100
Belmont Middle School	\$4,937,700	Belmont High School	\$14,245,400
Belmont Mill	\$934,500	Belknap Mall	\$12,321,700

Value of all structures in Belmont

Type of Structure	Number of Structure	Value of Structures	Average Structural Value
Residential	3,396	\$420,749,728	\$123,895.68
Commercial	172	\$94,884,370	\$551,653.31
Exempt	247	\$37,742,100	\$152,802.02
Total	3,458	\$553,376,198	\$160,027.82

The value of all the 3,652 structures in Belmont was more than \$448 million.

B. IDENTIFYING HAZARDS

The town of Belmont is prone to a variety of natural, technological, and human-caused hazards. The 2014 Plan identified the following hazards of concern to the town at that time.

Hazards identified in the 2014 Belmont Hazard Mitigation Plan

High	Moderate	Low
Flooding	Severe Winter Weather (Ice Storm)	Drought
High Winds (Thunderstorm, Tornado, Downburst, Hurricane)	Earthquake	Wildfire
Severe Winter Weather (Snowstorm)	Lightning	Radon
	Epidemic	Dam Failure
		Conflagration
		Hazardous Materials
		Terrorism
		Water System Failure
		Transport Incident

While updating the 2020 Plan, the committee considered the hazards identified in the *2018 State of New Hampshire Multi-Hazard Mitigation Plan*, developed by the New Hampshire Department of Safety's Division of Homeland Security and Emergency Management, for identification and definition of hazards that might affect the town. The 2018 State Plan updated the hazard nomenclature, grouping some hazard types together, adding several hazards, and deleting some. For example, tornado, downburst, and thunderstorm were grouped as High Wind Event, and Radon was deleted. Below is a list of natural hazards from the *2018 State of New Hampshire Multi-Hazard Mitigation Plan*, which assessed the hazard risk to Belknap County (see table below).

New Hampshire Hazards Profile 2018

Hazard	State Probability	State Severity	State Relative Threat	Belknap Co. Risk
Inland Flooding	High	High	High	High
Coastal Flooding	<i>Coastal only</i>	<i>Coastal only</i>	<i>Coastal only</i>	<i>n/a</i>
Dam Failure	High	High	Moderate	Moderate
Drought	Low	Moderate	Low	Moderate
Wildfire	Moderate	Low	Low	Low
Earthquake	Moderate	Low	Moderate	Moderate
Landslide	High	Low	Low	Low
High Wind Event	High	High	Moderate	Moderate
Tropical & Post-Tropical Cyclone	Low	Low	Moderate	Moderate
Lightning	High	Low	Low	Moderate
Severe Winter Weather	High	High	Moderate	Moderate
Snow Avalanche	Moderate	Low	Low	Low
Epidemic	Moderate	Low	High	High
Fire and Hazardous Materials	Moderate	Low	Low	Low
Terrorism	Low	High	Low	Low

C. HAZARD EVENTS: CHARACTERISTICS, IMPACTS & POTENTIAL LOSSES

Each of the natural hazards that the committee identified as likely affecting Belmont is profiled below, including a description of the likely location of each hazard, the extent of the hazard, the probability of an occurrence in Belmont, and its impact on the town. Extent is a description of “how bad the hazard could get,” considering three factors: magnitude, onset, and duration. *Magnitude* is size of the hazard, such as depth of floodwaters or wind speed. *Onset* is how quickly the hazard approaches. For example, depending on geography as well as the nature of a rainstorm, floodwaters might rise over a period of days, or it might take just a few hours to build up a concentrated flow. *Duration* is a matter of how long the hazard is present. A downburst or tornado exists for minutes or hours, while a hurricane or tropical depression is usually around for days. The committee considered the probability and severity of the various natural hazards. **Probability** was the likelihood of recurrence over a 25-year period and described as Highly Likely, Likely, Occasional, or Unlikely. **Severity** was a combination of impact to people, property, and business services.

The *impact* of a hazard is the potential degree of damage that could occur in Belmont. This incorporates the assessed value of each impacted facility and the vulnerability of these facilities and various populations and places to protect. To rate the impact of a hazard, committee members considered the potential intensity and scope of an event, as defined below:

- Low: limited structural damage, the town’s ability to respond is not compromised, local residents can handle the hazard event without help from outside sources
- Moderate: some structural damage, the town’s ability to respond is compromised, regional or county assistance is needed to survive and/or recover
- High: substantial structural damage, the town’s ability to respond is greatly compromised, state or federal assistance is necessary to survive and/or recover.

NATURAL HAZARDS

The committee discussed each of the natural hazards included in the *2018 State of New Hampshire Multi-Hazard Mitigation Plan Update* and, because of geography, determined that Coastal Flooding and Avalanche are not natural hazards of concern in Belmont.

2019 Belmont Natural Hazard Ranking			
HAZARD	TOTAL	RANK	RISK
High Wind Events	32	1	HIGH
Severe Winter Weather	20	2	HIGH
Tropical & Post Tropical Cyclones	18	3	HIGH
Lightning	16	4	HIGH
Inland Flooding	15	5	HIGH
Wildfires	12	6	MEDIUM
Drought	8	7	MEDIUM
Dam Failure	6	8	MEDIUM
Extreme Temperatures	6	9	MEDIUM
Infectious Disease	2.67	10	LOW
Landslides	2.67	11	LOW
Earthquakes	2	12	LOW
Solar Storms & Space Weather	1	13	LOW

HIGH WIND EVENTS

Belmont is likely to experience two types of high wind events that usually result from other severe storms and can occur at any time of the year: tornados and straight-line winds. A **tornado** is a narrow, violently rotating column of air that extends from the base of a thunderstorm to the ground. It is hard to see a tornado unless it forms a condensation funnel made up of water droplets, dust and debris. Tornadoes are the most violent of all atmospheric storms.² **Straight-line winds** describes any thunderstorm wind that is not associated with rotation and is usually used to differentiate from tornadic winds. There are several sub-types of straight-line winds, including **downdraft**, which is a small-scale column of air that rapidly sinks towards the ground; and **downburst**, which is the result of a downdraft, referred to as a **macroburst** when the area affected is greater than 2.5 miles and **microburst** when less than 2.5 miles.³

Extent: Belmont is at risk of several types of natural events associated with high winds, including hurricanes, microbursts, macrobursts, tornadoes, and nor'easters. According to the National Oceanic and Atmospheric Administration (NOAA), a downburst is a strong downdraft, rotational in

² <http://www.nssl.noaa.gov/education/svrwx101/tornadoes/>

³ <http://www.nssl.noaa.gov/education/svrwx101/wind/types>

nature, which causes damaging winds on or near the ground. Winds can exceed 130 mph.⁴ Downbursts fall into two categories based on their size:

- microbursts, which cover an area less than 2.5 miles in diameter, and
- macrobursts, which cover an area at least 2.5 miles in diameter.

Tornadoes are violent rotating storms that extend to the ground with winds that can reach 300 miles per hour. They are produced from thunderstorms and can uproot trees and buildings. The most recent damaging tornado to touch down in New Hampshire was on July 24, 2008, classifying around

100 homes “uninhabitable” and killing one person. The tornado traveled from Epsom to Effingham, missing Belmont by 20 to 30 miles. It transitioned from EF1 to EF2 multiple times

Enhanced Fujita Scale						
EF Number	0	1	2	3	4	5
3-Second Gust (mph)	65-85	86-110	111-135	136-165	166-200	Over 200
Damage Indicator		Small barns, Farm Outbuildings	One-or two-family residences	Single-Wide Mobile Home	Double-Wide Mobile Homes	Apt, Condo, Townhouse (3 Stories or less)

and caused significant damage to 83 homes in Alton and Barnstead which, like Belmont, are located in the Lakes Region of central New Hampshire. Since 2012, there have been 25 recorded high wind events in the Belknap region. High wind events affected Belmont on October 29, 2017, August 3, 2018, October 17, 2019, and November 1, 2019, all of which downed trees and utility wires. The 2017 storm was the most serious of the four, resulting in \$39,376 in FEMA Public Assistance Reimbursement (FEMA-4355-DR-NH).

History

Hazard	Date	Location	Magnitude	/Description
High Wind	07/04/2012	BELKNAP	50 kts.	Thunderstorm Wind
High Wind	07/04/2012	BELKNAP	50 kts.	Thunderstorm Wind
High Wind	07/04/2012	BELKNAP	50 kts.	Thunderstorm Wind
High Wind	07/17/2012	BELKNAP	50 kts.	Thunderstorm Wind
High Wind	07/17/2012	BELKNAP	52 kts.	Thunderstorm Wind
High Wind	08/05/2012	BELKNAP	50 kts.	Thunderstorm Wind
High Wind	08/05/2012	BELKNAP	52 kts.	Thunderstorm Wind
High Wind	08/12/2012	BELKNAP	50 kts.	Thunderstorm Wind
High Wind	10/29/2012	BELKNAP	50 kts.	Hurricane Sandy
High Wind	10/30/2012	BELKNAP	50 kts.	Thunderstorm Wind
High Wind	6/30/2013	BELKNAP	50 kts.	Thunderstorm Wind
Strong Wind	11/24/2013	BELKNAP	43 kts.	
High Wind	7/3/2014	BELKNAP	50 kts.	Thunderstorm Wind
Tornado	7/24/2014	BELKNAP - CENTER HARBOR	EF0	Waterspout spotted on Lake Winnepesaukee
High Wind	7/28/2014	BELKNAP	50 kts.	Thunderstorm Wind

⁴ *Weather Glossary*. National Oceanic and Atmospheric Administration, <http://www.weather.gov/glossary/index.php?letter=d>, visited March 8, 2011.

Hazard	Date	Location	Magnitude	/Description
High Wind	10/08/2014	BELKNAP	50 kts.	Thunderstorm Wind
Thunderstorm Wind	7/19/2015	Belmont	50 Knots (kts)	Severe storm downed trees in Belmont
Thunderstorm Wind	8/3/2015	Belmont	50 Knots (kts)	Severe storm downed trees in Belmont
High Wind	6/7/2016	BELKNAP	50 kts.	Thunderstorm Wind
High Wind	6/7/2016	BELKNAP	50 kts.	Thunderstorm Wind
High Wind	7/1/2016	BELKNAP	50 kts.	Thunderstorm Wind
High Wind	7/23/2016	BELKNAP	50 kts.	Thunderstorm Wind
High Wind	10/30/2017	Belknap	61 kts.	50-60 mph winds/ 2 to 5 inches of rain
Thunderstorm Wind	8/3/2018	Belmont	50 Knots (kts)	Sever storm downed trees and wires on Clark Street in Belmont
High Wind	8/7/2018	BELKNAP	50 kts.	Thunderstorm Wind

Location: All areas of town are susceptible to damage from high winds. Committee members identified the Route 107 corridor as particularly vulnerable to high wind events that can knock out important communication infrastructure located there. The Belmont EMD is concerned that communication could be cut off town-wide if the Route 107 area were hard hit. On average, six tornadoes touch down somewhere in New England each year. There is no way of knowing where or when the next damaging tornado will strike as they are among the most unpredictable weather phenomena. Downbursts are 10 times more likely to occur than tornadoes. The town experienced a high wind event on October 29, 2017 that caused power outages until November 4, 2017. The town's back-up generators were used at the town fire and police departments and to power the town's pump stations. The storm required road closures due to downed trees and utility wires, particularly on Higgins Road, South Road, High Street, Cotton Hill Road, Vineyard Way, Union Road, Bean Hill Road, Seavey Road, Hurricane Road, Jefferson Road, Jamestown Road, Horne Road, Dutile Road, Greenwood Drive, Hackett Road, Hicks Road, Gaudet Drive, Hoadley Road, Rogers Road, Durrell Mountain Road, Swallow Road, Sargent Lake Road, Aiden Circle, Upper Parish Settlement, Coventry Lane, Witham Road, Leavitt Road, Farrarville Road, Brown Hill Road, Lakewood Drive, Arnold road, Twin Bridge Road, Depot Street, Route 140, Route 107, Route 3, and Main Street. The town received \$39,376 in FEMA Public Assistance Reimbursement (FEMA-4355-DR-NH).

Impact: High wind events could strike anywhere in town with little, if any warning. While individual events may be minor and rare, their impacts could be devastating. All structures, especially older ones, which are not necessarily built to the current building code standards, could be at risk. Damage can occur to most structures in town as a result of downed trees in any high wind event, including the commonly occurring thunderstorms. These winds can bring down limbs and trees, causing damage to structures as well as pulling down utility lines and blocking roads. This is particularly the case along private roadways that may get limited cutback of vegetation. Because hurricanes form over the ocean and move relatively slowly, people usually have time to prepare for the event.

However, this also means that once the storm arrives, heavy rain and wind can be expected for several days. All structures in Belmont are susceptible to damage by high wind events, whether through thunderstorms, downburst, or tornado. Assuming 1% to 5% town-wide damage to buildings, high winds could result in \$4.4 million to \$22 million in damages. The potential impact to the town due to high winds is moderate. The October 29, 2017 high wind/rain event

Probability of Occurrence: Highly Likely

SEVERE WINTER WEATHER

Belmont experiences four types of severe winter weather: heavy snow, blizzards, nor'easters, and ice storms.

Extent: A **heavy snowstorm** is defined as one that deposits four or more inches of snow in a 12-hour period.⁵ Heavy snows can cause damage to property, disrupt services, and make for unsafe travel, even for emergency responders. Due to poor road conditions, residents may be stranded for several days. Extra pressure is placed on road crews and emergency services under these conditions. Snow load in severe winter storms is of concern as well. This is particularly true for flat-roofed structures. Several small storms can produce the same snow load as a single larger storm and the combined weight of the snow load can damage rooftops. Ice adds additional weight as well. It is not uncommon in New Hampshire to experience mixes of winter precipitation as temperatures fluctuate above and below the freezing mark. While not widespread, instances of collapsed roofs are not uncommon.

Snowfall Categories

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

Snowstorms are a common occurrence throughout the Lakes Region. Blizzards, which may dump 12 to 36 inches or more of snow in a one- to three-day period are less frequent, but can have a serious impact on structures, utilities, and services. The region typically receives greater than 66 inches of snow annually.⁶ The graph to the right, depicting record snowfalls in Belmont for each day of the year, illustrates the strong potential for Belmont to experience at least one snowfall of 12 inches or more in any given year.⁷

⁵ <http://www.nh.gov/safety/divisions/hsem/NaturalHazards/index.html>, visited February, 8, 2011.

⁶ *Northeast States Emergency Consortium*, <http://www.nesec.org/>, visited January 25, 2011.

⁷ <http://www.wunderground.com/NORMS/DisplayNORMS.asp?AirportCode=KCON&StateCode=NH&SafeCityName=Belmont&Units=none&IATA=LCI&records=on&MR=1>

An **ice storm** coats trees, power lines, streets, vehicles, and roofs with a very slick and heavy coating of ice.

The Sperry-Piltz Ice Accumulation (SPIA) Index (right) is used to forecast and classify ice storms based on a combination of the average thickness of ice coating (referencing expected temperature and precipitation levels) and wind speed; ratings range from 0 to 5.⁸ The SPIA Index was first used in the United States in 2009 and is now beginning to be utilized by the National Weather Service. The major threats to a community due to ice storms

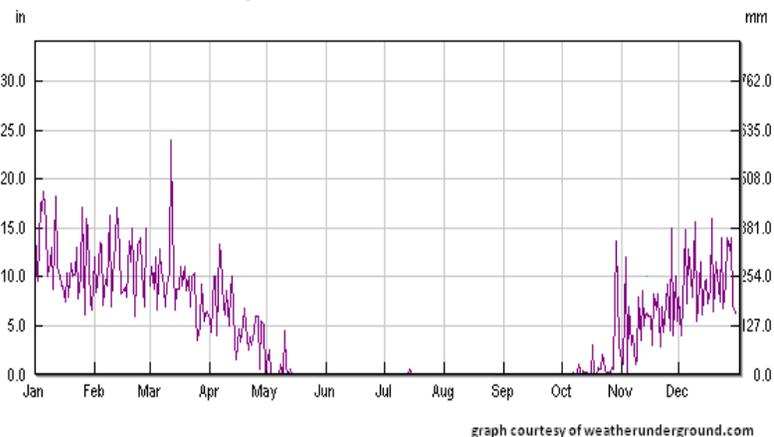
The Sperry-Piltz Ice Accumulation Index, or "SPIA Index" – Copyright, February, 2009

ICE DAMAGE INDEX	* AVERAGE NWS ICE AMOUNT (in inches) <small>* Based October, 2011</small>	WIND (mph)	DAMAGE AND IMPACT DESCRIPTIONS
0	< 0.25	< 15	Minimal risk of damage to exposed utility systems; no alerts or advisories needed for crews, for outages.
1	0.10 - 0.25	15 - 25	Some isolated or localized utility interruptions are possible, typically lasting only a few hours. Roads and bridges may become slick and hazardous.
	0.25 - 0.50	< 15	
2	0.10 - 0.25	25 - 35	Scattered utility interruptions expected, typically lasting 12 to 24 hours. Road and travel conditions may be extremely hazardous due to ice accumulation.
	0.25 - 0.50	15 - 25	
	0.50 - 0.75	< 15	
3	0.10 - 0.25	>= 35	Numerous utility interruptions with some damage to main feeder lines and equipment expected. Tree limb damage is excessive. Outages lasting 1 - 3 days.
	0.25 - 0.50	25 - 35	
	0.50 - 0.75	15 - 25	
	0.75 - 1.00	< 15	
4	0.25 - 0.50	>= 35	Prolonged & widespread utility interruptions with extensive damage to main distribution feeder lines & some high voltage transmission lines structures. Outages lasting 5 - 10 days.
	0.50 - 0.75	25 - 35	
	0.75 - 1.00	15 - 25	
	1.00 - 1.25	< 15	
5	0.50 - 0.75	>= 35	Catastrophic damage to entire exposed utility systems, including both distribution and transmission networks. Outages could last several weeks in some areas. Shelters needed.
	0.75 - 1.00	>= 25	
	1.00 - 1.50	>= 15	
	> 1.50	Any	

(Categories of damage are based upon combinations of precipitation totals, temperatures and wind speeds/directions.)

include structural damage due to heavy loads on roofs, interruptions of services such as electricity, fuel, water, and communications, as well as hazardous road conditions. In the winter of 1998, a major ice storm crippled much of New Hampshire, coating everything with as much as three inches of ice. This storm was the costliest FEMA/Presidential Declared disaster in New Hampshire's history. The ice load bent trees and power lines and led to massive power outages throughout the state. The U.S. Army Corps of Engineers, Cold Regions Research and Engineering Laboratory estimates a 40- to 90-year return period for an event with a uniform ice thickness of between 0.75 and 1.25 inches. Ten years later, however, New Hampshire was struck again by another severe ice storm. The December 2008 ice storm caused more damage than any other storm in the state's history. The President declared this storm as a major disaster and the state received \$15 million in federal aid for recovery.⁹

Record Daily Snowfall Amounts: Belmont, NH



New Hampshire generally experiences at least one or two **nor'easters** each year with varying degrees of severity. A nor'easter is defined as a large anticyclone weather system that resides near the New England region. These storms have the potential to inflict more damage than many hurricanes because high winds can last from twelve hours to three days, while the duration of hurricanes ranges from six to twelve hours. A nor'easter also has the potential to sustain hurricane force winds, produce torrential rain, and create blizzard conditions in winter months. Infrastructure, including critical facilities, may be impacted by these events, and power outages, communications, and transportation disruptions (i.e., snow and/or debris-impacted roads, as well as hazards to navigation and aviation) are often associated with the event.

⁸ SPIA Northeast webpage, <http://www.spia-index.com/neIce.php>, June 3, 2014.

⁹ <http://www.fema.gov/news/newsrelease.fema?id=48384>, visited January 25, 2011

In the winter months, the state may experience the additional coincidence of **blizzard** conditions with many of these events. A blizzard is characterized by sustained winds or frequent gusts to 35 miles per hour or greater and considerable amounts of falling or blowing snow that last for a duration of three hours or longer. The combination of winds and snow reduce visibility to less than a quarter mile.¹⁰ The added impact of the masses of snow and/or ice upon infrastructure often affects transportation and the delivery of goods and services for extended periods. Downed limbs and wires and unplowed or untreated roads can severely limit emergency access to many residences. The potential for very cold temperatures and loss of power can quickly compound the issue.

History

Hazard	Date	Location	Magnitude	Description
Severe Winter Weather	3/1/2012	County Wide	8 to 14 inches	Heavy snow
Severe Winter Weather	2/8/2013	County Wide	4 to 18 inches	Heavy Snow Southeastern part of county experienced blizzard conditions for 3 to 10 hours
Severe Winter Weather	2/23/2013	County Wide	6 to 14 inches	Heavy snow
Severe Winter Weather	3/19/2013	County Wide	6 to 10 inches	Heavy snow
Severe Winter Weather	12/14/2013	County Wide	8 to 14 inches	Heavy snow
Severe Winter Weather	1/2/2014	County Wide	6 to 14 inches	Heavy snow
Severe Winter Weather	2/5/2014	County Wide	6 to 12 inches	Heavy snow
Severe Winter Weather	2/13/2014	County Wide	6 to 14 inches	Heavy snow
Severe Winter Weather	2/18/2014	County Wide	6 to 14 inches	Heavy snow
Severe Winter Weather	3/19/2014	County Wide	6 to 18 inches	Heavy snow
Severe Winter Weather	1/26/2015	County Wide	6 to 14 inches	Heavy snow
Severe Winter Weather	2/2/2015	County Wide	8 to 14 inches	Heavy snow
Severe Winter Weather	2/7/2015	County Wide	6 to 15 inches	Heavy snow
Severe Winter Weather	2/14/2015	County Wide	6 to 12 inches	Heavy snow
Severe Winter Weather	2/5/2016	County Wide	4 to 10 inches	Heavy snow
Severe Winter Weather	12/11/2016	County Wide	4 to 8 inches	Heavy snow
Severe Winter Weather	12/17/2016	County Wide	4 to 7 inches	Heavy snow
Severe Winter Weather	12/29/2016	County Wide	6 to 16 inches	Heavy snow
Severe Winter Weather	2/9/2017	County Wide	6 to 15 inches	Heavy snow
Severe Winter Weather	2/12/2017	County Wide	6 to 16 inches	Heavy snow

¹⁰ "Winter storm terms," http://www.fema.gov/hazard/winter/wi_terms.shtm, visited February 8, 2011.

Hazard	Date	Location	Magnitude	Description
Severe Winter Weather	2/15/2017	County Wide	4 to 12 inches	Heavy snow
Severe Winter Weather	3/14/2017	County Wide	12 to 20 inches	Heavy Snow Laconia observed at least three hours of blizzard conditions 3:05 PM till 6:10 PM Presidential Major Disaster Declared (DR-4316)
Severe Winter Weather	3/31/2017	County Wide	6 to 12 inches	Heavy snow
Severe Winter Weather	4/1/2017	County Wide	6 to 12 inches	Heavy snow
Severe Winter Weather	12/22/2017	County Wide	3 to 10 inches	Heavy snow
Severe Winter Weather	1/4/2018	County Wide	10 to 15 inches	Heavy snow
Severe Winter Weather	2/7/2018	County Wide	6 to 10 inches	Heavy snow
Severe Winter Weather	2/17/2018	County Wide	2 to 9 inches	Heavy snow
Severe Winter Weather	3/7/2018	County Wide	10 to 18 inches	Heavy snow
Severe Winter Weather	3/13/2018	County Wide	12 to 24 inches	Heavy snow
Severe Winter Weather	11/20/2018	County Wide	6 to 10 inches	Heavy snow
Severe Winter Weather	11/27/2014	Statewide	4 to 15 inches 10 to 15 in Belknap County	Heavy snow
Severe Winter Weather	1/7/1998	Statewide	\$12.4m in damages statewide, 1 injury	Ice Storm
Severe Winter Weather	12/11/2008	Belknap County	\$359,000 Ice Storm	Ice

A series of nor'easters struck the state between February 23 and March 3, 2010 that left 330,000 residents without power. This was declared a major disaster by the President and the state received \$2 million in federal recovery aid.¹¹ The 2007 Patriots' Day Nor'easter was one of the largest springtime storms to strike New England.¹² The storm brought heavy snowfall to central and northern New Hampshire which flooded many rivers. The storm also packed hurricane force winds which caused structural damage and power outages from downed trees. FEMA and the U.S. Small Business Administration paid nearly \$30 million in New Hampshire for disaster aid related to this nor'easter.

The winter storm on March 14, 2017 was declared a Presidential Major Disaster on June 01, 2017, which led to hazard mitigation funding totaling to \$1,729,979.45 allocated to both Belknap County (\$4.69 per capita impact) and Carroll County (\$39.48 per capita impact). This storm primarily affected the utilities of each county.

Location: Severe winter weather occurs frequently in Belmont and the possibility exists for residents to have to withstand several days without power. No one area of the town is at greater risk than another, but there are segments of the population that are more at risk. These include the

¹¹ <http://www.fema.gov/news/newsrelease.fema?id=51887> visited January 25, 2011

¹² <http://www.fema.gov/about/regions/regioni/ora/externalaffairs/patriotsdaynoreaster.shtm>, visited May 15, 2012.

elderly, people in need of regular medical care, and young children. These weather events can vary greatly based on slight differences in temperature, humidity, and elevation. Some events will produce a combination of winter weather types. Committee members again referred to the vulnerability of the Route 107 corridor and its location for important communication infrastructure that can be impacted by these storms. In 2017, the town experienced the effects of Storm Stella, a nor'easter/blizzard that downed trees and utility lines, caused power outages, and damaged utilities and homes. The town received \$20,026 in FEMA Public Assistance Reimbursement (FEMA-4355-DR-NH).

Impact: Major roads, Populations to Protect, Emergency Response Facilities, Essential Services, and flat-roofed buildings are all susceptible to damage from one of these storms. While the town is accustomed to seasonal heavy snowfall, any particularly severe event with significant accumulations, especially combined with severe cold can be a burden. These events often lead to ice accumulation, and power loss, significantly increasing the vulnerability of populations and facilities. Storm Stella in March 2017 severely impacted Durrell Mountain Road, Middle Road, Hoadley Road, Province Road, Rogers Road, Bean Hill Road, and Swallow Road.

All structures in Belmont are susceptible to damage by winter weather events, whether through blizzards, or the heavy, wet snow often associated with a nor'easter. Assuming 1% to 5% town-wide damage to buildings, winter weather could result in \$4.4 million to \$22 million in damages. The potential impact to the town due to severe winter weather (blizzards, nor'easters) is moderate.

Probability of Occurrence: Highly Likely

TROPICAL & POST TROPICAL CYCLONES

Tropical and Post-Tropical cyclones are localized, very intense low-pressure wind system, forming over tropical oceans with winds of hurricane force. There are many stages throughout the life cycle of a tropical cyclone.

- Potential Tropical Cyclone
- Tropical Disturbance: Cluster of thunderstorms usually 100-300 miles wide
- Tropical Storm: Wind levels between 34 and 64 knots (39 to 74 MPH)
- Hurricane: Wind levels rise between 64 and 96 knots (74 to 111 MPH)
- Major Hurricane: Wind levels above 96 knots (111MPH)
- Post-Tropical Cyclone: Cyclone that no longer possess wind speeds and precipitation that tropical cyclones do and tend to form into frontal boundaries.

Extent: Hurricanes are severe tropical storms that have winds at least 74 miles per hour. In the Lakes Region they could produce heavy rain and strong winds that could cause flooding or damage buildings, trees, power lines, and cars.¹³ Hurricanes are measured by the Saffir-Simpson Hurricane Scale: a 1-5 rating based on a hurricane's intensity using wind speed as the determining factor (see table below). The scale is used to give an estimate of the potential property damage and flooding expected from a hurricane landfall.

