LOCAL HAZARD MITIGATION PLAN

TOWN OF WILMINGTON, VERMONT

2025

FEMA Approval Pending Adoption Date

Municipal Adoption Date:

FEMA Formal Approval Date:

Prepared by the Wilmington Local Hazard Mitigation Planning Committee	
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Technical Assistance by SEAM Solutions LLC

Key Partners	
VT Agency of Transportation – Maintenance District 1 Office	Agency of Natural Resources – Department of Environmental Conservation Southern Region Floodplain Manager
VT Department of Health	Windham Regional Planning Commission
Green Mountain Power	Agency of Natural Resources – Department of Environmental Conservation Flood Plain Manager
Great River Hydro	

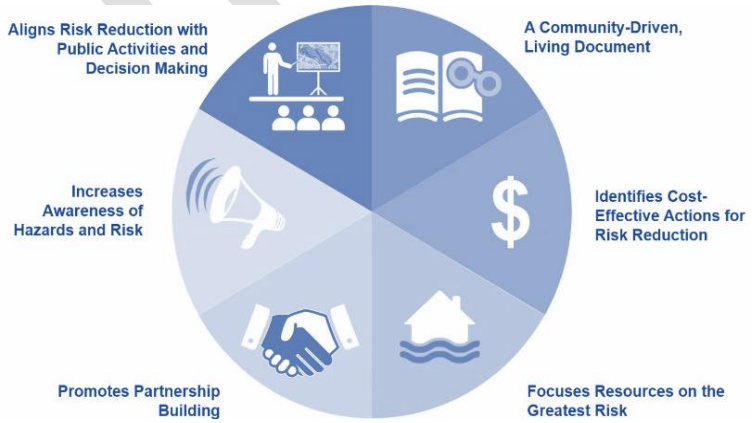
1 INTRODUCTION

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 Wilmington 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 both 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:



Source: FEMA LHMP Skill Share Workshop 2021

3 COMMUNITY PROFILE

Land Use – Land Features - Development Patterns

Situated in Vermont's southeastern corner, the Windham Region consists of 23 towns in Windham County, the neighboring towns of Readsboro, Searsburg, and Winhall in Bennington County, and Weston in Windsor County. The region is bordered by Massachusetts to the south and New Hampshire to the east. At over 920 square miles (590,000 acres), the region accounts for roughly 9.6% of the State's total land area. The Windham Region has several distinctive identities, largely defined by the diverse natural environment.

The Region's topography is relatively flat or gently rolling land in the Connecticut River valley in the east, while the western part of the region is characterized by the Green Mountain ridges and peaks with narrow stream valleys. Stratton Mountain is the highest point in the region at 3,936 feet. The lowest point is along the Connecticut River in Vernon, at 200 feet.

In addition to the Connecticut, other major rivers of the region are the Deerfield, Green, North, Saxtons, West, and Williams, all tributaries of the Connecticut. There are two major flood control reservoirs on the West River, Ball Mountain and Townshend, and two major storage reservoirs for hydropower generation on the Deerfield River, Somerset and Harriman.

Wilmington has long been a tourist destination, with visitors drawn to the village and nearby ski resorts. It is located in the Deerfield Valley of the Green Mountains. The town is also home to Molly Stark State Park. The landscape of Wilmington is rolling and mountainous, with the highest elevations being located in the western portion of the Town. The highest and most visible feature of the landscape is the distinctive peak of Haystack Mountain, which has an elevation of 3,420 feet. Conversely, the lowest area is the surface of Harriman Reservoir whose variable level is at about 1,500 feet in elevation. The local vertical relief in Wilmington is about 1900 feet, much of which is quite steep with slopes greater than 15%. The Reservoir, which extends southward into Whitingham, is the result of the Harriman Dam, built in 1923 as part of a hydroelectric power project. Wilmington is 41.3 square miles in size, or 26,432 acres, and is primarily drained to the south by the North Branch of the Deerfield River and the Deerfield River/Harriman Reservoir.

The Village functions as the center of Town government, public services, and community affairs. The Village is an area of clustered mixed land use containing residential, commercial, professional, institutional, municipal, recreational, and cultural uses and activities. There is a greater density of dwellings (including multifamily dwellings) found in Wilmington Village compared to outlying lands.

Historically, the development and primary travel corridors in Wilmington have occurred in the valleys and along the stream and river corridors, which is typical in the region. As slopes increase, buildability tends to become more difficult, especially historically, which along

with access to water, is why development patterns tend to be in valleys and near streams. Much of the historic development patterns remains in southern Vermont, leading to vulnerabilities to flood in some low lying areas and along certain travel corridors. It is the dominance of the Deerfield River, with its adjacent fertile floodplain, that allows the whole region to be known as “The Valley”.

Demographics and Growth Potential

Wilmington’s population rose gradually between 1950 and 2000, and then fell by 17% between 2000 and 2020, from 2,225 to 1,844 people. Wilmington’s population dynamics are similar compared with most other surrounding towns. There is very little new development on an annual basis. Wilmington sees a few development permits per year, mostly for residential rebuilds or upgrades.

Water Features

The Town of Wilmington is laced with many waterways, including the North Branch Deerfield River, Meadow Brook, Rose Brook, Haystack Brook, Hall Brook, Ellis Brook, Beaver Brook, Negus Brook and Wilder Brook, which divide the Town into a branching group of hills and ridges of considerable relief. The Village itself is situated at the confluence of the Beaver Brook, and its valley from the east, and the North Branch of the Deerfield River, with its Deerfield Valley from the north.

Water and Wastewater

The Wilmington Water Department basically has four components to it.

1) Haystack lake and 26 springs make up our source water. Haystack Lake is located on Haystack Mt and the 26 springs are located just south of Crystal lake.

2) The Transmission line that connects our source water to our treatment facility and storage tank, located at 32 Wilmington Heights. The transmission line is approximately 3.5 miles long.

3) Treatment facility and 810,000 gallon storage tank. These are located at 32 Wilmington Heights.

4) Distribution System, consisting of approximately 5 miles of underground pipe of various size and materials, including 260 + connections curb stops a number of gate valves and gate valve boxes and about 36 fire hydrants.

Transportation

The center of Wilmington Village in Wilmington is a major crossroads of two state highways, Route 9 goes east to west and Route 100 goes north to south, following Route 9 for a distance until veering north in the center of the Village. The built environment constricts the tight intersection of the two highways leading to traffic congestion at certain times. This intersection is also the main route to the Mount Snow Ski Area, in Dover, for anyone traveling from the south.
A typical weekend in winter has traffic backed up for a mile from the east, and as far back as the Dover town line to the north. The bottleneck creates an emergency response problem for the Fire Department. Alternatives have been considered for traffic mitigation for the intersection, but so far none have been agreed upon or pursued.

Electric Utility Distribution

Green Mountain Power Average Annual Outage Data(2019-2023)	
Average number of outages per customer per year	2.07 times per year
Total outage duration per customer	2.55 hours per year
Average length of each outage	5.28 hours per year

Green Mountain Power 5 year average number of meters served is 6,359.

Internet and telephone information?

Public Safety

The Wilmington Volunteer Fire Department serves the Town and is composed of 30 firefighters, including the Chief. The Department serves the entire town and has mutual aid agreements with surrounding towns. There is a firehouse in the Village. Keene Mutual Aid serves as dispatch for the Department. As with many small town fire departments in Vermont, getting volunteer firefighters is difficult. The Wilmington Volunteer Fire Department makes all efforts to recruit volunteer fire-fighting personnel to protect Wilmington residents and visitors. Members attend training courses sponsored by Vermont Fire Academy and the various mutual aid associations. The Fire Department, Town Garage, Town Office, Road Crew and Police all have interoperable radios and are able to communicate within town vehicles to those out and about, but their handheld radios are on the same bandwidth. This presents an issue in areas, especially where cell coverage is spotty.

Emergency medical services are provided primarily by Deerfield Valley Rescue operating out of their Wilmington facility. Deerfield Valley Rescue is a non-profit organization funded through subscriptions and donations. Deerfield Valley Rescue provides numerous towns in the Deerfield Valley with ambulance service, medical care, transport to and from area hospitals and large regional hospitals.

Wilmington has their own local police force for coverage, and they are aided by the Vermont State Police, as needed.

The nearest hospital is either Bennington Hospital or Brattleboro Memorial Hospital depending on where in town you are.

Emergency Management

The Emergency Management Director (EMD), who is appointed by the Selectboard, coordinates emergency preparedness and response for the Town. The EMD in Wilmington also happens to be the Fire Chief.

Wilmington's primary designated emergency shelter is Wilmington Elementary School, which does not have a generator or a hookup. The secondary shelter at the Old School Enrichment Center does have a generator hookup and overnight sheltering capability. Twin Valley Elementary is the only school in the Town and also acts as the Local Emergency Operations Center when needed.

Critical Infrastructure

A critical facility is defined as a facility in either the public or private sector that provides essential products and services to the general public, is otherwise necessary to preserve the welfare and quality of life in the appropriate jurisdictions, or fulfills important public safety, emergency response, and/or disaster recovery functions. The current scope of this plan is to address these facilities and associated infrastructure. Once this plan is accepted, there is the possibility to expand the plan to cover other facilities and structures within the community.

Dams

According to the Vermont Dam Inventory (VDI), Wilmington has eight dams. One has been removed, one has been breached, two are low risk, one minimal, one significant and one high hazard potential dam. The remaining one was recently added but has not been inspected yet. All for recreation purposes including the high hazard, which is owned by Mount Snow and used for snow making purposes.

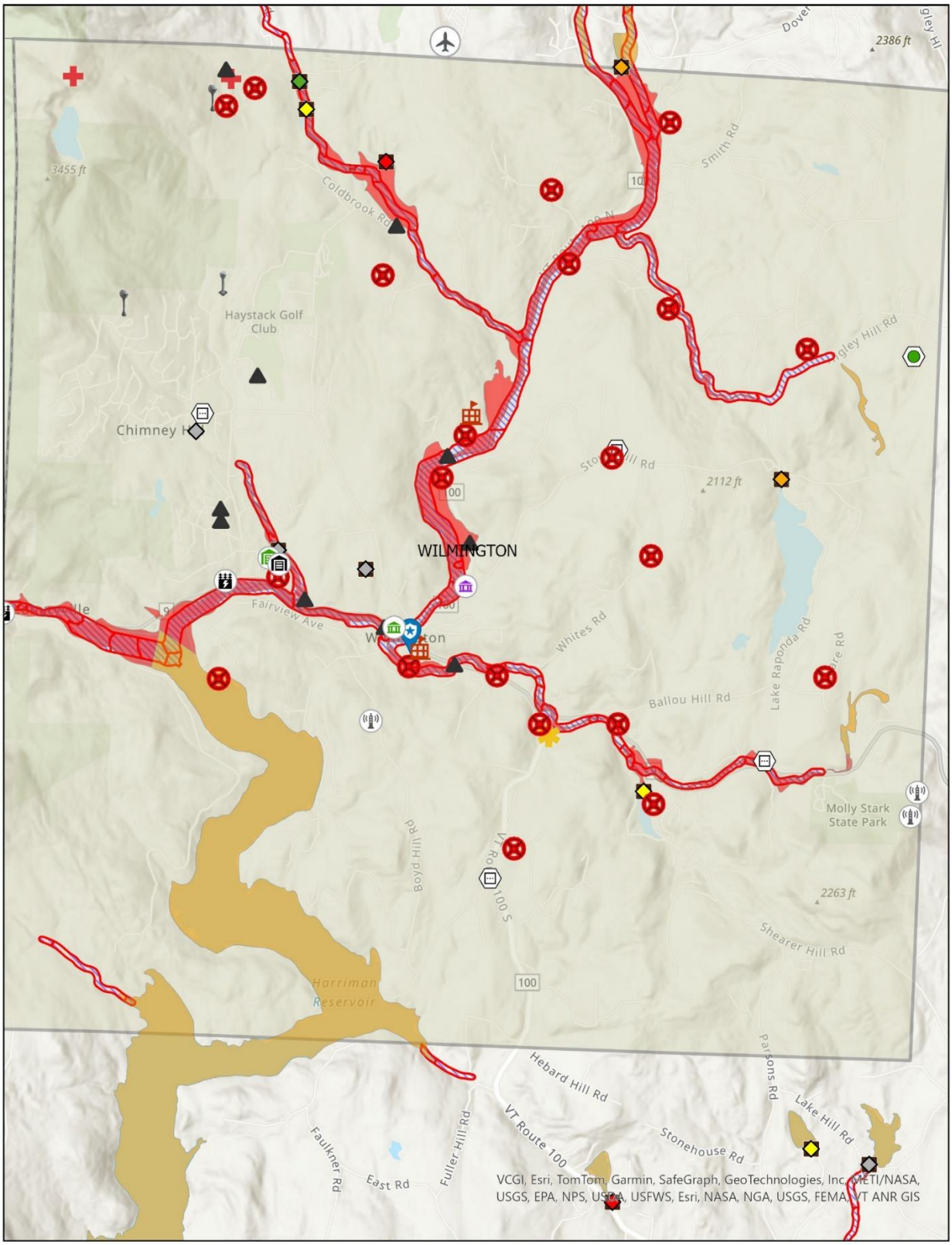
The Town does work with the dam owner Great River Hydro when flood events are warned to lower the Harriman Reservoir level to accommodate flood waters and protect the downtown from flooding. Great River Hydro also lowers the lake level every October before winter sets in in an effort to abate ice jams. The Town says that communication is effective with the dam owner.

