LOCAL HAZARD MITIGATION PLAN

TOWN OF PEACHAM, VERMONT

2025-2030

FEMA Approval Pending Adoption Date

Municipal Adoption Date:

FEMA Formal Approval Date:

Prepared by the Peacham Local Hazard Mitigation Planning Committee	
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Key Partners	
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VT Department of Health – St. Johnsbury District Office	Northeastern Vermont Regional Planning Commission
Green Mountain Power and Washington Electric Co-Operative	Agency of Natural Resources – River Management Engineer – Jaron Borg
	Peacham Pond Association

Table of Contents

1 INTRODUCTION

Mitigation planning provides an opportunity for local government to lessen the impact of the next natural disaster. The impact of probable, but unpredictable natural events can be reduced through community planning and action. The goal of this Plan is to advance and prioritize mitigation investments to reduce risks posed by natural hazards and to increase the Town of Peacham resilience to damages from natural hazard impacts.

Hazard Mitigation is any sustained policy or action that reduces or eliminates long-term risk to people and property from the effects of natural hazards. FEMA and state agencies have come to recognize that it is less expensive to prevent disasters than to repeatedly repair damage after a disaster has struck. This plan recognizes that opportunities exist for communities to identify mitigation strategies and measures during all the other phases of Emergency Management: Preparedness, Response and Recovery. While the hazards can never be completely eliminated, it is possible to identify what the hazards are, where their impacts are most severe, and identify local actions and policies that can be implemented to reduce or eliminate the severity of the impacts.

2 PURPOSE

The purpose of this Plan is to assist the Town in identifying all natural hazards facing the community, ranking them according to local vulnerabilities, and developing strategies to reduce risks from those hazards. Once adopted, this Plan is not legally binding; instead, it outlines goals and actions to prevent future loss of life and property. The intent is to create a short term 5- year pathway of actions while thinking more long-term resilience to mitigating hazards within the community. The benefits of mitigation planning include:

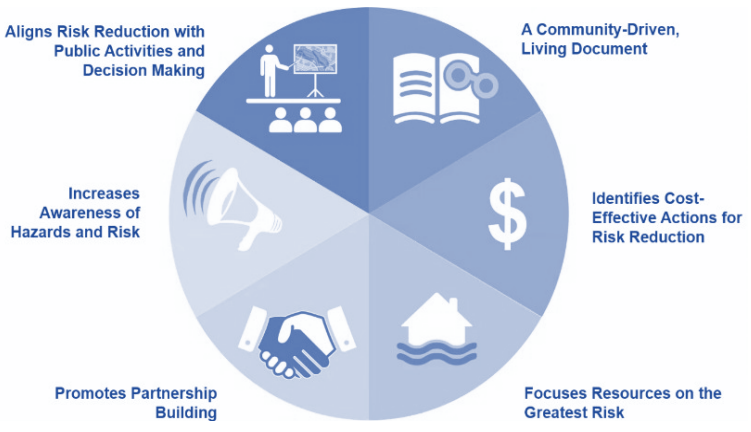


Figure 1 - FEMA LHMP Skill Share Workshop 2021

3 COMMUNITY PROFILE

Land Use – Land Features - Development Patterns

Peacham lies in the geographic region known as the Piedmont. This area is characterized by glacial uplands with hilly terrain and the absence of true mountains. The town land formations are the result of ancient uplifting of geologic plates and the subsequent wearing down and erosion through time. The last advance of ice, known as the Shelburne drift, occurred during the Wisconsin glacial period approximately 12,000 years ago, and gave the region the last major change in landforms. At that time, the parent material for the present-day soils was laid down by the churning action of the retreating glacier. Since this glacial epoch, the formation of specific drainage patterns, soil formation processes, and ultimately the development of plant and animal life formed pre-settlement Peacham.

Topographic elevations range from the peak of Cow Hill at 2,566 feet to a low of 888 feet (above sea level) along the eastern edge in the Peacham Hollow Brook; Peacham has the distinction of containing an important watershed divide. The range of hills starting with Cow Hill to the north and continuing southward including Macks Mountain, Lookout Mountain, Morse Mountain, Devil's Hill, and Jennision Mountain direct drainage on the west side primarily to the Winooski River and ultimately Lake Champlain. Drainage on the eastern slopes of these hills winds its way to the Connecticut River.

These hills have had a strong influence on the town's development. Population centers, agricultural, and business activity occupy the eastern half. Development in the west remains minimal except for occasional houses, and the recreational and seasonal use of shore lands, forests, and mountains.

The Groton State Forest includes 7,212.58 acres of land and water or about 23% of the Town of Peacham and represents a major natural resource that provides nearby opportunities for hiking, cross-country skiing, snowmobiling, swimming, and fishing, among other activities. The State Forest is actively managed and administered by Vermont’s Department of Forests, Parks and Recreation.

Peacham is an example of the pattern of development for which Vermont is well known. Historically, development in Peacham has occurred in and around compact villages with surrounding land uses appearing as a patchwork quilt of open farmland, managed wood lots, and large tracts of forested land. The small amount of residential development that has occurred outside of villages has, for the most part, occurred as low-density housing (housing lots of 10 acres or more).

Peacham has also benefited from many landowners who have maintained open land even if it is not actively farmed. There is strong public support for maintaining slow growth and the existing pattern of development through the town planning and development review process.

Demographics and Growth Potential

Peacham has experienced regrowth since 1970, with growth rates that have often surpassed county and state rates. Peacham even experienced double-digit growth over the most recent decade, an era characterized by economic upheaval and outmigration. This decades-long trend came to an end, however, since most current population indicates a slight population decrease at the town, county, and statewide levels. Peacham’s population decreased by 2.3% from 732 in 2010 to 715 in 2020; Peacham community size has stabilized.

Precipitation and Water Features

Peacham has, partially or wholly within its borders, eight lakes and ponds. (1) Peacham Pond (341 acres) borders on Groton State Forest with extensive cottage development on about a third of its shoreline. (2) Martin's Pond (73 acres) has extensive cottage development on half of its shoreline, with the remaining undeveloped area residing in Groton State Forest. (3) Osmore Pond (51 acres) is completely within Groton State Forest and has only a picnic area developed along its shore. (4) Kettle Pond is in Groton State Forest with 800 feet of shoreline in Peacham. (5) Foster Pond (56 acres), (6) Ewell Pond (40 acres), and (7) Keiser Pond (34 acres, most of which lie in Danville) have little development. (8) Mud Pond (31 acres), which is largely marsh land, is owned by the Vermont Department of Fish and Wildlife. Public fishing access is available on Peacham, Martins, Foster, Ewell, and Keiser Ponds. The two notable bogs in Peacham are owned by the State. Stoddard Bog is on the northern fringe of town and Peacham Bog is in Groton State Forest. Peacham precipitation is considered a microclimate in the mountain's snow belt with more than normal rain and snow along with at times high winds and colder temperatures.

Water and Wastewater

The Peacham Fire District #1 supplies water to all homes, apartments and public buildings in the Peacham Corner (Peacham Village) (as defined in 1927). This service is managed and paid for by those to whom water is provided in Peacham Corner (Peacham Village). In addition, the Fire District provides and maintains the streetlights within the Village and the Village Picnic Ground on Macks Mountain Road. The Fire District's major responsibility, the water system, was originally put in place in 1927 using spring water from Kettle Springs on Macks Mountain Road to supply a reservoir located just below the Kemble property and near the Shenck property. As supplemental sources, two wells were drilled, one in 1968 and a second in 2000. The water system currently uses all three water sources (the spring and the two wells) in a rotation year-round. Testing has confirmed that this provides the best quality water at the lowest cost.

A major upgrade to the system was completed in 2000. This upgrade included new reservoirs further up Macks Mountain Road. There were additional, smaller upgrades in 2011 and 2013. The Fire District has replaced the original pipeline in the village since 2019. The Line Replacement Project will add no new users.

Additional users could be added when the mainline passes their property and a curb stop is in place. If there were to be new residents within the Village boundaries, the system would be obligated to serve them. Any expansion beyond the Village limits and significant changes and improvements to the system would require approval from the Village residents. The water system has strict engineering limits that would require both state and Prudential Committee approval to add new customers outside the designated village boundaries.

The recent drought experience (2025) had the water supply down to 3 days reserves. The Peacham Fire District #1 is planning on building a "3rd Well" and has sought Grant funding to help facilitate.

Peacham has two community sewage disposal systems. Statewide, many private systems have annual periods of failure, causing pollution of the ground surface, the surface waters, and the atmosphere. Failure usually results from the system's being located in soils that are naturally saturated during wet periods, inadequate capacity of the system in relation to the volume of sewage and the soil's ability to absorb the effluent, and/or faulty installation. Peacham's overall wastewater systems have not experienced any significant incidents to date.

Transportation

Peacham residents are dependent on a well-maintained road system, summer and winter. They are also concerned with safety for travelers and pedestrians and that the roads support and enhance the rural and

scenic character of the town. Except for travel along the Groton-Peacham, Danville-Peacham and Macks Mountain Road there is little through traffic. The major routes in the region (1-91 and U.S. Rte. 5 to the east, U.S. Route 2 to the north and west, and Rte. 302 to the south) provide excellent access to the region, to Canada, and to other parts of New England.

The road network consists of 1.6 miles of Class I, 9.950 miles of Class II, 53.28 miles of Class III of maintained Town Highway. Peacham also has 6.18 miles of Class IV that maintained for summer service only.

Public Utility Distribution

Green Mountain Power and Washington Electric Cooperative both provide electricity to the Town. See the electric utility boundary map below.

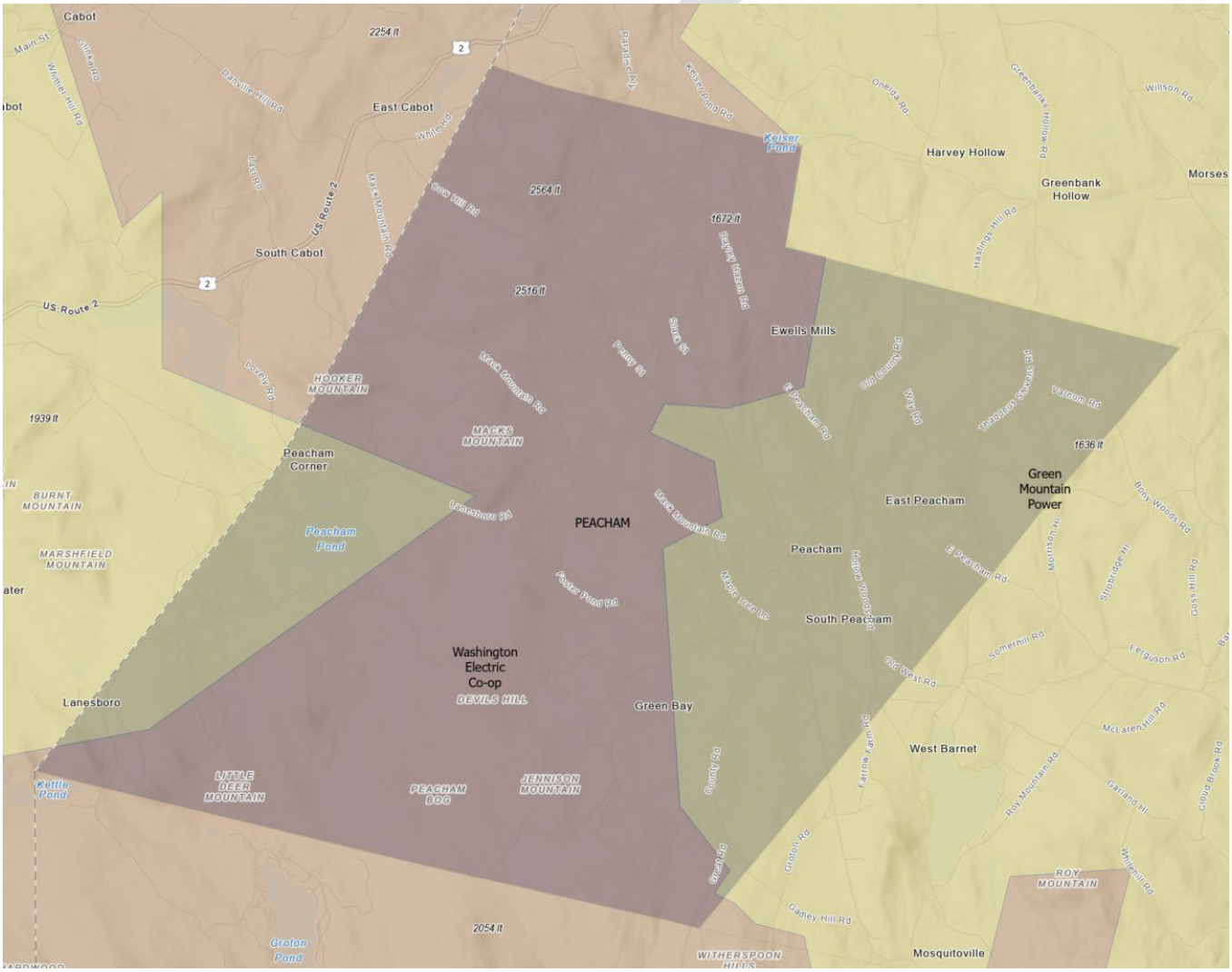


Figure 2 - Power Company Service Areas

Green Mountain Power Average Annual Outage Data (2019-2023)

Average number of outages per customer per year	3.88 times per year
Total outage duration per customer	4.51 hours per year
Average length of each outage	17.52 hours per year

Table 1 - GMP historical outage data

In extreme weather-related situations, there are outages that at times can last up to 2-3 days. Given the rural aspects of Peacham, the electric companies do not place this area as highest priority to resolve immediately, and thus time delays.

Public Safety

Over the years new equipment has been purchased. The next several years will feature more modest, yet important, improvements. Using Homeland Security funding has permitted the purchase of some communication equipment, and it is assumed that with continued funding from this source enhanced communications can be acquired.

Currently, the fire department has three dry hydrants in different parts of town. These are ponds that can be used in emergencies to refill the tanker. Two of these are in operation; one at the Hartong's farm outside South Peacham and a second on Old Cemetery Road. The third, on Thaddeus Stevens Road in East Peacham, is not currently in operation. The long-range plan is to have these three ponds operating and to add two additional sites, one of which would be located in the northern part of town, toward Danville.

As for personnel, the department now has 12 members and four officers. These numbers are up from the 2019 town plan report of 14 members. All firefighters are required to attend formal training sessions. These trainings include those who can play a secondary role (e.g., traffic control and maintaining supply lines). Additional help, especially for daytime fires, is needed. Peacham currently works with Danville Fire Department on calls for both towns and they coordinate response.

Peacham Fire Department also provides medical first response to the Town of Peacham. Emergency medical services are provided by Caledonia Essex Area Ambulance Service Inc. (CALEX) and in the Peacham Pond area by Cabot Ambulance, which are supported by the town through annual appropriation. Medical services are provided at the Danville Health Center and in nearby communities of St. Johnsbury, Monroe, Woodsville, and Littleton. These services are adequate currently.

Police protection is currently provided by the Vermont State Police, Caledonia County Sheriff, and local constable.

Emergency Management

As per the Town's Local Emergency Management Plan (LEMP), the Town has an appointed Emergency Management Director (EMD). The EMD works with others in town to keep the LEMP up to date and coordinates with State & Regional EMC, nearby towns, and non-profit agencies that serve vulnerable populations.

Critical Infrastructure

The planning committee identified several critical facilities in Peacham. These facilities provide important services to the community, such as basic government functions, water and power services, and schools. Some of these facilities can also serve additional roles during an emergency, including as a shelter for displaced residents, a staging area for emergency response and recovery activities, or a location for

important Town administration functions. Damage to these facilities can impair response and recovery operations and may lead to a disruption of vital services for Peacham's residents.

