Town of Baltimore
Local Hazard Mitigation Plan

2023-2028

DRAFT of January 24, 2024

Submitted to VEM for Review on January 30, 2024

Adopted by the Town of Baltimore
MM DD, YYYY

Prepared by
Town of Baltimore
and
Mount Ascutney Regional Commission

Acknowledgements

Hazard Mitigation Planning Team

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FEMA Approval Letter

[Insert when received]

Adoption Resolution

Town of Baltimore, VT

A RESOLUTION OF BALTIMORE ADOPTING THE TOWN OF BALTIMORE 2023-2028 LOCAL HAZARD MITIGATION PLAN.

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

WHEREAS the Town of Baltimore has prepared a multi-hazard mitigation plan, hereby known as the Town of Baltimore 2023-2028 Local Hazard Mitigation Plan in accordance with federal laws, including the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; and the National Dam Safety Program Act, as amended; and…

WHEREAS the Town of Baltimore 2023-2028 Local Hazard Mitigation Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Baltimore from the impacts of future hazards and disasters; and…

WHEREAS the updated Town of Baltimore 2023-2028 Local Hazard Mitigation Plan demonstrates the community's commitment to implementing the mitigation strategies and authorizes responsible agencies to execute their actions; and…

WHEREAS adoption by the Town of Baltimore Selectboard demonstrates its commitment to hazard mitigation and achieving the goals outlined in the Town of Baltimore 2023-2028 Local Hazard Mitigation Plan.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF BALTIMORE, VT that the Town of Baltimore Selectboard hereby adopts the Town of Baltimore 2023-2028 Local Hazard Mitigation Plan for municipal use and implementation. While content related to Baltimore may require revisions to meet the plan approval requirements, changes occurring after adoption will not require the Selectboard 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 _____, 2023.

Baltimore Selectboard

_____ _____

Walter Rich, Chair *George Wheeler*

_____ _____

Daniel Cox

Table of Contents

1. Introduction

This Local Hazard Mitigation Plan is intended to assist the Town of Baltimore in identifying and understanding the risks of natural hazard events to the community and developing strategies and actions that can be taken to improve the resiliency of the local community to hazard events.

Local Hazard Mitigation Planning is the process of identifying strategies and policies to develop a long-term plan of action that will reduce or remove future risk and losses to a community caused by natural or man-made hazard events. This planning effort involved an assessment of local capabilities and resources, an awareness of historical and future hazard occurrences, an understanding of the potential impacts to life, local economy, infrastructure and the environment, and a determination of vulnerable areas and assets within the community. These efforts concluded with a list of actions that can be found in **Table 6.2-1** at the end of this plan that are to be monitored for progress over the next five-year period.

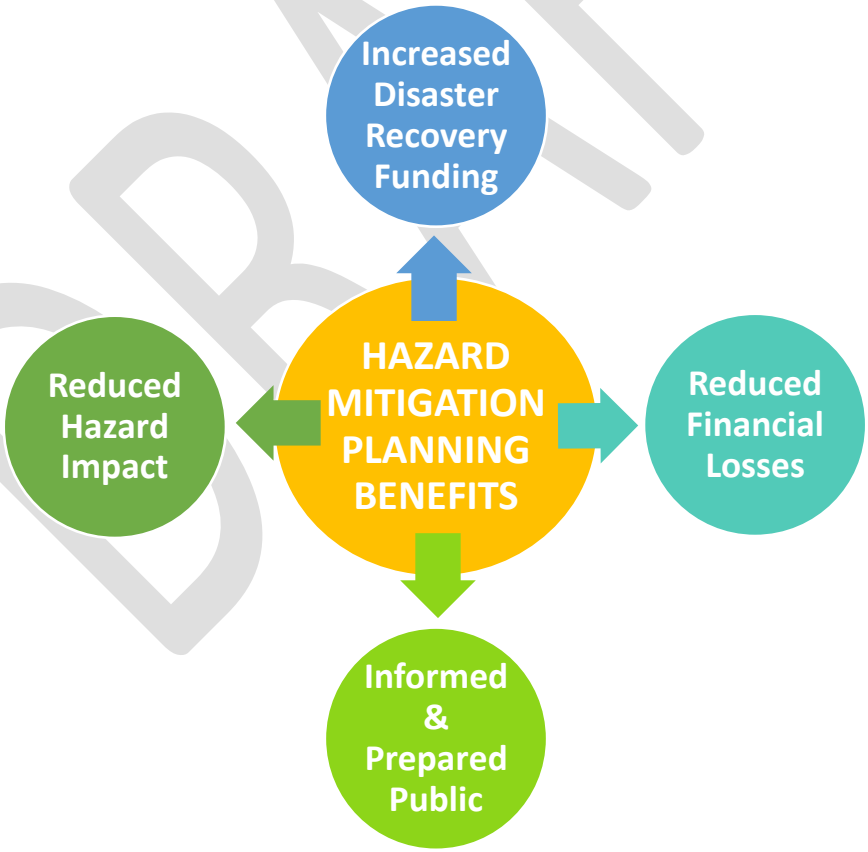
This plan will focus on assessing natural hazards and mitigating actions. The Baltimore community has provided input to this plan in the form of local and historic knowledge and experience.