Add more info for high hazard dam? Along with somerset and searsburg great River Hydro dams.
See **Figure 3** for location.

PRIMARYADD	SITETYPE
34 VT ROUTE 100 S	AMBULANCE SERVICE
10 LAKE RAPONDA RD	COMMUNICATION BOX
0 STOWE HILL RD	COMMUNICATION BOX
2 BINNEY BROOK RD	COMMUNICATION BOX
173 VT ROUTE 100 S	COMMUNICATION BOX
787 VT ROUTE 9 E	COMMUNICATION TOWER
7769 VT ROUTE 9	COMMUNICATION TOWER
119 BOYD HILL RD	COMMUNICATION TOWER
	first light/consolidated/GMP
115 VT ROUTE 100 N	PUMP STATION
197 HIGLEY HILL RD	HELIPAD / HELIPORT / HELISPOT
101 E DOVER RD	HELIPAD / HELIPORT / HELISPOT
227 VT ROUTE 9 E	HELIPAD / HELIPORT / HELISPOT
30 DIX RD	HELIPAD / HELIPORT / HELISPOT
94 WARE RD	HELIPAD / HELIPORT / HELISPOT

24 SCHOOL ST	HELIPAD / HELIPORT / HELISPOT
81 OLD ARK RD	HELIPAD / HELIPORT / HELISPOT
215 HAYNES RD	HELIPAD / HELIPORT / HELISPOT
21 HIGLEY HILL RD	HELIPAD / HELIPORT / HELISPOT
209 VT ROUTE 9 W	HELIPAD / HELIPORT / HELISPOT
352 VT ROUTE 100 N	HELIPAD / HELIPORT / HELISPOT
360 FAIRVIEW AVE	HELIPAD / HELIPORT / HELISPOT
174 GATEHOUSE TRL	HELIPAD / HELIPORT / HELISPOT
309 WHITES RD	HELIPAD / HELIPORT / HELISPOT
50 SHEARER HILL RD	HELIPAD / HELIPORT / HELISPOT
313 STOWE HILL RD	HELIPAD / HELIPORT / HELISPOT
188 VT ROUTE 100 N	HELIPAD / HELIPORT / HELISPOT
50 RALPH MAY RD	HELIPAD / HELIPORT / HELISPOT
5 HAYSTACK MOUNTAIN LN	HELIPAD / HELIPORT / HELISPOT
350 VT ROUTE 9 E	HELIPAD / HELIPORT / HELISPOT
148 VT ROUTE 9 E	HELIPAD / HELIPORT / HELISPOT
165 CHAMONIX TRL	HOSPITAL / MEDICAL CENTER
1581 CHAMONIX TRL	HOSPITAL / MEDICAL CENTER
40 BEAVER ST	LAW ENFORCEMENT
102 NORTH RD	PUMP STATION
85 E MAIN ST	PUMP STATION
181 VT ROUTE 100 N	PUMP STATION
2 WOFFENDEN RD	PUMP STATION
40 MOWING WAY	PUMP STATION
32 W MAIN ST	PUMP STATION
259 COLDBROOK RD	PUMP STATION
154 FANNIE HILL RD	PUMP STATION
167 VT ROUTE 9 W	PUMP STATION
48 WEST RD	PUMP STATION
360 VT ROUTE 100 N	SCHOOL K / 12

1 SCHOOL ST	SCHOOL K / 12
Northwest of the town	Somerset - great river hydro
23 HAYSTACK RD	STATE GARAGE
21 W MAIN ST	STATE GOVERNMENT FACILITY
281 VT ROUTE 9 W	SUBSTATION
63 NEW ENGLAND POWER RD	SUBSTATION
21 HAYSTACK RD	TOWN GARAGE
55 MILLER RD	TRANSFER STATION
178 UPPER DAM RD	WATER TANK
395 CHAMONIX TRL	WATER TANK
464 HAYSTACK RD	WATER TOWER


WILMINGTON
Haystack Golf Club
Chimney H
Coldbrook Rd
Smith Rd
Stowe Hill Rd
Fairview Ave
Whites Rd
Lake Raponda Rd
Ballou Hill Rd
Molly Stark State Park
Boyd Hill Rd
VT Route 100 S
Shearer Hill Rd
Harriman Reservoir
Hebard Hill Rd
Parsons Rd
Lake Hill Rd
Stonehouse Rd
VT Route 100
Fuller Hill Rd
Faulkner Rd
East Rd
2386 ft
3455 ft
2112 ft
2263 ft
100
VCGI, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS, Esri, NASA, NGA, USGS, FEMA, VT ANR GIS

4 PLANNING PROCESS

Plan Developers

The Town assembled a Hazard Mitigation Planning Team to participate in updating the Plan. Team members included: Town Manager, Police Chief, Fire Chief/Emergency Management Coordinator, Highway Superintendent, Town Clerk, Deerfield Valley Rescue, Town Administrative Assistant, Wilmington Works, and the Selectboard Chair.

The Town hired SEAM Solutions to assist 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 2020 single jurisdiction mitigation plan. A summary of the process taken to develop the 2025 update is provided in **Table XX**.

Table 1 - Plan Development Timeline and Process

Plan Development Timeline and Process
November 27, 2024 - – Kick off meeting. Discussed current plan status; planning process; update to plan sections; outreach strategy. Committee meetings were held online but not made available to the public
December 18, 2024 – Discussed public outreach strategy, identify community stakeholders, reviewed and made updates to the Introduction, Purpose and Community Profile, compiled information to identify critical facilities.
January 9, 2025 – Discussed critical facilities and made final edits, along with identifying dams that should be included, update community profile elements. Finalized public outreach including public meeting
January 11, 2025 – Sent plan update announcement that included surrounding towns, VTrans district office, ANR Floodplain Manager, DEC River Manager, Green Mountain Power, Consolidated Communications, FirstLight, Great River Hydro, and WRPC. Wilmington Works did outreach to local business, churches, Chamber, the Planning Commission, and other interested stakeholders along with a newspaper ad. Did receive feedback from 3 property owners and the Planning Commission. Wilmington Works also published community survey and received 52 responses.
February 19, 2025 –Performed the ranking of hazards and started to review the list of past plan mitigation actions to identify what has been accomplished and actions that should be included in the 2025 plan.
March 19, 2025 – Finalized hazard ranking and finished updating the prior plan list of mitigation actions.
April 16, 2025 – Public Meeting to review what a hazard mitigation plan is, the progress the committee has made so far and invited feedback for future actions to think about.
June 18, 2025 – Identified town's capabilities and areas for improvement in the areas of; Administrative and Technical, Planning and Regulatory; Financial; Education and Outreach. Started to identify future mitigation actions, goals and strategies.
August 20, 2025 – Reviewed mitigation actions and identified associated elements along with prioritizing them.
September 16, 2025 – Present draft to the Selectboard.

TBD – Make final edits and present draft for review and comment to the community, surrounding towns, community stakeholders as listed in the initial outreach.
TBD – Make any necessary edits and submit to VEM/FEMA for review and feedback.

In addition to the local knowledge of the Planning Committee 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 in **Table 3.**

2018 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.
2024 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 the Section 3.
2024 Zoning Ordinance & Development Guidelines Referenced to develop the Community Profile, Capabilities, Integrating into Existing Plans and Procedures, Mitigation Strategy Updates – Changes Since 2018 Plan in Section 6, NFIP participation and regulation.
2024 Annual Report Referenced to develop the Community Profile, Capabilities, Integrating into Existing Plans and Procedures, Mitigation Strategy Updates – Changes Since 2018 Plan in Section 6, NFIP participation and regulation.
2019-2023 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 2 - Existing Plans, Studies, Reports and Technical Information

Changes since the 2020 Plan

The 2025 local hazard mitigation planning effort analyzed natural hazards and the risk they posed to the Town of Wilmington. The risk assessment resulted in the categorization based similarly to the current form of hazard ranking, probability and impact. In the 2020 plan; Inundation flooding, fluvial erosion and invasive species were identified as the community's higher priority risk natural hazards. Actions proposed in 2020 focused on mitigating risks from flooding, fluvial erosion, invasive species, ice and snow along with actions that apply to all hazards.

The 2025 hazard ranking aligns with the State Hazard Mitigation Plan's identified hazards that consolidate many of the hazards identified in the previous plan. Wilmington recognizes that man-made events exist such as structure fire, hazmat spills, and highway crashes. Crucial to recognizing their threat to the community, however, there are other mechanisms such as the LEMP annexes that are better to deal with most short-term risks.

As the Town has sought to implement the 2020 mitigation strategy, they have looked for opportunities to incorporate information and recommendations from the 2020 Plan into other plans, programs, and procedures such as the zoning ordinances.

The Wilmington Town Plan, adopted in 2018, 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 the Wilmington Zoning Ordinance & Development Guidelines, adopted in XX and revised in 2024. The Flood Hazard District ensures 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.

In addition, Wilmington made significant progress in completing other mitigation actions identified in the 2020 Plan – see **Appendix B**.

Wilmington successfully moved the Fire and Police stations out of the floodplain and are now collocated in a single building that encourages interoperability and better coordination during events. Many culverts

have been replaced with upsized culverts, box culverts. The town is also making progress with the removal or containment of Japanese Knotweed along trails and river banks.

Other road improvements have been ongoing with the Municipal Roads General Permit projects. These mitigation investments have 1) strengthened the community's Transportation lifeline; 2) reduced risk to infrastructure; and 3) supported Town efforts to comply with the Municipal Roads General Stormwater Discharge Permit and protect water quality by controlling erosion and stormwater runoff from municipal roads.

As described in the Community Profile above, Wilmington's population has been in slow decline since its peak in 2000 and growth potential is believed to be limited by a lack of developable land and public water and sewer utilities.

Changes in population and development since 2020 have not made Wilmington 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 due to climate change most influenced the Town's current mitigation strategy.

The primary mitigation goal in the 2025 Plan is to increase 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 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 XX.**

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, the Hazard Mitigation Planning Team conducted an initial analysis of known natural hazard events in the Town of Wilmington. While there have been 16 FEMA disasters, and two emergencies declared in Windham County since 2000 only 6 have (one emergency declaration) affected the Town of Wilmington **(see Table 4**). This analysis aided in determining their probability of occurring in the future (high probability events are **in a darker shade of blue** in **Table 5**).