ADDRESS	CRITICAL FACILITY TYPE
889 GREEN BAY LOOP	HELIPAD / HELIPORT / HELISPOT
1010 COUNTY RD	HELIPAD / HELIPORT / HELISPOT
79 CHURCH ST	GOVERNMENT
340 BAYLEY HAZEN RD	SCHOOL K / 12
205 S MAIN ST	HELIPAD / HELIPORT / HELISPOT
64 MACKS MOUNTAIN RD	FIRE STATION
57 MACKS MOUNTAIN RD	HELIPAD / HELIPORT / HELISPOT
2010 HOLLOW WOODS RD	HELIPAD / HELIPORT / HELISPOT
750 E PEACHAM RD	TRANSFER STATION
1044 E PEACHAM RD	TOWN GARAGE
413 DEVILS HILL RD	HELIPAD / HELIPORT / HELISPOT
273 VT ROUTE 232	COMMUNICATION BOX
342 BAYLEY HAZEN RD	HELIPAD / HELIPORT / HELISPOT
556 BLANCHARD HILL RD	HELIPAD / HELIPORT / HELISPOT
614 GREAT RD	HELIPAD / HELIPORT / HELISPOT
2285 GREEN BAY LOOP	HELIPAD / HELIPORT / HELISPOT
659 PEACHAM GROTON RD	HELIPAD / HELIPORT / HELISPOT
898 THADDEUS STEVENS RD	HELIPAD / HELIPORT / HELISPOT
135 HOOKERVILLE CUTOFF	HELIPAD / HELIPORT / HELISPOT
424 BAYLEY HAZEN RD	TELEPHONE BUILDING

Table 2 - Critical facility locations

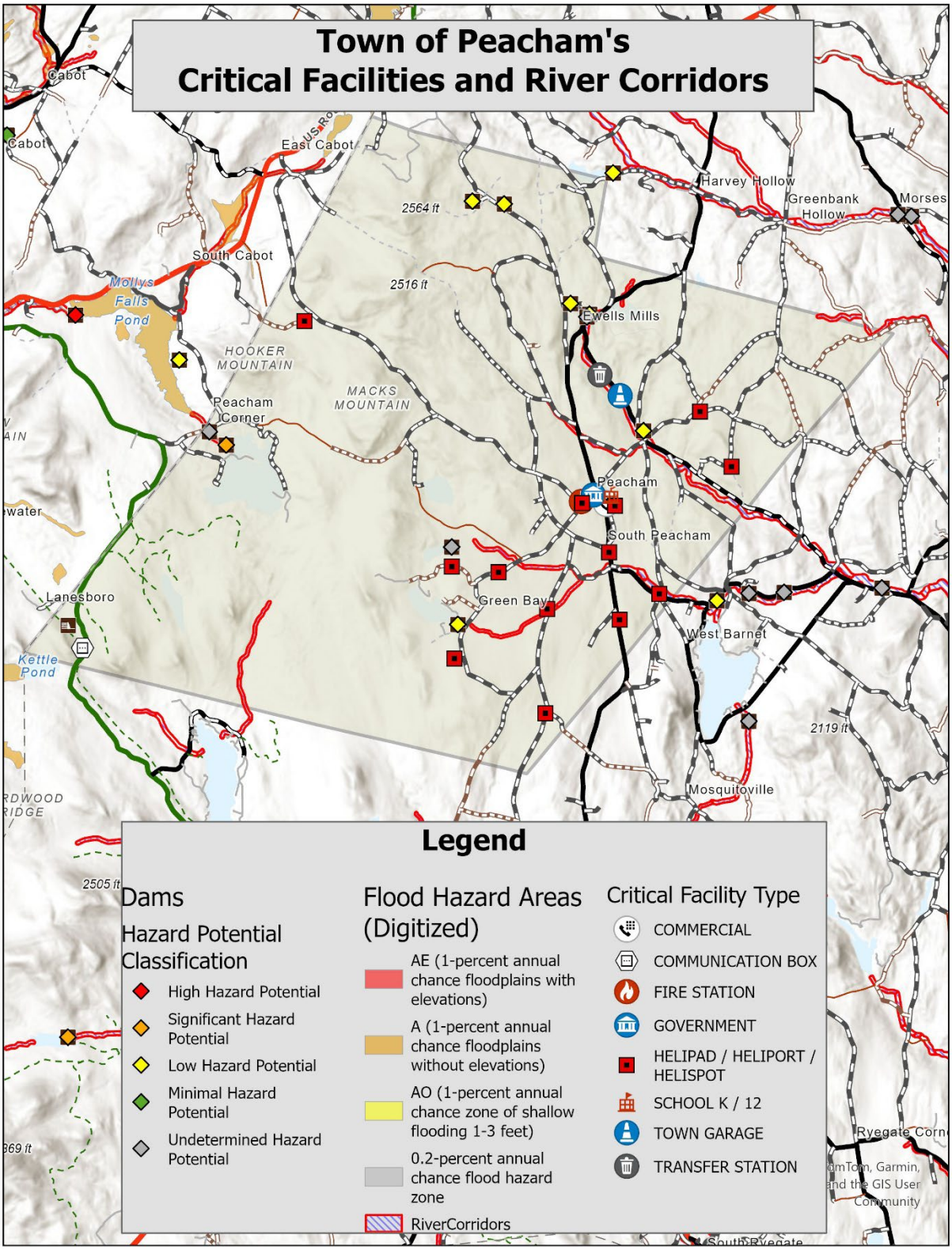


Figure 3 - Critical facility and river corridors

Dams

According to the Vermont Dam Inventory (VDI), Peacham has ten man-made dams in town none are rated at the high hazard level, see the map below for locations.

Aiken Low hazard privately-owned in-service recreation dam that had a non-periodic inspection done in 2023 after the flood event but has not been formally inspected since 1979.

Bruces Mill breached dam that is no longer functioning

Dawson low hazard dam in poor condition privately-owned in-service recreation dam that was last inspection in 2017 and is now "under investigation, planning, permitting or design review" for remediation per DEC. East Peacham Pond privately owned.

Ewell Mill does not have much information other than it is listed as breached and longer functioning. Ewell Pond is a low hazard privately owned mill storage dam that has been inventoried by the state but has never been inspected

Martins Pond is a low hazard, poor condition State Fish and Wildlife owned recreation concrete dam that was last inspection in 2022 and is now "under investigation, planning, permitting or design review" for remediation per DEC.

Mud Pond is a low hazard, poor condition breached, State Fish and Wildlife owned recreation concrete dam that was last inspection in 2022 and is now "under investigation, planning, permitting or design review" for remediation per DEC.

Peacham Pond is hydroelectric/recreation dam owned by Green Mountain Power which is under the jurisdiction of the VT Public Utility Commission. This dam is considered to be a significant hazard potential; However, the water flows out of Peacham and into Marshfield, thus the emergency crisis would impact Marshfield. Peacham does not current have a copy of the emergency action plan for this or other man-made dams.

Tinkers Pond privately owned in service recreation dam that had a non-periodic inspection done in 2023 after the flood event but has not been formally inspected since 1979.

As experienced in the last 3 floor events, the cause of crisis was the breaking of Beaver dams; Peacham will be mapping and annually monitoring the beaver dams and their potential.

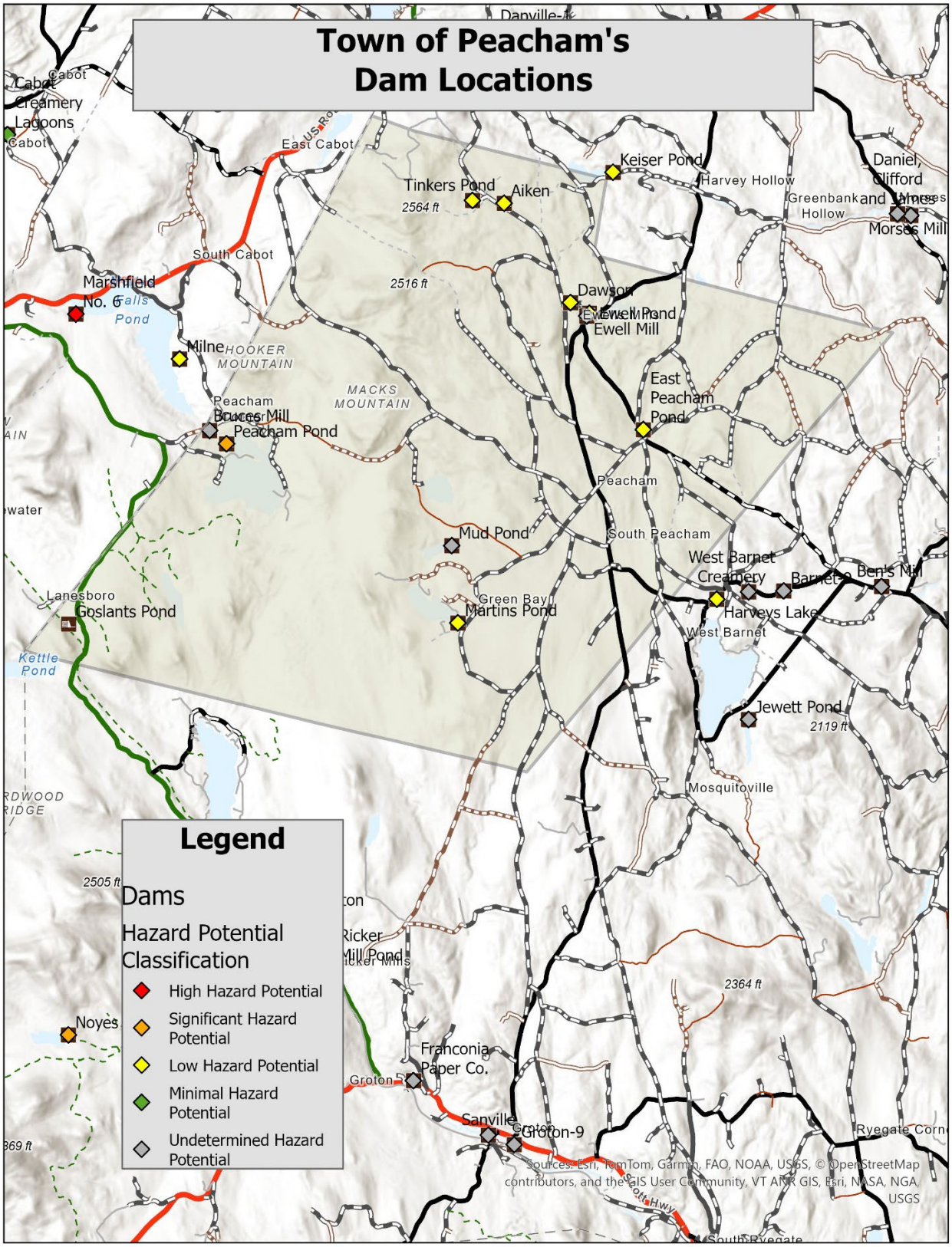


Figure 4 - Dam locations and classification

4 PLANNING PROCESS

Plan Developers

The Town Administrator assembled a Hazard Mitigation Planning Committee to participate in updating the Plan. Committee members included the: Emergency Management Director, Fire Chief, Members of the Planning and Zoning Commission, Energy Commission, Highway Foreman, and Water Operator also participated in Plan development.

SEAM Solutions assisted the Town with this Plan update. FEMA Building Resilient Infrastructure and Communities (BRIC) funds supported this process.

Plan Development Process

The 2025 Local Hazard Mitigation Plan is an update to the first single jurisdiction 2005 plan written for the Town by Northeastern Vermont Development Association (NVDA).

June 4, 2024 – Consultant met with Emergency Management Director to discuss project approach and next steps, including review the 2018 draft plan.
January 6, 2025 – Discussed Announcement of plan update and survey to be posted on the Town's website and made available at the Town Office, Front Porch Forum in early February.
January 23, 2025 – Announcement of hazard mitigation plan on the town's website along with posting at the town office**.**
February 5, 2025 – Public input for the Hazard Mitigation plan survey announcement made on the town's website and posted at the town office.
April 24, 2025 – Kick off meeting. Discussed current plan status; planning process; update to plan sections; outreach strategy; identify critical facilities. Committee meetings were held in person and not made available to the public.
May 7, 2025 – Public input for the Hazard Mitigation plan survey second announcement made on the town's website and posted at the town office.
June 5, 2025 – LHMP Committee met to discuss critical facilities, community stakeholders and identify and rate hazards.
July 2, 2025 – Sent outreach email to surrounding towns, VTrans District 7 Administrator, ANR River Engineer, AND/DEC Floodplain Manager, Caledonia Sheriff's Office, VT Dept of Health St. Johnsbury Office, NEK Chamber of Commerce, Caledonia Central Supervisory Union, Peacham Church, Green Mountain Power, VT Forest, Parks and Recreation.
July 9, 2025 – LHMP Committee met to continue rating hazards that affect the Town and review that past plans actions for updating.
September 11, 2025 – Met with LHMP Chair to discuss the status of the 2018 actions items, the new plan actions along with the community capabilities and areas for improvement. The Chair will be meeting with individuals separately to accomplish these updates.
September 23, 2025 – Met with LHMP Chair to continue discussion of the status of the 2018 actions items, the new plan actions along with the community capabilities and areas for improvement.
October 1, 2025 - November 20 – LHMP Chair met with each committee member, one on one to discuss in detail each perspective issues, concerns, insights.

December 1, 2025 – January 31 – Weekly check ins with the LHMP Chair to discuss the status of the new plan actions.
February 16, 2026– Distribute to LHMP Committee to review draft plan.
March 11, 2026–LHMP Committee met and discussed draft plan and make edits based on comments.
March 12, 2026 – Publish draft for public review
March 18, 2026 – Present draft at Selectboard meeting for public notification, review and input
TBD – Submit draft to VEM/FEMA for review

Table 3 - Plan development timeline and process

In addition to the local knowledge of Planning Team members and other relevant parties, several existing plans, studies, reports, and technical information were utilized in the preparation of this Plan. A summary of these is provided below.

Existing Plans, Studies, Reports and Technical Information
2019 Town Plan Referenced to develop the Community Profile, Capabilities, Integrating into Existing Plans and Procedures, Mitigation Strategy Updates – Changes Since 2018 Plan in Section 6.
2025 Local Emergency Management Plan Primarily used to identify local organizations that support vulnerable populations to ensure these organizations are invited to participate in the plan update along with updating Section 3.
2017 Town of Peacham, Vermont Zoning and Flood Hazard Regulations Referenced to develop Community Capabilities, Integrating into Existing Plans and Procedures, Mitigation Strategy Updates in Section 6
2015 NVDA Regional Plan Amended July 2023 Used to ensure the town plan and hazard mitigation elements align with the regional vision.
Green Mountain Power Outage Data Used to develop Table 2 in the Community Profile Section and identify potential vulnerabilities.
2020 US Census Data Used to develop the Demographics and Growth Potential information in Section 3.
2021 American Community Survey Five-Year Estimate Used to develop the Demographics and Growth Potential information in Section 3.
2023 State of Vermont Hazard Mitigation Plan Primarily referenced to develop the risk assessment and profiles in Section 5.
2023 FEMA Local Mitigation Planning Handbook Used to ensure plan meets the Federal mitigation planning requirements, including those for addressing climate change.
2023 FEMA Hazard Mitigation Assistance Program Policy Guide Used to ensure plan meets the Federal mitigation planning requirements, including those for addressing climate change.
2021 Vermont Climate Assessment Referenced to develop the flood risk profile in Section 5.
FEMA NFIP Insurance Reports Used to determine how many structures are insured and describe NFIP compliance in Section 6. NOTE: Due to FEMA Region I concerns related to personally identifiable information (PII), NFIP repetitive loss and severe repetitive loss information is unavailable for this plan update.
2017 FEMA Region I Mitigation Ideas for Natural Hazards Used to develop mitigation actions to address impacts from severe winter storms, high winds and floods.
2019 Road Erosion Inventory Referenced to develop the risk profile in Section 5 and mitigation actions to address floods in Section 6.

VTrans Transportation Resilience Planning Tool Referenced to develop the risk profile in Section 5 and mitigation actions to address floods in Section 6.
Vermont Dam Inventory (VDI) Referenced to develop the risk profile in Section 5 and mitigation actions to address floods in Section 6.
National Oceanic and Atmospheric (NOAA) National Climatic Data Center's Storm Events Database Referenced to develop the risk profile and hazard history in Section 5.
FEMA Disaster Declarations for Vermont Referenced to develop the risk profile and hazard history in Section 5.
OpenFEMA Dataset: Public Assistance Funded Project Summaries for Vermont Referenced to develop the risk profile and hazard history in Section 5.
Vermont Department of Health Referenced to develop the risk profile in Section 5.
Vermont Agency of Natural of Resources Referenced to develop the risk profile in Section 5.
Vermont Agency of Natural of Resources Watershed Projects Referenced to identifying completed and develop mitigation actions to address floods in Section 6

Table 4 - Existing plans, studies, reports and technical information

Changes since the 2018 Plan

The 2025 local hazard mitigation plan aligns with the hazards recognized in the 2023 State Hazard Mitigation Plan. The 2018 local hazard mitigation planning effort analyzed both natural and man-made hazards and the risk they posed to the Town of Peacham. The risk assessment resulted in the categorization of High, Medium, and Low risk level hazards. Flooding, high winds, sever winter/ice storm and extreme cold were ranked as the community's Medium to High risk natural hazards. The six actions proposed in 2018 focused on mitigating risks from those hazards and all hazards identified in the 2018 plan.

As the Town has sought to implement the 2018 mitigation strategy, they have looked for opportunities to incorporate information and recommendations from the 2018 Plan into other plans, programs, and procedures.

The Peacham Town Plan, adopted in 2019, serves as the Town's framework and guide for reaching community goals, including those for how future growth and development should proceed. It includes flood resilience and land use policies and actions to support the goal of mitigating risks to public safety, critical infrastructure, historic structures, and municipal investments posed by flooding and fluvial erosion.

The Town Plan is the basis for local land use controls such as those in Peacham's Zoning and Flood Hazard Regulations, adopted in 2019. Peacham's Zoning and Flood Hazard Regulations includes Flood Hazard Area to ensure the selection, design, creation, and use of development in these hazard areas is reasonably safe and accomplished in a manner that is consistent with public wellbeing, does not impair stream equilibrium, flood plain services, or the stream corridor.

Peacham has made some progress in completing or deferring the six mitigation actions identified in the 2018 Plan – see **Appendix B**. The current committee and Selectboard recognizes the importance to the community in developing actionable and practical mitigation actions for the next 5 years.

The Town continues to support the adopted the Road and Bridge Standards of 2019 which makes the town eligible for a higher state match along with aiding the town in upgrading and maintaining their transportation infrastructure, making it more resilient to flash flooding. They continue to maintain trees

within the Town's Right-of-Way to reduce the risk of trees and limbs falling on power lines and causing power outages.

Even though the population has been decreasing over the years, the changes in population and development since 2018 have not made Peacham more vulnerable to natural hazards and therefore are not the primary drivers for a shift in the Town's mitigation priorities in 2025. Rather changing weather conditions and natural hazards most influenced the Town's current mitigation strategy.

According to the FEMA Hazard Mitigation Assistance Program and Policy Guide, "Climate change is increasing the frequency, duration, and intensity of storms, floods, fires, and extreme temperatures across the nation. Local communities are feeling the impacts of climate change now, and these multi-hazard trends are expected to continue to increase in severity over the next century."