2. Purpose

The Federal Emergency Management Agency (FEMA), Vermont Emergency Management (VEM), and local towns have come to recognize that it is less costly to take action to minimize the impact of natural hazards than to repeatedly repair damage after a disaster has struck. Hazards cannot be eliminated, but it is possible to determine what the hazards are, and which are more likely to occur and tend to have the greatest impact on a community.

With some research and outreach, a local community can determine the extent and impact of these hazards and which assets and areas are most at risk. A culmination of these efforts is a working dynamic list of specific strategies and actions that can be taken to reduce the impact of these hazards on the community. This plan also recognizes and has identified opportunities for mitigation measures during all the other phases of emergency management: Preparedness, Response, and Recovery.

The Town of Baltimore Local Hazard Mitigation Plan is a stand-alone plan to assist the town in identifying hazards within the town and identify strategies to reduce or eliminate these hazard risks.



3. Town Profile

The towns of Weathersfield, Springfield, Chester, and Cavendish surround the town of Baltimore. The town consists of approximately 3,000 acres of woodland, pasture, homes, and rural farms (See **Appendix A: Current Land Use Map**). The land that is now the town of Baltimore was once part of the town of Cavendish. Hawks Mountain created a natural division between the two parts of town. Baltimore broke away from Cavendish by an act of the legislature in 1793.

In 1795 there was no road connecting the northern and southern parts of the Town. The town is nestled in the southeastern face of Hawks Mountain. The land is a mix of open pastures, woodland, and residential development. The climate is generally temperate with moderately cool summers and cold winters, as in the rest of Vermont. Average annual precipitation is around 40 inches, and snowfall generally ranges from a minimum of 70 inches to as much as 200 inches in the Green Mountains. The weather is unpredictable, and large variations in temperature, precipitation, and other conditions may occur both within and between seasons.

There are no state routes in Baltimore; the closest state routes are VT Route 131 to the north, VT Route 106 to the east, VT Route 10 to the south, and VT Route 103 to the west of Town. The Town maintains approximately 7 miles of public roadway (Class 2 and Class 3). There are 112 culverts and no bridges in town. (See **Appendix A: Transportation Map**).

Elevations in town rise to a high point of 2,092 feet at the summit of Hawks Mountain near the Baltimore town line.

Baltimore has a population of approximately 362 people. U.S. Census figures indicate that population growth between 1990 and 2000 was 31.6% while that figure recently decreased from 2000-2010 to -2.4%. From 2010 to 2020, the population growth was 33.9%. In 2021, according to the American Community Survey, Baltimore had a median family income of $69,545, falling slightly above the Windsor County average of $63,787.

Development Trends and Impact on Hazard Risk

Several large tracts of land in Baltimore are owned by a small percentage of residents. There is some development potential if these large tracts were subdivided and built on. The ongoing growth and expansion of Okemo Mountain Resort and other ski areas may put some development pressure on the town of Baltimore. In light of this development pressure, the residents of Baltimore have expressed a desire to maintain traditional patterns of development in the town. There has been no development since the adoption of the previous Plan that impacts vulnerability, and therefore vulnerability has remained the same.