Federal Disaster Declarations: Windham County 1970 – 2024(current)		
FEMA Disaster Number	**Date of Declaration**	**Description**
4762	March 2, 2024	Severe Storms and Flooding
4720	**July 14, 2023**	**Severe Storms, Flooding, Landslides, and Mudslides**
4621	September 29, 2021	Severe Storm and Flooding
4532	April 8, 2020	COVID – 19 Pandemic
4356	January 2, 2018	Severe Storms and Flooding
4043	November 8, 2011	Severe Storms and Flooding
4022	**September 1, 2011**	**Tropical Storm Irene**
EM -3338	August 29, 2011	Hurricane Irene
EM - 3167	**April 10, 2001**	**Snowstorm**

1816	**January 14, 2009**	**Severe Winter Storm**
1698	**May 4, 2007**	**Severe Storms and Flooding**
1559	September 23, 2004	Severe Storms and Flooding
1488	September 12, 2003	Severe Storms and Flooding
EM-3167	April 10, 2001	Snow
1336	**July 27, 2000**	**Severe Storms and Flooding**
1307	November 10, 1999	Tropical Storm Floyd
1124	June 27, 1996	Extreme Rainfall and Flooding
1101	February 13,1996	Ice Jams and Flooding
518	August 5, 1976	Severe Storms, High Winds and Flooding
397	July 6, 1973	Severe Storms, Flooding and Landslides
277	August 30, 1969	Severe Storms and Flooding

Table 3 - Federally declared disasters in Windham County

The Team then ranked the impacts associated with the natural hazard events based on 1) probability of occurrence and 2) potential impact to people, infrastructure, the environment, and local economy.

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 **Table 5** and reflect the following **highest risk hazard impacts** that the Town believes they are most vulnerable to:

Floods *associated with thunder and/or winter storms and ice jams.*

Strong wind *associated with thunder and/or winter storms.*

Infectious Disease *associated with cases of disease in excess of what is normally expected*

Each of the **highest risk hazard impacts** are profiled in this section. Lower risk hazards impacts do justify mitigation but to a lesser extent due to a low probability of occurrence and/or low impact. See the 2023 State Hazard Mitigation Plan if you are interested in more 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.

2025 Hazard Mitigation Plan Hazard Assessment								
Hazard Impact	**Probability**	**Potential Impact**					**Score**	Rank
		Infrastructure	Life	Economy	Environment	Average		

Indundation Flooding	4	3	2	3	3	2.75	11	1
Wind	4	3	2	3	3	2.75	11	1
Flash Flooding	4	3	2	3	2	2.5	10	2
Infectious Disease	4	1	3	3	1	2	8	3
Fluvial Erosion	4	1.5	1	2	3	1.875	7.5	4
Snow	4	2	2	2	1	1.75	7	5
Invasive Species	4	1	1	2	3	1.75	7	5
Heat	4	1	2	1	2	1.5	6	6
Ice	3	2	1	2	1.5	1.625	4.875	7
Cold	4	1	1	1	1	1	4	8
Drought	3	1	1	1	2	1.25	3.75	9
Hail	3	1	1	1	1	1	3	10
Wildfire	3	1	1	1	1	1	3	10
Landslide/slope failure	1	1	1	1	1	1	1	11
Earthquake	1	1	1	1	1	1	1	11

*Score = Probability x Average Potential Impact

Table 4 - Community Hazard Risk Assessment

	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

Highest Risk Hazard Profiles

Flooding

Hazard Description: Flooding is the most widespread and destructive hazard in the United States. Flooding has also been the most common and costly hazard to affect Wilmington. Flooding can occur anytime of the year as a result of heavy rains, thunderstorms, tropical storms, hurricanes or Nor'easters. It can result from the overflow of major rivers and their smaller tributaries, or inadequate local drainage. Historically, floods have been a factor in over 80 percent of all federally declared disasters. People living in close proximity to bodies of water such as rivers, lakes, and streams are at greater risk from flooding than those not living in the floodplain. There is a 26 percent chance of experiencing a flood during the life of a 30-year mortgage compared to a 4 percent chance of a fire. Wilmington has an NFIP compliant floodplain ordinance, which gives residents access to discount flood insurance and enables the Town to regulate development within the Special Flood Hazard Area (SFHA). SFHAs are subject to inundation by the 1% annual chance flood (100-year flood). Maps of these areas can be found at the Town Office or online at the FEMA Map Service Center. The primary FEMA mapped SFHA runs along Route 9 for nearly the entire extent through Wilmington and Route 100 between the Village and the Dover town line.

2011 TS Irene inundation flooding at the Village center, building in center of photo is the Town Hall and Police Department. Photo taken by Amber Bartlett.

Fluvial Erosion Description

Much of the destruction from flooding in Wilmington is due to fluvial erosion rather than inundation, which is the type of flooding targeted in FEMA mapping. Fluvial erosion is the destruction of river banks caused by the movement of rivers and streams, when stream power overcomes resistance of bed and bank material. This can range from gradual bank erosion to catastrophic changes in river channel location and dimension during flood events. This occurs when the stream has more energy than is needed to transport its sediment load, due to channel alterations or runoff events that increase water speed in the channel, leading to erosion.

Route 9 was cut off during TS Irene in 2011 due to fluvial erosion.

Gravity and water power are the forces driving fluvial erosion. Factors that allow the force of gravity to overcome the resistance of earth material to erosion include: saturation by water, steepening of slopes by erosion or construction, alternate freezing or thawing, removal of trees and other vegetation and earthquake shaking. Major erosion events are typically associated with periods of heavy rainfall or rapid

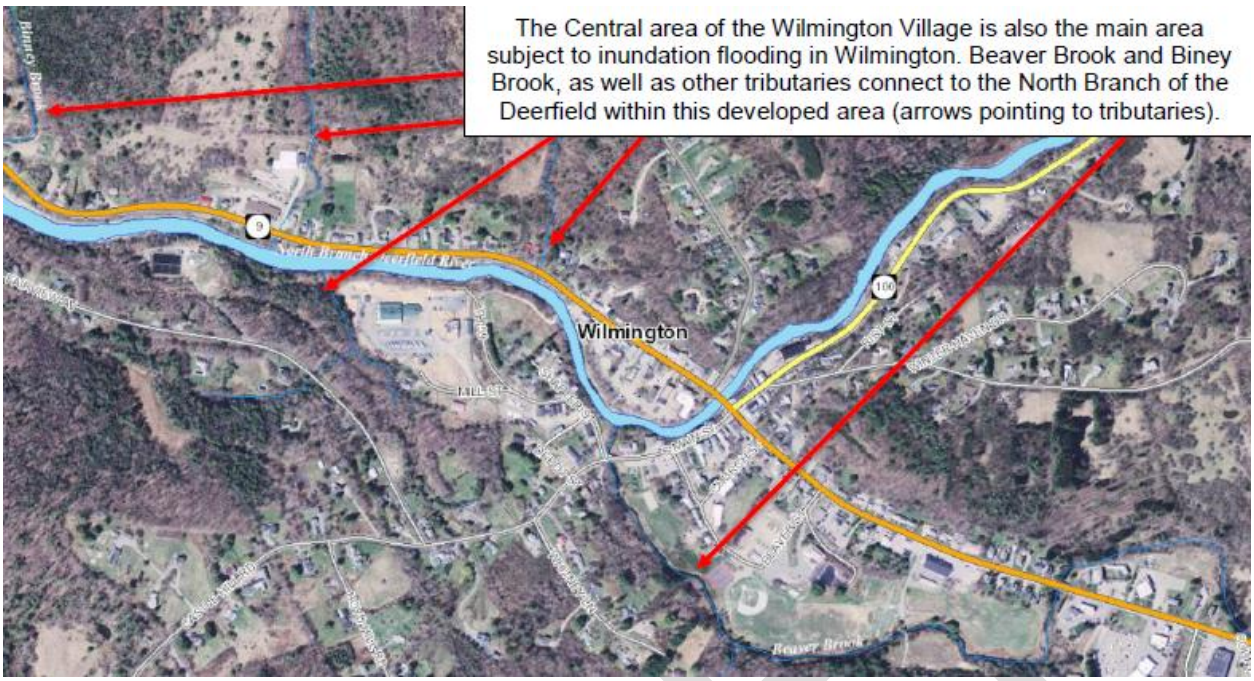
snow melt and tend to worsen the effects of flooding that often accompany these events. Associated issues in Wilmington are related to road cutting and bank erosion for the most part, areas where roads have been built between steep slopes on one side of the road, and slopes to a river or brook on the opposite side. Existing homes are dotted on the landscape along these roads which have existed for 200 years or more, so cannot be easily closed or relocated.

Flash floods typically occur in high elevation drainage areas as a result of summer thunderstorm activity. Drainage ditches and culverts are the biggest concern for local flash flooding events. Other areas of concern during flooding events are homes located along small brooks throughout town that are subject to rise during quick flash flooding events.

Ice jam flooding is fairly common in the early springtime, generally around March. The heavy rainfall, combined with runoff from snowmelt due to the mild temperatures, results in flooding of rivers, streams and creeks, mainly from the formation of ice jams. There are some ice jams on Beaver Brook but mitigation options are limited as they are on private property. The Town does work with the dam owner Great River Hydro when flood events are warned to lower the Harriman Reservoir level to accommodate flood waters and protect the downtown from flooding. Great River Hydro also lowers the lake level every October before winter sets in in an effort to abate ice jams. The Town says that communication is effective with the dam owner.

Hazard Location: The Village area as well as Route 100 along the North Branch of the Deerfield River have seen some of the most recent and severe damage from flooding and fluvial erosion. Due to their proximity to the Deerfield River and the number of tributaries that converge in the downtown area, flash floods can potentially cause severe flood damage in this area.

Due to the historic development patterns in Wilmington, with the main transportation routes following the waterway, much of the built environment is also located in this hazardous area or along tributaries to Beaver Brook or the North Branch of the Deerfield River. The tributaries are generally in mapped River Corridors, and because of the terrain, are more subject to fluvial erosion than rising and standing flooding such as is more common in wide lowlands. Wilmington was heavily impacted by the most recent large storm in memory, Tropical Storm Irene in 2011. In addition to the major flooding in the downtown area, Wilmington was entirely cut off via Route 9 which was closed in Marlboro. The National Guard actually had to do water drops for the Town because the sewer and water systems were overwhelmed and contaminated by the flooding and the town was trapped. Issues on Route 9 create a vulnerability for Wilmington from a variety of natural hazards.



The Central area of the Wilmington Village is also the main area subject to inundation flooding in Wilmington. Beaver Brook and Biney Brook, as well as other tributaries connect to the North Branch of the Deerfield within this developed area (arrows pointing to tributaries).

There are flooding issues behind Viking Inn in the downtown area. Roadways in floodplains and undersized bridges and culverts are a big cause of stream instability generally, not just in Wilmington. A waterway that is constrained is unable to reach geomorphic equilibrium which increases flooding in that area and puts increased pressure and larger flood loads on upstream and downstream sections, as well as causing more flooding damage. A river is in geomorphic equilibrium when its water, energy, sediment, and debris are in balance. In this condition a river is neither building up sediment in the channel nor losing sediment from its bed. Importantly, a river in equilibrium has not become overly deep and can continue to overflow onto its floodplains. The water that spills onto the floodplain slows down, and the velocity of the water still in the channel does not become excessively powerful. Mitigation actions are intended to assist with achieving greater equilibrium which will also lessen or even eliminate flooding levels and damages to buildings and infrastructure. Historic development patterns limit or complicate mitigation in some areas.

Hazard Extent: The extent of a flood event can vary from a minor event due to a typical rain event or could be a major event as a result of rapid snow melt in spring, rain on frozen ground, or as a result of a tropical depression or storm. The extent of flooding is such that brooks may breach their banks and flow onto land and down roads. Wilmington had the most infrastructure damage of any town in Vermont resulting from TS Irene. While recovery has come a long way, the flood and its effects still impact the lives of nearly everyone in Wilmington, either directly or through the memories of the damage.

