Town of Gilmanton, New Hampshire

Hazard Mitigation Plan Update, 2025

Prepared by the: **Gilmanton Hazard Mitigation Update Committee**

Flooding NH Rte. 140 July 16, 2023

Summer 2025

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Town of Gilmanton, New Hampshire
Hazard Mitigation Plan Update

Summer 2025

With Assistance from:
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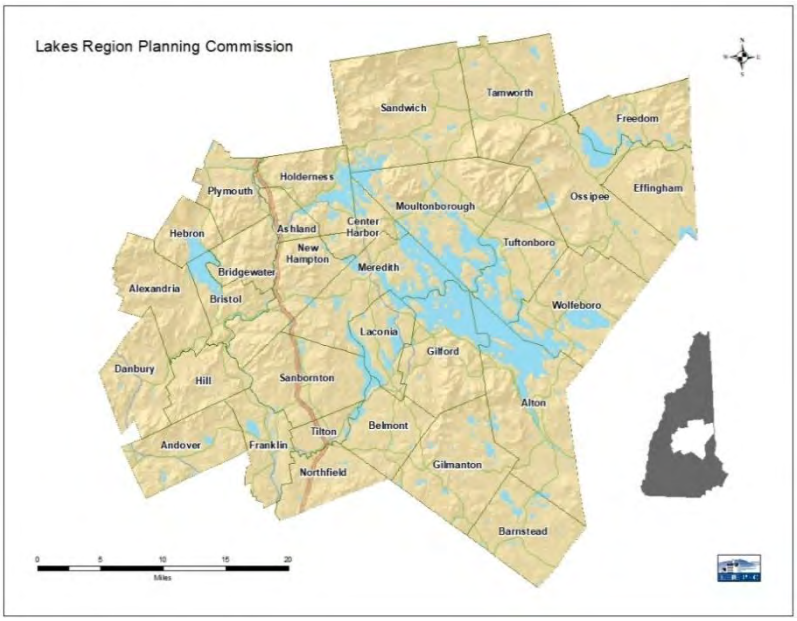
Funding for this plan was provided by the NH Department of Safety, Homeland Security and Emergency Management, and with matching funds provided by the Lakes Region Planning Commission.



Lakes Region Planning Commission

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EXECUTIVE SUMMARY

The *Gilmanton Hazard Mitigation Plan Update* (the Plan) serves to reduce future losses from natural hazard events before they occur. The Plan was developed by the Gilmanton 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 Section VI.

The Committee agreed that some of the natural hazards identified in 2019 continue today; but the Committee's evaluation of past hazards and potential future events, along with their extent and impact resulted in a different assessment than in the past. The matrix below shows the natural hazards considered to be high risks.

Hazard Event	Overall Risk
High Wind Events	High
Inland Flooding	High
Severe Winter Weather	High

There has been one change to the list of the town's Critical Facilities: addition of the Harvest Bible Church in Ironworks. Existing programs related to hazard mitigation include the following:

Existing Plans, Regulations and Practices Supporting Hazard Mitigation	
Hazard Mitigation Plan 2019	Subdivision Regulations (2020)
Code Enforcement	Site Plan Review Regulations (2021)
Zoning Ordinance (2024)	Master Plan (2018)
Floodplain Ordinance (2016)	School Emergency Operation Plan (2024)
Emergency Power Generation	Emergency Response Training and Drills

Some of the 30 Mitigation Actions from the 2019 Plan have either been completed (11) or are considered no longer pertinent (3). The sixteen remaining Mitigation Actions are being carried over and considered in this plan along with several new actions. In its effort to further reduce the vulnerability of the town to future hazards, new general and hazard-specific mitigation actions were developed and prioritized. based on local criteria. A schedule for implementing proposed mitigation actions was developed.

The update to the NH State Hazard Mitigation Plan (HMP) in 2023 led to several changes to this plan, including adjustments to a few of the hazards considered, the impacts of hazards on socially vulnerable populations, and consequently some of the stated hazard mitigation goals.

SECTION I: PLANNING PROCESS

A. BACKGROUND

To be eligible to receive disaster related Federal Emergency Management Agency (FEMA) grant funding to be used for hazard mitigation projects and actions that will ultimately reduce and mitigate future losses from natural hazard events, FEMA has required that municipalities within the State of New Hampshire establish local hazard mitigation plans. In response to this requirement, the NH Department of Safety's Division of Homeland Security and Emergency Management (HSEM) and the nine regional planning commissions in the state entered into agreements to aid municipalities with plan development and updates. This plan development and update process generally followed the steps outlined in FEMA's *Local Mitigation Planning Policy Guide (2025)*.

B. AUTHORITY

This 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

NH HSEM funded this update through FEMA's Pre-Disaster Mitigation Grant Program with local soft match (participants' time) and additional funds from the Lakes Region Planning Commission.

D. PURPOSE

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

Developing a hazard mitigation plan allows for the following:

- Increased education and awareness around threats, hazards, and vulnerabilities.
- Building partnerships for risk reduction which include government, organizations, businesses, and the public.
- Identifying long-term, broadly supported strategies for risk reduction.
- Developing local mitigation efforts that support local mitigation efforts.
- Identifying strategies and activities that focus resources on the greatest risks and vulnerabilities; and,
- Communicating priorities to potential sources of funding.

A FEMA-approved hazard mitigation plan is a requirement for receiving certain types of non-emergency disaster assistance including funding for mitigation projects including:

- Public Assistance
- Fire Management Assistance Grants (FMAG)
- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)
- High Hazard Potential Dam (HHPD)
- Building Resilient Infrastructure & Communities (BRIC).

Why Develop a Mitigation Plan?

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

E. SCOPE OF PLAN

The scope of this Plan includes the identification of natural hazards affecting the town of Gilmanton, assessment of the threats these pose to the town, and the development & prioritization of mitigation actions to be implemented. Supplemental information regarding some human-caused and technological hazards that could impact Gilmanton and a few preparation/response actions, are included in Appendix G.

In the 2023 State Hazard Mitigation Plan (SHMP), three new areas of focus were introduced: inclusive planning for equitable outcomes, the impacts of climate change, and community lifelines. While these topics are not new, this is the first time that the New Hampshire SHMP addressed them in depth, not only relative to each hazard, but also by incorporating them throughout the Plan into over-arching goals and mitigation actions. While the connections were not always explicit or direct, an effort was made to incorporate these focus areas into the Gilmanton HMP where locally appropriate.

The scope of this Plan includes a review of natural hazards affecting the town, as identified by the Hazard Mitigation Planning Committee. The hazards considered under the scope of this plan include the relevant natural hazards that are outlined in the State of New Hampshire's Hazard Mitigation Plan Update 2023. Some hazards identified in the State Plan were deemed not applicable to the Town of Gilmanton (i.e. Avalanche, Landslide).

F. METHODOLOGY

The Lakes Region Planning Commission (LRPC) corresponded with the Gilmanton Emergency Management Director (EMD) to initiate the hazard mitigation update process. The EMD established the Gilmanton Hazard Mitigation Planning Update Committee for the purpose of updating a plan for hazard mitigation. The Committee consisted of representatives from the Police, Fire, and Public Works departments, as well as Emergency Management Director (EMD), and the Board of Selectmen (Town Administrator).

The Committee developed the content of the Plan by following the process set forth in FEMA's Local Mitigation Planning Policy Guide (2025) Technical and historical information used during the development of this Plan Update was compiled from a variety of sources including local input as well as published information; a list of these resources can be found in Appendix I. Updated information on hazards in New Hampshire informed discussion of recommended mitigation actions.

Communication with committee members occurred at meetings and through correspondence. Meetings with the committee were open to the public. The committee reviewed and rated the risk of natural hazards to the town. They reviewed implementation progress and applicability of actions identified in the last plan. Existing challenges were identified. Additional mitigation actions were developed to address challenges/problems. All mitigation actions were evaluated, and an implementation schedule developed.

Neighboring municipalities were notified of Gilmanton's plan update. Some comments were received from the public during the development of the plan update through surveys, and these were incorporated into the risk analysis and development of mitigation actions phases of the process.

It is important to note that this is Gilmanton's Hazard Mitigation Plan (HMP). While all HMPs in the state (and country) must incorporate the elements set forth by FEMA, the plan update, "needs to reflect the unique situation and most effective path…to meet their specific needs"[1]. Gilmanton, a small rural community has done that by reviewing the existing plan and mitigation actions, considering what has and has not changed in the community since the last plan was adopted, identified problems associated with natural hazards, and developed a prioritized list of mitigation actions to address these problems and a plan to implement them.

G. PUBLIC INVOLVEMENT

A variety of Hazard Mitigation Planning stakeholders were invited to join the Hazard Mitigation Planning Committee. Other specific opportunities for public input occurred at each meeting. EMDs in adjacent communities and organizations working with vulnerable and underserved communities were notified of the update process and encouraged to provide input (see emails

[1] FEMA, *Local Hazard Mitigation Guide (2023)*, Section 3.1 Right-Sizing Plan Development and Update.

and press release Appendix C). Organizations that work with socially vulnerable communities were invited to provide input during plan development. Local businesses, neighboring communities, academia, and members of the public were encouraged to attend all meetings through press releases and postings (Appendix C & D).

A survey was made available to members of the public at the Town Hall and by posting a link https://arcg.is/1vLP912 and QR Code on the town website. Two dozen people submitted their concerns and comments which were shared with committee members (see Appendix D) and, where applicable, incorporated into the update. This resulted in refinement of the Risk Rating.

The Gilmanton Hazard Mitigation Committee was comprised of the following individuals.

Committee Representation	**Person**	**Title**
EMD (Emergency Management Director)	Paul Hempel	EMD/Fire Chief
Police	Matthew Currier	Chief
Fire	John Cuningham	Captain
Public Works/Highway/Road Agent	Travis Mitchell	Road Agent
Selectboard/Town Administrator	Heather Carpenter	Town Administrator
Additional participants:		
Lakes Region Planning Commission	Danielle Scadova-Vose	Regional Planner
NH HSEM field representative	Peter Llewellyn	Community Liaison
Regional Public Health Network	Heather Stanley	Public Health Emergency Prep

The committee members listed above participated in several committee meetings, provided departmental information, contributed in their field of expertise, reviewed and commented on committee meeting notes, reviewed drafts of the Plan, and worked together to identify and prioritize mitigation projects. The draft plan was made available for committee and public review from July 22-25, 2025.

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

SECTION II: COMMUNITY PROFILE

A. GEOGRAPHY

The Town of Gilmanton is in Belknap County in central New Hampshire. The town is bordered to the north by Belmont and Gilford, to the east by Alton, to the south by Barnstead and Pittsfield, and to the west by Loudon, Canterbury and Northfield. Gilmanton is 37 miles to Manchester; 77 miles to Portland, ME; 87 miles to Boston, MA; 294 miles to New York, NY; and 243 to Montreal, Canada.

The town of Gilmanton is comprised of 57.1 square miles of land area and 1.9 miles of water area. Gilmanton is part of the Merrimack River Watershed. Gilmanton is home to many lakes; Manning Lake, Lake Eileen, Crystal Lake, Sawyer Lake, Gillan Pond, Shellcamp Pond, and Rollins Pond, it also borders Rocky Pond in Canterbury, Sargent Lake in Belmont, and Sunset Lake in Alton. Rivers within the boundaries of Gilmanton are Suncook River, Nelson Brook, Badger Brook, Academy Brook, Loon Pond Brook, Kelley Brook, Ayers Branch, Varney Brook, Nighthawk Hollow Brook, and a host of others.

Gilmanton is a mixture of forests, farms and small villages. Steep slopes greater than 25% make up 7% of the land area and slopes greater than 15% account for 18% of total land area in Gilmanton. The highest points are in the northern part of the town and shared with Gilford and Alton by the Belknap Mountain State Forest, these peaks include Mount Mack 1,945 feet and Mount Anna at 1,670. There are also 7 town forests Gilmanton manages, Nelson Brook Town Forest, Thompson Town Forest, Elizabeth Smithers Town Forest, Ayers Brook I & II Town Forest, Ayers Brook III Town Forest, Ayers Brook IV Town Forest and Pine Hill Town Forest. Additionally, there are three more forests managed by the Society for the Protection of New Hampshire Forests, those being Frank L. Allen Forest, Foss Family Forest, and the Etta & Leon Tilton Memorial Forest.

Spring floods are common and are caused by rainfall in combination of snowmelt. Floods in late summer and fall are usually the result of above normal precipitation. Winter floods result from occasional thaws, particularly in years of heavy snow cover.

There are several aquifers in town, with the two largest being south of Gilmanton Ironworks and connects to the Upper Suncook Lake in Barnstead, and the second being around Crystal Lake.

B. WEATHER CONDITIONS

Like many New England towns, the temperature and precipitation in Gilmanton varies greatly. During the month of January, temperatures can range from a high of 56 degrees Fahrenheit to a low of -14 degrees Fahrenheit. During the month of July, temperatures can range from a high of 80 degrees Fahrenheit to a low of 53 degrees Fahrenheit. Annual precipitation totals average

about 45 inches, where the distribution is slightly lower during the winter months when compared to summer months. Gilmanton averages about 67 inches of snow per year.

C. PUBLIC SERVICES AND INFRASTRUCTURE

A three-member Board of Selectmen governs the town of Gilmanton with the assistance of a Town Administrator.

The town's Fire Chief also serves as the Emergency Management Director. Both the Fire Department and Police Department are located at the Public Safety Building at 297 NH route 140 and participate in statewide mutual aid programs. The Fire Department is considered a combination department that has a full-time Fire Chief and five other full-time staff firefighters providing paramedic and advanced emergency medical skills, along with a roster of twenty call members with varied certification levels. The Town has an additional fire station located at 1824 NH RT 140 in Gilmanton Iron Works Village that serves as the main station. The Police Department is staffed with a full-time Police Chief, full-time executive assistant, full-time Sergeant, and four full-time officers. The Highway Agent, who is also the head of the Highway Department, directs three department staff in maintaining more than 70 miles of town roads. The town has one primary emergency shelter at the Gilmanton Elementary School and several secondary emergency shelters if needed.

The Concord Hospital – Laconia is 9 miles to the north in Laconia; Concord Hospital is 23 miles to the southwest in Concord; and Huggins Hospital 25 miles to the northeast in Wolfeboro. Other hospitals are in Dover, Plymouth and Hanover.

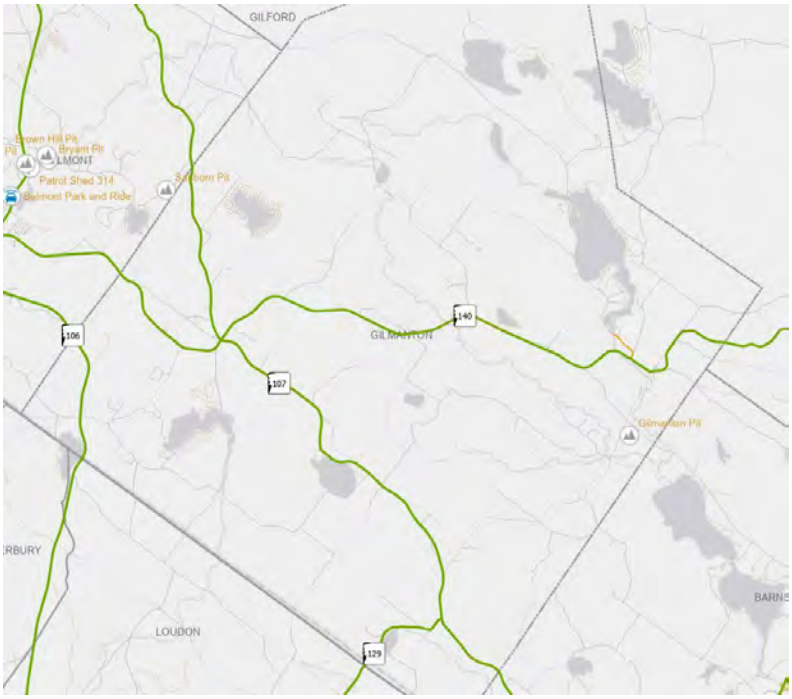
Educational resources in town consists of Gilmanton Elementary School which provides K-8 programing. Gilmanton does not have a Highschool, therefore, students attend Gilford High School beginning in 9th grade. The nearest community college is the Lakes Region Community College in Laconia followed by New Hampshire Technical Institute in Concord and the nearest 4-year college is Plymouth State University in Plymouth.

Power is provided to Gilmanton residents and businesses by two utilities: NH Electric Cooperative serves most of the homes and businesses throughout the town (1,855 properties), the remainder (499 properties) are served by Eversource.

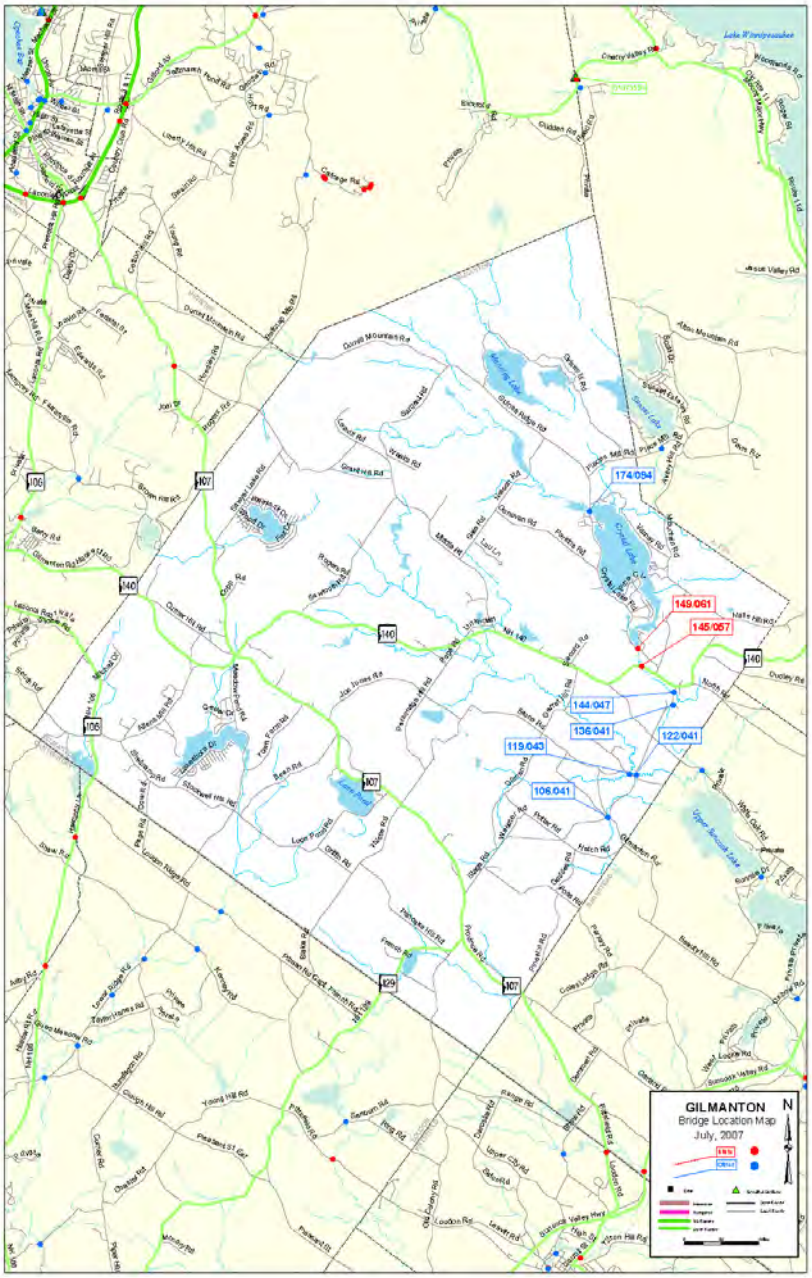
In Gilmanton drinking water is provided through private wells and water suppliers. There are two wellhead protection areas in town: Crystal Springs condominium & the Gilmanton Elementary school. Additionally, sewage is handled through privately owned and maintained septic systems.

Gilmanton has two major routes that transect the town. NH Route 140, which runs east-west through the center of Gilmanton, from Belmont in the west and Alton to the east where it goes

through Gilmanton Iron Works. Secondly there is NH Route 107 that runs north-south through the western part of the town from Laconia and Belmont in the north and through Barnstead and Pittsfield to the south. There are two smaller routes that fall within the town boundaries. NH route 106 passes through on the westernmost point of town through Allen Mills where it runs north-south from Belmont in the north and Loudon to the south. The second is NH 129 that runs east-west starting in Loudon and terminating at the junction of NH Route 107 at the southern tip of town. There is a portion of Crystal Lake Road that is a non-numbered state road in town that extends from NH 140, north to Crystal Lake at the mouth of the Suncook River.



Gilmanton has eight Bridges, with two owned and maintained by the State (red labels below), the remaining six are owned and maintained by the town (blue labels below). None of the bridges located in Gilmanton are currently on the state's red listed bridge program.



D. DEMOGRAPHICS AND POPULATION CHARACTERISTICS

Like many Lakes Region communities, the population of Gilmanton grew rapidly from 1980-2010, from 1,941 to 3,777 residents. Growth since then has slowed a bit and with the effects of Covid-19, adjustments have been made to future predictions. The New Hampshire Office of Planning and Development (NH OPD) has released population projections that indicate negative growth in year 2050.

Year-Round Population, 1980-2020 Census and Population Projections* 2030, 2040

Census	Population	% Change from Prior Census
1960	736	
1970	1,010	37.22%
1980	1,941	92.20%
1990	2,609	34.41%
2000	3,060	17.30%
2010	3,777	23.43%
2020	3,945	4.45%
Date	**Projected Population**	**% Change from Prior Decade**
2030*	4,250	7.73%
2040*	4,357	2.52%
2050*	4,341	-0.37%

*Source: US Census & *NH OPD*

Some characteristics of a community's population can put them at greater risk of being impacted by hazards. Utilizing Census data the NH Department of Health and Human Services (Environmental Public Health Tracking) developed a tool called the Social Vulnerability Index. This tool references sixteen determinants of health associated with health and emergency response outcomes. The most recent data available though this index (2015-2019) indicate very little Social Vulnerability for Gilmanton.

E. LAND USE AND DEVELOPMENT TRENDS

The town consists of two villages, Gilmanton Corners and Gilmanton Iron Works. There are 2,152 housing units in Gilmanton, according to *Current Estimates and Trends in New Hampshire's Housing Supply 2024*, published by the NH Department of Business and Economic Affairs. Ninety-four percent of them are single family homes.

Gilmanton has a slightly smaller percentage of seasonal homes (24%), compared with the Lakes Region average of 32%, per the 2020 US Census. The US Census indicates that while there has been slow growth in the number of housing units in Gilmanton, some of the seasonal (vacant) housing are being converted to year-round (occupied).

Housing Units - Gilmanton, NH 2016-2023

Year	Housing Units Permitted	Total Housing Units
2016	10	2,133
2017	17	2,150
2018	14	2,164
2019	4	2,168
2020	12	2,180
2021	20	2,200
2022	27	2,227
2023	7	2,234

Source: NH OPD

Development Trends

Existing land use has a strong influence on future development patterns. It is important to understand how land and other resources are currently used before recommendations can be developed regarding future land uses. Several factors have influenced Gilmanton's current land use patterns, including natural resource constraints, the transportation network, economic development, and housing. Another significant factor is the influence of the Gilmanton Zoning Ordinance, which has been in place without significant change since the adoption of zoning in 1970.

Land Use Regulation Changes

2019

- Amended Accessory Dwelling Units for Consistency with State Statutes. (Passed)

2020

- Amend Article VI.D:2, regulating the permitting period of recreational vehicles, from 120 days annually to commencing from May 15th through November 1st of each year.
- Amend Article XVI by adding a definition of "Camp for Children" as a supervised program for children or teenagers conducted for the purpose of educational, athletic, or cultural development for overnight campers. Housing shall consist of tents, cabins or the like.
- Amend Article XVI by replacing the definition of "Excavation"(the digging of any type) with "Earth Excavation" to mean the commercial taking of sand, gravel, rock, soil or construction aggregate produced by quarrying, crushing or any other mining activity.

2021

- Allow 55+ Housing Developments by CUP 1-4 units or Special exception 5+ units in certain zones.
- Allow solar roof to be mounted by right in all zones and ground mounted and pole mounted by CUP in all zones.
- Allow Outdoor Event Venue by CUP in certain zones, Special Exception in Conservation Zone and not permitted in Res. Lake Zone.

2023

- Amend Article XVI. Definitions to remove the definition of "warehouse"; to create the definition of "Commercial Storage Facility" to be a building or series of buildings which are leased or rented; to create the definition of "Warehouse or Wholesale Marketing" to be storage for the sole purpose of distribution; and to amend the definition of Storage Building- Noncommercial to remove the requirement that it be used by the owner of the lot.
- Amend Article IV, Table1. Table of Uses to add "Commercial Storage Facility" to be by special exception in the Village Zone, by conditional use permit in the Rural & Residential Lake Zones, permitted in the Business & Light Business Zones, not permitted in the Conservation Zone; to add "Storage Building Non-commercial" to be permitted in the Village, Rural, Conservation, Light Business & Business Zones and by conditional use permit in the Residential Lake Zone; and to amend the use of Warehouse Existing Building and New Construction to be allowed by conditional use permit in the Rural & Light Business Zones where currently is not permitted or permitted by special exception.

Capital Projects

2019

- Construction/Replacement of Stage Rd. bridges. Two bridges: one over Nighthawk Hollow Brook and over Unnamed Brook (Beauty Hill Road). (Completed)

2020

- Identified the need to repair Loon Pond Damn and to see if the Town will vote to raise and appropriate the sum of Seven Thousand, Seven Hundred and Fifty Dollars ($7,750)

Building Permits

2021

- Total of 484 Building permits: including adding 26 new single-family homes, 31 barns / garages, 20 decks & porches, 20 renovations and issuing 16 certificates of occupancy.

2022

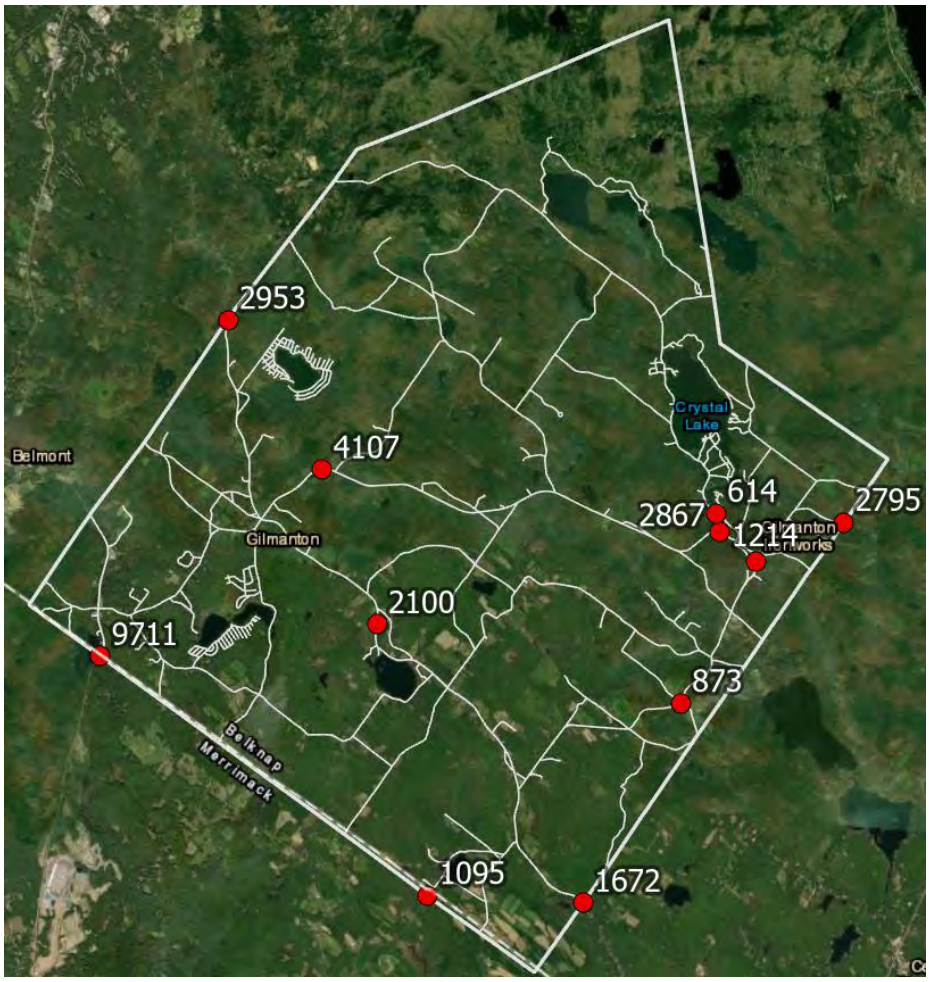
- Total of 403 Building permits which consisted of 21 assorted, 19 new single-family homes, 19 barns & garages, 14 decks & porches and issued 19 certificates of occupancy.

2023

- Total of 530 Building permits; this was an increase of 131 permits from the year prior. Permits issued this year (in part) include 12 new single-family homes permits (a decrease of 7 homes in comparison to 2022), 17 barns & garages, 14 decks & porches, 14 renovations, 163 gas related permits, 175 electrical and plumbing permits as well as issuing 26 Certificates of Occupancy (an increase of 8 CO'S compared to 2022)

Traffic Volume

A standard measure of traffic volume is Average Annual Daily Traffic (AADT) counts, measured in vehicles per day.[2] As this is a projected average over the entire year, there are certainly many summer days when the volume of traffic on any one of these roads exceeds these figures.