As a result, Peacham considered the effects of future conditions, like climate change, on the type, location, and range of intensities of identified hazards when they conducted the risk assessment in 2025. The 2005 hazard risk assessment reflected not only hazards, but hazard events that could potentially relate to multiple hazards in this current plan such as widespread power failure. The highest risk hazard impacts that the Town believes they are most vulnerable to have shifted somewhat since the 2005 Plan, mainly due to focusing on natural hazards.

The primary mitigation goal in the 2025 Plan is increasing the Town's resilience to natural hazards by advancing mitigation investment to reduce or avoid long-term risk to people, homes, neighborhoods, the local economy, cultural and historic resources, ecosystems, and Community Lifelines.

When evaluating mitigation actions, the Town selected actions that support the appropriate mitigation goal and are acceptable and practical for the community to implement. Actions that directly benefit a vulnerable population were assigned a high prioritization score – see **Table 8**.

5 HAZARD IDENTIFICATION AND RISK ASSESSMENT

Local Vulnerabilities and Risk Assessment

To be consistent with the approach to hazard assessment in the 2023 State Hazard Mitigation Plan (SHMP), the Hazard Mitigation Planning Committee conducted an initial analysis of known natural hazard events that have occurred in the past to determine their probability of occurring in the future and their potential impacts on the people, infrastructure, environment, and local economy. Reviewing both the Appendix to Section 4 of the SHMP and NOAAs Storm Event Database for the Town of Peacham aided in determining that the State's high-ranking hazards such as Inundation Flooding and Heat have not historically had an impact in the area and therefore rated them as lower risk hazards. The Town does recognize, however, that this could change in the coming five years if climate change continues its current path.

This assessment considered the effects of future conditions, like climate change, on the type, location, and range of intensities of identified hazards.

The ranking results are presented (in bold and darker blue in **Table 6** and reflect the following **highest risk hazard impacts** that the Town believes they are most vulnerable to:

Fluvial Erosion and Flash Floods *associated with thunder and/or winter storms and ice jams*

Infectious Disease *as caused by micro-organisms, such as bacteria, viruses, or parasites.*

Drought *is a deficiency of moisture or a period of abnormally dry weather sufficiently long enough to cause a serious hydrological imbalance*

Strong wind *associated with thunderstorms, hurricanes, tropical storms, and winter storms*

Each of the **highest risk hazard impacts** are profiled in this section. Lower risk hazard impacts do not justify mitigation due to a low probability of occurrence and/or low impact and are not profiled in this Plan. See the State Hazard Mitigation Plan for information on the lower risk hazards.

Hail and Earthquakes were decided by the planning team to be outside of the realm of justification within our region for mitigation actions. Hail being that the historic record of damage being primarily minimal and to vehicles. Earthquakes even though experienced also are historically small in Vermont do occur but were deemed to be of minimal threat and with no building codes basically impossible for a town to develop effective mitigation strategies. See the State Hazard Mitigation Plan for information on these and other lower risk hazards.

The planning committee also considered and reviewed declared disaster declarations for Caledonia County. Below is a summary of declared disasters, with Peacham specific events highlighted in blue.

Federally Declared Disasters in Caledonia County					
Year	**Declaration Date**	**Description**	**Dec. #**	**County Est.**	**Peacham**
2004	**9/23/2004**	**Severe Storms and Flooding**	**DR1559**	**$373,855**	**$30,205**
2007	6/4/2007	Severe Storms and Flooding	DR 1698	Unknown	Unknown
2007	8/3/2007	Severe Storms and Flooding	DR 1715	Unknown	Unknown
2008	8/15/2008	Severe Storms, Tornado and Flooding	DR 1784	Unknown	Unknown
2008	**9/15/2008**	**Severe storms and Flooding**	**DR1790**	**$587,185**	**$210,083**
2011	**7/8/2011**	**Severe Storms and Flooding**	**DR 4001**	**$2,798,851**	**$381,861**
2011	**9/1/2011**	**Tropical Storm Irene**	**DR4022**	**$2,242,702**	**$44,128**
2013	8/2/2013	Severe Storms and Flooding	DR 4140	Unknown	Unknown
2014	1/29/2014	Severe Winter Storms	DR4163	$48,694	
2014	**6/11/2014**	**Severe Storms and Flooding**	**DR 4178**	**Unknown**	**$3,203**
2017	8/16/2017	Severe Storms and Flooding	DR4330	$371,916	
2020	4/8/2020	COVID-19	DR4532	$400,670	
2023	**7/14/2023**	**Severe Storms, Flooding, Landslides, and Mudslides**	**DR4720**	**$9,594,152**	**$ 97,204**
2024	**8/20/2024**	**Severe Storm, Flooding, Landslides, and Mudslides**	**DR 4810**	**$1,293,370**	**$529,888**
2024	9/26/204	Severe Storms, Flooding, Landslides, and Mudslides	DR 4826	$1,546,765	

**Public Assistance money listed is reflective of the Federal portion only*

Table 5 - Federally declared disasters affecting Caledonia County and Peacham

Hazard Impact	Probability	Potential Impact					Score	Rank
		Infrastructure	Life	Economy	Environment	Average		
Fluvial Erosion/Flash Flooding	4	2.5	2	4	2	2.625	10.5	1
Infectious Disease	3	1	4	3	1	2.25	6.75	2
Wind	4	2	1	2	1	1.5	6	3
Drought	3	1	1	3	3	2	6	3
Cold	4	1	1	2	1	1.25	5	4
Snow	4	1.5	1	1	1	1.125	4.5	5
Wildfire	2	1	1	3	2	1.75	3.5	6
Landslide/slope failure	3	1	1	1	1	1	3	7
Invasive Species	2	1	1	1	2	1.25	2.5	8
Inundation Flooding	2	1	1	2	1	1.25	2.5	8
Ice	1	2	2	3	1	2	2	9
Heat	2	1	1	1	1	1	2	9
Earthquake	1	2	1	1	1	1.25	1.25	10
Hail	1	1	1	1	1	1	1	11

	Frequency of Occurrence: Probability of plausibly significant event	**Potential Impact:** Severity and extent of damage and disruption to population, property, environment, and the economy
1	**Unlikely**: < 1% probability of occurrence per year	**Negligible:** Isolated occurrences of minor property and environmental damage, potential for minor injuries, no to minimal economic disruption
2	**Occasionally**: 1% to 10% probability of occurrence per year, or at least one chance in the next 100 years	**Minor:** Isolated occurrences of minor property and environmental damage, potential for minor injuries, no to minimal economic disruption
3	**Likely:** >10% but <75% probability per year, at least one chance in the next 10 years	**Moderate**: Severe property and environmental damage on a community scale, injuries or fatalities, short-term impact
4	**Highly Likely:** > 75% probability in a year	**Major:** Severe property and environmental damage on a community or regional scale, multiple injuries or fatalities, significant economic impact

Table 6 - Community hazard risk assessment

Highest Risk Hazard Profiles

Flooding: Inundation/Fluvial Erosion/ Ice Jams

Hazard Description: Floods (fluvial erosion, inundation, and ice jams) can damage or destroy property; disable utilities; destroy or make impassable roads and bridges; destroy crops and agricultural lands; cause disruption to emergency services; and result in fatalities**.**

People may be stranded in their homes for a time without power, heat, or communication, or they may be unable to reach their homes. Long-term collateral dangers include the outbreak of disease, loss of livestock, broken sewer lines or wash out of septic and wastewater systems causing water supply pollution, downed power lines, loss of fuel storage tanks, fires, and release of hazardous materials.

As noted in the 2023 State Hazard Mitigation Plan and 2021 Vermont Climate Assessment, the most common recurring hazard event impacting Vermont communities is flooding. The two most common types of flooding are inundation and fluvial erosion. Inundation is when water rises onto low lying land. Fluvial erosion is caused by intense and rapidly flowing floodwaters in brooks, rivers, drainage ditches, and along unpaved roads and private drives. It can occur suddenly, referred to as flash flooding, and as the flow of floodwater increases in velocity. Fluvial erosion includes stream bank erosion and the development of gullies in areas where there is minimal or no plant cover.

Whereas inundation-related flood loss can be a significant component of flood disasters, the more common mode of damage in Vermont is fluvial erosion, often associated with physical adjustment of stream channel dimensions and location during flood events. These dynamic, and often catastrophic, adjustments are due to bed and bank erosion of naturally occurring, unstable stream banks, debris and ice jams, or to the structural failure of, or flow diversion by, human-made structures**.** Fluvial erosion can cause severe undermining of bridge abutments and wingwalls, drainage ditches, and unpaved driveways/private roads. These were significant and widespread effects of the flash flooding in 2024 in Peacham and resulted in the disruption of the transportation network for many days, as well as condemnation of housing and loss of life.

Flooding is one of the worst threats to Peacham's residents and infrastructure. Past instances of flooding in Peacham have included rain and/or snowmelt events that cause flooding in the major rivers' floodplains, and intense rainstorms over a small area that caused localized flash-flooding. Both types of events can be worsened by the build-up of ice or debris, which can contribute to the failure of important infrastructure (such as culverts, bridges, and dams).

Hazard Extent: Major floods occur periodically in Peacham along the Peacham Hollow Brook and South Peacham Brook. Some of the worst flooding has come in recent years. The most widespread and significant flood damage occurred as a result of prolonged heavy rainfall during the 10-11 July 2024 period, when rainfall amounts of 3 to 9 inches were observed across the state over 48 hours. The highest 48-hour rainfall total was 9.20" in Calais, Vermont and rainfall reports of 4 to 8 inches were commonplace along the spine of the Green Mountains and adjacent communities. East Moretown saw 7.4 inches according to the NWS.

Extensive flooding to communities, washouts of numerous roads and bridges, and even the occurrence of land and mudslides resulted in significant property losses and two deaths were reported. To date, over 26.2 million dollars have been obligated for individual assistance and 61.2 million dollars in public assistance from this flood event.

Many of the inundation flood events in Caledonia County have been caused by ice jams and or rain events causing rivers to back up and flood roads by as much as two feet of water, closing the roads for as much as a day.

Hazard Location: Peacham recognizes the importance of identifying those areas most vulnerable to inundation flooding and fluvial erosion. Lanesboro, Foster Pond, and Governor Maddox Roads have been closed from the flooding in 2023. The Town is in the process of throwing these roads up as the cost of repairing and the probability of future washouts out weigh the benefits of continuing to maintain these roads.

Peacham is vulnerable to inundation flooding primarily along the Peacham Hollow Brook and South Peacham Brook in low-lying areas.

The figure below is the current version (3/19/2013) of the Flood Insurance Rate Map (FIRM) for the Town of Peacham, which defines both the current special flood hazard areas and the ANR river corridors.

Figure 5 - Special Flood Hazard Areas and VT ANR River Corridors

The town is also concerned that climate change will fuel more extreme and rapid runoff. This could result from increased winter temperatures, more extreme temperature fluctuations in the winter, and more intense rain and snow events. In mountainous areas, such as Peacham the increase in temperature fluctuations and precipitation is especially worrisome. The snowpack can become hazardous with rapid melting from rain on snow and sudden warming fueling extreme and rapid runoff.

There are 18 buildings in the current FEMA floodway; as well as roads, culverts, bridges, and two water wells for public establishments.

Hazard History: The table below identifies a history of occurrences, with associated property and crop damage, in Caledonia County. Please refer to the 2023 State Hazard Mitigation Plan Appendix to Section 4 for more details.

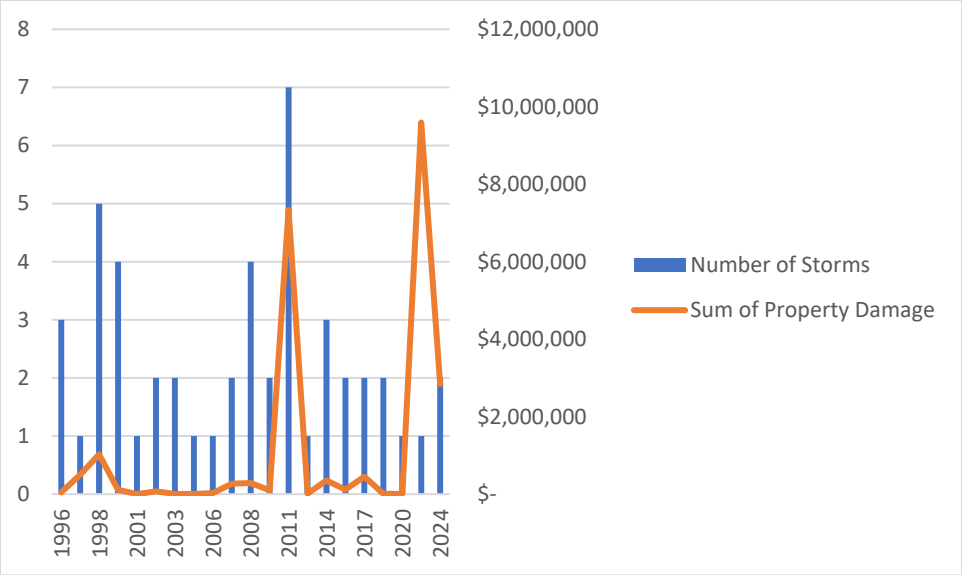


Table 7 – History of flood events and associated costs

Town Vulnerability:

People: Fluvial erosion and flooding events can cause injuries or fatalities to people who do not evacuate in time. Delayed evacuation can be caused by no-noticed events, or by individuals who are hesitant to leave their houses. Vulnerable populations may potentially be impacted more than other residents. In addition, given Peacham's culture of helping neighbors and the town, there is a heighten risk of the public at risk during the response phase.

Built environment: Fluvial erosion and flooding events can cause damage to town and private property, including roads, culverts, driveways, bridges, wells, sewage facilities/septic systems, and buildings.

Natural environment: Fluvial erosion and flooding events can cause damage to the environment and fragile ecosystems. Vulnerabilities and impacts include algae blooms (harmful to the environment, and toxic to animals/people), transportation of invasive species, soil and bank erosion, and pollution.

Economy: Fluvial erosion and flooding events can cause major economic impacts to the town. Impacts include disruption or closure of businesses, homelessness due to house damage, and recovery costs, including employee overtime, time and equipment spent on the repairs.

Future Probability and Potential Future Impacts:

Climate Change: Climate change has profound effects on weather patterns, precipitation, and temperature, all of which significantly impact fluvial erosion and flooding. Increased river flows, earlier and rapid snowmelt, more severe storms, vegetation loss and soil saturation, as a result of climate change, may impact fluvial erosion and flooding event frequency and intensity.

Change in Land Use/Development: The town has adopted inundation hazard area regulations and participates in the National Flood Insurance Program (NFIP). Peacham's regulations are consistent with the minimum requirements of the NFIP. Therefore, changes in development and land use is not expected to increase impacts of fluvial erosion,

inundation flooding or flooding on current or future assets. If most of the currently approved FEMA buyouts are accepted, the change in land use will reduce the town's tax base.

Change in Demographics: Peacham's population demographics are not expected to change significantly in the next five years, though an increase in the average age of the residents may increase the vulnerabilities of the population.

Infectious Disease

Hazard Description: Infectious disease outbreaks refer to the occurrence of cases of disease in excess of what is normally expected in a population or geographic area. These diseases are typically caused by bacteria, viruses, fungi, or parasites.

Hazard Extent: Outbreaks can last from days to years, influenced by factors such as the nature of the pathogen, public health response, and population immunity. Some diseases have seasonal patterns (e.g., influenza in winter, vector-borne diseases in warmer months).

Hazard Location: Infectious disease outbreaks can occur anywhere in Peacham. Recently, Peacham, as did the entire United States, saw direct impacts from the COVID-19 pandemic.

Hazard History: Per the State Hazard Mitigation Plan, the following disease outbreak events have occurred in Vermont:

1918, 1957, 1968 – Pandemic Influenza

2009 – H1N1 strain

2015 – Sika virus

2020 – COVID-19

Town Vulnerability:

People: The population within the town is aging, leaving them more at risk of infectious diseases along with people with disabilities, access and functional needs may be most vulnerable to disease outbreak events. An outbreak can impact any person.

Built environment: A disease outbreak can cause a strain on local health care facilities. Additionally, facilities may need to be modified to respond to the crisis (e.g., school turned into a triage center).

Natural environment: Infectious disease outbreak events can originate from local environments (e.g., farms, lakes, etc.) and mitigative measures may need to be taken to prevent future spread (e.g., treatment of a body of water).

Economy: Infectious disease outbreak events can cause economic impacts to the town. Impacts include disruption or closure of impacted businesses, and costs to operate immunization clinics.

Potential Future Impacts:

Climate Change: Climate change has the potential to increase the frequency and intensity of disease outbreak events through various mechanisms. Temperature changes may increase vector-borne disease and pathogen survival. Extreme weather events (e.g., hurricanes) can disrupt infrastructure, leading to breakdowns in sanitation, clean water supply, and healthcare

services. Climate-induced displacement and migration can lead to overcrowded living conditions, which can facilitate the spread of infectious diseases.

Change in Land Use/Development: No changes to asset impacts due to infectious disease outbreak events as a result of development or land use changes could be identified.

Change in Demographics: Peacham's population demographics are not expected to change significantly in the next five years, though an increase in the average age of the population may increase the vulnerabilities of the population.

Strong Wind

Hazard Description: Wind hazards include high winds from thunderstorms, hurricanes, tropical storms, and winter storms. These winds can cause damage to buildings, power lines, trees, and other infrastructure. Wind events can vary in intensity, duration, and geographic extent. They often accompany other severe weather conditions such as heavy rain, snow, or ice.