4. Planning Process

The local planning process used to develop this hazard mitigation plan follows guidance by the Federal Emergency Management Agency (FEMA) and Vermont Emergency Management (VEM). The planning process began in June 2023 with the Mount Ascutney Regional Commission (MARC) reaching out to municipal staff and local volunteers to participate as members of a Hazard Planning Mitigation Team (HMPT). A HMPT was formed to direct the activities of the process with guidance from Mount Ascutney Regional Commission's (MARC) Assistant Planner. All correspondence was via phone or email and meetings were conducted both virtually and in-person.

MARC followed up with the Team members on the planning process, roles, and responsibilities with updating the plan and overseeing the public process. MARC staff were responsible for overseeing the planning process and distribution and posting of planning documents, conducting the public meetings, conducting a survey, documenting public input, updating hazard data, drafting, and circulating the plan and guiding the plan through review to adoption.

Team Members from the Town and their responsibilities are listed below. All members of the HMPT were tasked with assessing and prioritizing natural hazards, providing local input, status of past actions and identifying vulnerable areas and mitigation action items for the plan.

- **Selectboard Chair** – Provides input on historical occurrences, extent of impact of previous hazard events, and vulnerability of critical public facilities. Informs Boards of progress.
- **Planning Commission Chair** – Ensures public notice and website postings, provides information on local regulations, Capabilities and Resources, historical occurrences, hazard events, and impacts on residents.
- **Planning Commission Members** - provides information on local regulations, Capabilities and Resources, historical occurrences, hazard events, and impacts on residents.

The process began with creating a *Baltimore Climate Change Survey* which was posted on the Town website and on MARC's webpage titled "Baltimore Local Hazard Mitigation Planning Update Process." [We will leave the survey open throughout the process until the final draft]. A copy of the survey and a summary of the responses can be found in **Appendix D: Survey Results**. The process proceeded with the tasks and timeline as depicted in **Appendix B: Plan Process Flow Chart**. Public meetings were noticed, and participants recorded. The meeting materials can also be found in **Appendix C**. The MARC webpage was created as a repository for planning and meeting documents and the link was provided with the notices.

Through a series of public meetings, each hazard was assessed and prioritized for the probability of future occurrence and the potential impact each would have on life, infrastructure, the local economy, and the environment. Vulnerable areas and potential mitigation actions assets were identified during the hazard assessment as part of the discussion on historical impact.

As part of the update process, the HMPT conducted a review of the status of prior plan actions and other progress made in mitigation and preparedness **(Section 4.3a: Status of Previous Plan Mitigation Actions).** Municipal capabilities and available resources for hazard mitigation planning and implementation were also discussed and suggestions made for improving **effectiveness (Section 4.3c: Status of Town Resources and Capabilities).** A thorough review of the Town Plan policies and

recommendations identified common strategies which generated ideas for new mitigation actions **(Section 4.3b: Review of Baltimore Town Plan).**

This is an extensive rewrite of the previous plan and includes several revisions and improvements. The following is a partial list of revisions:

- General updates to Town profile and town maps with new graphics and visuals.
- Inclusion of an easy-to-read Process Flow Chart to depict and manage the planning process.
- Reorganization/restructuring of the plan contents to better reflect required FEMA elements.
- New table for assessing Capabilities and Resources
- Reevaluation of hazards with a new methodology for scoring similar to that of the Vermont State 2018 Hazard Mitigation Plan to better recognize the integral natural of hazard events and hazard impacts and how hazards can impact a community in different ways.
- Update of hazard data using updated data sources and localized data.
- Prioritization of mitigation strategies/actions and correlation to plan goals and incorporation of phasing large projects.
- Recognition of specific prior actions completed but not previously identified in prior plan.
- Review and integration of new relevant reports and documents.
- A formalized Plan Monitoring process to maintain focus on plan goals and to encourage progress, annual reporting, recording of local hazard events, identification of new vulnerable assets, and public outreach over the plan period.

4.1 Public Involvement

Public outreach consisted of a Hazard Mitigation Survey entitled 'Baltimore Climate Impact Survey' prepared by MARC and released on August 10, 2023, to the local community of Baltimore on the Town's Website, as well as a series of public meetings. A link to the survey was also posted on the MARC website with hard copies available at the Town Office.

[Results from the survey.] **See Appendix C**.