¹³ http://www.fema.gov/hazard/hurricane/hu_about.shtm, visited January 25, 2011.

Saffir-Simpson Hurricane Scale

Category	Characteristics
1	Winds 74-95 mph (64-82 kts or 119-153 km/hr). Storm surge generally 4-5 ft above normal. No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Some damage to poorly constructed signs. Also, some coastal road flooding and minor pier damage.
2	Winds 96-110 mph (83-95 kts or 154-177 km/hr). Storm surge generally 6-8 feet above normal. Some roofing material, door, and window damage of buildings. Considerable damage to shrubbery and trees with some trees blown down. Considerable damage to mobile homes, poorly constructed signs, and piers. Coastal and low-lying escape routes flood 2-4 hours before arrival of the hurricane center. Small craft in unprotected anchorages break moorings.
3	Winds 111-129 mph (96-113 kts or 178-209 km/hr). Storm surge generally 9-12 ft above normal. Some structural damage to small residences and utility buildings with a minor amount of curtainwall failures. Damage to shrubbery and trees with foliage blown off trees and large trees blown down. Mobile homes and poorly constructed signs are destroyed. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the center of the hurricane. Flooding near the coast destroys smaller structures with larger structures damaged by battering from floating debris. Terrain continuously lower than 5 ft above mean sea level may be flooded inland 8 miles (13 km) or more. Evacuation of low-lying residences with several blocks of the shoreline may be required.
4	Winds 130-156 mph (114-135 kts or 210-249 km/hr). Storm surge generally 13-18 ft above normal. More extensive curtainwall failures with some complete roof structure failures on small residences. Shrubs, trees, and all signs are blown down. Complete destruction of mobile homes. Extensive damage to doors and windows. Low-lying escape routes may be cut by rising water 3-5 hours before arrival of the center of the hurricane. Major damage to lower floors of structures near the shore. Terrain lower than 10 ft above sea level may be flooded requiring massive evacuation of residential areas as far inland as 6 miles (10 km).
5	Winds greater than 156 mph (135 kts or 249 km/hr). Storm surge generally greater than 18 ft above normal. Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. All shrubs, trees, and signs blown down. Complete destruction of mobile homes. Severe and extensive window and door damage. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the center of the hurricane. Major damage to lower floors of all structures located less than 15 ft above sea level and within 500 yards of the shoreline. Massive evacuation of residential areas on low ground within 5-10 miles (8-16 km) of the shoreline may be required.

History: No hurricanes have hit Belmont or the region in the past five years. By the time a hurricane reaches central New Hampshire, it is rare that it will retain the characteristics that make it a hurricane, but remnants of hurricanes have been experienced and can still cause damage to the region. The remnants of hurricanes Irene and Sandy caused damage in New Hampshire, but not to Belmont.

Location: A cyclone could affect all areas of Belmont, especially steam crossings, floodplains, and steep slopes.

Impact: Hurricanes in the Lakes Region could produce heavy rain and strong winds that could lead to flooding and damage to property and infrastructure. Tropical and post-tropical cyclones can cause the same damage that high wind events cause, with the added hazard of possible flooding.

Probability of Occurrence: Likely

LIGHTNING

Lightning is a giant spark of electricity that occurs within the atmosphere, or between the atmosphere and the ground. As lightning passes through the air, it heats the air to a temperature of about 50,000 degrees Fahrenheit, considerably hotter than the surface of the Sun. During a lightning discharge, the sudden heating of the air causes it to expand rapidly, resulting in thunder.¹⁴ Exactly where and when lightning will strike is unknown. These giant sparks of electricity can result in fire, damage to electronic equipment, injury/death to people.

Extent: The National Weather Service utilizes a six-point scale for characterizing lightning activity called the Lightning Activity Level (LAL) based on frequency of ground strikes along with rainfall and ground conditions.¹⁵

Lightning Activity Level (LAL)	
LAL 1	No thunderstorms
LAL 2	Isolated thunderstorms. Light rain will occasionally reach the ground. Lightning is very infrequent, 1 to 5 cloud to ground strikes in a five-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.

History: In 2015, lightning struck the town's Police and Fire departments, causing \$6,000 in damage.

Hazard	Date	Location	Remarks/Description	Source
Lightning	6/24/2013	West Alton/Gilmanton	30 people were injured by lightning at a Boy Scout camp in Gilmanton. Large hail and wet microbursts were main concerns.	NOAA
Lightning	7/18/2013	Melvin Village (Tuftonboro, Carroll County)	Lightning struck two sailboats causing them to catch fire and sink in Lake Winnepesaukee. Wind damage and heavy rain were the main concerns as the storm moved through the region.	NOAA

Location: Lightning can strike anywhere in town.

Impact: Forest fires or structural fires can result from lightning strikes. Lightning can injure or kill people near the strike. Structures that are not grounded are the most susceptible to damage. The impact of lightning could be similar to either wildfire or conflagration; assuming 1-2% town-wide damage to buildings, fire could result in \$4.4-9 million in damages. The potential impact to the town due to lightning is moderate.

¹⁴ <http://www.nh.gov/safety/divisions/hsem/HazardMitigation/documents/hmp-chapter-3.pdf> accessed September 16, 2013.

¹⁵ NWS Definitions webpage, <http://graphical.weather.gov/definitions/defineLAL.html>. Accessed June 3, 2014.

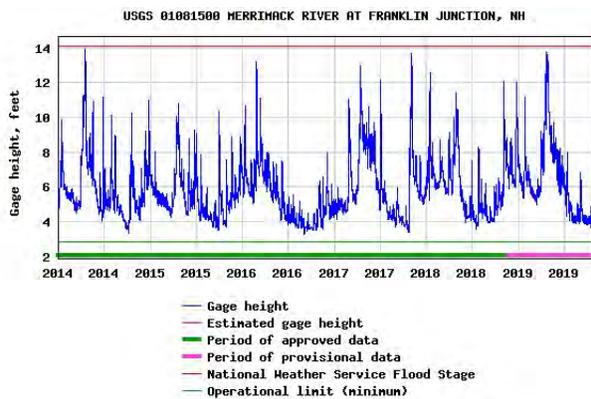
Probability of Occurrence: Occasional

INLAND FLOODING AND DAM FAILURE

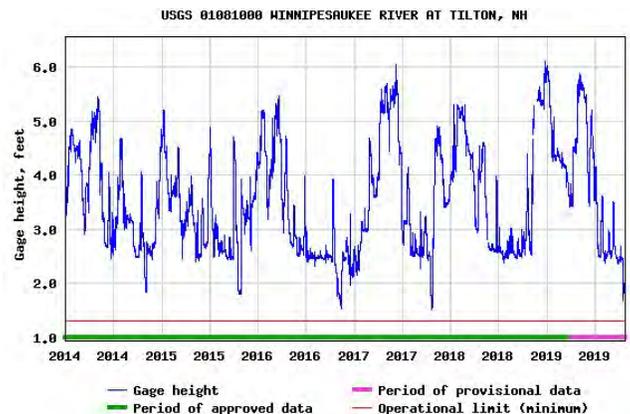
Inland flooding is generally defined as a high flow, overflow, or inundation by water, which causes or threatens damage. Flooding results from the overflow of rivers, their tributaries, and streams, primarily from high precipitation events. Flash flooding is a flow with a rapid rise in water level and extreme velocities in a river or stream, beginning within six hours of the causative event (e.g., intense rainfall, dam failure, ice jam).¹⁶

Extent: Flooding is most commonly associated with structures and properties located within the 1% annual flood hazard area. The term 100-year flood does not mean that flood will occur once every 100 years. It is a statement of probability that scientists and engineers use to describe how one flood compares to others that are likely to occur. It is more accurate to use the phrase “1% annual chance flood,” which means that there is a 1% chance of a flood of that size happening in any year.

Also, the US Army Corps of Engineers maintain nearby stream gauges including one on the Winnepesaukee River in Tilton. The image below on the right is from a graph depicting gage movements from 2014 to 2019. The graph on the left depicts stream gauge readings at a Merrimack River site downstream from Silver Lake, indicates periods of elevated discharge from the Lake, and coincides with the recurrent flooding events along the shores of Silver Lake.



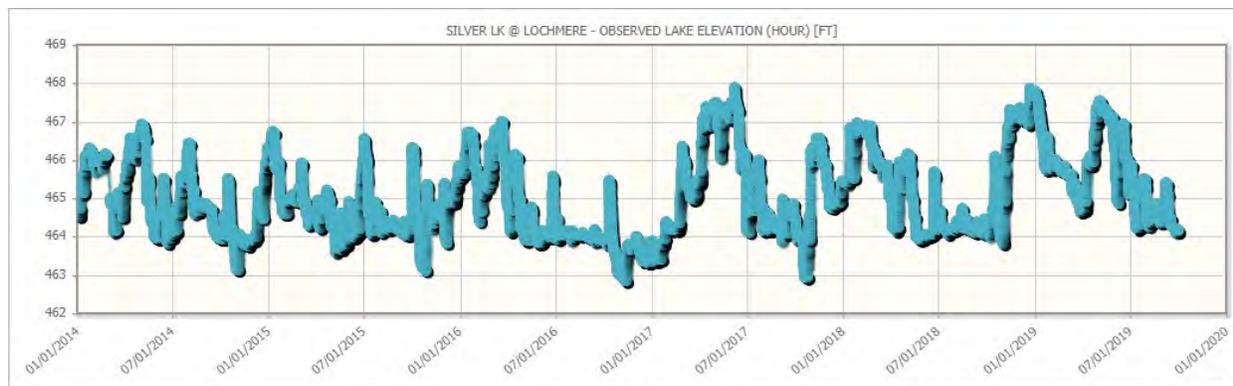
Water level readings at Merrimack River, Franklin



Water level readings at Winnepesaukee River, Tilton

Elevation height for Silver Lake, below, recorded from January 1, 2014 to the date of data collection, was obtained from the NH Department of Environmental Services (NHDES).

¹⁶ <http://w1.weather.gov/glossary/index.php?letter=f>



Water level readings at Silver Lake

Definition: Dam Failure is defined as the sudden, rapid, and uncontrolled release of impounded water.¹⁷

Dams in New Hampshire are classified by the NHDES Dam Bureau. The four dam hazard classifications (High, Significant, Low, and Non-Menace) are based on the potential losses associated with a dam failure. High (H) and Significant (S) Hazard dams have the highest potential for damage, which could include damage to state or municipal roads.

New Hampshire Dam Classifications¹⁸

Classification	Description
Non-Menace	A dam that is not a menace because it is in a location and of a size that failure or mis operation of the dam would not result in probable loss of life or loss to property, provided the dam is: <ul style="list-style-type: none"> • Less than six feet in height if it has a storage capacity greater than 50 acre-feet; or • Less than 25 feet in height if it has a storage capacity of 15 to 50 acre-feet.
Low Hazard	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: <ul style="list-style-type: none"> • 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. • Reversible environmental losses to environmentally sensitive sites.
Significant Hazard	A dam that has a significant 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: <ul style="list-style-type: none"> • No probable loss of lives. • Major economic loss to structures or property. • Structural damage to a Class I or Class II road that could render the road impassable or otherwise interrupt public safety services. • Major environmental or public health losses, including one or more of the following:

¹⁷ National Oceanic and Atmospheric Administration (NOAA), Hydrological Terminology (2014).

¹⁸ NH DES Fact Sheet WD-DB-15 Classification of Dams in New Hampshire, <http://des.nh.gov/organization/commissioner/pip/factsheets/db/documents/db-15.pdf>.

	<ul style="list-style-type: none"> • Damage to a public water system, as defined by RSA 485:1-a, XV, which will take longer than 48 hours to repair. • The release of liquid industrial, agricultural, or commercial wastes, septage, sewage, or contaminated sediments if the storage capacity is 2 acre-feet or more. • Damage to an environmentally sensitive site that does not meet the definition of reversible environmental losses.
High Hazard	<p>A dam that has a high hazard potential because it is in a location and of a size that failure or mis-operation of the dam would result in probable loss of human life as a result of:</p> <ul style="list-style-type: none"> • Water levels and velocities causing the structural failure of a foundation of a habitable residential structure or commercial or industrial structure, which is occupied under normal conditions. • Water levels rising above the first-floor elevation of a habitable residential structure or a commercial or industrial structure, which is occupied under normal conditions when the rise due to dam failure is greater than one foot. • Structural damage to an interstate highway, which could render the roadway impassable or otherwise interrupt public safety services. • The release of a quantity and concentration of material, which qualify as “hazardous waste” as defined by RSA 147-A:2 VII. • Any other circumstance that would more likely than not cause one or more deaths.

There are 16 active dams in Belmont, including one classified as High Hazard (Sargent Lake). The others include one Low Hazard dam (Lochmere), and 14 Non-Menace Hazard dams.

History: State records indicate that some flooding events affect the entire state, while others have a more local impact. In the past 100 years, there have been five statewide flooding events, three others that have impacted central New Hampshire, as well as a flood of Beaver Brook in Keene in 1987 that qualified for FEMA remediation. Most of the flood damage in Belmont has been along the shores of Silver Lake, the small lake along the Winnepesaukee River. Since the 2014 Plan update, minor flooding occurred in the Sargent Lake area on Garners Grove Road and Coons Point, although records of specific dates of incidents were not kept.

In the Lakes Region, the Town of Alton was impacted by an earthen dam failure on March 12, 1996. Listed in the NH Hazard Mitigation Plan as a significant hazard, its failure resulted in the loss of one life. No dam failures have been recorded in Belmont.

Hazard	Date	Location	Magnitude/ Description	
High Wind/Heavy Rain	10/30/2017	Statewide	2 to 5 inches 50 to 60 mph	Heavy rain (2 to 5 inches in a 10-hour period) was reported statewide and wind speeds statewide were reported as 50 mph to 60 mph in southern and central regions. Presidential Major Disaster Declared for this event (DR-4335).
Flash Flood	6/19/2017	Laconia	2 to 3 inches in 3-hour period	\$10,000 Property Damage Estimate
Flash Flood	6/19/2017	Gilford	2 to 3 inches in 3-hour period	\$35,000 Property Damage Estimate

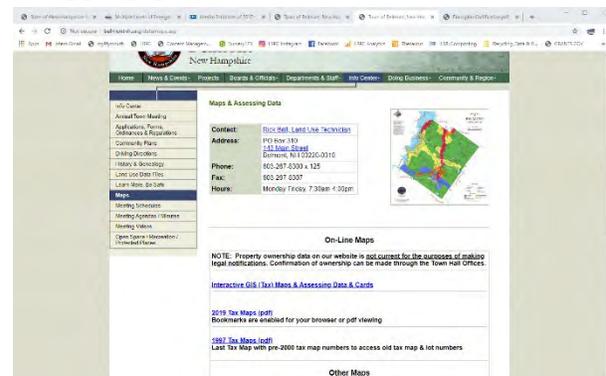
Location: Committee members said flooding is more likely in the Route 140 area and around Jamestown Road, Garners Grove Road, and South Road. Areas near Silver Lake react to changes in the Lakeport dam on the Winnepesaukee River, the major outlet for Lake Winnepesaukee. Resulting damages have included washouts and flooding of residences. Since the 2014 Plan, the town upgraded the Hoadley Road culvert to better accommodate a dam removal and a change in flow in the Tioga River. Sargent Lake dam, classified as a High Hazard dam, is located near the Gilmanton town line. The lake feeds Badger Brook which flows into Belmont Village. Failure of the Lochmere or Lakeport (Laconia) dams could lead to flooding of properties along Silver Lake that are in the Special Flood Hazard Area.

Active dams in Belmont

Hazard Class	NAME
H (High)	SARGENT LAKE DAM
L (Low)	LOCHMERE DAM
NM (Non-Menace)	TIOGA RIVER DAM
NM	CLOUGH POND
NM	BEAN DAM
NM	BADGER BROOK
NM	BOURQUE DAM
NM	WILDLIFE DAM
NM	WILDLIFE POND
NM	WILDLIFE POND DAM
NM	WATER SUPPLY POND
NM	FARM POND
NM	BBI PARK DETENTION POND

Impact: Flooding, whether from heavy rains, ice jams, or due to dam failure, carries great risk for the town of Belmont. Floods impact dams and bridges and have the potential to cause damage to roads, properties, and structures, as well as loss of life.

The town of Belmont actively participates in the National Flood Insurance Program (NFIP) through the administration and enforcement of its floodplain ordinance by the Code Enforcement Officer. The town joined the program in 1976. Flood Insurance Rate Maps (FIRM) were developed by FEMA in 1989; they have not been updated since then and no Digital FIRMs have been developed. There is no Flood Insurance Study (FIS) for Belknap County. However, two FEMA flood mapping projects are underway that affect Belmont. One mapping project is for the Merrimack River Watershed and the other is for the Winnepesaukee River Watershed. Most Belmont is in the Winnepesaukee River Watershed. Although FEMA mapping projects, including the flood analyses and initial mapping, are performed by watershed, the maps are still issued by county. Preliminary FIRMs are anticipated to be issued in 2020 for the Merrimack project. At the time this HMP was updated, new flood analyses were being performed for the Winnepesaukee project, and preliminary FIRMs are expected to follow in late 2020 or in 2021.¹⁹



¹⁹ NFIP Principal Planner, NH Office of Strategic Initiatives, November 19, 2019

The Belmont Planning Board and the town's Land Use Department actively maintain an up-to-date floodplain ordinance and periodically evaluate it as well as the Subdivision and Site Plan Review Regulations for compliance with federal and state standards. The floodplain ordinance was updated in 2008. Taking the steps to maintain involvement in the NFIP can reduce the impact of flooding to the town and also ensures that property owners will maintain their ability to purchase flood insurance through the FEMA program.

All new structures in town must have a local Building Permit, which requires that the owner indicate whether the structure is within the floodplain; the 1989 FIRM maps are available at the Town Hall as well as on the town webpage. The town maintains a list of all actions taken at the annual Town Meeting regarding the town's floodplain ordinance and participation in the NFIP. The Land Use office developed a two-page sheet with NFIP resources and makes it available to all on the town webpage (see Appendix C). Properties within the floodplain are required to submit an elevation certificate and such folders are marked differently. The most recent Community Assistance Visit (CAV) with the Land Use Department from the State Floodplain Coordinator was in 2007. That report indicated that the town was "fully compliant with the requirements of the NFIP at this time." The town has utilized the State Floodplain Coordinator's technical assistance at times on floodplain issues.

Belmont currently has 37 buildings with flood insurance policies in force with a total insurance value of \$8,013,500. Since 1976 there have been 17 losses paid out for a total of \$198,982. There have been 11 repetitive losses in Belmont, all occurring on four residential properties, one of which is a severe repetitive loss (at least four paid losses, at least two within a ten-year period²⁰).²¹ The 2007 CAV suggested that the town work with the owner of this property to protect their structure against further losses and that federal funds might be able to assist in this effort. While the Town Planner reports that the town would certainly work with the owner if they made improvements to the property, there has not been a building permit on that property for several decades.

In 2009, community officials reported to FEMA that there were an estimated 79 structures and up to 450 people within the 1% floodplain in Belmont. Applying the average insured value of \$216,850, extrapolated from the above statistics, this equates to a value of \$17,110,000. If there is a 1% chance of each of these properties flooding each year, then each year there is the potential that flooding could result in \$171,100 in damages and put 4-5 people at risk. The potential impact to the town due to flooding is moderate.

Flooding in the Lakes Region is most commonly associated with structures and properties located within a floodplain. There are numerous rivers and streams within the region and significant changes in elevation, leading to some fast-moving water. The region also has a great deal of shoreline, making it exposed to rising water levels as well. Although historically there have not been many instances of shoreline flooding, the potential always exists for a major flood event to occur.

If the Sargent Lake Dam were to fail, outflow would travel a mile through fairly undeveloped land, joining the Tioga River prior to crossing under NH Route 106 and flowing into Belmont Village. Some damage may occur, but because there is limited development in the initial outflow area and

²⁰ FEMA Definitions, <http://www.fema.gov/severe-repetitive-loss-program>, May 2014.

²¹ NFIP State Coordinator, NH Office of Energy and Planning, May 2013.

most of the Village is above the floodplain, the structural damage would be limited. There may be some impact to roadways, limiting emergency access. Failure of the Lochmere or Lakeport dams could lead to flooding of structures near Silver Lake; how much damage would depend on how readily the dams downstream could accommodate the extra flow. The impact to the town from a dam failure would be moderate. The approximate dollar value is not known without conducting a detailed engineered study on the specific dam sites as well as measuring potential downstream impact. An Emergency Action Plan (EAP) for Sargent Lake Dam, revised in 2007, is on file at NHDES.

While the probability of general inland flooding is likely, the probability of flooding from dam failure is unlikely.

Probability of Occurrence: Likely/Unlikely

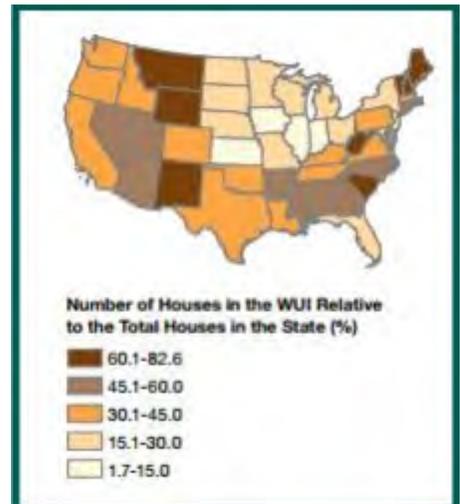
WILDFIRE

A wildfire is any non-structural fire, other than prescribed fire, that occurs in the wildland areas consisting of vegetation or natural fuels. Wildfires can be referred to as brush fires, wildland fires, or grass fires depending on the location and what is burning.²²

Extent: Much of the Lakes Region is forested and susceptible to fire. New Hampshire has about 500 wildland fires each year; most burn less than half an acre.

The National Wildfire Coordinating Group (NWCG) has defined seven classes of wildfire based on size:

- Class A - one-fourth acre or less;
- Class B - more than one-fourth acre, but less than 10 acres;
- Class C - 10 acres or more, but less than 100 acres;
- Class D - 100 acres or more, but less than 300 acres;
- Class E - 300 acres or more, but less than 1,000 acres;
- Class F - 1,000 acres or more, but less than 5,000 acres;
- Class G - 5,000 acres or more.



History: According to data from the New Hampshire Fire Incident Reporting System (NHFIRS) provided by the New Hampshire Fire Marshal's Office (NHFMO), there were 6,001 vegetation fires reported between 2013 and 2017. Larger scale wildfires have not been reported in Belknap County. According to Belmont Fire Department records, brush fires were reported in April 2015 near Depot Street and Union Road, and from May 6 to May 9, 2015 numerous brush fires were reported in Belmont and nearby Northfield, Canterbury, and Franklin.

Location: New Hampshire has large areas of woodlands; several portions of Belmont are wooded and susceptible to fire. Committee members discussed wildfire potential and a wildfire incident near

²² https://www.nwcg.gov/glossary/a-z#letter_w

Route 140. There is limited access to much of the eastern section of town as well as the land between Hurricane Road and Bean Hill Road. The spate of brush fires reported in May 2015 in Belmont were located near Jamestown and Weston roads, Gardners Grove Road, Bean Hill Road, and Intervale Road.

Impact: Areas that abut and are near wildlands are referred to as being within the Wildland Urban Interface (WUI). A 2010 study by the USDA identified that New Hampshire has the greatest percentage of homes in the WUI out of the total number of homes than any of the other states in the United States, with 82.6% of homes located in the WUI.²³ In the eastern section of town firefighters have limited access to potential wildfire areas but fires in this section would have limited impact on structures. There are some water resources, including dry hydrants, in this area. Assuming 1% town-wide damage to buildings, fire could result in \$4.4 million in damages. The potential impact to the town due to wildfire is low.

Probability of Occurrence: Likely

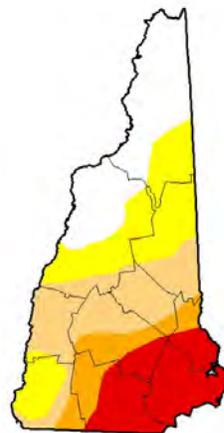
DROUGHT

Drought is the absence of water in a region that occurs slowly due to below-average precipitation over an extended period, resulting in low stream flows, low surface water, and low groundwater levels.²⁴ According to NOAA, the climatological community has defined four types of droughts to address their cause(s), timeframe, and effects²⁵:

- **Meteorological Drought:** Occurs when dry weather patterns dominate an area, resulting in a lack of precipitation
- **Hydrological Drought:** Occurs when low water supply becomes evident, especially in streams, reservoirs, and groundwater levels—usually after many months of meteorological drought
- **Agricultural Drought:** Occurs when crops become affected by drought conditions
- **Socioeconomic Drought:** Effects of supply and demand of commodities affected by drought conditions

Extent: Since 1990 New Hampshire has had a state Drought Emergency Plan, which identifies four levels of action indicating the severity of the drought: Alert, Warning, Severe, and Emergency. Effects may include decreased soil moisture, groundwater levels, streamflow, and lake, pond, and well levels may drop. Factors that may contribute to drought include reduced precipitation, increased rates of evaporation, and increased water usage. New Hampshire generally receives

U.S. Drought Monitor New Hampshire



September 20, 2016
(Released Thursday, Sep. 22, 2016)
Valid 8 a.m. EDT

	None	Drought Conditions (Percent Area)				
		D0-D1	D1-D2	D2-D3	D3-D4	D4
Current	23.66	76.34	52.44	20.12	19.21	0.00
Last Week 8/13/2016	23.66	76.34	52.44	20.12	19.21	0.00
3 Months Ago 6/27/2016	10.12	89.88	27.71	0.00	0.00	0.00
Start of Calendar Year 1/1/2016	90.84	49.16	14.88	0.00	0.00	0.00
Start of Water Year 9/30/2015	25.64	74.36	20.42	0.00	0.00	0.00
One Year Ago 9/20/2015	25.64	74.36	8.64	0.00	0.00	0.00

Intensity:
 D0 Abnormally Dry D3 Extreme Drought
 D1 Moderate Drought D4 Exceptional Drought
 D2 Severe Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Anthony Aflusa
NOAA/NWS/NCEP/CPC



<http://droughtmonitor.unl.edu/>

²³ https://www.fs.fed.us/nrs/pubs/rmap/rmap_nrs8.pdf

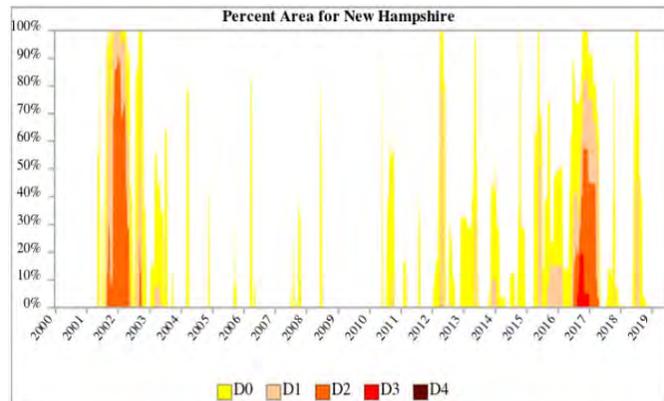
²⁴ <https://www.des.nh.gov/organization/divisions/water/dam/drought/index.htm>

²⁵ <https://www.ncdc.noaa.gov/monitoring-references/dyk/drought-definition>

adequate rainfall; it is rare that the state experiences extended periods of below normal water supplies. The US Drought Monitor²⁶ uses a five-level drought intensity scale ranging from Abnormally Dry to Exceptional Drought.