Hazard Extent: FEMA's National Risk Index defines Strong Wind as damaging winds that exceed 58 mph. Strong Wind poses a threat to lives, property, and vital utilities primarily because of flying debris or downed trees and power lines. Caledonia County has seen winds as high as 86 mph. However, on average the winds events range on the low end of what FEMA considers strong winds. From 1997 to 2022 wind events have caused more than $345,000.

Hazard Location: Several wind events have come from other directions, mainly the south and in winter the traditional nor'easter. With its location at the intersection of the Champlain Valley and the Green Mountains, winds from the SSW tend to be compressed against the mountains causing locally higher winds than are experienced in other areas of the region. Fortunately for Peacham, these same geographic conditions tend to break potential tornadic wind patterns.

Town Vulnerability: Downed trees within the road right-of-way are the root cause of many power outages. Roads that pass through dense wooded areas are prone to downed trees, which can lead to fallen power lines. Strong wind events with associated power outages can have a short-term impact on the local economy due to business closures. Environmental impacts such as the Emerald Ash can have an impact on the health of trees that can become vulnerable to strong winds. A committee and plan, cited in the invasive species section was established, for the removal of vulnerable trees. The potential risk to public and private woodlots and impacts on the local economy have not been quantified.

Power outages are the main reason for disrupting communications, which are crucial in times of crisis. Telecommunications are also needed for warning systems before a disaster, as well as for response during and recovery after. During a disaster, municipal response is managed by the local Emergency Operations Center (EOC), this would include all communications – from phone calls to internet browsing and 2-way radio. The Fire Department's repeater also goes down when there is a loss of power hindering communications if there are responding to an event.

Potential Future Impacts: The entire Caledonia County region has been experiencing an increased frequency of microbursts, straight line winds and reported tornadoes. The severity of all types of weather events usually comes with a component of high winds. Climate change predictions would indicate that this type of wind event will continue to increase over the next few decades.

Climate Change: Climate change has significant effects on weather patterns and atmospheric dynamics, which in turn influence wind events. These changes can alter the frequency, intensity, and geographic distribution of wind-related hazards.

Change in Land Use/Development: No changes to asset impacts due to wind events as a result of development or land use changes could be identified.

Change in Demographics: Peacham's population demographics are not expected to change significantly in the next five years, though an increase in the average age of the population may increase the vulnerabilities of the population.

Hazard History: The table below identifies a history of occurrences within Caledonia County as data specific to Peacham was not available.

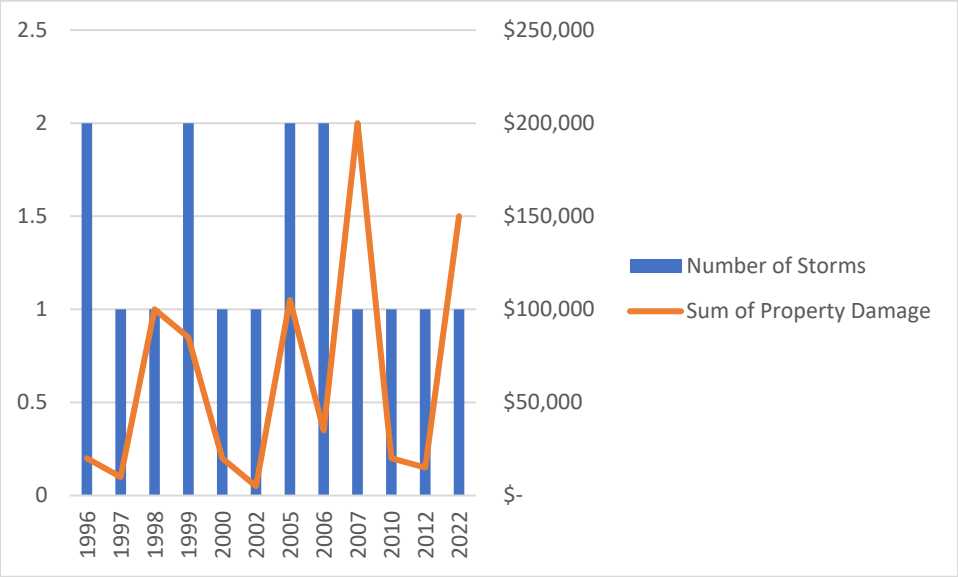


Table 8– History of wind events and associated costs

Drought

Hazard Description: Taking from the 2023 State Hazard Mitigation Plan "Drought is a deficiency of moisture that results in adverse impacts on people, animals, or vegetation over a sizeable area (NOAA National Weather Service) or a period of abnormally dry weather sufficiently long enough to cause a serious hydrological imbalance (American Meteorological Society)."

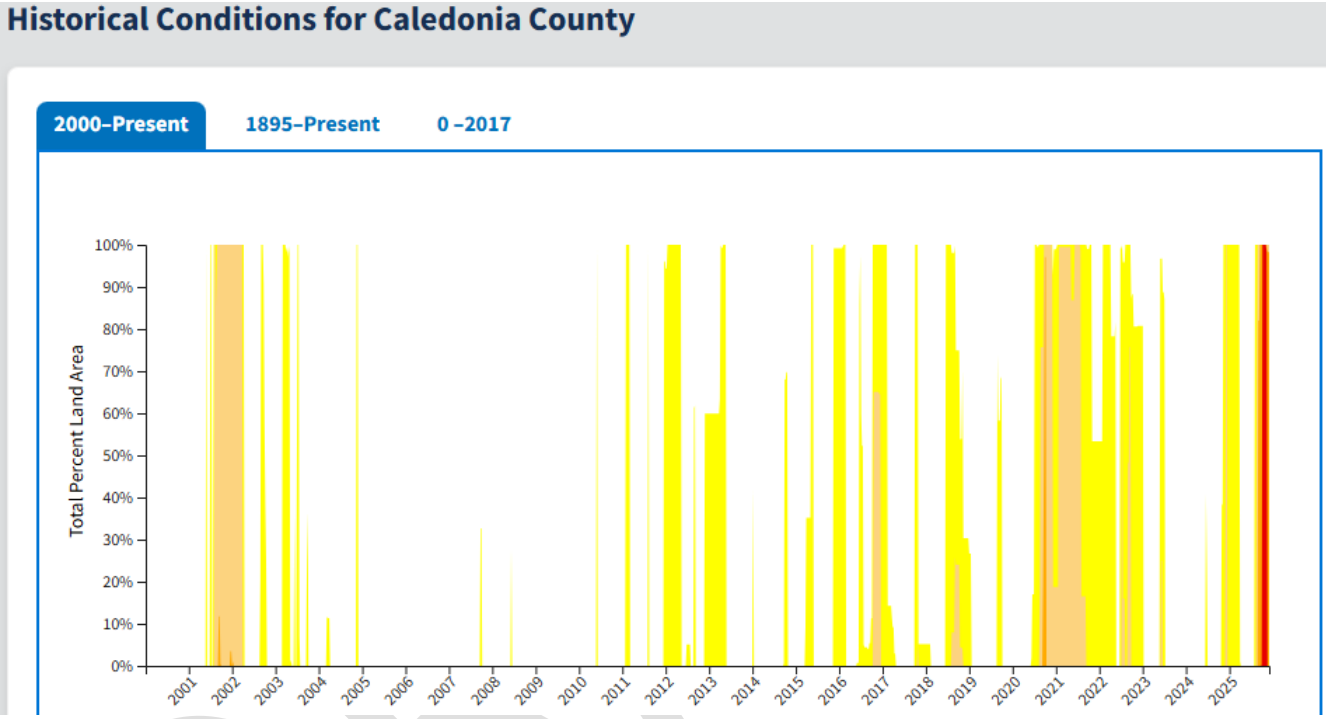
Droughts in the Northeast tend to be, what are referred to as "flash" droughts, defined as rapid onset of intense dry periods that can follow periods of normal or above normal precipitation. These may last from 2-6 months, and can have profound impacts within the region, on agricultural losses, shortages of water supply and very low stream flows. This pendulum often swings from a dry year to a wet year.

Hazard Extent: Droughts can affect large geographic regions, including urban and rural areas, agricultural lands, forests, and waterways. Drought severity is often categorized based on indicators such as precipitation deficits, soil moisture levels, streamflow, and water storage reservoir levels. Severe droughts can lead to significant water shortages, ecological disturbances, and socio-economic impacts. Severe

droughts can result in reduced water availability for drinking, irrigation, and industrial uses, leading to economic losses, environmental degradation, and social disruption.

Hazard Location: All areas of Peacham, Caledonia County and the State are susceptible to drought events.

Hazard History: There have been 3 instances of D2 (Severe Drought) level droughts in Caledonia County Vt since 2000. One longer event in 2016 and then two short events in 2018 and 2020. The most recent was Summer of 2025.



Category	Description	Possible Impacts
D0	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures Coming out of drought: some lingering water deficits pastures or crops not fully recovered
D1	Moderate Drought	Some damage to crops, pastures Streams, reservoirs, or wells low, some water shortages developing or imminent Voluntary water-use restrictions requested
D2	Severe Drought	Crop or pasture losses likely Water shortages common Water restrictions imposed
D3	Extreme Drought	Major crop/pasture losses Widespread water shortages or restrictions
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses Shortages of water in reservoirs, streams, and wells creating water emergencies

Table 9 - County history of drought events

Town Vulnerability:

People: Droughts can cause issues to homeowner's wells, leading to compromised drinking water, which could result in health issues.

Built environment: Droughts are not likely to cause new well or replace well parts.

Natural environment: Droughts can cause minor to catastrophic issues for the natural environment. Local wild plants and crops may be lost during a prolonged drought event. Additionally, a drought can lead to streams and groundwater being depleted, which impacts wild and domesticated animals.

Economy: Droughts can impact the tourism industry, with depleted streams or areas for water activity. Additionally, droughts may impact 'leaf peeping season.'

Potential Future Impacts:

Climate Change: Climate change has the potential to increase extreme heat occurrences, therefore there is an increased likelihood of future drought events, both in frequency and magnitude.

Change in Land Use/Development: No changes to asset impacts due to drought events because of development or land use changes could be identified.

Change in Demographics: Peacham's population demographics are not expected to change significantly in the next five years, though an increase in the average age of the population may increase the vulnerabilities of the population.

Extreme Cold

Hazard Description: Cold temperature hazards result from prolonged periods of frigid weather, often accompanied by snowfall, ice accumulation, and strong winds. Cold snaps and extreme cold events can pose significant risks to human health, infrastructure, agriculture, and ecosystems. Cold temperature hazards are characterized by below-freezing temperatures, with daytime highs and nighttime lows falling well below normal seasonal averages.

Hazard Extent: In the region, extreme cold can still be an issue. Historic cold extremes in Peacham have reached as low as -35° F, with wind chill values dropping below -50° F during severe Arctic outbreaks, as documented in NOAA regional data. These conditions pose risks of frostbite within minutes, freezing of uninsulated water lines, and have historically resulted in school closures and increased emergency heating needs in Caledonia County. If it is a long-lasting cold without snow cover, frost can migrate deep into the ground freezing pipes and heaving roadways. Most of this would be dealt with by the town either through their utility contracts or by the town road crew in keeping the transportation infrastructure in usable condition. Loss of power during one of these cold snaps may require use of the town shelter and is planned for in the town Local Emergency Management Plan. For cold weather events the Town has the capacity to open the Town Office and the Peacham Community Fellowship Hall as an additional shelter if in association with a power outage.

Hazard Location: Peacham and surrounding areas are susceptible to cold temperature hazards, with higher elevations typically experiencing colder temperatures and more severe winter conditions.

Hazard History: Below are the 7 cold related listing from the State Hazard Mitigation Plan (SHMP) of 2023.

Caledonia 1/25/2007 Cold
Caledonia 3/6/2007 Cold
Caledonia 1/7/2015 Cold
Caledonia 1/11/2022 Cold

Caledonia 3/9/2007 Cold
Caledonia 1/14/2009 Cold
Caledonia 1/14/2022 Cold

Town Vulnerability:
People: Cold weather events can cause injuries or fatalities to people who do not shelter-in-place, or who do not have adequate shelter. Delayed sheltering-in-place can be caused by no-noticed events, or by individuals who do not heed the warning. The elderly, the homeless, residents with special needs and those without proper transportation may potentially be impacted more than other residents.
Built environment: Cold weather events can cause damage to town and private property, including buildings (roof collapse), blocked egress routes, blocked evacuation routes, frozen pipes, and downed powerlines.
Natural environment: Cold weather events can cause damage to the environment with downed trees.
Economy: Cold weather events can cause economic impacts to the town. Impacts include disruption or closure of impacted businesses, and recovery costs, including employee overtime, time and equipment spent on the repairs.

Potential Future Impacts:
Climate Change: Climate change significantly affects weather patterns, including the frequency, intensity, and geographic distribution of extreme cold events. These changes can increase frequency and intensity of snow and ice storms, change snowfall patterns, lead to more ice accumulation, and reduce snowpack.
Change in Land Use/Development: No changes to asset impacts due to extreme cold events as a result of development or land use changes could be identified.
Change in Demographics: Peacham's population demographics are not expected to change significantly in the next five years, though an increase in

Snow
Hazard Description: Snow hazards include heavy snowfall, blizzards, and snowdrifts. Snow events vary in intensity and duration, from light snowfalls to severe blizzards with high winds and significant accumulation.

Hazard Extent Severe Snowstorms in Peacham has the potential of bringing over 6 inches of snow in less than 24 hours, especially in higher sections of town in the area of Mack Mountain and nor'easters type events, that will require removal from roads and other community assets that may be vulnerable to the weight of snow. Severe snowstorms may reduce visibility due to falling snow and associated strong winds.

National Weather Service warnings include:

- Winter Storm Warning: Heavy snowstorm predicted within 24 hours
- Blizzard Warning: Sustained wind and snow with gusts ≥35 mph for ≥3 hours
- Heavy Snow Warning: Accumulations of over 6 inches in 24 hours

Hazard Location: Townwide. Blowing snow can close roads, especially steep segments. Infrastructure is highly impacted by snow accumulation.

Hazard History: During the Valentine's Day Storm of 2007, Caledonia County saw snow accumulations from 19 to 26 inches of snow fall
Previous Occurrences

Since 2000, Caledonia County has seen over 105 winter events, none were categorized as blizzards and eight were categorized as Heavy Snow and the remaining; winter storm or weather.

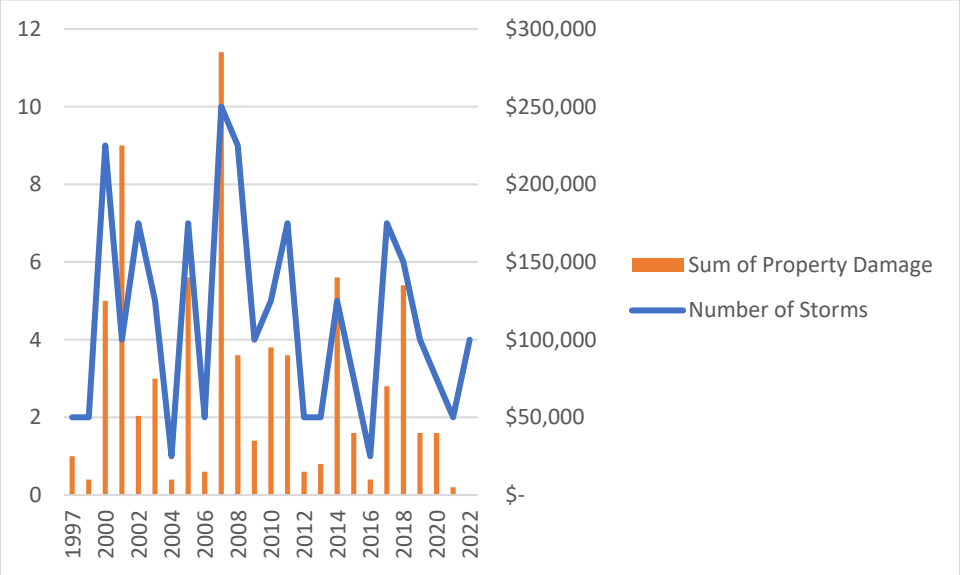


Table 10 - History of snow events and associated costs

Probability of Future Events and Impacts

Severe snowstorms in Peacham are classified as highly likely: >75% probability per year. Since 2010, Peacham has experienced numerous snowstorms with more than 10 inches of accumulation within 24 hours. The range of intensities townwide includes: 6 to 18 inches of snow within 24 to 48 hours. The Town feels very comfortable handling these snow events and there have been very limited disruptions.

While historical data show an increase in the frequency of extreme snowstorms in the eastern United States during the 20th century, recent research suggests that climate change may lead to a decline in blizzard frequency in the coming decades due to warming temperatures and changing atmospheric conditions. Increased winter precipitation in the form of rain is anticipated to pose increased risk to assets in Peacham. In recent years the winter season has been starting later and finishing sooner. Although there are no guarantees of this continuing this change has been very noticeable.

Climate Change: Climate change significantly affects weather patterns, including the frequency, intensity, and geographic distribution of ice and snow events. These changes can increase frequency and intensity of snow and ice storms, change snowfall patterns, lead to more ice accumulation, and reduce snowpack.

Change in Land Use/Development: No changes to asset impacts due to ice and snow events as a result of development or land use changes could be identified.

Change in Demographics: Peacham's population demographics are not expected to change significantly in the next five years, though an increase in the average age of the population may increase the vulnerabilities of the population.