Traffic Counts in Gilmanton ('Latest' is the AADT – average number of vehicles each day)

[2] The complete set of current and historic Gilmanton Traffic Count volumes can be found at https://nhdot.public.ms2soft.com/tcds/tsearch.asp?loc=Nhdot&mod=TCDS using the NH DOT TDMS data mapping tool.

There are 11 active traffic count locations throughout Gilmanton where traffic volume is measured on a regular basis. Unlike other towns in the Lakes Region where they have only begun to experience current traffic volumes reach pre Covid-19 volumes (2020/2021), Gilmanton experienced little decline, and/or their numbers have now increased well beyond their pre Covid-19 volumes. The following locations have experienced significant growth over their pre Covid-19 volumes: NH Route 140 over Suncook River, NH 140 at Alton Town Line, NH 107 at Belmont Town Line, NH 106 at Loudon Town Line.

Loc ID	Community	On	Latitude	Longitude	Latest	Latest Date
62171052	GILMANTON	NH Route 140	43.4235832	-71.276159	2795	1/1/2024
62171055	GILMANTON	Province Rd	43.4581538	-71.421103	2953	1/1/2024
62271051	GILMANTON	NH Route 106	43.4006863	-71.451132	9711	1/1/2024
82171051	GILMANTON	Province Rd	43.4061355	-71.386058	2100	1/1/2024
82171053	GILMANTON	Pine Hill Rd	43.3584954	-71.337512	1672	1/1/2024
82171054	GILMANTON	NH Route 129	43.3597641	-71.374104	1095	1/1/2024
82171056	GILMANTON	NH Route 140	43.4326641	-71.398946	4107	1/1/2024
82171059	GILMANTON	Stage Rd	43.3926627	-71.314439	873	1/1/2024
82171060	GILMANTON	Elm St	43.4168403	-71.296747	1214	1/1/2024
82171061	GILMANTON	NH Route 140	43.4218948	-71.305428	2867	1/1/2024
82171062	GILMANTON	Crystal Lake Rd	43.4251179	-71.306188	614	1/1/2024

Future Development

In the 2018 Gilmanton Master Plan the community vision is stated as follows:

Growth and Development

- Growth of non-residential development should be directed to NH Route 106.
- Low Impact Development should be encouraged.
- Tourist-related businesses and restaurants are very important to the community.
- The historic character of the Village plays a strong role in the Town's Identity.
- Appropriate land use regulations can guide new development at a rate and in locations that will maintain and "look and feel of our Town".
- Agriculture is a vital part of the local economy and preserving our farming community should be supported.

The Natural Environment

- Respect and maintain important environmental features in the community.

Population & Housing

- Well-planned residential development will not negatively impact areas of sensitive open space, wildlife corridors, working forests and farms, aquifers, rivers, wetlands, steep slopes and viewsheds.

- The reuse and adaptation for older housing should be encouraged.

Traffic & Transportation

- Improvements to dangerous intersections should be addressed through a thoughtful planning process.
- While maintaining public safety, continue to support road design standards that maintain and enhance the rural character of the community.

Water Resources

- The protection of our aquifers is critical to meeting the current and future needs of water.

Historic Resources

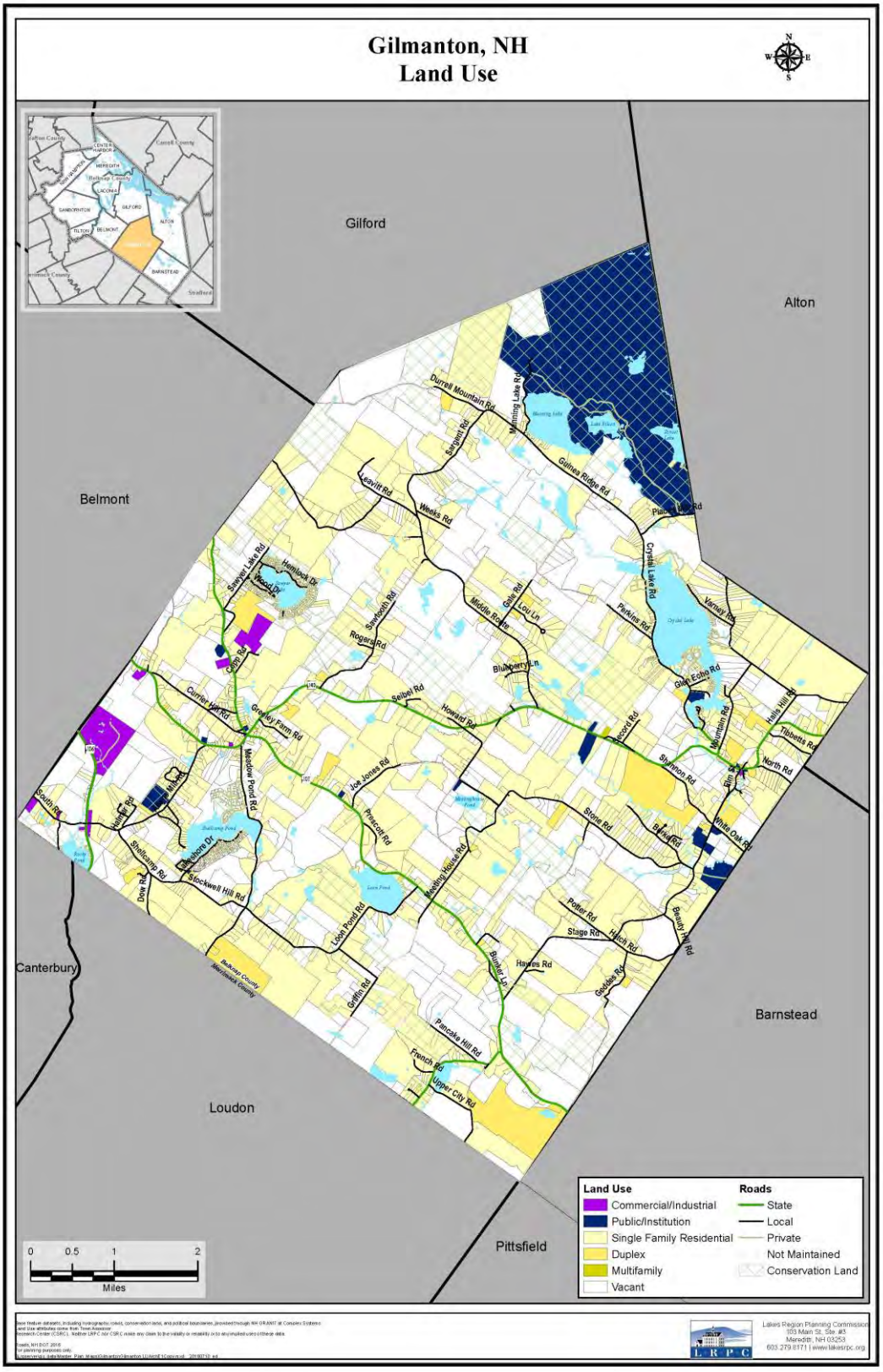
- Historic resources are important to Gilmanton because they provide a tangible link to the past, thereby creating a sense of continuity of time and place.

Community Facilities

- The maintenance of public facilities is a sound investment and in the long run, reduces future tax ramifications.
- The availability of recreational assets for all age groups should be maintained and when appropriate, expanded to meet demand.
- School enrollment levels and projections should continue to be monitored to anticipate potential capital facility needs.

Future Development and Natural Hazards

Growth and development continue to occur in Gilmanton, but at a slower rate than the rest of the Lakes Region. Much of the development is related to the rural nature of the town. Several road and drainage upgrade projects have been completed since the last plan. Overall, the EMD feels that the town is better protected from natural hazard events than it was at the time of the last plan update.


Gilmanton, NH
Land Use
Gilford
Alton
Belmont
Canterbury
Loudon
Barnstead
Pittsfield
Land Use
Commercial/Industrial
Public/Institution
Single Family Residential
Duplex
Multifamily
Vacant
Roads
State
Local
Private
Not Maintained
Conservation Land
0 0.5 1 2
Miles
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603.279.8171 | www.lakesrpc.org

SECTION III: RISK ASSESSMENT

A. INVENTORY OF ASSETS

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

CATEGORY 1 (Primary Response Facilities)
- Fire
- Emergency Medical Services (EMS)
- Police
- Shelter
- Town Hall
- Emergency Operations Center (EOC)
- Public Works

CATEGORY 2 (Secondary Response Facilities)
- Public Utilities
- Transportation

CATEGORY 3 (Populations & Places to Protect)
- Camps
- High Concentration Populations
- Recreation areas
- Historic Resources

CATEGORY 4 (Major Evacuation Routes)
- Town roads
- State Routes

Gilmanton Critical Facilities - 2025

Facility Type	Name	Location	Owner	Notes
Category 1 - Primary Response Facilities				
EOC (Primary), Fire & Police Stations, Communications	Public Safety Building	297 NH Rt. 140	Municipal	Y
EOC (Secondary), Shelter, Secondary, Fire Station	Ironworks Fire Station	1824 NH Rt. 140	Municipal	Y
Shelter (Primary) EOC (Secondary)	Gilmanton School	1386 NH Rt. 140	SAU 79	Y, K, °
Town Hall, Shelter (Secondary), Historic	Academy Building (Municipal Offices)	503 Province Rd. (NH Rt. 107)	Municipal	Y, K
Public Works, Emergency Fuel	Highway Department	770 Stage Road	Municipal	Y (portable)
Shelter (Secondary), Historic	Ironworks Town Hall	1800 NH Rt. 140	Municipal	N, K
Shelter (Secondary)	Hidden Valley Camp	159 Manning Lake Road	Private	Y, K
Shelter (Secondary)	Center Congregational Community Church - Corners	497 Provence Road	Private	N, K
Shelter (Secondary)	Center Congregational Community Church - Iron Works	1817 NH Route 140	Private	N, K
Shelter (Secondary)	Gilmanton Year Round Public Library	1385 NH Rt. 140	Private	N, K
Category 2 - Secondary Response Services/Facilities				
Facility Type	**Name**	**Location**	**Owner**	**Notes**
Public Utilities	IW: NH Elec. Coop & TDS, Corners: NH Elec. Coop., EverSource	11 Elm Street	Private	
Transportation	First Student Bus Company	33 East Gate Park Rd, Belmont	Private	
Supplies	Iron Works Market	1818 NH Route 140	Private	Y, K
Category 3 - Populations and Places to Protect				
Facility Type	**Name**	**Location**	**Owner**	**Notes**
High Population Area	Four Corners Village Area	NH Routes 140 & 107	Private	
High Population Area	Ironworks Village Area	NH Route 140 & Elm St.	Private	
High Population Area	Sawyer Lake	Sawyer Lake Road	Private	
High Population Area	Shellcamp Pond	Lakeshore Drive, Meadow Pond Road, & Ridgewood Drive	Private	
High Population Area	Crystal Lake Park	Crystal Lake Road	Private	
High Population Area	Harvest Bible Church	729 Stage Road	Private	
High Population Area	Rocky Pond	NH Route 106 & South Road	Private	
High Population/Recreation Area	Hidden Valley & Camp Bell Boy Scout Camps	159 Manning Lake Road	Private	K
Historic	Corner Library	509 Provence Rd	Municipal	N
Major Evacuation Routes				
Facility Type	**Name**	**Location**	**Owner**	**Notes**
Evacuation Route	NH Rt 140		State	

Major Evacuation Routes				
Facility Type	**Name**	**Location**	**Owner**	**Notes**
Evacuation Route	NH Rt 106		State	
Evacuation Route	NH Rt 107		State	
Evacuation Route	NH Rt 129		State	
Evacuation Route	Middle Route		Municipal	
Evacuation Route	Stage Road		Municipal	
Evacuation Route	Allens Mills Road		Municipal	

KEY: Y - has generator, N - no generator, K - Has kitchen, ° - Has nursing staff

B. IDENTIFYING NATURAL HAZARDS

The town of Gilmanton is prone to a variety of natural hazards. The following hazards were identified as posing a risk to Gilmanton in the 2019 Hazard Mitigation Plan.

Risk Rating (2019) - Natural Hazards

High Risk	Medium Risk	Low Risk
Severe Winter Weather	Inland Flooding	Infectious Disease
	Dam Failure	Wildfire
	High Wind Events	Earthquake
	Drought	Extreme Temperatures
		Lightning
		Tropical/Post-Tropical Cyclone

While updating the Plan, the committee considered the hazards identified in the latest S*tate of New Hampshire Multi-Hazard Mitigation Plan (2023)*, 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. Since the last local plan, the State Plan now utilizes a somewhat different hazard nomenclature, grouping some hazard types together, adding several hazards, and deleting some. All winter Weather events have been grouped under Severe Winter Weather. Extreme Temperature now encompasses both heat and cold. Hurricane is now Tropical & Post-Tropical Cyclone. Solar Storms & Space Weather is a newly specified natural hazard.

Gilmanton HMP 2025	Risk
Severe Winter Weather	14.00
High Wind Events (Torn./Downb.)	14.00
Flooding or Erosion	12.00
Dam Failure	8.00
Infectious Diseases	8.00
Drought	6.67
Wildfire	4.00
Extreme Temperatures	4.00
Thunderstorm/ Lightning	4.00
Tropical & Post-Tropical Cyclones	4.00
Earthquake > 4.0	2.00
Landslides	1.00
Avalanche	1.00
Solar Storms & Space Weather	1.00

Following a review of the natural hazards identified in the 2023 State Plan and in Gilmanton's 2019 Plan, as well as historical information from internet sources about past hazard events in and near Gilmanton since 2019, the following natural hazards were identified as posing the greatest risk to the town. Higher risk score indicates higher risk (See end of Section III for more information on risk ratings).

Due to topography and geography, coastal flooding, avalanche, and landslides were not considered pertinent by the committee. While there are some steep areas in town, the committee indicated that they are not severe enough to lead to avalanche or landslide nor is there development in that area. Dams are addressed under inland flooding. While solar storms and space weather were acknowledged as potentially impacting communications equipment, it was seen as a hazard

which would impact the entire state and that remaining abreast of notices from NH HSEM regarding this hazard would be the wisest course of action.

The natural hazards with the highest relative risk ratings have not changed. Changes since the last update include raising high winds and flooding from a medium risk to a high risk; and raising infectious diseases, wildfire, extreme temperatures, lightning, and tropical/post-tropical cyclones from a low risk to a medium risk.

Human-caused and Technological hazards are acknowledged in the State Hazard Mitigation Plan. They are not, however, required by FEMA to be addressed in local Hazard Mitigation Plans. The potential for long-term utility outage, hazardous materials, transportation accident, aging infrastructure, terrorism/violence, and conflagration events all have the potential to occur in Gilmanton. Any of these hazards that the committee felt applicable are addressed in Appendix G.

C. PROFILING NATURAL HAZARD EVENTS

This section of the plan **defines** each of the natural hazards that might impact Gilmanton. It also describes the **extent** of the hazard, the recent **history** of these events, the likely **location** of each hazard, as well as the **probability** of an occurrence in Gilmanton. These are listed alphabetically.

The **extent** is a description of "how bad the hazard could get" considering three factors: magnitude, onset, and duration.

- *Magnitude* is the size of the hazard, such as depth of floodwaters or wind speed.
- *Onset* is how quickly the hazard approaches. Depending on geography as well as the nature of the 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 can be around for days.

Within the Risk Assessment completed for this plan, **extent** was measured on a scale ranging from Weak through Moderate, Severe, and Extreme based on magnitude, onset, and duration.

Probability is a description of how likely it is that an event will occur in town within the next 10 years. Potential hazards were rated on a four-point descriptive scale including unlikely, occasional, likely, and highly likely. These were based mainly on past occurrences in the town, region, and state.

If a hazard event has occurred in the past it is listed under **history**, with a focus on those occurring since the last plan. If some parts of the town are more likely to be impacted by a particular hazard, either based on past events or local knowledge of geography, that is described under **location**.

Impact

The **impact** of a hazard is the potential degree of damage that could occur. To rate the impact of a hazard, the damages and consequences that might result from an event were considered in three separate areas Human, Property, and Business & Services. This incorporates the likelihood of injury or death, the assessed value of each critical facility, and the vulnerability of these facilities. It also anticipated disruption of services to residents and visitors. Four levels of impact were used, as defined here:

- Low: Limited structural damage, the town's ability to respond is not compromised, and 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 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
- 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 would likely be interrupted for days or weeks.

The assessed value of the critical facilities identified in Section A totals more than $21M. This does not, however, include the contents of the building. Also not reflected in this assessment is the value of built infrastructure such as streets, bridges, curbs, drainage, and utility transmission lines. These values can also be used to determine potential loss estimates in the event of a natural hazard event that damages a part of or an entire facility.

Of course, critical facilities are not the only resources at risk during a hazard event. There are numerous structures in town, both residential and commercial. The total valuation of the structures in Gilmanton is over $1.7 billion dollars. If even a small percentage of those structures are destroyed or damaged during a hazard event, it could be quite costly to repair or replace.

Gilmanton Structure Assessment

	Value - Structures 2024	1%	2%	5%
Residential	$635,705,000	$6,357,050	$12,714,100	$31,785,250
Manufactured Housing	$2,185,200	$21,852	$43,704	$109,260
Comm./Industrial	$10,525,700	$105,257	$210,514	$526,285
Exempt	$23,123,900	$231,239	$462,478	$1,156,195
Public Utilities	$1,061,378,601	$10,613,786	$21,227,572	$53,068,930
Total	**$1,732,918,401**	**$17,329,184**	**$34,658,368**	**$86,645,920**

Source: MS-1 form in Gilmanton Annual Report 2024

Aging infrastructure, local implementation of land use and zoning laws, and various social vulnerabilities may increase the risk to natural hazards. Local jurisdictions are provided with the ability to address zoning through RSAs to adopt ordinances that can reduce risk to infrastructure and vulnerable individuals within their communities. By taking advantage of federal funding available through NH HSEM, NH DOT, and NH DHHS, Gilmanton can address the areas of greatest risk in town.

Social Vulnerability refers to the resilience of communities (the ability to survive and thrive) when confronted by external stresses on human health, stresses such as natural or human-caused disasters, or disease outbreaks. Socially Vulnerable Populations can include those who have special needs, such as, but not limited to, people without vehicles, people with disabilities, older adults, and people with limited English proficiency.[3]

The aspects considered in this plan focus on those socially vulnerable groups that comprise at least 10% of the residents or households according to the State Hazard Mitigation Plan. In Gilmanton this includes Individuals Aged 65 or Older (16%) and individuals Aged 17 and Younger (18.2%).

[3] NH State Hazard Mitigation Plan (2023), p. 70.

NATURAL HAZARDS

Below is a list of declared disasters or incidents listed on the HSEM Resource Center page for which public assistance was made available.

FEMA/NH HSEM Declared Disasters

DR #	Declaration Date	Incident Description	Event date, name	Declaration Type	Total Funds
EM 3445	*3/13/2020*	*Public Health Outbreak*	COVID-19 (1/20/2020-5/11/2023)	*Emergency Declaration*	*N/A*
DR 4516	*4/3/2020*	*Public Health Outbreak*	COVID-19 (1/20/2020-5/11/2023)	*Major Disaster Declaration*	*$126,873,601*
4622	*9/30/2021*	*Severe Storms and Flooding*	*July 17-19 Flooding*	*Major Disaster Declaration*	*TBD*
4624	*10/4/2021*	*Severe Storms and Flooding*	*July 29-30 Flooding*	*Major Disaster Declaration*	*TBD*
DR 4693	*3/15/2023*	*Severe Storms and Flooding*	*Dec. 21-25, 2022*	*Major Disaster Declaration*	*TBD*
4740	*9/14/2023*	*Severe Storms and Flooding*	*July 9-17, 2023 Flooding*	*Major Disaster Declaration*	*TBD*
4761	*2/27/2024*	*Severe Storms and Flooding*	*Dec. 17-21, 2023*	*Major Disaster Declaration*	*TBD*
4771	*4/19/2024*	*Severe Storms and Flooding*	*Jan. 9-14, 2024*	*Major Disaster Declaration*	*TBD*

The information above was utilized as a guide for further discussion of hazards by the Committee with an emphasis on those most likely to impact Gilmanton. The following section describes the hazard, its **extent**, **probability** of occurrence, and **history**, likely **location**, its likely **impact** in Gilmanton. Hazard names are highlighted based on local risk (Orange - high, yellow – medium, blue – low).

AVALANCHE

An avalanche is a slope failure consisting of a mass of rapidly moving, fluidized snow that slides down a mountainside. The flow can be composed of snow, ice, water, soil, rocks, and trees. An avalanche is a large mass of snow and ice, falling, sliding, or flowing under the force of gravity. An avalanche can be comparable to a landslide, only with snow instead of earth.

Natural and human-caused snow avalanches most often result from structural weaknesses of mountainside and unstable snow and ice formations. Factors leading to these conditions include recent heavy snow, temperature, wind direction, snowpack conditions, slope angle, and slope orientation. Heavy snowfall followed by high winds often create areas of unstable snow

accumulations that can be set in motion by human activities, such as hiking, ice climbing, skiing, and snowboarding.

There are three categories of avalanches:

- Soft Slab – consists of soft, low-density snow
- Hard Slab – consists of dense, hard-packed snow
- Loose Snow (also called sluffs or point releases) – release from a single point, typically on a very steep slope

Extent: Weak
The North American Public Avalanche Danger Scale (NAPADS) from the National Avalanche Center (www.avalanche.org) is a system that rates avalanche danger and provides general travel advice based on the likelihood, size, and distribution of expected avalanches. It consists of five levels, from least to highest amount of danger: 1 – Low, 2 – Moderate, 3 – Considerable, 4 – High, 5 – Extreme. Danger ratings are typically provided for three distinct elevation bands. Although the danger ratings are assigned numerical levels, the danger increases exponentially between levels. In other words, the hazard rises more dramatically as it ascends toward higher levels on the scale.

History: Records (NOAA Storm Events database) indicate no avalanches have occurred in Belknap County. There was no local knowledge of an avalanche occurring in Gilmanton.

Location: The mountainous regions of Carroll, Coos, and Grafton counties are at risk for avalanches, with the highest risk of avalanches occurring in the Presidential Range, particularly on Mount Washington. The committee determined that there are no locations in Gilmanton where avalanches would occur.

Probability of Occurrence: Unlikely
Avalanches are a common occurrence in high terrain areas in New Hampshire during the winter and spring months. Early warning systems have resulted in less impact lately, however, as more people get involved in outdoor recreation, the number exposed to avalanche threat could increase.

Impact: Low
Avalanches present a significant threat to hikers, skiers, and other people recreating on the mountain. Falling ice and rocks can cause injury or death. Cracks, holes, and crevasses in the snowpack can cause individuals to become trapped or buried in snow, which can result in extreme cold injuries, suffocation, and possibly death. Twenty-five to thirty people die each year nationally from avalanches. As there are no known instances of, nor likely areas of avalanche, the impacts are considered low.

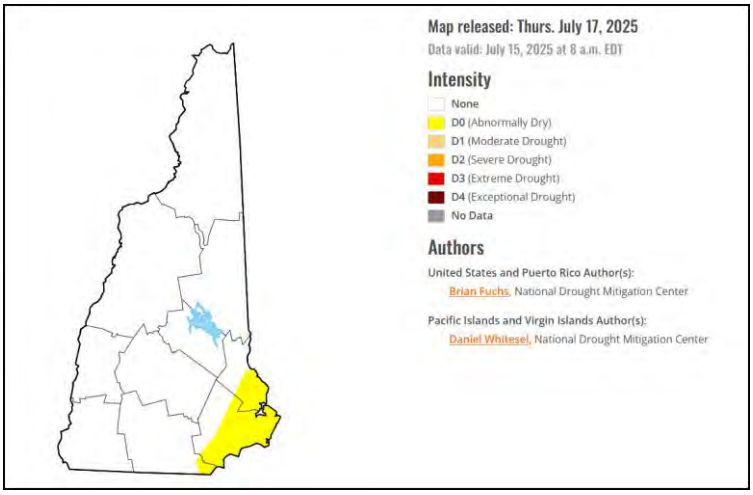
Impact on Vulnerable Communities: There are no known potential impacts associated with avalanche on Gilmanton's vulnerable populations.

DROUGHT

Drought occurs when less than the normal amount of water is available for extended periods of time. It often but not always, accompanies elevated temperatures. 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 rain/snowfall, increased rates of evaporation, and increased water usage. New Hampshire generally receives adequate rainfall; it is rare that the state experiences extended periods of below normal water supplies.

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

- **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



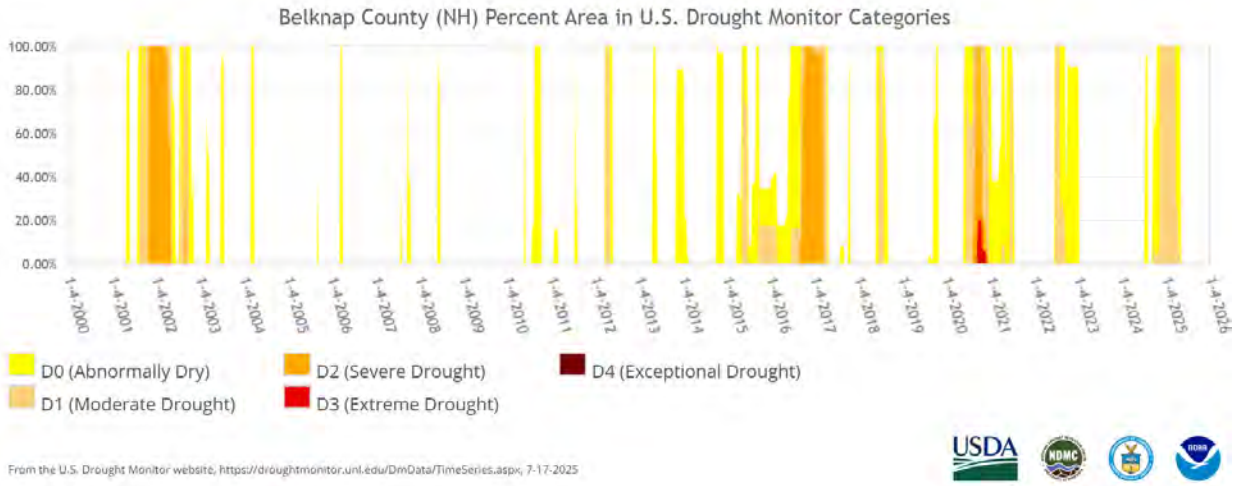
Extent: Moderate
A drought can last for months, or even years. Since 1990 New Hampshire has had a state Drought Emergency Plan, which identifies four levels of action indicating the severity of the drought:

- Alert
- Warning
- Severe
- 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 adequate rainfall; it is rare that the state experiences extended periods of below normal water supplies. The US Drought Monitor 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, and 2001 to 2002 and 2010. The statewide

drought of 2001/02 had a minimal impact on water sources for fire protection in Gilmanton. While much of the country experienced drought conditions in 2012, New Hampshire received adequate precipitation. Moderate drought conditions existed in New Hampshire during parts of 2015, 2016 and into April of 2017. While Gilmanton experienced dry conditions during the 2015 – 2017 drought, no specific instances of impact on Town were noted. In 2020 the state experienced a severe drought (D2-D3) leading to water restrictions and $500K of crop damages.



Location: Since drought is a state-wide or regional event, it would affect most areas of the town. Those with shallow (or dug) wells would likely be affected first. Drought can affect fire suppression where access to water for this purpose is limited.

Probability of Occurrence: Occasional

Impact: Low-Moderate
A severe drought can affect public water supply, increase the probability of fires, and impede fire suppression. Those areas with minimal fire protection are at a higher risk because of a prolonged drought. Those with shallow wells would also be affected by drought. The committee discussed measures that can be taken to make water available both for consumption and fire suppression. As most residents rely on private wells for their water supply, the Committee emphasized the importance of providing public outreach during drought events.

Impact on Vulnerable Communities: Potential impacts associated with drought on Gilmanton's vulnerable populations include:

- May be dependent upon others to travel
- Children can experience mental health impacts from extreme weather events

EARTHQUAKE > 4.0 RICHTER

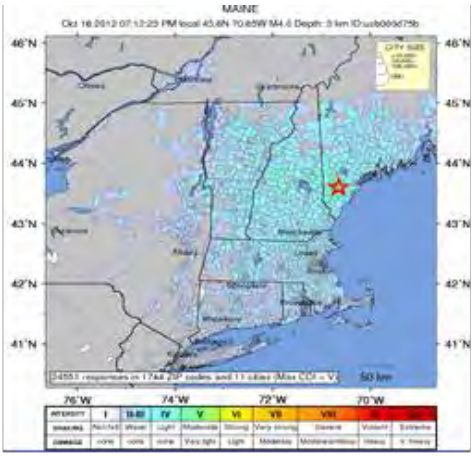
An earthquake is a series of vibrations induced in the Earth's crust by the abrupt rupture and rebound of rocks in which elastic strain has been slowly accumulating.

Extent: Weak 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 in the table above. Note: The 2023 NH State HMP now qualifies this hazard as *Earthquakes>4.0* as opposed to simply *Earthquakes*.

Richter 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 destroy communities near the epicenter.

New Hampshire is in an area of moderate seismic activity with respect to other regions of the country. 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.[4] 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. The image at left shows the expected number of damaging earthquakes shaking in 10,000 years.