History: There have been five extended droughts in New Hampshire in the past century: 1929 to 1936, 1939 to 1944, 1947 to 1950, 1960 to 1969, 2001 to 2002, and 2015 to 2016.²⁷ Southern New Hampshire received about half of its normal precipitation during 2016. Moderate drought conditions existed in New Hampshire during parts of 2015 and 2016. This continued for nearly a year, ending in April 2017.²⁸ Belmont experienced dry conditions during the drought of 2015-2017, but no specific instances of impacts on the town were noted.

The National Drought Mitigation Center²⁹ maps and tracks drought conditions weekly while NOAA provides seasonal forecasts.³⁰



Location: Since drought is a statewide or regional event, a drought would affect most areas of Belmont. Those with shallow wells would likely be affected first.

Impact: Drought would lead to a heightened risk of fire, especially in or near the limited Wildfire Access Areas. Individual wells might go dry for a period of time and a prolonged drought might have a negative impact on lakefront recreation businesses. There is a limited reliance on agriculture in Belmont and there would be no direct impact to structures. The town's public water supply system has a conservation plan in place that has allowed it to mitigate the impact of most drought conditions. While drought is likely and has occurred in New Hampshire, the committee felt that the impact to the town from a drought would be low.

Probability of Occurrence: Likely

²⁶ US Drought Monitor <http://droughtmonitor.unl.edu/Home/StateDroughtMonitor.aspx?NH>.

²⁷ <http://des.nh.gov/organization/divisions/water/dam/drought/documents/historical.pdf> visited February 8, 2011.

²⁸ <https://www.drought.gov/drought/states/new-hampshire>

²⁹ US Drought Monitor <http://droughtmonitor.unl.edu/>.

³⁰ US Seasonal Drought Outlook, NOAA.

http://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.html.

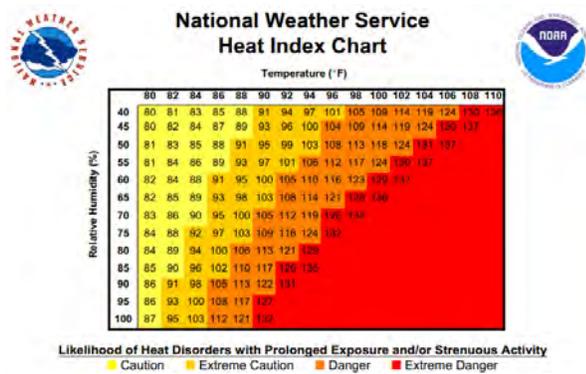
EXTREME TEMPERATURES

Extreme temperatures are a period of prolonged and/or excessive hot or cold that presents a danger to human health and life. **Extreme Heat** events occur as a result of above normal temperatures, which often coincide with high relative humidity, that increase the likelihood of heat disorders with prolonged exposure or strenuous activity. **Extreme Cold** events are caused by the southern transport of arctic airmasses into the Northeast. This effect is exacerbated when there are winds present that effectively lower the temperature that is perceived by the human body, known as the wind chill. The risk comes from when the body is losing heat faster than it can produce it. Wind acts to carry heat away from the body, therefore amplifying the perceived temperature by the human body and reducing the body's core temperature. Cold disorders can include frostbite and hypothermia.

Extent: Severity and magnitude relates to how extreme the temperature is, how long it is expected to remain extreme, and exacerbating factors such as humidity or wind. The National Weather Service alert criteria signals when temperatures are extreme³¹:

Extreme Heat Some of these values from the National Weather Service are specific to the Northeastern Forecast Region, which includes New Hampshire:³²

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



Extreme Cold Some of these values from the National Weather Service are specific to the Northeastern Forecast Region, which includes New Hampshire:³³

- Wind Chill Watch: NWS issues a wind chill watch when dangerously cold wind chill values are *possible*. As with a warning, adjust your plans to avoid being outside during the coldest

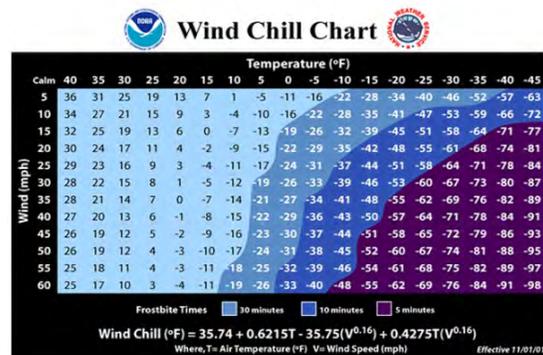
³¹ <https://www.dhhs.nh.gov/media/pr/2017/05102017-heat-index-study.htm>

³² <http://www.nws.noaa.gov/om/heat/ww.shtml>

³³ <http://www.nws.noaa.gov/om/cold/ww.shtml>

parts of the day. Make sure your car has at least a half a tank of gas and update your winter survival kit.

- Wind Chill Advisory: NWS issues a wind chill advisory when seasonably cold wind chill values but not extremely cold values are expected or occurring. Be sure you and your loved ones dress appropriately and cover exposed skin when venturing outdoors. A Wind Chill Advisory is issued for New Hampshire if wind chill values are expected to be -20°F to -29°F and winds are greater than 5 mph.
- Wind Chill Warning: NWS issues a wind chill warning when dangerously cold wind chill values are expected or occurring. A Wind Chill Advisory is issued for New Hampshire if wind chill values are expected to be -30°F and winds are greater than 5 mph.
- Freeze Watch: NWS issues a freeze watch when there is a potential for significant, widespread freezing temperatures within the next 24-36 hours. A freeze watch is issued in the autumn until the end of the growing season and in the spring at the start of the growing season.
- Frost Advisory: Be Aware: A frost advisory means areas of frost are expected or occurring, posing a threat to sensitive vegetation.
- Freeze Warning: When temperatures are forecasted to go below 32°F for a long period of time, NWS issues a freeze warning. This temperature threshold kills some types of commercial crops and residential plants.
- Hard Freeze Warning: NWS issues a hard freeze warning when temperatures are expected to drop below 28°F for an extended period of time, killing most types of commercial crops and residential plants.



History:

Date	Description	Impacts	Location	Additional Info
March 2012	Heat Wave	Record high temps set in Concord	Statewide	Record temps were set on five consecutive days in Concord (Max: 84°F)
September 2017	Heat Wave	Record high temps set statewide	Statewide	Locations around the state including Mount Washington set record high temps on four consecutive days
December 2017	Cold Wave	Record low temps set statewide	Statewide	Many locations saw record lows (Portsmouth -1°F and Mount Washington -33°F) Wind chill warnings and advisories were posted through the state
February 2018	One Day Winter Heat Wave	Record high temps set statewide	Statewide	Exceptionally strong high-pressure ridge in place across the region setting temp records

Belmont has experienced periods of extreme heat and extreme cold annually since the 2014 Plan update.

Location: The entire town of Belmont is vulnerable to extremes of both heat and cold and usually experiences each on an annual basis.

Impact: Heat related disorders include heat cramps, heat exhaustion, and heat stroke. Extreme heat can also damage or kill crops and animals (wild, farm, or domesticated), potentially presenting a risk to the economy. Frostbite occurs when uncovered skin and extremities are exposed to extreme cold and body tissue is either injured or killed. Hypothermia occurs when the body is unable to heat itself at the rate it is being cooled and the body's core temperature begins to drop below normal values. A normal core body temperature is 98.6°F. Mild hypothermia occurs when core body temperature drops between 90 and 95° F, and severe hypothermia occurs at core body temperatures of below 90° F. If left untreated, hypothermia can result in unconsciousness and eventually death. Extreme cold can also damage or kill crops and animals (wild, farm, or domesticated), potentially presenting a risk to the economy. Committee members expressed particular concern for vulnerable populations, including the elderly living at Belmont Village.

Probability of Occurrence: Likely

INFECTIOUS DISEASE

Infectious diseases are illnesses caused by organisms—such as bacteria, viruses, fungi or parasites. Some infectious diseases can be passed from person to person, some are transmitted by bites from insects or animals, and others are acquired by ingesting contaminated food or water or being exposed to organisms in the environment. Signs and symptoms vary depending on the organism causing the infection, but often include fever and fatigue. Mild infections get better on their own without treatment, while some life-threatening infections may require hospitalization.

While some diseases are so rare in each population that a single case warrants an epidemiologic investigation (e.g., rabies, plague, polio), there are other diseases that occur more common so that only deviations from the norm (i.e. seeing more cases than expected) warrants investigation.

Extent: The magnitude and severity of infectious diseases is described by its speed of onset (how quickly people become sick or cases are reported) and how widespread the infection is. Some infectious diseases are inherently more dangerous and deadly than others, but the best way to describe the extent of infectious diseases relates to the disease occurrence:³⁴

- Endemic – Constant presence and/or usual prevalence of a disease or infection agent in a population within a geographic area
- Hyperendemic – The persistent, high levels of disease occurrence
- Cluster – Aggregation of cases grouped in place and time that are suspected to be greater than the number expected even though the expected number may not be known
- Epidemic – An increase, usually sudden, in the number of cases of a disease above what is normally expected
- Outbreak – The same as epidemic, but over a much smaller geographical area

³⁴ <https://www.cdc.gov/ophss/csels/dsepd/ss1978/lesson1/section11.html>

- Pandemic – Epidemic that has spread over several countries or continents, usually affecting many people

The NH Department of Health and Human Services (DHHS) developed an epidemic response plan in February 2007, so that communities can be prepared and respond to outbreaks.³⁵ Shaker School District, which includes Belmont's elementary, middle, and high school, as well as Canterbury's elementary school, has an up to date Emergency Operations Plan with policies for addressing epidemics.

History: While there have been minor outbreaks of flu in Belmont, no major outbreaks of this or any other infectious disease was identified since the 2014 Plan update. Statewide, the 2012-13 flu season was much more severe than any of the previous decade; 35 deaths occurred, the most since 1997.³⁶ In 2016, the DHHS was notified and responded to a total of 102 outbreaks: 73 gastrointestinal illnesses (5 of which were foodborne), 23 respiratory illnesses, and 6 other types of illness.

Date	Description	Impacts	Location	Additional Info
Fall 2014	Enterovirus D-68	>40 ill children in New Hampshire	Statewide	A rare strain of enterovirus resulting in infections in children nationwide.
2016	Gonorrhea	465 people infected	Statewide	465 cases reported; 250% higher than previous years
2017-2018	Seasonal Influenza Outbreak	As of 2018, 63 influenza related deaths were identified in NH	Statewide	A particularly damaging flu season impacted the region, it was reported that the overall effectiveness of the flu vaccine at this time was 36% ³⁷
Annually	Foodborne outbreaks	Ill individuals associated with outbreaks	Statewide	5-10 outbreaks per year
Annually	Influenza and other respiratory virus outbreaks	Ill individuals associated with outbreaks	Statewide	25-50 outbreaks per year primarily to vulnerable populations
Annually	Norovirus and other gastrointestinal virus outbreaks	Ill individuals associated with outbreaks	Statewide	60-80 outbreaks a year primarily to vulnerable populations

Location: The entire State of New Hampshire is at risk for Infectious Diseases. The prevalent diseases can change based on the time of year, such as the influenza virus in the winter and foodborne disease in the summer. In Belmont the schools and areas where the elderly gather are likely places for transmission to occur.

Impact: The concerns associated with an epidemic include local capacity to respond to not only the residents of Belmont but also any visitors. The town partners with Lakes Region Partnership for Public Health (<http://www.lrp-ph.org/>) for resources and training. The impact of an epidemic on

³⁵ <http://www.dhhs.nh.gov/dphs/cdcs/avian/documents/pandemic-plan.pdf>, visited February 8, 2011.

³⁶ NH Department of Health and Human Services <http://www.dhhs.nh.gov/media/pr/2013/01-jan/01112013flu.htm>, visited January 17, 2013.

³⁷ CDC <https://www.cdc.gov/mmwr/volumes/67/wr/mm6706a2.htm>

the town would be low. The cost of infectious diseases in Belmont is difficult to calculate as any cost would primarily result from health care response.

Probability of Occurrence: Occasional. Infectious disease does occur in Belmont and other Lakes Region communities from time to time.

LANDSLIDES

A landslide is the downward or outward movement of earth materials on a slope that is reacting to a combination of the force of gravity and a predisposed weakness in the material that allows the sliding process to initiate.³⁸ Landslides tend to occur when a layer of topsoil on a slope becomes saturated by significant precipitation and slides along other hardy soil or rock. New Hampshire's greatest potential area for landslides would be the White Mountains due to the abundance of steep slopes and marginal soils.

Extent: While there is no universal scale for measuring the severity of a landslide, it can be measured with the following criteria:

- Steepness of the slope
- Geographical area
 - Measured in square feet, square yards, etc.
 - More accurately measured using LiDAR or GIS systems
- Earthquake – either causing the event, or caused by the event

There are also different several types of landslides:

- **Falls** – A mass detaches from a steep slope or cliff and descends by free-fall, bounding or rolling
- **Topples** – A mass tilts or rotates forward as a unit
- **Slides** – A mass displaces on one of more recognizable surfaces, which may be curved or planar
- **Flows** – A mass moves downslope with fluid motion. A significant amount of water may or may not be part of this mass

History: Landslides do not occur often in New Hampshire. A 2013 landslide occurred in Lebanon, in western New Hampshire, due to an overtopped and undersized culvert at the top of a hill, damaging an apartment complex. The most famous landslide in New Hampshire occurred in May 2003 when the New Hampshire state symbol, The Old Man in the Mountain, crumbled due to a rockslide. Since the 2014 Plan update, Belmont has not reported any landslide events.

Location: The steepest slopes in Belmont are near Murray Park, Badger Brook Estates and Route 140, as well as just east of Silver Lake Park Campground.

Impact: The primary areas affected by landslide would be property and infrastructure that are either atop of at the base of a landslide. Buildings or roads and other infrastructure that are on top of a landslide usually succumb to more extensive damage than building and infrastructure located at the

³⁸ New Hampshire State Multi-Hazard Mitigation Plan 2018

base of a landslide. A landslide can also affect plant and animal life as well as agriculture in the given area. If a body of water were to be involved or affected by a landslide, excess sediment could be introduced into an ecosystem that could simply not handle the load. A landslide near a body of water could also create an obstruction acting like a dam and could then lead to the risk of dam failure further downstream.

Probability of Occurrence: Unlikely

EARTHQUAKE

An earthquake is a series of vibrations induced in the Earth's crust by the abrupt rupture and rebound of rocks in which elastic strain has been slowly accumulating.

Extent: Earthquakes are commonly measured using magnitude, or the amount of seismic energy released at the epicenter of the earthquake. The Richter magnitude scale is a mathematical device used to compare the size of earthquakes, shown below.³⁹

Richter Magnitude 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.

New Hampshire is considered an area of moderate seismic activity compared to other regions of the country. This means the state could experience large (6.5-7.0 magnitude) earthquakes, but they are not likely to occur as frequently as in a high hazard area like the Pacific coast.

There is the potential for nearby earthquakes to register 5.5 on the Richter Scale, causing slight damage to buildings and structures. Due to the unique geology of New Hampshire, earthquake propagation waves travel up to 40 times further than they do in the western United States, possibly enlarging the area of damage.⁴⁰ The strongest earthquakes to strike New Hampshire occurred December 20 and 24, 1940 in the town of Ossipee. Both earthquakes had a magnitude of 5.5 and were felt over an area of 400,000 square miles.

History: On average, every other year the Lakes Region experiences an earthquake, though these earthquakes are mild and go mostly undetected by people. Neighboring Sanbornton is identified as a major epicenter in the region.⁴¹ A search of the USGS National Earthquake Information Center database shows that since 1990 there have been 6 earthquakes (magnitude > 2.5) in the Vermont

³⁹ <http://pubs.usgs.gov/gip/earthq4/severitygip.html>

⁴⁰ <http://www.nh.gov/safety/divisions/hsem/NaturalHazards/index.html> visited February 8, 2011.

⁴¹ <http://des.nh.gov/organization/commissioner/pip/factsheets/geo/documents/geo-3.pdf>, pg. 3, visited March 6, 2013

and New Hampshire region; the largest ones were magnitude 3.8. Since 2006 only one earthquake of magnitude 2.6 occurred and that was in 2007⁴². A 4.0 quake centered in southern Maine (75 km away) shook the region on October 16, 2012 but caused no damage. No earthquakes have occurred in Belmont since the 2014 Plan.

Location: An earthquake could affect all areas of Belmont.

Impact: According to the US Geologic Survey, the overall earthquake risk to the state is high due to the built environment; which means that many structures in the state are old or not built to withstand an earthquake. Damage from the 1940 earthquakes in Ossipee included some damage to most of the chimneys in the epicenter region of Ossipee, ranging from cosmetic cracks to total collapse. Sections of several foundations collapsed and at least one house rotated on its foundation. In Conway, 15 miles from the epicenter, one house was lost to fire when sparks in a cracked chimney started the blaze. Splits found in the rafters and trusses temporarily closed Ossipee High School. No damages were associated with the October 2012 earthquake, but the potential does exist for some damages to occur.⁴³

There are relatively few buildings taller than three stories in Belmont. A relatively large earthquake in all likelihood would impact the bridges, limiting the ability of emergency services to be rendered. The fire department would have some response problems if the bridges were impacted, although in most cases there are alternate options, requiring redeployment of apparatus and people. The likely impact of an earthquake on the town would be low.

While all structures in Belmont are susceptible to damage by an earthquake, those that are taller, older, and constructed of masonry are most susceptible to damage. Assuming 1% town-wide damage to buildings, an earthquake could result in \$4.4 million in damages.

Probability of Occurrence: Occasional

SOLAR STORMS & SPACE WEATHER

The term space weather is relatively new and describes conditions in the Earth's outer space environment. Space weather includes conditions and events on the sun, in the solar wind, in near-Earth space, and in Earth's upper atmosphere that can affect space-borne and ground-based technological systems.⁴⁴ Although space weather has occurred since the beginning of time, little was understood about the causes and impacts of these instances on the planet. It has only been in the last 200 or so years where multiple science fields have come together to study space weather.⁴⁵ Not all space weather is damaging or effects humans or technology. Perhaps one of the most well-known effects of space weather on the Earth's atmosphere is the Aurora Borealis (aka Northern Lights – northern hemisphere) and the Aurora Australis (southern hemisphere). Aurora displays are a result of solar wind where some of the charged particles become trapped in the Earth's atmosphere.

⁴² Lamont-Doherty Cooperative Seismic Network, <http://almaty.ldeo.columbia.edu:8080/data.search.html>. Accessed February 20, 2013.

⁴³ USGS <http://earthquake.usgs.gov/earthquakes/eventpage/usb000d75b#pager>, accessed October 17, 2012.

⁴⁴ https://www.nasa.gov/mission_pages/sunearth/spaceweather/index.html#q12

⁴⁵ https://www.nasa.gov/mission_pages/sunearth/spaceweather/index.html#q12

Extent: The 2018 *State of New Hampshire Multi-Hazard Mitigation Plan Update* describes three different types of events: Geomagnetic Storms, Solar Radiation Storms, and Radio Blackout. Each of these is then rated on a five-level scale (minor, moderate, strong, severe, extreme), with descriptions of increasing impacts on power, spacecraft, biological, satellite, high frequency radio, and navigation systems. A solar storm may exacerbate radio communications problems. The Radio Blackout Scale (right)⁴⁶ offers a measure of the extent of solar storms on radio communications.

Scale	Description	Effect	Physical measure	Average Frequency (1 cycle = 11 years)
R 5	Extreme	HF Radio: Complete HF (high frequency) radio blackout on the entire sunlit side of the Earth lasting for a number of hours. This results in no HF radio contact with mariners and en route aviators in this sector. Navigation: Low-frequency navigation signals used by maritime and general aviation systems experience outages on the sunlit side of the Earth for many hours, causing loss in positioning. Increased satellite navigation errors in positioning for several hours on the sunlit side of Earth, which may spread into the night side.	X20 (2×10^{-3})	Less than 1 per cycle
R 4	Severe	HF Radio: HF radio communication blackout on most of the sunlit side of Earth for one to two hours. HF radio contact lost during this time. Navigation: Outages of low-frequency navigation signals cause increased error in positioning for one to two hours. Minor disruptions of satellite navigation possible on the sunlit side of Earth.	X10 (10^{-3})	8 per cycle (8 days per cycle)
R 3	Strong	HF Radio: Wide area blackout of HF radio communication, loss of radio contact for about an hour on sunlit side of Earth. Navigation: Low-frequency navigation signals degraded for about an hour.	X1 (10^{-4})	175 per cycle (140 days per cycle)
R 2	Moderate	HF Radio: Limited blackout of HF radio communication on sunlit side, loss of radio contact for tens of minutes. Navigation: Degradation of low-frequency navigation signals for tens of minutes.	M5 (5×10^{-5})	350 per cycle (300 days per cycle)
R 1	Minor	HF Radio: Weak or minor degradation of HF radio communication on sunlit side, occasional loss of radio contact. Navigation: Low-frequency navigation signals degraded for brief intervals.	M1 (10^{-5})	2000 per cycle (950 days per cycle)

History: There have not been any known occurrences in Belmont of solar storms or space weather, and no significant events have been reported statewide. Nearby events include Quebec, Canada, which experienced a 9-hour blackout in March 1989 when solar winds caused a fluctuation in the Earth's magnetic field and caused Hydro-Quebec's transmission to go down.⁴⁷

Location: All of Belmont and the entire State of New Hampshire are at risk of solar storms and space weather. While the Earth is somewhat protected from solar storms and space weather by its upper atmosphere, the potential for a loss of communications, power, and GPS exists on a daily basis. The Route 107 corridor in Belmont will be the location of utmost concern when it comes to the impacts of this hazard because of the location of important communications equipment there.

Impact: Solar storms and space weather impact the Earth daily, although the effects are not often felt. It is difficult to estimate the impact of this hazard on Belmont as knowledge of this hazard is evolving, but committee members have already identified the vulnerability of communications infrastructure of other hazards.

Probability of Occurrence: Unlikely

⁴⁶ https://prd.blogs.nh.gov/dos/hsem/wp-content/uploads/2015/11/State-of-New-Hampshire-Multi-Hazard-Mitigation-Plan-Update-2018_FINAL.pdf, p. 141

⁴⁷ Adapted from the *State of New Hampshire Multi-Hazard Mitigation Plan Update (2018)*, https://prd.blogs.nh.gov/dos/hsem/wp-content/uploads/2015/11/State-of-New-Hampshire-Multi-Hazard-Mitigation-Plan-Update-2018_FINAL.pdf.

TECHNOLOGICAL AND HUMAN-CAUSED HAZARDS

While the focus of the Hazard Mitigation Plan is on natural hazards, committee members felt it was important to discuss several technological and human-caused potential hazards. This section includes a discussion of the technological and human-caused hazards that the committee ranked as high or medium risk.

2019 Belmont Human-Caused and Technological Hazard Ranking			
HAZARD	TOTAL	RANK	RISK
Transport Accident	27	1	HIGH
Long-Term Utility Outage	26.67	2	HIGH
Terrorism/Violence	21	3	HIGH
Cyber Event	18	4	HIGH
Mass Casualty Incident	15	5	MEDIUM
Conflagration	15	6	MEDIUM
Hazardous Materials	10	7	MEDIUM
Aging Infrastructure	5.33	8	LOW
Known and Emerging Contaminants	1	9	LOW
Radiological	1	10	LOW

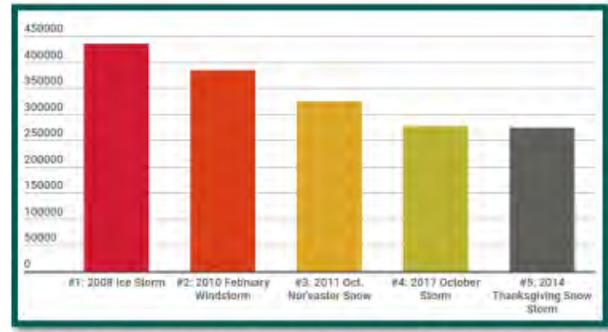
TRANSPORT ACCIDENT

A transport accident is any accident that occurs during transportation, including passenger vehicles, tractor trailers, airplanes and other modes of transportation. Several major state highways run through Belmont, including US 3/NH 11, NH 106, NH 140, and NH 107, each carrying an average annual daily volume of between 8,000 and 17,000 vehicles. The actual volume can be much higher depending on the season and individual events, such as Laconia's Motorcycle Week or events at the New Hampshire International Speedway in Loudon. A small airport is located in neighboring Laconia, and aircraft accidents could occur in Belmont. The primary impact of a transportation incident would be on response capabilities of emergency services. The committee also noted that a potential shut down of Route 106 would be the most damaging when it comes to access to critical facilities or utilities. No quantitative calculations of impact were made as part of this plan.

Probability of Occurrence: Likely

LONG-TERM UTILITY OUTAGE

A long-term utility outage is a prolonged absence of any type of public utility that is caused by infrastructure failure, cyber-attack, supply depletion, distribution disruption, water source contamination, or a natural, human caused or technological disaster.⁴⁸ For the purpose of this plan is classifying a long-term utility outage as one that last a month or more or an outage that causes extreme impacts. The entire town of Belmont is at risk for this hazard, especially the Route 107 corridor which experiences downed trees and utility lines during high wind events and severe winter weather. Critical communications infrastructure is located in this area, and loss of power and communications has a great impact on municipal and emergency functions.



Top 5 power outages in New Hampshire history. Data provided by NH HSEM. Figure courtesy of NHPR.

Recent History

Date	Description	Impacts	Location	Additional Info
January 2014	Fred Fuller	The Fred Fuller oil company was unable to make deliveries to numerous customers	Statewide	Residents began to run out of fuel and were not able to fill their needs even pre-paid customers for the Fred Fuller oil company
Oct 29 – Nov 4, 2017	Severe Rain and Windstorm	Low pressure system merged with Tropical Storm Phillippe	Statewide, including Belmont	Uprooted trees and heavy rains downed power lines leading to roughly 290K power outages.

Probability of Occurrence: Highly Likely

TERRORISM/VIOLENCE

Events around the country demonstrate that one or more people intent on inflicting harm and terror on others can occur almost anywhere, not just in urban areas. Committee members also discussed an increase in general violence which included recent police officer-involved shootings. Such events may be limited to just one or two victims or the perpetrator(s) may be seeking to inflict damage on many people. The committee considered not only an armed terror attack but also intentional contamination of water resources. These resources include surface water as well as ground water and the infrastructure used to deliver potable water. It is also possible that cyber events could also fit within this potential hazard. Belmont has not experienced an armed attack in the past; nor have there been instances of intentional contamination of water supplies.

⁴⁸ State Multi-Hazard Mitigation Plan https://prd.blogs.nh.gov/dos/hsem/wp-content/uploads/2015/11/State-of-New-Hampshire-Multi-Hazard-Mitigation-Plan-Update-2018_FINAL.pdf

An armed attack could occur anywhere in town. The most likely locations are either areas where people congregate (Belmont Mall, Town Offices, Post Office, churches) or where the most vulnerable people are (schools). Surface water might be contaminated from the bridges crossing the Winnepesaukee River, especially US Route 3/NH Route 11 or Silver Lake Road. While the groundwater might be contaminated through contamination of soils overtop of the aquifer, the most immediate threats would come through the compromising of infrastructure.