The first publicly noticed meeting, held on August 16, 2023, was noticed on the Town website and on the Town bulletin board, as is customary for the Town. A link inviting the public to participate in the virtual meetings was offered along with a link to the agenda and meeting materials. The notice and webpage encouraged residents to attend the meeting, provide direct public comment to MARC and to complete the survey. The Planning Commission Chair and Selectboard Chair were tasked with keeping the Town Selectboard and relevant commissions abreast of the planning progress and noticed meetings and to help encourage participation of the public. This meeting was attended by members of the HMPT, town staff, and one member of the public. Public comments were not received at this meeting.

Subsequent public meetings were held on September 20, October 25, and November 29 to continue planning the draft. Significant input was received from the HMPT during this planning stage for hazard assessment, historical occurrences, vulnerable areas, and mitigation ideas. Public comments were not received at this meeting. Public input was primarily provided through the 'Baltimore Climate Impact Survey' with feedback incorporated into the final draft of the plan`

A preliminary plan draft was circulated to the Hazard Mitigation Planning for review on November 29, 2023. Then, after revisions, the draft plan was circulated to neighboring towns and other stakeholders on January 30, 2024. The draft was also submitted to the Vermont State Hazard Mitigation Officer for review and feedback was received on _____.

A complete list of stakeholders can be found in **Appendix D: Stakeholder Engagement.**

Individuals were provided a copy of the draft with a request to provide any comments and a request to circulate to town boards and commissions, and to post the draft on their websites. Comments could be provided in person, or via phone or email. The draft was made available for public viewing on the Town website and Facebook page and provided for posting to other Stakeholders when applicable. A paper draft was made available at the Town Office.

Comments were received on the draft _____ . VEM review requirements were then incorporated with public input into a revised draft and released to the public and neighboring towns for comment on _____.

As part of the announced release, the local public and other Stakeholders were invited to a presentation and review at a noticed Selectboard meeting on _____. MARC presented the revised plan for comment and questions and to finalize mitigation actions and a process for monitoring the plan. ___ attended the meeting and comments received include: _____.

A final plan draft was resubmitted on _____ to complete the Vermont State Hazard Mitigation Officer review for referral to FEMA for Approval Pending Adoption (APA). Following APA, the Town may then adopt the Local Hazard Mitigation Plan and forward a copy of the adoption resolution for FEMA to complete the plan approval and adoption process.

The final adopted Local Hazard Mitigation Plan will also be posted on the Town and Mount Ascutney Regional Commission websites and made available at the Baltimore Town Office.

The public notices, agendas, attendance sheets, and other meeting materials can be found in **Appendix C: Public Involvement Documents.**

4.2 Resources Consulted

Several plans, studies, reports, technical information, and web data sources were consulted in addition to local input during the preparation of this plan. These sources provided data on hazard extent and historical trends, and ideas for new hazard mitigation actions. A listing of these sources includes the following:

- 2018-2023 Town of Baltimore, Vermont: Local Hazard Mitigation Plan
- Baltimore Town Plan (Adopted 2016, Amended 2018)
- Culvert Inventory (2014 per Town Plan)
- Road Condition Inventory (2014 per Town Plan)
- Road Erosion/MRGP Inventory (2016 per Town plan)
  Baltimore Unified Bylaws (2009)
- Vermont DEC Watershed Project Database

- US Census Bureau
- NOAA Storm Events Database
- Climate.gov / Climate Explorer
- EPA Climate Change Indicators
- Vermont Division of Fire Safety
- US Climate Data
- USGS Water Watch
- FEMA Disaster Declarations
- Vermont Agency of Natural Resources Atlas Mapper
- State of Vermont 2018 Hazard Mitigation Plan
- Drought.gov
- Valley News
- Vermont Transportation Resilience Planning Tool
- Mount Ascutney Regional Commission for mapping data

**Additional sources for information are provided throughout the plan as needed (i.e. tables, footnotes).*

4.3 Review of Town Progress, Resources, and Capabilities

4.3a Previous Plan Period Mitigation Actions

Table 4.3-1 below lists the mitigation and preparedness projects and actions from the previous 2018-2023 Town of Baltimore Local Hazard Mitigation Plan and indicates the status of each as determined by the Hazard Mitigation Planning Team. These action items will be reevaluated, modified, and carried forward for inclusion **in Section 6.2, Table 6.2-1: 2023-2028 Mitigation/Preparedness Strategies and Actions** at the end of this document.