However, if a large earthquake occurred in or around the town, it is assumed that structural damage would be moderate to high.



Areas where the October 16, 2012 earthquake

History: On average, every other year the Lakes Region experiences an earthquake, though these earthquakes are mild and go mostly undetected by people. Sanbornton and Tamworth are identified as two epicenters in the region.[5] A search of the USGS National Earthquake Information Center database shows that since 1977 there have been 13 earthquakes with a magnitude of at least 3.0 within a 100 km (62 mi.) radius of Gilmanton; the largest was magnitude 4.7. Two such earthquakes have occurred since 2006; a 3.4 event in 2010 centered in Penacook, NH and a 4.0 quake in southern Maine shook the region on October 16, 2012. The image at right indicates the communities where people reported feeling this event.[6].

[4] nh-state-hazard-mitigation-plan.pdf visited July 24, 2025.
[5] https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/geo-3.pdf, pg. 3, visited July 24, 2025.
[6] USGS, Earthquake Archive Search. https://earthquake.usgs.gov/earthquakes/map/

Location	Date	Magnitude
Hollis Center, ME	October 16, 2012	4.7
Sanbornton	January 19, 1982	4.5
7km SE of Scarborough, ME	April 26, 1957	4.4
Tamworth	December 24, 1940	5.6
Tamworth	December 20, 1940	5.3
Ossipee	October 9, 1925	4.0
2km SSE of South Paris, ME	August 21, 1918	4.2
Portsmouth	November 10, 1810	4.0
Central NH	June 11, 1638	6.5

Since the last plan (2019) there have been four earthquake events within 100 km of Gilmanton, none reached a magnitude of 4.0. Gilmanton has not experienced any significant earthquakes.

Location: An earthquake of 4.0 or greater could affect all areas of Gilmanton, mainly multi-level structures and those that are either constructed of masonry or have masonry chimneys. Some bridges and dams might be impacted.

Probability of Occurrence: Unlikely

Impact: Moderate
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 (buildings, bridges, dams, and power infrastructure) are old or not built to withstand an earthquake.

A relatively large earthquake would likely impact the roads, including bridges limiting the ability of emergency services to be rendered. Damages could range from cracked foundations, chimneys, and supports to full collapse. Structures that are taller, older, or built of masonry are most at risk.

Damage from the 1940 earthquakes in Tamworth 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 the town of 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.

The fire department could have some response problems if the bridges were impacted, requiring redeployment of apparatus and people or mutual aid assistance. Areas of town with only one egress could become isolated from direct assistance.

All structures in Gilmanton are susceptible to damage by an earthquake. Assuming 1% town-wide damage to buildings, an earthquake could result in nearly $17.3 million in damages any given year.

Impact on Vulnerable Communities: Potential impacts associated with earthquakes on Gilmanton's vulnerable populations include:

- May have limited mobility for getting assistance, dependence upon others to travel
- Children can experience mental health impacts from extreme weather events

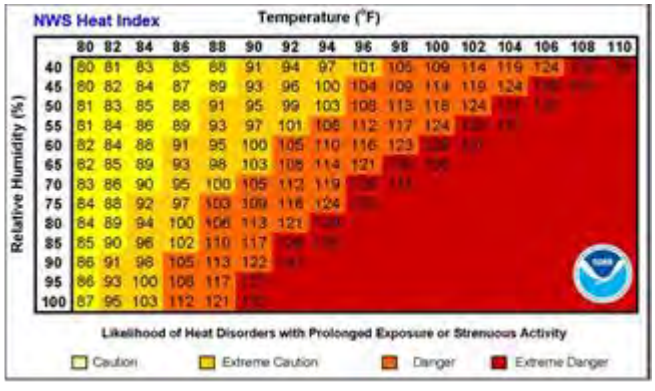
EXTREME TEMPERATURES

Extreme temperatures are a period of prolonged and/or excessive heat or cold that presents a danger to human health and life. Extreme Heat events occur because of above normal temperatures, which often coincide with high relative humidity, that increase the likelihood of heat disorders with prolonged exposure or strenuous activity. Heat related disorders include heat cramps, heat exhaustion, and heat stroke. High heat and humidity can also adversely affect air quality, leading to respiratory problems. Extreme heat can also damage or kill crops and animals (wild, farm, or domesticated), potentially presenting a risk to the economy. 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.

Frostbite occurs when uncovered skin/extremities are exposed to extreme cold and the body tissue is either injured or killed. Hypothermia is 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 to 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.

Extent: Weak

- Heat Advisory—Two or more consecutive hours of Heat Index values of 95-99 °F for two or more days *OR* any duration of Heat Index values of 100-104 °F. 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 °F 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.
- Wind Chill Watch: The National Weather Service (NWS) issues a wind chill watch when dangerously cold wind chill values are *possible*. As with a warning, adjust your plans to avoid being outside during the coldest parts of the day. Make sure your car has at least 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 is wind chill values are expected to be -20°F to -29°F and winds are greater than 5 mph.

Wind Chill Chart

Wind (mph) \ Temperature (°F)	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5		36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10		34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15		32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20		30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25		29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30		28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35		28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40		27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45		26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50		26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55		25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60		25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes, 10 minutes, 5 minutes

Wind Chill (°F) = 35.74 + 0.6215T - 35.75($V^{0.16}$) + 0.4275T($V^{0.16}$)

Where, T= Air Temperature (°F) V= Wind Speed (mph) Effective 11/01/01

- 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 is wind chill values are expected to be -30°F and winds are greater than 5 mph.

History:

Gilmanton has experienced regular extreme hot and cold temperatures annually since the last plan update. The Town of Gilmanton experiences extreme heat temperatures several days during the summer, but usually with little impact on the population.

Event Date	Event Description	Impacts	Location	Additional Information
July 1911	Heat Wave	Record high temperatures set in Concord, New Hampshire	Statewide	Extreme heat was recorded from July 3rd through July 5th, with high temperatures ranging from 101-102°F in Concord on these days.[116] These three days account for three of the top 10 hottest days on record for Concord, New Hampshire.
March 2012	Heat Wave	Record high temperatures set in Concord, New Hampshire	Statewide	High temperature records in Concord, New Hampshire were broken for 5 consecutive days, with the hottest day being 84°F.
September 2017	Heat Wave	High temperature records set across New Hampshire	Statewide	Mount Washington set record a daily high temperatures for four consecutive days. Manchester, Concord, and other areas across the State and New England also saw daily temperature records broken.[117]
December 2017	Cold Wave	Record low temperatures set across New Hampshire	Statewide	Record low temperatures were set across the State as a result of a cold wave. Portsmouth saw a low of -1°F and Mount Washington saw a low of -33°F (with a wind chill of -51°). Wind Chill Advisories were posted in central and southern New Hampshire, and Wind Chill Warnings were posted for northern New Hampshire.
February 2018	One Day Winter Heat Wave	High temperature records set across New Hampshire	Statewide	Exceptionally strong high pressure ridge in place across the Eastern Seaboard. Record high temperatures were broken across the State.[118]
2/3/2023	Wind Chill	Most areas recorded top 3 coldest wind chill readings on record.	Merrimack Co.	Plym. airport Windchill -43 F. NOAA Events

Location:
Extreme temperatures can occur anywhere throughout the town of Gilmanton. Those at higher elevation and greater exposure to wind are most likely to be impacted by cold. People living in less accessible parts of town are more likely to be impacted during winter cold spells.

Probability of Occurrence: Occasional

Impact: Moderate
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. Facilities without generators and air-conditioners that house the elderly and disabled are very susceptible to human health issues. Utilities are also vulnerable as the demand for air-conditioners rises.

While most of the impact from extreme temperatures is on people and animals, there can also be structural impacts, especially from freezing and expansion of water in pipes and the resulting damages.

Impact on Vulnerable Communities: Potential impacts associated with extreme temperature events on Gilmanton's vulnerable populations include:

- May have limited mobility for getting assistance/evacuation, dependence upon others to travel
- May have health conditions that make them more sensitive to climate conditions
- May spend more time outdoors increasing their exposure to heat and cold

HIGH WIND EVENT (THUNDERSTORM/TORNADO/DOWNBURST)

Gilmanton is likely to experience either of 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. **Straight-line winds** describe 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.[7]

Image source: NH HSEM

Extent: Moderate
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. According to the National Oceanic and Atmospheric Administration (NOAA) a downburst is a strong downdraft, rotational in nature, which causes damaging winds on or near the ground. Winds can exceed 130 mph.

The Enhanced Fujita Scale is used to categorize tornados based on a combination of wind speed and the type of damage that is observed.

Operational Enhanced Fujita (EF) Scale

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)

History:
The most recent damaging tornado to touch down in New Hampshire was on July 24, 2008 rendering around 100 homes "uninhabitable" and killing one person. This event traveled from Epsom to Effingham. Although damage resulted in some Lakes Region locations, areas affected were many miles southeast of Gilmanton. Since 2019 there have been three reported high wind events in Gilmanton. The high wind event in August 2022 directly impacted Gilmanton resulting in downed trees off Route 107 near Sawyer Lake Road.

[7] http://www.nssl.noaa.gov/education/svrwx101/wind/types

History of High Wind Events

Event Type	Date	Location	Extent	General Impacts	Source
High Wind Event	6/30/2021	Gilmanton Ironworks	61 kts.	Severe thunderstorm wind gusts knocked down numerous trees.	NOAA Events
High Wind Event	8/26/2022	Gilmanton	52 kts.	Downed multiple trees off Rte. 107 near Sawyer Lake Road	NOAA Events
High Wind Events (Torn./Downb.)	12/23/2022	State-wide	Wind>50 mph Rain 2-5 in.	Downed Trees and wires (120K without power)	NOAA Events
High Wind Event	8/5/2024	Gilmanton Ironworks	50 kts.	Severe thunderstorm wind gusts downed trees and wires	NOAA Events

Location: While thunderstorms can be localized, they often hit the whole town. 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. All areas of town are susceptible to damage from high winds.

Probability of Occurrence: Likely

Impact: Moderate-High
In Gilmanton, the major damage from downbursts or tornados would come from falling limbs and trees, which may take down power lines, block roads, or damage structures and vehicles. Damage can occur to most structures in town because of downed trees in any high wind event, including the common thunderstorms. These winds can bring down limbs and trees, causing damage to structures, as well as pulling down power and telephone lines and blocking roads. This is particularly the case along private roadways that may only get limited cutback of vegetation. Trees and wires down across evacuation routes could slow evacuation efforts and draw limited emergency response personnel away from other safety efforts.

Tornados and downbursts could strike anywhere in town with little, if any warning. While individual events may be small 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.

All structures in Gilmanton, including most critical facilities, are susceptible to damage by high wind events, whether through downburst, tornado, or hurricane. Assuming 1% to 5% town-wide damage to buildings, high winds could result in $17.3M to $86.6M in damages in Gilmanton.

Impact on Vulnerable Communities: Potential impacts associated with high wind events on Gilmanton's vulnerable populations include:

- May have limited mobility for getting assistance, dependence upon others to travel
- Limited resources for seeking medical assistance

INFECTIOUS DISEASES

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: Moderate

Experience with the Covid-19 pandemic has dramatically changed views on the risk of infectious diseases as compared to risk mitigation planning for the 2019 Plan. 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 occurrence of the disease:

- 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
- 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 so that communities can be prepared and respond to outbreaks.

History: The 2012-13 flu season was much more severe in New Hampshire than in the previous decade; 35 deaths occurred statewide, the most since 1997. In 2016, the DHHS responded to a

total of 102 outbreaks: 73 gastrointestinal illnesses, 23 respiratory illnesses, and 6 other types of illness.

Since March of 2020, the Covid-19 pandemic has had a significant impact on all facets of life, including on emergency medical responders and the operations of municipal services and local schools. While there certainly have been minor outbreaks of flu in town, other outbreaks of infectious disease haven't compared to the coronavirus pandemic.

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 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	In 2018 the overall effectiveness of the flu vaccine at this time was 36%
2020-23	COVID-19 or Coronavirus pandemic	Hospitals, schools, municipalities, & businesses have taken extra precautions, cancelled many events, and adjusted policies	Worldwide	Respiratory disease >379K cases and 3,495 deaths in NH >190 deaths in Belknap Co.
Annually	Foodborne outbreaks	Ill individuals associated with outbreaks	Statewide	5-10 outbreaks per year
Annually	Influenza and other raspatory 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: An epidemic is an outbreak of a disease, generally isolated to one area. The disease spreads easily person-to-person and can cause serious illness, with long-lasting side effects and deaths. An outbreak could impact anyone in town. Transmission of germs and diseases between people is accelerated in a close living and socializing environment. Schools, and congregate care centers for the elderly are places where transmission is likely to occur.

Probability of Occurrence: Occasional
Epidemics do occur in Gilmanton and other Lakes Region communities from time to time. The Central NH Regional Health Network representative has noted that it is likely that a future epidemic could involve multiple outbreaks at once.

Impact: Moderate
The concerns associated with infectious disease include the local capacity to respond to not only the residents of Gilmanton but also any visitors. The cost of infectious diseases in Gilmanton is difficult to calculate as any cost would primarily result from health care response. Experience with COVID-19 pandemic has revealed the human and economic costs resulting from the shut down or slowdown of many businesses in town and the region.

Impact on Vulnerable Communities: Potential impacts associated with infectious disease on Gilmanton's vulnerable populations include:

- Children can experience mental health impacts from hazard events
- May have limited mobility for accessing attention
- More likely to have compromised immune systems

INLAND FLOODING

Flooding is defined as a temporary overflow of water onto lands that are not normally covered by water. It results from the overflow of rivers and tributaries or inadequate drainage. Flooding is rarely associated with lakeshore properties, especially if there are appropriate setbacks, and is more likely to be associated with rivers.

Flooding is most associated with structures and properties located within the 1% annual (or 100-year) floodplain. Areas in this floodplain have been identified as having a 1% chance of flooding any given year. This means that flooding in this area is projected to have an average recurrence interval of 100 years; however, that does not mean that a flood in this area will only occur once every 100 years.

Flooding on Rte. 140 July 16, 2023

Gilmanton participates in the **National Flood Insurance Program (NFIP)** through the administration of its floodplain ordinance by the Board of Selectmen and the Zoning Administrator. By actively participating in the NFIP property owners can purchase flood insurance through the FEMA program. Active participation includes administration of site plan review, subdivision regulations and zoning, to regulate development in the floodplain using federal standards. Gilmanton joined the National Flood Insurance Program on April 16, 2008. The original Flood Insurance Rate Maps (FIRM) were published by FEMA on January 17, 1975. Digital Flood

Insurance Rate Maps (DFIRM) have not been created, and are thus not available, for Belknap County.

From the Floodplain Management Ordinance, **Article III.N** of the Gilmanton Zoning Ordinance, revised 2024.

Administration and Enforcement:

1. The Board of Selectmen shall enforce the provisions of this Ordinance, and shall be entitled to recover reasonable attorney's fees, as well as all other costs, where they prevail.
2. The Zoning Administrator shall have authority to enforce the provisions of this Ordinance.

Article III.N Floodplain Development – 3 & 4 Enforcement:

3. All proposed development in any special flood hazard areas shall require a permit.

4.The Building Inspector shall review all building permit applications for new construction or substantial improvements to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is located in a special flood hazard area, all new construction or substantial improvements shall:

a. be designed (or modified) and adequately anchored to prevent floatation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;

b. be constructed with materials resistant to flood damage;

c. be constructed by methods and practices that minimize flood damages;

d. be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment, and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding. 3-15

Definitions: (Article III.N.11 Floodplain Development – A. Definition of Terms)

Substantial Damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.

Substantial Improvement means

(1)any combination of repairs, reconstruction, alteration, or improvements to a structure in which the cumulative cost equals or exceeds fifty percent (50%) of the market value of the structure. The market value of the structure should equal:

(a) the appraised value prior to the start of the initial repair or improvement; or

(b) in the case of damage, the value of the structure prior to the damage occurring,

(2) For the purposes of this definition, "Substantial Improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. This term includes structures that have incurred substantial damage, regardless of actual repair work performed. The term does not, however, include any project for improvement of a structure required to comply with existing health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions or any alteration of a "Historic Structure", provided

that the alteration will not preclude the structure's continued designation as a "Historic Structure".

As of July 2025, there were four flood insurance policies in force in Gilmanton, all of which cover single-family residential (SFR) properties. Two of these properties are in the A-zone, and two are in the B-, C-, or D-zone. There have been no paid losses, nor any repetitive losses in Gilmanton. The amount of insurance in force in Gilmanton was $680,000, according to FEMA's database.

Extent: Flooding – Moderate
FEMA defines flood hazards by the 100-year and 500-year flood events. A 100-year flood event is defined as a flood event having a 1% chance of being equaled or exceeded in any given year. The 500-year flood event is defined as a flood event having a 0.2% chance of being equaled or exceeded in any given year. Land development can contribute to flood hazards. As areas are covered with additional impervious surfaces, less water is allowed to infiltrate, evaporate, or be transpired by vegetative growth, resulting in more water runoff directly into surface drainages and water bodies. This increases the likelihood of flash floods and substantial overland flow.

Dam Failure
Although Dam Failure is classified as a technological hazard, it seems appropriate to include a discussion of dams in Gilmanton when assessing risks associated with Inland Flooding. According to the NH Department of Environmental Services (DES), a dam is any artificial barrier which impounds or diverts water which: has a height of 6 feet or more; or is located at the outlet of a great pond, regardless of height or storage; or is an artificial barrier which impounds liquid Industrial or liquid commercial wastes, or septage or sewage, regardless of height or storage.

Extent: Moderate
Dams in New Hampshire are classified by the New Hampshire Department of Environmental Services Dams Bureau. The four dam hazard classifications (High, Significant, Low, and Non-Menace) are based on the potential losses associated with a dam failure (see Appendix G for a detailed description). High (H) and Significant (S) Hazard dams have the highest potential for damage; this could include damage to state or municipal roadways as well as structures.

There are thirty active dams in Gilmanton; two are **High** Hazard dams, six are **Low** Hazard, and twenty-two are **Non-Menace** Hazard dams. There are no Significant Hazard dams in Gilmanton. Failure or mis-operation of a Non-Menace dam would not result in probable loss of life or loss of property. Failure or mis-operation of a Low Hazard dam would not result in the possible loss of life. It would result in any of the following:

- Low economic loss to structures or property.
- Structural damage to a 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 under certain conditions.

- Reversible environmental losses to environmentally sensitive sites.

HAZCL	STATUS	USE	NAME	RIVER	LENGTH	IMPND	HEIGHT
NM	ACTIVE		BADGER BROOK NH-107 EMBANKMENT DAM	BADGER BROOK	450	0	48
	RUINS	M	SUNCOOK RIVER I DAM	SUNCOOK RIVER	0	0	14
	RUINS	M	SUNCOOK RIVER II DAM	SUNCOOK RIVER	140	0	12
	EXEMPT	R	SUNCOOK RIVER IV DAM	SUNCOOK RIVER	0	0.25	3.5
	RUINS	R	DIMOCK DAM	UNNAMED BROOK	140	0	6
L	ACTIVE	R	ROLLINS POND DAM	KELLEY BROOK	192	37	17
NM	ACTIVE	C	FARM POND DAM	UNNAMED STREAM	0	0.46	10
L	ACTIVE	R	SHELLCAMP POND DAM	ACADEMY BROOK	108	150.5	12
NM	ACTIVE	P	FIRE POND DAM	UNNAMED STREAM	95	0.2	7
L	ACTIVE	R	KIMBALL BROOK DAM	KIMBALL BROOK	150	2.1	14
NM	ACTIVE	C	FARM POND DAM	UNNAMED STREAM	0	0.5	18
NM	ACTIVE	C	FARM POND DAM	UNNAMED STREAM	500	2.23	12
NM	ACTIVE	C	FARM POND DAM	UNNAMED STREAM	300	0.25	8
NM	ACTIVE	P	FIRE POND DAM	TR NIGHTHAWK HOLLOW BROOK	150	0.25	10
NM	ACTIVE	C	WILDLIFE POND I DAM	UNNAMED STREAM	0	0.29	8
NM	ACTIVE	R	SNOW DAM	UNNAMED STREAM	0	0.37	8
L	ACTIVE	R	GILLAN POND DAM	NELSON BROOK	300	40	10
NM	ACTIVE	P	FIRE POND DAM	TR POND BROOK	0	0.5	11
NM	ACTIVE	R	EISANHAUER DAM	UNNAMED STREAM	465	0.95	13
NM	ACTIVE	C	FARM POND DAM	UNNAMED STREAM	0	0.58	12
H	ACTIVE	R	CRYSTAL LAKE DAM	SUNCOOK RIVER	188	441	16
NM	ACTIVE	R	LOON POND DAM	LOON POND BROOK	16	129	5
H	ACTIVE	R	SAWYER LAKE DAM	BADGER BROOK	450	91	19
	BREACHED	R	BADGER BROOK DAM	BADGER BROOK	0	0	0
NM	ACTIVE	R	LOON POND BROOK DAM	LOON POND BROOK	145	0.26	15
NM	ACTIVE	C	FARM POND II DAM	TR AYERS BROOK	200	0.92	10
	RUINS	C	FARM POND III DAM	UNNAMED STREAM	0	0	0
	EXEMPT	C	FARM POND DAM	UNNAMED STREAM	0	0.25	4
NM	ACTIVE	R	MEETINGHOUSE POND DAM	TR NIGHTHAWK HOLLOW BROOK	150	25.34	3
NM	ACTIVE	C	WILDLIFE POND DAM	AYRS BROOK	0	0.25	8
NM	ACTIVE	P	VILLAGE FIRE POND DAM	UNNAMED STREAM	50	0.33	7
L	ACTIVE	R	ACADEMY BROOK I DAM	ACADEMY BROOK	125	3.6	12
NM	ACTIVE	C	FARM POND DAM	TR POND BROOK	0	0.25	14
NM	ACTIVE	R	LAKE EILEEN DAM	TR SUNCOOK RIVER	138	44.9	3
NM	ACTIVE	P	PERRY FIRE POND DAM	UNNAMED STREAM	200	0.23	10
	EXEMPT	R	RAY POND DAM	UNNAMED STREAM	150	0.5	5
L	ACTIVE	R	ACADEMY BROOK II DAM	ACADEMY BROOK	165	0.7	15
NM	ACTIVE	R	ACADEMY BROOK III DAM	POND BROOK	123	0.5	12

Source: NH Department of Environmental Services

History – Dam Failure:
There is no history of significant dam failures in Gilmanton.

Location:
The Crystal Lake Dam and Sawyer Lake Dam are both classified as High Hazard dams. However, while Sawyer Lake Dam's classification has not changed since the last plan update in 2019, Crystal Lake Dam was classified as a Significant Hazard Dam in the last plan, so this is an

improvement. Failure of the Crystal Lake Dam would impact the low-lying properties along the banks of the Suncook River near Gilmanton Ironworks. Failure of the Sawyer Lake Dam would have some impacts along Badger Brook as it flows west into Belmont.
Probability: Occasional

Impact: Moderate
A dam failure or breach could occur due to extreme rainfall and/or a human caused incident. A failure or breech would result in rapid loss of water that is normally held by the dam resulting in an inundation downstream.

History - Inland Flooding:
Historically, the state's two largest floods occurred in 1936 and 1938. The 1936 flood was associated with snowmelt and heavy precipitation. The 1938 flood was caused by the Great New England Hurricane of 1938. Those floods prompted the construction of a series of flood control dams throughout New England, built in the 1950s and 1960s. They continue to be operated by the US Army Corps of Engineers.

A series of floods in New Hampshire began in October 2005 with a flood that primarily affected the southwest corner of the state and devastated the town of Alstead. The flood killed seven people. It was followed by floods in May 2006 and April 2007 and a series of floods during the late summer and early fall of 2008, one caused substantial flash flooding and washouts in Ashland, New Hampton, Center Harbor, and Meredith. In addition to property damages, one young girl died in Ashland because of the floodwaters from this storm.

Flooding in the region was associated with Tropical Storm Irene in September 2011 and Tropical Storm Sandy in October 2012.

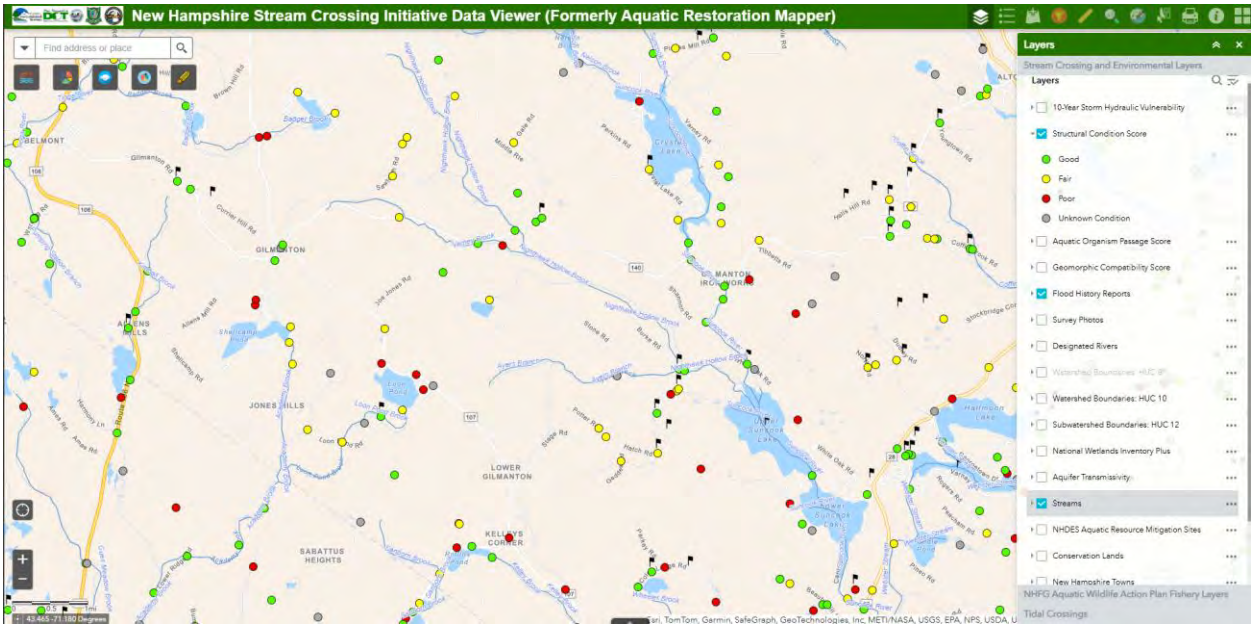
The NOAA database reports two documented flooding event in or near Gilmanton since 2019; heavy rain on July 29, 2021 caused flash flooding in neighboring Barnstead leading to a washout on White Oak Drive (pictured right), and heavy rain on July 16, 2023 caused flash flooding closing numerous roads.

Probability of Occurrence: Flooding – Likely, Dam Failure - Occasional

Location: In Gilmanton, the floodplain is primarily located along Nighthawk Hollow Brook, Ayers Brook, and the Suncook River. Survey responses show that residents are concerned about the eastern end of Rte. 140, Mountain Road, Crystal

Lake Road, Middle Route, Rte. 107, and dirt roads in general.

The NH Stream Crossing Initiative and Mapping Tool and the NH Aquatic Restoration Mapper are mapping and assessment tools coordinated by UNH T2 can be useful resources for tracking the location and status of bridges and culverts along with areas that have flooded in the past. Many state-owned features have been mapped by state agencies. Mapping local features is usually done through the regional planning commission.



Impact – Flooding – Moderate, Dam Failure - Moderate
Flooding, whether from heavy rains or ice jams, carries great risk for the town of Gilmanton. Floods could impact dams and bridges and have the potential to cause damage to roads, properties, and structures, as well as loss of life. Some structures in Gilmanton are susceptible to damage due to flooding. Those in the floodplain are most likely to be impacted. Assuming 1% to 2% town-wide damage to buildings, flooding could result in $17.3M to $34.7M in damages.

Impact on Vulnerable Communities: Potential impacts associated with flooding on Gilmanton's vulnerable populations include:

- May live in areas prone to flooding
- May have limited mobility for getting assistance/evacuation, dependence upon others to travel

LANDSLIDE

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

one just described, other causes can include: [1]

- Erosion by rivers or the ocean that creates over-steepened slopes through erosion of the slope's base. In the case of rivers, this can occur because of flash flooding
- Rock and soil slopes are weakened through saturation by snowmelt or heavy rains
- Earthquake creates stress that makes weak slopes fail—earthquakes of 4.0 magnitude and greater have been known to trigger landslides
- Wildfires (loss of vegetation)
- Excess weight from accumulation of rain or snow, stockpiling of rock or ore, the formation
of waste piles, or building of man-made structures may stress weak slopes to the point of failure.

Extent: Weak
While there is no universally accepted standard or scientific scale has been developed for measuring the severity of all landslides, severity can be measured several other ways:

- Steepness/grade of the Slope (measured as a percent)
- Geographical Area
    - o Measured in square feet, square yards, etc.
    - o More accurately measured using LiDAR/GIS systems
- Earthquake, either causing the event or caused by the event
    measured using the Moment Magnitude Intensity or Mercalli Scale

There are also multiple 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 or more recognizable surfaces, which may be curved or planar
- Flows: A mass moves downslope with a fluid motion. A significant amount of water may or may not be part of the mass

Like flooding, landslides are unique in how they affect different geographic, topographic, and geologic areas. Therefore, consideration of a multitude of measurements is required to determine the severity of the landslide event.