One or more people intent on doing harm could do so just about anywhere. Whether large or small, such an event would impact the people in the community. The impact of an armed attack comes through instilling fear and terror. Structural damages would be low. The most vulnerable places are those areas where many people congregate such as the Belmont Mall, schools, Town Offices. Those most impacted by contamination of the town's water resources would be those in the Special Needs Population – the elderly, children, and the mentally challenged. Neither an armed attack nor water contamination would likely impact structures; rather the impact would be on people and the public safety system. No figure of losses has been calculated for this plan.

Probability of Occurrence: Likely

CYBER EVENTS

The Department of Homeland Security (DHS) defines a cyber incident as an event occurring on or conducted through a computer network that actually or imminently jeopardizes the confidentiality, integrity, or availability of computers, information or communications systems or networks, physical or virtual infrastructure controlled by computers or information systems, or information resident thereon.⁴⁹ The National Cybersecurity and Communications Integration center (NCCIC) classifies a cyber incident using a scoring system of zero to 100 using the following factors:

- Functional Impact
- Observed Activity
- Location of Observed Activity
- Actor Characterization
- Information Impact
- Recoverability
- Cross-Sector Dependency
- Potential Impact

Belmont has not recorded a cyber event, but approximately 75 cyber incidents affecting New Hampshire's public sector were reported in 2017-2018. Any location connected to the internet in the town of Belmont is at risk to a cyber event. Belmont is reliant on technology for regular municipal functions as well as emergency response. The locations that could pose the largest impact are the public offices of Belmont along with critical communications infrastructure.

Probability of Occurrence: Likely

⁴⁹ State Multi-Hazard Mitigation Plan https://prd.blogs.nh.gov/dos/hsem/wp-content/uploads/2015/11/State-of-New-Hampshire-Multi-Hazard-Mitigation-Plan-Update-2018_FINAL.pdf

MASS CASUALTY INCIDENT

Any large number of casualties produced in a relatively short period of time, usually as the result of a single incident such as a military aircraft accident, hurricane, flood, earthquake, or armed attack that exceeds local logistic support capabilities.⁵⁰ According to FEMA's Fire/Emergency Medical Services Department, since the Columbine High School shooting in 1999 up through 2013 there were a reported 250 deaths connected to an active shooter/mass casualty incident.⁵¹ This number has shown an exponential increase in the past five-year period with 2017 seeing over 725 mass casualty event deaths alone with a large percentage of those occurring at a live show in Las Vegas.⁵² Public gathering places, schools, hospitals, and similar locations in Belmont are vulnerable to a mass casualty incident.

No mass casualty incidents have been recorded in Belmont, but in the recent years there have be a few in New Hampshire.

History:

Date	Event	Location	Information
February 2014	Explosion	New Hampshire Ball Bearings Inc. Peterborough, NH	Firefighters from the surrounding area responded to a industrial explosion critically injuring two and seriously injuring four.
August 2017	Hospital Contamination	Exeter Hospital at Exeter, New Hampshire	Numerous staff members reported feeling dizzy and nauseous. Causing surrounding towns to get involved and closing parts of the hospital for decontamination.

Probability of Occurrence: Likely

CONFLAGRATION

While wildfire is not a high-level concern for Belmont, of greater concern is the possibility of a fire among the structures in the village of Belmont, which could spread quickly; many of the structures are older and in close proximity to each other.

The Belmont Fire Department responds to an average of 12 structure fires a year within Belmont and 31 structure fires throughout the mutual aid district. Several major fires have occurred over the last two decades. In 1992 Belmont experienced a major fire at the Belmont Mill. The fire went to five alarms and required extensive mutual aid to help contain the fire. In January 2005 a six-alarm fire destroyed six businesses located in the Major Brands Strip Mall. The fire started in a bookstore and quickly spread to a gym, lighting store, restaurant, nail salon and antique shop. The fire drew about

⁵⁰ State Multi-Hazard Mitigation Plan https://prd.blogs.nh.gov/dos/hsem/wp-content/uploads/2015/11/State-of-New-Hampshire-Multi-Hazard-Mitigation-Plan-Update-2018_FINAL.pdf

⁵¹ State Multi-Hazard Mitigation Plan https://prd.blogs.nh.gov/dos/hsem/wp-content/uploads/2015/11/State-of-New-Hampshire-Multi-Hazard-Mitigation-Plan-Update-2018_FINAL.pdf

⁵² <https://www.fbi.gov/about/partnerships/office-of-partner-engagement/active-shooter-incidents-graphics>

150 firefighters from 20 departments from as far as Concord and Waterville Valley. Subzero temperatures made the job more challenging. In 2012 a 3 Alarm fire at a multi-family residence in downtown Belmont resulted in extensive damage. The incident was complicated due to the fact the City of Laconia experienced a third alarm fire at the same time.

Several areas are at risk to conflagration: the Belmont Village area, the Belknap Mall, and the high-density housing areas in town. The structures in Belmont most susceptible to damage from conflagration are those in the village area, the Belknap Mall, and those in high density areas. Assuming 2% town-wide damage to buildings, fire could result in \$9 million in damages. The potential impact to the town due to conflagration is moderate.

Probability of Occurrence: Likely

HAZARDOUS MATERIALS

A hazardous material is any item or agent (biological, chemical, radiological, and/or physical), which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors.⁵³

Oil spills along many of the routes in Belmont could result in the contamination of wells or water bodies in the Lake Winnepesaukee watershed. In addition to distributing fuel to central locations in the region, tankers travel throughout the area daily to deliver home heating fuel. Many oil tankers have the capacity to carry 10,000 gallons of home heating oil. While Belmont has several major transportation routes for hazardous material haulers, NH 106, NH 140 and US 3, there have been few serious transportation incidents involving hazardous materials. In the late 1980s a tanker truck hauling #6 fuel oil rolled over on NH 106 spilling part of its load. In the early 2000s a tractor-trailer unit carrying acids and other chemicals rolled over on NH 140 resulting in a response from the Central NH Hazardous Materials Response Team. After investigation it was determined that there was no spillage of any of the product and the trailer was righted and the product safely offloaded.

Major roadways, especially in populated areas near aquifers and wells, or at water crossings are areas of concern. Of particular concern, is a large aquifer that lies below NH 140 and NH 106. An accident involving a carrier of hazardous materials along this segment of these two heavily traveled state highways could contaminate a vital drinking water source. US 3/NH 11 lies near Lake Winnisquam and crosses it, creating the potential for direct contamination.

The release of hazardous materials along one of the roadways in Belmont has the capacity to cause substantial damage in the town. Many variables could affect the degree of impact, including the nature of the material, the location of the accident and its proximity to surface and groundwater, as well as structures. An oil spill along a remote section of NH 140 is quite different from a chemical spill along the same roadway in the center of town near the elementary school. The aquifer serves as a water source for many parts of Belmont, Tilton, and Northfield. A spill that gets into the surface water might impact the businesses associated with waterfront recreation. A hazardous materials accident would not likely impact structures; rather the impact would be environmental. The NH Lakes

⁵³ <https://www.ihmm.org>

Association notes that a reduction in water quality could lead to \$25 million of lost income to the 30 communities of the Lakes Region. The impact to the town could range from minimal to severe.

Probability of Occurrence: Likely

D. SUMMARY OF VULNERABILITY

The following matrix was used by the committee to determine an overall hazard vulnerability assessment rating. The committee considered such factors as probability of future events; extent; impact to people, property, and business; and overall risk. The following definitions of measurement were used:

Probability of Future Events

- **Unlikely:** <1% probability of occurrence in the next year or a recurrence interval of more than every 100 years.
- **Occasional:** 1 to 10 percent probability of occurrence in the next year or a recurrence interval of 11 to 100 years.
- **Likely:** 10 to 90 percent probability of occurrence in the next year or a recurrence interval of 1 to 10 years
- **Highly Likely:** 90 to 100% probability of occurrence in the next year or a recurrence interval of less than 1 year.

Extent

- **Weak:** limited magnitude, slow onset, short duration, little damage.
- **Moderate:** moderate magnitude, moderate onset speed, moderate duration, some damage/loss of service for days.
- **Severe:** Severe magnitude, fast speed of onset, long duration, devastating damage and loss of service for weeks
- **Extreme:** Extreme magnitude, immediate onset, extended duration, catastrophic damage, uninhabitable conditions.

Impact - Human, Property, Business

Low: There is little likelihood that injury or death will result from this hazard. The damage to land and property will likely be limited. Essential services and other services that residents and visitors depend upon will not be interrupted.

Moderate: There is some likelihood that injury or death will result from this hazard. There will likely be some damage to land and property. There will likely be some interruption of essential services and other services that residents and visitors depend upon for hours of days.

High: It is quite likely that injury or death will result from this hazard. There will be damage to multiple properties. Essential services and other services that residents and visitors depend upon be likely be interrupted for days.

Catastrophic: Multiple injuries or deaths will likely result from this hazard. Damage to properties will be widespread and extensive. Essential services and other services that residents and visitors depend upon be likely be interrupted for days or weeks.

Overall Risk

Low: Two or more criteria fall in lower classifications or the event has a minimal impact on the planning area. This rating is sometimes used for hazards with a minimal or unknown record of occurrences or for hazards with minimal mitigation potential.

Medium: The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is sometimes used for hazards with a high extent rating but very low probability rating.

High: The criteria consistently fall in the high classifications and the event is likely/highly likely to occur with severe strength over a significant to extensive portion of the planning area.

The ranking of individual hazards for the purposes of planning discussion should not diminish the potential severity of the impacts of a given hazard event. Further, hazards ranked as low risk may have the impact of increasing the risk of other hazards when they occur. For example, in the event of a drought, the risk of wildfire may be greater. In combination, hazard events may have the impact of overwhelming existing emergency response systems. While Long-Term Utility Outage is defined as a technological hazard, such outages can be the result of natural or human-caused events. The table below indicates the committee's ranking of natural hazards. The table on the following page indicates the committee's ranking of technological and human-caused hazards.

Natural Hazards Vulnerability Ranking

Belmont 2019 Natural Hazards	Probability	Extent	Human Impact	Property Impact	Business Impact	Average Impact	Risk
Definition	Likelihood this will occur w/in 100 yrs	(Magnitude/Strength)	Probability of Death or Injury	Physical Loss or damage	Interruption of Service	Average of Human, Property, Business	Probability x Extent x Avg. Impact
Scale	1: Unlikely 2: Occasional 3: Likely 4: Highly Likely	1: Weak 2: Moderate 3: Severe 4: Extreme	1: Low 2: Moderate 3: High 4: Catastrophic	Low Medium High			
Drought	3	2	1	2	1	1.33	8.00
Earthquake	2	1	1	1	1	1.00	2.00
Extreme Temperatures	3	2	1	1	1	1.00	6.00
High Wind Events	4	3	2	3	3	2.67	32.00
Infectious Diseases	2	1	2	1	1	1.33	2.67
Inland Flooding	3	3	1	3	1	1.67	15.00
Dam Failure	1	3	2	3	1	2.00	6.00
Landslides	1	2	1	2	1	1.33	2.67
Lightning	4	3	1	1	2	1.33	16.00
Severe Winter Weather	4	3	1	1	3	1.67	20.00
Solar Storms & Space Weather	1	1	1	1	1	1.00	1.00
Tropical & Post-Tropical Cyclones	3	3	1	3	2	2.00	18.00
Wildfires	3	2	1	3	2	2.00	12.00

Technological and Human-Caused Hazards Vulnerability Ranking

Belmont 2019 Human-Caused and Tech Hazards	Probability	Extent	Human Impact	Property Impact	Business Impact	Average Impact	Risk
Definition	Likelihood this will occur w/in 100 yrs	(Magnitude/ Strength)	Probability of Death or Injury	Physical Loss or damage	Interruption of Service	Average of Human, Property, Business	Probability x Exent x Avg. Impact
Scale	1: Unlikely 2: Occasional 3: Likely 4: Highly Likely	1: Weak 2: Moderate 3: Severe 4: Extreme	1: Low 2: Moderate 3: High 4: Catastrophic	Low Medium High			
Aging Infrastructure	2	2	1	1	2	1.33	5.33
Conflagration	3	3	1	3	1	1.67	15.00
Hazardous Materials	3	2	1	3	1	1.67	10.00
Known and Emerging Contaminants	1	1	1	1	1	1.00	1.00
Long Term Utility Outage	4	4	1	1	3	1.67	26.67
Radiological	1	1	1	1	1	1.00	1.00
Cyber Event	3	3	1	2	3	2.00	18.00
Mass Casualty Incident	3	3	2	2	1	1.67	15.00
Terrorism/Violence	3	3	3	2	2	2.33	21.00
Transport Accident	3	3	3	3	3	3.00	27.00

CHAPTER IV: MITIGATION STRATEGIES

A. CURRENT PLANS, POLICIES, AND REGULATIONS

The planning decisions that affect community growth patterns have evolved over the years as the population and demographics in Belmont have changed. While all of the local programs listed below were in existence in 2014, their implementation was improved as a result of the 2014 Hazard Mitigation Plan, but Belmont was not able to integrate information from the 2014 Plan into other planning documents. The Emergency Operations Plan and the Master Plan were not revised between the update of the 2014 HMP and the 2020 Plan, but both are scheduled for updates in the next few years.

A review of existing mitigation strategies was conducted; it included review of pertinent documents including the zoning ordinance, subdivision regulations, emergency management plan, site plan regulations, and discussion with committee members. The following strategies detail existing plans and regulations related to hazard mitigation. The review of existing capabilities (see table below) and the status of the 2014 Mitigation Actions (see table on page 49) utilized these categorizations:

Poor *The policy, plan or mutual aid system does **not work as well as it should** and **often** falls short of meeting its goals.*

Fair *The policy, plan or mutual aid system does **not work as well as it should** and **sometimes** falls short of meeting its goals.*

Good *The policy, plan or mutual aid system **works well** and **is achieving its goals**.*

Excellent *The policy, plan or mutual aid system **works very well** and **often exceeds its goals**.*

Untested *The policy, plan or mutual aid system has not yet been utilized or tested.*

Existing Protections and Policies

Type of Existing Protection	Description	Area of Town Covered	Effective-ness	Improvements/ Changes
Floodplain Ordinance	Ensures that any construction within the floodplain adheres to FEMA safety standards. Implemented and enforced by Planning Board, Planning Department, and Code Enforcement Officer.	100 Year Floodplain	Fair	Floodplain maps for town/Belknap Co. are inadequate (limited accuracy and not in electronic format).
Floodplain Ordinance: Inspection, Record-Keeping, and Outreach	<ul style="list-style-type: none"> - For construction in the floodplain, the Land Use Office requires three separate inspections relative the Base Flood Elevation (BFE) - at the footing/rebar-prior to concrete, the foundation/rebar prior to concrete, and foundation prior to backfill points during construction. - The Land Use Office requires elevation certification for new/substantial improvement applications. They have added the FEMA Elevation Certificate and Instructions to the website (www.belmontnh.org/dataapplications.asp) 	100 Year Floodplain	Good	No changes needed

Type of Existing Protection	Description	Area of Town Covered	Effectiveness	Improvements/ Changes
	- The Land Use Office has added the FEMA FIRM tutorial to the website (www.belmontdraft.org/dataapplications.asp).			
Wetland Ordinance	Establishes minimum setbacks for development near wetlands. Implemented and enforced by Planning Board, Planning Department, and Code Enforcement Officer.	Entire town	Good	No changes are needed.
Zoning Ordinance	Includes an aquifer protection ordinance for the protection of drinking water. Implemented and enforced by Planning Board, Planning Department, and Code Enforcement Officer.	Entire town	Good	No changes are needed.
Site Plan Review Regulations	Minimum development standards within the aquifer. Implemented and enforced by Planning Board, Planning Department, and Code Enforcement Officer.	Entire town	Good	No changes are needed.
Data Retention	Daily backup of Town Hall data, removed to off-site location; surge protection at Town Hall.	Entire town	Good	No changes are needed.
Fire Protection	Site Plan and Subdivision Fire Protection Regulations. Fire Dept. maintains an extensive list of chemicals housed and managed by local businesses	Entire town	Good	No changes are needed.
Tri-Town Aquifer BMPs	Best Management Practices for development in the vicinity of the aquifer. Implemented and enforced by Planning Board, Planning Department, and Code Enforcement Officer.	Areas associated with the aquifer	Good	No changes are needed.
Belmont Public Water System Emergency Plan	Plan identifying responsible parties and establishing appropriate procedures for responding to various water system emergencies.	Public Water Department District	Good	
Emergency Operations Plan	Plan detailing how various town entities should respond to various emergency situations. Approved, 2005.	Entire town	Fair	This plan is due for an update.
Dam Evacuation Plan	Telephone tree for evacuation of residents downstream of Lochmere and Sargent Dams.	Downstream of Lochmere, Sargent dams	Good	Contacts in the plan need to be checked annually.
Dam Maintenance Plan	NH DES inspections of dams are to occur on a regular basis.	Downstream of Lochmere, Sargent dams	Good	No changes are needed.

Type of Existing Protection	Description	Area of Town Covered	Effective-ness	Improvements/ Changes
School Emergency Plans	Includes evacuation routes. Tested 10 times per year.	All schools and some of the daycares	Excellent	No changes are needed.
Building Code	Adheres to International Building Code standards; town has Building Inspector.	Entire town	Good	No changes are needed.
Tree Maintenance Program	Conducted as needed by DPW and power companies to limit damage due to downed trees, limbs, and wires.	Entire town	Good	No changes are needed.
Fire Protection	Mutual Aid Agreement with Lakes Region and Capital Area Complex. Have established agreements for the giving and receiving of assistance in an emergency.	Entire town	Good	No changes are needed.
Public Works Consortium	Mutual Aid network. This is a network of DPWs that enable the giving and receiving of public works assistance in an emergency.	Entire town	Untested	Town is in process of joining
Police Department	Mutual Aid through NH RSA 105, 106.	Entire town	Good	No changes are needed.
Emergency Plans	Several large stores and businesses (ex. Shaw's) have emergency plans that are shared with the town's EMD.	Businesses	Good	No changes are needed.
Mass Casualty/ Brush Fire	Statewide Mutual Aid.	Entire town	Good	Have joined the Statewide Mobilization Plan and successfully participated in several activations.
Rural Fire Protection	Fire Department maintains an inventory of fire ponds and cisterns.	Entire Town	Good	Requires updating on an annual basis.
Fire Protection	Fire Department maintains a list of potentially hazardous sites and materials stored on site.	Entire Town	Good	Requires updating on an annual basis.
Emergency Power	Town has several back-up generators.	Police and Fire Stations, Shelters	Good	No changes are needed.

B. STATUS OF 2014 ACTIONS

The status of the mitigation actions recommended in the 2014 Plan is indicated in the table below as either Completed, Deleted, or Deferred. The effectiveness of each action was rated as Good, Fair, Poor, or Untested.

Status of Mitigation Actions from the 2014 Hazard Mitigation Plan

ID	Mitigation Action	Status 2019	Effective-ness	Comment
1	Carry out a culvert maintenance program, ensuring that debris is cleared. This reduces the number of washouts along roads.	Deferred	Good	Culvert maintenance is a regular practice. Most are privately owned; some driveway culverts need to be cleared out by the town. The town newsletter is often used to remind residents to clear their culverts. DPW may add administrative staff to help with culvert data.
2	Encourage residents and businesses to install and maintain lightning rods, reducing the likelihood of damage to property and loss of life due to fire.	Deferred	Untested	Did not prove to be feasible and was not a high priority. Should be combined with #6 and included in fact sheets on protecting property from lightning
3	Establish Job Summary/Policy of Public Information Officer to develop public education and outreach efforts and to handle contact with the media.	Completed	Good	Rich Mann of the PD, Mike Newhall of the FD, Jeanne Beaudin of Town Hall
4	Include a recommendation in the Master Plan to maintain a Hazard Mitigation Plan.	Deferred	Untested	2002 master plan has not been updated yet.
5	Include in the plan submission sections of both site plan and subdivision regulations a reference to the HazMit Plan, and require the applicant to articulate how the proposal complies with the standards of the plan and achieves a “no adverse impact” status as it relates to emergency situations. This is intended to ensure that the town emergency services can continue to maintain protection for existing development, in addition to any new development.	Deferred	Poor	Did not prove to be feasible. Mitigation action needs to be reworded; site plan regulations updated in 2018.

ID	Recommended Actions	Status 2019	Effective-ness	Comment
6	Develop a series of Fact Sheets for distribution to residents and town officials indicating the appropriate steps for homeowners and business owners to take to reduce their risk of exposure to hazards, including Ice Storms, High Winds, Drought, Lightning, Earthquake, Radon, and Epidemic, as well as providing sources of information and contacts in the community.	Partially Completed	Good	Fact sheets from State of New Hampshire and handouts from Primex were distributed to the public, although the town did not develop its own set of fact sheets, as originally planned, or a comprehensive plan for distributing them.
7	Compile additional mapping data in GIS format (Gas Lines, Critical Facilities, PSNH/NHEC Lines, etc.)	Deferred	Untested	Town doesn't have the GIS capability needed. Rick Ball uses GIS, but only new layers as they appear on the state's GRANIT system.
8	Develop good fire ordinance to reduce the spread of fire and loss of life and property.	Deferred	Good	Fireworks, Sprinkler and Fire alarm ordinances have been put in place. Updated ordinances are needed as new codes come forward
9	Develop a Salt Application Plan for municipal roads within the Aquifer District. A prevention plan may reduce the need for a cleanup of the aquifer system.	Deleted	Untested	No salt application plan was developed; issue was determined not to present the type of problem that required a mitigation action.
10	Work with appropriate state agencies to ensure that dam inspections occur regularly. Without regular NH DES inspections, required maintenance may not occur, potentially leading to compromised structural integrity.	Deleted	Good	Completed - Sargent Lake is the only one remaining. This is a high hazard dam, and is privately owned. The private party has a vested interest in keeping this plan going.
11	Adopt stormwater management regulations that are separate from both subdivision and site plan regulations that will allow regulation of land disturbance that does not trigger either.	Deferred	Untested	This could be a zoning ordinance. Belmont is not an MS4 community.
12	Cut back trees on a regular basis so that roads will be less likely to be blocked and power lines taken down by falling limbs.	Completed	Good	This action is working very well, and needs to be enhanced in the 2020 Plan

ID	Recommended Actions	Status 2019	Effective-ness	Comment
13	Updates to the Master Plan Land Use chapter should incorporate a review of emergency situation probability/service availability.	Deferred	Untested	Wording of this action was vague and did not prove to be feasible. Master Plan has not been updated
14	Upgrade the culvert under Hoadley Road (Tioga R.) to bridge to better accommodate flows (per NH DES requirement).	Completed	Good	
15	Improve drainage along Union Road near Juniper Drive to reduce the likelihood that water will overtop the road.	Deleted	Untested	Determined not to present enough of a problem that required a mitigation action
16	Work with State Floodplain Manager and other partners to encourage FEMA to update and digitize the 1976 Flood Hazard Boundary maps.	Deferred	Good	FEMA has begun process of updating Winnepesaukee Watershed floodplain maps. More info can be obtained from NH OSI. Rick Ball coordinates that effort on behalf of the Town.
17	Work with NH DES Dam Bureau, NH Floodplain Manager, and other stakeholders to ensure that better communication and coordination occurs regarding water levels in Silver Lake.	Completed	Good	Very active resident coordinates with the Dam Bureau when there are issues regarding the Silver Lake dam.
18	Maintain and expand early warning system, allowing people in town to seek appropriate shelter.	Deferred	Good	PD does NIXL and FD is preparing to use Code Red through 9-1-1. Currently in the process
19	Work with Lakes Region Partnership for Public Health, ensure that shelters are in place and stocked in advance so that all who seek shelter there may be served.	Completed	Good	Remove “stocked in advance” from wording. Town works with Jon Beland at Partnership for Public Health.
20	Develop and maintain Mutual Aid networks, allowing for support from nearby communities for particular events without needing to maintain an excessively large staff.	Completed	Good	Mutual Aid networks are working well with FD, PD and Public Works. Public Works coordinates with City of Laconia for vehicles. Currently no written agreements.
21	Have sufficient equipment available to respond to a downburst event.	Completed	Good	DPW equipment added to the fleet. Fire Department added a trailer. Further actions needed to make sure town is properly equipped to handle broad range of hazards

ID	Recommended Actions	Status 2019	Effectiveness	Comment
22	Incorporate Hazard Mitigation Plan into Emergency Operations Plan	Delete	Untested	Both should reference each other but they can't be incorporated in each.
23	Ensure that emergency vehicles are capable of handling the weather so that all residents might be reached in an emergency.	Completed	Good	FD Onspots, FD winter tires, police vehicles upgraded.
24	Ensure that the proper equipment and training to handle a wildfire is available.	Partially Deferred	Good	Forestry equipment upgraded. Approved for grant moneys for additional equipment
25	Develop evacuation plans, especially for high density areas and for those with limited mobility.	Delete	Untested	Not done. Should be part of town's Emergency Operations Plan, not HMP.
26	Ensure that the proper equipment and training is available to handle a mass casualty accident.	Deferred	Good	Mutual Aid would be relied on for Fire and Police for mass casualty accidents. This is ongoing. Town has received grants for EMS Warm Zone training (act of violence training). Continuing to seek grants for the same. This action should be reworded to include best practices for mass casualty situations and developing training.
27	Ensure sufficient personnel, equipment and materials are available to meet future demands placed on municipal services resulting from increased growth. It is essential to maintain protection for existing development while planning for new development.	Deferred	Good	This is ongoing. Town adds personnel and equipment as needed to accommodate town's growth in population. Town has kept up with the growth, but aging of population creates different challenges.

C. MITIGATION GOALS AND TYPES OF ACTIONS

Goals: The *State of New Hampshire All Hazards Hazard Mitigation Plan* is prepared and maintained by the NH Division of Homeland Security and Emergency Management (NH HSEM). The Belmont Hazard Mitigation Committee is committed to upholding the goals of the state's plan. Adapted from the NH state goals, Belmont's Hazard Mitigation Goals are:

- I. To improve upon the protection of the general population, the citizens and guests of the Town of Belmont, from all natural and human-caused hazards.
- II. To reduce the potential impact of natural and human-caused disasters on Belmont's Critical Support Services, Critical Facilities, and Infrastructure.
- III. To improve Belmont's Emergency Preparedness, Disaster Response, and Recovery Capability town wide.
- IV. To reduce the potential impact of natural and human-caused disasters on Belmont's economy, environment, historical & cultural treasures, and private property.
- V. To identify, introduce and implement cost effective Hazard Mitigation measures in order to accomplish Belmont's Goals.
- VI. To reduce Belmont's liability with respect to natural and human-caused hazards generally.
- VII. To address the challenges posed by climate change as they pertain to increasing risks in Belmont's infrastructure and natural environment.