Table 4.3-1: Status of Previous Plan Mitigation Actions

2018 MITIGATION ACTION **(*Indicates Action to be included in this update)**	**2023 Status**
Complete annual culvert upgrade* based on inventory	Inventory has been completed; almost all culverts have been upgraded.
Monitor Drought Condition* – check pond levels and runoff	Pond levels have been checked and ponds are full. None flooded during the July 2023 floods. Continue monitoring drought conditions.
Research the installation of additional dry hydrant and funding sources – Bergeron site*	To be carried over; funding not available through Town budget.
Conduct annual maintenance program on ditches*	Ongoing.
Increase awareness of extreme temperature risk & safety*	Ongoing; to be carried over.
Install and maintain additional surge protection on critical electronic equipment	To be carried over.
Develop procedures and planning for pre-winter activities*	To be carried over.

2018 MITIGATION ACTION (*Indicates Action to be included in this update)	2023 Status
Develop an action plan for removing high risk trees from along power lines	To be carried over; majority of high risk trees are located on private property and are not within the Town Right-of-Way.
Maintain a LEOP*	To be carried over; Local Emergency Management Plan (LEMP) has been updated annually.
Provide 'Firewise' practice materials	To be carried over.

The following was also reported by the Town:

- Ongoing completion of road ditching
- Completed 3 culvert upgrades
- 2-3 miles of gravel and road maintenance of the 7 miles of road
- Highway staff works with Mount Ascutney Regional Commission staff to update the MRGP Inventory on an as needed basis.

4.3b Review of Town Plan

The Baltimore Town Plan was adopted in 2016 and amended in 2018. The Town is currently working on the 2024 Town Plan update. Compared to earlier plans, the community is making strides in its efforts to address sustainable development, natural resource conservation, flood resiliency, and hazard mitigation. The current Town Plan includes information that outlines the importance of:

- Regulating development in special flood hazard areas and river corridors
- Regulating development that is proposed in areas prone to damage from fluvial erosion
- Creating and maintaining vegetative buffers along wetlands, streams, rivers, and public ponds
- Continuing to maintain adequate culvert sizing
- Community outreach on flood resiliency, preparedness, and mitigation

The Town Plan has outlined goals, policies, and recommendations related to hazard mitigation and flood resiliency, which can be found in **Appendix E.** Upon review, the HMPT has identified mitigation strategies and actions that will meet objectives for both the Town Plan and the Hazard Mitigation Plan. These proposed actions can be found in **Section 6.2, Table 6.2-1: 2023-2028 Mitigation/Preparedness Strategies and Actions.**

Baltimore currently participates in the National Flood Insurance Program (NFIP) and will continue to regulate development and use through the town regulations as adopted in the *Baltimore Unified Bylaws (2009).* The Federal Emergency Management Agency (FEMA) has not designated any special flood hazard areas within Baltimore and the only Vermont Agency of Natural Resources designated river corridor area within town results from a 50' top of bank setback included on those streams too small to have mapped river corridor areas. However, flooding is identified as a significant natural hazard facing the town. As a result, the town has mapped flood prone areas and regulates development within these areas thus

allowing residents to participate in the NFIP. The Zoning Administrator acts as the Administrative Officer and is charged with implementing and enforcing these regulations and advising residents on floodplain development.

4.3c Community Resources and Capabilities

Table 4.3-2 below is a compilation of community resources and capabilities including town authorities, policies, and programs, which can be helpful in reducing hazard risk for Baltimore. Opportunities for improvement have been identified. These resources and capabilities are useful in regulating development, building design, environmental conservation, and best management practices to reduce flooding and erosion.