Although the overall vulnerability for landslides in the state is low, there is considerable terrain susceptible to landslide action. This was exemplified in May of 2003 when the Old Man of the Mountain collapsed. The continuous action of freezing and thawing of moisture in rock fissures causes it to split and separate. This action occurs frequently on the steeply sloped areas of the state, increasing the risk of landslides. In addition to being susceptible to this freeze/thaw process, the Ossipee Mountain Range, Squam Range, and other mountains throughout the Lakes Region are also close to seismic faults and at risk of increased pressure to development.

Consideration should be given to the vulnerability of man-made structures in these areas due

to seismic- and/or soils saturation-induced landslide activity. Landslide activities are also often attributed to other hazard events. For example, during a 1998 flood event, a death occurred when a mass of saturated soil collapsed. This death was attributed to the declared flood event.[8] Also, during the 2007 Nor'easter a landslide occurred in Milton, NH resulting in the temporary closure of NH Route 101.

History: Records (NOAA Storm Events database) indicate no landslides have occurred in northern Belknap County. There was no local knowledge of a landslide occurring in Gilmanton.

Location: Although New Hampshire is mountainous, it consists largely of relatively old geologic formations that have been worn by the forces of nature for eons. Consequently, much of the landscape is relatively stable and the exposure to this hazard type is generally limited to areas in the north and north central portion of the state. Formations of sedimentary deposits along the Connecticut and Merrimack Rivers also create potential landslide conditions.

Probability of Occurrence: Unlikely

Impact: Low
The primary impacts of a landslide are the damage and destruction to property and infrastructure located in the area where the landslide occurred. The land material moved during a landslide can cause damage to roads, buildings, and infrastructure at the base of the slope on which the landslide occurred. Buildings or infrastructures that are atop the slide, or on the side of the slope where the slide occurs, can be severely damaged or destroyed through its consumption by the slide. The hazard of death and injury to individuals atop, on, or at the base of a slide exists if such individuals are present in those locations when the landslide occurs.

Landslides that occur adjacent to a waterbody, such as a river or lake, can introduce excess sediment, increasing the turbidity of the receiving waterbody and impacting water quality if the quantity of sediment is of sufficient quantity. A very large landslide into a river could cause an obstruction that acts like a dam, creating an impoundment of water which leads to sediment and woody material deposition within it. This could also further create an additional risk of a "dam failure" at some future time when the natural dam breaks down, resulting a rapid release of the stored water from upstream.

As there are no significant steep slopes near structures nor adjacent to rivers or lakes, the potential impact to Gilmanton is minimal.

Impact on Vulnerable Communities: As there are no significant steep slopes near structures nor adjacent to rivers or lakes, the potential impact to Gilmanton is minimal.

[8] nh-state-hazard-mitigation-plan.pdf, visited July 24, 2025.

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.

Extent: Weak

All thunderstorms have the potential to create lightning, which can cause death, injury, and property damage and have great potential to cause damage to electronic equipment as well as structure and wildfires. Although the numbers have trended downward in recent decades, during the last half of the twentieth century more people were killed in the United States each year by lightning than by any other weather event. It can also wreak havoc with electrical and communications systems.

The National Weather Service does utilize 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.

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:

According to the NOAA database, there has been one recorded lightning event in Belknap County since the last plan update. However, this event struck a house in Meredith, approximately 20 miles north of Gilmanton. There have been no recorded lightning events in Gilmanton since the last plan update.

Location: Lightning can strike anywhere in town. Exactly where and when lightning will strike is unknown.

Probability of Occurrence: Occasional

In the Lakes Region, fewer than two lightning strikes occur per square kilometer annually. While this value is not particularly high compared with other parts of the country, the frequency of storms with lightning is a local concern, especially during the summer months.

Impact: Moderate
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.

Power outages, associated with natural hazards like lightning, high winds, inland flooding, severe winter weather have the potential to cause disruption to residents and the functioning of the town. The elderly and disabled who rely on powered medical devices are at risk.

All structures in Gilmanton are susceptible to damage by lightning and resulting fires. There is back-up power for most municipal facilities. Assuming 1% town-wide damage to buildings, each year lightning could result in $17.3M in damages.

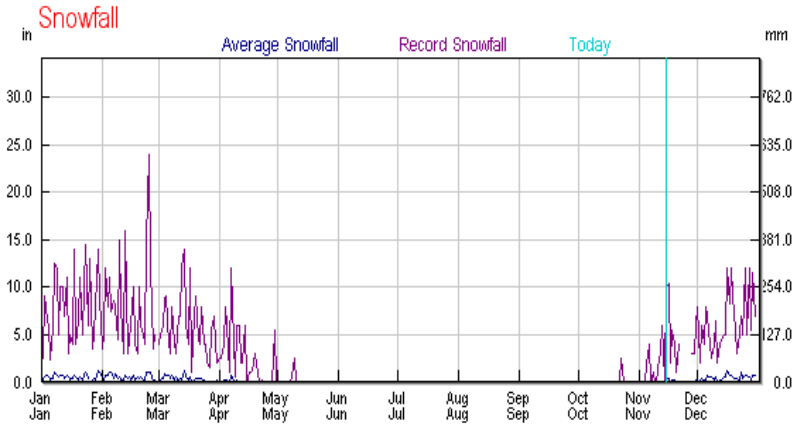
Impact on Vulnerable Communities: Potential impacts associated with lightning on Gilmanton's vulnerable populations include:

- May have limited mobility for getting assistance/evacuation, dependence upon others to travel
- May spend more time outside, increasing their exposure

SEVERE WINTER WEATHER (SNOWSTORMS, ICE STORMS)

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

Extent: Moderate
A heavy snowstorm can be defined as one that deposits four or more inches of snow in a 12-hour period. 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. Records indicate that eight or more inches have fallen in a single day on most dates from late November through mid-March but the average snowfall on any day from November through April is less than an inch. This record also shows that deposits of more than 10 inches have happened in each of these months and on several days in February



CATEGORY	NESIS VALUE	DESCRIPTION
1	1–2.499	Notable
2	2.5–3.99	Significant
3	4–5.99	Major
4	6–9.99	Crippling
5	10.0+	Extreme

the area has seen more than 15 and even 20 inches of snow in one day.
A couple of scales have been adopted by NOAA for comparing snowstorms that incorporate the number of inches of snow that accumulate, the area of the storm, and the number of people that could be impacted by the storm. The Northeast Snowfall Impact Scale (NESIS) applies specifically to the northeastern United States. It groups high-impact snowstorms into five categories.

An ice storm coats trees, power lines, streets, vehicles, and roofs with a very slick and heavy coating of ice. In the winter of 1998, a major ice storm crippled much of New Hampshire, coating everything with as much as three inches of ice. 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. In 2008, just 10 years later, however, New Hampshire was struck again by another severe ice storm.

The Sperry-Piltz Ice Accumulation (SPIA) Index 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.

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

ICE DAMAGE INDEX	* AVERAGE NWS ICE AMOUNT (in inches) *Revised-October, 2011	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, few 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. Roads 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 – 5 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 – 1.50	< 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.)

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.

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 (moving south to north) 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 12 hours to three days, while the duration of hurricanes ranges from 6 to 12 hours. A nor'easter also has the potential to sustain hurricane force winds, produce torrential rain, and create blizzard conditions in winter months.

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 reduces visibility to less than a quarter mile.

History: The 1998 ice 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 December 2008 ice storm surpassed the 1998 storm, in terms of state-wide damage. The President declared this storm as a major disaster and the state received $15 million in federal aid for recovery.

The NOAA Storm database lists 24 severe winter storm events since 2019. While there have not been any Declared Disasters for Severe Winter Weather three of the six Severe Storms and Flooding declarations since 2019 have been winter-time events.

- December 2022 (major disaster declaration)
- December 2023 (major disaster declaration)
- January 2024 (major disaster declaration)

Location: Severe winter weather occurs frequently in the northeast and the possibility exists for Gilmanton residents to have to withstand several days without power. There are segments of the population that are more at risk. These include the elderly, people that need 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. Snow and ice storms can affect the entire town.

Probability of Occurrence: Likely

Impact: Moderate-High
Major roads, essential services, and flat-roofed buildings are all likely to be impacted by winter 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.

Heavy snow can cause damage to property, disrupt services, and make travel unsafe, 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.

The major threats to a community due to ice storms 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. 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. A severe ice storm struck central and southern New Hampshire and New England on December 11, 2008. Over 400,000 people were without power, some for over two weeks, and overall damages exceeded $15 million.

No specific critical facilities in Gilmanton were identified as being vulnerable to snow or ice event. Flat-roofed buildings are all susceptible to damage from snow and ice loads.

While maintenance on the major arteries (NH 140 and NH 107) falls to NH DOT, most of the other roads in Gilmanton are the town's responsibility. The precipitation from some storms, especially multi-day nor'easters, can outpace the capacity of equipment and staff.

All structures in Gilmanton are susceptible to damage by winter weather events, whether through ice storms, blizzards, or the heavy, wet snow often associated with a nor'easter. Town facilities are not particularly at risk to Severe Winter Weather. Assuming 1% to 5% town-wide damage to buildings, winter weather could result in $17.3M to $86.6M in damages annually. The potential for impact to the town from severe winter weather is seen as high.

Impact on Vulnerable Communities: Potential impacts associated with severe winter weather on Gilmanton's vulnerable populations include:

- May have limited mobility for getting assistance/evacuation, dependence upon others to travel
- Limited resources for seeking medical assistance
- May spend more time outdoors and thus increase their odds of exposure
- May have health conditions that make them more sensitive to climate hazards

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.[9] 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 that multiple science fields have come together to study space weather. Not all space weather is damaging or affects 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.

Extent: Weak

[9] https://www.nasa.gov/mission_pages/sunearth/spaceweather/index.html#q12

The State of New Hampshire Hazard Mitigation Plan (2023) 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[10] offers a measure of the extent of solar storms on radio communications.

Radio Blackout

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 Gilmanton 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.

Location: All of Gilmanton 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.

Probability of Occurrence: Unlikely

Impact: Low
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 Gilmanton as knowledge of this hazard is evolving, but committee members acknowledge that while human and property impacts are low, compromised communications could impact communications and response during other types of hazards, including reaching out for mutual aid.

Impact on Vulnerable Communities: Potential impacts associated with solar storms and space weather on Gilmanton's vulnerable populations are all related to compromised electronic communication and response associated with some other emergency.

TROPICAL & POST-TROPICAL CYCLONES

Tropical and Post-Tropical cyclones are large storms with winds rotating in a counterclockwise manner. Tropical depressions and hurricanes form over the Atlantic Ocean and often come ashore in the southeastern United States, frequently moving up the Eastern Seaboard.

[10] nh-state-hazard-mitigation-plan.pdf, pg. 258

Occasionally such storms come ashore along the northeast coast. Sustained high winds and heavy rains for 12 to 36 hours are characteristic of tropical depressions and hurricanes. There are many stages throughout the life cycle of a tropical cyclone.

- Potential Tropical Cyclone: Describes a disturbance that is not yet a tropical cyclone, however, poses the threat of becoming one
- Tropical Disturbance: A cluster of showers and thunderstorms that flare up over the tropics. These are usually 100-300 miles in diameter and generally move westward.
- Tropical Storm: Sustained wind levels are between 34 knots and 64 knots (39 to 74 MPH)
- Hurricane: Once a tropical cyclone sustains wind levels between 64 and 96 knots (74 to 111 MPH)
- Major Hurricane: A tropical cyclone with maximum sustained winds of 96 knots (111 MPH) and higher. Major hurricanes are classified as category 3 or higher.
- Post-tropical Cyclone: A former tropical cyclone, this term is used to describe a cyclone that no longer possesses sufficient tropical characteristics to be considered a tropical cyclone. These post-tropical cyclones often undergo an extratropical transition and form frontal boundaries. Post-tropical cyclones can continue carrying heavy rains and high winds and cause a storm surge in coastal areas.

Extent: Weak
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. 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 a couple of days.

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.

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.

Source: http://www.nhc.noaa.gov/aboutsshs.shtml

History: On September 21, 1938, a Category 3 hurricane claimed 13 lives in New Hampshire and many more throughout New England. Official records at the Weather Bureau in Concord show sustained winds of 56 miles per hour, but around the state, gusts around 100 miles per hour were reported, mostly due to topographical acceleration. The Merrimack River rose nearly 11 feet above its flood stage. *The Hanover Gazette* reported that in New Hampshire, 60,000 people were homeless, and many areas were without power. Damages were estimated at $22 million. New Hampshire has not experienced a severe hurricane directly since 1938.

Hurricane Bob, a category 2 storm, in 1991, was declared a major federal disaster in New Hampshire and is recorded as a severe storm in the state's history.

In the past five years no hurricanes have hit the region. By the time that a hurricane reaches central New Hampshire, it is rare that it retains the characteristics of a hurricane. Wind speeds usually dissipate but they can still bring a great deal of rainfall to the region. That was the case with the remnants of Hurricanes Irene and Sandy, which hit the area in 2011 and 2012 as tropical depressions.

Location: A cyclone could affect all areas of Gilmanton. Stream crossings, floodplains, and steep slopes are most likely to be impacted.

Probability of Occurrence: Occasional

Impact: Moderate
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.

The committee noted that infrastructure such as roads, bridges, communications, and utilities are most vulnerable. All structures in Gilmanton are susceptible to damage by cyclonic events, whether through tropical depression or hurricane. Assuming 2% to 5% town-wide damage to buildings, high winds could result in $34.7M to $86.6M in damage in Gilmanton in any given year.

Impact on Vulnerable Communities: Potential impacts associated with cyclonic events on Gilmanton's vulnerable populations include:

- May have limited mobility for getting assistance/evacuation, dependence upon others to travel
- May spend more time outdoors and thus increase odds of exposure

WILDFIRE

Wildfire is defined as a fire in wooded, potentially remote areas that may endanger lives. A wildfire is any non-structural fire, other than prescribed fire, that occurs in 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.

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

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:
Although the NOAA Database shows no history of wildfire occurring in Belknap County, local knowledge states that wildfire occurred in the county in 2009, 2010, and 2011. There were no reports of wildfire in Gilmanton since the last plan.

Location: Much of Gilmanton is heavily wooded, and a fire could occur anywhere.

Probability of Occurrence: Unlikely

Impact: Moderate
Some sections of town may have limited access to potential wildfire areas, especially due to steep slopes, but fires in these locations would have a limited impact on structures. Due to the heavily wooded nature of the town, all properties in town have the potential to be impacted by a wild land fire. Assuming 1% town-wide damage to buildings, each year wildfire could result in $17.3M in damages.

Impact on Vulnerable Communities: Potential impacts associated with wildfire on Gilmanton's vulnerable populations include:

- May have limited mobility for getting assistance/evacuation, dependence upon others to travel
- Likely to be more prone to the effects of air pollutants (smoke) associated with wildfire
- May spend more time outdoors and thus increase their odds of exposure

Summary of Risk

A matrix was created to determine an overall hazard risk assessment rating (next page). Each criterion (**Extent**, **Probability** of occurrence, and **Impact** – an average of three types) was given a rating to show which hazards are the greatest threat to the community, based on historic events and local knowledge, the town's ability to respond, along with economic and environmental issues.

These ratings were transformed into numerical values. The **overall risk rating** associated with each hazard was determined by multiplying the three factors. For Natural Hazards, a total score of 12 or more was deemed to be High Risk, a total of between 4 and 12 was deemed to be Medium Risk, and a score of less than 4 was deemed Low Risk.

Definitions

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 interuption 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 interupted 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 interupted 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.

Gilmanton Hazards - 2025	Extent	Probability	Average Impact	Risk
Definition	(Magnitude/ Strength)	Likelihood this will occur w/in 10 yrs	Average of Human, Property, Business	Probability x Exent x Avg. Impact
Scale	1: Weak, 2: Moderate, 3: Severe, 4: Extreme	1: Unlikely 2: Occasional 3: Likely 4: Highly Likely	1: Low 2: Moderate 3: High 4: Catastrophic	**Low Medium High**
Severe Winter Weather	**2**	**3**	**2.33**	**14.00**
High Wind Events (Torn./Downb.)	**2**	**3**	**2.33**	**14.00**
Flooding or Erosion	**2**	**3**	**2.00**	**12.00**
Dam Failure	**2**	**2**	**2.00**	**8.00**
Infectious Diseases	**2**	**2**	**2.00**	**8.00**
Drought	**2**	**2**	**1.67**	**6.67**
Wildfire	**2**	**1**	**2.00**	**4.00**
Extreme Temperatures	**1**	**2**	**2.00**	**4.00**
Thunderstorm/ Lightning	**1**	**2**	**2.00**	**4.00**
Tropical & Post-Tropical Cyclones	**1**	**2**	**2.00**	**4.00**
Earthquake > 4.0	**1**	**1**	**2.00**	**2.00**
Landslides	**1**	**1**	**1.00**	**1.00**
Avalanche	**1**	**1**	**1.00**	**1.00**
Solar Storms & Space Weather	**1**	**1**	**1.00**	**1.00**

It should be noted that the ranking of individual hazards for the purposes of planning discussion should not in any way 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 woodland fire may be greater. In combination, hazard events may have the impact of overwhelming existing emergency response systems.

SECTION IV: VULNERABILITY ASSESSMENT

After reviewing the various natural hazards and the Town's critical facilities and other resources, the Gilmanton HMP Committee considered how susceptible they considered each critical facility/population to be to damage or economic loss (vulnerability). As a group, the Committee gave a rating for each category's vulnerability to each hazard. The **vulnerability ratings** below indicate the Town's greatest vulnerabilities are severe winter weather, dam failure, wildfire, earthquakes, lightning, tropical & post-tropical cyclones, and drought.
Key: Low – 1, Medium – 2, High – 3.

Critical Facilities Hazard Vulnerability: Gilmanton 2025

Facility/ Infrastructure	Severe Winter Weather	Dam Failure	Wildfire	Earthquake	Lightning	Tropical & Post-Tropical Cyclones	Drought	Flood/ Erosion	High Wind Events	Extreme Temps	Landslide	Avalanche	Infectious Diseases	Solar Storms & Space Weather	SUM TOTAL
Category 1: Primary Response Facilities															
Corner Church	3	3	2	2	2	2	2	2	1	1	1	1	2	1	25
Highway Department	3	3	2	2	2	2	2	2	1	1	1	1	2	1	25
Ironworks Fire Station	3	3	2	2	2	2	2	2	1	1	1	1	2	1	25
Ironworks Town Hall	3	3	2	2	2	2	2	2	1	1	1	1	2	1	25
Gilmanton School (Primary Shelter)	3	1	2	2	2	2	2	1	2	1	1	1	3	1	24
Hidden Valley Camp	3	2	2	2	2	2	2	2	1	1	1	1	2	1	24
Ironworks Church	3	2	2	2	2	2	2	2	1	1	1	1	2	1	24
Municipal Offices (Academy Building)	3	1	2	2	2	2	2	1	1	1	1	1	2	2	23
Public Safety Building	3	1	2	2	2	2	2	1	1	1	1	1	2	2	23
Year-round Library	3	1	2	2	2	2	2	1	1	1	1	1	2	1	22
Category 2: Secondary Response Facilities															
Iron Works Market	3	3	2	2	2	2	2	2	1	1	1	1	2	1	25
Town Hall (Secondary Shelter)	3	3	2	2	2	2	2	1	1	1	1	1	2	1	24
TDS - Telephone	3	3	2	2	2	2	2	2	1	1	1	1	1	2	25
First Student Bus Co.	3	2	2	2	2	2	2	2	1	1	1	1	1	2	24

Facility/ Infrastructure	Severe Winter Weather	Dam Failure	Wildfire	Earthquake	Lightning	Tropical & Post-Tropical Cyclones	Drought	Flood/ Erosion	High Wind Events	Extreme Temps	Landslide	Avalanche	Infectious Diseases	Solar Storms & Space Weather	SUM TOTAL
Category 3: Populations and Places to Protect															
Ironworks Harvest Bible Church	3	3	2	2	2	2	2	2	1	1	1	1	2	1	25
Ironworks Village Area	3	3	2	2	2	2	2	2	1	1	1	1	1	1	24
Sawyer Lake	3	2	2	2	2	2	2	2	1	1	1	1	1	1	23
Shellcamp Pond	3	2	2	2	2	2	2	2	1	1	1	1	1	1	23
Camp Bell Boy Scout Camp	3	2	2	2	2	2	2	2	1	1	1	1	2	1	24
Four Corners Village Area	3	2	2	2	2	2	2	2	1	1	1	1	1	1	23
Hidden Valley	3	2	2	2	2	2	2	2	1	1	1	1	1	1	23
Rocky Pond	3	2	2	2	2	2	2	2	1	1	1	1	1	1	23
Corner Library	3	1	2	2	2	2	2	1	1	1	1	1	1	1	21
Category 4: Major Evacuation Routes															
NH Rt 140	3	3	2	2	2	2	2	3	1	1	1	1	1	1	25
NH Rt 107	3	3	2	2	2	2	2	2	1	1	1	1	1	1	24
NH 129	3	2	2	2	2	2	2	3	1	1	1	1	1	1	24
Stage Road	3	3	2	2	2	2	2	2	1	1	1	1	1	1	24
Allens Mills Rd	3	2	2	2	2	2	2	2	1	1	1	1	1	1	23
Middle Route	3	2	2	2	2	2	2	2	1	1	1	1	1	1	23
NH Rt 106	3	2	2	2	2	2	2	2	1	1	1	1	1	1	23
Total	**90**	**67**	**60**	**60**	**60**	**60**	**60**	**56**	**31**	**30**	**30**	**30**	**45**	**34**	

SECTION V: MITIGATION STRATEGIES

A. CURRENT PLANS, POLICIES, AND REGULATIONS

The planning decisions that affect community growth patterns have evolved over the years as Gilmanton has developed. Many local programs have the effect of mitigating disasters; some of these have been in effect for years, others were implemented since the development of the 2019 Hazard Mitigation Plan. A review of existing mitigation strategies was conducted and 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. Also included is a column with comments noted by the Committee. The review of existing effectiveness utilized these categories:

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 tried or put to the test.***

The primary planning mechanism in Gilmanton addressing land use development is the master plan. Gilmanton's Master Plan was last revised in 2018. The town's Zoning Ordinance (2024) along with Subdivision (2020) and Site Plan Review Regulations (2021) are the tools for implementing the vision and goals of the master plan. These various planning documents are responsible for promoting the health, safety, and welfare of the community.

The town's Zoning Ordinance was updated since the last HMP. NH RSA 674:2(e) does allow for the inclusion of a natural hazards Section in a local master plan. The town should consider adopting this HMP as part of the master plan by reference.

How the town appropriates its funds is another form of planning, indicating local priorities. In Gilmanton, the Selectmen are responsible for the development of annual and long-term town budgets, which could include some hazard mitigation expenses. However, it was noted that while expectations regarding level of service have gone up, three of the last four years the town has opted for a default (level-funded) budget.

Table V-1: Existing Protections and Policies

Existing Protection	Description	Responsible Agent	Effectiveness* *Poor/Fair/Good/Excellent*
Emergency Operations Plan (2023)	Local guide for response to hazard events	EMD	Good
Floodplain Ordinance (2016)	Involved in the National Flood Insurance Program (NFIP) since 1975. The Flood Hazard Boundary Maps for Gilmanton were revised in 1979 and then converted to Flood Insurance Rate Maps in 2008. These serve as the most recent representation of the potential flood areas in Gilmanton. The town maintains a Floodplain Ordinance that restricts the types of development that can occur in the floodplain.	Town Planner	Good
Dam Emergency Action Plan	Plans are in place for Sawyer (2006) and Crystal Lake (2013) dams and Sunset Lake dam in Alton. In addition to maintaining the Plans, routine dam inspections are performed on-site as prescribed by the New Hampshire Department of Environmental Service's Dams Bureau.	NH DES	Fair
Master Plan (2018)	Many of the goals and objectives from the Gilmanton Master Plan support hazard mitigation ideals. These include addressing issues associated with growth, infrastructure, and land use, along with improving the quality of roads throughout town.	Town Planner	Good
Zoning Ordinance	The Zoning Ordinance regulates land use in Gilmanton and has been updated in regularly since 2010. Likewise, the Road Design Standards were updated in 2010 and Subdivision Regulations in 2020. Wellhead and Aquifer Protection ordinances were adopted in 2011, a Steep Slopes Overlay in 2012, and a Biosolids ordinance in 2018. The Site Plan Review Regulations (2021) address topics such as erosion and sediment control in the development of commercial and residential sites (three or more units)	Town Planner	Good
Capital Improvement Plan	This multi-year budgeting tool is actively used for addressing many of the town's infrastructure and equipment needs. Meeting frequently in 2025.	CIP Committee	Good

Existing Protection	Description	Responsible Agent	Effectiveness* *Poor/Fair/Good/Excellent*
Infrastructure	Gilmanton adheres to the State Bridge Design Standards. Bridges are inspected by the state and maintained by the town. Local funds for this work are included in the town's CIP. The Road Agent inspects culverts and storm drains two – three times per year and conducts maintenance as needed. He also does roadside mowing once a year to reduce fire hazards. There is a very active snowmobile club that carries out maintenance on Class VI roads.	Road Agent	Good
Building Code & Code Enforcement	Follow the BOCA and NFPA standards and the town does have a part-time Code Enforcement Officer.	Code Enforcement Officer	Good
Communications	The town of Gilmanton maintains a Reverse 911 system for notifying residents town-wide in case of an emergency. They now also utilize Nixle and residents can sign up for it through the town website.	Police Chief	Good
Outreach and Education	The Police and Fire Departments conduct several outreach programs for residents and in the school, including distribution of smoke detectors, Fire Prevention Week, gun safety workshop, the DARE program, and Project Good Morning for seniors.	Police & Fire Chiefs	Good
Mutual Aid	The goal of New Hampshire Mutual Aid agreements is to facilitate quick response to a variety of emergencies by creating an inter-community cooperative. The program creates a network of communities that will assist one another during emergency situations. This is done through the creation of partnering agreements and fashioning a protocol for requesting and receiving mutual aid. The Fire Department actively participates in the Lakes Region Mutual Aid. The Police Department actively participates in the Belknap County Sheriff's Department Mutual Aid and has formal mutual aid agreements with surrounding towns.	Police & Fire Chiefs	Good

Existing Protection	Description	Responsible Agent	Effectiveness* *Poor/Fair/Good/Excellent*
Training	The staffs of both the Fire and Police Departments participate in regular local and regional training programs.	Police & Fire Chiefs	Good
School Emergency Planning	Gilmanton Elementary School has an Evacuation Plan and practice implementing it regularly. The School Emergency Prevention Plan is being updated by the school administration and the Police Chief.	Police Chief	Good

A Capital Improvements Program (CIP) is a tool that can be useful in helping a community budget for a variety of expensive capital projects, including those that mitigate hazards (NH RSA 674.5). The CIP can be developed by the Planning Board or a committee appointed by the Board of Selectmen. Gilmanton does have a CIP Committee.

B. STATUS OF 2019 ACTIONS

The 2019 HMP contained 32 recommended actions, 30 mitigation actions regarding natural hazards and 2 mitigation actions relating to human-caused hazards. The status of the mitigation actions recommended in the 2019 plan is indicated in Table V-2 as either Completed (C), Deleted (X), or Deferred (D) [Mitigation Actions regarding human-caused hazards are addressed in Appendix G.] A review of the status of these actions reveals that eleven have been completed and three others are no longer considered pertinent. Deferred Actions (or portions of deferred Actions) were carried forward to be considered along with new Mitigation Actions (Table V-3).