Action Type: There are a number of types of actions that municipalities may take to reduce the likelihood of hazard impact. These include:

1. **Local Planning and Regulations**
 - a. Zoning – floodplain and steep slope overlays
 - b. Open space preservation
 - c. Subdivision and Site Plan Review
 - i. Impervious surface limits
 - ii. Stormwater management
 - d. Building and Fire codes

2. Structure and Infrastructure Projects

- a. Actions that will control the hazard
 - i. Diversion of stormwater away from developed areas
 - ii. Reservoirs to store drinking water
- b. Actions that will protect individual buildings
 - i. Flood-proofing existing buildings
 - ii. Retrofitting existing buildings to reduce damage
 - iii. Relocating structures from hazard-prone areas
 - iv. Public procurement and management of land vulnerable to hazard damage
- c. Actions that will protect emergency services before, during, and immediately after an event (long-term continuity)
 - i. Protect warning system capability
 - ii. Protection or hardening of critical facilities such as fire stations or hospitals
 - iii. Protection of infrastructure, such as roads that are needed in emergency response

3. Natural Systems Protection

- a. Erosion and sediment control programs
- b. Wetlands protection programs
- c. Expand public open space
- d. Environmental restoration programs

4. Education and Awareness Programs

- a. Make hazard information and maps available to residents and visitors.
 - i. Paper or electronic
 - ii. Targeted at residents and businesses in hazard-prone areas
 - iii. Set up displays in public areas, or homeowners associations.
 - iv. Give educational programs in schools.
 - v. Make information available through newspapers, radio, TV.
- b. Ask businesses to provide hazard information to employees.
- c. Adopt a real estate disclosure requirement so that potential owners are informed of risks prior to purchase.

D. PRIORITIZATION AND IMPLEMENTATION OF MITIGATION ACTIONS

A review of the hazard risk assessment and local vulnerabilities helped identify several issues that were refined by the committee, especially potential mitigation actions associated with improving communications infrastructure and the continuity of communications during hazard events.

In addition, actions or portions of actions deferred from the 2014 Plan were brought forward and considered along with new ideas. A brainstorming session yielded an updated list of recommended actions to address current problems. The table on the following page lists the 2020 Plan's recommended mitigation actions, along with the hazard(s) that they address. The ID numbers are used simply for tracking purposes; they do not indicate any sort of prioritization. Blue highlight indicates new actions; actions not highlighted were deferred from the 2014 Plan. Some completed and deferred actions from the 2014 Plan were amended and included as new actions in this 2020 Plan; therefore, they are highlighted in blue. Yellow highlight indicates Preparedness actions rather than purely Mitigation actions. Mitigation is action taken to reduce or eliminate long-term risk to hazards while preparedness is action taken to improve emergency response or operational preparedness.⁵⁴

The table of recommended actions also indicates the goal(s) and type of structure (existing or new) that each action addresses. Mitigation actions were distinguished by the four types listed in Section C above. Cost of implementing each action was estimated as accurately as possible either in terms of dollars or staff hours. Cost was also a factor in the STAPLEE evaluation process.

Many factors influence how a town chooses to spend its energy and resources in implementing recommended actions. Factors include:

- Urgency
- How quickly an action could be implemented
- Likelihood that the action will reduce future emergencies
- Regulations required to implement the action
- Administrative burdens
- Time (both paid and volunteer)
- Funding availability
- Political acceptability of the action.

⁵⁴ *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards*, January 2013. FEMA.

In the context of these factors, the committee discussed the mitigation actions and utilized the STAPLEE method (see Appendix E for more detail) as a guide to reach consensus regarding each action's relative level of priority, recognizing that enhancing communications infrastructure and continuity is a primary goal of this Plan.

Recommended Mitigation Actions 2020 Plan

ID	Recommended Actions	Hazard Addressed	Goal	Type	Cost	STAPLEE Rank
1	Incorporate information from the Hazard Mitigation Plan into the next update of the Master Plan.	All	V	Local Planning & Regulations	1 hour staff time	21
2	Establish additional mapping data in GIS format for the town's public water and sewer lines.	All	III	Local Planning & Regulations	40 – 80 hours staff time	21
3	Develop plans for additional water supply sites	Wildfire Conflagration	I IV	Structure/ Infrastruct.	20 hours staff time	21
4	Update Emergency Operations Plan (EOP) to include a warming and cooling shelter plan and a populations at risk plan	Extreme Temperatures	I	Education & Awareness	10 hours staff time	21
5	Schedule debris mitigation prior to storms by cutting back tree hazards	High Wind & Severe Winter Weather	II III	Structure/ Infrastruct.	80 – 120 hours staff time and \$0 - \$10,000 subcontracting costs	21
6	Work with State Floodplain Coordinator and other partners on FEMA flood mapping projects underway to update the Belknap County Flood Insurance Study (FIS) and Flood Insurance Rate Maps (FIRMs).	Flooding	II IV	Local Planning & Regulations	20 hours staff time	21
7	Investigate grant opportunities to harden communications infrastructure.	All	I II III	Structure/ Infrastruct.	100 hours staff time	21

ID	Recommended Actions	Hazard Addressed	Goal	Type	Cost	STAPLEE Rank
8	Lobby/encourage public utilities to upgrade and improve maintenance of communications infrastructure.	All	II III	Structure/ Infrastruct.	40 hours staff time	21
9	Maintain Belmont's priority status with its communications service provider to allow immediate access to communications.	All	I III	Structure/ Infrastruct.	15 hours staff time	21
10	Engage Community Action Program (CAP) in discussion about obtaining a generator for Belmont Elderly Housing	Extreme Temperatures	I	Structure/ Infrastruct.	50 hours staff time	21
11	Ensure/encourage publicly subsidized elderly housing community access to emergency utilities for critical services, including heat and air conditioning	Extreme Temperatures	I	Education & Outreach	10 hours staff time	21
12	Develop public outreach to encourage residents to sign up for NH Alerts	Wildfire	I	Education & Outreach	10 hours staff time	21
13	Warm Zone training for emergency responders	Terrorism/ Violence	I III	Education & Outreach	200 hours staff time/ \$10,000	21
14	Apply for additional grant funding for emergency management and hazard mitigation	All	I III	Structure/ Infrastruct.	100 – 200 hours staff time	21
15	Explore cyber security software	Cyber Event	II	Structure/ Infrastruct.	\$5,000 - \$10,000	21
16	Work with State of New Hampshire to develop cyber security resources	Cyber Event	II	Structure/ Infrastruct.	20 hours staff time	21
17	Upgrade the culvert on Church Street, which has deteriorated due to a change in amount and speed of water flow of the river.	Flooding	II VII	Structure/ Infrastruct.	\$250,000	19

ID	Recommended Actions	Hazard Addressed	Goal	Type	Cost	STAPLEE Rank
18	Enforce fire ordinances to reduce the spread of fire and loss of life and property.	Wildfire Conflagration	I IV	Local Planning & Regulations	16 – 24 hours staff time	18
19	Carry out a culvert maintenance program, ensuring that debris is cleared. This reduces the number of washouts along roads.	Flooding	II VII	Structure/ Infrastruct.	\$20,000/year	17
20	Develop a public information distribution plan for sharing fact sheets that inform homeowners and business owners about steps to take to reduce their risk of exposure to natural hazards, including lightning strikes, and providing sources of information and community contacts.	All	I IV	Education & Awareness	20 – 40 hours staff time	17
21	Upgrade Police Department and Fire Department generators	All	II	Structure/ Infrastruct.	\$50,000 - \$75,000	17
22	Upgrade rescue equipment	Transport Accident	I III	Structure/ Infrastruct.	\$250,000	17
23	Upgrade internet access and provide sufficient backup systems to harden communications infrastructure.	All	I II III	Structure/ Infrastruct.	\$30,000 - \$35,000	16
24	Investigate improved communications service provider options.	All	I II III	Structure/ Infrastruct.	20 hours staff time	15
25	Adopt stormwater management regulations in the zoning ordinance to allow regulation of land disturbance that does not trigger either subdivision or site plan regulations	Flooding	IV VII	Local Planning & Regulations	32 – 40 hours staff time	15
26	Relocate Town Hall operations based on feasibility study	All	II	Structure/ Infrastruct.	\$2.8 million	15

ID	Recommended Actions	Hazard Addressed	Goal	Type	Cost	STAPLEE Rank
27	Relocate or construct a new Police Department facility based on feasibility study	All	II	Structure/ Infrastuct.	\$3 million	15
28	Maintain and expand early warning system.	All	I	n/a	25 hours staff time + incidental costs	21
29	Ensure that adequate shelters are in place and maintained.	All	III	n/a	\$50,000 - \$100,000 initial costs, \$5,000 – annual maintenance	21
30	Ensure that the proper equipment and training to handle a wildfire is available.	Wildfire	III	n/a	\$100,000 - \$250,000 + 100 – 150 hours staff time	21
31	Ensure that the proper equipment and training is available for best management practices for a mass casualty accident.	Mass Casualty Incident	III	n/a	\$100,000 - \$500,000	21
32	Ensure sufficient personnel, equipment and materials are available to meet future demands placed on municipal services resulting from increased growth. It is essential to maintain protection for existing development while planning for new development.	All	II III IV V	n/a	\$100,000 - \$250,000/year	21

The implementation schedule below includes some of the information from the previous table as well as the parties responsible for bringing about these actions, the implementation time frame, and potential funding sources. The time frame for which the actions are executed depends upon staff time and budgetary limitations.

The table below lists Belmont’s 2020 Mitigation Strategies and Preparedness Actions in order of their STAPLEE score. To keep the plan current, the implementation schedule should be updated and re-evaluated on a regular basis as outlined in the monitoring section of this plan.

Implementation Schedule for Recommended Actions

KEY:

BOS – Board of Selectmen	CEO – Code Enforcement Officer/ Health Officer/Building Inspector	DPW - Department of Public Works
EMD – Emergency Management Director	FD – Fire Department	LU – Land Use
PD – Police Department	SB – School Board	

ID	Recommended Actions	Hazard Addressed	Cost	Responsible Parties	Time Frame	Potential Funding Sources
1	Incorporate information from the Hazard Mitigation Plan into the next update of the Master Plan.	All	\$40,000/year	LU	2023	Planning Board budget
2	Establish additional mapping data in GIS format for the town’s public water and sewer lines.	All	40 – 80 hours staff time	LU	2020, 21, 22, 23, 24	LU budget Water/Sewer budgets
3	Develop plans for additional water supply sites	Wildfire Conflagration	80 hours staff time	FD	2022	EMD budget
4	Update Emergency Operations Plan (EOP) to include a warming and cooling shelter plan and a populations at risk plan	Extreme Temperatures	20-30 hours staff time	EMD	2020	Grants

ID	Recommended Actions	Hazard Addressed	Cost	Responsible Parties	Time Frame	Potential Funding Sources
5	Schedule debris mitigation prior to storms by cutting back tree hazards	High Wind & Severe Winter Weather	80 -120 hours staff time + subcontracting costs (\$0 - \$10,000)	DPW	2020, 21, 22, 23, 24	DPW Budget
6	Work with State Floodplain Coordinator and other partners on FEMA flood mapping projects underway to update the Belknap County Flood Insurance Study (FIS) and Flood Insurance Rate Maps (FIRMs).	Flooding	20 hours staff time	LU	2020-2021	Planning Board budget
7	Investigate grant opportunities to harden communications infrastructure.	All	100 hours staff time	EMD, BOS	2020	Grants/ CIP budget
8	Lobby/encourage public utilities to upgrade and improve maintenance of communications infrastructure.	All	40 hours staff time	EMD, BOS	2020	Executive budget
9	Maintain Belmont's priority status with its communications service provider to allow immediate access to communications.	All	15 hours Staff time	EMD	2020	FD budget
10	Engage Community Action Program (CAP) in discussion about obtaining a generator for Belmont Elderly Housing	Extreme Temperatures	50 hours staff time	BOS, EMD	2020	Executive budget
11	Ensure/encourage publicly subsidized elderly housing community access to emergency utilities for critical services, including heat and air conditioning	Extreme Temperatures	10 hours staff time	BOS, EMD	2020	Executive budget

ID	Recommended Actions	Hazard Addressed	Cost	Responsible Parties	Time Frame	Potential Funding Sources
12	Develop public outreach to encourage residents to sign up for NH Alerts	Wildfire	10 hours staff time	EMD	2021	FD budget
13	Warm Zone training for emergency responders	Terrorism / Violence	200 hours staff time + \$10,000	FD, PD	2020	Grant
14	Apply for additional grant funding for emergency management and hazard mitigation	All	100 – 200 hours staff time	EMD	2020	Grant/ FD budget
15	Explore cyber security software	Cyber Event	\$5,000 - \$10,000	BOS	2020	General Gov't budget
16	Work with State of New Hampshire to develop cyber security resources	Cyber Event	20 hours staff time	BOS	2020	Executive budget
17	Upgrade the culvert on Church Street, which has deteriorated due to a change in amount and speed of water flow of the river.	Flooding	\$250,000	BOS	20223	State Bridge Aid/ CIP budget
18	Enforce fire ordinances to reduce the spread of fire and loss of life and property.	Wildfire Conflagration	16 -24 hours staff time	FD, BOS	2020, 21, 22, 23, 24	FD budget/ Legal budget
19	Carry out a culvert maintenance program, ensuring that debris is cleared. This reduces the number of washouts along roads.	Flooding	\$20,000/year	DPW	2020, 21, 22, 23, 24	DPW budget

ID	Recommended Actions	Hazard Addressed	Cost	Responsible Parties	Time Frame	Potential Funding Sources
20	Develop a public information distribution plan for sharing fact sheets that inform homeowners and business owners about steps to take to reduce their risk of exposure to natural hazards, including lightning strikes, and providing sources of information and community contacts.	All	20-40 hours staff time	EMD	2020	Emergency Management budget
21	Upgrade Police Department and Fire Department generators	All	\$50,000 -\$75,000	EMD, PD, FD	2020	Grants
22	Upgrade rescue equipment	Transport Accident	\$250,000	FD	2023	Special Revenue Fund
23	Upgrade internet access and provide sufficient backup systems to harden communications infrastructure.	All	\$30,000 - \$35,000	BOS	2020	Grants/ CIP budget
24	Investigate improved communications service provider options.	All	20 hours staff time	EMD, BOS	2020	Executive budget
25	Adopt stormwater management regulations in the zoning ordinance to allow regulation of land disturbance that does not trigger either subdivision or site plan regulations	Flooding	32 -40 hours staff time	LU	2023	PB budget/ Grants
26	Relocate Town Hall operations based on feasibility study	All	\$2.8 million	BOS	2023	Bond/ CIP budget
27	Relocate or construct a new Police Department facility based on feasibility study	All	\$3 million	BOS	2020	Bond

ID	Recommended Actions	Hazard Addressed	Cost	Responsible Parties	Time Frame	Potential Funding Sources
28	Maintain and expand early warning system.	All	25 hours staff time + incidental costs	EMD, PD, FD	2021	Grants/ Emergency Management budget
29	Ensure that adequate shelters are in place and maintained.	All	\$50,000 - \$100,000 initial costs, \$5,000 – annual maintenance	EMD	2022	FD budget
30	Ensure that the proper equipment and training is available to handle a wildfire.	Wildfire	\$100,000 - \$250,000 + 100 – 150 hours staff time	FD	2020	FD budget
31	Ensure that the proper equipment and training is available for best management practices for a mass casualty accident.	Mass Casualty Incident	\$100,000 - \$500,000	FD, PD	2020, 21, 22, 23, 24	FD/PD budgets
32	Ensure sufficient personnel, equipment and materials are available to meet future demands placed on municipal services resulting from increased growth. It is essential to maintain protection for existing development while planning for new development.	All	\$100,000 - \$250,000/year	LU, BOS	2020, 21, 22, 23, 24	General operating budget

CHAPTER V: PLAN ADOPTION AND MONITORING

A. IMPLEMENTATION

The Belmont Hazard Mitigation Plan Update Committee, established by the EMD and Board of Selectmen, will meet annually to review the Plan and provide a mechanism for ensuring that an attempt is made to incorporate the actions identified in the plan into ongoing town planning activities, such as the annual update of the Capital Improvements Plan, and the future updates of the Emergency Operations Plan and the Master Plan. Essential elements of implementation require that all responsible parties for the various recommendations understand what is expected of them, and that they are willing to fulfill their role in implementation. It is therefore important to have the responsible parties clearly identified when the town adopts the final plan. Where appropriate it would be helpful to have any hazard mitigation activities identified in job descriptions.

Many of the actions in this plan rely on the town's operating budget along with grant funds available through FEMA and other sources, such as those listed in Appendix B. Several of the recommended actions in the 2014 HMP were not implemented due to funding constraints. Because the town budget is subject to approval by Belmont's voters, it is important that as many people as possible be aware of the importance of these recommended mitigation actions as they pertain to the health, safety, and welfare of citizens of Belmont. The Emergency Management Director will coordinate with the Town Administrator, department heads, Budget Committee, and Selectmen to ensure that funds and staff time for these projects are included in the budget. The EMD and Hazard Mitigation Committee will work with the Selectmen and Capital Improvements Plan (CIP) Committee to incorporate the various projects into subsequent budgets, which may utilize Capital Reserve funds. The EMD will also coordinate with the NH HSEM Field Representative to ensure that the town applies for appropriate grant funds.

For mitigation actions that involve either revisions to zoning, subdivision, or site plan regulations, members of the Hazard Mitigation Committee will work with the Planning Board and Land Use Office to develop appropriate language. As the town updates its Master Plan in 2023, the Master Plan committee should consider incorporating information from this Hazard Mitigation Plan .

Within a year after the town officially adopts the 2020 update to the Hazard Mitigation Plan, an attempt will be made to have hazard mitigation strategies integrated into these existing mechanisms and into all other ongoing town planning activities. The Belmont EMD and others implementing the various actions in this plan may find the FEMA publication *Integrating Hazard Mitigation into Local Planning: Case Studies and Tools for Community Officials, 2013*⁵⁵ a useful resource.

B. PLAN MAINTENANCE AND PUBLIC INVOLVEMENT

The Belmont Hazard Mitigation Planning Committee and the Selectboard, in order to track progress and update the mitigation strategies identified in Chapter IV, will review the Belmont Hazard Mitigation Plan every year or after a hazard event (refer to tables in Appendix G). The Belmont Emergency Management Director is responsible for initiating this review and should consult with

⁵⁵ <http://www.fema.gov/library/viewRecord.do?id=7130>

committee members identified in this Plan. Changes will be made to the Plan to accommodate projects that have failed, are no longer consistent with the timeframe identified, are no longer consistent with the town's priorities, or lack funding resources. Priorities that were not ranked high, but identified as potential mitigation strategies, will be reviewed during the monitoring and update of this Plan to determine feasibility of future implementation. In keeping with the process of adopting the Plan, a public meeting will be held to receive public comment on the Plan.

Maintenance and updating will be held during the annual review period and the final product adopted by the Selectboard. The Committee will meet annually as part of this plan maintenance. The Emergency Management Director is also responsible for updating and resubmitting the plan to FEMA to be re-approved every five years. The EMD will convene a plan update committee in early 2024 to begin updating this plan before it expires.

On behalf of the Hazard Mitigation Committee, the Emergency Management Director, under direction of the Selectboard, will be responsible for ensuring that town departments and the public have adequate opportunity to participate in the planning process during the Plan's annual review and during any Hazard Mitigation Committee meetings. Administrative staff may be utilized to assist with the public involvement process.

For each committee meeting and the annual update process, techniques that will be utilized for public involvement include:

- Provide invitations to Budget Committee members;
- Provide invitations to municipal department heads;
- Post notices of meetings at the Town Offices, Library, and on the town website;
- Submit press releases for publication in the *Winnisquam Echo*, *Laconia Daily Sun*, and other appropriate newspapers or media outlets.

Entities to invite to future Hazard Mitigation plan updates include the Emergency Management Directors of the neighboring municipalities of Laconia, Gilford, Gilmanton, Canterbury, Northfield, Tilton and Sanbornton.

C. SIGNED CERTIFICATE OF ADOPTION

**Certificate of Adoption - Town of Belmont
A resolution adopting the Belmont Hazard Mitigation Plan Update 2020**

Plan dated: 2020

Conditionally approved: 1-24-2020

WHEREAS, the town of Belmont received funding from the NH Division of Homeland Security and Emergency Management through a FEMA Pre-Disaster Mitigation Grant and assistance from the Lakes Region Planning Commission for the preparation of the Belmont Hazard Mitigation Plan Update 2020; and

WHEREAS, several public planning meetings were held between October and December 2019; and

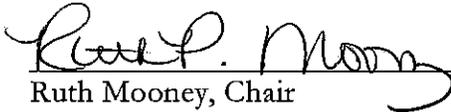
WHEREAS, the Belmont Hazard Mitigation Plan Update 2020 contains several potential future projects to mitigate hazard damage in the town of Belmont and,

WHEREAS, a duly noticed public meeting was held by the Selectmen on January 29, 2020 to formally approve and adopt the Belmont Hazard Mitigation Plan Update 2020.

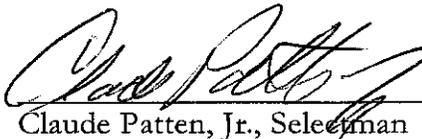
NOW, THEREFORE BE IT RESOLVED that the Belmont Board of Selectmen adopts the Belmont Hazard Mitigation Plan Update 2020.

ADOPTED AND SIGNED this day of January 29, 2020.

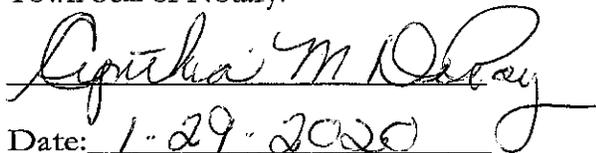
BELMONT BOARD OF SELECTMEN


Ruth Mooney, Chair


Jon Pike, Selectman


Claude Patten, Jr., Selectman

Town Seal or Notary:


Date: 1-29-2020

APPENDIX A: TECHNICAL RESOURCES

NH Homeland Security and Emergency Management	271-2231
http://www.nh.gov/safety/divisions/HSEM/	
Hazard Mitigation Section.....	271-2231
http://www.nh.gov/safety/divisions/hsem/HazardMitigation/index.html	
Federal Emergency Management Agency	(617) 223-4175
http://www.fema.gov/	
FEMA, National Flood Insurance Program, Community Status Book	
http://www.fema.gov/national-flood-insurance-program/national-flood-insurance-program-community-status-book	
NH Regional Planning Commissions:	
Central NH Regional Planning Commission	796-2129
http://www.cnhrpc.org/	
Lakes Region Regional Planning Commission.....	279-8171
http://www.lakesrpc.org/	
Nashua Regional Planning Commission	883-0366
http://www.nashuarpc.org/	
North Country Council.....	444-6303
http://www.nccouncil.org/	
Rockingham Regional Planning Commission	778-0885
http://www.rpc-nh.org/	
Southern New Hampshire Regional Planning Commission.....	669-4664
http://www.snhpc.org/	
Southwest Regional Planning Commission	357-0557
http://www.swrpc.org/	
Strafford Regional Planning Commission.....	742-2523
http://www.trafford.org/	
Upper Valley Lake Sunapee Regional Planning Commission.....	448-1680
http://www.uvlsrc.org/	
NH Governor's Office of Strategic Initiatives	271-2155
https://www.nh.gov/osi/	
New Hampshire Floodplain Management Program	
https://www.nh.gov/osi/planning/programs/fmp/training-education.htm	
NH Department of Transportation	271-3734
http://www.nh.gov/dot/index.htm	
NH Department of Business and Economic Affairs	271-2591
http://www.nheconomy.org	
NH Department of Environmental Services	271-3503
http://www.des.state.nh.us/	
Dam Bureau.....	271-63406
http://www.des.state.nh.us/organization/divisions/water/dam/index.htm	
NH Municipal Association	224-7447
http://www.nhmunicipal.org/LGCWebsite/index.asp	
NH Fish and Game Department	271-3421

http://www.wildlife.state.nh.us/	
NH Department of Natural and Cultural Resources	271-2411
https://www.dncr.nh.gov/	
Division of Historical Resources.....	271-3483
https://www.nh.gov/nhdhr/	
Division of Forests and Lands.....	271-2214
http://www.nhdf.org/	
Natural Heritage Inventory	271-2215
http://www.nhdf.org/about-forests-and-lands/bureaus/natural-heritage-bureau/	
Division of Parks and Recreation.....	271-3255
http://www.nhstateparks.org/	
NH Department of Health and Human Services	271-9389
http://www.dhhs.state.nh.us/	
Northeast States Emergency Consortium, Inc. (NESEC)	(781) 224-9876
http://www.nesec.org/	
US Department of Commerce	(202) 482-2000
http://www.commerce.gov/	
National Oceanic and Atmospheric Administration.....	(202) 482-6090
http://www.noaa.gov/	
National Weather Service, Eastern Region Headquarters	
http://www.erh.noaa.gov/	
National Weather Service, Tauton, Massachusetts.....	(508) 824-5116
http://www.erh.noaa.gov/er/box/	
National Weather Service, Gray, Maine	(207) 688-3216
http://www.erh.noaa.gov/er/gyx/	
US Department of the Interior	
http://www.doi.gov/	
US Fish and Wildlife Service.....	225-1411
http://www.fws.gov/	
US Geological Survey.....	225-4681
http://www.usgs.gov/	
US Geological Survey Real Time Hydrologic Data	
http://waterdata.usgs.gov/nwis/rt	
US Army Corps of Engineers	(978) 318-8087
http://www.usace.army.mil/	
US Department of Agriculture	
http://www.usda.gov/wps/portal/usdahome	
US Forest Service	(202) 205-8333
http://www.fs.fed.us/	
New Hampshire Electrical Cooperative	(800) 698-2007
http://www.nhec.com/	
Cold Region Research Laboratory	646-4187
http://www.crrel.usace.army.mil/	
National Emergency Management Association	(859) 244-8000
http://nemaweb.org	

National Aeronautics and Space Administration

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

NASA Optical Transient Detector – Lightning and Atmospheric Research

<http://thunder.msfc.nasa.gov/>

National Lightning Safety Institute

<http://lightningsafety.com/>

The Tornado Project Online

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

National Severe Storms Laboratory

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

Plymouth State University Weather Center

<http://vortex.plymouth.edu/>

APPENDIX B: MITIGATION FUNDING RESOURCES

There are numerous potential sources of funding to assist with the implementation of mitigation efforts. Two lists of state and federal resources are provided below. Some of these may not apply or be appropriate for Belmont. The NH Homeland Security and Emergency Management Field Representative for Belknap County can provide some assistance.

404 Hazard Mitigation Grant Program (HMGP)	NH Homeland Security and Emergency Management
406 Public Assistance and Hazard Mitigation	NH Homeland Security and Emergency Management
Community Development Block Grant (CDBG)	NH Community Development Finance Authority
Dam Safety Program	NH Department of Environmental Services
Emergency Watershed Protection (EWP) Program.....	USDA, Natural Resources Conservation Service
Flood Mitigation Assistance Program (FMAP)	NH Homeland Security and Emergency Management
Highway Safety Improvement Program.....	NH Department of Transportation
Mitigation Assistance Planning (MAP).....	NH Homeland Security and Emergency Management
Mutual Aid for Public Works.....	NH Municipal Association
National Flood Insurance Program (NFIP)	NH Office of Strategic Initiatives
Project Impact	NH Homeland Security and Emergency Management
Roadway Repair & Maintenance Program(s)	NH Department of Transportation
Shoreline Protection Program	NH Department of Environmental Services
Various Forest and Lands Program(s).....	NH Department of Resources & Economic Development
Wetlands Programs.....	NH Department of Environmental Services

Federal Mitigation Funding Sources

Federal Emergency Management Agency

Program	Details	Notes
Flood Mitigation Assistance Program (FMA)	Provides funding to implement measures to reduce or eliminate the long-term risk of flood damage http://www.fema.gov/government/grant/fma/index.shtm	States and localities
Hazard Mitigation Grant Program (HMGP)	Provides grants to implement long-term hazard mitigation measures after a major disaster declaration http://www.fema.gov/government/grant/hmgp/index.shtm	Open
National Flood Insurance Program (NFIP)	Enables property owners to purchase insurance as a protection against flood losses in exchange for state and community floodplain management regulations that reduce future flood damages http://www.fema.gov/business/nfip/	States, localities, and individuals
Pre-Disaster Mitigation Program (PDM)	Provides funds for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event http://www.fema.gov/government/grant/pdm/index.shtm	States, localities and tribal governments

Environmental Protection Agency

The EPA makes available funds for water management and wetlands protection programs that help mitigate against future costs associated with hazard damage.