Town Vulnerability:

People: Snow events can cause injuries or fatalities to people who do not shelter-in-place, or who do not have adequate shelter. Delayed sheltering-in-place can be caused by no-noticed events, or by individuals who do not heed the warning. The elderly, the homeless, residents with special

needs and those without proper transportation may potentially be impacted more than other residents. Power outages can affect heat access, especially for elderly or medically vulnerable. Emergency operations may be disrupted due to blocked roads.

Built environment: Snow events can cause damage to town and private property, including buildings (roof collapse), blocked egress routes, blocked evacuation routes, frozen pipes, and downed powerlines. Barns, sheds, and flat-roofed buildings at risk of roof collapse. Older buildings have been retrofitted, but some vulnerability remains.

Natural environment: Snow events can cause damage to the environment with downed trees. Steep roads may become impassable.

Economy: Snow events can cause economic impacts to the town. Impacts include disruption or closure of impacted businesses, and recovery costs, including employee overtime, time and equipment spent on the repairs**.**

Mitigation Measures

- Maintain snow removal equipment.
- Prioritize plowing steep roads.
- Emergency Shelter kits stored at Fire Station; volunteers trained.
- Encourage roof raking and home resilience measures.
- Designated emergency shelter facilities

Wildfire

Hazard Description: Wildfires are uncontrolled fires that spread rapidly through vegetation, forests, grasslands, and other flammable materials. Wildfire may be a result of natural causes (lightning, volcanic eruptions), human activities (arson, campfires, machinery sparks), and weather conditions (high temperatures, drought, strong winds). While Peacham benefits from the relatively moist conditions of Northeastern forests, drought periods in spring and fall elevate wildfire risk. Leaf litter and dry brush in these seasons increase fuel load, and wind can cause rapid fire spread.

Hazard Extent: Wildfires in Vermont can spread quickly through dense forests, particularly in dry conditions. Wildfires can last from several hours to several days depending on conditions and response efforts. There is a higher risk of wildfires during late spring, summer, and early fall when vegetation is driest. The National Weather Service (NWS) issues a “Red Flag Warning” when conditions are conducive for wildfires. A Red Flag Warning means warm temperatures, very low humidities, and stronger winds are expected to combine to produce an increased risk of fire danger. Extent Due to a lack of recent historical occurrences, extent data is unavailable for Peacham.

Hazard Location: Townwide. With 85% forest cover, all developed areas in Peacham fall within the wildland-urban interface. Homes along forested roads and remote cabins are particularly vulnerable.

Hazard History: No major fires reported in Peacham in the last 75 years, but statewide closures of public lands have occurred three times in that period of time due to extreme fire danger. Forest closures have occurred three times statewide in the past 50 years due to extreme fire risk.

Probability of Future Events and Impacts

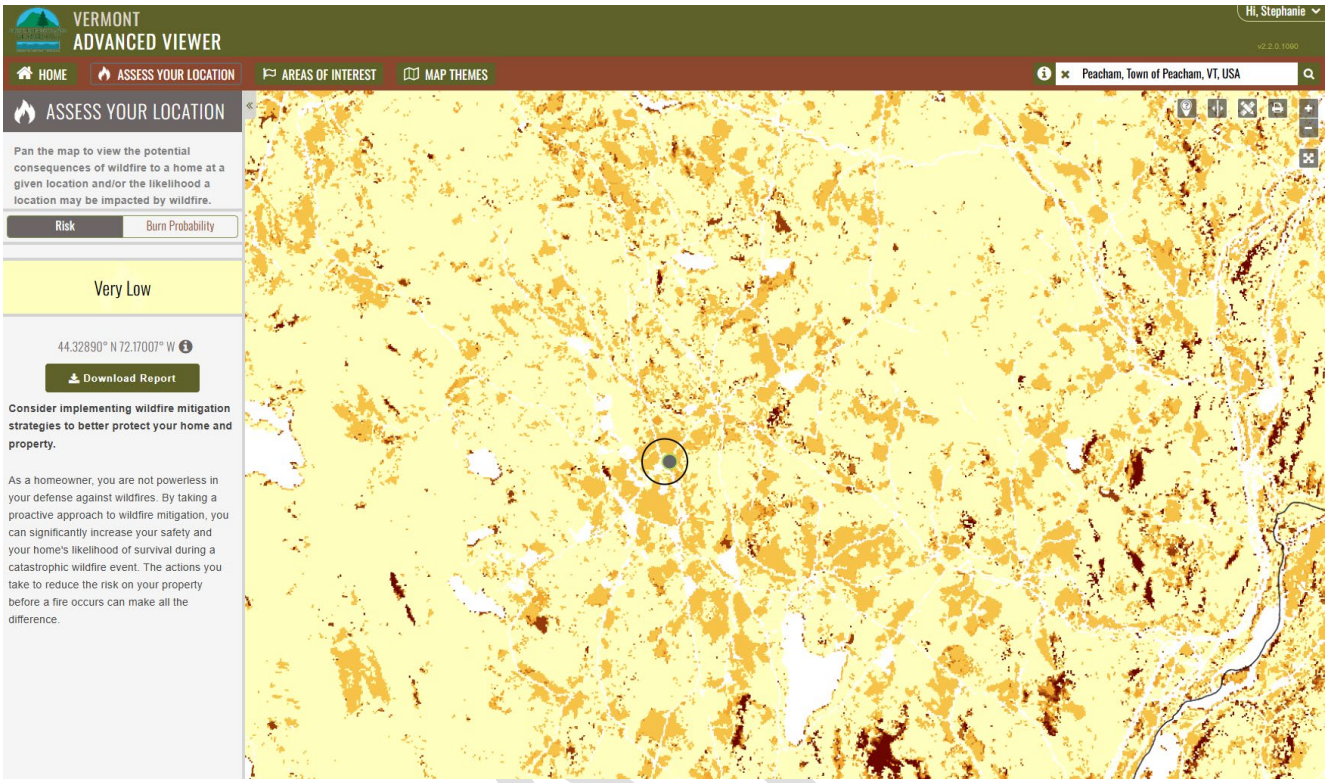


Figure 6 - Risk of wildfire according to the Northeast-Midwest Wildfire Risk map

Wildfire events are considered Unlikely in Peacham, defined as a <1% probability of occurrence per year. Although Peacham has not experienced major wildfire events, increasing periods of drought and regional trends in fire weather raise the likelihood.

Expected townwide intensities range from small ground fires during dry leaf-litter seasons to potential moderate canopy fires during extended drought conditions.

With climate variability and predicted increases in dry weather during spring and fall, wildfire probability is expected to rise. Extended droughts may increase the frequency and intensity of future events, especially given the dense forest cover and topography.

Climate Change: Climate change has the potential to increase the frequency and intensity of wildfires due to rising temperatures and changing precipitation patterns.

Change in Land Use/Development: Development within the Forest Reserve District could increase assets vulnerable to wildfire, however no known development is anticipated.

Change in Demographics: Peacham's population demographics are not expected to change significantly in the next five years, though an increase in the average age of the population may increase the vulnerabilities of the population.

Town Vulnerability

People: Wildfire events can cause injuries or fatalities to people who do not evacuate in time. Delayed evacuation can be caused by no-noticed events, or by individuals who do not heed the warning. The elderly, the homeless, residents with special needs and those without proper

transportation may potentially be impacted more than other residents. Emergency response may be delayed due to limited road access.

Built environment: Wildfire events can cause damage to town and private property, including buildings (burn damage), blocked egress routes, blocked evacuation routes, and loss of electrical power. All structures are within forested areas, many along narrow, tree-lined roads.

Natural environment: Wildfire events can cause damage to the environment with acres of forests and farmlands being burned. Accumulated debris and deadfall during drought conditions increases fuel load.

Economy: Wildfire events can cause economic impacts to the town. Impacts include disruption or closure of impacted businesses, and recovery costs, including employee overtime, time and equipment spent on the repairs.

Mitigation Measures

- Continue tree trimming and debris clearing on town rights-of-way.
- Encourage defensible space around structures.
- Provide community wildfire education via Conservation Commission events.
- Train fire department on forest fire response and interagency coordination with State Fire Wardens.
- Replace Peacham's 1970's Forestry Truck and Equipment
- Monitor drought and fire risk via Vermont's Fire Danger Rating system.
- Coordinate with State officials around local campfire permitting in state forests.

Landslide/Rockslide Hazards

Hazard Description: Landslide is the sliding of a large mass of rock, earth, or debris, down a sloped section of land. Landslides can be caused by rainstorms, fires, alternate freezing or thawing and/or by the steepening of slopes by erosion or human modification. In Peacham, landslides tend to occur or are exacerbated by fluvial erosion as most of the landslides occur on or near a stream bank, or during extreme wet conditions in areas of clay substrate.

Landslide/Rockslide hazards occur in the Town of Peacham as the result of glacial deposits and how both roads and rivers interact with these deposits.

Hazard Extent: Landslides can affect localized areas or larger regions, depending on the size and scale of the landslide event. Historically landslides in Peacham have been small at ~0.1 of an acre or less.

Hazard Location: Most of the landslides affecting the Town of Peacham are as a result of fluvial erosion along the South and East Peacham Brooks as shown in the map below. Other landslides have occurred in remote mountain areas and more recently the 2023 flood event that washed out Lanesboro Road.

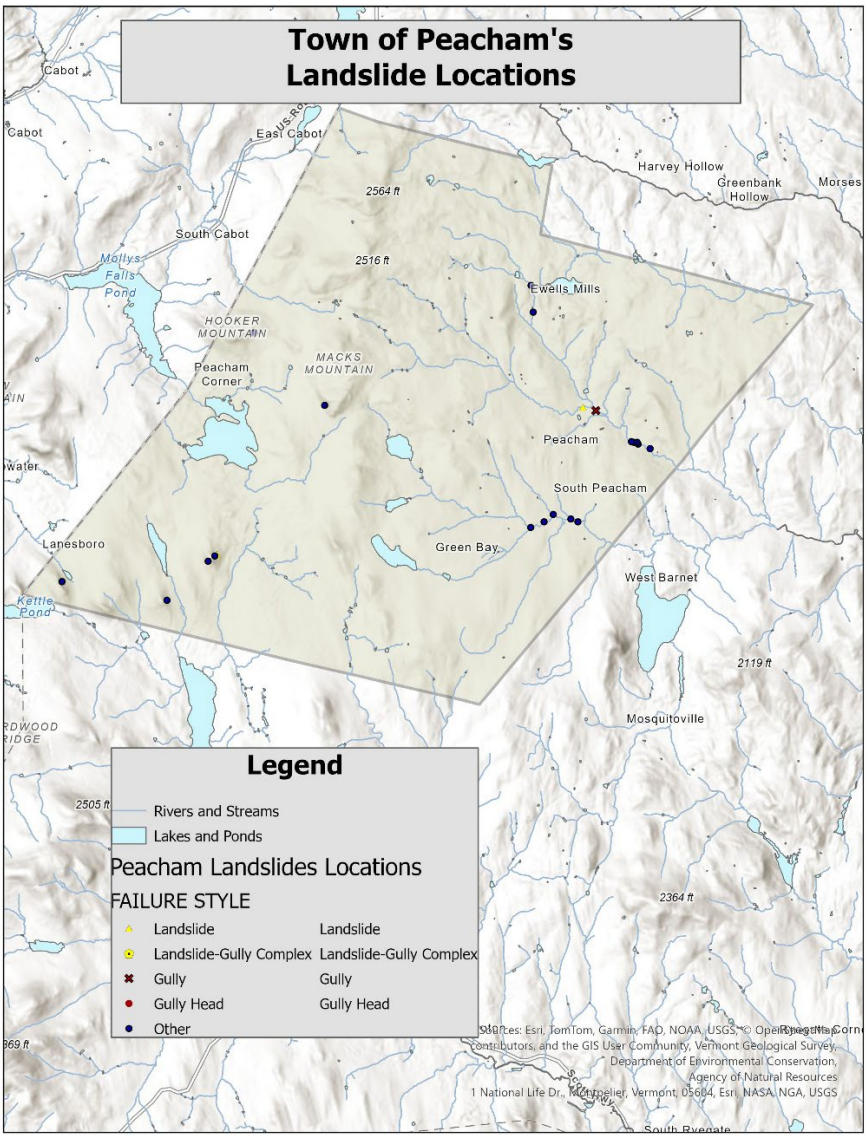


Figure 7 - VTANR Landslide locations

Hazard History: Each flood event of the past 20 years has resulted in erosion of riverbanks, some more than others. As previously identified, the landmark flooding of 2023 was the worst in recent memory.

According to the Vermont Landslide database maintained by the Vermont Agency of Natural Resources (ANT). There have been 34 landslides, however the data is suspect as the failure date occurs on the same date as the visit date. The history of landslides prior to 2010 was not available but certain locations in town show clear historic landslide activity. Please see the VT ANR Landslide database for more information.

Town Vulnerability: The inherent instability associated with erosion of gravel deposits is and will be of great concern to the Town of Peacham in the future. Actions of water courses will likely continue to move them laterally, putting riverside homes and infrastructure at risk. Additionally, the value of the underlying gravel makes it attractive to continue removing this resource by landowners. When gravel removal excavates the base of these gravel deposits, the gravel bank, itself, becomes potentially unstable.

Increases in the value of gravel and the frequency of severe rain events will both point to greater risks in the future.

People: Residents living or near steep slopes may face increased risks of property damage and loss of life. Landslides can impact hikers and other people engaged in outdoor recreation.
Built environment: Transportation networks, utilities, buildings, and critical infrastructure located in landslide-prone areas may be exposed to damage or disruption during landslide events.
Natural environment: Landslides can have ecological impacts, including habitat destruction, soil erosion, sedimentation of waterways, and loss of biodiversity in affected areas.
Economy: Landslides can damage or destroy buildings, roads, bridges, utilities, and other infrastructure in their path, leading to economic losses and disruption of services.

Potential Future Impacts: Peacham has existed in its current location for over 250 years and during that period, has experienced the effects of landslide and erosion events. It is reasonable to expect that trend will continue, especially with predicted increases in storm severity. This trend would continue whether the area had been settled or not. The community's vulnerability to this hazard continues to be of high concern to the town.

Climate Change: Climate change may lead to increased frequency and intensity of flooding events, fluvial erosion, rain/snow events and changes to material's strength through weathering, resulting in a higher probability of future landslides.
Change in Land Use/Development: Increased recreational use or development in landslide or fluvial erosion prone areas may lead to increased impacts of landslides.
Change in Demographics: Peacham's population demographics are not expected to change significantly in the next five years, though an increase in the average age of the population may increase the vulnerabilities of the population.

Invasive Species

Hazard Description: Invasive species are non-native organisms that, when introduced to an area, cause harm to the environment, economy, or human health. These species can outcompete native species, disrupt ecosystems, and cause significant ecological and economic damage. Invasive species can be plants, animals, fungi, or microorganisms. They often have high reproductive rates, few natural predators in their new environment, and the ability to thrive in a wide range of conditions.

Hazard Extent: The extent of impact can vary from localized infestations to widespread ecological disruption. Damages range from skin blistering and scarring in the case of poison parsnip, to the devastating effect the Asian Longhorn Beetle (ALB) or Emerald Ash Borer (EAB) could have on Peacham's Forest products industry and village landscape**.**

Hazard Location: All ecosystems in Peacham, including forests, wetlands, agricultural lands, and waterways, are susceptible to invasion by non-native species.

Hazard History: Invasive species are becoming a widespread problem throughout Peacham and the rest of Vermont.

The Peacham Hazard Mitigation Committee pointed out that much of the spread of unwanted invasive plants is along roadsides and has entered the town via state highways. Flying insect invasives will be far more widespread due to the mobility of these pests and could strike anywhere in the community where

their hosts live (Ash for Emerald Ash Borer and Maple for Asian Longhorned Beetle). From small woodlots to large-tract forests, all forested land is susceptible.

Widespread establishment of Wild or Poison Parsnip (*Pastinaca sativa*) along roadsides and/or open fields can effectively remove those areas for recreational purposes through much of the summer months. Once contracted, many are quite hesitant to venture far from cleared paths and given the non-developed nature of much of Vermont's attraction for tourists, could heavily impact future visits.

Ash trees are the source for hardwood that can bend and withstand considerable stress. Historically, ash has been the source for axe handles, hockey sticks and baseball bats. It is a component of timber harvesting in Vermont and provides that industry with a moneymaking product. Spread of the Emerald Ash Borer (*Agrilus planipennis*) (EAB) into Vermont's forests would have a significant impact on timber values. The Emerald Ash Borer Strategic Plan Committee was established in 2020 a year after the first detected tree with EAB by the Selectboard with the mission to update and broaden the 2014 street tree inventory to identify the location and condition of all ash trees on public properties, including along neighborhood streets, within public parks, and along roadways. This committee also identified locations, established priorities and timelines for removal of ash trees

A third invasive of immediate concern to Vermont is the Asian Longhorned Beetle (*Anoplophora glabripennis*) (ALB) which attacks and kills maple trees. Vermont is famous for its maple syrup and is the largest producer of maple products in the United States. Widespread loss of maple trees could result in the collapse of this iconic industry and a severe impact to the state's economy.

Other invasives include Purple Loosestrife, Japanese Knotweed, Rock Snot and many others which all have a detrimental impact on the state's native populations and the state's ecological balance.

The most noticeable impact of invasives in Vermont began when a load of elm lumber was imported into this country from Europe in the early 1900s. Embedded in this load were spores of what we now call Dutch elm disease. At the time, the elm was the most popular street tree in the US due to its hardiness in many types of conditions. The loss of these trees which were liberally planted as shade trees in many village greens and along roadsides had an extreme impact both aesthetically and due to the loss of shade, in the overall use of electricity in summer months. Now, elms are uncommon in most of the northeast and the disease continues to spread westward.