Table V-2: Status of Mitigation Actions from the 2019 Plan Key: C-Completed, X – Delete, D – Deferred

Status of Gilmanton 2019 HMP Actions

Hazard	Projects	Project Status (2025)	Comments
Severe Winter Weather	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of severe winter weather on their properties.	**D**	In process with operating budget funds
Infectious Diseases	Work with PPH to provide information and public outreach regarding steps that residents and visitors can take to reduce the likelihood of being impacted by infectious diseases.	**D**	In process with operating budget funds
High Winds *(Tornado/ Downbursts)*	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of high winds on their properties.	**D**	In process with operating budget funds
Drought	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of drought on their properties.	**D**	In process with operating budget funds
All Hazards	Update and implement the School Emergency Prevention Plan.	**C**	Completed 2024

Hazard	Projects	Project Status (2025)	Comments
All Hazards	Obtain and install and appropriately sized generator for the facility to meet the various purposes that it serves.	**C**	Completed - school upgraded generator
Flooding	Repair and widen the bridge along Crystal Lake Rd. near Places Mill Rd.	**C**	Completed using State Bridge Aid Funds
Flooding	Repair and widen the bridge along Stage Rd. near Beauty Hill Rd.	**C**	Completed using State Bridge Aid Funds
Flooding	Replace and enlarge culverts along Stage Rd. near Stone Rd., along Stone Rd. near Meetinghouse Pond.	**C**	Completed with operating funds
Flooding	Improve drainage conditions along Allen's Mills Rd. (Evacuation Route) at NH Rte. 106.	**C**	Completed with operating funds
Fire	Implement the recommendations of the 2010 Water Resources Plan.	**X**	Outdated/No longer relevant
All Hazards	Include the Gilmanton Hazard Mitigation Plan in the town Master Plan.	**C**	Completed
All Hazards	Develop a plan to enable residents to bring pets to a shelter and publicize this plan.	**C**	Completed
All Hazards	Conduct a table-top exercise	**D**	Needs to be readdressed
All Hazards	Improve pavement conditions along Stage Rd. (Evacuation Route).	**C**	Most has been completed, remaining carried over as a new action
Wildfire	Conduct educational outreach regarding mitigation strategies for wildfire, including information about Fire Permits and the FireWise program. Include this information on the town website.	**D**	In process with operating budget funds

Hazard	Projects	Project Status (2025)	Comments
Tropical or Post-Tropical Cyclone	Provide information and public outreach on steps that people can take to keep themselves safe and mitigate the effects of the high winds and rain on their homes and businesses.	**D**	In process with operating budget funds
Extreme Temperature	Provide information and public outreach regarding steps that residents and visitors can take to protect themselves in extreme temperatures.	**D**	In process with operating budget funds
Extreme Temperature	Provide information and public outreach on measures that property owners can take to mitigate the effects on their homes and businesses, such as keeping pipes from freezing in cold temperatures.	**D**	In process with operating budget funds
Earthquake	Work with Gilmanton Elementary School on retrofitting & hardening the school building against earthquakes and other events that might damage the structure.	**D**	Still needs addressing
Flooding	Work with NH Fish & Game and NH DES to reduce the flooding on Meadow Pond Rd near Shellcamp Rd. associated with beaver dams.	**D**	In process with operating budget funds
Dam Failure	Develop regular correspondence with State and private dam owners regarding dam maintenance.	**D**	In process with operating budget funds
Flood	Document the Storm Drain/Culvert Maintenance Program.	**C**	Documentation completed
All Hazards	Reduce the number of "dead zones" for radio communication.	**D**	Seen improvements, but still an issue during certain weather
Flooding	Make needed improvements to roads and drainage to reduce washouts along Currier Hill Rd. west of High St.	**D**	In process, but experiencing some budget constraints

Hazard	Projects	Project Status (2025)	Comments
Lightning	Investigate the best options for the town to mitigate the effects of lightning **on critical records**, especially those in the Town offices.	**D**	In process with operating budget funds
Earthquake	Learn more about how susceptible the dams and bridge in town are to earthquakes (NH DES & NH DOT)	**X**	Not an issue, not a priority
Lightning	Investigate the best options for the town to mitigate the effects of lightning **on critical facilitie**s, especially the Town Hall and offices.	**D**	Completed for the Town Hall and Offices
Flooding	Actively participate in and adopt recommendations of Geofluvial Assessment.	**D**	In process with operating budget funds
Flooding	Develop and implement a system for maintaining Elevation Certificates for properties within the floodplain.	**C**	Addressed in the 2024 Floodplain Management Ordinance

C. MITIGATION GOALS AND TYPES OF ACTIONS

GOALS

In the 2019 Plan, the committee affirmed its support for the goals stated in the State HMP at the time. This included both general and hazard-specific local goals. In 2023 the New Hampshire State Hazard Mitigation Plan published six overarching goals to help align the plan with new focuses on equity, the impacts of climate change, and community lifelines. The Gilmanton HMP Committee reviewed both sets of goals and adopted the following wording that incorporates elements of both sets of goals as they apply to Gilmanton.

Goal I: Community and Resource Protection

Reduce the potential impact of natural disasters on the town's residents and visitors, as well as its critical facilities, property, economy, and natural, historical and cultural resources, through a coordinated and collaborative effort to implement appropriate and cost-effective hazard mitigation measures.

Goal II: Outreach and Education

Enhance protection of the general population, citizens, and guests, including vulnerable populations of the Town of Gilmanton through public education of the impacts of potential hazards before, during and after an event, while increasing the public's awareness of the threats and hazards which face the Town and possible mitigation measures.

Goal III: Coordination and Communication

Promote regular collaboration and communication between various departments and with local, regional, and state officials; thereby ensuring that those involved are aware of their responsibilities in the continuation of essential services.

Goal IV: Damage Prevention

Minimize the damage and public expense which might be caused to public and private buildings and infrastructure due to natural hazards and the effects of warmer and wetter weather through appropriate mitigation strategies.

The Goals will be achieved through:

a. Identifying and assessing hazards posing a risk to Gilmanton and developing mitigation measures through a community outreach effort, including vulnerable populations.

b. A coordinated and collaborative effort between federal, State, and local authorities along with other partners (private, NGOs, and VOADs*) to implement appropriate and cost-effective hazard mitigation measures.

c. Public education about disaster preparedness and resilience and expanded awareness of the threats and hazards which face the town.

d. Strengthen Continuity of Operations and Continuity of Government to ensure continuation of essential services through training, outreach, and education.

e. Reduce the impact of increased severe weather incidents (flooding, snow and ice storms).

*NGO – Non-governmental Organization, VOAD - Voluntary Organizations Active in Disaster

TYPES OF ACTIONS

There are six **types of actions** that communities may take to reduce the likelihood that a hazard might impact the community. Below each **action type** are several examples of those actions.

A. Actions that will keep things from getting worse - Prevention
   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. Capital Improvements Plan – limiting the extension of public infrastructure into hazard areas
   e. Building and Fire codes

B. Actions that address individual buildings - Property Protection
   a. Flood-proofing existing buildings
   b. Retrofitting existing buildings to reduce damage
   c. Relocating structures from hazard-prone areas
   d. Public procurement and management of land vulnerable to hazard damage

C. Actions that will inform the public - Public education and awareness
   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. Actions that will protect natural resources
   a. Erosion and sediment control programs
   b. Wetlands protection programs
   c. Expand public open space
   d. Environmental restoration programs

E. Actions that will protect emergency services before, during, and immediately after an event (Long-term continuity)
   a. Protect warning system capability
   b. Protection or hardening of critical facilities such as fire stations or hospitals

c. Protection of infrastructure, such as roads that are needed in emergency response

F. Actions that will control the hazard – <u>Structural projects</u>

a. Diversion of stormwater away from developed areas
b. Reservoirs to store drinking water

D. MITIGATION ACTIONS

Through a review of the risk assessment and local vulnerabilities, several Problem Statements were identified and refined by the Committee. Through discussion an updated list of mitigation strategies was developed to address these current problems. Hazards are listed alphabetically, and ID letters/numbers do not indicate any prioritization.

Table V-3: Problem Statements and Potential Mitigation Actions

Project ID	Hazard	Problem Statements	Projects
AH 1	**All Hazards**	Practicing the Emergency Operation Plan can build confidence and identify gaps.	Conduct a table-top exercise
AH 2	**All Hazards**	While Stage Rd. is an evacuation Rd, the pavement is in poor condition, in part due to poor drainage and washout.	Improve pavement conditions along Stage Road, between Stone Road to Elm Street.
AH 3	**All Hazards**	While communication in town has improved, there are still some gaps in coverage in the southern part of town. This could impact emergency response.	Reduce the number of "dead zones" for radio communication.
DF	**Dam Failure**	There should be a better awareness of dam maintenance and periodic communication with dam owners. Best done when there is not an emergency.	Develop regular correspondence with State and private dam owners regarding dam maintenance.
D	**Drought**	Drought can lead to low water tables and dry wells. Most properties rely on private wells.	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of drought on their properties.
E	**Earthquake**	The elementary school can be hardened, protecting many of the town's vulnerable population.	Work with Gilmanton Elementary School on retrofitting & hardening the school building against earthquakes and other events that might damage the structure.
ET 1	**Extreme Temperature**	If vulnerable populations do not take appropriate steps, they can succumb to extreme heat or extreme cold, putting a burden on the emergency response system.	Provide information and public outreach regarding steps that residents and visitors can take to protect themselves in extreme temperatures.

Project ID	Hazard	Problem Statements	Projects
ET 2	**Extreme Temperature**	In winter, unprotected pipes can burst damaging property and endangering residents.	Provide information and public outreach on measures that property owners can take to mitigate the effects on their homes and businesses, such as keeping pipes from freezing in cold temperatures.
F 1	**Flooding**	Meadow Pond Road floods due to beaver activity, restricting traffic and emergency response to the area.	Work with NH Fish & Game and NH DES to reduce the flooding on Meadow Pond Rd near Shellcamp Rd. associated with beaver dams.
F 2	**Flooding**	Washouts have occurred along Currier Hill Road west of High Street.	Make needed improvements to roads and drainage to reduce washouts along Currier Hill Rd. west of High St.
F 3	**Flooding**	A Geofluvial Assessment can identify areas of the riverbank most susceptible to erosion and recommend actions to reduce hazards.	Actively participate in and adopt recommendations of Geofluvial Assessment.
F 4	**Flooding**	Culverts and other drainage structures should be built and maintained to protect the town's infrastructure. There should be a written record of work on these structures.	Implement the Storm Drain/Culvert Maintenance Program
HW	**High Winds *(Tornado/ Downbursts)***	Downed trees and branches can damage property and hinder emergency response vehicles. The more property owners do to reduce the impacts of high winds to their property, the less damage is likely.	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of high winds on their properties.
ID	**Infectious Diseases**	The more that residents and visitors do to protect themselves from infectious diseases, the less emergency response it likely to be required.	Work with PPH to provide information and public outreach regarding steps that residents and visitors can take to reduce the likelihood of being impacted by infectious diseases.

Project ID	Hazard	Problem Statements	Projects
L 1	**Lightning**	Many municipal records and documents are stored in the Academy Building, a large wooden structure.	Investigate the best options for the town to mitigate the effects of lightning **on critical records**, especially those in the Town offices.
L 2	**Lightning**	Many of the town's municipal properties do not have lightning rods, surge protection, or other form of protection against lightning strikes.	Investigate the best options for the town to mitigate the effects of lightning **on critical facilities**
SWW	**Severe Winter Weather**	The more that property owners do to reduce the impacts of winter weather to their property, the less damage is likely to be sustained.	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of severe winter weather on their properties.
PTC	**Tropical or Post-Tropical Cyclone**	The combination of high winds and heavy rains during a cyclone can combine to bring down branches, trees, and wires damaging structures and leading to flooding.	Provide information and public outreach on steps that people can take to keep themselves safe and mitigate the effects of the high winds and rain on their homes and businesses.
WF	**Wildfire**	Many homes in Gilmanton are built near the woods and are susceptible to damage during a wildfire.	Conduct educational outreach regarding mitigation strategies for wildfire, including information about Fire Permits and the FireWise program. Include this information on the town website.

The Committee identified the various costs and benefits associated with each action. The estimated cost represents what the town estimates it will cost in terms of dollars or staff hours to implement each action. Table V-4 shows the costs as well as the various benefits associated with each action. This table also includes notes whether the action addresses existing structures/infrastructure or future (new) structures/infrastructure. The ID letters are used simply for tracking purposes; they do not indicate any sort of prioritization. IDs with similar highlighting address similar problem statements.

Table V-4: Actions indicating Hazard, Cost, Structure, Goal, and Type of Action

Project ID	Hazard	Problem	Mitigation Action	New/ Existing	Estimated Cost	Potential Funding Source
AH 1	**All Hazards**	Practicing the Emergency Operation Plan can build confidence and identify gaps.	Conduct a table-top exercise	Existing	20-30 Staff Hours	Department Budgets
AH 2	**All Hazards**	While Stage Rd. is an evacuation Rd, the pavement is in poor condition, in part due to poor drainage and washout.	Improve pavement conditions along Stage Road, between Stone Road to Elm Street.	New	$75K - $120K	Town Budget
AH 3	**All Hazards**	While communication in town has improved, there are still some gaps in coverage in the southern part of town. This could impact emergency response.	Reduce the number of "dead zones" for radio communication.	Existing	$5K	Town Budget
DF	**Dam Failure**	There should be a better awareness of dam maintenance and periodic communication with dam owners. Best done when there is not an emergency.	Develop regular correspondence with State and private dam owners regarding dam maintenance.	Existing	20-30 Staff Hours	Department Budget
D	**Drought**	Drought can lead to low water tables and dry wells. Most properties rely on private wells.	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of drought on their properties.	Existing	10-15 Staff Hours	Town Budget
E	**Earthquake**	The elementary school can be hardened, protecting many of the town's vulnerable population.	Work with Gilmanton Elementary School on retrofitting & hardening the school building against earthquakes and other events that might damage the structure.	Existing	80 Staff Hours	School Budget

Project ID	Hazard	Problem	Mitigation Action	New/ Existing	Estimated Cost	Potential Funding Source
ET 1	**Extreme Temperature**	If vulnerable populations do not take appropriate steps, they can succumb to extreme heat or extreme cold, putting a burden on the emergency response system.	Provide information and public outreach regarding steps that residents and visitors can take to protect themselves in extreme temperatures.	Existing	20-30 Staff Hours	Town Budget
ET 2	**Extreme Temperature**	In winter, unprotected pipes can burst damaging property and endangering residents.	Provide information and public outreach on measures that property owners can take to mitigate the effects on their homes and businesses, such as keeping pipes from freezing in cold temperatures.	Existing	20-30 Staff Hours	Town Budget
F 1	**Flooding**	Meadow Pond Road floods due to beaver activity, restricting traffic and emergency response to the area.	Work with NH Fish & Game and NH DES to reduce the flooding on Meadow Pond Rd near Shellcamp Rd. associated with beaver dams.	Existing	10-20 Staff Hours	Town Budget
F 2	**Flooding**	Washouts have occurred along Currier Hill Road west of High Street.	Make needed improvements to roads and drainage to reduce washouts along Currier Hill Rd. west of High St.	Existing	20-40 Staff Hours	Town Budget and FEMA grants
F 3	**Flooding**	A Geofluvial Assessment can identify areas of the riverbank most susceptible to erosion and recommend actions to reduce hazards.	Actively participate in and adopt recommendations of Geofluvial Assessment.	Existing	20 Staff Hours	Town Budget

Project ID	Hazard	Problem	Mitigation Action	New/ Existing	Estimated Cost	Potential Funding Source
F 4	**Flooding**	Culverts and other drainage structures should be built and maintained to protect the town's infrastructure. There should be a written record of work on these structures.	Implement the Storm Drain/Culvert Maintenance Program	New	20-40 Staff Hours	Town Budget
HW	**High Winds *(Tornado/ Downbursts)***	Downed trees and branches can damage property and hinder emergency response vehicles. The more property owners do to reduce the impacts of high winds to their property, the less damage is likely.	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of high winds on their properties.	Existing	10-15 Staff Hours	Town Budget
ID	**Infectious Diseases**	The more that residents and visitors do to protect themselves from infectious diseases, the less emergency response it likely to be required.	Work with PPH to provide information and public outreach regarding steps that residents and visitors can take to reduce the likelihood of being impacted by infectious diseases.	Existing	10-15 Staff Hours	Town Budget & PPH
L 1	**Lightning**	Many municipal records and documents are stored in the Academy Building, a large wooden structure.	Investigate the best options for the town to mitigate the effects of lightning **on critical records**, especially those in the Town offices.	Existing	2,000 Staff Hours	Town Budget
L 2	**Lightning**	Many of the town's municipal properties do not have lightning rods, surge protection, or other form of protection against lightning strikes.	Investigate the best options for the town to mitigate the effects of lightning **on critical facilities**	Existing	20 Staff Hours	Town Budget

Project ID	Hazard	Problem	Mitigation Action	New/ Existing	Estimated Cost	Potential Funding Source
SWW	**Severe Winter Weather**	The more that property owners do to reduce the impacts of winter weather to their property, the less damage is likely to be sustained.	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of severe winter weather on their properties.	Existing	10-15 Staff Hours	Town Budget
PTC	**Tropical or Post-Tropical Cyclone**	The combination of high winds and heavy rains during a cyclone can combine to bring down branches, trees, and wires damaging structures and leading to flooding.	Provide information and public outreach on steps that people can take to keep themselves safe and mitigate the effects of the high winds and rain on their homes and businesses.	Existing	20-30 Staff Hours	Town Budget
WF	**Wildfire**	Many homes in Gilmanton are built near the woods and are susceptible to damage during a wildfire.	Conduct educational outreach regarding mitigation strategies for wildfire, including information about Fire Permits and the FireWise program. Include this information on the town website.	Existing	80 Staff Hours	Town Budget

E. PRIORITIZATION OF ACTIONS

After considering the various merits and limitations of each project, the Committee prioritized the projects which had been identified. Committee members agreed to the standard STAPLEE prioritization tool to reflect the concerns of the community. The tool asks the committee to consider seven separate aspects for each Action. There was much discussion during this prioritization process and the final scores were reached through group consensus. Table V-5 shows the Actions and their scores. Total scores range from a high of 7 to a low of -7. See Appendix H for further details regarding the STAPLEE prioritization method and the detailed scores.

Scoring: 1 = Highly effective of feasible, 0 = Neutral, -1 = Ineffective or not feasible

Table V-5: Recommended Actions in Ranked Order

Project ID	Hazard	Mitigation Action	Total
SWW	**Severe Winter Weather**	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of severe winter weather on their properties.	**7**
ID	**Infectious Diseases**	Work with PPH to provide information and public outreach regarding steps that residents and visitors can take to reduce the likelihood of being impacted by infectious diseases.	**7**
HW	**High Winds *(Tornado/ Downbursts)***	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of high winds on their properties.	**7**
D	**Drought**	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of drought on their properties.	**7**
AH 3	**All Hazards**	Reduce the number of "dead zones" for radio communication.	**3**
F 4	**Flooding**	Implement the Storm Drain/Culvert Maintenance Program	**3**
AH 1	**All Hazards**	Conduct a table-top exercise	**1**
F 2	**Flooding**	Make needed improvements to roads and drainage to reduce washouts along Currier Hill Rd. west of High St.	**1**
AH 2	**All Hazards**	Improve pavement conditions along Stage Road, between Stone Road to Elm Street.	**1**

Project ID	Hazard	Mitigation Action	Total
WF	**Wildfire**	Conduct educational outreach regarding mitigation strategies for wildfire, including information about Fire Permits and the FireWise program. Include this information on the town website.	**0**
PTC	**Tropical or Post-Tropical Cyclone**	Provide information and public outreach on steps that people can take to keep themselves safe and mitigate the effects of the high winds and rain on their homes and businesses.	**0**
ET 1	**Extreme Temperature**	Provide information and public outreach regarding steps that residents and visitors can take to protect themselves in extreme temperatures.	**0**
ET 2	**Extreme Temperature**	Provide information and public outreach on measures that property owners can take to mitigate the effects on their homes and businesses, such as keeping pipes from freezing in cold temperatures.	**0**
L 1	**Lightning**	Investigate the best options for the town to mitigate the effects of lightning **on critical records**, especially those in the Town offices.	**0**
F 3	**Flooding**	Actively participate in and adopt recommendations of Geofluvial Assessment.	**0**
E	**Earthquake**	Work with Gilmanton Elementary School on retrofitting & hardening the school building against earthquakes and other events that might damage the structure.	**-1**
L 2	**Lightning**	Investigate the best options for the town to mitigate the effects of lightning **on critical facilitie**s, especially the Town Hall and offices.	**-1**
F 1	**Flooding**	Work with NH Fish & Game and NH DES to reduce the flooding on Meadow Pond Rd near Shellcamp Rd. associated with beaver dams.	**-2**
DF	**Dam Failure**	Develop regular correspondence with State and private dam owners regarding dam maintenance.	**-2**

F. IMPLEMENTATION OF MITIGATION ACTIONS

There are many factors that 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.

In the context of these factors, the Committee discussed the mitigation actions and relative level of priority, recognizing that some actions are of greater priority to different town departments. This implementation schedule is a matrix (Table V-6) indicating the estimated cost of implementation, potential funding sources, the parties responsible for bringing about these actions, and implementation time frame. The time frame used fits within the 5-year term of this plan (Short 1-2 yr, Medium 3-4 yr, Long 5+ yr). These are listed in order of their Time Frame. 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 and a record of this process and progress documented in Appendix K.

Table V-6: Implementation Schedule for Mitigation Actions by Time Frame

Project ID	Hazard	Mitigation Action	Estimated Cost	Potential Funding Source	Responsible Party	Time Frame S: 1-2 yr, M: 3-4 yr, L: 5+ yr
F 3	**Flooding**	Actively participate in and adopt recommendations of Geofluvial Assessment.	20 Staff Hours	Town Budget	CC/PB	L
AH 3	**All Hazards**	Reduce the number of "dead zones" for radio communication.	$5K	Town Budget	Fire & Police Chiefs	M

Project ID	Hazard	Mitigation Action	Estimated Cost	Potential Funding Source	Responsible Party	Time Frame S: 1-2 yr, M: 3-4 yr, L: 5+ yr
E	**Earthquake**	Work with Gilmanton Elementary School on retrofitting & hardening the school building against earthquakes and other events that might damage the structure.		School Budget	EMD, TA, School Principal	M
F 1	**Flooding**	Work with NH Fish & Game and NH DES to reduce the flooding on Meadow Pond Rd near Shellcamp Rd. associated with beaver dams.		Town Budget	RA	M
F 2	**Flooding**	Make needed improvements to roads and drainage to reduce washouts along Currier Hill Rd. west of High St.	20-40 Staff Hours	Town Budget and FEMA grants	RA	M
L 1	**Lightning**	Investigate the best options for the town to mitigate the effects of lightning **on critical records**, especially those in the Town offices.	2,000 Staff Hours	Town Budget	TA	M
L 2	**Lightning**	Investigate the best options for the town to mitigate the effects of lightning **on critical facilities**	20 Staff Hours	Town Budget	TA	M
AH 1	**All Hazards**	Conduct a table-top exercise	20-30 Staff Hours	Department Budgets	EMD	S
AH 2	**All Hazards**	Improve pavement conditions along Stage Road, between Stone Road to Elm Street.	$75K - $120K	Town Budget	RA	S
DF	**Dam Failure**	Develop regular correspondence with State and private dam owners regarding dam maintenance.	20-30 Staff Hours	Department Budget	Selectboard	S

Project ID	Hazard	Mitigation Action	Estimated Cost	Potential Funding Source	Responsible Party	Time Frame S: 1-2 yr, M: 3-4 yr, L: 5+ yr
D	**Drought**	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of drought on their properties.	10-15 Staff Hours	Town Budget	Fire Chief	S
ET 1	**Extreme Temperature**	Provide information and public outreach regarding steps that residents and visitors can take to protect themselves in extreme temperatures.	20-30 Staff Hours	Town Budget	EMD	S
ET 2	**Extreme Temperature**	Provide information and public outreach on measures that property owners can take to mitigate the effects on their homes and businesses, such as keeping pipes from freezing in cold temperatures.	20-30 Staff Hours	Town Budget	EMD	S
F 4	**Flooding**	Implement the Storm Drain/Culvert Maintenance Program	20-40 Staff Hours	Town Budget	RA	S
HW	**High Winds *(Tornado/ Downbursts)***	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of high winds on their properties.	10-15 Staff Hours	Town Budget	EMD	S
ID	**Infectious Diseases**	Work with PPH to provide information and public outreach regarding steps that residents and visitors can take to reduce the likelihood of being impacted by infectious diseases.	10-15 Staff Hours	Town Budget & PPH	EMD	S

Project ID	Hazard	Mitigation Action	Estimated Cost	Potential Funding Source	Responsible Party	Time Frame S: 1-2 yr, M: 3-4 yr, L: 5+ yr
SWW	**Severe Winter Weather**	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of severe winter weather on their properties.	10-15 Staff Hours	Town Budget	EMD	S
PTC	**Tropical or Post-Tropical Cyclone**	Provide information and public outreach on steps that people can take to keep themselves safe and mitigate the effects of the high winds and rain on their homes and businesses.	20-30 Staff Hours	Town Budget	EMD	S
WF	**Wildfire**	Conduct educational outreach regarding mitigation strategies for wildfire, including information about Fire Permits and the FireWise program. Include this information on the town website.	80 Staff Hours	Town Budget	Fire Chief	S

SECTION VI: PLAN ADOPTION AND MONITORING

A. IMPLEMENTATION

The Gilmanton Hazard Mitigation Plan Update Committee, established by the Emergency Management Directors/Selectboard, 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. 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, NH HSEM, state agencies, and other sources such as those listed in Appendix B. The EMDs will coordinate with the department heads to ensure that funds and staff time for these projects are available. The EMD and Hazard Mitigation Committee will work with the Selectmen to incorporate the various projects into subsequent budgets where appropriate. The EMDs will also coordinate with the NH HSEM Field Representative to ensure that the town applies for appropriate grant funds.

For those mitigation actions which involve updates to the Master Plan, Zoning, or the Subdivision or Site Plan Regulations or development of regulations or standards, members of the Hazard Mitigation Committee will work with the Planning Board to develop appropriate language.

When appropriate, an effort will be made to incorporate this plan into the Emergency Operations Plan. Within a year after the town officially adopts the 2025 update to the Hazard Mitigation Plan, an attempt will be made to have hazard mitigation strategies integrated into existing mechanisms and into all other ongoing town planning activities.

B. PLAN MAINTENANCE & PUBLIC INVOLVEMENT

Plan Evaluation

To track progress and evaluate the mitigation strategies identified in Section V.F., the Gilmanton Hazard Mitigation Planning Committee and the Selectboard will review the Hazard Mitigation Plan **every year (by the end of July) or after a major hazard event**. The **Emergency Management Director** is responsible for initiating this review and shall consult with members of the HMP Committee identified in this Plan. Responsible parties identified for specific mitigation actions will be asked to submit a status report of those actions in advance of the meeting. Tables A and B in Appendix K may be used for recording this plan evaluation. Meetings will entail the following actions:

Documentation of natural hazard events during the past year, local damages (and costs) associated with these events, costs associated with mitigation actions (and any match or reimbursement). Documentation could include a brief description, any associated costs and funding sources, as well as images.

Track progress toward implementation of the current mitigation plan based on status reports from responsible parties. Refer to Section V.B. for an applicable evaluation scale.

Assess the effectiveness of the plan at achieving the plan's stated purpose (Section I.D.) and goals (Section V.C.). Refer to Section V.A. for an applicable evaluation scale.

Other activities and discussions may include:
Review previous hazard events to discuss and evaluate major issues and possible mitigation for future events.
Assess how the mitigation strategies of the plan can be integrated with other Town plans and operational procedures, including the zoning ordinance and local Emergency Operations Plan.

Plan Update

The Emergency Management Director is also responsible for updating and resubmitting the plan to FEMA to be re-approved every five years. The EMDs will convene a plan update committee in mid-2029 to begin updating this plan before it expires. The plan update process will follow the same planning process used in this plan update. If modifications have been made either to the FEMA Local Mitigation Planning Policy Guide or the NH State Hazard Mitigation Plan, these will be incorporated into the planning process. Administrative staff may be utilized to assist, especially with the public involvement process.

Public Participation

For annual monitoring/evaluation process and for the five-year update, techniques that will be utilized for public involvement include:

- Provide invitations to municipal department heads as well as the Planning Board;
- Post notices of meetings at the Town Office and on the town website;
- Submit press releases for publication in the *Laconia Daily Sun* and other appropriate newspapers or media outlets.
- Additional steps to consider include conducting a public survey, holding an evening meeting, or providing for remote participation in meetings.

Entities to invite to future Hazard Mitigation monitoring/evaluation meetings and plan updates include the Emergency Management Directors of the neighboring communities of Belmont, Gilford, Alton, Barnstead, Loudon, and Canterbury.. Additionally, the Emergency Preparedness Planner from Capital Area Regional Health Network, social service providers such as Belknap-Merrimack CAP, and others working with socially vulnerable communities in Gilmanton.

C. SIGNED CERTIFICATE OF ADOPTION

BOARD OF SELECTMEN
A RESOLUTION ADOPTING THE
GILMANTON, NH
HAZARD MITIGATION PLAN UPDATE 2025

WHEREAS, the Town of Gilmanton, NH has historically experienced damage from natural hazards, and it continues to be vulnerable to the effects of those natural hazards as profiled in this plan, potentially resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Gilmanton, NH has developed and received approval pending adoption from the Federal Emergency Management Agency (FEMA) for its Hazard Mitigation Plan Update 2025 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held between June and July 2025 regarding the development and review of the Gilmanton, NH Hazard Mitigation Plan Update 2025; and

WHEREAS, the Plan specifically addresses hazard mitigation actions and Plan maintenance procedures for the Town of Gilmanton, NH, and

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

WHEREAS, adoption of this Plan will make the Town of Gilmanton, NH eligible for funding to mitigate the impacts of future hazards; now therefore be it RESOLVED by the Board of Selectmen:

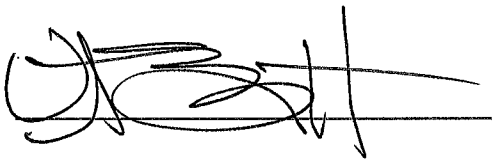
1. The Plan is hereby adopted as an official plan of the Town of Gilmanton, NH;
2. The respective officials identified in the mitigation actions of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the plan's mitigation action items shall be presented to the Selectboard by the Emergency Management Director.

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the town seal of the Town of Gilmanton this

Date: 08-18-2025

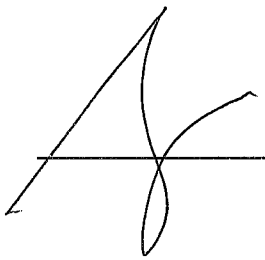
Seal:

GILMANTON, NH SELECTBOARD



(Signature) Vincent Baiocchetti (Printed)

(Signature) Evan Collins (Printed)



(Signature) Meredith Kelley (Printed)

ATTEST:

(Signature) (Printed)

U.S. Department of Homeland Security
FEMA Region 1
220 Binney Street
Cambridge, MA 02142

FEMA

September 4, 2025

Robert M. Buxton, Director
New Hampshire Homeland Security and Emergency Management
33 Hazen Dr.
Concord, NH 03305

Director Buxton:

The U.S. Department of Homeland Security, Federal Emergency Management Agency (FEMA) Region 1 Mitigation Division has approved the *Gilmanton, NH Hazard Mitigation Plan Update 2025* effective **September 4, 2025** through **September 3, 2030** in accordance with the planning requirements of the Robert T. Stafford Relief and Emergency Assistance Act (Stafford Act), as amended; the National Flood Insurance Act of 1968, as amended; the National Dam Safety Program Act, as amended; and Title 44 Code of Federal Regulations (CFR) Part 201.