Mitigation Funding Sources Program	Details	Notes
Clean Water Act Section 319 Grants	Grants for water source management programs including technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and regulation. http://www.epa.gov/OWOW/NPS/cwact.html	Funds are provided only to designated state and tribal agencies
Clean Water State Revolving Funds	State grants to capitalize loan funds. States make loans to communities, individuals, and others for high-priority water-quality activities. http://www.epa.gov/owow/wetlands/initiative/srf.html	States and Puerto Rico
Wetland Program Development Grants	Funds for projects that promote research, investigations, experiments, training, demonstrations, surveys, and studies relating to the causes, effects, extent, prevention, reduction, and elimination of water pollution. http://www.epa.gov/owow/wetlands/initiative/#financial	See website

National Oceanic and Atmosphere Administration (NOAA)

NOAA is the major source for mitigation funding related to coastal zone management and other coastal protection projects.

Mitigation Funding Sources Program	Details	Notes
Coastal Services Center Cooperative Agreements	Funds for coastal wetlands management and protection, natural hazards management, public access improvement, reduction of marine debris, special area management planning, and ocean resource planning. http://www.csc.noaa.gov/funding/	May only be used to implement and enhance the states' approved Coastal Zone Management programs
Coastal Services Center Grant Opportunities	Formula and program enhancement grants for implementing and enhancing Coastal Zone Management programs that have been approved by the Secretary of Commerce. http://www.csc.noaa.gov/funding/	Formula grants require non-federal match
Coastal Zone Management Program	The Office of Ocean and Coastal Resource Management (OCRM) provides federal funding and technical assistance to better manage our coastal resources. http://coastalmanagement.noaa.gov/funding/welcome.html	Funding is reserved for the nation's 34 state and territory Coastal Zone Management Programs
Marine and Coastal Habitat Restoration	Funding for habitat restoration, including wetland restoration and dam removal. http://www.nmfs.noaa.gov/habitat/recovery/	Funding available for state, local and tribal governments and for- and non-profit organizations.

Floodplain, Wetland and Watershed Protection Programs

USACE and the U.S. Fish and Wildlife Service offer funding and technical support for programs designed to protect floodplains, wetlands, and watersheds.

Funding and Technical Assistance for Wetlands and Floodplains Program	Details	Notes
USACE Planning Assistance to States (PAS)	Fund plans for the development and conservation of water resources, dam safety, flood damage reduction and floodplain management. http://www.lre.usace.army.mil/planning/assist.html	50 percent non-federal match
USACE Flood Plain Management Services (FPMS)	Technical support for effective floodplain management. http://www.lrl.usace.army.mil/p3md-o/article.asp?id=9&MyCategory=126	See website
USACE Environmental Laboratory	Guidance for implementing environmental programs such as ecosystem restoration and reuse of dredged materials. http://el.erdc.usace.army.mil/index.cfm	See website
U.S. Fish & Wildlife Service Coastal Wetlands Conservation Grant Program	Matching grants to states for acquisition, restoration, management or enhancement of coastal wetlands. http://ecos.fws.gov/coastal_grants/viewContent.do?viewPage=home	States only. 50 percent federal share
U.S. Fish & Wildlife Service Partners for Fish and Wildlife Program	Program that provides financial and technical assistance to private landowners interested in restoring degraded wildlife habitat. http://ecos.fws.gov/partners/viewContent.do?viewPage=home	Funding for volunteer-based programs

Housing and Urban Development

The Community Development Block Grants (CDBG) administered by HUD can be used to fund hazard mitigation projects.

Mitigation Funding Sources Program	Details	Notes
Community Development Block Grants (CDBG)	Grants to develop viable communities, principally for low and moderate income persons. CDBG funds available through Disaster Recovery Initiative. http://www.hud.gov/offices/cpd/communitydevelopment/programs/	Disaster funds contingent upon Presidential disaster declaration
Disaster Recovery Assistance	Disaster relief and recovery assistance in the form of special mortgage financing for rehabilitation of impacted homes. http://www.hud.gov/offices/cpd/communitydevelopment/programs/dri/assistance.cfm	Individuals
Neighborhood Stabilization Program	Funding for the purchase and rehabilitation of foreclosed and vacant property in order to renew neighborhoods devastated by the economic crisis. http://www.hud.gov/offices/cpd/communitydevelopment/programs/neighborhoodspg/	State and local governments and non-profits

Bureau of Land Management

The Bureau of Land Management (BLM) has two technical assistance programs focused on fire mitigation strategies at the community level.

Mitigation Funding Sources Program	Details	Notes
Community Assistance and Protection Program	Focuses on mitigation/prevention, education, and outreach. National Fire Prevention and Education teams are sent to areas across the country at-risk for wildland fire to work with local residents. http://www.blm.gov/nifc/st/en/prog/fire/community_assistance.html	See website
Firewise Communities Program	Effort to involve homeowners, community leaders, planners, developers, and others in the effort to protect people, property, and natural resources from the risk of wildland fire before a fire starts. http://www.firewise.org/	See website

U.S. Department of Agriculture

There are multiple mitigation funding and technical assistance opportunities available from the USDA and its various sub-agencies: the Farm Service Agency, Forest Service, and Natural Resources Conservation Service.

Mitigation Funding Sources Agency Program	Details	Notes
USDA Smith-Lever Special Needs Funding	Grants to State Extension Services at 1862 Land-Grant Institutions to support education-based approaches to addressing emergency preparedness and disasters. http://www.csrees.usda.gov/funding/rfas/smith_lever.html	Population under 20,000
USDA Community Facilities Guaranteed Loan Program	This program provides an incentive for commercial lending that will develop essential community facilities, such as fire stations, police stations, and other public buildings. http://www.rurdev.usda.gov/rhs/cf/cp.htm	Population under 20,000
USDA Community Facilities Direct Loans	Loans for essential community facilities. http://www.rurdev.usda.gov/rhs/cf/cp.htm	Population of less than 20,000
USDA Community Facilities Direct Grants	Grants to develop essential community facilities. http://www.rurdev.usda.gov/rhs/cf/cp.htm	Population of less than 20,000
USDA Farm Service Agency Disaster Assistance Programs	Emergency funding and technical assistance for farmers and ranchers to rehabilitate farmland and livestock damaged by natural disasters. http://www.fsa.usda.gov/	Farmers and ranchers
USDA Forest Service National Fire Plan	Funding for organizing, training, and equipping fire districts through Volunteer, State and Rural Fire Assistance programs. Technical assistance for fire related mitigation. http://www.forestsandrangelands.gov/	See website
USDA Forest Service Economic Action Program	Funds for preparation of Fire Safe plans to reduce fire hazards and utilize byproducts of fuels management activities in a value-added fashion. http://www.fs.fed.us/spf/coop/programs/eap/	80% of total cost of project may be covered
USDA Natural Resources Conservation Service Emergency Watershed Protection Support Services	Funds for implementing emergency measures in watersheds in order to relieve imminent hazards to life and property created by a natural disaster. http://www.nrcs.usda.gov/programs/ewp/	See website
USDA Natural Resources Conservation Service Watershed Protection and Flood Prevention	Funds for soil conservation; flood prevention; conservation, development, utilization and disposal of water; and conservation and proper utilization of land. http://www.nrcs.usda.gov/programs/watershed/index.html	See website

Health and Economic Agencies

Alternative mitigation programs can be found through health and economic agencies that provide loans and grants aimed primarily at disaster relief.

Federal Loans and Grants for Disaster Relief Agency Program	Details	Notes
Department of Health & Human Services Disaster Assistance for State Units on Aging (SUAs)	Provide disaster relief funds to those SUAs and tribal organizations who are currently receiving a grant under Title VI of the Older Americans Act. http://www.aoa.gov/doingbus/fundopp/fundopp.asp	Areas designated in a Disaster Declaration issued by the President
Economic Development Administration (EDA) Economic Development Administration Investment Programs	Grants that support public works, economic adjustment assistance, and planning. Certain funds allocated for locations recently hit by major disasters. http://www.eda.gov/AboutEDA/Programs.xml	The maximum investment rate shall not exceed 50 percent of the project cost
U.S. Small Business Administration Small Business Administration Loan Program	Low-interest, fixed rate loans to small businesses for the purpose of implementing mitigation measures. Also available for disaster damaged property. http://www.sba.gov/services/financialassistance/index.html	Must meet SBA approved credit rating

Research Grants

The United States Geological Survey (USGS) and the National Science Foundation (NSF) provide grant money for hazard mitigation-related research efforts.

Hazard Mitigation Research Grants Agency Program	Details	Notes
National Science Foundation (NSF) Decision, Risk, and Management Sciences Program (DRMS)	Grants for small-scale, exploratory, high-risk research having a severe urgency with regard to natural or anthropogenic disasters and similar unanticipated events. http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5423&org=SES	See website
U.S. Geological Survey (USGS) National Earthquake Hazards Reduction Program	The purpose of NEHRP is to provide products for earthquake loss reduction to the public and private sectors by carrying out research on earthquake occurrence and effects. http://www.usgs.gov/contracts/nehpr/	Community with a population under 20,000

APPENDIX C: AGENDAS, NOTES AND PUBLICITY

The following pages include examples of committee meeting agendas, meeting notes, meeting notices, and press releases associated with this planning process. Meetings were posted on the town's website, and the public was invited to attend meetings and to provide input on the draft Plan update prior to its adoption by the Board of Selectmen.

Belmont Hazard Mitigation Plan Update Committee

November 4, 2019 10 AM - 12 PM
Corner Meeting House
Sargent Street, Belmont, NH



FEMA



AGENDA

The focus of this process is **mitigation**, which is action taken to reduce or eliminate long-term risk to hazards.

Mitigation is different from preparedness, which is action taken to improve emergency response or operational preparedness.

1. Introductions
2. Critical Facilities
 - a. Review preliminary Critical Facilities map for needed changes, updates
 - b. Assessed values of Critical Facilities
3. Hazard Risk Assessment
 - a. Review 2018 State Hazard Mitigation Plan list of natural hazards
 - b. Hazard risk ranking
 - c. High Hazard and Significant Dams
 - d. Discuss History, Location, Impact of each Natural Hazard
 - e. Address Human-Caused and Technological Hazards
4. Next Meeting – November 18 @ 1 pm
 - a. Update Mitigation Goals
 - b. Review status of 2014 Mitigation Actions
 - c. Develop new problem statements and proposed Mitigation Actions
 - d. Establish factors for prioritizing Mitigation Actions
5. Public Input

Town of Belmont Department

HMP Meeting

November 4, 2019

This meeting started at 10:00am at the Corner Meeting House and ended at 12:00pm. Alicia Jipson, Assistant Town Administrator posted the Public Meeting Notice for this meeting at Town Hall, the Library, and the Post Office. In attendance was Fire Chief and EMD Michael Newhall, Town Administrator Jeanne Beaudin, Fire Administrative Assistant Sarah Weeks, Police Sergeant Evan Boulanger, Public Works Director Craig Clairmont, Town Planner Dari Sassan, Land Use Technician Rick Ball, Assistant Town Administrator Alicia Jipson, Selectman Ruth Mooney, HSEM Representative Kayla Henderson, LRPC Susan Slack, and LRPC Intern Henry Casey.

This meeting was held to focus on mitigation. A review of critical facilities and hazard risk assessments was conducted.

The following critical facilities are to be added to the plan and to the map:

- Belmont Medical Center – 8 Corporate Dr, Belmont, NH
- Clearchoice MD – 96 Daniel Webster Highway, Belmont, NH
- Convenient MD – 77 Daniel Webster Highway, Belmont, NH
- Cell Tower – Laconia Road / Gilmanton Rd, Belmont, NH
- Highway Garage Generator – 149 Hurricane Rd (Lat: 43.46672, Long: -71.50273)
- Sewer Pump Station – Jefferson Rd East, Belmont, NH (Lat: 43.479900, Long: -71.514221)
- Sewer Pump Station – Gardner’s Grove Rd, Belmont, NH (Lat: 43.458018, Long: -71.532177)
- Sewer Pump Station/Generator – Nancy Dr, Belmont, NH (Lat: 43.493721, Long: -71.508847)
- Sewer Pump Station/Generator – Coons Point Rd, Belmont, NH (Lat:43.461894, Long: -71.532289)
- Water Distribution Center/Generator – Shaker Rd by Pout Pond, Belmont, NH (Lat: 43.436402, Long: -71.488197)
- Sewer Pump Station/Generator – Shaker Rd near Main St, Belmont, NH (Lat: 43.440430, Long: -71.484673)
- Fire Station Generator – 14 Gilmanton Rd, Belmont, NH (Lat: 43.444517, Long: -71.477593)
- Police Station Generator – 16 Fuller St, Belmont, NH (Lat: 43.442346, Long: -71.481116)

The following critical facilities are to be removed from the plan and the map:

- Dr.'s Office – 14 Mill Street, Belmont, NH
- Dr.'s Office – 73 Daniel Webster Highway, Belmont, NH
- Winnisquam Fire Station – 17 Sunset Drive, Belmont, NH

The following are items that need to be changed within the Hazard Mitigation Plan:

- Belmont Police Station will now be listed as the alternate EOC.
- Belmont Public Works garage will now be removed as the alternate EOC.

The following are Belmont Natural Hazards addressed, and their risk assessment:

Belmont 2019 Natural Hazards	Probability	Extent	Human Impact	Property Impact	Business Impact	Average Impact	Risk
Definition	Likelihood this will occur w/in 100 yrs	(Magnitude/Strength)	Probability of Death or Injury	Physical Loss or Damage	Interruption of Service	Average of Human, Property, Business	Probability x Extent x Avg. Impact
Scale	1:Unlikely 2:Occasional 3:Likely 4:Highly Likely	1: Weak 2:Moderate 3: Severe 4: Extreme	1:Low 2:Moderate 3:High 4:Catastrophic	1:Low 2:Moderate 3:High 4:Catastrophic	1:Low 2:Moderate 3:High 4:Catastrophic	1:Low 2:Moderate 3:High 4:Catastrophic	Low Medium High
Avalanche	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Drought	3	2	1	2	1	1.3	(8) Medium
Earthquake	2	1	1	1	1	1	(2) Low
Extreme Temperatures	3	2	1	1	1	1	(6) Medium
High Wind Events	4	3	2	3	3	2.67	(32) High
Infectious Disease	2	1	2	1	1	1.3	(2.67) Low
Inland Flooding	3	3	1	3	1	1.67	(15) High
Dam Failure	1	3	2	3	1	2	(6) Medium
Landslides	1	2	1	2	1	1.3	(2.67) Low
Lightning	4	3	1	1	3	1.67	(20) High
Severe Winter Weather	4	3	1	1	3	1.67	(20) High
Solar Storms & Space Weather	1	1	1	1	1	1	(1) Low
Tropical & Post-Tropical Cyclones	3	3	1	3	2	2	(18) High
Wildfires	3	2	1	3	2	2	(12) Medium

High Winds – This is a large threat to the Town of Belmont. Many high wind incidents have transpired for Belmont, more heavily disturbing the Rt 107 side of town. Communications have been severely interrupted due to the major communication lines that come through Rt 107.

Winter Weather – This is a large threat to the Town of Belmont. These incidents are more town wide, although Rt 107 gets hit very hard. Communications can be

severely interrupted due to the major communication lines that come through Rt 107.

Lightning - These incidents have transpired more heavily on the Rt 107 side of town. Communications can be severely interrupted due to the major communication lines that come through Rt 107.

Flooding – This is more likely in the Rt 140 area, and around Jamestown Rd, Gardners Grove Rd, and South Rd. The Tioga River gets high every year, but has not flooded out the roadway as of yet.

Drought – This is more of a town wide issue. It effects primarily the agriculture and the owners of private wells.

Extreme Temperatures – This is more of a town wide threat. Belmont currently has many areas of elderly housing where this can really affect the public.

Dam Failure – There is a history of dam failure. In 2006, one of the dams failed. Sargent Lake is a concern for this.

Tropical & Post-Tropical Cyclones – This presents a possible threat to the entire town.

Wildfires – There is a history of wildfires in the Town of Belmont. Rt 140 had a wildfire in 2014 or 2015. This presents a possible threat to the entire town.

The following are Belmont Human-Caused and Tech Hazards addressed, and their risk assessment:

Belmont 2019 Human-Caused and Tech Hazards	Probability	Extent	Human Impact	Property Impact	Business Impact	Average Impact	Risk
Definition	Likelihood this will occur w/in 100 yrs	(Magnitude/ Strength)	Probability of Death or Injury	Physical Loss or Damage	Interruption of Service	Average of Human, Property, Business	Probability x Extent x Avg. Impact
Scale	1:Unlikely 2:Occasional 3:Likely 4:Highly Likely	1: Weak 2:Moderate 3: Severe 4: Extreme	1:Low 2:Moderate 3:High 4:Catastrophic	1:Low 2:Moderate 3:High 4:Catastrophic	1:Low 2:Moderate 3:High 4:Catastrophic	1:Low 2:Moderate 3:High 4:Catastrophic	Low Medium High
Aging Infrastructure	2	2	1	1	2	1.3	(5.3) Low
Conflagration	3	3	1	3	1	1.67	(15) Medium
Dam Failure	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hazardous Materials	3	2	1	3	1	1.67	(10) Medium
Known & Emerging Contaminants	1	1	1	1	1	1	(1) Low
Long Term Utility							

Outage	4	4	1	1	3	1.64	(10) Medium
Radiological	1	1	1	1	1	1	(1) Low
Cyber Event	3	3	1	2	3	2	(18) High
Mass Casualty Incident	3	3	2	2	1	1.67	(15) Medium
Terrorism/Violence	3	3	3	2	2	2.3	(21) High
Transport Accident	3	3	3	3	3	3	(27) High

The following tasks have been assigned to get the process going for the next meeting:

- Chief Newhall will send out the Press Release for the upcoming meeting.
- All committee members shall look over the goals on page 40 of the 2014 Hazard Mitigation Plan and make any changes if they are needed.
- Chief Newhall will send Susan Slack documentation showing that the Town of Belmont requested surrounding towns to be present at these meeting for feedback purposes, and that no surrounding towns responded to the request.
- Sarah Weeks will work on compiling information about recent natural hazards and send the information to Susan Slack.
- A reminder that upcoming meetings are scheduled for the Hazard Mitigation Plan on:
 - **Monday, November 18, 2019 at 1:00pm**
 - **Monday, December 2, 2019 at 10:00am**



**BELMONT FIRE
DEPARTMENT**
Michael Newhall, Fire Chief
P.O. Box 837 – 14 Gilmanton Road
Belmont, NH 03220
*"Our Town – Our People
Our Responsibility"*



October 28, 2019

Fire Chiefs and EMDs,

The Town of Belmont 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 other hazards. Our towns and organizations share common hazards that don't recognize governmental boundaries. Therefore, we are 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 4, 2019 at 10 am at the Corner Meeting House on Sargent Street in Belmont. 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 Susan Slack, Principal Planner, Lakes Region Planning Commission, at sslack@lakesrpc.org or 279-5337.

We look forward to hearing your ideas on how to mitigate future hazards for the community.

Thank you,

Fire Chief Michael Newhall
Town of Belmont

OFFICE (603) 267-8333 FAX: (603) 267-8337
EMAIL: bfd@belmontnh.org

Town of Belmont website with notice of Hazard Mitigation Plan Update Committee meetings, agendas and meeting notes:

Public Hearing Notice

2020 Belmont Municipal Budget Committee Public Hearing Notice. [Click here](#) for the further information.

Hazard Mitigation Plan Update 2019

- [11/04/2019- Agenda](#) [11/04/2019- Meeting Notes](#)
- [11/18/2019- Agenda](#) [11/18/2019- Meeting Notes](#)
- [12/02/2019- Agenda](#) [10/25/2019- Meeting Notes](#)

12/12/2019- [Belmont Hazard Mitigation Plan Draft](#)

It's Here!! The December Community Newsletter and Calendar are Now Available!

[Check Us Out!](#)

Previous Editions can be found at

<http://www.belmontnh.org/belmontnewsletter.asp>

Share your memories of Belmont

Seeking oral histories and memories

[Send us your stories and ideas!](#)

25-year Time Capsule

150th Town Anniversary Celebration

Remember Celebrate Imagine

Creating a Time Capsule to be opened in 2044!



What do you think should be included in the capsule?

[Current Time Capsule Suggestions](#)

Send **Your** suggestions to Events@BelmontNH.org

[See details on these and all other news items...](#)

Press Release from town seeking public comment on draft Plan sent to regional newspapers:**For Immediate Release**

Contact: Chief Michael Newhall - 267-8333

**Town of Belmont Seeks Public Comment on
2020 Hazard Mitigation Plan Update**

The Belmont Hazard Mitigation Plan Update Committee is seeking public comment on a draft update of the town's Hazard Mitigation Plan. Led by Emergency Management Director and Fire Chief Michael Newhall, the committee includes members of the Fire, Police, Public Works and Land Use departments, as well as town administration and the Board of Selectmen. The 2020 Hazard Mitigation Plan Update documents the committee's review of the hazards that may put the town at risk and presents a prioritized set of recommendations to mitigate those hazards and protect the people, property, and infrastructure of Belmont.

The draft plan is available for public review and comment for the next few weeks. Residents of Belmont and neighboring communities, as well as other interested parties, are encouraged to contact Chief Newhall to provide input or to discuss the Plan.

The draft Plan can be viewed at the Belmont Town Office, the Belmont Public Library, or at the Belmont Fire Department (14 Gilmanton Road). The Plan also can be accessed on the town's website: www.belmontnh.org

The committee identified natural hazards of concern for Belmont including high wind events, severe winter weather, and flooding. The update gives municipal leaders a plan to prioritize mitigation actions that can reduce impacts to these and other hazard events and foster community-wide resilience to natural disasters.

For more information, contact Chief Newhall, Belmont Emergency Management Director, at 267-8333.

NFIP information posted on Belmont town website:



Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP)

NFIP Information Web Sites

The following web links can also be found on the NH Office of Energy and Planning Floodplain Management Program's web site at:
www.nh.gov/oep/programs/floodplainmanagement/index.htm



General NFIP

Answers to Questions about the NFIP
<http://www.fema.gov/business/nfip/qanda.shtm>

Community Rating System (CRS)
<http://www.fema.gov/business/nfip/crs.shtm>
<http://training.fema.gov/EMIWeb/CRS/>

Community Status Book
<http://www.fema.gov/fema/csb.shtm>

Laws and Regulations
<http://www.fema.gov/business/nfip/laws1.shtm>

NFIP Publications
<http://www.fema.gov/business/nfip/libfacts.shtm#3#3>

Flood Insurance

FloodSmart (How to Find an Agent, File a Claim, etc.)
<http://www.floodsmart.gov/floodsmart/pages/inscenter.jsp>

The Myths and Facts about the National Flood Insurance Program
<http://www.fema.gov/business/nfip/myth.shtm>

FEMA's Flood Insurance Claims Handbook
<http://www.fema.gov/library/viewRecord.do?id=2187>

FEMA's Flood Insurance Manual
<http://www.fema.gov/business/nfip/manual.shtm>

Mandatory Purchase of Flood Insurance Guidelines
<http://www.fema.gov/business/nfip/mpurfi.shtm>

Flood Mapping

FEMA Map Service Center (Where to find, print and buy a flood map)

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

NH GRANIT Flood Insurance Study (FIS) and Digital Flood Insurance Rate Maps (DFIRMs) Repository (Where to find and print FIS and DFIRMs)

http://www.granit.sr.unh.edu/dfirms/dfirm_home.htm

How to Read a Map – Tutorial

http://www.fema.gov/plan/prevent/fhm/ot_firmr.shtm

FEMA Map Modernization

http://www.fema.gov/plan/prevent/fhm/mm_main.shtm

FEMA Forms and Information (Elevation Certificate, Floodproofing Certificate, Letter of Map Amendment (LOMA)/Letter of Map Revision (LOMR) Applications)

http://www.fema.gov/plan/prevent/fhm/frm_form.shtm

Status of Map Change Requests

http://www.fema.gov/plan/prevent/fhm/st_main.shtm

Documents, Guidelines, and Manuals

Managing Floodplain Development in Approximate A Zones

http://www.fema.gov/plan/prevent/fhm/dl_zonea.shtm

FEMA's Technical Bulletins (Guidance on NFIP regulations on various topics)