Other examples include the importation of gypsy moth in an attempt to create locally grown silk, the spread of zebra mussels which threaten water intakes on infested water bodies and the unintentional importation of the Norway Rat in ships holds with early colonists. Each of these has had its own impacts on the economy and ecological stability of the US and Vermont.

Givne that there are 8 bodies of water, within the Town boards, and the Aquactic Invasive species are becoming rampat in Vermont/New England; Peacham is at risk. Peacham Pond has particiipated in VT's Aquatic Invasive Species Program to mitigate the risk; expansion of the program should be a preempt measure.**Town Vulnerability:**

People: People may be injured or made ill by invasive species events (e.g., blisters from poison parsnip

Built environment: Invasive species may cause overgrowth or damage to various built environments, such as, powerlines and culverts. The damage can be minor to catastrophic.

Natural environment: Invasive species can wipe out an entire local ecosystem, causing complete devastation to the local natural environment. Bodies of water may become uninhabitable, and forests can see complete devastation.

Economy: Invasive species can impact the tourism industry with the closure of outdoor recreation trails.

Potential Future Impacts:

Climate Change: Warmer temperatures and altered precipitation patterns can create more favorable conditions for invasive species to thrive and expand their range. Species that were previously limited by cold temperatures may be able to establish populations in new areas, including higher elevations and latitudes. Climate change can influence the distribution and abundance of vectors (e.g., mosquitoes, ticks) that transmit invasive species and vector-borne diseases. Warmer temperatures and changes in precipitation patterns can expand the geographic range of these vectors, increasing the risk of invasive species introductions and disease transmission. Invasive species themselves can contribute to climate change through various mechanisms, such as altering carbon cycling, disrupting ecosystem services, and promoting changes in land cover and vegetation dynamics. These feedback loops can further exacerbate the impacts of climate change on ecosystems.

Change in Land Use/Development: Increased recreational use or development in forest reserve districts can lead to habitat modification, fragmentation of natural habitats, altered disturbance regimes, changes in hydrology and drainage and loss of native biodiversity.

Change in Demographics: Peacham's population demographics are not expected to change significantly in the next five years, though an increase in the average age of the population may increase the vulnerabilities of the population.

Ice

Hazard Description: Ice events include ice storms, freezing rain, sleet, and ice accumulation on surfaces. Ice accumulation occurs when rain falls through a layer of subfreezing air near the surface, causing it to freeze on contact with surfaces. Sleet involves small ice pellets that bounce upon hitting the ground, while freezing rain creates a glaze of ice.

Hazard Extent: Ice events can occur several times each winter season. Ice accumulation can range from a light glaze (less than 0.25 inches in the 2013 storm) to significant buildup (up to 0.75 inches in the 1998 storm). Severe ice storms can lead to widespread tree and structure damage and can lead to multiple day power outages.

Hazard Location: All areas of Peacham can be affected by ice events, particularly higher elevations, and exposed locations.

Hazard History: Even in 1998 when a severe ice storm hit much of northern Vermont, fortunately, the Town of Peacham was spared the brunt of the damage due to micro-climate differences from its neighboring communities. Even though there is a level of risk to the Town of Peacham, the committee chose not to detail the hazard any further or identify any mitigation measures.

Probability of Future Events and Potential Impacts

With the almost annual occurrence of significant snow, the probability of ice has dropped significantly over the years, however, if it were to occur the town feels an impact most on the infrastructure of the community. The town is able to keep the roads open and treated for most storms and any loss of power is usually limited to hours.

As population growth and housing expands into the more rural areas of town, increasing dependency on local roads by the new homeowners requires changes in winter maintenance. The town has, thus far, been able to keep up with the increased demand on its services.

Ice events in Peacham are considered Unlikely to Occasional, defined as a <1% to 10% probability of occurrence per year, or at least one chance in the next 100 years. Although Peacham has not experienced frequent ice, with climate variability and predicted increase in the frequency of winter storms, ice events could be expected. Winter storms and higher temperatures may increase the frequency of future events.

Climate Change: Climate change significantly affects weather patterns, including the frequency, intensity, and geographic distribution of ice and snow events. These changes can increase frequency and intensity of snow and ice storms, change snowfall patterns, lead to more ice accumulation, and reduce snowpack.

Change in Land Use/Development: No changes to asset impacts due to ice and snow events as a result of development or land use changes could be identified.

Change in Demographics: Peacham's population demographics are not expected to change significantly in the next five years, though an increase in the average age of the population may increase the vulnerabilities of the population.

Town Vulnerability

The community vulnerability to Ice Storm is LOW based on the Unlikely (<1% probability) occurrence and the negligible (<10% of the community) impact.

People: Ice events can cause injuries or fatalities to people who do not shelter-in-place, or who do not have adequate shelter. Delayed sheltering-in-place can be caused by no-noticed events, or by individuals who do not heed the warning. The elderly, the homeless, residents with special needs and those without proper transportation may potentially be impacted more than other residents. Emergency response may be delayed due to limited road access.

Built environment: Ice events can cause damage to town and private property, including buildings (roof collapse), blocked egress routes, blocked evacuation routes, frozen pipes, and downed powerlines.

Natural environment: Accumulation on tree limbs could cause them to break off and fall impacting overall tree or forest health.

Economy: Ice events can cause economic impacts to the town. Impacts include disruption or closure of impacted businesses, and recovery costs, including employee overtime, time and equipment spent on the repairs

Mitigation Measures

- Continue tree trimming and debris clearing on town rights-of-way.
- Encourage defensible space around structures.
- Provide community education via Conservation Commission events.

Extreme Heat

Hazard Description: Heat hazards result from prolonged periods of high temperatures, often accompanied by high humidity levels. Heatwaves can pose significant risks to human health, infrastructure, agriculture, and ecosystems. Heatwaves are characterized by extended periods of unusually hot weather, with daytime temperatures exceeding normal seasonal averages and limited relief during the nighttime hours.

Hazard Extent: Peacham and the surrounding region have experienced heatwaves in the past, with notable events leading to heat-related illnesses, increased energy demand, and stress on infrastructure. Heat advisories, watches, and warnings are issued by the National Weather Service and local authorities to alert residents to the risks of impending heatwaves. Peacham may experience a heat advisory, watch or warning, however given historical data, it's likely that Peacham would be issued with a heat advisory.

Hazard Location: All areas of Vermont are susceptible to heat hazards, with urban areas typically experiencing higher temperatures due to the urban heat island effect.

Hazard History: Consecutive days of hot weather with warm overnight temperatures further increase the risk of experiencing severe heat-related health impacts. Risk also depends on the "normal" level of heat experienced in an area – places that are relatively cooler will typically experience health impacts at lower heat index values than a place that is relatively warmer. Below are the 8 heat related listing from the SHMP of 2023.

Caledonia 1/18-19/1996 Heat
Caledonia 12/7/1998 Heat
Caledonia 8/1/2006 Heat
Caledonia 7/21/2011 Heat
Caledonia 3/17/2012 Heat – caused $750,000 in crop damage across Caledonia County
Caledonia 7/1/2018 Heat
Caledonia 6/18/2018 Heat

Town Vulnerability:

Older adults, people with chronic health conditions, and people with disabilities are at particularly high risk, especially if they live in housing without air conditioning or are unhoused and cannot access cooling facilities and other support resources. The unhoused may not be or feel welcomed at cooling centers, sleep in hot tents, and carry heavy loads of their possessions in the heat. There is increasing risk to multiday heat events in Peacham with a greater increase in heat warning. With there being at least 1 multiday heat advisory on average per year.

Epidemiological analyses completed by the Vermont Department of Health indicate that Vermonters are five times as likely to visit the emergency department for heat-related illnesses when the heat index reaches the 80s, 10 times as likely when the heat index reaches the low 90s, and over 20 times as likely when the heat index reaches the upper 90s or hotter. These risks are greatly modified by how acclimated a person is to hot weather – the risk for heat-related health impacts is higher early in the heat season, and lower if it has been consistently hot over the past week or more.

People: Heat events can cause injuries or fatalities to people who do not head advisories. People, especially those will disabilities, access, and functional needs, may be more susceptible to heat related injuries, such as heat stroke.

Built environment: Heat events can cause a strain on the town's electrical system, leading to brown or blackout events. Extreme heat can also cause thermal expansion of concrete and steel and swelling on connection bridges.

Natural environment: Heat events can increase the occurrences of droughts and wildfires, which may impact maple sugaring and other crops.

Economy: Heat events can cause economic impacts to the town. Impacts include disruption or closure of impacted businesses and the costs to operate a cooling shelter.

Potential Future Impact:

Heat warnings are becoming increasingly more prevalent due to our shifting climate. Vermont has been seeing an increase in 90+ degree temperature days. This trend is expected to continue. Most of our housing stock and individuals are well adapted to dealing with cold temperatures, but the quick swings to higher temperatures do not allow for acclimation, and many of our structures are designed to retain, rather than shed, heat.

Climate Change: Although extreme heat events are relatively uncommon in Peacham and in Vermont, climate change may have the potential to increase extreme heat occurrences. The average annual temperature in Vermont and across the United States continues to rise. The rise in ground surface temperatures and greenhouse gases will continue to future extreme heat events.

Change in Land Use/Development: No changes to asset impacts due to extreme heat events as a result of development or land use changes could be identified.

Change in Demographics: Peacham's population demographics are not expected to change significantly in the next five years, though an increase in the average age of the population may increase the vulnerabilities of the population.

6 HAZARD MITIGATION STRATEGY

The highest risk natural hazards and vulnerabilities identified in the previous section of this Plan directly form the hazard mitigation strategy outlined below, which the community will strive to accomplish over the coming years. The mitigation strategy chosen by the Town includes the most appropriate activities to reduce future risk from potential hazards within its economic capacities.

Mitigation Goals

The Hazard Mitigation Planning Committee identified the following as the community's primary goals:

Protect the health and safety of the public, protect existing floodplain areas from development, reduce loss of infrastructure due to flash flooding, ensure that essential services can function during disaster by making the infrastructure more resilient, and ensure that current and future highway improvement results in safer conditions. This can be accomplished by:

Increase the Town of Peacham's resilience to natural hazards by advancing mitigation investment to reduce or avoid long-term risk to people, homes, neighborhoods, the local economy, cultural and historic resources, ecosystems, and Community Lifelines such as transportation, water, sewer, energy, and communications.

See Community Survey Results in **Appendix D** for which assets survey respondents thought were most important to protect against potential future severe weather impacts.

Community Lifelines

Community Lifelines enable the continuous operation of critical government and business functions and are essential to human health and safety or economic security. The goal of the lifeline concept is to focus efforts on stabilizing or re-establishing these most fundamental services during and after a disaster. Mitigating lifelines should reduce cascading impacts across government and business functions and lessen system-wide damage.

1. Law Enforcement
2. Fire Service
3. Search & Rescue
4. Government Service
5. Community Safety

1. Highway/Road/Motor Vehicle
2. Mass Transit
3. Railway
4. Aviation
5. Maritime

1. Medical Care
2. Public Health
3. Patient Movement
4. Medical Supply Chain
5. Fatality Management

1. Infrastructure
2. Responder Communications
3. Alerts, Warnings, & Messages
4. Finance
5. 911 & Dispatch

1. Food
2. Water
3. Shelter
4. Agriculture

1. Power Grid
2. Fuel

1. Facilities HAZMAT, Pollutants, Contaminants

Community Capabilities and areas for improvement

Each community has a unique set of capabilities, including authorities, programs, staff, funding, and other resources available to accomplish mitigation and reduce long-term vulnerability. Peacham's mitigation capabilities that reduce hazard impacts or that could be used to implement hazard mitigation activities are listed below.

Administrative and Technical

This capability refers to the Town's staff and their skills and tools that can be used for mitigation planning and to implement actions. In addition to the Emergency Management staff described in Section 3, municipal staff that can be used for mitigation planning and to implement specific mitigation actions including: Town Treasurer, Town Clerk, Assistant Town Clerk, Zoning Administrator and Road Foreman.

In addition to paid staff, there is a 5-member Selectboard, 4-member Planning Commission, 5-member Tree Board, 4 Offices of the Fire Department, Emergency Management Director, Fire Warden, Town Health Officer, and Tree Warden. The Peacham Pond Association is very active with the along with someone that tests the water quality and promoting the LakeWise program with residents.

To augment local resources, the Town has formal mutual aid agreements for emergency response and fire/rescue. Technical support is available through the NVDA in the areas of land use planning, emergency management, transportation, GIS mapping, and grant writing. Technical support is also available through the State ANR for floodplain bylaw administration and VTrans Districts for hydraulic analyses and grants and Municipal Assistance Bureau /Better Back Roads.

Strengths Peacham is a community with a small village atmosphere, committed to a small core of volunteers involved in several committees and groups, strong interdepartmental communication and cooperation, and a dedicated town hall team. The town hall, church, Library and transfer station are great places for folks to meet and communicate. Events such as the Farmers Market monthly market are used to gather the community and to promote supporting local farmers along with ways to get information out to the residents.

Areas for Improvement The potential candidates for volunteering are limited and a small pool of volunteers creates burn out and limited time commitments. As outlined above, some actions have been initiated to generate more events to generate that sense of community. Still will need to continue with

other opportunities that may present themselves. The future recruitment of new residents into the volunteer ranks is a key element of this.

Planning and Regulatory

These capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards. Examples of planning capabilities that can either enable or inhibit mitigation include land use plans (e.g., the Town Plan?), stormwater management plans (e.g., such as the Lake Watershed Action Plan), disaster recovery and reconstruction plans, and emergency preparedness and response plans. Examples of regulatory capabilities include the enforcement of zoning ordinances, subdivision regulations, and building codes that regulate how and where land is developed, and structures are built.

Peacham does not have local residential building codes. Vermont has adopted statewide codes for commercial building fire safety and energy standards. The energy code also applies to residential buildings. Codes enforced by Vermont's Division of Fire Safety are the 2015 National Fire Protection Association (NFPA) 1 Fire Code; 2015 NFPA 101 Life Safety.

Town Plan: adopted in 2019 and revised in 2021
Description: A framework and guide for how future growth and development should proceed.

Relationship to Natural Hazard Mitigation Planning: Includes goals and policies related to flood resilience and land use.

Zoning Ordinance with Flood Hazard Regulations: February 2017
Description: Provides for orderly community growth promoting the health, safety, and general welfare of the community.

Relationship to Natural Hazard Mitigation Planning: Establish site plan review requirements and zoning districts, including Flood Hazard areas, with specific standards for proposed development. Requirements are designed to prevent overdevelopment; to mitigate negative impacts to the natural and human environment; minimize effects to the historical and aesthetic character of the community; and ensure design and construction of development in flood and other hazard areas are accomplished in a manner that minimizes or eliminates the potential for flood loss or damage to life and property.

Road and Bridge Standards: July 2019
Description: Provide minimum codes and standards for construction, repair, and maintenance of town roads and bridges.

Relationship to Natural Hazard Mitigation Planning: Standards include management practices and are designed to ensure travel safety, minimize damage to road infrastructure during flood events, and enhance water quality protections.

Road Erosion Inventory Report: 2017
Description: Prioritizes those infrastructure projects necessary to improve transportation network resiliency and water quality.

Relationship to Natural Hazard Mitigation Planning: Improvements are designed to minimize or eliminate flood impacts on hydrologically connected road segments.

Local Emergency Management Plan: June 2025
Description: Establishes lines of responsibility and procedures to be implemented during a disaster and identifies high risk populations, hazard sites, and available resources.

Relationship to Natural Hazard Mitigation Planning: Includes actions for tracking events and response actions including damage reports to facilitate funding requests during recovery. This type of information can be essential to preparing hazard mitigation project applications for FEMA funding.

Strengths plans and regulations in place are being executed; keep plans and regulations up to date strong local partners in implementing plans; ensure plans are integrated appropriately

Area of improvement: Having a more formalized approach to identifying and prioritizing Capital Improvement Plans is needed to ensure that tax dollars are managed in the most efficient and effective manner possible.
The initial stages of this process has been initiated in 2025 and should progress each year as part of the annual planning process Stormwater management efforts have begun to switch from being reactive to a more proactive stance. This trend should be encapsulated into a more formalized process going forward.

The Town will continue leverage grant writing to better leverage the opportunities these funds provide to improve existing infrastructure and accelerate the pace of needed improvements. Continue to add skills and capabilities to existing and future staff.

Financial
These capabilities are the resources that a community has access to or is eligible to use to fund mitigation actions.

The $4,093,999.05 2025 budget has $2,040,558 allocated to the Highway Department for operating costs, road materials and equipment. Revenues are funded primarily by property taxes, state and federal payments and grants, local option tax, interest bearing bank accounts and fees for municipal services. In recent years the town has focused on more grant writing to fund one-time special needs and infrastructure investments.

Each year voters are asked to approve committed funds for various infrastructure needs. These include funds for town equipment, roadway maintenance and capital infrastructure,

Strengths Well-funded budgets. Capable financial manager

Areas for Improvement Consider adding an emergency fund to better prepare for unexpected expenses from hazard events.

Education and Outreach
Peacham has several outreach and education opportunities that could be used to implement mitigation activities and communicate hazard-related information such as; Town website, Front Porch Forum, and postings at the Town Office
Peacham selectboard and zoning meetings are opportunities for providing information to the community

Strengths Multiple programs/organizations are already in place in the community with dedicated program managers who actively engage residents. This is supplemented with online and social media presence at the municipal government, committee and citizen-led organizations.