Mitigation plans may include additional content to meet Element H: Additional State Requirements or content the local government included beyond applicable FEMA mitigation planning requirements. FEMA approval does not include the review or approval of content that exceeds these applicable FEMA mitigation planning requirements.

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

The plan must be updated and resubmitted to the FEMA Region 1 Mitigation Division for approval every five years to remain eligible for FEMA mitigation grant funding.

Thank you for your continued commitment and dedication to risk reduction demonstrated by preparing and adopting a strategy for reducing disaster losses. Should you have any questions, please contact Jay Neiderbach at (202) 285-7769 or josiah.neiderbach@fema.dhs.gov.

Sincerely,

CHRISTOPHER J MARKESICH Digitally signed by CHRISTOPHER J MARKESICH
Date: 2025.09.04 12:56:12 -04'00'

Christopher Markesich
Floodplain Management and Insurance Branch Chief
Mitigation Division | DHS, FEMA Region 1

cc: Austin Brown, Mitigation & Recovery Section Chief, NH HSEM
Lynne Ryan, State Planner, NH HSEM
Richard Verville, Mitigation Division Director, DHS, FEMA Region 1
Josiah (Jay) Neiderbach, Hazard Mitigation Community Planner, DHS, FEMA Region 1

APPENDIX A: TECHNICAL RESOURCES

NH Homeland Security and Emergency Management.....271-2231
https://www.hsem.dos.nh.gov/
Hazard Mitigation Section.....271-2231
https://www.hsem.dos.nh.gov/hazard-mitigation

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

Lakes Region Regional Planning Commission 279-8171
https://www.lakesrpc.nh.gov/

NH Governor's Office of Planning and Development 271-2155
https://www.nheconomy.com/office-of-planning-and-development
New Hampshire Floodplain Management Program
https://www.nheconomy.com/office-of-planning-and-development/what-we-do/floodplain-management-program

NH Department of Transportation 271-3734
https://www.dot.nh.gov/

NH Department of Cultural Affairs 271-2540
https://www.dncr.nh.gov/
Division of Historical Resources.....271-3483
https://www.nhdhr.dncr.nh.gov/

NH Department of Environmental Services 271-3503
https://www.des.nh.gov/
Dam Bureau 271-63406
https://www.des.nh.gov/water/dam-maintenance-and-management

NH Municipal Association.....224-7447
https://www.nhmunicipal.org/

NH Fish and Game Department.....271-3421
https://www.wildlife.nh.gov/

NH Department of Natural and Cultural Resources.....271-2411
https://www.dncr.nh.gov/
Division of Forests and Lands.....271-2214
https://www.nhdfl.dncr.nh.gov/
Natural Heritage Inventory 271-2215
https://www.nhdfl.dncr.nh.gov/natural-heritage

Division of Parks and Recreation 271-3255
http://www.nhstateparks.org/

NH Department of Health and Human Services 271-9389
https://www.dhhs.nh.gov/

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
https://www.weather.gov/erh
National Weather Service, Boston/Norton, Massachusetts ..... (508) 824-5116
https://www.weather.gov/box
National Weather Service, Gray, Maine ..... (207) 688-3216
https://www.weather.gov/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
https://www.fs.usda.gov/

Eversource ..... (800) 662-7764
http://www.eversource.com/

New Hampshire Electrical Cooperative ..... (800) 698-2007
http://www.nhec.com/

Cold Region Research Laboratory 646-4187
https://www.erdc.usace.army.mil/Locations/CRREL/

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
https://www.earthdata.nasa.gov/data/instruments/otd

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 Gilmanton. The NH Homeland Security and Emergency Management Community Liaison 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 HSEM, NH OPD, also refer to LRPC

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

NH Public Works Mutual Aid..... UNH Technology Transfer (T2)

National Flood Insurance Program (NFIP) ..... NH Office of Planning & Development

Project Impact..... NH Homeland Security and Emergency Management

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

Shoreland Protection Program .....NH Department of Environmental Services

Various Forest and Lands Program(s) ..... NH Department of Division of Forests and Land

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

State Aid Bridge Program for Municipalities ..... NH Department of Transportation (and LRPC)

Contribution to Damage Losses (RSA 235:34) ..... NH Department of Transportation

FEMA's Public Assistance (PA) grant program is authorized through the Stafford Act to provide federal assistance to government organizations and certain Private Nonprofit (PNP) organizations following a Presidential Disaster Declaration. This funding is provided at a 75%/25% cost share to allow government and certain PNP entities to respond and recover from major disasters or emergencies. The Public Assistance program returns damages to their pre-disaster condition. Through the PA program, FEMA provides supplemental assistance in the following categories:

- Emergency Work
    - o Debris Removal
    - o Emergency Protective Measures
- Permanent Work
- Roads and Bridges

- Water Control Facilities
- Public Buildings and Contents
- Public Utilities
- Parks, Recreational, and other facilities

Section 406 of the Stafford Act provides FEMA with the authority to fund cost-effective mitigation measures to repair, restore, or replace eligible damaged facilities, and allows for those structures to be rebuilt or repaired to better than pre-disaster conditions to make them less vulnerable to future hazards. Unlike other hazard mitigation grant programs, Section 406 mitigation is only available in the counties declared in the presidential declaration and only for eligible damaged facilities.[11]

[11] NH State Hazard Mitigation Plan, 2023, p. 26.

Federal Emergency Management Agency (FEMA)

FEMA makes funds available for mitigation efforts to reduce future costs associated with hazard damage.

Mitigation Funding Sources 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 Assistance Grant (HMA)	Provides grants for eligible long-term solutions that reduce the impact of disasters in the future https://www.fema.gov/grants/mitigation	State, Local, and Territorial Governments
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 (EPA)

The EPA makes funds available for water management and wetlands protection programs that help mitigate 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. https://www.epa.gov/nps/319-grant-program-states-and-territories	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. https://www.epa.gov/cwsrf	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,	See website

	extent, prevention, reduction, and elimination of water pollution. https://www.epa.gov/wetlands/wetland-program-development-grants-and-epa-wetlands-grant-coordinators	

Floodplain, Wetland and Watershed Protection Programs

US Army Corps of Engineers (USACE) and the U.S. Fish and Wildlife Service offer funding and technical support for programs designed to protect floodplains, wetlands, and watersheds.

Mitigation Funding Sources 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. https://www.usace.army.mil/Missions/Civil-Works/Technical-Assistance/Planning-Assistance/	50 percent non-federal match
USACE Flood Plain Management Services (FPMS)	Technical support for effective floodplain management. https://www.usace.army.mil/Missions/Civil-Works/Technical-Assistance/FPMS/	See website
USACE Environmental Laboratory	Guidance for implementing environmental programs such as ecosystem restoration and reuse of dredged materials. https://www.erdc.usace.army.mil/Locations/EL/	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. https://www.fws.gov/service/national-coastal-wetlands-conservation-grants	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. https://www.fws.gov/program/partners-fish-and-wildlife	Funding for volunteer-based programs

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. https://www.nifc.gov/about-us/our-partners/blm/fuels/community-assistance	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. https://www.nfpa.org/education-and-research/wildfire/firewise-usa	See website

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. https://www.hudexchange.info/programs/cdbg/	Disaster funds contingent upon Presidential disaster declaration

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 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.	Population under 20,000

	https://www.nifa.usda.gov/grants/funding-opportunities/smith-lever-special-needs-competitive-grants-program	
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. https://www.rd.usda.gov/programs-services/community-facilities/community-facilities-guaranteed-loan-program	Population under 20,000
USDA Community Facilities Direct Loans	Loans for essential community facilities. https://www.rd.usda.gov/programs-services/community-facilities/community-facilities-direct-loan-grant-program	Population of less than 20,000
USDA Community Facilities Direct Grants	Grants to develop essential community facilities. https://www.rd.usda.gov/programs-services/community-facilities	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. https://www.fsa.usda.gov/resources/programs/disaster-assistance-programs	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 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. https://www.nrcs.usda.gov/programs-initiatives/ewp-emergency-watershed-protection#:~:text=The%20EWP%20Program%20offers%20technical,disasters%20that%20impair%20a%20watershed	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. https://www.nrcs.usda.gov/programs-initiatives/watershed-protection-and-flood-	See website

	prevention-operations-wfpo-program	

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

Mitigation Funding Sources Program	Details	Notes
Economic Development Administration (EDA) Investment Programs	Grants that support public works, economic adjustment assistance, and planning. Certain funds allocated for locations recently hit by major disasters. https://www.eda.gov/funding/programs	The maximum investment rate shall not exceed 50 percent of the project cost
U.S. 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. https://www.sba.gov/funding-programs/loans	Must meet SBA approved credit rating

APPENDIX C: PUBLICITY AND INFORMATION

Press releases like the one below were sent to the *Laconia Daily Sun.* Several informational handouts and the 2019 Hazard Mitigation Plan were distributed to the committee and available at all meetings.

Press Release

LAKES REGION PLANNING COMMISSION
103 Main Street, Suite #3
Meredith, NH 03253
Tel 603.279.8171
www.lakesrpc.nh.gov

June 19, 2025

For Immediate Release

Contact: Danielle Scadova-Vose, 603.316.6495, dscadova@lakesrpc.nh.gov

Town of Gilmanton Hazard Mitigation Plan Meeting

The Gilmanton Hazard Mitigation Plan Committee is in the process of updating its 2019 Hazard Mitigation Plan. The committee is represented by a variety of local interests including the Fire, Police, and Highway departments, along with the Town Administrator. The group is reviewing the various hazards that put Gilmanton at risk as well as the development of recommendations to protect the safety and well-being of town residents.

The committee will meet on June 24th at 1:00 PM at the Gilmanton Town Offices, 503 Provence Road. Residents of Gilmanton and representatives from neighboring communities are encouraged to attend. Input to the plan can also be provided through an on-line survey at https://arcg.is/1vLP912 or scanning this QR Code.

Hazard Mitigation Planning is as important to reducing disaster losses as are appropriate regulations and land use ordinances. The most significant natural hazards of concern for Gilmanton are being reviewed and evaluated through this process; in the 2019 Plan these included flooding, winter weather, severe winds, and hurricane.

With the update to the Hazard Mitigation Plan, town leaders will be able to evaluate the status of current plans, policies, and actions then develop and prioritize actions to reduce the impacts of these and other hazards. Community leaders want the town to be a disaster resistant community and believe that updating the Hazard Mitigation Plan will bring Gilmanton one step closer to that goal.

For more information, please contact Gilmanton Emergency Management Director Chief Paul Hempel Fire Chief FireChief@gilmantonnh.org or Danielle Scadova-Vose, Regional Planner at Lakes Region Planning Commission at 603.316.6495. The *2019* Gilmanton *Hazard Mitigation Plan* can be found at https://www.lakesrpc.nh.gov/Pages/Index/228297/hazard-mitigation.

Information

Local Hazard Mitigation Planning

Hazard Mitigation:

"Hazard Mitigation means any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards"

Questions to address:

- Where are potential hazards?
- What are the risks?
- What are we already doing?
- Where are the gaps?
- What actions can be taken?
- What actions are feasible?
- What are our priorities?
- How will these actions be implemented?
- How will the plan be monitored?

What is a Hazard Mitigation Plan?

In cooperation with the NH Bureau of Emergency Management (BEM), the Lakes Region Planning Commission (LRPC) is working with several of its member communities each year to develop local Hazard Mitigation Plans.

The Hazard Mitigation Plans are designed to address each particular community's vulnerability to natural and man-made hazards. The local plan serves as a means to reduce future losses from hazard events before they occur. This local initiative is guided by a community-based Hazard Mitigation Planning Committee, with the LRPC providing technical support. The structure for plan development is provided through the *Guide to Hazard Mitigation Planning for New Hampshire Communities* which ensures that the community has considered the content of the State of New Hampshire Hazard Mitigation (409) Plan.

MITIGATION PROCESS

- IDENTIFY HAZARDS
- PROFILE HAZARD EVENTS
- INVENTORY ASSETS
- ESTIMATE LOSSES
- PRIORITIZE ACTION STEPS
- ADOPT THE PLAN
- IMPLEMENTATION

Why create a plan?

Development of a local Hazard Mitigation Plan is a chance for the community to assess the hazards that have the potential to threaten residents and their property. It also gives the community an opportunity to identify at-risk populations as well as resources within the community that might be at risk. The committee can then explore a variety of steps that might be put into place to help the community reduce damage and loss.

Having a Hazard Mitigation Plan in place, enables many communities to allocate their resources more effectively. It can also be a useful tool for leveraging additional sources of funding in the event of a disaster.

Federal Emergency Management Agency (FEMA) Requirement:

In order for communities to be eligible for the full spectrum of mitigation program funding, local hazard mitigation plans must be approved by FEMA. The staff of LRPC attend semi-annual hazard mitigation meetings and training programs that are designed to expedite the approval process.

Lakes Region Planning Commission
103 N. Main St., Suite #3
Meredith, NH 03253

(603) 279-8171 - phone
(603) 279-0200 - fax

L · R · P · C

Frequently asked questions

- **What will a Hazard Mitigation Plan cost?**

Since this project is funded by the NH Bureau of Emergency Management, the only cost to the community is the dedication of committee members' time and energy.

- **How is a Hazard Mitigation Plan different from an Emergency Action Plan?**

Although there is some overlap, these are different plans, each serving a different function in helping a community to minimize the potential for damage and loss in a community.

Emergency Action Plans (EAP) identifies potential hazard events and the resources available to address them; it also addresses how a community responds to an emergency.

A Hazard Mitigation Plan (HMP) also identifies potential hazard events and community resources. However, an HMP looks at the situation in terms of prevention instead of response. Gaps in coverage, programs, and structural needs are analyzed and specific mitigation steps are recommended and potential funding sources are identified.

- **Is this a community plan, a state plan, or a federal plan?**

The state of New Hampshire does require that each community develop an HMP. Once a plan is approved by FEMA and adopted by the community, should there be a need for Federal Mitigation money, more funding would be available. However, local public involvement is required. The local Emergency Management Director or a committee of citizens should help in plan development; there should also be several public presentations where citizens can make recommendations, provide input, and participate in development of the plan. In the end, the Board of Selectmen need to approve the plan.

Alton dam breach, 1996

The Essentials

At a minimum, each local Hazard Mitigation Plan should contain the following sections:

- An evaluation of the potential hazards within the community
- A description and analysis of local, state, and federal hazard mitigation policies, programs, and capabilities to mitigate the identified hazards in the area
- Goals, objectives, strategies and actions to reduce long-term vulnerability to hazards
- An evaluation of the costs and benefits of the recommended mitigation projects.

State and Local Mitigation Planning

Building stronger and safer

Hazard mitigation planning is the process state, local and tribal governments use to identify risks and vulnerabilities associated with natural disasters and to develop long-term strategies for protecting people and property in future hazard events. The process results in a mitigation plan that offers a strategy for breaking the cycle of disaster damage, reconstruction and repeated damage and a framework for developing feasible and cost-effective mitigation projects. Under the Disaster Mitigation Act of 2000 (Public Law 106-390), State, local and Tribal governments are required to develop a hazard mitigation plan as a condition for receiving certain types of non-emergency disaster assistance.

Reducing risks through mitigation planning

A hazard mitigation plan is a long-term strategy for reducing disaster losses. The planning process promoted by the Disaster Mitigation Act of 2000 is as important as the resulting plan because it encourages jurisdictions to integrate mitigation with day-to-day decision-making regarding land-use planning, floodplain management, site design and other functions.

Mitigation planning elements

- Public involvement – In addition to government agencies involved in incident management, floodplain management and economic development, the planning process usually involves a range of stakeholders, including representatives of neighborhood groups, civic organizations, academia, environmental groups, the business community and individual citizens. Involving stakeholders is essential to determining the most vulnerable populations and facilities in the community and to assuring community wide support for the plan.
- Risk assessment – A risk assessment is the process of identifying natural hazards and risks associated with them, including threats to public health and safety, property damage and economic loss. The assessment answers the fundamental question, "What would happen if a natural disaster occurred?" and provides a factual basis for the mitigation activities proposed in the strategy. The assessment includes a description of the type, location and extent of natural hazards; the jurisdiction's vulnerability to the hazards; and the type and numbers of buildings, infrastructure and critical facilities located in identified hazard areas.
- Mitigation strategy – Based on the risk assessment, State, local and Tribal governments develop mitigation goals and objectives and a strategy for mitigating disaster losses. The strategy sets forth an approach for implementing activities that are cost-effective, technically feasible and environmentally sound.

Hazard mitigation plan required to receive HMGP Project Grants

Local jurisdictions are required by federal law to have a FEMA-approved hazard mitigation plan in order to receive Pre-Disaster Mitigation (PDM) or Hazard Mitigation Grant Program (HMGP) project grant funding. However, in extraordinary circumstances, HMGP funds can be awarded to communities that agree to develop a hazard mitigation plan within 12 months of receiving the project grant. Every State has a FEMA-approved hazard mitigation plan, though many local jurisdictions still do not.

FEMA "FEMA's mission is to support our citizens and first responders to ensure that as a nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards."

Fact Sheet

State and Local Mitigation Planning

FEMA

Mitigation Examples

History shows that the physical, financial and emotional losses caused by disasters can be reduced significantly through mitigation planning. Mitigation focuses attention and resources on solving a particular problem (such as reducing repetitive flood losses) and thereby produces successive benefits over time. Through implementation of local floodplain ordinances, for example, it is estimated that $1.1 billion in flood damages are prevented annually.

Mitigation includes a broad range of activities designed to protect homes, schools, public buildings and critical facilities. Examples include the following types of projects:

- Adopting and enforcing more stringent building codes, flood-proofing requirements, seismic design standards, or wind-bracing requirements for new construction or the retrofit of existing buildings.
- Exceeding the National Flood Insurance Program (NFIP) floodplain management regulations by elevating structures above the base flood elevation (BFE) in high-risk areas.
- Adopting stricter development regulations and zoning ordinances that steer development away from areas subject to flooding, storm surge, or coastal erosion.
- Retrofitting public buildings, schools and critical facilities, such as police and fire stations, to withstand hurricane-strength winds or ground shaking from earthquakes.
- Using public funds to acquire damaged homes or businesses in flood-prone areas, demolish or relocate the structures and use the property for open space, wetlands, or recreational uses.
- Building community shelters and "safe rooms" to help protect people in public buildings and schools in hurricane- and tornado-prone areas.

Planning tool available for government agencies

FEMA has developed a number of planning tools to help government agencies develop mitigation plans. These include how-to guides, CD ROMs and online information about organizing a planning team, involving stakeholders, conducting risk assessments, evaluating potential mitigation measures, conducting benefit-cost analyses and other planning issues.

For more information

Please visit: http://www.fema.gov/plan/mitplanning/index.

For state name disaster recovery, visit www.fema.gov or your state Web-site.

FEMA

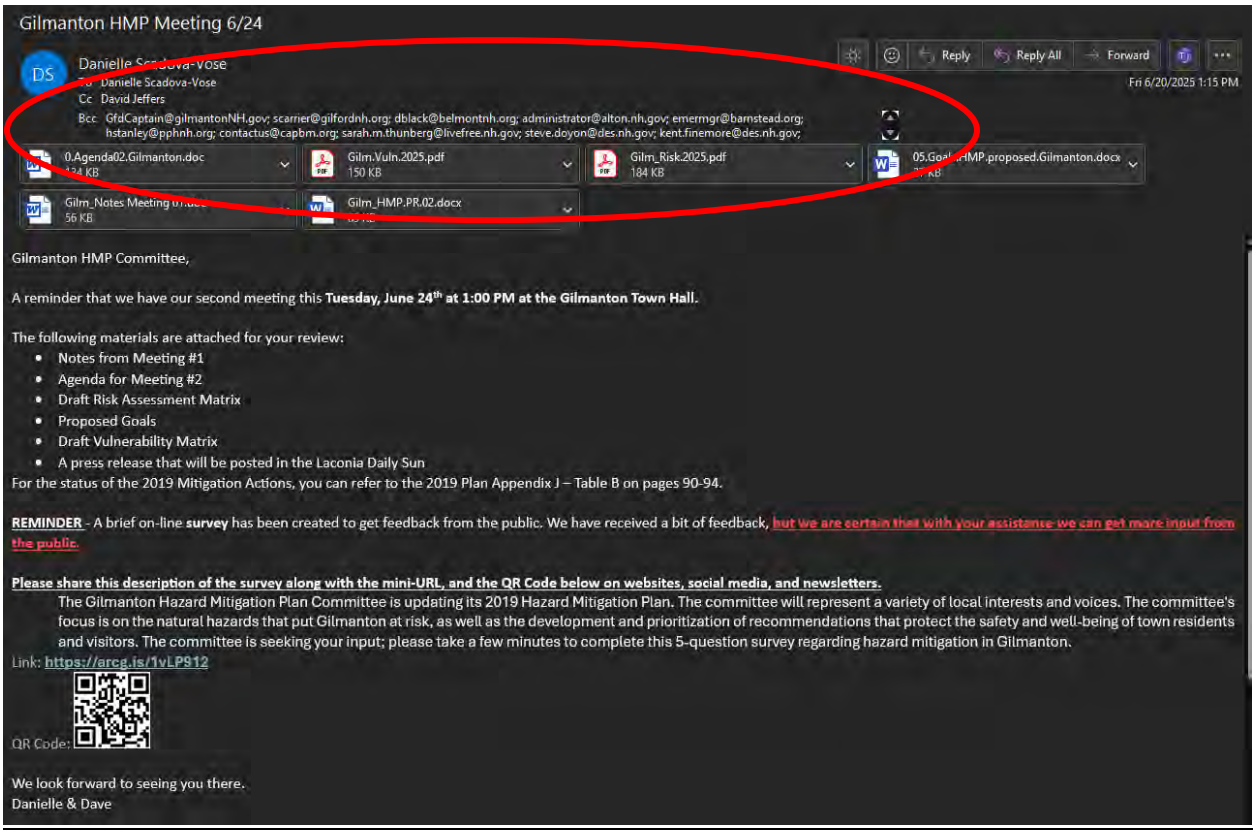
"FEMA's mission is to support our citizens and first responders to ensure that as a nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards."

APPENDIX D: MEETINGS, AGENDAS, PARTICIPATION, and SURVEY

Invitations to participate in meetings were sent to committee members, neighboring EMDs, various state agencies, and stakeholders including those who work with socially vulnerable communities.

This section also contains copies of the Committee meeting agendas and a summary of participation. All Committee meetings were held at the Gilmanton Town Hall and were open to the public. Agendas were developed by the LRPC planner who also facilitated the meetings. At each meeting there was an opportunity for public input.

Invitation



Gilmanton HMP Meeting 6/24

DS Danielle Scadova-Vose

To Danielle Scadova-Vose
Cc David Jeffers
Bcc GfdCaptain@gilmantonNH.gov; scarrier@gilfordnh.org; dblack@belmontnh.org; administrator@alton.nh.gov; emermgr@barnstead.org; hstanley@pphnh.org; contactus@capbm.org; sarah.m.thunberg@livefree.nh.gov; steve.doyon@des.nh.gov; kent.finemore@des.nh.gov;

Reply Reply All Forward

Fri 6/20/2025 1:15 PM

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Gilm.Vuln.2025.pdf 150 KB
Gilm_Risk.2025.pdf 184 KB
05.Goal...HMP.proposed.Gilmanton.docx
Gilm_Notes Meeting 01.doc 56 KB
Gilm_HMP.PR.02.docx

Gilmanton HMP Committee,

A reminder that we have our second meeting this **Tuesday, June 24th at 1:00 PM at the Gilmanton Town Hall.**

The following materials are attached for your review:

- Notes from Meeting #1
- Agenda for Meeting #2
- Draft Risk Assessment Matrix
- Proposed Goals
- Draft Vulnerability Matrix
- A press release that will be posted in the Laconia Daily Sun

For the status of the 2019 Mitigation Actions, you can refer to the 2019 Plan Appendix J – Table B on pages 90-94.

REMINDER - A brief on-line **survey** has been created to get feedback from the public. We have received a bit of feedback, but we are certain that with your assistance we can get more input from the public.

Please share this description of the survey along with the mini-URL, and the QR Code below on websites, social media, and newsletters.

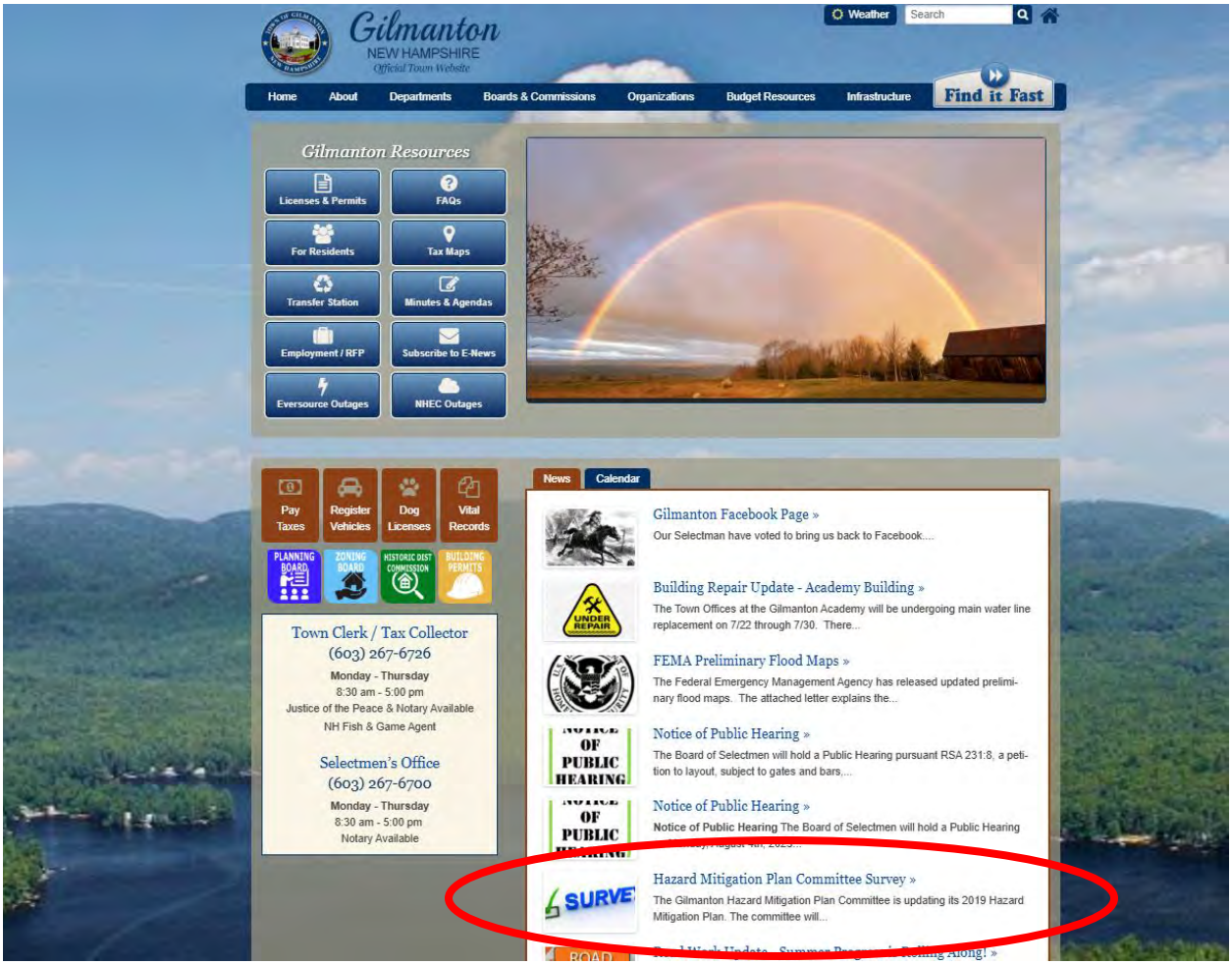
The Gilmanton Hazard Mitigation Plan Committee is updating its 2019 Hazard Mitigation Plan. The committee will represent a variety of local interests and voices. The committee's focus is on the natural hazards that put Gilmanton at risk, as well as the development and prioritization of recommendations that protect the safety and well-being of town residents and visitors. The committee is seeking your input; please take a few minutes to complete this 5-question survey regarding hazard mitigation in Gilmanton.

Link: https://arcg.is/1vLP912

QR Code:

We look forward to seeing you there.
Danielle & Dave

Survey Advertisement



Gilmanton Hazard Mitigation Plan Update

June 3, 2025 1:00 PM
Gilmanton Town Hall
503 Province Road
Gilmanton, NH

Meeting 1 - AGENDA

1. Introductions
2. Mitigation planning vs. emergency response planning
3. Changes to Plan Development
   a. FEMA Guidance/Checklist (2022)
   b. State HMP (2023)
4. Process
   a. Plan Update Process
   b. Methods for Gathering Information
   c. Community Outreach & Opportunities for Public Input*
5. Information – Changes since last plan
   a. Natural hazards
      i. History of events
      ii. Locations
      iii. Impacts
   b. Critical Facilities
   c. Development Trends
   d. Community Capabilities
6. Schedule for Meetings
7. Public Input

A copy of the 2019 Gilmanton HMP can be found at https://www.lakesrpc.nh.gov/Pages/Index/228297/hazard-mitigation.