Some Improvement Opportunities noted in **Table 4.3-2** have been added as action items for this plan update and can be found in **Section 6.2, Table 6.2-1: 2023-2028 Mitigation/Preparedness Strategies and Action.**

Table 4.3-2: Status of Capabilities

Plans and Studies		
Capability	**Description**	**Improvement Opportunity**
Town Plan	Plan for coordinated town-wide planning for land use, municipal facilities, etc. Updated every 8 years. 2024 draft is in progress.	Maintain update cycle. When updating the plan, integrate hazard mitigation goals and policies into each section where applicable.
Local Hazard Mitigation Plan	Plan for town-wide mitigation planning for hazard events and impacts. Updated every 5 years.	Begin update process earlier to avoid expiration and formalize annual review process to plot progress during plan period.
Stormwater Plan	Plan for stormwater management that helps reduce pollution and contamination.	The Town has no streams or rivers and reports no pollution or contamination issues.
Local Emergency Management Plan (LEMP)	Basic municipal procedures for emergency response. Updated annually.	Continue updating annually; public posting of management plan each update to raise awareness.
Forest Management Plan	Plan for forest management that considers forest blocks, habitat connectivity, and public trees.	Regulated through *Baltimore Unified Bylaws (2009).* Areas of significance are identified in **Appendix A: Natural Resources Map.**
Invasive Species Management Plan	Plan for the management and prevention of invasive species.	Consider creating an Invasive Species Management Plan for Japanese knotweed and Multi-flora rose.

Capital Improvement Plan	Municipal plan to coordinate financing of capital improvements over a 5-year period.	Not applicable.
Culvert Inventory (VT Culverts)	Statewide program to collect and report culvert locations and conditions.	Continue updating and maintaining.
Administrative Capacity and Capability		
Emergency Management Director	An appointed individual in each town or city who has direct responsibility for the organization, administration, and coordination of the local organization for emergency management.	Continue working closely with Town staff and RPC. Maintain status with VEM and FEMA trainings.
Planning Commission	Town Commission responsible for the development and updating of the Town Plan, Zoning Bylaws, and Subdivision Regulations.	Ensure that the Commission is involved with planning as it relates to hazard mitigation.
Zoning Administrator	Town administrative officer responsible for administering the Zoning and Subdivision regulations, to include Flood Hazard Area regulations.	Effectiveness is determined by periodic updates in zoning and FHA regulations and enforcement. Outreach to public to create awareness of regulations and their role in hazard mitigation may improve effectiveness.
Tree Warden	A tree warden is the appointed individual in each Vermont community responsible for making determinations about the care and stewardship of shade trees in public ways and places.	Continue to work closely with Town staff; consider management practices as they relate to hazardous trees.
Selectboard	Town governing body that has general supervision and control over the affairs of the Town.	Continued coordination with Zoning Administrator and Planning Commission will improve effectiveness.
Mutual Aid Agreements	Agreement for regional emergency services and state assistance when requested. Baltimore has agreements with	Continue implementing current agreements; keep agreements up to date.

	Springfield for fire and emergency response.	
VEM Training	Training opportunities are provided via in-person and online courses administered through the Learning Management System (LMS).	Ensure training is kept current for the Emergency Management Director.
Highway Department	Town Department responsible for maintaining Town roads and right of ways in accordance with VT's best management standards.	Continued coordination with Zoning Administrator, Planning Commission, and RPC will improve effectiveness.
Town Clerk/Manager/Administrative Assistant	Town Officials responsible for recording and filing Town documents. The Town employs a Town Clerk and an Assistant Town Clerk.	Continued coordination with Zoning Administrator, Planning Commission, Selectboard, and RPC will improve effectiveness. Opportunities for community outreach.
Town Planner	Town staff responsible for developing land use plans and programs.	The Town employs a Zoning Administrator. Effectiveness is determined by implementation of land use bylaws and coordination with Planning Commission, Selectboard, Town Manager, and RPC.
Financial Resources		
Town Budget	Fiscal spending plan that operates on a calendar year of July 1 through June 30.	Continue updating annually.
Municipal Bonds	A bond or note or evidence of debt constituting a general obligation of the municipality.	Not applicable.
Taxing Authority	The Town; the governmental authority responsible for the administration of local taxes.	Continue administering.
Outreach and Education		
Town Newsletter	Routinely distributed newsletter by the Library and Historical Society containing information and resources for residents.	Not applicable.
Town Website	Official Town website for community information.	Maintained by Town. Opportunities for community outreach.