The highest recorded measurement on the North River at the nearest stream gauge to Wilmington (at Shattuckville, MA) was 18.17 feet, which was measured on August 28. 2011 during TS Irene. According to the National Weather Service flood stage at that gauge is 9 feet.8

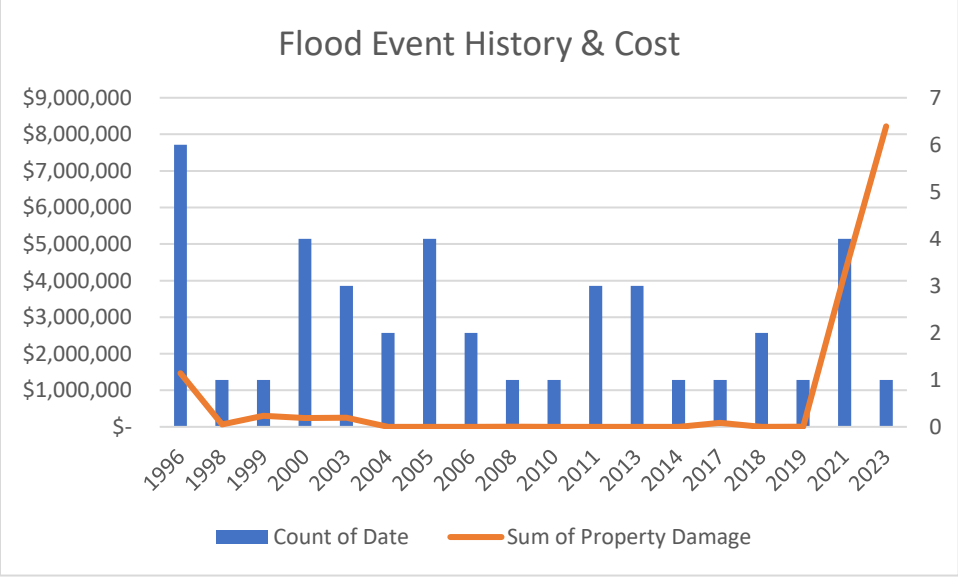
Extent for thunderstorms/heavy rain events: The tables below shows the top 10 rain events at two former USGS weather monitoring stations nearby to Wilmington, that also have significant periods of record. Two stations are used to give a lengthier period of record. This table shows that TS Irene in 2011 was the seventh highest 1-day precipitation value between 1930 and 2012, based on these station data. Most

stations take their observations in the morning (7 and 8am are the most common times), so the precipitation would have fallen between 7am on the previous date to 7 am on the date listed in the table.

Maximum 1-Day Total Precipitation[9] for Searsburg, VT		
Rank	Value (inches)	Ending Date
1	8.98	1949-01-01
2	8.27	1938-09-22
3	7.33	1948-12-31
4	6.51	1984-05-31
5	6.37	1990-08-07
6	6.27	1949-01-02
7	6.10	1955-08-14
8	6.07	1990-08-08
9	5.83	1935-07-09
10	5.72	1990-08-06
Period of record: 1930-05-01 to 1998-07-31		

Maximum 1-Day Total Precipitation[10] for West Wardsboro, VT		
Rank	Value (inches)	Ending Date
1	6.22	8/29/2011
2	4.75	9/17/1999
3	4.55	7/16/2000
4	4.42	10/9/2005
5	4.22	7/14/1996
6	4	3/14/1993

Hazard History: The Town of Wilmington has experienced five presidentially declared disasters the past 25 years due to flooding along with other occurrences identified in the table below.



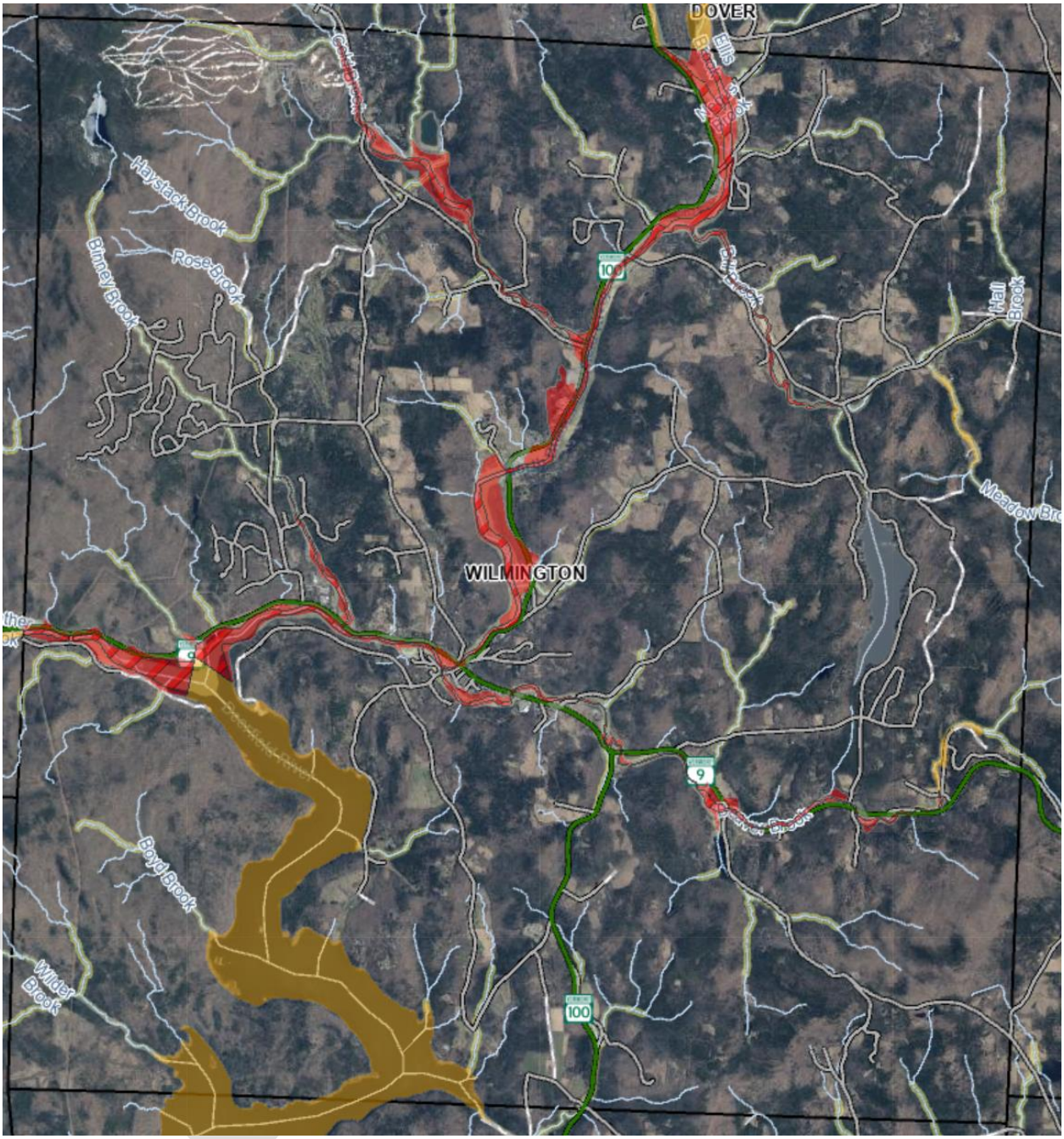
Future Probability and Potential Impacts: Flooding is highly likely, as determined by the number of past events and the local knowledge of the Hazard Mitigation Planning Committee. There are events every year, especially during spring snow melt and late summer season rains. Flash flooding is a locally probable event, with flash floods typically occurring in summer months. Higher-elevation drainage areas and streams are particularly susceptible to flash floods, which plan participants noted are more common.

Fluvial erosion is highly likely and exists in Wilmington, especially due to the damage caused by TS Irene in 2011, where fluvial erosion hazard flooding de-stabilized many steep-sloped areas and washed out riparian zones next to roads and streams. Fluvial erosion is directly associated with flooding and large scale rain events and spring snow melt. Inundation flooding events are also a hazard in Wilmington, especially in the downtown. With areas of high elevation drainage, Wilmington is subject to flash flood events that erode stream banks and adjacent areas. There are events every year, especially during spring snow melt and late summer season rains.

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 flood hazard area regulations and participates in the national flood insurance program. Wilmington's regulations prohibit new structures in the Special Flood Hazard Area. Therefore change in development and land use is not expected to increase impacts of fluvial erosion, inundation flooding or flooding on current or future assets.

Change in Demographics: Wilmington'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.



Vulnerability Summary: Wilmington is vulnerable to both **Inundation** and **Flash Flooding** as described above. Both flood hazard types rely on natural floodplains to disperse flood waters and reduce their potentially disastrous impact. Floodplains provide important social, economic and ecological functions. They are areas where human structures and critical transportation infrastructure are at risk. River Corridors are dynamic areas where a great deal of damage can also occur during flooding disasters.

Built Environment: The most damages to date have occurred to the town highway infrastructure in the form of washouts and culvert failures. Fortunately, a progressive road crew monitors trends and proactively installs culverts and repairs ditching in anticipation of ever worsening

rainfall/flooding events. Fortunately, the community understands this vulnerability and supports the road crew's efforts to prepare against future risk.

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. The elderly, the homeless, residents with special needs and those without proper transportation may potentially be impacted more than other residents.

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 impacted businesses, homelessness due to house damage, and recovery costs, including employee overtime, time and equipment spent on the repairs.

Wind

Hazard Description: High Winds can be generated from a thunderstorm, hurricane or tropical depression, a localized microburst, or simply just a windstorm. Any of these events can produce wind gusts up to 50 mph or greater causing property damage and disruption in electric and telecommunication utilities, transportation, and commercial businesses. Although difficult to predict, these events also pose a high risk of injuries and loss of life.

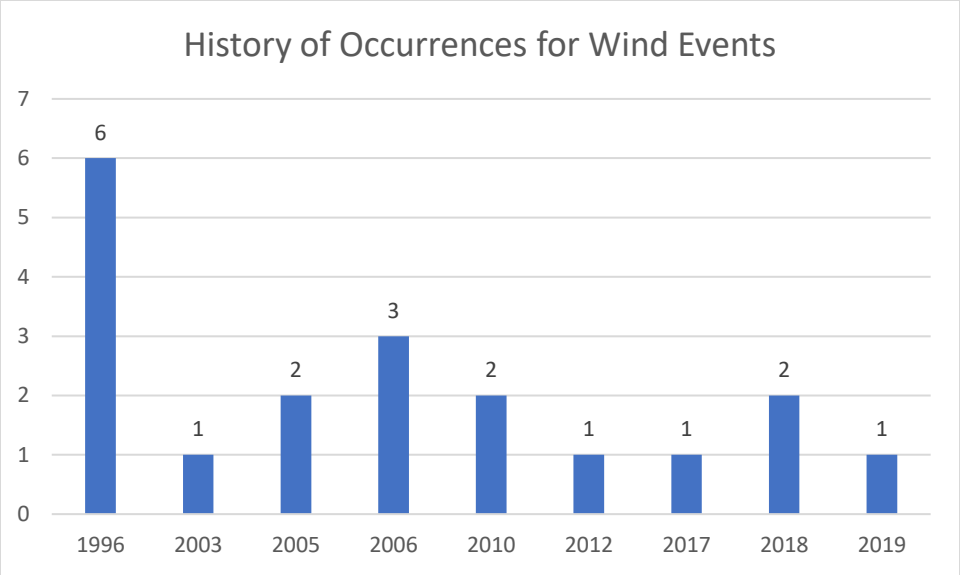
National Weather Service warnings include:

- High Wind Warning: Take Action! Sustained, strong winds with even stronger gusts are happening. Seek shelter. If you are driving, keep both hands on the wheel and slow down.
- High Wind Watch: Be Prepared! Sustained, strong winds are possible. Secure loose outdoor items and adjust plans as necessary so you're not caught outside.
- Wind Advisory: Take Action! Strong winds are occurring but are not so strong as to warrant a High Wind Warning. Objects that are outdoors should be secured and caution should be taken if driving.