*A brief on-line survey has been created to get feedback from the public. It can be accessed with this link https://arcg.is/1vLP912 or by scanning this QR Code with a phone or tablet. **Please share this link & QR Code with residents and encourage them to complete this survey.**

FEMA

Mitigation vs. preparedness/response

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

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

Major changes to FEMA Guidelines & Checklist

The 2022 FEMA Guidelines & Checklist place emphasis on several specific areas.

- Natural Hazards as opposed to Human-caused or Technological
- Efforts to include the concerns of under-represented populations

Plan Update Process

a. Hazard Identification
b. Risk Analysis
c. Identify Problems
d. Identify Mitigation Actions
e. Prioritize Mitigation Actions
f. Address Implementation
g. Draft Plan
h. Review & Adoption

Community Capabilities

- Planning & Regulatory
- Administrative and Technical
- Financial
- Education & Outreach
- National Flood Insurance Program (NFIP)

Participants

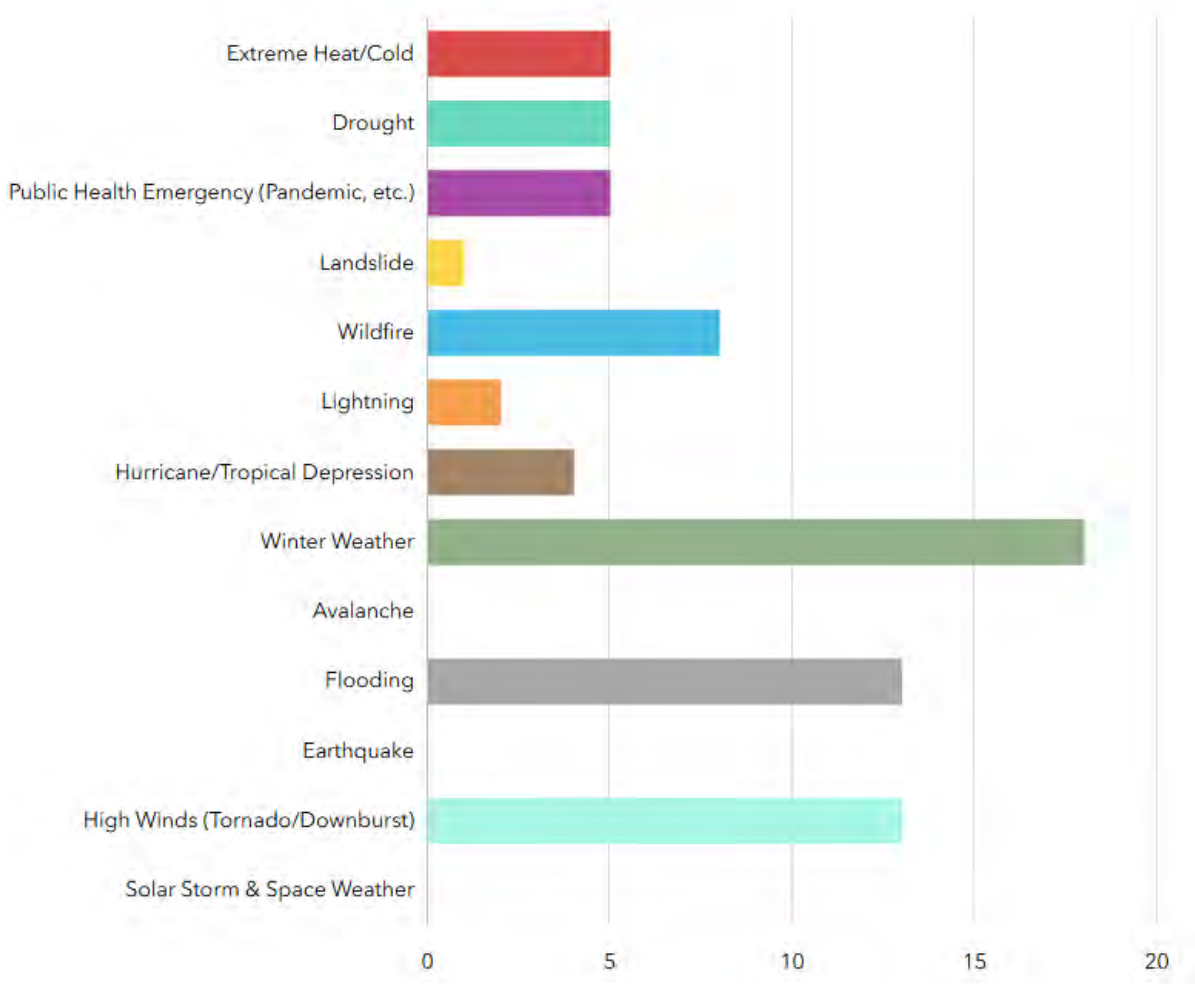
6/3/2025	6/24/2025	7/8/2025			
Meeting #1	Meeting #2	Meeting #3	Homework/ Correspondence	Title	Name
2	1.5	1.5	5	Emergency Management Director & Fire Chief	Paul Hempel
2	1.5	1.5	2	Police Chief	Matthew Currier
2	1.5	1.5	5	Fire Captain	John Cunningham
2	1.5	1.5	2	Road Agent	Travis Mitchell
2		1.5	2	Town Administrator	Heather Carpenter
		1.5		Fire Department	Matt Greene
		1.5		NH HSEM Field Representative Community Liaison	Peter Llewellyn
		1.5		Regional Public Health Network Emergency Prep	Heather Stanley
	1.5	1.5		Lakes Region Planning Commission, Regional Planner	Danielle Scadova-Vose
2	1.5			Lakes Region Planning Commission, Planning Manager	David Jeffers

Public Input - Survey

In addition to postings and press releases requesting public input at meetings, members of the public were also encouraged to complete an on-line survey to provide input to the hazard mitigation planning process. Twenty-four responses were received and shared with the committee at meetings as local risk was considered and problems/mitigation actions discussed.

The questions and responses are below.

1. Which of these hazards are of greatest concern to you? (Select up to four from the list.)

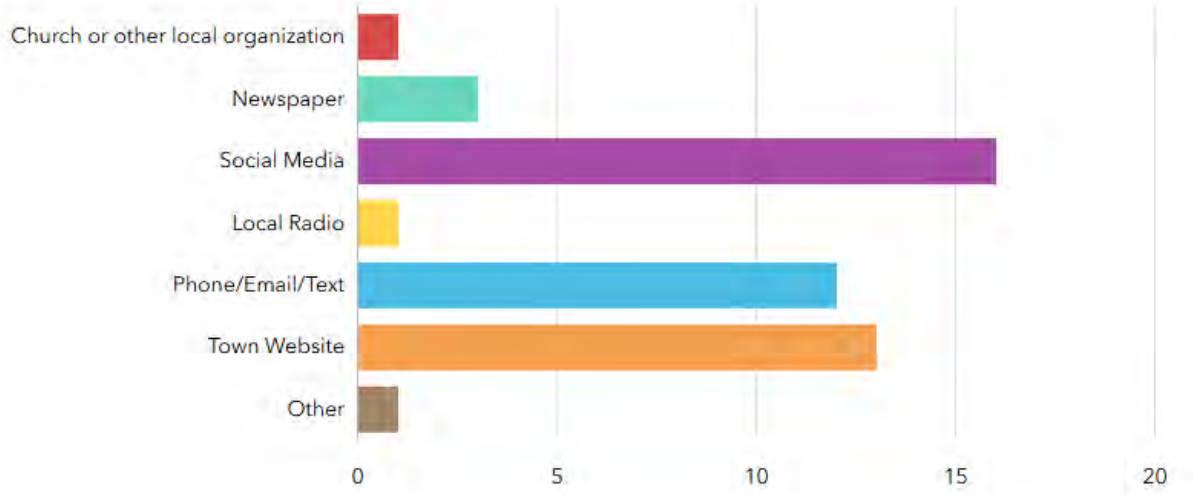


2. Which road(s) or areas are you most concerned about in Gilmanton when severe weather occurs? (List the road segment or area of town. Why are you concerned?)

- The iron works
- Stage rd. We live on this road and the amount of heavy commercial traffic as well as work traffic create a daily hazard. Speed limits are not enforced, and vehicles frequently pass cars that are maintaining the speed limit.
- Smaller roads seem to have a lot of downed trees when there's a large storm. Not specific to any particular small roads.

- Rte 107 between 129 & 140
- N/a
- Mountain road (crystal lake bend) has seen significant flooding where the road nearly became impassible. They finally paved the missing tar where it eroded away before but I'm concerned it may happened again with heavy rains.
- Middle Rte and other roads that have become undermined on the edges due to heavy rain washing away the gravel under the asphalt.
- Middle route
- Loon pond,smithmeeting House,meadow pond.
- I'm not familiar enough with Gilmanton to know the problem areas.
- Guinea Ridge/Sargent Road/Places Mill Rd. Dirt roads in most seasons have issues: icey in winter, sometimes impassable in mud season, pot holes/ washboard in ALL seasons making travel difficult.
- ELM ST
- Crystal Lake Road. I live on this road and it did flood next to my home two years ago in August. Because the dam was under designed and can not protect us from a flood and because it raised the level of the lake by 3.8 feet above the now natural level and my home was built 250 years ago and the basement floor is at the same level as the dam level. This flooding will take out many homes that abut the Suncook River outflow.
- Almost all of the roads have alot of trees over hanging. One good snow or ice storm could prevent travel
- Allen’s Mill Rd. It is a heavily trafficked area due to work commuters as well as others, and is often not treated as well early in the morning during winter. This road also has a steep decline heading from town to 106. This decline poses significant safety risks if not cleared/treated prior to early morning traffic. I have witnessed on several occasions people going below the speed limit in these situations, and they start to slide into 106 during morning commutes. 140/107 intersection: have witnessed multiple people having difficulties navigating this area during winter weather. This is due to roads not being cleared/treated in a timely manner, and significant lapses of time between plowings during storms.
- All of them get washed out downhill badly. Paved roads the sides get flooded and pour out into the roads. Dirt roads holes get deeper. Pavement wears away underneath and roads become giant holes which we have seen in the past few years.

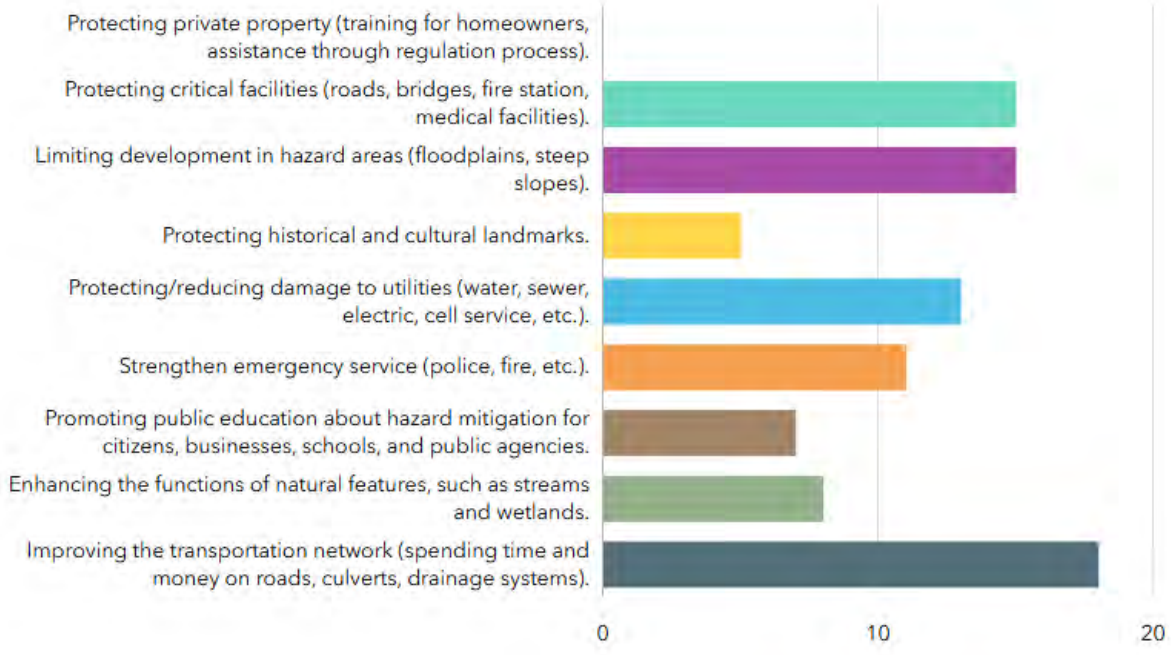
3. What are the best methods for you to receive information about how to make your business, home, and/or members of your household safer from hazards?



4. Can you describe any hazard events that impacted Gilmanton, especially ones that occurred in the last five years? (Up to three events).
   - Snow and ice storms that pull trees down into the roadway
   - Road deterioration is the worst! All of them!
   - Power outage mud season
   - N/a
   - long lasting power outages
   - Large wind storms last year took down multiple poles on mountain road near varney. It took two days to clear the road to make it passable. We had to take detours up through alton circle or crystal lake road to get anywhere.
   - Ice storm caused power outages all over town for several days. 3 years ago? Flooding last year ? caused roads to wash out all over town making it almost impossible to leave town/evacuate if necessary from the Crystal Lake area.
   - Ice storm 1998. Because of our elevation, we were in Perpetual ice for 8 days. It was impossible to get out of our yard due to extreme ice. Trees came down all around us. High winds are an increasing danger these last couple of winters. We're finding more wind damage than in previous decades Flood on Stage Rd by Stone Rd/Camp Fatima area Summers are producing more severe storms. Having more hail events too.
   - General Lakes Region- extreme weather events: winter storms, windstorms, flooding, etc.
   - Flooding of Crystal Lake in August of 2023. Road washouts thruout town due to 8 inches of rain fall in 24 hours. We had shore front wash out and the lake still has not recovered from the runoff. A lot of silt is still in suspension and the oxogen levels in the water are low. It does not help that way too much sand is applied to the roads and left to runoff into the lake. I have watched the quality of the water deteriorate at a now very rapid rate. Over building and the ZBA granting rebuilding less than the town ordinace of 75 ft. with appropriate reason. The flooding closed may roads due to washouts.
   - Crystal lake and sawyer lake not being monitored for bacteria levels causes hazards for our community.

- .Eastern end of rt140 July 2023 flooding/washout .Middle rt, rt107 and rt140 March 2018(?) Blocked by trees .Extremely high winds, frequent high winds of past few years - anticipate fallen trees, difficult to control fires Weather extremes are increasing

5. Natural Hazards can have a significant impact on a community, but planning for (or mitigating) these events can help lessen the impacts. Planning may require the use of Town and Federal funds, as well as Town staff and volunteer support. Please select the four mitigation strategies you would prioritize for the Town of Gilmanton.



APPENDIX E: HAZARD EVENTS PRIOR TO 2019

Hazard	Date	Location	Description	Source*
Drought	1929-1936	Statewide	Regional	FEMA
Drought	1939-1944	Statewide	Sever in Southeast	FEMA
Drought	1947-1950	Statewide	Moderate	FEMA
Drought	1960-1969	Statewide	Longest record continuous period of below normal precipitation.	FEMA
Drought	2001 - 02	Statewide		FEMA
Earthquake	12/20/1940	Carroll County	5.5 on Richter scale - affected region	NHHSEM
Earthquake	12/24/1940	Carroll County	5.5 on Richter scale - affected region	NHHSEM
Earthquake	1/18/1982	Sanbornton/Gaza	4.5 Richter Scale - felt in Nashua	NOAA
Flood	3/14/1977	Central and Southern NH	Peak flow for Soucook River	NHHSEM
Flood	8/19/1991	Statewide	FEMA DR-917-NH: Hurricane Bob struck New Hampshire causing extensive damage in Rockingham and Stafford counties, but the effects were felt statewide.	NHHSEM
Flood	10/15/2005	Statewide	Rainfall amounts ranged from around 3 - 9 inches. This resulting flooding of small rivers and streams caused additional damage to roads that had been damaged earlier in the month. $625 K in damages statewide.	NOAA
Flood	6/1/1998 – 7/31/1998	Central and Southern NH	FEMA DR-1231-NH: A series of rainfall events. Counties Declared: Grafton, Carroll, Belknap, Rockingham, Sullivan, and Merrimack (1 fatality)	NHHSEM
Flood	7/1/1986 – 8/10/1986	Statewide	FEMA DR-771-NH: Severe summer storms with heavy rains, tornadoes; flash flood and severe winds.	NHHSEM
Flood	8/ 7/1990 - 8/11/1990	Statewide	FEMA DR-876-NH: A series of storm events from August 7-11, 1990 with moderate to heavy rains produced widespread flooding in New Hampshire.	NHHSEM
Flood	8/19/1991	Statewide	FEMA DR-917-NH: Hurricane Bob struck New Hampshire causing extensive damage in Rockingham and Stafford counties, but the effects were felt statewide.	NHHSEM
Flood	3/13/1996	Alton	Dam break. $500,000. 1 fatality. Not weather related.	NOAA
Flood	7/4/1996	Laconia	5 inches of rain in Laconia. Roads were washed out and a section of railroad bed was destroyed.	NOAA
Flood	6/1/1998 – 7/31/1998	Central and Southern NH	FEMA DR-1231-NH: A series of rainfall events. Counties Declared: Grafton, Carroll, Belknap, Rockingham, Sullivan, and Merrimack (1 fatality)	NHHSEM
Flood	6/15/1998	Belknap County	3-8 inches of rain. $100,000 in damages. Some homes and campgrounds were evacuated.	NOAA
Flood	6/17/1998	Belknap County	$200,000 in damages.	NOAA
Flood	7/26/1999	Belmont/ Laconia	Thunderstorms produced more than 2 inches of rain in 75 minutes causing flooding of poor drainage areas in Laconia and Belmont.	NOAA

Hazard	Date	Location	Description	Source*
Flood	3/28/2000	Tilton/ Gilford	The rain combined with melting snow to cause small rivers and streams to rise resulting in road washouts in Gilford, Laconia, and Tilton. $15,000.	NOAA
Flood	8/5/2003	Gilford	3 to 4 inches of rain and caused roads and streets to flood in the town of Gilford.	NOAA
Flood	4/3/2005	Statewide	$945,000 Statewide. The Pemigewasset and Smith Rivers were above flood stage.	NOAA
Flood	10/8/2005	Statewide	$5.8 M plus $200,000 in crop damage; 2 deaths. Nine inches of rain in Gilford. Tremendous amount of damage to roads and bridges, and to the infrastructure in general due to flooding of small rivers and streams. Homes and businesses were damaged.	NOAA
Flood	10/15/2005	Statewide	Rainfall amounts ranged from around 3 - 9 inches. This resulting flooding of small rivers and streams caused additional damage to roads that had been damaged earlier in the month. $625 K in damages statewide.	NOAA
Flood	5/13/2006	Belknap County	Over 12 inches of rain in some locations in a 72-hour period. Homes and businesses were damaged extensively. Many roads were washed out and impassable. Some bridges were damaged or destroyed.	NOAA
Flood	7/12/2006	Sanbornton	3-5 inches of rain caused flooding $10,000 in damages	NOAA
Flood	7/22/2006	Sanbornton	3-5 inches of rain caused flooding and washouts: $10,000 in damages	NOAA
Flood	4/16/2007	Laconia/ New Hampton	$700,000 in damages in Laconia, $45,000 to New Hampton roads	NOAA
Flood	8/7/2008	New Hampton, Meredith, Center Harbor, Ashland	Moderate to severe damage to numerous roads and infrastructure estimated at over $1.24 million. One death in Ashland, two injuries.	NOAA
Flood	8/10/2008	Gilford. Laconia, Meredith	3 inches caused small stream flooding.	NOAA
Flood	6/27/2009	Belmont	3 inches, flash flooding. $50,000 in damages	NOAA
Flood	7/26/2011	Laconia	Flash flooding and washout on NH Routes 106 and 107.	NOAA
Flood	8/28/2011	Barnstead	Tropical Storm Irene caused $25,000 in property damages. Statewide damage to roads was extreme with repair costs in the millions.	NOAA
Hail	7/12/1970	Belknap County	2.00-inch diameter	NOAA
Hail	7/11/1976	Belknap County	1.75-inch diameter	NOAA
Hail	8/1/1991	Belknap County	1.0-inch diameter	NOAA
Hail	7/14/1996	Sanbornton/ Gaza	1.0 - 1.5-inch diameter	NOAA
Hail	6/20/2006	Alton	1.75-inch diameter	NOAA
Hail	6/29/2006	New Hampton, Sanbornton	0.75 -1.0-inch diameter	NOAA
Hail	6/5/2007	Alton and Center Harbor	0.75 -1.0-inch diameter	NOAA

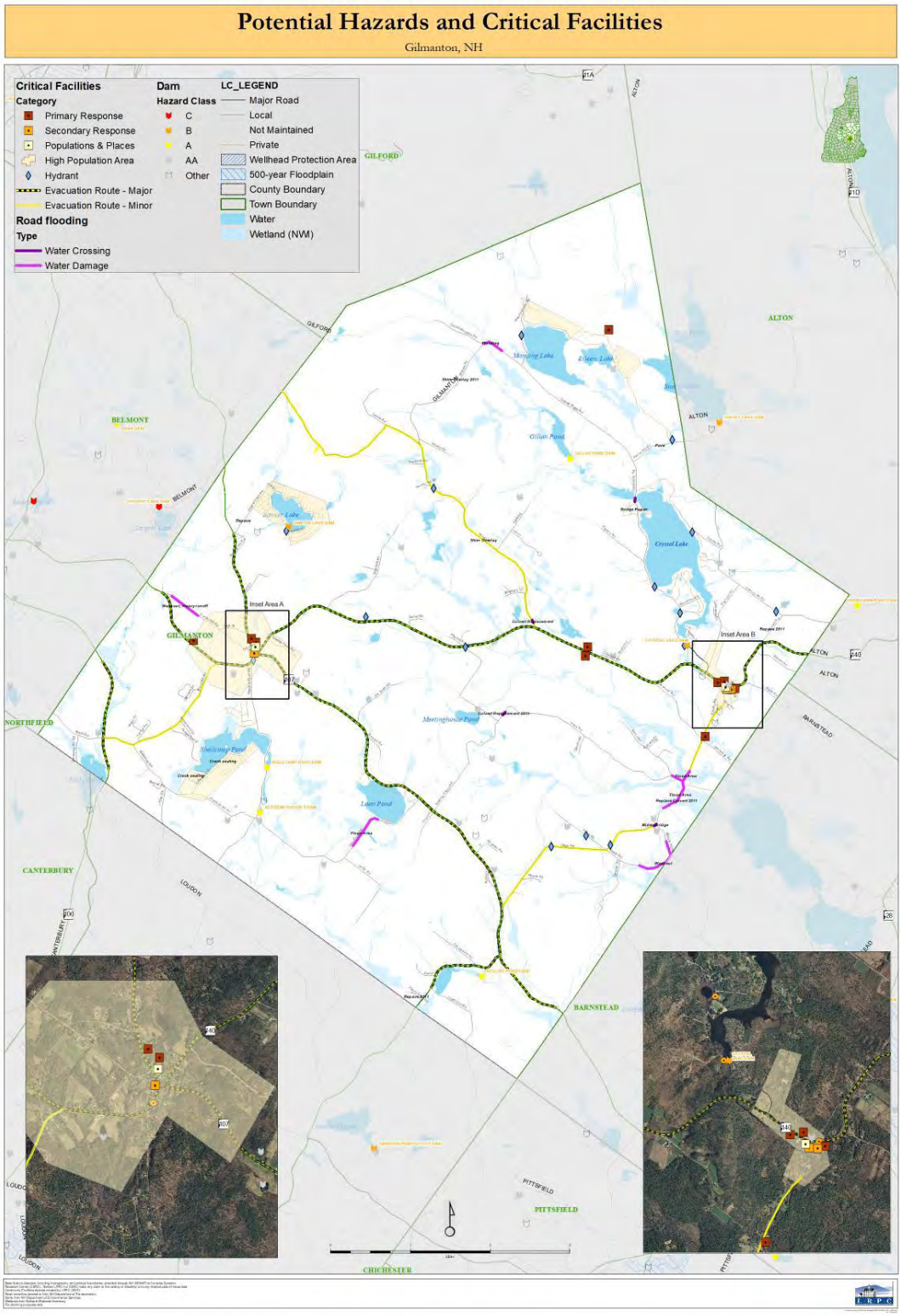
Hazard	Date	Location	Description	Source*
Hail	7/9/2007	Center Harbor, Gilford, Laconia, Sanbornton	0.88 -1.0-inch diameter	NOAA
Hail	7/15/2007	Belmont	0.88-inch diameter	NOAA
Hail	6/22/2008	Meredith	0.88 -1.0-inch diameter	NOAA
Hail	7/2/2008	Laconia	0.75-inch diameter	NOAA
Hail	7/18/2008	Meredith	0.75-inch diameter	NOAA
Hail	7/19/2008	Meredith	0.75-inch diameter	NOAA
Hail	8/7/2008	Sanbornton	0.75 - 0.88-inch diameter	NOAA
Hail	8/10/2008	Laconia, Meredith	0.75-inch diameter	NOAA
Hail	6/26/2009	Alton	0.88-inch diameter	NOAA
Hail	6/27/2009	Belmont	0.88-inch diameter	NOAA
Hail	7/4/2009	Tilton	0.88-inch diameter	NOAA
Hail	7/21/2010	Barnstead	0.88-inch diameter	NOAA
Hail	7/26/2011	Alton, Gilford, Meredith	0.75 – 1.00-inch diameter	NOAA
Hurricane	9/21/1938	Statewide	13 Deaths, 2 billion feet of marketable lumber blown down, flooding throughout the State, total Direct Losses - $12,337,643 (1938 Dollars)	NHHSEM
Hurricane	9/9/1991	Statewide	Hurricane Bob, severe storms	FEMA
Hurricane	September 18- 19, 1999	Statewide	Heavy Rains associated with tropical storms; Hurricane Floyd affected the area.	FEMA
Ice	1/5/1979	Statewide	Power and Transportation disruptions	NHHSEM
Ice	1/7/1998	Statewide	More than $17 million in damage in NH alone	NHHSEM
Ice	12/11/2008	Statewide	State emergency declaration after major power and transportation disruption. Exceeding $15 million in damages. Over 400,000 without power, 2 fatalities due to carbon monoxide poisoning.	NHHSEM
Ice/Freezing Rain	1/27/1996	Belknap County	Cold road surfaces quickly iced up at the beginning of a heavy rain event, leading to numerous automobile accidents over a short period of time. Multiple vehicle accidents and one fatality	NOAA
Lightning	7/26/1994	Alton	A home was gutted by fire in Alton due to a lightning strike. $500,000.	NOAA
Lightning	7/9/1996	Gilford	Lightning started a fire that caused $20,000 damage to a home in Gilford.	NOAA
Lightning	6/25/2000	Gilmanton	2 injuries.	NOAA
Lightning	7/18/2000	Laconia	Lightning caused a power surge resulting in about $5,000. in damages.	NOAA
Lightning	7/29/2000	Gilford	2 injuries.	NOAA
Lightning	5/31/2002	Franklin/ Laconia	A total of $70,000 in damages.	NOAA
Lightning	8/13/2003	Belmont/ Laconia	Four injuries.	NOAA
Lightning	8/11/2004	Center Harbor	$100,000 in structural damages.	NOAA
Lightning	6/9/2005	New Hampton	$100,000 in structural damages to a lakeside lodge.	NOAA
Lightning	6/10/2005	Laconia	1 injury.	NOAA
Lightning	7/22/2005	New Hampton	Barn fire. $50,000.	NOAA
Lightning	7/27/2005	Sanbornton	$10,000 in property damages.	NOAA
Lightning	10/20/2006	Meredith	Three injuries and $20,000 in damages.	NOAA