Town Facebook Page	Official Town Facebook page for community information.	Maintained by Town. Opportunities for community outreach.
Water Bill	Municipal bill sent to individual residences on a quarterly basis.	Not applicable; no Town water.
Zoning and Regulations		
National Flood Insurance Program (NFIP)	Provides ability for residents to acquire flood insurance; Town enrolled since 2014.	Town is currently enrolled; maintain enrollment.
SFHA Bylaws	Regulates development in FEMA flood hazard areas.	Continued implementation and enforcement of *Baltimore Unified Bylaws* is critical to effectiveness.
Zoning	Regulates land use and development.	Continued implementation and enforcement of *Baltimore Unified Bylaws* is critical to effectiveness.
Road Standards	Design and construction standards for roads and drainage systems.	Continued implementation of State Road standards is critical to effectiveness.
NFIP CRS	A voluntary incentive program that recognizes and encourages community floodplain management practices that exceed the minimum requirements of the NFIP.	The Town does not have any FEMA defined SFHAs and does not have capacity to apply for CRS.
Wetland Protections	Regulates development in wetland areas.	Continued implementation and enforcement of *Baltimore Unified Bylaws* is critical to effectiveness.
River Corridor Bylaws	Regulates development in River Corridors.	Continued implementation and enforcement of *Baltimore Unified Bylaws* is critical to effectiveness.
Green Infrastructure Bylaws	Regulates development.	Town does not have green infrastructure bylaws.
Building Codes	Regulates building development.	Town does not have a building inspector. Buildings are subject to State codes.

5. Hazard Identification and Assessment

This Section describes the process used to identify the natural hazards that are likely to have the greatest impact on the community in the future and provides a basis for the selected mitigation strategies and actions listed in **Table 6.2-1: 2023-2028 Mitigation/Preparedness Strategies and Actions**.

The following assessment addresses all of the natural hazards identified during the hazard analysis. The probability of occurrence and impact to the town were used to assess the town's vulnerability to each hazard and can be found in **Section 5.1**. Following this assessment, it was determined that only those hazards that were more likely to occur were further examined for historical occurrence, extent of impact, future trends and community risk and vulnerability as outlined in **Section 5.2**.

5.1 Hazard Impact Assessment

A hazard impact assessment for Baltimore began with identifying all possible natural hazards as addressed in the 2018 Vermont State Hazard Mitigation Plan. Prior to the exercise, MARC discussed the difference between a weather event and the hazards, or impact of these weather events. For example, **Wind** is a natural hazard which can impact a community from different types of weather events: Hurricanes, Thunderstorms and Winter Storms; **Erosion and Flooding** can result from Tropical Storms, Thunderstorms, Ice Jams, or spring melt from an extreme heat event during the winter. This discussion also allowed for better understanding of the relationship between these natural hazards and the secondary hazards, such as structure fire, power outages, and ice jams.

Input from the Climate Survey, the public meetings, and the HMPT was used to determine a **Probability of Occurrence Score** for each natural hazard for the Baltimore community. The group considered the historical trends of and expected changes in climate to determine the probability of occurrence in the future. The potential severity and extent of damage and disruption to public infrastructure, economy, natural environment, and quality of life which includes damage to personal property and potential for injuries. These scores were averaged and used to generate an overall **Hazard Assessment Score** for each natural hazard as shown in **Table 5.1-1: Hazard Probability of Occurrence and Impact Assessment**. The methodology used for this exercise is detailed below the table.

Table 5.1-1: Hazard Probability of Occurrence and Impact Assessment

Hazard Impacts	Probability of Occurrence Score	Potential Hazard Impact (Score 1-4)					Hazard Assessment Score
		Public Infrastructure	Life & Property	Economy	Natural Environment	Avg.	
Inundation/Flash Flooding	1.2	1.0	1.0	1.2	1.2	1.1	1.3
Fluvial Erosion/Slope Failure	1.8	1.8	1.0	1.0	1.0	1.2	2.2
Ice	2.2	1.3	1.0	1.2	1.3	1.2	2.6
Heavy Snow	2.2	1.7	1.0	1.2	1.2	1.3	2.7
High Wind	1.7	1.5	1.0	1.0	1.3	1.2	2.0
Hail	1.3	1.5	1.0	1.0	1.0	1.1	1.5
Extreme Heat	1.3	1.2	1.2	1.0	1.2	1.1	1.5