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

FEMA Documents (Various FEMA manuals and documents)

http://www.fema.gov/plan/prevent/fhm/frm_docs.shtm

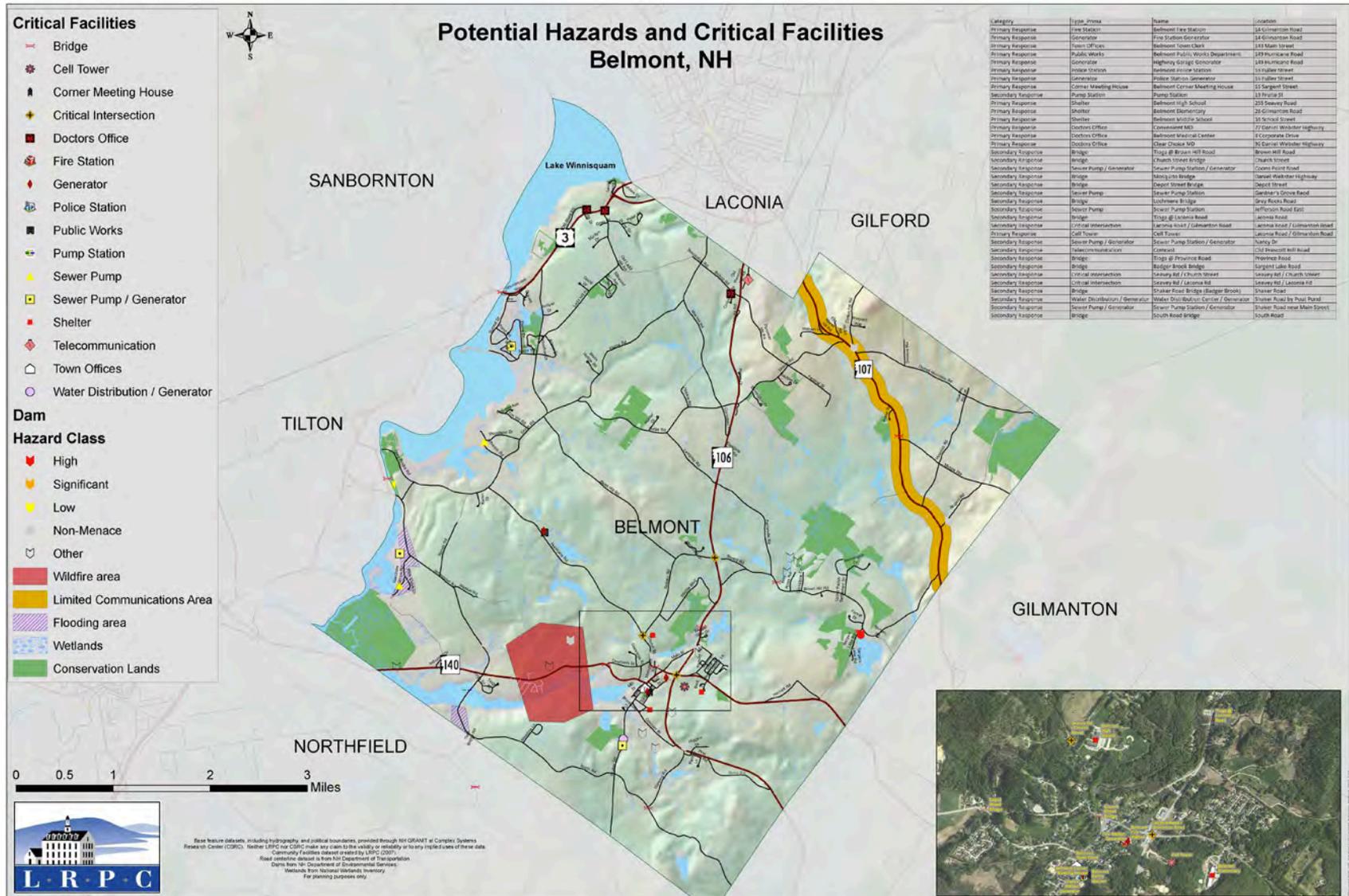
Mitigation Funding

Flood Mitigation Assistance Program

<http://nh.gov/oep/programs/floodplainmanagement/fma.htm>

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

APPENDIX D: POTENTIAL HAZARDS AND CRITICAL FACILITIES MAP AND FULL CRITICAL FACILITIES LIST



FULL CRITICAL FACILITIES LIST

<i>Classification</i> ▼	<i>Title</i> ▼	<i>Address</i> ▼
Emergency Response Facilities		
Command & Control		
Emergency Command Center (ECC)- Primary	Fire Station	14 Gilmanton Road
Emergency Command Center (ECC)- Secondary	Police Station	16 Fuller Street
Alternate	Town Offices	143 Main Street
Alternate	Public Works	149 Hurricane Road
Alternate	Corner Meeting House	16 Sargent Street
Primary Evacuation & Transportation Routes		
Bridges & Culverts	Tioga @ Laconia Road	Laconia Road
Bridges & Culverts	Mosquito Bridge	Daniel Webster Highway
Bridges & Culverts	Badger Brook Bridge	Sargent Lake Road
Bridges & Culverts	Lochmere Bridge	Grey Rocks Road
Bridges & Culverts	Depot Street Bridge	Depot Street
Bridges & Culverts	Church Street Bridge	Church Street
Bridges & Culverts	South Road Bridge	South Road
Bridges & Culverts	Tioga @ Brown Hill Road	Brown Hill Road
Bridges & Culverts	Tioga @ Province Road	Province Road
Routes	NH Route 106 (Laconia Road)	
Routes	NH Route 140 (Depot Street)	
Routes	NH Route 140 (Gilmanton Road)	
Routes	NH Route 107 (Province Road)	
Routes	US/NH Routes 3/11 (Daniel Webster Highway)	
Critical Intersections	Seavey Rd/Church Street	Seavey Rd/Church Street
Critical Intersections	Seavey Rd/Laconia Rd	Seavey Rd/Laconia Rd
Critical Intersections	Laconia Road/Gilmanton Road	Laconia Road/Gilmanton Road
Potential Shelters		
Schools	Belmont Elementary	26 Gilmanton Road
Schools	Belmont Middle	38 School Street
Schools	Belmont High	255 Seavey Road
Town Buildings	Corner Meeting House	16 Sargent Street
Emergency Medical Services		
Ambulance and EMT	Belmont Fire Dept	14 Gilmanton Road
Clear Choice MD	Urgent Care Center	96 D. Webster HWY
Convenient MD	Urgent Care Center	77 D. Webster HWY
Belknap Family Health Center	Medical Center	8 Corporate Drive

<i>Classification</i> ▼	<i>Title</i> ▼	<i>Address</i> ▼
Fire & Chemical Suppression		
Water Supply		
Water Pump Station		
Hydrants		
Ponds		
Town Water Tanks		
Communications		
Emergency Alarm Systems		
Cell Towers		
Potential Helicopter Land Zones		
School Athletic Fields		
Large Parking Lots		
Open Fieldss		
Not Necessary for Emergency Response Facilities		
Water		
Wells		
Storage Facilities		
Infiltration Galleys		
Utilities		
Telephone lines		
Power Lines		
Transmission Lines		
Substations		
Transformers		
Natural Gas Lines		
Distribution Centers		
Underground Fiber Optics		
Sewer Pump Stations		
Fuel Storage Facilities		
Diesel		
LP		
Oxygen		
Facilities & Populations to Protect		
Transmission Lines		
Buildings & Businesses		
Public Schools	Belmont Elementary	26 Gilmanton Road

<i>Classification</i> ▼	<i>Title</i> ▼	<i>Address</i> ▼
Public Schools	Belmont Middle	38 School Street
Public Schools	Belmont High	255 Seavey Road
Libraries	Belmont Public	146 Main Street
Child Care Facilities	Heavenly Sonshine	49 Church Street
Child Care Facilities	LR Child Care	24 Eastgate Park Drive
Child Care Facilities	June Fletcher	316 Depot Street
Child Care Facilities (Pending)	Central Baptist	304 Laconia Road
Before and After School	LR Child Care	26 Gilmanton Road
Elderly & Disabled Housing	Heritage Terrace	9 Heritage Terrace
Elderly & Disabled Housing	Lakeview Care Ptns	87 Horne Rd
Adult Congregate Living Facilities	Genera Corp	240 South Rd
Adult Congregate Living Facilities	Genera Corp	246 South Road
Adult Congregate Living Facilities	Merfeld	129 Brown Hill
Veterinarians	Noreast Veterinary Assoc	5 Wareing Road
Commercial - High Density	Belknap Mall	96 Daniel Webster Highway
Commercial - High Density	Belknap Mall	12 Old State Road
Commercial - High Density	Lakes Region Casino	1265 Laconia Road
Commercial - High Density	Major Brands	225 Daniel Webster Highway
Commercial - High Density	Wilcom	73 Daniel Webster Highway
Commercial - High Density	All Metals	4 Higgins Drive
Commercial - High Density	Atlantic Broadband	9 Apple Road
Commercial - High Density	Belmont Business Park	7 Fruite Street
Commercial - High Density	Belmont Landing	171 Daniel Webster Highway
Commercial - High Density	Belmont Mill	14 Mill Street
Commercial - High Density	Opechee Plaza	140 Laconia Road
Residential - High Density	Heritage Terrace MF	9 Heritage Terrace
Residential - High Density	Maple Acres MF	6 Maple Hill Drive
Residential - High Density	Belmont Village Apartments MF	5 Village Apartment Road
Residential - High Density	Gold Eagle MF	310 Daniel Webster Highway
Residential - High Density	Gold Eagle MF	312 Daniel Webster Highway
Residential - High Density	EWT MF	5 Rhodes Drive
Residential - High Density	EWT MF	8 Rhodes Drive
Residential - High Density	EWT MF	8 Judkins Drive
Residential - High Density	EWT MF	17 Judkins Drive
Residential - High Density	EWT MF	18 Judkins Drive
Residential - High Density	EWT MF	9 Bisson Avenue
Residential - High Density	EWT MF	15 Bisson Avenue
Residential - High Density	Sandy Ledge MF	124 Concord Street

<i>Classification</i> ▼	<i>Title</i> ▼	<i>Address</i> ▼
Residential - High Density	Orchard Hill II MF	24-72 Randlett Street
Residential - High Density	Orchard Hill Condos	17-62 Orchard Hill Road
Residential - High Density	Granite Ridge Condos	Oak Drive
Residential - High Density	Tioga View Condos	27-29 River Street
Residential - High Density	Country Side Condos	24-38 Countryside Circle
Residential - High Density	Country Side Condos	8-18 Countryside Circle
Residential - High Density	Hillcrest MF	25-26 Hill Street
Residential - High Density	Shaker Road Apartments MF	99 Shaker Road
Residential - High Density	Shaker Road Apartments MF	113 Shaker Road
Residential - High Density	Pine Gardens MHP	6 Scenic Drive
Residential - High Density	LRMHPark Coop MHP	7 Lakewood Drive
Residential - High Density	Ladd Hill MHP	Ladd Hill Road
Residential - High Density	Northbrook MHP	Bishop Road
Residential - High Density	Cates MHP	Sunset Drive
Residential - High Density	Great Brook MHP	Depot Street
Residential - High Density	Lakemont Cooperative MHP	Old Prescott Hill Road
Residential - High Density	Mallards Landing MHP/CG	Union Road
Residential - High Density	Granite State CG MHP/CG	Laconia Road
Residential - High Density	WBCG CG	Grey Rock Road
Residential - High Density	Silver Lake CG	Jamestown Road
Residential - High Density	White Birch CG	Union Road
Residential - High Density	Pleasant Valley Dev	Gilmanton Road
Residential - High Density	Solar Village	Ladd Hill Road
Residential - High Density	Fox Hill Estates Dev	Railroad Avenue
Limited Fire Access	Grey Rocks Road	
Limited Fire Access	Winnisquam Beach Campground	
Limited Fire Access	Island Drive Area	
Limited Fire Access	Mallards Landing	
Limited Fire Access	Mohawk Island	
Limited Fire Access	Tucker Shore Rd Area	
Limited Fire Access	Ephrams Cove Rd (pvt)	
Limited Fire Access	Morgan Rd	
Limited Fire Access	Dutile Shore Rd	
Limited Fire Access	Fox Hill Rd.	
Limited Fire Access	Gilman Shore Rd	
Limited Fire Access	Coons Point Rd	
Limited Fire Access	Sawicki Rd.	
Limited Fire Access	Gardners Grove Rd	

<i>Classification</i>	<i>Title</i>	<i>Address</i>
Explosives	Atlas Fireworks	320 Daniel Webster Highway
Explosives	Nitro Fireworks	930 Laconia Road
Dams	Sargent Lake Dam	Sargent Lake Road
Dams	Lochmere Dam	Jamestown Road
Places of Religious Worship	St. Joseph Church	96 Main Street
Places of Religious Worship	First Baptist Church	47 Church Street
Historic Landmarks	Province Road Mtg House	251 Province Road
Historic Landmarks	Belmont Mill	14 Mill Street
Historic Landmarks	Belmont Library	146 Main Street
Historic Landmarks	Gale School	38 School Street
Historic Landmarks	1908 Bandstand	Town Green
Historic Landmarks	Corner Meeting House	16 Sargent Street
Historical Society		
Museums		
Galleries		
Theatres		
Cemeteries	South Road Cemetery Association	South Road
Cemeteries	Jackson Cemetery- Burial Ground	Jamestown Road
Cemeteries	Gile Cemetery - Burial Ground	Jamestown Road
Cemeteries	Adams Cemetery	Jamestown Road
Cemeteries	Elkins/Jamestown Cemetery	Jamestown Road
Cemeteries	Judkins/Hunt Cemetery	Union Road
Cemeteries	Woodman Cemetery	Hurricane Road
Cemeteries	Highland Cemetery	Church Street
Cemeteries	Simple/Perkins Cemetery	Perkins Road
Cemeteries	Hackett- Burial Ground	Hackett Road
Cemeteries	Weymouth Cemetery- Burial Ground	Brown Hill Road
Cemeteries	Bean Hill Cemetery	Bean Hill Road
Cemeteries	Bartlett Cemetery	Horne Road
Cemeteries	Page Cemetery	Lamprey Road
Cemeteries	Hadley Cemetery	Federal Street
Cemeteries	Young Cemetery	Leavitt Road
Cemeteries	Leavitt Cemetery	Leavitt Road
Cemeteries	Wolcott Cemetery	Hoadley Road
Cemeteries	Lamprey Cemetery	Province Road
Cemeteries	Folsom Cemetery	Province Road
Cemeteries	Farrar Cemetery	Province Road
Cemeteries	Dow Cemetery	Province Road

<i>Classification</i> ▼	<i>Title</i> ▼	<i>Address</i> ▼
Cemeteries	Randlett Cemetery	Randlett Street
Cemeteries	Prescott Cemetery	North Brook Road
Cemeteries	Ladd Hill Cemetery- Burial Ground	Ladd Hill Road
Cemeteries	Chertok Cemetery- Burial Ground	Shaker Road
Cemeteries	DeRoy Cemetery- Burial Ground	Leavitt Road
Cemeteries	Spiller Cemetery- Burial Ground	Province Road
Cemeteries	Swallow Cemetery	Young Road
Cemeteries	Moulton Cemetery- Burial Ground	Hackett Road
Community Water System-Residential	Cates MHP	Sunset Drive
Community Water System-Residential	Fox Hill Estates Dev	Railroad Avenue
Community Water System-Residential	Abenak	Plummer Hill
Community Water System-Residential	Mallards Landing MHP/CG	Union Road
Community Water System-Residential	Granite State CG MHP/CG	Laconia Road
Community Water System-Residential	WBCG CG	Grey Rock Road
Community Water System-Residential	Ladd Hill MHP	Ladd Hill Road
Community Water System-Residential	LRMHPark Coop MHP	7 Lakewood Drive
Community Water System-Residential	Northbrook MHP	Bishop Road
Community Water System-Residential	Pine Gardens MHP	6 Scenic Drive
Community Water System-Residential	Silver Lake CG	Jamestown Road
Community Water System-Residential	Solar Village	Ladd Hill Road
Community Water System-Residential	Sun Lake Village	Sun Lake Drive
Community Water System-Residential	Sunray Shores	Nancy Drive
Community Water System-Residential	Tioga River Water	Tioga Drive
Community Water System-Residential	Westview Meadows	Horseshoe Drive
Community Water System-Residential	White Birch CG	Union Road
Community Water System-Institutional	Lakeview Care Partners	87 Horne Rd
Community Water System-Commercial	Belmont Business Park	7 Fruite Street
Community Water System-Commercial	China Garden Restaurant	200 Daniel Webster Highway
Community Water System-Commercial	Pike Industries	3 Eastgate Park Road
Community Water System-Commercial	Center for Contemporary Denistry	58 Laconia Road
Community Water System-Commercial	Lakeview Golf Club	89 Ladd Hill Road
Community Water System-Commercial	LR Coca Cola	495 Depot Street
Community Water System-Commercial	Reynolds	24 Corporate Drive
Community Water System-Commercial	Shooters Tavern	190 Daniel Webster Highway
Community Water System-Commercial	Noyes Fiber Systems	16 Eastgate Park Road
Community Water System-Commercial	Opechee Plaza	140 Laconia Road
Community Water System-Commercial	Belknap Family Health	8 Corporate Drive
Community Water System-Commercial	Lakes Region Casino	1265 Laconia Road

<i>Classification</i> ▼	<i>Title</i> ▼	<i>Address</i> ▼
Community Water System-Commercial	Top of the Town	88 Ladd Hill Road
Potential Contamination Source	Sun Lake Village	Sun Lake Drive
Potential Contamination Source	CHINA GARDEN REST	200 DANIEL WEBSTER HIGHWAY
Potential Contamination Source	NORTHEAST TIRE SERVICE INC	174 DANIEL WEBSTER HIGHWAY
Potential Contamination Source	Vacant	150 DANIEL WEBSTER HIGHWAY
Potential Contamination Source	Vacant	150 DANIEL WEBSTER HIGHWAY
Potential Contamination Source	HOWLAND, DAVID	150 DANIEL WEBSTER HIGHWAY
Potential Contamination Source	HOWLAND, DAVID	150 DANIEL WEBSTER HIGHWAY
Potential Contamination Source	AUTO DEPOT	287 DANIEL WEBSTER HIGHWAY
Potential Contamination Source	BLADEKI AUTOMOTIVE	264 DANIEL WEBSTER HIGHWAY
Potential Contamination Source	CATES MOBILE HOME PARK	SUNSET DRIVE
Potential Contamination Source	SUNRAY SHORES WATER DIST	HORSESHOE DRIVE
Potential Contamination Source	WINNISQUAM MARINE INC	18 SUNSET DRIVE
Potential Contamination Source	WINNISQUAM MARINE INC	18 SUNSET DRIVE
Potential Contamination Source	LADD HILL CEMETERY	LADD HILL ROAD
Potential Contamination Source	WESTVIEW MEADOWS	UNION ROAD
Potential Contamination Source	CZERWONKA, PETER	21 LINDA DRIVE
Potential Contamination Source	WINNISQUAM MARINE INC	238 UNION ROAD
Potential Contamination Source	MALLARDS LANDING INC	200 UNION ROAD
Potential Contamination Source	OTTO, WILLIAM RESIDENCE	29 SECOND STREET
Potential Contamination Source	THERRIEN, ROLAND & BERGERON, ELI	71 MALLARDS LANDING ROAD
Potential Contamination Source	DROUIN, WAYNE	487 UNION ROAD
Potential Contamination Source	LOCHMERE VILLAGE DISTRICT	461 JAMESTOWN ROAD
Potential Contamination Source	NORM'S AUTO BODY	752 UNION ROAD
Potential Contamination Source	WINNISQUAM BEACH CAMPGROUND	GREY ROCKS ROAD
Potential Contamination Source	SILVER LAKE PARK	389 JAMESTOWN ROAD
Potential Contamination Source	ELKINS/JAMESTOWN CEMETERY	JAMESTOWN ROAD
Potential Contamination Source	BURBANK, JOHN	12 STARK STREET
Potential Contamination Source	BELMONT ELEMENTARY SCHOOL	26 BEST STREET
Potential Contamination Source	BELMONT, TOWN OF	154 MAIN STREET
Potential Contamination Source	YOUNG, ALAN	8 CHURCH STREET
Potential Contamination Source	WOODBURY, SUSAN	134 MAIN STREET
Potential Contamination Source	BROUILLARD, PHILIP	930 LACONIA ROAD

<i>Classification</i> ▼	<i>Title</i> ▼	<i>Address</i> ▼
Potential Contamination Source	D & D COUNTRY MARKET & DELI	916 LACONIA ROAD
Potential Contamination Source	RECORD, LAWRENCE	955 LACONIA ROAD
Potential Contamination Source	DAWNMARK LLC	977 LACONIA ROAD
Potential Contamination Source	BELMONT IRVING	944 LACONIA ROAD
Potential Contamination Source	BELMONT FIRE DEPARTMENT	14 GILMANTON ROAD
Potential Contamination Source	FAIRPOINT COMMUNICATIONS	7 GALE STREET
Potential Contamination Source	WALKER AUTOMOTIVE	130 DEPOT STREET
Potential Contamination Source	STURGEON, KEVIN	110 DEPOT STREET
Potential Contamination Source	CHERTOK CEMETERY	SHAKER ROAD
Potential Contamination Source	BELMONT PARKS & REC DEPT	16 SARGENT STREET
Potential Contamination Source	BELMONT MEMORIAL SCHOOL	28 SCHOOL STREET
Potential Contamination Source	BELMONT GARAGE	53 CONCORD STREET
Potential Contamination Source	BUSACK, HELMUT	LACONIA ROAD
Potential Contamination Source	C & S AUTO SALES	995 LACONIA ROAD
Potential Contamination Source	DUGGAN, JOHN	1001 LACONIA ROAD
Potential Contamination Source	WATERS AUTOMOTIVE	3 RONALD ROAD
Potential Contamination Source	GLENNS TRUCK SERVICE	1021 LACONIA ROAD
Potential Contamination Source	NH DOS MARINE PATROL	3 HIGGINS DRIVE
Potential Contamination Source	NH DOS MARINE PATROL	3 HIGGINS DRIVE
Potential Contamination Source	TIERNEY-ROBINSON	5 WAREING ROAD
Potential Contamination Source	FOLEY AND SON INC., FRANK W	39 OLD STATE ROAD
Potential Contamination Source	DUNN, DANIEL	OLD STATE ROAD
Potential Contamination Source	BELKNAP MALL	96 DANIEL WEBSTER HIGHWAY
Potential Contamination Source	BELKNAP MALL	96 DANIEL WEBSTER HIGHWAY
Potential Contamination Source	BELMONT WATER WORKS	DANIEL WEBSTER HIGHWAY
Potential Contamination Source	Northland self storage	73 DANIEL WEBSTER HIGHWAY
Potential Contamination Source	LAKE VIEW GOLF CLUB	89 LADD HILL ROAD
Potential Contamination Source	LAKE VIEW GOLF CLUB	89 LADD HILL ROAD
Potential Contamination Source	TOP OF THE TOWN REST	88 LADD HILL ROAD
Potential Contamination Source	SWALLOW CEMETERY	SWALLOW ROAD
Potential Contamination Source	A&W TRUST	NOYES ROAD
Potential Contamination Source	LACONIA MAGNETICS	12 APPLE ROAD
Potential Contamination Source	RANDLETT CEMETERY	PLUMMER HILL ROAD
Potential Contamination Source	LAKELAND MGMT CO	PROVINCE ROAD
Potential Contamination Source	O'CONNOR, JOHN	590 PROVINCE ROAD
Potential Contamination Source	O'CONNOR, JOHN	590 PROVINCE ROAD

<i>Classification</i> ▼	<i>Title</i> ▼	<i>Address</i> ▼
Potential Contamination Source	MOONEY, MARK	33 PROVINCE ROAD
Potential Contamination Source	OPECHEE CONSTRUCTION CORPORATION	11 CORPORATE DRIVE
Potential Contamination Source	REYNOLDS DENTAL ASSOCIATES PA	24 CORPORATE DRIVE
Potential Contamination Source	REYNOLDS DENTAL ASSOCIATES PA	24 CORPORATE DRIVE
Potential Contamination Source	SUMMIT REHABILITATION	8 CORPORATE DRIVE
Potential Contamination Source	NORTHBROOK MOBILE HOME PARK	BISHOP ROAD
Potential Contamination Source	PRESCOTT CEMETERY	BISHOP ROAD
Potential Contamination Source	CENTER FOR CONTEMPORARY DENTISTRY	58 LACONIA ROAD
Potential Contamination Source	CENTER FOR CONTEMPORARY DENTISTRY	58 LACONIA ROAD
Potential Contamination Source	A & R MOTORS, INC.	11 LACONIA ROAD
Potential Contamination Source	A & R MOTORS, INC.	11 LACONIA ROAD
Potential Contamination Source	FAIRPOINT COMMUNICATIONS	6 OLD PRESCOTT HILL ROAD
Potential Contamination Source	IRVING OIL	9 PLUMMER HILL ROAD
Potential Contamination Source	LADD HILL MOBILE HOME PARK	LADD HILL ROAD
Potential Contamination Source	LAKE VIEW GOLF CLUB	89 LADD HILL ROAD
Potential Contamination Source	SOLAR VILLAGE ASSOC	SILKWOOD AVENUE
Potential Contamination Source	PROVINCE SAND & GRAVEL	33 PROVINCE ROAD
Potential Contamination Source	DEVIVO, PETER	188 HORNE ROAD
Potential Contamination Source	WINNIPESAUKEE TRUCK SVC INC	284 LACONIA ROAD
Potential Contamination Source	OPECHEE PLAZA	140 LACONIA ROAD
Potential Contamination Source	OPECHEE PLAZA	140 LACONIA ROAD
Potential Contamination Source	AL'S USED PARTS	49 HUBBLE ROAD
Potential Contamination Source	AL'S USED PARTS	49 HUBBLE ROAD
Potential Contamination Source	DEROY CEMETERY	LEAVITT ROAD
Potential Contamination Source	YOUNG CEMETERY	LEAVITT ROAD
Potential Contamination Source	FENDLEY/ALEXANDER	171 PROVINCE ROAD
Potential Contamination Source	LAMPREY CEMETERY	PROVINCE ROAD
Potential Contamination Source	LEAVITT CEMETERY	LEAVITT ROAD
Potential Contamination Source	SMITH'S APPLE ORCHARD	184 LEAVITT ROAD
Potential Contamination Source	HADLEY CEMETERY	FEDERAL STREET
Potential Contamination Source	WOLCOTT CEMETERY	HOADLEY ROAD
Potential Contamination Source	FOLSOM CEMETERY	PROVINCE ROAD
Potential Contamination Source	CLARK, LAMONT RESIDENCE	292 DURRELL MOUNTAIN ROAD
Potential Contamination Source	FAIRHURST, JACKIE	182 HOADLEY ROAD

<i>Classification</i>	<i>Title</i>	<i>Address</i>
Potential Contamination Source	SPILLER CEMETERY	PROVINCE ROAD
Potential Contamination Source	PATTEN, CLAUDE	493 PROVINCE ROAD
Potential Contamination Source	PAGE CEMETERY	LAMPREY ROAD
Potential Contamination Source	LAKES REGION MHP COOP	7 TOP LANE
Potential Contamination Source	LAKES REGION MHP COOP	7 TOP LANE
Potential Contamination Source	PIKE IND.	3 EASTGATE PARK ROAD
Potential Contamination Source	FIRST STUDENT INC	32 EASTGATE PARK ROAD
Potential Contamination Source	NOYES FIBER LLC	16 EASTGATE PARK ROAD
Potential Contamination Source	BELMONT BUSINESS PARK	FRUITE STREET
Potential Contamination Source	PARAMOUNT PRESS LACONIA OFFSET INC	7 FRUITE STREET, UNIT 4
Potential Contamination Source	MITCHELL, AE	28 FRED FRIENDS ROAD
Potential Contamination Source	BII FENCE & GUARDRAIL INC	15 DUTILE ROAD
Potential Contamination Source	BARTLETT CEMETERY	HORNE ROAD
Potential Contamination Source	WHITE BIRCH CAMPGROUND	LAPOINTE, TUCCOLO
Potential Contamination Source	WINNIPESAUKEE TOWING	114 HURRICANE ROAD
Potential Contamination Source	WOODMAN CEMETERY	HURRICANE ROAD
Potential Contamination Source	JUDKINS/HUNT CEMETERY	UNION ROAD
Potential Contamination Source	BEAN HILL CEMETERY	BEAN HILL ROAD
Potential Contamination Source	BELMONT PWD	149 HURRICANE ROAD
Potential Contamination Source	BELMONT LANDFILL	HURRICANE ROAD
Potential Contamination Source	HUTCHINSON MOTORS	6 FARRARVILLE ROAD
Potential Contamination Source	SLEEPER TRUST, F ROBERT	595 LACONIA ROAD
Potential Contamination Source	SLEEPER TRUST, F ROBERT/ BELKNAP LANDSCAPING	595 LACONIA ROAD
Potential Contamination Source	FARRAR CEMETERY	PROVINCE ROAD
Potential Contamination Source	DOW CEMETERY	PROVINCE ROAD
Potential Contamination Source	CLARK, RONALD	21 WALKER ROAD
Potential Contamination Source	JENOT, LYMAN	43 ROGERS ROAD
Potential Contamination Source	STEPHENS FRAME & COLLISION	661 PROVINCE ROAD
Potential Contamination Source	STEPHENS FRAME & COLLISION/PETERSONS	661 PROVINCE ROAD
Potential Contamination Source	CLAIRMONT, MAURICE	548 BROWN HILL ROAD
Potential Contamination Source	HEIMLICH, SCOTT	223 FARRARVILLE ROAD
Potential Contamination Source	WEYMOUTH CEMETERY	BROWN HILL ROAD
Potential Contamination Source	PAQUETTE, GREGORY	218 BROWN HILL ROAD
Potential Contamination Source	DIONNE, HENRY	730 LACONIA ROAD
Potential Contamination Source	BELKNAP REPAIR SERVICE	3 SEAVEY ROAD
Potential Contamination Source	LAKES REGION FIBERGLASS	631 LACONIA ROAD
Potential Contamination Source	HARRIS AUTOMOTIVE	346 HURRICANE ROAD