Hazard	Date	Location	Description	Source*
Lightning	9/27/2007	Alton	$200,000 in damage to home.	NOAA
Lightning	8/7/2008	Laconia	$60,000 in damage to hay barn	NOAA
Nor'easter	4/27/2007	Statewide	Nor'easter caused flooding, damage in excess of $25 million s of August 2007.	FEMA
Snow/Blizzard	3/16/1993	Statewide	High winds and record snowfall	FEMA
Heavy Snow	3/28/2001	Statewide		FEMA
Heavy Snow	1/5/2004	Statewide		FEMA
Heavy Snow	2/14/2007	Statewide	6 – 20 inches	NOAA
Heavy Snow	3/2/2007	Statewide	6 – 12 inches	NOAA
Heavy Snow	3/16/2007	Statewide	7 – 12 inches, changed to freezing rain	NOAA
Heavy Snow	4/4/2007	Statewide	8 inches	NOAA
Heavy Snow	4/12/2007	Statewide	8 inches	NOAA
Heavy Snow	4/27/2007	Statewide	Nor'easter caused flooding, damage in excess of $25 million – Federal Disaster Declaration	FEMA
Heavy Snow	12/3/2007	Statewide	6 – 10 inches	NOAA
Heavy Snow	12/16/2007	Statewide	7 inches	NOAA
Heavy Snow	12/19/2007	Statewide	6 – 15 inches	NOAA
Heavy Snow	12/30/2007	Statewide	6 – 14 inches	NOAA
Heavy Snow	1/18/2008	Statewide	8 - 10 inches	NOAA
Heavy Snow	1/14/2008	Statewide	6 – 12 inches	NOAA
Heavy Snow	2/12/2008	Statewide	5 - 8 inches followed by sleet & freezing rain	NOAA
Heavy Snow	2/26/2008	Statewide	6 – 12 inches	NOAA
Heavy Snow	3/1/2008	Statewide	4 - 10 inches	NOAA
Heavy Snow	12/19/2008	Statewide	5 - 10 inches	NOAA
Heavy Snow	12/21/2008	Statewide	10 - 15 inches	NOAA
Heavy Snow	1/18/2009	Statewide	8 - 15 inches	NOAA
Heavy Snow	1/28/2009	Statewide	8 - 14 inches	NOAA
Heavy Snow	2/18/2009	Statewide	6 - 12 inches	NOAA
Heavy Snow	2/22/2009	Statewide	6 – 12 inches	NOAA
Heavy Snow	3/1/2009	Statewide	2 - 5 inches	NOAA
Heavy Snow	12/9/2009	Statewide	6 - 10 inches	NOAA
Heavy Snow	1/17/2010	Statewide	6 - 10 inches	NOAA
Heavy Snow	12/26/2010	Statewide	6 - 16 inches	NOAA
Heavy Snow	1/12/2011	Statewide	10 - 19 inches	NOAA
Heavy Snow	1/18/2011	Statewide	4 - 8 inches followed by sleet & freezing rain	NOAA
Heavy Snow	2/2/2011	Statewide	8 - 12 inches	NOAA
Heavy Snow	2/25/2011	Statewide	8 - 12 inches	NOAA
Heavy Snow	4/1/2011	Statewide	4 - 6 inches	NOAA
Heavy Snow	10/29/2011	Statewide	16 inches, many without power	NOAA
T'storm Wind	7/6/1999	Meredith	Severe winds, downed trees blocked roads, and caused power outages. The winds damaged several buildings, damaged hundreds of trees, closing roads, and damaging homes. 1 fatality, 1 injury	NOAA
T'storm Wind	12/1/2006	Alton	50 knots, trees downed	NOAA
T'storm Wind	7/15/2007	Gilmanton	50 knots, trees downed	NOAA
T'storm Wind	8/16/2007	Tilton	50 knots, trees and wires downed	NOAA
T'storm Wind	9/27/2007	Center Harbor	50 knots, trees downed	NOAA
T'storm Wind	6/26/2008	Gilmanton	50 knots, numerous trees downed	NOAA
T'storm Wind	7/18/2008	Gilmanton	50 knots, numerous trees downed	NOAA
T'storm Wind	7/19/2008	Belmont, Alton	50 knots, trees downed on roads, one car hit	NOAA
T'storm Wind	8/7/2008	Meredith	50 knots, trees downed	NOAA
T'storm Wind	8/10/2008	Sanbornton	50 knots, trees downed, one on a house	NOAA
T'storm Wind	5/9/2009	Laconia, Tilton	50 knots, trees and wires downed	NOAA

Hazard	Date	Location	Description	Source*
T'storm Wind	7/27/2009	Barnstead	50 knots, trees downed, one on a building	NOAA
T'storm Wind	7/29/2009	Belmont	50 knots, trees and wires downed	NOAA
T'storm Wind	6/24/2010	Sanbornton	50 knots, trees downed	NOAA
T'storm Wind	7/19/2010	New Hampton	50 knots, trees downed across NH Route 132	NOAA
T'storm Wind	6/9/2011	Laconia	50 knots, trees downed, 45,000 homes without power in southern part of state	NOAA
T'storm Wind	7/4/2011	Gilmanton	50 knots, trees downed	NOAA
T'storm Wind	7/26/2011	Meredith	50 knots, 10 trees downed	NOAA
Tornado	6/24/1960	Belknap County	F1	NOAA
Tornado	5/31/1972	Belknap County	F1 $250K in damages	NOAA
Tornado	7/3/1972	Belknap County	F2 $25K in damages	NHHSEM
Tornado	7/23/1978	Belknap County	F1, $25,000 in damages	Tornado
Tornado	7/23/1995	Meredith	F1	NHHSEM
Tornado	7/6/1999	Belknap County	F1	NHHSEM
Tornado	7/24/2008	Five counties, including Belknap, Merrimack, Carroll	50-mile swath cut through south-central part of NH. Nineteen homes destroyed. One death. State and federal disaster declared in five counties.	NHHSEM NOAA
Wildfire	1947	Farmington	7,335 acres burned	NHHSEM
Wildfire	1947	Freedom	1,225 acres burned	NHHSEM
Wildfire	1953	Tuftonboro	1,794 acres burned	NHHSEM
Wildfire	3/31/2006	Alton	Brush fire	Alton Fire
Wildfire	5/5/2007	Alton	Brush fire	Alton Fire
Wildfire	4/25/2008	Alton	39 acres burned	Alton Fire
Wildfire	2009	Belknap County	16 fires burned 13 acres	Gilm AR
Wildfire	2010	Belknap County	Eight fires burned five acres	Gilm AR
Wildfire	2011	Belknap County	One fire, half an acre	Gilm AR

Hazard	Date	Location	Remarks/Description	Source
Hurricane	8/28/2011	Belknap Co.	Tropical Storm Irene caused the Pemigewasset River to crest at 21.7 feet in Plymouth, 8.7 feet above flood stage. Nearby Barnstead sustained $25,000 in property damages due to flooding. **Declared Disaster DR-4026**	NOAA
Hurricane	10/26 – 11/6/2012	Belknap County	**Declared Disaster DR-4095** Remnants of Hurricane Sandy	NOAA

APPENDIX F: POTENTIAL HAZARDS MAP



APPENDIX G: SUPPLEMENTAL INFORMATION

This section provides statewide or regional information regarding hazards. Some information is about hazards mentioned in the NH Hazard Mitigation Plan. Other information either provides context or extra detail which supplements the locally important information addressed in Section III.

Flooding due to Dam Failure

Dam failure results in rapid loss of water that is normally held back by a dam. These types of floods can be extremely dangerous and pose a threat to both life and property. Dam classifications in New Hampshire are based on the degree of potential damages that a failure or disoperation of the dam is expected to cause. The classifications are designated as non-menace, low hazard, significant hazard, and high hazard and are summarized in greater detail in Table G-1.

The designations for these dams relate to damage that would occur if a dam were to break, not the structural integrity of the dam itself. In the Lakes Region, the Town of Alton was impacted by an earthen dam failure on March 12, 1996. Although listed in the NH Hazard Mitigation Plan as a significant hazard, it did result in the loss of one life.

Table G-1: New Hampshire Dam Classifications[12]

Classification	Description
Non-Menace	A dam that is not a menace because it is in a location and of a size that failure or misoperation of the dam would not result in probable loss of life or loss to property, provided the dam is: • Less than six feet in height if it has a storage capacity greater than 50 acre-feet; or • Less than 25 feet in height if it has a storage capacity of 15 to 50 acre-feet.
Low Hazard	A dam that has a low hazard potential because it is in a location and of a size that failure or misoperation of the dam would result in any of the following: • 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 misoperation of the dam would result in any of the following: • 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: • Damage to a public water system, as defined by RSA 485:1-a, XV, which will take longer than

[12] NH DES Fact Sheet WD-DB-15 "Classification of Dams in New Hampshire", WD-DB-15, Accessed July 24, 2025.

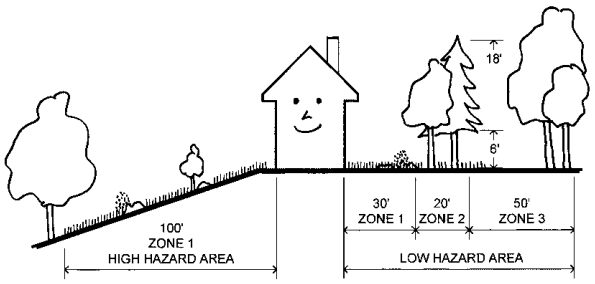
	48 hours to repair. • The release of liquid industrial, agricultural, or commercial wastes, septage, sewage, or contaminated sediments if the storage capacity is 2 acre-feet or more. • Damage to an environmentally-sensitive site that does not meet the definition of reversible environmental losses.
High Hazard	A dam that has a high hazard potential because it is in a location and of a size that failure or misoperation of the dam would result in probable loss of human life as a result of: • Water levels and velocities 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.

Wildfire

Several areas in the region are relatively remote in terms of access and firefighting abilities. Of greatest concern are those areas characterized by steep slopes and vast woodlands, with limited vehicular access. These areas include the Ossipee, Squam, Belknap, and Sandwich Mountain Ranges.

As these once remote areas begin to see more development (the urban wildfire interface), care should be taken to ensure that adequate fire protection and buffers are established. Techniques include increased buffers between wooded areas and residential buildings, requirements for cisterns or fire ponds, a restriction on the types of allowable building materials such as shake roofs, and special considerations for landscaping. While historically massive wildfires have been western phenomena, each year hundreds of woodland acres burn in New Hampshire.

The greatest risk exists in the spring when the snow has melted and before the tree canopy has developed, and in the late summer – early fall. Appropriate planning can significantly reduce a community's vulnerability to wildfires. There are four-zone suggestions from the Firewise community program that could be potentially helpful for Gilmanton's homeowners.[13]



FIREZONES

ZONE 4 is a natural zone of native or naturalized vegetation. In this area, use selective thinning to reduce the volume of fuel. Removing highly flammable plant species offers further protection while maintaining a natural appearance.

[13] http://www.firewise.org accessed July 24, 2025.

ZONE 3 is a low fuel volume zone. Here selected plantings of mostly low-growing and fire-resistant plants provide a decreased fuel volume area. A few well-spaced, fire resistant trees in this zone can further retard a fire's progress.

ZONE 2 establishes a vegetation area consisting of plants that are fire resistant and low growing. An irrigation system will help keep this protection zone green and healthy.

ZONE 1 is the protection area immediately surrounding the house. Here vegetation should be especially fire resistant, well irrigated and carefully spaced to minimize the threat from intense flames and sparks.

Conflagration

Conflagration is an extensive, destructive fire in a populated area that endangers lives and affects multiple buildings. Historically, many New Hampshire towns were settled in areas along waterways in order to power the mills. Often the town centers were at a low point in the topography, resulting in dense residential development on the steeper surrounding hillsides. Hillsides provide a natural updraft that makes firefighting more difficult. In particular, structural fires spread more readily in hillside developments because burning buildings pre-heat the structures that are situated above them.

Alton Bay Christian Conference Center, 2009

Within the Lakes Region the city of Laconia was the site of one of the most devastating structural fires to occur in the state of New Hampshire. The 1903 Great Lakeport Fire consumed more than 100 homes; two churches, two factories, a large mill, a power plant, and a fire station. Wolfeboro's history includes a significant fire in the winter of 1956. This event is recognized as the last block fire in town and is considered a small conflagration. On April 12, 2009 the Alton Bay Christian Conference Center complex caught fire, resulting in an 11-alarm fire and destroying more than 40 structures.

APPENDIX H: PRIORITIZATION DETAILS

As the Committee began the process of prioritizing these actions, the group utilized the standard STAPLEE project prioritization. The committee reviewed each mitigation action in the standard STAPLEE categories (**Social**, **Technical**, **Administrative**, **Political**, **Environmental**, and **Economic**). Below is the STAPLEE Criteria Sheet used by the Committee. Detailed project scores follow.

STAPLEE Criteria

Committee members are asked to consider both the costs and benefits of implementing identified mitigation actions. The starting point is to consider all actions as positive steps towards making the community a safer place. Any of the STAPLEE criteria that would hinder the action from moving to implementation should be noted. When evaluating the mitigation actions, the following questions are designed to help identify potential obstacles to implementation for each criterion.

Social

- ☐ Will the action unfairly affect any one segment of the population?
- ☐ Will it disrupt established neighborhoods or adversely affect cultural resources?
- ☐ Is it compatible with present and future community values?

Technical

- ☐ Is the proposed action technically feasible?
- ☐ Will it reduce losses in the long term with minimal secondary impacts?

Administrative

- ☐ Does the community have the capability to implement the action? (staff, technical expertise, funding)
- ☐ Can the community provide the necessary maintenance?
- ☐ Can it be accomplished in a timely manner?

Political

- ☐ Is there local/regional support for this sort of mitigation activities or program?

Legal

- ☐ Does the community have the authority to implement the action?
- ☐ Is enabling legislation necessary? (ordinance, resolution, etc.)

Environmental

- ☐ Are there likely to be positive or negative impacts to the environment if this action is implemented?
- ☐ Does the action comply with local, state, and federal environmental regulations?
- ☐ Is it consistent with community environmental goals?

Economic

- ☐ Can the cost of this action be managed by the community? (operating budget or capital improvements)
- ☐ Are state/federal grant programs applicable?
- ☐ Will this reduce costs, for example improving insurance ratings?
- ☐ How does this action fit in with existing economic development plans?
- ☐ Is it likely that this action will result in economic benefits for the community?

Note: Some HMP Committees choose not to use the "Political" category for rating. Some committees choose to combine the "Economic" and "Costs" categories.

This table shows the detailed scoring of the Mitigation Actions by the Gilmanton Hazard Mitigation Committee. For each action, the benefits and costs of implementing the action (under each of the seven categories) were considered and scored 1, 0, (-1) with a 'one' meaning that the benefits were greater than the costs in a particular category, a 'minus one' indicating that the costs outweighed the benefits, and a 'zero' meaning that the while there are costs associated with the project, they are balanced out by the benefits. The seven category scores were summed for an overall project total. The maximum total score was 7, the minimum was -7. Actual results ranged from 7 to -2. These ratings were arrived at through committee discussion and group consensus.

Scoring: 1 = Highly effective or feasible, 0 = Neutral, -1 = Ineffective or not feasible

Project ID	Hazard	Problem	Mitigation Action	Social	Technical	Administrative	Political	Legal	Environmental	Economic	Total
SWW	**Severe Winter Weather**	The more that property owners do to reduce the impacts of winter weather to their property, the less damage is likely to be sustained.	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of severe winter weather on their properties.	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**7**
ID	**Infectious Diseases**	The more that residents and visitors do to protect themselves from infectious diseases, the less emergency response it likely to be required.	Work with PPH to provide information and public outreach regarding steps that residents and visitors can take to reduce the likelihood of being impacted by infectious diseases.	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**7**
HW	**High Winds *(Tornado/ Downbursts)***	Downed trees and branches can damage property and hinder emergency response vehicles. The more property owners do to reduce the impacts of high winds to their property, the less damage is likely.	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of high winds on their properties.	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**7**

Project ID	Hazard	Problem	Mitigation Action	Social	Technical	Administrative	Political	Legal	Environmental	Economic	Total
D	Drought	Drought can lead to low water tables and dry wells. Most properties rely on private wells.	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of drought on their properties.	1	1	1	1	1	1	1	7
AH 3	All Hazards	While communication in town has improved, there are still some gaps in coverage in the southern part of town. This could impact emergency response.	Reduce the number of "dead zones" for radio communication.	0	0	1	1	1	0	0	3
F 4	Flooding	Culverts and other drainage structures should be built and maintained to protect the town's infrastructure. There should be a written record of work on these structures.	Implement the Storm Drain/Culvert Maintenance Program	0	1	0	0	1	0	1	3
AH 1	All Hazards	Practicing the Emergency Operation Plan can build confidence and identify gaps.	Conduct a table-top exercise	0	1	0	0	0	0	0	1
F 2	Flooding	Washouts have occurred along Currier Hill Road west of High Street.	Make needed improvements to roads and drainage to reduce washouts along Currier Hill Rd. west of High St.	0	1	0	0	0	-1	1	1

Project ID	Hazard	Problem	Mitigation Action	Social	Technical	Administrative	Political	Legal	Environmental	Economic	Total
AH 2	**All Hazards**	While Stage Rd. is an evacuation Rd, the pavement is in poor condition, in part due to poor drainage and washout.	Improve pavement conditions along Stage Road, between Stone Road to Elm Street.	**0**	**1**	**1**	**0**	**0**	**0**	**-1**	**1**
WF	**Wildfire**	Many homes in Gilmanton are built near the woods and are susceptible to damage during a wildfire.	Conduct educational outreach regarding mitigation strategies for wildfire, including information about Fire Permits and the FireWise program. Include this information on the town website.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PTC	**Tropical or Post-Tropical Cyclone**	The combination of high winds and heavy rains during a cyclone can combine to bring down branches, trees, and wires damaging structures and leading to flooding.	Provide information and public outreach on steps that people can take to keep themselves safe and mitigate the effects of the high winds and rain on their homes and businesses.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ET 1	**Extreme Temperature**	If vulnerable populations do not take appropriate steps, they can succumb to extreme heat or extreme cold, putting a burden on the emergency response system.	Provide information and public outreach regarding steps that residents and visitors can take to protect themselves in extreme temperatures.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Project ID	Hazard	Problem	Mitigation Action	Social	Technical	Administrative	Political	Legal	Environmental	Economic	Total
ET 2	**Extreme Temperature**	In winter, unprotected pipes can burst damaging property and endangering residents.	Provide information and public outreach on measures that property owners can take to mitigate the effects on their homes and businesses, such as keeping pipes from freezing in cold temperatures.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
L 1	**Lightning**	Many municipal records and documents are stored in the Academy Building, a large wooden structure.	Investigate the best options for the town to mitigate the effects of lightning **on critical records**, especially those in the Town offices.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
F 3	**Flooding**	A Geofluvial Assessment can identify areas of the riverbank most susceptible to erosion and recommend actions to reduce hazards.	Actively participate in and adopt recommendations of Geofluvial Assessment.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
E	**Earthquake**	The elementary school can be hardened, protecting many of the town's vulnerable population.	Work with Gilmanton Elementary School on retrofitting & hardening the school building against earthquakes and other events that might damage the structure.	**0**	**0**	**0**	**0**	**0**	**0**	**-1**	**-1**
L 2	**Lightning**	Many of the town's municipal properties do not have lightning rods, surge protection, or other form of protection against lightning strikes.	Investigate the best options for the town to mitigate the effects of lightning **on critical facilitie**s, especially the Town Hall and offices.	**0**	**0**	**0**	**0**	**0**	**0**	**-1**	**-1**

Project ID	Hazard	Problem	Mitigation Action	Social	Technical	Administrative	Political	Legal	Environmental	Economic	Total
F 1	Flooding	Meadow Pond Road floods due to beaver activity, restricting traffic and emergency response to the area.	Work with NH Fish & Game and NH DES to reduce the flooding on Meadow Pond Rd near Shellcamp Rd. associated with beaver dams.	0	0	0	0	0	-1	-1	-2
DF	Dam Failure	There should be a better awareness of dam maintenance and periodic communication with dam owners. Best done when there is not an emergency.	Develop regular correspondence with State and private dam owners regarding dam maintenance.	-1	-1	0	-1	1	0	0	-2

APPENDIX I: EXISTING PLANS, STUDIES, REPORTS, AND TECHNICAL INFORMATION

Gilmanton Hazard Mitigation Plan, 2019
Gilmanton Master Plan, 2018
Gilmanton Zoning Ordinance, 2024
Gilmanton Subdivision Regulations, 2020
Gilmanton Site Plan Regulations, 2021
Gilmanton MS-1, 2024 – local structural valuation

Homeland Security & Emergency Management, New Hampshire Department of Safety
- *New Hampshire State Hazard Mitigation Plan, 2023 Update*
NH Department of Transportation Traffic Volume (TDMS),
https://nhdot.public.ms2soft.com/tcds/tsearch.asp?loc=Nhdot&mod=TCDS
NH Division of Forests and Lands, Division of Forests and Lands | NH Division of Forests and Lands
National Flood Insurance Program through NH Office of Planning and Development Floodplain Management Program - NH Economy
FEMA's Map Changes Viewer
National Oceanic and Atmospheric Administration website, http://www.ncdc.noaa.gov/
Census 2020 and American Community Survey
FEMA Community Information System
FEMA Flood Map Service Center - https://msc.fema.gov/portal/home

APPENDIX J: 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	Natural Hazards Center
National Oceanic and Atmospheric Administration (NOAA): Information on various projects and research on climate and weather.	National Oceanic and Atmospheric Administration
National Climatic Data Center active archive of weather data.	Climate Data Online (CDO) - The National Climatic Data Center's (NCDC) Climate Data Online (CDO) provides free access to NCDC's archive of historical weather and climate data in addition to station history information. | National Climatic Data Center (NCDC)
Northeast Snowfall Impact Scale	Regional Snowfall Index (RSI) | The Northeast Snowfall Impact Scale (NESIS) | National Centers for Environmental Information (NCEI)
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	The Coastal Flood Hazard Analysis and Mapping Process
Floodsmart	https://www.floodsmart.gov/
National Flood Insurance Program (NFIP)	http://www.fema.gov/nfip
Digital quality Level 3 Flood Maps	http://msc.fema.gov/MSC/statemap.htm
Flood Map Modernization	hazards.fema.gov/femaportal/mapmod/mapmod.htm
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	Hazard Mapping System | OSPO
U.S. Forest Service, USDA	Home | US Forest Service
Wildfire Hazards - A National Threat	http://pubs.usgs.gov/fs/2006/3015/2006-3015.pdf

GEOLOGIC RELATED HAZARDS

USGS Topographic Maps	Topographic Maps | U.S. Geological Survey
Building Seismic Safety Council	http://www.nibs.org/?page=bssc
Earthquake hazard history by state	Building Seismic Safety Council – National Institute of Building Sciences
USGS data on earthquakes	Earthquake Hazards - Data & Tools | U.S.

	Geological Survey
USGS Earthquake homepage	Earthquakes | U.S. Geological Survey
National Cooperative Geologic Mapping Program (NCGMP)	National Cooperative Geologic Mapping Program | U.S. Geological Survey
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	Why Does the Earth Quake in New England?
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	ATC Hazards by Location - Website and API
U.S. Wind Zone Maps	Strong Wind | National Risk Index
Tornado Project Online	http://www.tornadoproject.com/
National Hurricane Center	http://www.nhc.noaa.gov
Community Hurricane Preparedness Tutorial	http://meted.ucar.edu/hurrican/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.	Interior Geospatial Emergency Management System (IGEMS) | U.S. Geological Survey
FEMA GeoPlatform: Geospatial data and analytics in support of emergency management	http://fema.maps.arcgis.com/home/index.html

DETERMINING RISK AND VULNERABILITY

HAZUS	Hazus | FEMA.gov
FEMA Hazus Average Annualized Loss Viewer	http://fema.maps.arcgis.com/home/webmap/viewer.html?webmap=cb8228309e9d405ca6b4db60

	27df36d9&extent=-139.0898,7.6266,-48.2109,62.6754
Vulnerability Assessment Tutorial: On-line tutorial for local risk and vulnerability assessment	http://www.csc.noaa.gov/products/nchaz/htm/mitigate.htm
Case Study: an example of a completed risk and vulnerability assessment	http://www.csc.noaa.gov/products/nchaz/htm/case.htm

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	ghinternational.com/case-studies/national-information-sharing-consortium-nisc
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	Software : USDA ARS
USACE Hydrologic Engineering Center (HEC)	http://www.hec.usace.army.mil/software/
Stormwater Manager's Resource Center SMRC	FedCenter - Stormwater Manager's Resource Center
USGS Current Water Data for the Nation	http://waterdata.usgs.gov/nwis/rt
USGS Water Data for the Nation	USGS Water Data for the Nation
Topography Maps and Aerial photos	US Topo: Maps for America | U.S. Geological Survey
National Register of Historic Places	National Register of Historic Places (U.S. National Park Service)
National Wetlands Inventory	http://www.fws.gov/wetlands/
ICLUS Data for Northeast Region	ICLUS Data for the Northeast Region | US EPA

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	EDA Program List | U.S. Economic Development Administration
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 New England. Resources are available on earthquake preparedness, mitigation, and hurricane safety.	www.nesec.org
Association of State Floodplain Managers (ASFPM): ASFPM has developed a series of technical and topical research papers, and a series of Proceedings from their annual conferences.	www.floods.org
National Voluntary Organizations Active in Disaster (VOAD) is a non-profit, nonpartisan membership	http://www.nvoad.org

organization that serves as the forum where organizations share knowledge and resources throughout the disaster cycle—preparation, response, recovery and mitigation.	

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)	Federal Insurance and Mitigation Administration | FEMA.gov
Community Rating System (CRS)	Community Rating System | FEMA.gov
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.	Increased Cost of Compliance Coverage | FEMA.gov
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	Integrating Hazard Mitigation Into the Local Comprehensive Plan

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

FEMA Multi-Hazard Mitigation Planning Website	Hazard Mitigation Planning | FEMA.gov
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:	http://www.fema.gov/library/viewRecord.do?id=

Case Studies and Tools for Community Officials	7130

APPENDIX K: MONITOR, EVALUATE, & UPDATE

Table A: Periodic Hazard Mitigation Plan Review Record (Assessing overall plan effectiveness: Poor, Fair, Good, Excellent)

Meeting Schedule (dates)	Tasks Accomplished	How well is plan achieving stated purpose and goals?	Lead Parties	Public Involvement (citizens, neighboring communities)
July, 2026	□ Documentation □ Track implementation □ Assess effectiveness □ Other			
July, 2027	□ Documentation □ Track implementation □ Assess effectiveness □ Other			
July, 2028	□ Documentation □ Track implementation □ Assess effectiveness □ Other			
July, 2029	□ Documentation □ Track implementation □ Assess effectiveness □ Other			

Table B: Project Implementation Checklist (Action Status: C-Completed, X – Delete, D – Deferred)

Project ID	Hazard	Mitigation Action	Potential Funding Source	Responsible Party	Time Frame S: 1-2 yr, M: 3-4 yr, L: 5+ yr	Status July 2026	Status July 2027	Status July 2028	Status July 2029
AH 1	**All Hazards**	Conduct a table-top exercise	Department Budgets	EMD	S				
AH 2	**All Hazards**	Improve pavement conditions along Stage Road, between Stone Road to Elm Street.	Town Budget	RA	S				
AH 3	**All Hazards**	Reduce the number of "dead zones" for radio communication.	Town Budget	Fire & Police Chiefs	M				
DF	**Dam Failure**	Develop regular correspondence with State and private dam owners regarding dam maintenance.	Department Budget	Selectboard	S				
D	**Drought**	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of drought on their properties.	Town Budget	Fire Chief	S				
E	**Earthquake**	Work with Gilmanton Elementary School on retrofitting & hardening the school building against earthquakes and other events that might damage the structure.	School Budget	EMD, TA, School Principal	M				
ET 1	**Extreme Temperature**	Provide information and public outreach regarding steps that residents and visitors can take to protect themselves in extreme temperatures.	Town Budget	EMD	S				

Project ID	Hazard	Mitigation Action	Potential Funding Source	Responsible Party	Time Frame S: 1-2 yr, M: 3-4 yr, L: 5+ yr	Status July 2026	Status July 2027	Status July 2028	Status July 2029
ET 2	**Extreme Temperature**	Provide information and public outreach on measures that property owners can take to mitigate the effects on their homes and businesses, such as keeping pipes from freezing in cold temperatures.	Town Budget	EMD	S				
F 1	**Flooding**	Work with NH Fish & Game and NH DES to reduce the flooding on Meadow Pond Rd near Shellcamp Rd. associated with beaver dams.	Town Budget	RA	M				
F 2	**Flooding**	Make needed improvements to roads and drainage to reduce washouts along Currier Hill Rd. west of High St.	Town Budget and FEMA grants	RA	M				
F 3	**Flooding**	Actively participate in and adopt recommendations of Geofluvial Assessment.	Town Budget	CC/PB	L				
F 4	**Flooding**	Implement the Storm Drain/Culvert Maintenance Program	Town Budget	RA	S				
HW	**High Winds *(Tornado/ Downbursts)***	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of high winds on their properties.	Town Budget	EMD	S				

Project ID	Hazard	Mitigation Action	Potential Funding Source	Responsible Party	Time Frame S: 1-2 yr, M: 3-4 yr, L: 5+ yr	Status July 2026	Status July 2027	Status July 2028	Status July 2029
ID	**Infectious Diseases**	Work with PPH to provide information and public outreach regarding steps that residents and visitors can take to reduce the likelihood of being impacted by infectious diseases.	Town Budget & PPH	EMD	S				
L 1	**Lightning**	Investigate the best options for the town to mitigate the effects of lightning **on critical records**, especially those in the Town offices.	Town Budget	TA	M				
L 2	**Lightning**	Investigate the best options for the town to mitigate the effects of lightning **on critical facilities**	Town Budget	TA	M				
SWW	**Severe Winter Weather**	Provide information and public outreach regarding steps that property owners can take to mitigate the impacts of severe winter weather on their properties.	Town Budget	EMD	S				
PTC	**Tropical or Post-Tropical Cyclone**	Provide information and public outreach on steps that people can take to keep themselves safe and mitigate the effects of the high winds and rain on their homes and businesses.	Town Budget	EMD	S				

Project ID	Hazard	Mitigation Action	Potential Funding Source	Responsible Party	Time Frame S: 1-2 yr, M: 3-4 yr, L: 5+ yr	Status July 2026	Status July 2027	Status July 2028	Status July 2029
WF	**Wildfire**	Conduct educational outreach regarding mitigation strategies for wildfire, including information about Fire Permits and the FireWise program. Include this information on the town website.	Town Budget	Fire Chief	S				