Hazard Location: Townwide. Heavily tree-lined roads. Buildings that are surrounded by trees. Power lines are located near tree lines.

Hazard Extent: 19 wind events in Windham County have been recorded since 2000, which typically range from 40 to 60 mph. With one recorded event in 2006, where Stratton Mountain Ski Resort personnel recorded a wind gust of 143mph.

Hazard History: According to the 2023 VSHMP there were 19 recorded events in Windham County from 1997 – 2002 totaling $268,000 in damage, along with a few tornado events, at least four events affected the Town of Wilmington.



Probability of Future Events and Potential Impacts

While many other regions have been experiencing an increased frequency of microbursts, straight line winds and reported tornadoes, Windham County has stayed consistent with wind events. The severity of all types of weather events usually comes with a component of high winds. However, climate change predictions would indicate that this type of wind event will potentially 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: Wilmington'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: Wind events can cause injuries or fatalities to people who do not shelter-in-place in time, 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 operations may be disrupted due to blocked roads.

Built environment: Wind events can cause damage to town and private property, including buildings (windows and roofs), downed road signs, utility poles and power lines and overturned vehicles. Roads may become impassable. Power outages can occur from downed trees. Older buildings' roofs may be vulnerable.

Natural environment: Wind events can cause damage to the environment with downed trees, and uprooted trees and plants.

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

Infectious Disease

Hazard Description: Infectious disease outbreaks refer to the occurrence of cases of disease more than 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 Wilmington. Recently, Wilmington, 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: People with disabilities, access and functional needs may be most vulnerable to disease outbreak events. A disease outbreak event 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 because of development or land use changes could be identified.

Change in Demographics: Wilmington'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 - Snow – Cold

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.

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. 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 Location: All areas of Wilmington can be affected by ice, snow and cold events, particularly higher elevations and exposed locations.

Hazard Extent: A winter storm is considered severe when there is a possibility of:

- Six or more inches of snow fall at a given location within 48 hours,
- Property damage, injuries or deaths, or
- An ice/glaze storm which causes property damage, injuries or death.

At levels exceeding ½ inch of ice accumulation Wilmington can experience power outages. Depending on the severity of the damage, power losses often continue for days. These conditions occur often enough that many town residents have a back-up power system installed.

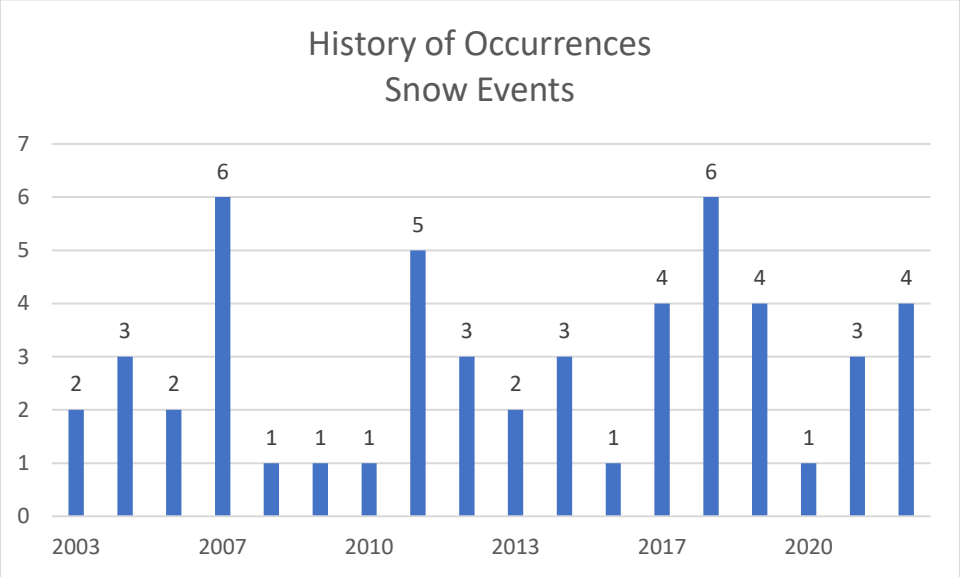
In the region, extreme cold can still be an issue. Historic cold extremes in Wilmington have reached as low as -35° F, with wind chill values dropping below -50° F during severe Artic outbreaks, as documented in NOAA regional data. These conditions pose risks of frostbite within minutes, freezing of uninsulated water lines, and have historically resulted in school closures and increased emergency heating needs in Windham 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 the use of the town shelter and is planned for in the town's Local Emergency Management Plan.

What constitutes "extreme cold" can vary across different areas of the country based on what the population is accustomed to in their respective climates. Vermont is adapted to cold conditions; however very cold temperatures remain a threat despite their commonality during Vermont winters.

Hazard History: According to the Vermont Disaster History by Event Table located in the 2023 SHMP and NOAA Storm Events Database there have been 4 ice events since 2000.

Windham 1/15/2007	Western Windham 3/4/2008
Western Windham 3/18/2008	Windham 12/11/2008

There have been over 50 recorded winter storm/weather events in Windham County since 2010 as recorded by NOAA National Centers for Environmental Information (NCEI). The descriptions of the winter events include type of precipitation, snow totals, ice accumulations, exceptional cold and wind speed data, and the extent of impact on the community where available. Unlike neighboring Windsor County to the north, which incurred close to $800,000 in property damages due to winter storm events over the same period, there were little or no damages recorded in Windham County as a result of any of these noted winter events. Wilmington had one declared event in 2000 that resulted in over $7,000 in public assistance.



For cold weather events the Town uses their shelters the same as associated with a power outage. Below are the 10 cold related listing from the SHMP of 2023.

Windham 1/14/2022 Cold
Windham 1/20/2019 Cold
Windham 1/1/2018 Cold
Windham 1/19/2015 Cold
Windham 1/7/2015 Cold
Windham 1/30/2019 Cold
Windham 1/5/2018 Cold
Windham 2/13/2016 Cold
Windham 2/15/2015 Cold
Windham 1/23/2011 Cold

Future Probability and Potential Impact

According to the 2023 National Climate Assessment "Changes in some types of storms are also apparent. Over the past three decades, heavy snowfalls have been more frequent over the Northeast, a trend consistent with warming in the western Atlantic Ocean and increasingly frequent Arctic air outbreaks from polar vortex disruptions. Atmospheric rivers along the Pacific Coast have become warmer over the past several decades and have transported larger amounts of moisture into the West because of increases in Pacific Ocean temperatures. "

Climate Change: Climate change significantly affects weather patterns, including the frequency, intensity, and geographic distribution of ice, snow, and 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 ice, snow and extreme cold events as a result of development or land use changes could be identified.

Change in Demographics: Wilmington'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

Potential losses from winter storms are mostly indirect and can be difficult to quantify or predict. Damage from snow and ice storms can vary depending upon snow or ice accumulation, wind speeds, storm duration, tree cover, and structural conditions.

For example, large, flat roofed structures or aged structures in deteriorating conditions are most vulnerable to collapse under heavy snow and/or ice accumulation.

Most roofs can withstand 20 pd/sf of snow which equates to approximately 3 to 4 feet of fresh snow or a foot of heavy wet snow. A season's worth of snowfall, however, can be well above what a typical roof will support, particularly if there have been layers of old snow and ice.

In addition to accumulating snow, drifting snow and low visibility during high intensity snow and ice storms can become extremely hazardous for pedestrians and motorists. Also, warming trends have led to a greater frequency of freezing rain followed by flash freezing causing black ice to form on paved roadways which are typically the major thoroughfares in the region.

One of the greatest impacts on infrastructure from snow and ice storms is typically the loss of power due to downed powerlines caused by the weight of either heavy wet snow or ice load.

Vermont communities and municipal road crews are generally well prepared to handle heavy snowfall. However, it is typically the secondary hazards that are most concerning to the town. Depending on the event, particularly with heavy, wet snow or ice, electricity may be knocked out for a few hours or days due to downed powerlines from falling trees. This is a time when residents are most vulnerable to structure fire hazards. Many residents heat their homes with open flame heating sources including fireplaces and wood or pellet stoves and will supplement with electric or kerosene space heaters.

People: Ice, snow and extreme 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: Ice, snow and extreme 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: Ice, snow and extreme cold weather events can cause damage to the environment with downed trees.

Economy: Ice, snow and extreme 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.

Extended periods of extreme cold or loss of power during the winter months require continued vigilance on the safety of heating to reduce the risk of a structure fire as a secondary hazard.

Invasive Species

Hazard Description: 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 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 the 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.

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 Wilmington's Forest products industry and village landscape**.**

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

Hazard History: are becoming a widespread problem throughout Wilmington and the rest of Vermont. 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 Wilmington's Forest products industry and village landscape**.**
The Wilmington Hazard Mitigation Committee (GHMC) 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.

Hazard Vulnerability: Wilmington is extremely vulnerable to the economic impacts of invasives and is limited in its ability to combat their spread. The community does what it can but is highly dependent on State and Federal agencies to slow down the spread of invasives. With a local economy highly focused on the forests and forest products, the community is highly at risk. From the 2023 State Hazard Mitigation Plan, "A compounding hazard can impact the occurrence of other hazards days, weeks, or months later. Invasive species and extreme heat are two hazards which have been noted to cause major compounding and cross-cutting impacts. Invasive species can accelerate the frequency of landslides, wildfires, and infectious disease outbreaks."

> **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: With an increasing global economy, new and unknown invasives are sure to be imported from other countries in the future. In recognition of the inevitable spread of EAB and ALB into Vermont, trapping is being conducted by foresters and biologists along the border areas of Vermont. ALB is expected in Vermont within the next few years and damage caused by their spread is already anticipated by the Vermont Agency of Natural Resources. EAB was reported in the State of Vermont for the first time in early 2018 and State plans have been put into action.

> **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: Wilmington'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.

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.

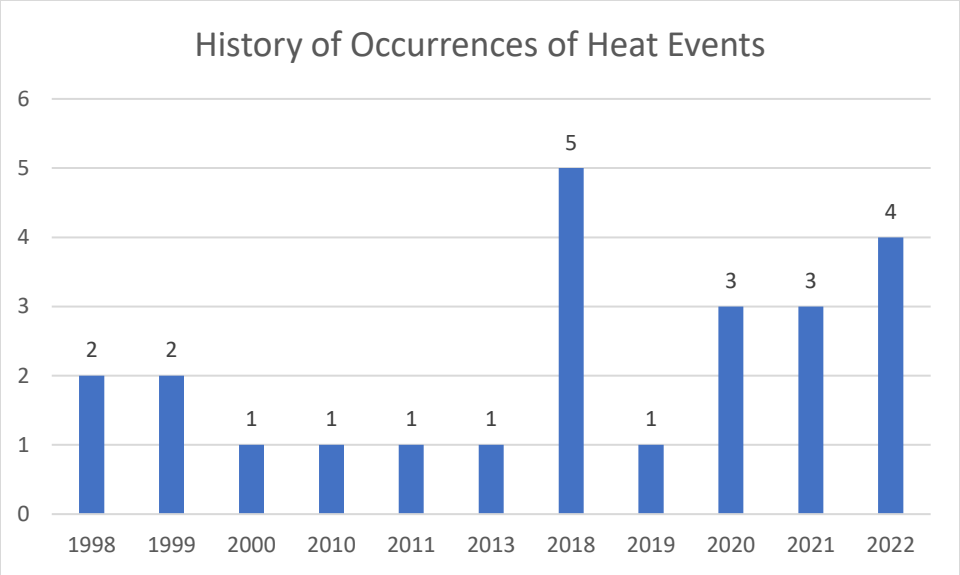
Consecutive days of hot weather with warm overnight temperatures further increase the risk of experiencing severe heat-related health impacts. Risk also depends on the "normal" level of heat experienced in an area – places that are relatively cooler will typically experience health impacts at lower heat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

Hazard Extent: Heat advisories, watches, and warnings are issued by the National Weather Service and local authorities to alert residents to the risks of impending heatwaves. Wilmington may experience a heat advisory, watch of warning, however given historical data, it's likely that Wilmington would be issued with a heat advisory.