<i>Classification</i> ▼	<i>Title</i> ▼	<i>Address</i> ▼
Potential Contamination Source	DUGGAN CONSTRUCTION	300 HURRICANE ROAD
Potential Contamination Source	BLANEY SALVAGE	256 HURRICANE ROAD
Potential Contamination Source	PIKE IND.	DEPOT STREET
Potential Contamination Source	BELMONT AUTO	288 HURRICANE ROAD
Potential Contamination Source	BLUE SKY ENT	224 HURRICANE ROAD
Potential Contamination Source	DECATO AUTOMOTIVE	237 HURRICANE ROAD
Potential Contamination Source	GILE CEMETERY	JAMESTOWN ROAD
Potential Contamination Source	ADAMS CEMETERY	JAMESTOWN ROAD
Potential Contamination Source	PIKE IND.	WESTON ROAD
Potential Contamination Source	VIRGIN, VICTOR	DEPOT STREET
Potential Contamination Source	TIOGA RIVER WATER CO	SOUTH ROAD
Potential Contamination Source	SUPERIOR FENCE	22 SOUTH ROAD
Potential Contamination Source	DUBOIS TRANSPORT & EXCAVATION	DEPOT STREET
Potential Contamination Source	DUBOIS TRANSPORT & EXCAVATION	DEPOT STREET
Potential Contamination Source	NH DOT DISTRICT 3	427 DEPOT ROAD
Potential Contamination Source	LAKES REG COCA COLA BOTTLING	495 DEPOT STREET
Potential Contamination Source	RYDER TRANSPORTATION SERVICE	495 DEPOT STREET
Potential Contamination Source	BROX INDUSTRIES INC	512 DEPOT STREET
Potential Contamination Source	BESTWAY DISPOSAL	43 INDUSTRIAL DRIVE
Potential Contamination Source	JACKSON CEMETERY	JAMESTOWN ROAD
Potential Contamination Source	TILTON SAND & GRAVEL, PIKE IND.	310 DEPOT STREET
Potential Contamination Source	PIKE IND.	310 DEPOT STREET
Potential Contamination Source	CRAM, LEON	314 DEPOT STREET
Potential Contamination Source	PINE GARDENS MOBILE HOME PARK	DEPOT STREET
Potential Contamination Source	BOOTH, CLAIRE	DEPOT STREET
Potential Contamination Source	PIKE IND.	170 DEPOT STREET
Potential Contamination Source	TILTON SAND & GRAVEL, PIKE IND., WEEKS	170 DEPOT STREET
Potential Contamination Source	WEEKS, EVERETT	170 DEPOT STREET
Potential Contamination Source	HIGHLAND CEMETERY	CHURCH STREET
Potential Contamination Source	BELMONT HIGH SCHOOL	255 SEAVEY ROAD
Potential Contamination Source	BELMONT HIGH SCHOOL	255 SEAVEY ROAD
Potential Contamination Source	FECTEAU, FRED	28 MAIN STREET
Potential Contamination Source	SEMPLE/PERKINS CEMETERY	PERKINS ROAD
Potential Contamination Source	ROBERTS, SUZANNE	BROWN HILL ROAD
Potential Contamination Source	ROBERTS, SUZANNE	87 HACKETT ROAD

<i>Classification</i> ▼	<i>Title</i> ▼	<i>Address</i> ▼
Potential Contamination Source	HACKETT BURIAL GROUND	HACKETT ROAD
Potential Contamination Source	MOULTON CEMETERY	HACKETT ROAD
Potential Contamination Source	ROBERTS, CLIVE	98 BERRY ROAD
Potential Contamination Source	MILPOWER SOURCE INC.	7 FIELD LANE
Potential Contamination Source	DUNN, CALVIN	1213 LACONIA ROAD
Potential Contamination Source	ALL METALS	4 HIGGINS DRIVE
Potential Contamination Source	CONTRACTOR SUPPORT GROUP	40 HIGGINS DRIVE
Potential Contamination Source	PARENT SAND & GRAVEL	SHAKER ROAD
Potential Contamination Source	PARENT SAND & GRAVEL	SHAKER ROAD
Potential Contamination Source	PARENT SAND & GRAVEL	SHAKER ROAD
Potential Contamination Source	DALTON, FRANK	142 SHAKER ROAD
Potential Contamination Source	BELMONT WATER WORKS	SHAKER ROAD
Potential Contamination Source	SOUTH ROAD CEMETERY	SOUTH ROAD
Potential Contamination Source	NUTTER ENTERPRISES, INC	28 STONE ROAD
Potential Contamination Source	NUTTER ENTERPRISES, INC	28 STONE ROAD
Potential Contamination Source	NUTTER ENTERPRISES, INC	41 STONE ROAD
Potential Contamination Source	SCHUMACHER PROPERTIES	19 FIELD LANE
Potential Contamination Source	NUTTER ENTERPRISES, INC	WAREING ROAD
Potential Contamination Source	LAKES REGION CASINO	1265 LACONIA ROAD
Potential Contamination Source	GRANITE STATE CAMPGROUND	806 RTE 106
Potential Contamination Source	Lakeview Care Partners	87 Horne Rd
Potential Contamination Source	Shooters Tavern	190 Daniel Webster Highway
Potential Contamination Source	Pasta Patio	223 Daniel Webster Highway
Potential Contamination Source	Henry Dionne	730 Laconia Road
Potential Contamination Source	DAVID LIBBY	25 LAMPREY ROAD
Potential Contamination Source	GMI PAVING	288 LACONIA ROAD
Potential Contamination Source	FIRST STUDENT	592 LACONIA ROAD
Potential Contamination Source	MARK MOONEY	220 BROWN HILL ROAD
Potential Contamination Source	PIKE	246 DEPOT STREET

APPENDIX E: STAPLEE RESULTS

This section contains a summary of STAPLEE rankings for each of the Recommended Mitigation Actions by the Belmont Hazard Mitigation Committee. The highest possible rank in each of the seven categories is 3.0; the lowest is 1.0. Each score represents a net valuation of the costs and benefits within that particular criterion. The scores for all criteria were totaled. A maximum score is 21. At the December 3, 2019 meeting, committee members discussed each recommended action and the STAPLEE criteria, and arrived at consensus scoring. For each recommended action the committee asked the following questions:

STAPLEE Category	Description
Social	Does the public support the overall implementation and specific mitigation action?
Technical	Is the proposed action technically feasible and help reduce losses in the long term?
Administrative	Does the town have the staff and capabilities necessary to implement the action?
Political	Is there political support to implement and maintain the action?
Legal	Are there proper laws, ordinances, and resolutions in place to implement the action?
Economic	Are there sources of funds that can be used to implement the action?
Environmental	How will the action affect the environment (land, water, endangered species)?

Blue highlighted text indicates new actions recommended for the 2020 Plan; actions not highlighted were deferred from the 2014 Plan. Some deferred actions were amended and, therefore, are highlighted in blue. Yellow highlighted text indicates Preparedness actions rather than purely Mitigation actions. Recommended mitigation actions and their STAPLEE score appear in the table on the following page:

Mitigation Recommendation	STAPLEE Rank	Social	Technical	Administrative	Political	Legal	Economic	Environmental
Incorporate information from the Hazard Mitigation Plan into the next update of the Master Plan.	21	3	3	3	3	3	3	3
Establish additional mapping data in GIS format for the town's public water and sewer lines.	21	3	3	3	3	3	3	3
Develop plans for additional water supply sites	21	3	3	3	3	3	3	3
Update Emergency Operations Plan (EOP) to include a warming and cooling shelter plan and a populations at risk plan	21	3	3	3	3	3	3	3
Schedule debris mitigation prior to storms by cutting back tree hazards	21	3	3	3	3	3	3	3
Work with State Floodplain Coordinator and other partners on FEMA flood mapping projects underway to update the Belknap County Flood Insurance Study (FIS) and Flood Insurance Rate Maps (FIRMs).	21	3	3	3	3	3	3	3
Investigate grant opportunities to harden communications infrastructure.	21	3	3	3	3	3	3	3
Lobby/encourage public utilities to upgrade and improve maintenance of communications infrastructure.	21	3	3	3	3	3	3	3
Maintain Belmont's priority status with its communications service provider to allow immediate access to communications.	21	3	3	3	3	3	3	3
Engage Community Action Program (CAP) in discussion about obtaining a generator for Belmont Elderly Housing	21	3	3	3	3	3	3	3
Ensure/encourage publicly subsidized elderly housing community access to emergency utilities for critical services, including heat and air conditioning	21	3	3	3	3	3	3	3
Develop public outreach to encourage residents to sign up for NH Alerts	21	3	3	3	3	3	3	3
Warm Zone training for emergency responders	21	3	3	3	3	3	3	3
Apply for additional grant funding for emergency management and hazard mitigation	21	3	3	3	3	3	3	3

Mitigation Recommendation	STAPLEE Rank	Social	Technical	Administrative	Political	Legal	Economic	Environmental
Explore cyber security software	21	3	3	3	3	3	3	3
Work with State of New Hampshire to develop cyber security resources	21	3	3	3	3	3	3	3
Upgrade the culvert on Church Street, which has deteriorated due to a change in amount and speed of water flow of the river.	19	2	3	3	3	3	2	3
Enforce fire ordinances to reduce the spread of fire and loss of life and property.	18	2	2	3	2	3	3	3
Carry out a culvert maintenance program, ensuring that debris is cleared. This reduces the number of washouts along roads.	17	3	3	3	2	3	2	3
Develop a public information distribution plan for sharing fact sheets that inform homeowners and business owners about steps to take to reduce their risk of exposure to natural hazards, including lightning strikes, and providing sources of information and community contacts.	17	2	3	3	2	3	3	1
Upgrade Police Department and Fire Department generators	17	3	3	3	2	3	2	1
Upgrade rescue equipment	17	2	3	3	2	3	2	2
Upgrade internet access and provide sufficient backup systems to harden communications infrastructure.	16	3	3	2	3	3	1	1
Adopt stormwater management regulations in the zoning ordinance to allow regulation of land disturbance that does not trigger either subdivision or site plan regulations	15	2	2	2	2	2	2	3
Investigate improved communications service provider options.	15	3	1	3	3	3	1	1

Mitigation Recommendation	STAPLEE Rank	Social	Technical	Administrative	Political	Legal	Economic	Environmental
Relocate Town Hall operations based on feasibility study	15	2	3	3	2	3	1	1
Relocate Police Department operations, or construct new PD facility, based on feasibility study	15	2	3	3	2	3	1	1
Maintain and expand early warning system.	21	3	3	3	3	3	3	3
Ensure that adequate shelters are in place and maintained.	21	3	3	3	3	3	3	3
Ensure that the proper equipment and training is available to handle a wildfire.	21	3	3	3	3	3	3	3
Ensure that the proper equipment and training is available for best management practices for a mass casualty accident.	21	3	3	3	3	3	3	3
Ensure sufficient personnel, equipment and materials are available to meet future demands placed on municipal services resulting from increased growth. It is essential to maintain protection for existing development while planning for new development.	21	3	3	3	3	3	3	3

APPENDIX F: FEMA WEBLIOGRAPHY

DISASTERS AND NATURAL HAZARDS INFORMATION

FEMA-How to deal with specific hazards	http://www.ready.gov/natural-disasters
Natural Hazards Center at the University of Colorado	http://www.colorado.edu/hazards
National Oceanic and Atmospheric Administration (NOAA): Information on various projects and research on climate and weather.	http://www.websites.noaa.gov
National Climatic Data Center active archive of weather data.	http://lwf.ncdc.noaa.gov/oa/ncdc.html
Northeast Snowfall Impact Scale	http://www.erh.noaa.gov/rnk/Newsletter/Fall%202007/NESIS.htm
Weekend Snowstorm Strikes The Northeast Corridor Classified As A Category 3"Major"Storm	http://www.publicaffairs.noaa.gov/releases2006/feb06/noaa06-023.html

FLOOD RELATED HAZARDS

FEMA Coastal Flood Hazard Analysis & Mapping	http://www.fema.gov/national-flood-insurance-program-0/fema-coastal-flood-hazard-analyses-and-mapping-1
Floodsmart	http://www.floodsmart.gov/floodsmart/
National Flood Insurance Program (NFIP)	http://www.fema.gov/nfip
Digital quality Level 3 Flood Maps	http://msc.fema.gov/MSK/statemap.htm
Flood Map Modernization	http://www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/map-modernization
Reducing Damage from Localized Flooding: A Guide for Communities, 2005 FEMA 511	http://www.fema.gov/library/viewRecord.do?id=1448

FIRE RELATED HAZARDS

Firewise	http://www.firewise.org
NOAA Fire Event Satellite Photos	http://www.osei.noaa.gov/Events/Fires
U.S. Forest Service, USDA	http://www.fs.fed.us/land/wfas/welcome.htm
Wildfire Hazards - A National Threat	http://pubs.usgs.gov/fs/2006/3015/2006-3015.pdf

GEOLOGIC RELATED HAZARDS

USGS Topographic Maps	http://topomaps.usgs.gov/
Building Seismic Safety Council	http://www.nibs.org/?page=bssc
Earthquake hazard history by state	http://earthquake.usgs.gov/earthquakes/states/
USGS data on earthquakes	http://earthquake.usgs.gov/monitoring/deformation/data/download/
USGS Earthquake homepage	http://quake.wr.usgs.gov

National Cooperative Geologic Mapping Program (NCGMP)	http://ncgmp.usgs.gov/
Landslide Overview Map of the Conterminous United States	http://landslides.usgs.gov/learning/nationalmap/
Kafka, Alan L. 2008. Why Does the Earth Quake in New England? Boston College, Weston Observatory, Department of Geology and Geophysics	http://www2.bc.edu/~kafka/Why_Quakes/why_quakes.html
Map and Geographic Information Center, 2010, "Connecticut GIS Data", University of Connecticut	http://magic.lib.uconn.edu/connecticut_data.html
2012 Maine earthquake	http://www.huffingtonpost.com/2012/10/17/maine-earthquake-2012-new-england_n_1972555.html

WIND-RELATED HAZARDS

ATC Wind Speed Web Site	http://www.atcouncil.org/windspeed/index.php
U.S. Wind Zone Maps	http://www.fema.gov/safe-rooms/wind-zones-united-states
Tornado Project Online	http://www.tornadoproject.com/
National Hurricane Center	http://www.nhc.noaa.gov
Community Hurricane Preparedness Tutorial	http://meted.ucar.edu/hurricane/chp/hp.htm
National Severe Storms Laboratory, 2009, "Tornado Basics",	http://www.nssl.noaa.gov/primer/tornado/tor_basics.html

GEOGRAPHIC INFORMATION SYSTEMS (GIS) AND MAPPING

The National Spatial Data Infrastructure & Clearinghouse (NSDI) and Federal Geographic Data Committee (FGDC) Source for information on producing and sharing geographic data	http://www.fgdc.gov
The OpenGIS Consortium Industry source for developing standards and specifications for GIS data	http://www.opengis.org
Northeast States Emergency Consortium (NESEC): Provides information on various hazards, funding resources, and other information	http://www.nesec.org
US Dept of the Interior Geospatial Emergency Management System (IGEMS) provides the public with both an overview and more specific information on current natural hazard events. It is supported by the Department of the Interior Office of Emergency Management.	http://igems.doi.gov/
FEMA GeoPlatform: Geospatial data and analytics in support of emergency management	http://fema.maps.arcgis.com/home/index.html

DETERMINING RISK AND VULNERABILITY

HAZUS	http://www.hazus.org
FEMA HAZUS Average Annualized Loss Viewer	http://fema.maps.arcgis.com/home/webmap/viewer.html?webmap=cb8228309e9d405ca6b4db6027df36d9&extent=-139.0898,7.6266,-48.2109,62.6754
Vulnerability Assessment Tutorial: On-line tutorial for local risk and vulnerability assessment	http://www.csc.noaa.gov/products/nchaz/html/mitigate.htm
Case Study: an example of a completed risk and vulnerability assessment	http://www.csc.noaa.gov/products/nchaz/html/case.htm

DATA GATHERING

National Information Sharing Consortium (NISC): brings together data owners, custodians, and users in the fields of homeland security, public safety, and emergency management and response. Members leverage efforts related to the governance, development, and sharing of situational awareness and incident management resources, tools, and best practices	http://nisconsortium.org/
The Hydrologic Engineering Center (HEC), an organization within the Institute for Water Resources, is the designated Center of Expertise for the US Army Corps of Engineers	http://www.hec.usace.army.mil/
National Water & Climate Center	http://www.wcc.nrcs.usda.gov/
WinTR-55 Watershed Hydrology	http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/water/?&cid=stelprdb1042901
USACE Hydrologic Engineering Center (HEC)	http://www.hec.usace.army.mil/software/
Stormwater Manager's Resource Center SMRC	http://www.stormwatercenter.net
USGS Current Water Data for the Nation	http://waterdata.usgs.gov/nwis/rt
USGS Water Data for the Nation	http://waterdata.usgs.gov/nwis/
Topography Maps and Aerial photos	http://www.terraserver.com/view.asp?tid=142
National Register of Historic Places	http://www.nps.gov/nr/about.htm
National Wetlands Inventory	http://www.fws.gov/wetlands/
ICLUS Data for Northeast Region	http://www.epa.gov/ncea/global/iclus/inclus_nca_northeast.htm

SUSTAINABILITY/ADAPTATION/CLIMATE CHANGE

Planning for a Sustainable Future: the Link Between Hazard Mitigation and Livability	http://www.fema.gov/media-library-data/20130726-1454-20490-3505/fema364.pdf
Why the Emergency Management Community Should be Concerned about Climate Change: A discussion of the impact of climate change on selected natural hazards	http://www.cna.org/sites/default/files/research/WEB%2007%2029%2010.1%20Climate%20Change%20and%20the%20Emergency%20Management%20Community.pdf

NOAA RISA for the Northeast (Regional Integrated Sciences and Assessments)	http://ccrun.org/home
Resilient Sustainable Communities: Integrating Hazard Mitigation& Sustainability into Land Use	http://www.earth.columbia.edu/sitefiles/file/education/documents/2013/Resilient-Sustainable-Communities-Report.pdf
U.S. EPA	http://www.epa.gov/climatechange/
NOAA National Ocean Service (NOS)	http://oceanservice.noaa.gov/
The Northeast Climate Research Center (NRCC) folks were heavily involved in climate data in the NCA, below. They have a wealth of historic climate data and weather information, trends, etc.	http://www.nrcc.cornell.edu/
Community and Regional Resilience: Perspectives from hazards, disasters, and emergency management	http://www.resilientus.org/library/FINAL_CUTTER_9-25-08_1223482309.pdf
National Fish, Wildlife and Plants Climate Adaptation Strategy	www.wildlifeadaptationstrategy.gov
ICLEI Local Governments for Sustainability	http://www.icleiusa.org/
Kresge Foundation Survey	http://www.kresge.org/news/survey-finds-communities-northeast-are-trying-plan-for-changes-climate-need-help-0
New England's Sustainable Knowledge Corridor	http://www.sustainableknowledgecorridor.org/site/
The Strategic Foresight Initiative (SFI)	http://www.fema.gov/pdf/about/programs/oppa/findings_051111.pdf
Northeast Climate Choices	http://www.climatechoices.org/ne/resources/ne/nereport.html
Northeast Climate Impacts Assessment	http://www.northeastclimateimpacts.org/
Draft National Climate Assessment Northeast Chapter released early 2013	http://ncadac.globalchange.gov/
Northeast Chapter of the National Climate Assessment of 2009:	http://www.globalchange.gov/images/cir/pdf/northeast.pdf
NEclimateUS.org	http://www.neclimateus.org
ClimateNE	www.climate-northeast.com
Scenarios for Climate Assessment and Adaptation	http://scenarios.globalchange.gov/
Northeast Climate Science Center	http://necsc.umass.edu/
FEMA Climate Change Adaptation and Emergency Management	https://www.llis.dhs.gov/content/climate-change-adaptation-and-emergency-management-0
Climate Central	http://www.climatecentral.org
EPA State and Local Climate and Energy Program	http://www.epa.gov/statelocalclimate/index.html

PLANNING

American Planning Association	http://www.planning.org
PlannersWeb - Provides city and regional planning resources	http://www.plannersweb.com

OTHER FEDERAL RESOURCES

U.S. Army Corps of Engineers: Provides funding for floodplain management planning and technical assistance and other water resources issues.	www.nae.usace.army.mil
Natural Resources Conservation Service: Technical assistance to individual land owners, groups of landowners, communities, and soil and water conservation districts.	www.nrcs.usda.gov
NOAA Coastal Services Center	http://www.csc.noaa.gov/
Rural Economic and Community Development: Technical assistance to rural areas and smaller communities in rural areas on financing public works projects.	www.rurdev.usda.gov
Farm Service Agency: Manages the Wetlands Reserve Program (useful in open space or acquisition projects by purchasing easements on wetlands properties) and farmland set aside programs	www.fsa.usda.gov
National Weather Service: Prepares and issues flood, severe weather and coastal storm warnings. Staff hydrologists can work with communities on flood warning issues; can give technical assistance in preparing flood-warning plans.	www.weather.gov
Economic Development Administration (EDA): Assists communities with technical assistance for economic development planning	www.osec.doc.gov/eda/default.htm
National Park Service: Technical assistance with open space preservation planning; can help facilitate meetings and identify non-structural options for floodplain redevelopment.	www.nps.gov
Fish and Wildlife Services: Can provide technical and financial assistance to restore wetlands and riparian habitats.	www.fws.gov
Department of Housing & Urban Development	www.hud.gov
Small Business Administration: SBA can provide additional low-interest funds (up to 20% above what an eligible applicant would qualify for) to install mitigation measures. They can also loan the cost of bringing a damaged property up to state or local code requirements.	www.sba.gov/disaster
Environmental Protection Agency	www.epa.gov

OTHER RESOURCES

New England States Emergency Consortium (NESEC): NESEC conducts public awareness and education programs on natural disaster and emergency management activities throughout	www.nesec.org
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New England. Resources are available on earthquake preparedness, mitigation, and hurricane safety.	
Association of State Floodplain Managers (ASFPM): ASFPM has developed a series of technical and topical research papers, and a series of Proceedings from their annual conferences.	www.floods.org
National Voluntary Organizations Active in Disaster (VOAD) is a non-profit, nonpartisan membership organization that serves as the forum where organizations share knowledge and resources throughout the disaster cycle—preparation, response, recovery and mitigation.	http://www.nvoad.org

FEMA RESOURCES

Federal Emergency Management Agency (FEMA)	www.fema.gov
National Mitigation Framework	http://www.fema.gov/national-mitigation-framework
Federal Insurance and Mitigation Administration (FIMA)	http://www.fema.gov/fima
Community Rating System (CRS)	http://www.fema.gov/national-flood-insurance-program/national-flood-insurance-program-community-rating-system
FEMA Building Science	http://www.fema.gov/building-science
National Flood Insurance Program (NFIP)	http://www.fema.gov/national-flood-insurance-program
Floodplain Management & Community Assistance Program	http://www.fema.gov/floodplain-management
Increased Cost of Compliance (ICC): ICC coverage provides up to \$30,000 for elevation and design requirements to repeatedly or substantially damaged property.	http://www.fema.gov/national-flood-insurance-program-2/increased-cost-compliance-coverage
National Disaster Recovery Framework	http://www.fema.gov/national-disaster-recovery-framework
Computer Sciences Corporation: contracted by FIMA as the NFIP Statistical Agent, CSC provides information and assistance on flood insurance to lenders, insurance agents and communities	www.csc.com
Integrating the Local Natural Hazard Mitigation Plan into a Community's Comprehensive Plan: A Guidebook for Local Governments	https://www.fema.gov/ar/media-library/assets/documents/89725
Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning	http://www.fema.gov/media-library/assets/documents/4317

Mitigation Best Practices Portfolio <http://www.fema.gov/mitigation-best-practices-portfolio>

FEMA Multi-Hazard Mitigation Planning Website	http://www.fema.gov/multi-hazard-mitigation-planning
FEMA Resources Page	http://www.fema.gov/plan/mitplanning/resources.shtm
Local Mitigation Plan Review Guide	http://www.fema.gov/library/viewRecord.do?id=4859
Local Mitigation Planning Handbook complements and liberally references the Local Mitigation Plan Review Guide above	http://www.fema.gov/library/viewRecord.do?id=7209
HAZUS	http://www.fema.gov/protecting-our-communities/hazus
Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards	http://www.fema.gov/library/viewRecord.do?id=6938
Integrating Hazard Mitigation Into Local Planning: Case Studies and Tools for Community Officials	http://www.fema.gov/library/viewRecord.do?id=7130
IS-318 Mitigation Planning for Local and Tribal Communities Independent Study Course	http://training.fema.gov/EMIWeb/IS/is318.asp

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APPENDIX G: MONITOR, EVALUATE AND UPDATE

Periodic Hazard Mitigation Plan Review Record

Meeting Schedule (dates)	Tasks Accomplished	How well (or not-so-well) is implementation progressing?	Lead Parties	Public Involvement (citizens, neighboring communities)

Project Implementation Checklist

ID	Recommended Action	2020	2021	2022	2023	2024
1	Incorporate information from the Hazard Mitigation Plan into the next update of the Master Plan.					
2	Establish additional mapping data in GIS format for the town's public water and sewer lines.					
3	Develop plans for additional water supply sites					
4	Update Emergency Operations Plan (EOP) to include a warming and cooling shelter plan and a populations at risk plan					
5	Schedule debris mitigation prior to storms by cutting back tree hazards					
6	Work with State Floodplain Coordinator and other partners on FEMA flood mapping projects underway to update the Belknap County Flood Insurance Study (FIS) and Flood Insurance Rate Maps (FIRMs).					
7	Investigate grant opportunities to harden communications infrastructure.					
8	Lobby/encourage public utilities to upgrade and improve maintenance of communications infrastructure.					
9	Maintain Belmont's priority status with its communications service provider to allow immediate access to communications.					
10	Engage Community Action Program (CAP) in discussion about obtaining a generator for Belmont Elderly Housing					
11	Ensure/encourage publicly subsidized elderly housing community access to emergency utilities for critical services, including heat and air conditioning					
12	Develop public outreach to encourage residents to sign up for NH Alerts					
13	Continue Warm Zone training for emergency responders					
14	Apply for additional grant funding for emergency management and hazard mitigation					
15	Explore cyber security software					
16	Work with State of New Hampshire to develop cyber security resources					
17	Upgrade the culvert on Church Street, which has deteriorated due to a change in amount and speed of water flow of the river.					
18	Enforce fire ordinances to reduce the spread of fire and loss of life and property.					

ID	Recommended Action	2020	2021	2022	2023	2024
19	Carry out a culvert maintenance program, ensuring that debris is cleared. This reduces the number of washouts along roads.					
20	Develop a public information distribution plan for sharing fact sheets that inform homeowners and business owners about steps to take to reduce their risk of exposure to natural hazards, including lightning strikes, and providing sources of information and community contacts.					
21	Upgrade Police Department and Fire Department generators					
22	Upgrade rescue equipment					
23	Upgrade internet access and provide sufficient backup systems to harden communications infrastructure.					
24	Investigate improved communications service provider options.					
25	Adopt stormwater management regulations that are separate from both subdivision and site plan regulations that will allow regulation of land disturbance that does not trigger either.					
26	Relocate Town Hall operations based on feasibility study					
27	Relocate or construct a new Police Department facility based on feasibility study					
28	Maintain and expand early warning system.					
29	Ensure that adequate shelters are in place and maintained.					
30	Ensure that the proper equipment and training is available to handle a wildfire.					
31	Ensure that the proper equipment and training is available for best management practices for a mass casualty accident.					
32	Ensure sufficient personnel, equipment and materials are available to meet future demands placed on municipal services resulting from increased growth. It is essential to maintain protection for existing development while planning for new development.					