Lakewise - The Vermont Lake Wise Program is an Agency of Natural Resources initiative that awards lake-friendly shoreland property, including that of state parks, town beaches, private homes and businesses is another resource for education and outreach for property owners along the lake shore.

Areas for Improvement Better coordination needed across all groups to help implement future mitigation activities

National Flood Insurance Program

Peacham joined the National Flood Insurance Program (NFIP) 2011. The effective date of the current Flood Insurance Rate Map (FIRM) and Flood Insurance Study is May 17, 1988. The Zoning Bylaws hold to the recommended practices under the NFIP and all continued compliance and participatory requirements are managed by the Zoning Administrator.

The Zoning Administrator enforces the flood hazard regulations, which are integrated with the town's zoning regulations. The Zoning Administrator receives, and reviews permit applications and forwards for board review as appropriate. In accordance with FEMA requirements, the Zoning Administrator maintains records of all permits issued for development in areas of special flood hazard; elevations, in relation to mean sea level, of the lowest floor, including basement, of all new or substantially improved buildings; elevations, in relation to mean sea level, to which buildings have been flood proofed; flood proofing certifications; and all variance actions, including justification for their issuance. There are no repetitive loss properties in the town. There is one policy with $45,000 in coverage with $0 paid out since 1978.

Fortunately, much of the current mapped floodplain is not subject to the threat of inundation as the primary flood damage in Peacham is the result of fluvial erosion. The recent (2023) episodes of heavy precipitation resulted in stream flooding and should be a focus of adhering to the river corridor boundaries to avoid future encroachment and related development along these vulnerable areas.

Peacham's regulations outline detailed minimum standards for development in flood hazard areas defined as FEMA Special Flood Hazard Areas and Floodway Areas. The regulations also require administering Substantial Improvement and Substantial Damage (SI/SD) requirements in accordance with FEMA P-758 SI/SD Desk Reference, May 2010: in accordance with 24 V.S.A. § 1972 and 24 V.S.A. § 4461 and shall be used to determine the appropriate development standards for repair and rebuilding.

The Town discussed the following as possible actions to continue NFIP compliance:
1) Prepare, distribute, or make available NFIP insurance explanatory pamphlets or booklets.
2) Participate in NFIP training offered by the State and/or FEMA.
3) Establish mutual aid agreements with neighboring communities to address administering the NFIP following a major storm.

State Incentives for Flood Mitigation

Vermont's Emergency Relief Assistance Funding (ERAF) provides state funding to match FEMA Public Assistance after federally declared disasters. Eligible public costs are generally reimbursed by FEMA at 75% with a 7.5% State match. The State will increase its match to 12.5% or 17.5% if communities take steps to reduce flood risk as described below.
12.5% funding for communities that have adopted four (4) mitigation measures:
1) NFIP participation;
2) Town Road and Bridge Standards;
3) Local Emergency Plan; and

4) Local Hazard Mitigation Plan.

17.5% funding for communities that also participate in FEMA's Community Rating System OR adopt Fluvial Erosion Hazard or other river corridor protection bylaw that meets or exceeds the Vermont ANR model regulations.

Peacham's current ERAF rate is 7.5%. Upon adoption of the 2025 Local Hazard Mitigation Plan, their ERAF rate will remain at 7.5% because the Town does not currently participate in the National Flood Insurance Program but is currently in the process of applying. This, combined with a River Corridor plan, will increase the rate to 12.5%.

Mitigation Action Identification

The Hazard Mitigation Planning Team discussed the mitigation strategy, reviewed projects from the 2005 Plan, and identified possible new actions from the following categories for each of the highest risk natural hazards identified in Section 5.

Local Plans & Regulations These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.

Structure & Infrastructure Projects These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This applies to public or private structures as well as critical facilities.

Natural Systems Protection These actions minimize damage and losses and preserve or restore the functions of natural systems.

Outreach & Education Programs These actions inform and educate the public about hazards and potential ways to mitigate them. Although this type of action reduces risk less directly than structure projects or regulation, it is an important foundation. Greater awareness is more likely to lead to community support for direct actions.

Local Plans & Regulations Examples

Integrate Mitigation into Capital Improvement Programs: Incorporate risk assessment and hazard mitigation principles into capital planning.

Reduce Impacts to Roadways: The leading cause of death and injury during winter storms is automobile accidents, so it is important to plan for and maintain adequate road and debris clearing capabilities.

Develop a Road Right-of-Way Vegetation Management Plan: Identify community priorities and action plan for site-specific tree and roadside forest management to increase roadside resilience.

Improve Flood Resilience with a Flood Study: The aim of a flood study is to define existing flood behavior for a particular catchment, river, or creek. The study helps inform building, land use planning, community awareness and disaster management.

Improve Stormwater Management Planning: Rain and snowmelt can cause flooding and erosion in developed areas. A community-wide stormwater management plan can address stormwater runoff-related flooding.

Manage Development in Erosion Hazard Areas: The intent of River Corridor Bylaws is to allow for wise use of property within river corridors that minimizes potential damage to existing structures and development from flood-related erosion.

Structure & Infrastructure Project Examples

Protect Power Lines: Protect power lines by 1) inspecting and maintaining hazardous trees in the road right-of-way and 2) burying power lines.

Protect Critical Roadways: Use snow fences or living snow fences (e.g., rows of trees) to limit the blowing and drifting of snow.

Retrofit Critical Facilities: Critical facilities can be protected from the impacts of high winds and winter storms by 1) retrofitting them to strengthen structural frames to withstand wind and snow loads; 2) anchoring roof-mounted mechanical equipment; and 3) installing back-up generators or quick connect wiring for a portable generator.

Remove Existing Structures from Flood Hazard Areas: FEMA policy encourages the removal of structures from flood-prone areas to minimize future flood losses and preserve lands subject to repetitive flooding.

Improve Stormwater Drainage Capacity: Minimize flooding and fluvial erosion by 1) increasing drainage/absorption capacities with green stormwater management practices; 2) increasing dimensions of undersized drainage culverts in flood-prone areas; 3) stabilizing outfalls with riprap and other slope stabilization techniques; and 4) re-establishing roadside ditches.

Conduct Regular Maintenance for Drainage Systems: Help drainage systems and flood control structures function properly with 1) routine cleaning and repair; 2) cleaning debris from support bracing underneath low-lying bridges; and 3) inspecting bridges and identifying if any repairs are needed to maintain integrity or prevent scour.

Protect Infrastructure and Critical Facilities: Minimize infrastructure losses and protect critical facilities from flooding by 1) elevating roads above base flood elevation to maintain dry access; 2) armoring streambanks near roadways to prevent washouts; 3) rerouting a stream away from a vulnerable roadway; and 4) floodproofing facilities.

Natural Systems Protection Examples

Protect and Restore Natural Flood Mitigation Features: Natural conditions can provide floodplain protection, riparian buffers, groundwater infiltration, and other ecosystem services that mitigate flooding. Preserving such functionality is important. Examples include 1) adding riparian buffers; 2) stabilizing stream banks; 3) removing berms; 4) minimizing impervious area development; 5) restoring floodplain; and 6) restoring incision areas.

Outreach & Education Program Examples

Educate Residents about Extreme Winter Weather: Winter storms create a higher risk of car accidents, hypothermia, frostbite, carbon monoxide poisoning, and heart attacks from overexertion. Educational outreach can help minimize these risks.

Assist Vulnerable Populations: Measures can be taken to protect vulnerable populations from natural hazards, such as 1) organizing outreach and 2) establishing and promoting accessible heating or cooling centers in the community.

Mitigation Action Evaluation

For each mitigation action identified, the Planning Team evaluated its potential benefits and/or likelihood of successful implementation. Actions were evaluated against a range of criteria, including a planning level assessment of whether the costs are reasonable compared to the probable benefits. Results of this evaluation are presented in **Table 11**.

See Community Survey Results in **Appendix D** for which category of mitigation actions survey respondents wanted the Town to prioritize.

After careful evaluation, the Planning Team agreed on a list of actions that support the Mitigation Goals of this Plan and are acceptable and practical for the community to implement.

Actions without overall public support/political will were not selected for implementation. Actions whose costs were not reasonable compared to probable benefits were also not selected.

For the selected actions, the Planning Team then 1) assigned a responsible party to lead the completion of each action; 2) identified potential grant funding; 3) defined a timeframe for implementation; and ranked each action's priority (high, medium, low).

Natural hazards pose a unique threat to the Town's vulnerable populations. Data has shown that underserved and marginalized populations tend to live in at-risk hazard-prone areas or in homes with substandard construction. The data also suggests that this segment of the community is less likely to fully recover after a disaster. When ranking an action's priority, those that directly benefit a vulnerable population were ranked high.

The action plan is presented in **Table 12**

Table 11 - Mitigation action evaluation and prioritization

Mitigation Actions	Life Safety	Prop Protect	Tech	Political	Admin	Other Obj	Benefit Score	C/B
Local Plans & Regulations								
Recommended for Implementation								
Adapt and management oversight if GeoMapping of Risks	1	1	1	1	1	1	6	Yes
Expand the Invasive Species Program beyond the current Aquatic Program at Peacham Pond	1	0	1	1	0	1	4	Yes
Identify the Beaver Dams and integrate Beaver Den Monitoring	1	0	1	1	1	1	5	Yes
Incorporate a Response Tracking Plan of Roads and Trails	1	0	1	1	1	1	5	Yes
Create and then conduct EOC training with Town-wide Exercise	1	1	1	0	1	1	5	Yes
Update Community lists and upgrade interact with during crisis	1	1	1	1	1	1	6	Yes
Map out Protocol of Kids outdoors during Crisis so that School can transform into the Shelter	1	1	0	1	1	1	5	Yes
Formalize and integrate a specific Volunteer organization protocol for Crisis Management	1	1	1	1	0	1	5	Yes
Identify needed alternative Power Sources during Crisis	1	1	1	-1	1	0	3	Yes
Identify needs and formalized Water Storage plans	1	1	1	0	0	0	3	Yes
Upgrade Current inventory for Better Equipment to Reduce Risks	1	1	1	-1	0	1	3	Yes
Further foster Mutal Aid Relationship - REMC and FD	1	0	0	0	0	0	1	Yes
Upgrade School Standard Operating Procedures to include Crisis and conversion of School into Shelter	1	1	1	-1	1	0	3	Yes
Upgrade Emergency Operating Center Procedures	1	1	-1	1	1	1	4	Yes
Upgrade Town Garage SOP to align with Emergency Crisis Management protocols	0	0	0	0	1	0	1	Yes
Enhance Grant Writing, approach, scripting with corresponding reference and data file requirements	1	0	0	-1	-1	1	0	Yes
LHMP Grant	1	1	1	1	1	1	6	Yes
MERP Mini Grant - energy Resilience	1	1	1	1	1	1	6	Yes
Incorporate within Local Plans & Regulations; updates on Land Use, Act 181, Flood Plains	1	1	1	1	0	0	4	Yes

Mitigation Actions	Life Safety	Prop Protect	Tech	Political	Admin	Other Obj	Benefit Score	C/B
Integrate oversight of Natural Systems and subsequent Protection	1	1	-1	0	-1	1	1	Yes
The Town will receive updated and digitized FIRMs from FEMA to support their flood mitigation efforts	1	1	1	1	1	1	6	Yes
Outreach & Education	1	1	1	1	1	1	6	Yes
Recommended for Implementation	1	1	1	1	1	1	6	Yes
Set out protocol for Neighbor Efforts & Door to Door check-ins during Crisis periods	1	0	1	1	0	1	4	Yes
Upgrade and reinforce Town awareness of Crisis Management	1	1	1	0	1	1	5	Yes
Incorporate CPR into Alice Training & Staff	1	1	1	1	1	1	6	Yes
Articulate Citizens training "On How to Help" protocol during emergencies	1	0	0	0	1	0	2	Yes
Structure & Infrastructure	1	1	1	0	1	1	5	Yes
Recommended for Implementation	1	1	1	1	1	1	6	Yes
Upgrade Roads & Water systems	1	1	1	0	1	1	5	Yes
Continue Culverts upsizing inventory	1	1	1	0	1	1	5	Yes
Build a 3rd Well for Peacham water district	1	1	1	1	1	1	6	Yes
Install an upgraded Remote Connections system/technology	0	0	-1	-1	0	-1	-3	Yes
Incorporate a Satellite based Internet Communications as back up	0	0	-1	-1	0	-1	-3	Yes
Upgrade Water Reserves resilience and enhance number of Dry Hydrants	0	0	0	0	1	1	2	Yes
Acquire for PVFD an off-road Utility Vehicle/ATV	0	0	1	0	1	1	3	Yes
Up Grade Infrastructure at the School as better quickly transform into a needed Shelter	0	0	-1	0	0	1	0	Yes
Establish Shelter equipment, supplies and food reserves	1	0	0	0	0	0	1	Yes
Obtain Backup Generators for (Garage, School (Shelter), Town Clerk (EOC))	1	0	1	0	1	1	4	Yes
Acquire Pumps & Storage /Transportations for used during droughts	1	1	1	1	1	0	5	Yes
Install Better Communications Towers (non PVFD) move by Town offices	0	0	-1	0	1	0	0	Yes
Require additional building and Parking for PVFD	-1	-1	0	-1	0	1	-2	Yes
Establish Remote Communications Infrastructure & Protocols	0	0	-1	0	0	0	-1	Yes
Move EOC to Town Clerk Office	0	0	0	-1	1	1	1	Yes
Upgrade Equipment/ Computer in EOC	0	0	0	0	1	1	2	Yes

Mitigation Actions	Life Safety	Prop Protect	Tech	Political	Admin	Other Obj	Benefit Score	C/B
Create multiuser access to EOC data and materials	0	0	1	0	1	1	3	Yes
Create a matching fund for HMGP	1	1	1	1	1	0	5	Yes
VTrans Municipal Grants - Erosion Control	1	1	1	1	1	1	6	Yes
AFG Equipment	1	1	1	1	1	1	6	Yes
AFG Forestry Truck	1	1	1	1	1	1	6	Yes
Peacham Pond Aquatic Invasive - Greeter Program	0	1	1	0	0	1	3	Yes
Help Secure Buyout of Houses Programs/ Public FEMA	1	1	1	1	1	1	6	Yes
406 Fundings - Damaged Infrastructure - Maddox Road	1	1	1	1	1	1	6	Yes
FEMA Buyout	1	1	1	1	1	1	6	Yes

Table 11 and 12 Evaluation Criteria:
Life Safety –Will the action be effective at protecting lives and preventing injuries?
Property Protection –Will the action be effective at eliminating or reducing damage to structures and infrastructure?
Technical – Is the action a long-term, technically feasible solution?
Political – Is there overall public support/political will for the action?
Administrative – Does the community have the administrative capacity to implement the action?
Other Community Objectives – Does the action advance other community objectives, such as capital improvements, economic development, benefit a vulnerable population, environmental quality, or open space preservation?
Rank each of the above criteria in Table 5 with a -1, 0, or 1 using the following table:
1 = Highly effective or feasible
0 = Neutral
-1 = Ineffective or not feasible
Estimated Cost – 1 = less than $50,000; 2 = $50,000 to $100,000; 3 = more than $100,000
C/B – Are the costs reasonable compared to the probable benefits? Yes or No

Table 12 - Mitigation action plan

FEMA Project Type	**Key Focus**	**Community Lifeline Targeted:**	**Hazards Addressed**	**Areas of Impact**	**Strategic Importance**	**Lead Party**	**Grant Funding Source**	**Partnerships**	**Project Timeframe**	**Prioritization**	**Cost**
Local Plans & Regulations	Adapt and management oversight if GeoMapping of Risks	Safety and Security, Transportation	Fluvial Erosion/Flash Flooding, Landslides/ Slope Failure, Inundation Flooding	Town wide - Roads and River/Stream corridors	Risk Reductions	Emergency Management	Town Budget	State	2027	Medium	1
Local Plans & Regulations	Expand the Invasive Species Program beyond the current Aquatic Program at Peacham Pond	Communication	Invasive Species	8 ponds in Peacham and River/Stream corridors	Risk Reductions	Town Office	State Program	State	2028	Medium	1
Local Plans & Regulations	Identify the Beaver Dams and integrate Beaver Den Monitoring	Transportation , Safety and security	Fluvial Erosion/Flash Flooding	5 reoccurring Beaver Dams near the 8 ponds/3 bogs and 5 streams	Risk Reductions	Emergency Management	State Grant / Town Budget	State	2028	Medium	1
Local Plans & Regulations	Incorporate a Response Tracking Plan of Roads and Trails	Safety and Security, Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice	Town wide - Roads and River/Stream corridors	Risk Reductions	Emergency Management	Town Budget	REMC	2027	Medium	1
Local Plans & Regulations	Create and then conduct EOC training with Town-wide Exercise	Safety and Security, Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Risk Reductions	Emergency Management	State Grant / Town Budget	State	2027	Med-High	1
Local Plans & Regulations	Update Community lists and upgrade interacts with during crisis	Safety and Security, Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Risk Reductions	Town Office	Town Budget	Aging Well in Peacham	2026	Med-High	1