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.

Hazard Location: All areas of Wilmington, Windham County and statewide are susceptible to extreme heat events.

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. June of 2024, Vermont saw forecasted heat index of 102. Below is the chart for the 19-heat related listing from the SHMP of 2023.



Town Vulnerability:

People: 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 Wilmington with a greater increase in heat warning. With there being at least 1 multiday heat advisory on average per year.

Built environment: Heat events can cause a strain on the town's electrical system, leading to brown or blackout events.

Natural environment: Heat events can increase the occurrences of droughts and wildfires.

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 Impacts: 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: 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 extreme heat and drought events because of development or land use changes could be identified.

Change in Demographics: Wilmington'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

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).“

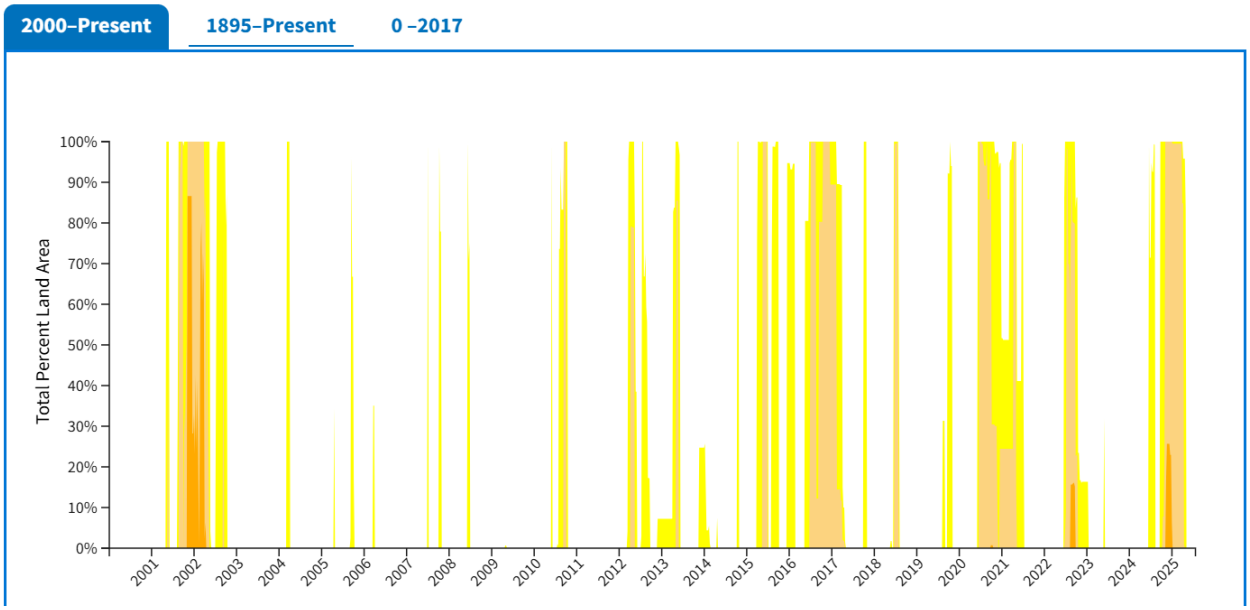
Droughts in the Northeast tend to be, what are referred to as “flash” droughts, defined as rapid onset of intense dry periods that can follow periods of normal or above normal precipitation. These may last from 2-6 months, and can have profound impacts within the region, on agricultural losses, shortages 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 Wilmington, Windham County and the State are susceptible to drought events.

Hazard History: There have been 4 instances of D2 (Severe Drought) level droughts in southern Windham County Vt since 2000. Two in the Fall of 2022 and two in 2024, all of them lasting around a month. Even though there is a level of risk to the Town, the committee chose not to detail the hazard any further or identify any mitigation measures other than identified in the category of all hazards.

Historical Conditions for Windham County



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

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: Wilmington'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.

Hail

Hazard Description: Hail is a type of precipitation that consists of solid ice balls or lumps (hailstones) that form within strong thunderstorm clouds, particularly those with intense updrafts. Hailstones form when updrafts in thunderstorms carry raindrops upward into extremely cold areas of the atmosphere where they freeze. Layers of ice accumulate as the stones are repeatedly lifted and dropped within the storm before falling to the ground when they become too heavy.

Hazard Extent: Hail events can occur year-round but are most common in late spring and summer during thunderstorms. Hailstone size can range from the size of a pea to the size of a melon. Given the State's

historical data, hail size is anticipated to be smaller than five inches, and in Windham County typically quarter size. Hail greater than in inch was reported nine events since 2000.

Hazard Location: Hail events not only impact the Town of Wilmington but can extend to the County of Windham and beyond.

Hazard History: Below is the history of hail events recorded in the NOAA Storm Events Database since 2000 for Windham County, no events have been recorded in the Town of Wilmington.

Date	Size (inches)
6/20/2001	1
7/10/2007	1
8/7/2008	1.75
6/1/2011	1.75
5/29/2012	2
6/17/2013	1
5/28/2015	1
7/17/2017	1
9/5/2017	1

Town Vulnerability:

Built environment: Hail events can cause damage to town and private property, including buildings (windows and roofs) and vehicles. These impacts could cause disruption of the transportation system to and from the community and county.

People: Hail events can potentially cause minor injuries to people who do not shelter-in-place in time, 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 may potentially be impacted more than other residents.

Economy: Hail events can cause minimal economic impacts on the town. Impacts could potentially include disruption or closure of impacted businesses, homelessness due to house damage, and recovery costs, including employee overtime, time and equipment spent on the repairs.

Natural Environment: Hail events can cause damage to the environment with potential isolated damage to trees and plants.

Potential Future Impacts:

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

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

Change in Demographics: No changes to asset impacts due to hail events because of development or land use changes could be identified.

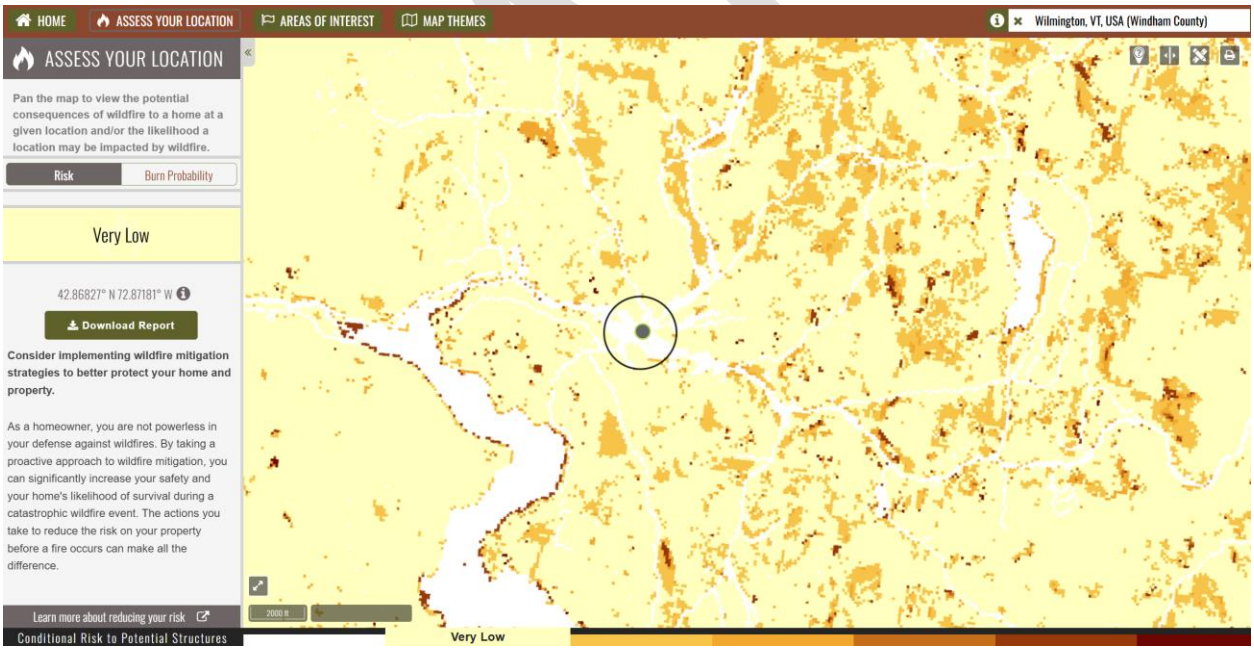
Wildfire

Hazard Description: Wildfires are uncontrolled fires in natural areas. While Wilmington 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. Forest closures have occurred three times statewide in the past 50 years due to extreme fire risk.

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.

Hazard Location: Throughout Wilmington, there are large tracks of forested land in the southwest portion of Town that could be at risk during sustained dry periods. times when dry hazardous conditions exist.

Hazard History: There have only been small, isolated wildfires within the last 50 years within Windham County, but statewide closures of public lands have occurred three times in that period of time due to extreme fire danger. Extent Due to a lack of recent historical occurrences, extent data is unavailable for Wilmington.



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

Probability of Future Events and Impacts

Wildfire events in Wilmington are considered Occasional in Wilmington, defined as a 1% to 10% probability of occurrence per year, or at least one chance in the next 100 years. Although Wilmington has

not experienced major wildfire events recently, 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:** Wilmington'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.
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.
Natural environment: Wildfire events can cause damage to the environment with acres of forests and farmlands being burned.
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.

Landslide/slope failure

Hazard Description: A 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 Wilmington, 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.

Landslides have three major causes: geology, morphology, and human activity. Geology refers to characteristics of the material itself. The earth or rock might be weak or fractured, or different layers may have different strengths and stiffness.

Morphology refers to the structure of the land. For example, slopes that lose their vegetation to fire or drought are more vulnerable to landslides. Vegetation holds soil in place, and without the root systems of trees, bushes, and other plants, the land is more likely to slide away. Human activity, such as agriculture

and construction, can increase the risk of a landslide. Irrigation, deforestation, excavation, and water leakage are some of the common activities that can help destabilize, or weaken, a slope.

Hazard Location, Extent and History: The Town of Wilmington has no landslide locations within the town boundaries according to the Vermont Agency of Natural Resources Landslide map that was last updated in 2020.

Total damages for landslides are not tracked well within the State of Vermont since often landslides are in association with Fluvial Erosion the damages are often lumped together there. With the increase in precipitation trends due to climate change the risk from landslides is increasing. This can be addressed through land use regulations and mitigation of surface runoff from human actions and development.

Town Vulnerability:
People: Residents living in 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:
Climate Change: Climate change primarily affects atmospheric and oceanic processes, but there is emerging evidence suggesting that it can indirectly influence seismic activity, including earthquakes. It is not currently possible to predict when or where an earthquake may occur.
Change in Land Use/Development: No changes to asset impacts due to earthquakes as a result of development or land use changes could be identified.
Change in Demographics: Wilmington'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.

Earthquake

Hazard Description: An earthquake is the shaking of the surface of the Earth resulting from a sudden release of energy in the Earth's lithosphere that creates seismic waves.

Hazard Extent: An earthquake is measured by magnitude, energy released by an earthquake, and intensity, effect and damage caused by the earthquake. The most used scale is the Richter Scale. Although difficult to predict, given the State's historical earthquake data, Wilmington may anticipate an earthquake measuring very low on the Richter Scale.

Hazard Location: While earthquakes occur on fault lines, the entire town of Wilmington is susceptible to an earthquake.

Hazard History: Per the Vermont Hazard Mitigation Plan, since 1900, Vermont has only experienced three earthquakes registering 2.5 or greater of the Richter Scale.

Town Vulnerability:

Built environment: There is the potential that buildings could become damaged or collapse during an earthquake. Earthquake events could also cause impact on roads. These impacts could cause disruption of the transportation system to and from the community and county. However, given the situation in Vermont, this is a low possibility.