Local Plans & Regulations	Map out Protocol of Kids outdoors during Crisis so that School can transform into the Shelter	Safety and Security, Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Regular School Community	Capacity	Head of School	School Budget	Town Office	2027	Medium	1
Local Plans & Regulations	Formalize and integrate a specific Volunteer organization protocol for Crisis Management	Safety and Security, Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Risk Reductions	Emergency Management	Town Budget	Town Office	2027	Medium	1
Local Plans & Regulations	Identify needed alternative Power Sources during Crisis	Energy	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice	School as Shelter and EOC, town office	Backup	Energy Committee	State Programs	State	2027	Med-High	3
Local Plans & Regulations	Identify needs and formalized Water Storage plans	Food, Water, Shelter	Drought	Town Wide Community	Increase capacity	Peacham Emergency Committee	State Programs	State	2027	Med-High	2
Local Plans & Regulations	Upgrade Current inventory for Better Equipment to Reduce Risks	Safety and Security, Transportation	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Risk Reductions	Highway Department & PVFD	State Grants	State	2027	Med-High	3
Local Plans & Regulations	Further foster Mutal Aid Relationship - REMC and FD	Safety and Security	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Risk Reduction	PVFD	Town Budget	REMC	2027	Medium	1
Local Plans & Regulations	Upgrade School Standard Operating Procedures to include Crisis and conversion of School into Shelter	Food, Water, Shelter; Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice	School as Shelter and EOC, town office	Risk Reduction	Head of School	Town Budget	Red Cross	2026	High	1
Local Plans & Regulations	Upgrade Emergency Operating Center Procedures	Safety and Security; Communications	Fluvial Erosion/Flash Flooding, Cold, Snow,	Town Wide Community	Risk Reduction	Emergency Management	Town Budget	REMC	2026	High	1

			Wildfire, Ice, Drought								
Local Plans & Regulations	Upgrade Town Garage SOP to align with Emergency Crisis Management protocols	Safety and Security, Transportation	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice	Town Wide Community	Risk Reduction	Highway Department	Town Budget	REMC	2027	Med-High	1
Local Plans & Regulations	Enhance Grant Writing, approach, scripting with corresponding reference and data file requirements	Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Office	Capacity	Town Office	State Grants	State	2026	High	1
Local Plans & Regulations	LHMP Grant (9,862.50.. Actual expenses 13,150)	Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Capacity	Town Office	State Grants	State	2026	High	1
Local Plans & Regulations	MERP Mini Grant - energy Resilience (4,000)	Communications	Fluvial Erosion/Flash Flooding	Town Wide Community	Capacity	Town Office	State Grants	State	2026	High	1
Local Plans & Regulations / Natural Systems Protection	Incorporate within Local Plans & Regulations; updates on Land Use, Act 181, Flood Plains	Community Safety	Fluvial Erosion/Flash Flooding	Town wide - Roads and River/Stream corridors	Risk Reductions	Planning Board	Town Budget	State	2026	Med-High	1
Local Plans & Regulations / Natural Systems Protection	Integrate oversight of Natural Systems and subsequent Protection	Community Safety/Highway/Road	Fluvial Erosion/Flash Flooding	Town wide - Roads and River/Stream corridors	Risk Reductions	Emergency Management	State Grant / Town Budget	State	2027	Medium	1
Outreach & Education	Set out protocol for Neighbor Efforts & Door to Door checkins during Crisis periods	Safety and Security, Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Risk Reductions	Emergency Management	Town Budget	Aging Well in Peacham	2026	Med-High	1

Outreach & Education	Upgrade and reinforce Town awareness of Crisis Management	Safety and Security, Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Capacity	Emergency Management	Town Budget	Select Board	2026	Med-High	1
Outreach & Education	Incorporate CPR into Alice Training & Staff	Safety and Security, Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice	School community	Capacity	Head of School	School Budget	CALEX	2027	Medium	1
Outreach & Education	Articulate Citizens training "On How to Help" protocol during emergencies	Safety and Security, Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Risk Reductions	Emergency Management	Town Budget	Aging Well in Peacham	2026	Med-High	1
Structure & Infrastructure Projects	Upgrade Roads & Water systems	Transportation	Fluvial Erosion/Flash Flooding	2026 Paving Rebuild Rd Peacham Village Rd North 1 Mile on Bayley Hazan Rd	Infrastructure	Highway Department	State Programs	State	2028	High	3
Structure & Infrastructure Projects	Continue Culverts upsizing inventory	Transportation	Fluvial Erosion/Flash Flooding	2026 Increase 30" culvert to 6' on Rake Factory Rd, Each Peacham	Infrastructure	Highway Department	State Programs	State	2028	High	3
Structure & Infrastructure Projects	Build a 3rd Well for Peacham water district	Food, Water, Shelter	Drought	Town Wide Community and Fire District specifically	Increase capacity	Fire District Water Company	State Programs	State	2027	High	3
Structure & Infrastructure Projects	Install an upgraded Remote Connections system/technology	Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Infrastructure	PVFD	State Programs	State	2027	Medium	2

Structure & Infrastructure Projects	Incorporate a Satellite-based Internet Communications as back up	Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Infrastructure	PVFD	State Programs	State	2028	Medium	1
Structure & Infrastructure Projects	Upgrade Water Reserves resilience and enhance number of Dry Hydrants	Safety and Security	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Risk Reductions	PVFD	State Programs	State	2027	High	3
Structure & Infrastructure Projects	Acquire for PVFD an off road Utility Vehicle/ATV	Safety and Security, Transportation	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Risk Reductions	PVFD	State Grants	State	2027	Med-High	3
Structure & Infrastructure Projects	Up Grade Infrastructure at the School as better quickly transform into a needed Shelter	Food, Water and Shelter	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	School as Shelter	Risk Reductions	Head of School	State Grants	School Board	2026	High	3
Structure & Infrastructure Projects	Establish Shelter equipment, supplies and food reserves	Food, Water and Shelter	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	School as Shelter	Risk Reductions	Head of School	State Grants	School Board	2026	High	3
Structure & Infrastructure Projects	Obtain Backup Generators for(Garage, School (Shelter), Town Clerk (EOC))	Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Risk Reductions	Town office	State Grants	State	2026	High	2
Structure & Infrastructure Projects	Acquire Pumps & Storage /Transportations for used during droughts	Food, Water and Shelter	Drought	Town Wide Community and Fire District specifically	Risk Reductions	Fire District Water Company	State Grants	State	2027	Med-High	3

Structure & Infrastructure Projects	Install Better Communications Towers (non PVFD) move by Town offices	Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Office	Infrastructure	Town office	State Grants	State	2028	Medium	2
Structure & Infrastructure Projects	Require additional building and Parking for PVFD	Safety and Security, Transportation	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Infrastructure	PVFD	State Grants/Town Budget	State	2027	Medium	3
Structure & Infrastructure Projects	Establish Remote Communications Infrastructure & Protocols	Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Infrastructure	Town office					1
Structure & Infrastructure Projects	Move EOC to Town Clerk Office	Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Office	Infrastructure	Emergency Management & Town Office	State Grants/Town Budget	State	2026	High	2
Structure & Infrastructure Projects	Upgrade Equipment/ Computer in EOC	Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Office	Infrastructure	Town office	State Grants/Town Budget	State	2026	High	1
Structure & Infrastructure Projects	Create multiuser access to EOC data and materials	Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Infrastructure	Town Office	State Grants/Town Budgets	State	2027	Med-High	1
Structure & Infrastructure Projects	Create a matching fund for HMGP	Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Capacity	Town Office	State Grants	State	2026	High	1

Structure & Infrastructure Projects	VTrans Municipal Grants - Erosion Control $24k (20% town in in Kind Labor/truck hours)	Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought		Capacity	Town Office	State Grants	State	2026	High	1
Structure & Infrastructure Projects	AFG Equipment $49,045.71 - expenses $51,398	Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Infrastructure	PVFD	State Grants	State	2026	High	2
Structure & Infrastructure Projects	AFG Forestry Truck $324,622.85 - expense $340,854	Communications	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Risk Reduction	PVFD	State Grants	State	2026	High	3
Structure & Infrastructure Projects	Peacham Pond Aquatic Invasive - Greeter Program ($7,523)	Communications	Invasive Species	Peacham Pond	Risk Reduction	Town Office	State Grants	State	2028	Medium	1
Structure & Infrastructure Projects	Retreatment Fund $50,000 Recapitalization	Safety and Security, Transportation	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Infrastructure	Highway Department	Town Budget	State	2026	High	2
Structure & Infrastructure Projects	Road Capital Equipment Fund $95,000 Capitalization	Safety and Security, Transportation	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Risk Reductions	Highway Department	Town Budget	State	2026	High	2
Structure & Infrastructure Projects	Fire Equipment Fund $50,000 Capitalization	Safety and Security	Fluvial Erosion/Flash Flooding, Cold, Snow, Wildfire, Ice, Drought	Town Wide Community	Risk Reduction	PVFD	Town Budget	State	2026	High	2

Structure & Infrastructure Projects / Natural Systems Protection	Help Secure Buyout of Houses Programs/ Public FEMA,$425k	Communications	Fluvial Erosion/Flash Flooding	South Peacham	Risk Reduction	Town Office	State Grants	State	2026	High	3
Structure & Infrastructure Projects / Natural Systems Protection	406 Fundings - Damaged Infrastructure – Gov. Mattocks Road	Communications	Fluvial Erosion/Flash Flooding	South Peacham Maddox Road	Capacity	Town Office	State Grants	State	2026	High	2
Structure & Infrastructure Projects / Natural Systems Protection	FEMA Buyout ($2,500 in expenses paid out in 2025)	Communications	Fluvial Erosion/Flash Flooding	South Peacham Maddox Road	Capacity	Town Office	State Grants	State	2026	High	1
Local Plans & Regulations / Natural Systems Protection	The Town will receive updated and digitized FIRMs from FEMA to support their flood mitigation efforts	Safety and Security, Transportation	Fluvial Erosion/Flash Flooding	Town Wide Community	Risk Reductions	Town office	State Grants	state	2026	High	1

Integrating Into Existing Plans and Procedures

For Peacham to succeed in reducing long-term risk, information from this Plan should be integrated throughout government operations. When activities are connected, they can not only reduce risk and increase resilience, but also accomplish other objectives such as environmental protection, economic development, financial stability, and land use planning.

There are several ways the Town can achieve integration into existing plans and procedures to support risk-informed community planning. They can include the community's primary mitigation goal as stated on page 42, information from the risk assessment, and mitigation actions as follows:

- Funding for mitigation actions can be prioritized in the annual budget process.
- The mitigation goal and risk assessment information can support the Town's interest in expanding local capacity to enforce State building codes as part of the development review process.
- The mitigation goal and risk assessment information can be incorporated into the next Town Plan update (Land Use and Flood Resilience chapters in particular) to help steer growth and redevelopment away from high-risk locations.
- The mitigation goal and risk assessment information can be incorporated into future zoning ordinance updates.
- Several flood-related mitigation actions for increasing road resiliency can be implemented under the existing Municipal Road General Permit (8273-9040) for controlling stormwater discharges from town roads.

7 PLAN MAINTENANCE

This Plan is dynamic. To ensure it remains current and relevant, it should be annually evaluated and monitored and updated every five years, in accordance with FEMA guidelines in effect at the time.

Annual Evaluation and Monitoring

Within 12 months of FEMA Final Approval, the Plan will be annually evaluated and monitored as follows:

1. The Selectboard will assemble a Review/Update Committee to evaluate the effectiveness of the Plan in meeting the stated goals. Things to consider during this evaluation:

- What disasters has the town (or region) experienced?
- Should the list of highest risk natural hazard impacts be modified?
- Are new data sources, maps, plans, or reports available? If so, what have they revealed, and should the information be incorporated into this plan?
- Has development in the region occurred and could it create or reduce risk?
- Has the town adopted new policies or regulations that could be incorporated into this plan?
- Have elements of this plan been incorporated into new plans, reports, policies, or regulations?
- Are there different or additional community capabilities available for mitigation implementation?

2. Next, the Review/Update Committee will monitor mitigation action progress. Things to consider:

- Is the mitigation strategy being implemented as anticipated?
- Were the cost and timeline estimates accurate?
- Should new mitigation actions be added?
- Should proposed actions be revised or removed?
- Are there new funding sources to consider?

The status (e.g., in progress, complete) of each action should be recorded in **Table 9**. If the status is "in progress" note whether the action is on schedule. If not, describe any problems, delays, or adverse conditions that will impair the ability to complete the action.

3. The Selectboard will seek public comment from the whole community on plan implementation. Things to consider:

- Are there any new stakeholders to include?

- What public outreach activities have occurred?
- How can public involvement be improved?

4. Based on input received, the mitigation strategy and/or actions will be modified, if needed.

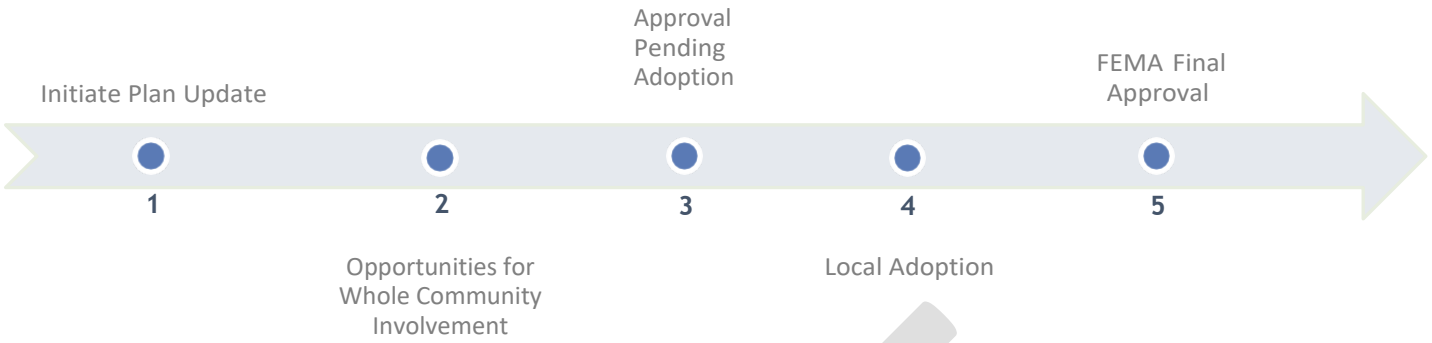
5. A report (or record in the form of meeting minutes) of the annual evaluation and monitoring will be made available to the public.

Table 9: Mitigation Action Status

Mitigation Action	2025	2026	2027	2028	2029
Local Plans & Regulations					
Structure & Infrastructure Projects					
Natural Systems Protection					
Outreach & Education Programs					

5-Year Updates

This Plan will be updated at a minimum every five (5) years as follows:



1. Currently, funding to assist municipalities in paying for planning services to update the Local Hazard Mitigation Plan through FEMA is unknown. The Town of Peacham should contact Vermont Emergency Management (VEM) to apply for any available funding grants in 2028 – approximately 2 years before the Plan expires.

   Once funding is secured and the grant agreement between the Town and State is in place, the Town Manager can issue a request for proposals (RFP) to procure planning services in accordance with the grant agreement. The RFP should be issued approximately 14 months before the Plan expires.

   Once a consultant is procured, the Plan update can begin with a kick-off meeting including the consultant and local hazard mitigation planning team. The kick-off meeting should be scheduled approximately 12 months before the Plan expires. The Town should allot approximately 8 months for the Plan update process.

2. Opportunities for Whole Community involvement throughout the Plan update process need to be factored into the schedule. These opportunities may include a community survey, planning workshop, and public meetings at critical milestones agreed to at the project kick-off meeting.

3. Once the local hazard mitigation planning team has prepared a final draft, they can seek authorization from the Selectboard to submit the Plan for VEM/FEMA approval. Plan approval is accomplished in two steps – the first is Approval Pending Adoption. The Town should submit for Approval Pending Adoption approximately 4 months before the Plan expires to allow for time to respond to any review comments received from VEM/FEMA.

4. Once the Town receives Approval Pending Adoption, the Selectboard should adopt the Plan as soon as their next regular meeting.

5. Once adopted, the Town can submit the Plan for VEM/FEMA Final Approval. The Town should submit for Final Approval approximately 1 month before the Plan expires to ensure there is no gap in coverage between updates. The plan will expire 5 years from the FEMA Final Approval.

APPENDIX A – Community Outreach

APPENDIX B – Past Mitigation Actions Updates

APPENDIX C – Meeting Agendas and Notes

APPENDIX D – Community Survey Questions

APPENDIX E – Certificate of Adoption

CERTIFICATE OF ADOPTION
Town of TOWN XXX, Vermont Selectboard
A Resolution Adopting the TOWN XXX, Vermont 2024 Local Hazard Mitigation Plan

WHEREAS the TOWN XXX Selectboard recognizes the threat that natural hazards pose to people and property within the Town of TOWN XXX; and

WHEREAS the TOWN XXX Selectboard has prepared a natural hazard mitigation plan, hereby known as the TOWN XXX, Vermont 2024 Local Hazard Mitigation Plan in accordance with federal laws, including the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; and the National Dam Safety Program Act, as amended; and

WHEREAS the TOWN XXX, Vermont 2024 Local Hazard Mitigation Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of TOWN XXX from the impacts of future hazards and disasters; and

WHEREAS adoption by the TOWN XXX Selectboard demonstrates its commitment to hazard mitigation and achieving the goals outlined in the TOWN XXX, Vermont 2024 Local Hazard Mitigation Plan.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF TOWN XXX, VERMONT, THAT:

Section 1. In accordance with 24 VSA §872, the TOWN XXX Selectboard adopts the TOWN XXX, Vermont 2024 Local Hazard Mitigation Plan. While content related to the Town of TOWN XXX may require revisions to meet the plan approval requirements, changes occurring after adoption will not require the Town of TOWN XXX to re-adopt any further iterations of the plan. Subsequent plan updates following the approval period for this plan will require separate adoption resolutions.

ADOPTED by a vote of_____ in favor and____ against, and____ abstaining, this _____ day of_____, 2024.

By:_____(print name)
Selectboard Chair

ATTEST: By:_____(print name)