People: People could become injured or trapped during an earthquake. However, given the situation in Vermont, this is a low possibility.

Economy: Earthquakes could result in the closure (temporary or permanent) of local businesses due to damage sustained during the earthquake. However, given the situation in Vermont, this is a low possibility.

Potential Future Impacts:

Climate Change: Climate change primarily affects atmospheric and oceanic processes, but there is emerging evidence suggesting that it can indirectly influence seismic activity, including earthquakes. It is not currently possible to predict when or where an earthquake may occur.

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

Change in Demographics: Wilmington'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.

The Hazard Identification and Risk Assessment is the foundation for the Mitigation Strategy to reduce future risk.

1. Law Enforcement	1. Highway/Road/Motor Vehicle	1. Medical Care	1. Infrastructure
2. Fire Service	2. Mass Transit	2. Public Health	2. Responder Communications
3. Search & Rescue	3. Railway	3. Patient Movement	3. Alerts, Warnings, & Messages
4. Government Service	4. Aviation	4. Medical Supply Chain	4. Finance
5. Community Safety	5. Maritime	5. Fatality Management	5. 911 & Dispatch

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

1. Power Grid
2. Fuel

1. Facilities HAZMAT, Pollutants, Contaminants

Community Capabilities

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. Wilmington'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 include: Town Manager, Town Treasurer, Town Clerk, Assistant Town Clerk, and Zoning Administrator, Assessor, police department.
Wilmington Works

In addition to paid staff, there is a 5-member Selectboard, 5-member Planning Commission, Fire Warden, Town Health Officer, and Constable.
Economic Development consultant (grants, sidewalks and water/wastewater) for the Town and Wilmington Works

To augment local resources, the Town has formal mutual aid agreements for emergency response – fire and public works. Technical support is available through the WRC 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.

Strengths community with a family atmosphere committed small core of volunteers involved in several committees and groups strong interdepartmental communication and cooperation

Areas for Improvement potential candidates for volunteering is limited and small pool of volunteers creates burn out and limited time commitments.

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, capital improvement programs, transportation plans, stormwater management plans, 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 codes3 that regulate how and where land is developed, and structures are built.

Town Plan: 2018
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 Overlay District Requirements: April 2024
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 and River Corridor Overlay Districts, 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: August 2019
Description: Provide minimum codes and standards for construction, repair, 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: 2018
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
Areas for Improvement TBD – circle back COOP ?

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

Wilmington's 2025-2026 town budget is $7,386,998 that includes $882,121 to fund Capital, one-time and special projects and $2,486,594 to fund the Highway Department. Mainly supported by property tax revenues and other small fee services. 1% Local Option Tax and water/ sewer fees - yes

Capital funds established for equipment and trucks

Occasional articles that are voted

Apply for state and federal grants

Reimbursement for hazardous materials for time, labor and materials

Strengths well-funded budgets – capital funds allocated

Areas for Improvement allocate budget item for recommit to mitigating town office space or find new space along with other mitigation and response activities.

Education and Outreach
Wilmington has several outreach and education opportunities that could be used to implement mitigation activities and communicate hazard-related information:

Wilmington Works updates the down town businesses

Town website, and postings at the Town Office

VTAlert – fire/police – foreman is in contact with the dispatch – educate to sign up for VT alert

Strengths multiple programs/organizations are already in place in the community particularly strong online and social media presence

Areas for Improvement ongoing coordination to help implement future mitigation activities

National Flood Insurance Program
The Town joined the National Flood Insurance Program (NFIP) in 1978 and is a member in good standing. The effective date of the current Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) is September 28, 2007. The Town of Wilmington has adopted floodplain regulations within the Zoning Ordinance & Development Guidelines which are administered by the Zoning Administrator along with the NFIP compliance through permit review requirements in the Zoning Ordinance & Development Guidelines. All zoning applications are reviewed against a map that has the FIRM superimposed over the zoning districts. 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.

According to VT ANR ERAF Community Report there are 149 E911 buildings in the Special Flood Hazard Area, with nine structures in town that has a policy under the NFIP. 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. However, according to the NFIP Multiple Loss Properties table found on FEMA's website there are two repetitive loss properties in Wilmington.

The town is currently awaiting the new flood insurance maps that are being compiled by FEMA and will be reviewed and accepted to maintain the town's NFIP status once the process has been completed.

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.

Wilmington's current ERAF rate is 7.5%. Upon adoption of the 2025 Local Hazard Mitigation Plan, ERAF Rate Actions 1-4 will be up to date and therefore their ERAF rate will change to 12.5%.

Mitigation Action Identification

The Hazard Mitigation Planning Team discussed the mitigation strategy, reviewed projects from the 2017 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 plan of action 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 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) restore floodplain; and 6) restore 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 6**.

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

Mitigation Action Evaluation

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 XX**.

Mitigation Actions	Life Safety	Prop Protect	Tech	Political	Admin	Other Obj	Benefit Score	C/B	Hazard Type	Area of Impact	Lead Party	Funding Source	Est Cost	Time	Priority
Local Plans & Regulations															
Recommended for Implementation															
Adoption of an enhanced flood hazard bylaw to include River Corridors and compliance with Statewide River Corridor Standard (Act 121) and a freeboard factor in the floodplain.	1	1	1	1	1	1	6	Yes	flooding; landslide/rockslide		Planning Commission	Town Funding/ACCD grant	1	2028	Low ?
Work with ANR regarding possibility of developing a plan for removing trees and stumps on an as needed basis from rivers and streams to prevent blockages in future floods.	1	1	1	1	1	1	6	Yes	flooding		Road Foreman/Selectboard	Town funds	1		
WOULD LIKE TO IMPROVE COMMUNICATIONS WITH OTHER ENTITIES SUCH AS BUSING COMPANIES	1	1	1	1	1	1	6	Yes	all hazards		Police Departmen /school administration	dept of justice svpp	3		
Culvert inventory	1	1	1	1	1	1	6	Yes	flooding; landslide/rockslide		Road foreman	highway funds	1	2027	
Plan for maintaining drive culverts to VT Standards	1	1	1	1	1	1	6	Yes	flooding; landslide/rockslide		Road foreman	highway funds	1	ongoing	

Update road erosion inventory	1	1	1	1	1	1	6	Yes	flooding		Road Foreman/WRCpc	Vtrans grant	1	2026?
Communicate and plan with power company on tree trimming	1	1	1	1	1	1	6	Yes	invasive species/wind/snow/ice		Road foreman	highway funds	1	ongoing
Consult with hydrogeologist to develop floodplan restoration on VT 100N	1	1	1	1	1	1	6	Yes	flooding; landslide/rockslide		town admin	town funds/ask Scott about federal funding		
Preservation easement also or with above?	1	1	1	1	1	1	6	Yes			town admin			

Not Recommended for Implementation

Structure & Infrastructure Projects

Recommended for Implementation

Install flood vents and structural support on Memorial Hall. The engineering and architecture has been done. The construction needs to be done.	1	1	1	1	1	1	6	Yes	Flooding		Selectboard	Capital fund for Memorial Hall; town funds only		2025-26	High

The Route 9 bridge 31 over the North Branch of the Deerfield River is in poor condition and it is a problem during high waters because it causes a bottleneck.	1	1	1	1	1	1	6	Yes	flooding; landslide/rockslide		Vtrans	Vtrans/FHWA/possible town match		2029	high
Land acquisition for relocation of town office to move it out of the floodplain. This is step one of that move.	1	1	1	1	1	1	6	Yes	Flooding		Selectboard	Grant funding		Goal in Town Plan	
Highway department currently removing knotweed	1	1	1	1	1	1	6	Yes	Invasive species		Town foreman	town highway funding		2025	
Creating a flood bench next to the river planting trees and shrubs - town budget – 2025 -ANR funding	1	1	1	1	1	1	6	Yes	Flooding		Town foreman	ANR funding		2025	
Encourage the Wilmington Trails Committee to do identification and removal of invasive species management on their trail network on an annual basis.	1	1	1	1	1	1	6	Yes	Invasive species		Trails Committee	Town funding		ongoing	
Tree trimming on town ROW	1	1	1	1	1	1	6	Yes	invasive species/wind/snow/ice		Town foreman	Town funding		ongoing	

Not Recommended for Implementation

Natural Systems Protection															
Recommended for Implementation															
Adoption of an enhanced flood hazard bylaw to include River Corridors and compliance with Statewide River Corridor Standard (Act 121) and a freeboard factor in the floodplain.	1	1	1	1	1	1	6	Yes	flooding; landslide/rockslide		Planning Commission	Town Funding/ACCD grant		2028	Low ?
Work with ANR regarding possibility of removing trees and stumps on an as needed basis from rivers and streams to prevent blockages in future floods.	1	1	1	1	1	1	6	Yes	Flooding		Road Foreman/Selectboard	Town funds/grants			
CONSERVATION EASEMENT OF PROPERTY ALONG VT 100 MAY IN THE FUTURE PURSUE PURCHASING AND PRESERVE	1	1	1	1	1	1	6	Yes	flooding; landslide/rockslide		see above				
Not Recommended for Implementation															
Outreach & Education Programs															
Recommended for Implementation															

SOCIAL MEDIA PLATFORM PUSHES OUT EDUCATIONAL BLURBS ON HOW TO PREPARE FOR EVENTS – FLOOD/ SNOW ONGOING	1	1	1	1	1	1	6	Yes	all hazards		EMD	Town funds		ongoing
Institute once a year in-school educational program where the Fire Department visits and shares fire safety education to students.	1	1	1	1	1	1	6	Yes	Wildfire		Fire Chief	Town funds		ongoing
Not Recommended for Implementation														

Table 7 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

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 8**. 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.

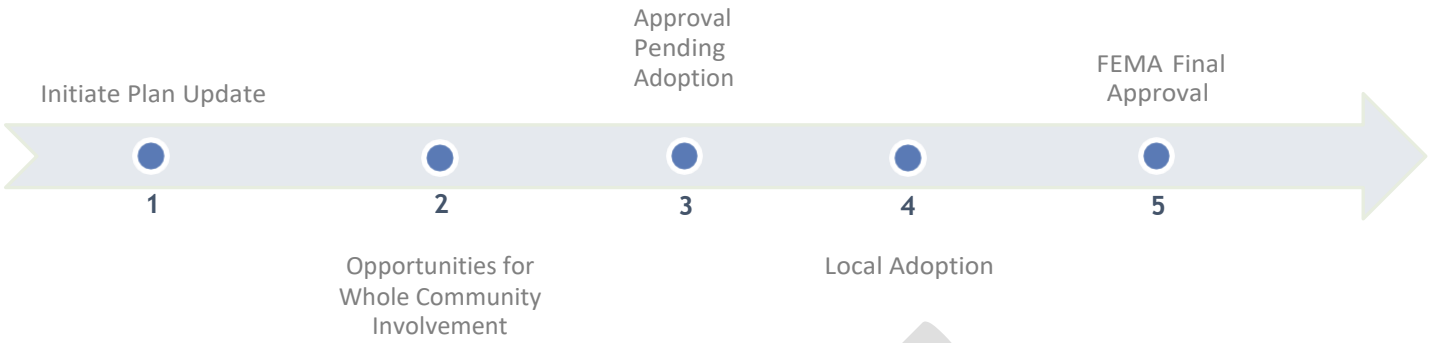
5. A report (or record in the form of meeting minutes) of the annual evaluation and monitoring will be made available to the public.

Table X: Mitigation Action Status

Mitigation Action	2024	2025	2026	2027	2028
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 is available through FEMA's Building Resilient Infrastructure and Communities (BRIC) grant program. If using this grant, TOWN XXX should contact Vermont Emergency Management (VEM) to apply for funding in 2027 – 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

Mitigation Actions Identified by the Hazard Mitigation Planning participants

HAZARD(S) ADDRESSED	ISSUE DETAIL	ACTION	RESPONSIBLE ENTITY	Start/Complete TIMELINE	POTENTIAL FUNDING	MITIGATION / PREPAREDNESS	PRIORITY	Notes / Status
Flooding / Fluvial Erosion	Currently this is a 6' galvanized pipe. It sometimes gets plugged, but there have been 4 events that have overtopped the culvert. The culvert does not meet bank-full width.	Upgrade culvert #33. This will likely need to be replaced by a box culvert. The alignment likely needs to be corrected as well.	Road Foreman would oversee contractors to complete the work	2023 or 2024, but sooner if possible	VTrans grant	Mitigation	High	This has been on the town's list for years. TS Irene. This will need to be engineered. Cost would probably be $1 million. REMOVE not relevant – has been flooded since 2011
Flooding / Fluvial Erosion	East Dover Road culvert #6 is 6' diameter corrugated metal culvert currently. It is in poor condition.	Replace East Dover Road culvert #6 with large box culvert or a bridge, depending on ANR's recommendation.	Road Foreman would oversee contractors to complete the work	2022 or 2023, but sooner if possible	VTrans grant - Bridge Structures grant	Mitigation	High	Road Foreman is going to talk with ANR to see if the town can put a cement invert to temporarily support the culvert until replacement. COMPLETED
Flooding / Fluvial Erosion	Inlet is smaller than the outside, the water did top the culverts during TS Irene.	Ballou Hill Road two different size boiler tubes, to be replaced with a box culvert (6'x12').	Road Crew	2020, a month to complete during the summer	Better Back Roads grant	Mitigation	High	The grant has already been awarded, the Road Foreman is preparing to do this work in the upcoming building season. COMPLETED

Flooding / Fluvial Erosion	Inundation flooding damaged this historic building in Irene and has had some floodproofing since Irene.	Install flood vents and structural support on Memorial Hall. The engineering and architecture has been done. The construction needs to be done.	Selectboard / Contractor	Summer 2020 start and finish	Capital fund for Memorial Hall; town funds only	Mitigation	High	Stevens Associates assessment suggested this work after Irene and architectural work has been done. The town is negotiating a contract with a builder now. Cost estimate $30-35,000. HAVE A GRANT SHOULD BE COMPLETED 2025-6

HAZARD(S) ADDRESSED	ISSUE DETAIL	ACTION	RESPONSIBLE ENTITY	Start/Complete TIMELINE	POTENTIAL FUNDING	MITIGATION / PREPAREDNESS	PRIORITY	Notes / Status
Flooding / Fluvial Erosion	The Fire and Police Stations are not currently located together, which would enhance their interoperability and coordination. The relocation would also move both out of their current floodprone locations.	Move the Police and Fire station outside the floodplain.	Contractors	2021 start;/ complete in one year	Town bond; grant funding through FEMA	Mitigation	High	Land for the move is owned by the Town. Town is currently in the RFP stage for the project plan. Land feasibility study yet to be done. The project is pending voter approval. Projected cost is $5-7 million. COMPLETED 2022 BONDED 100%
Flooding / Fluvial Erosion	The Route 9 bridge over the North Branch of the Deerfield River is in poor condition and it is a problem during high waters because it causes a bottleneck.	Upsizing the Route 9 bridge. The town doesn't know the size that is needed. This is a VTrans state owned bridge and roadway.	VTrans	Unknown, as this is VTrans schedule and they have not told the Town of any expectation.	VTrans / possibly with town match	Mitigation	High	The Road Foreman is not aware that this bridge is on any VTrans list for replacement/ upsizing. VTrans has asked the town to "take over" two miles in downtown, which encompasses two bridges but this would be economically difficult for the Town and they have not agreed. BR31 - 2029
Flooding / Fluvial Erosion	The town would like to have a better understanding of the decision behind raising or lowering the level of Lake Harriman. The town would like the the dam owner to understand the town's concerns.	Have a formal conversation with Great River Hydro on decisions and protocols about when the Lake level is lowered. Goal would be to put on paper a communication protocol for going forward.	EMD and Police Department	Fall 2020 - one meeting	Town funds	Mitigation / Preparedness	Medium	HOW TO PREPARE FOR FLOOD EVENTS – CONTINUE TO ASK IN PLAN THAT'S BEEN SENT HOW TO REGULATE LEVELS FOR THE RIVER ALSO REMOVE – Communication has improved

HAZARD(S) ADDRESSED	ISSUE DETAIL	ACTION	RESPONSIBLE ENTITY	Start/Complete TIMELINE	POTENTIAL FUNDING	MITIGATION / PREPAREDNESS	PRIORITY	Notes / Status
Flooding / Fluvial Erosion	The Planning Commission may wish to again pursue this in the future. It was voted down by the Selectboard in late 2019.	Adoption of an enhanced flood hazard bylaw to include River Corridors and a freeboard factor in the floodplain.	Planning Commission and Selectboard	Unknown	Town funding / possible ACCD grant	Preparedness	Low	Town politics would not currently support this. STATE RIVER CORRIDOR ACCURACY ACT 121 – statewide river corridor standard - 2028
Flooding	Town Hall is located in a vulnerable location and has been flooded multiple times.	Land acquisition for relocation of town office to move it out of the floodplain. This is step one of that move.	Selectboard and Town Staff	No start date yet set, hope to complete within the next 5 years	Seeking grant funding	Mitigation	Medium	This may or may not happen depending on funding and community support. IN THE TOWN PLAN – in progress
Flooding	Install a beaver mitigation fence on culvert on #42 Higley Hill Road. Flooding doesn't damage the road but flows down the side of it.	Install a beaver fence on culvert #42	Road Foreman	Summer 2020	Town funds	Mitigation	Medium	Road foreman is going to reach out to adjacent road foreman to learn about this practice. NOT COMPLETED – trap instead
Flooding	Many landowners have concern about the downtown bridge blockage and vulnerability it created during TS Irene.	Work with ANR regarding possibility of removing trees and stumps on an as needed basis from rivers and streams to prevent blockages in future floods.	Selectboard / Road Foreman	approaching ANR in 2020	Town funds	Mitigation / Preparedness	Medium	ANR sets the rules on woody debris in streams. ONGOING – PRIVATE LAND OWNERS THE BRIDGE PROJECT WILL HOPEFULLY STUDY DOWN TO THE LOOK

								FUTURE ACTION : CONSERVATION EASEMENT OF PROPERTY ALONG VT 100 MAY IN THE FUTURE PURSUE PURCHASING AND PRESERVE **ONGOING**
Invasive Species	The Town would benefit from having more of the population aware of invasive insects. Reach out to State Forester to host the training.	Host a First Detector training to raise awareness and train first detectors to spot invasive insects in Wilmington.	Zoning Administrator	Hold training in 2021	Town funding	Mitigation / Preparedness	Medium	Without more attention to invasive insects Wilmington runs the risk of an infestation. The Town is in a high risk area for EAB. NOT RELEVANT BECAUSE THE TOWN NEVER HEARD FROM ANR ON THE TRAPS AND DO NOT APPEAR TO HAVE ISSUES BRIDGE – CAP IMPROVEMENT PLA

HAZARD(S) ADDRESSED	ISSUE DETAIL	ACTION	RESPONSIBLE ENTITY	Start/Complete TIMELINE	POTENTIAL FUNDING	MITIGATION / PREPAREDNESS	PRIORITY	Notes / Status
Invasive Species	Japanese knotweed is present in Buzzy Town Park and along the North Branch river bank.	Work with Youth Conservation Corps on an invasive plant removal of project for Buzzy Town Park.	Town Manager / Tree Warden	Spring 2021	Town funding	Mitigation	Medium	NOTHING HAS BEEN DONE BUT WOULD STILL LIKE TO GET CONTROL OF THE SPREAD Highway department currently removing knotweed and mitigating for erosion – Creating a flood bench next to the river planting trees and shrubs - town budget – 2025 -ANR funding
Invasive Species	Invasives are present on town and private lands.	Encourage the Wilmington Trails Committee to do identification and removal of invasive species management on their trail network on an annual basis.	Trails Committee / Planning Commission	Start Spring 2021	Town funding	Mitigation	High	The Trails committee regularly uses the trails, so training them would provide a lot of benefit for Wilmington. UNSURE – BUT THERE IS MOWING IN THE AREA – poc carol dois
Ice and snow	Falling ice and snow is a hazard for nearby driveway for Crafts Inn.	Install a snow and ice fence on Memorial Hall.	Selectboard / Contractor	fall 2020, start and complete	Town funds	Mitigation	Medium	awaiting cost estimate IN ARCHITECTURAL PLAN TO DO THIS WHEN THE ROOF IS REPLACED Only would be done if roof is replace – slate roof currently maintaining roof annually – highway department maintains drive if snow falls off roof

All hazards	The town needs a shared channel between fire, police and highway. They currently operate on different bands. The issue is that they can communicate in the vehicles but not on handheld radios. First Net will not solve this. This will involve network and some equipment upgrades, some equipment is compatible.	Hire outside consultant to audit current capabilities around communication inoperability and show an economically feasible solution for interoperability.	Police Chief and EMD, Town Manager and Selectboard	Winter 2020	Town funds	Mitigation / Preparedness	High	UPGRADED ALL RADIOS TO FDS DUAL BAND COMPLETED without hiring a consultant Waiting on dps and signaling and then improve pd WOULD LIKE TO IMPROVE COMMUNICATIONS WITH OTHER ENTITIES SUCH AS BUSING COMPANIES HOMELAND SECURITY GRANTS?

HAZARD(S) ADDRESSED	ISSUE DETAIL	ACTION	RESPONSIBLE ENTITY	Start/Complete TIMELINE	POTENTIAL FUNDING	MITIGATION / PREPAREDNESS	PRIORITY	Notes / Status
All hazards	Educational article once per year in the Wilmington Town newsletter with link to FEMA emergency kit information online.	Write annual article yearly emergency management subject matter.	EMD	Fall 2020	Town funds	Preparedness	Medium	SOCIAL MEDIA PLATFORM PUSHES OUT EDUCATIONAL BLURBS ON HOW TO PREPARE FOR EVENTS – FLOOD/ SNOW ONGOING
All hazards	Ensuring proper fire safety awareness for local children and families.	Institute once a year in-school educational program where the Fire Department visits and shares fire safety education to students.	Fire Chief	2020/2021 School year	Town Funds	Preparedness	Medium	COMPLETED – ongoing 3 times a year Field days, fire prevention month, after school programs WINGS
	Cutting down trees and removing stumps on an ongoing basis currently – **Ongoing communication with the power company** **WRC – road erosion inventory – 2026** **Culverts- Inventoried once and adding to it – adding driveway culverts – standards for driveway culverts – driveway permit and culvert to VT standards**							

	Town then owns the drive culvert **Consultation with hydrogeologist vt 100 n floodplain – speak to the community about with the improvement** **Preservation easement to include mitigation – property would need to be purchased – (buyout $$?)**							

APPENDIX C – Meetings Agendas and Notes

APPENDIX D – Community Survey Questions

APPENDIX E – Certificate of Adoption

CERTIFICATE OF ADOPTION
Town of Wilmington, Vermont Selectboard
A Resolution Adopting the Local Hazard Mitigation Plan Town of Wilmington, Vermont 2025

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

WHEREAS the Wilmington Selectboard has prepared a natural hazard mitigation plan, hereby known as the Local Hazard Mitigation Plan Town of Wilmington, Vermont 2025 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 Local Hazard Mitigation Plan Town of Wilmington, Vermont 2025 identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Wilmington from the impacts of future hazards and disasters; and

WHEREAS adoption by the Wilmington Selectboard demonstrates its commitment to hazard mitigation and achieving the goals outlined in the Local Hazard Mitigation Plan Town of Wilmington, Vermont 2025.

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

Section 1. In accordance with 24 VSA §872, the Wilmington Selectboard adopts the Local Hazard Mitigation Plan Town of Wilmington, Vermont 2025. While content related to the Town of Wilmington may require revisions to meet the plan approval requirements, changes occurring after adoption will not require the Town of Wilmington 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)