Extreme Cold	1.8	1.3	1.2	1.0	1.0	1.1	2.1
Wildfire	1.2	1.2	1.0	1.2	1.2	1.1	1.3
Earthquake	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Drought	1.3	1.2	1.0	1.2	1.2	1.1	1.5
Invasive Species	1.5	1.3	1.0	1.0	1.5	1.2	1.8
Infectious Disease Outbreak	1.5	1.2	1.2	1.2	1.2	1.2	1.8

Potential Hazard Impact Scoring Methodology

Historical Occurrence: Relative frequency of occurrence experience in the past 10 years

1 = Rarely	0 to 2 occurrences
2 = Few Occurrences	2 to 5 occurrences
3 = Several Occurrences	5 to 9 occurrences
4 = Annual Occurrence	10 or more occurrences or typically experienced at least once annually

Probability of Future Occurrence: Probability of occurrence over next 10 years.

1 = Not Likely	Not expected to occur
2 = Occasionally	Could plausibly occur at least once
3 = Likely	Likely to occur in any one year
4 = Highly Likely	Highly likely to occur at least once in any one year

Potential Impact: Probability of a Significant Impact defined as 'Severity and extent of damage and disruption to population property, environment and the economy'

1 = Negligible	Isolated occurrences of minor property and environmental damage, minor disruption of critical facilities and infrastructure, potential for minor injuries, no to minimal economic disruption
2 = Minor	Isolated occurrences of moderate to severe property and environmental damage, brief disruption of critical facilities and infrastructure, potential for injuries, and minor economic disruption
3 = Moderate	Severe property and environmental damage on a community scale, temporary shutdown of critical facilities, injuries or fatalities, short-term economic impact
4 = Major	Severe property and environmental damage on a town-wide or regional scale, shutdown of critical facilities, and/or multiple injuries or fatalities, significant economic impact

5.2 Hazard Profile

While the assessment scores in **Table 5.1-1** are not intended to prioritize hazard risk, they can be used to get a general sense of which hazards are of greatest concern to the Baltimore community. The HMPT had determined that only those natural hazards which scored over a "2.0" out of a possible 16 were considered for mitigation/preparedness actions and are highlighted in Table **5.1.-1** above. These and other hazards which are trending higher in the region due to climate change, as determined in the *2018 Vermont State Hazard Mitigation Plan*, are profiled in this plan in **Section 5.2.**

Subsections provide additional detail of each of these natural hazards and include a description of the hazard and its general impact on a community; a discussion of historical local occurrences and extent of the hazard impact based on available data; hazard trend and discussion of vulnerability and populations and community assets at risk. Baltimore is a small rural town, and much of the town-specific data for these natural hazards does not exist. Previous occurrence hazard data specific to Baltimore has been

provided where available. Where no town-specific data exists, the most relevant available data or information has been provided, such as county, regional or state data, or data from a neighboring town.

Excluded Hazards: For purposes of the plan update, the following hazards have been excluded from detailed discussion given that the likelihood of occurrence is either very low with no account of recent local occurrence or the hazard impact is very isolated or minimal as described below. For more information on these hazards, the reader is directed to the *2018 Vermont State Hazard Mitigation Plan*.

Hail does occur but very rarely and has not resulted in reported damage to the Town of Baltimore. These incidents are very difficult to predict or mitigate and can only be addressed through preparedness and effectiveness of emergency response. Regional weather warnings and safety measures are issued when an extreme event is projected. The Town indicated that homeowner's insurance provides sufficient assistance with any related damages.

There is a potential for **Wildfire** in the heavily forested parts of town. However, wildfire incidents have been low in past years. The last reported wildfire was in the early 1950s. 'No Burn' events are well posted and noticed and are at times extended, if need be, during the spring months.

Extreme Heat and **Drought** has not been an issue for the Town. Pond and private well levels have not been negatively impacted. The Baltimore Town Office is available as a cooling shelter for any residents in need.

Although **Earthquakes** can be a significant hazard, the likelihood of occurring in Baltimore over the plan period would be negligible for New England per the Vermont State Hazard Mitigation Plan. Local regional recollection of this type of hazard occurring has been the sensation of minor tremors felt from distant events.

Plant Infestations from **Invasive Species** due to climate change are beginning to gain recognition. While more information is needed, the Town recognizes that this could become a hazard for town roads and infrastructure and has impacted the Town's vulnerability to flooding and erosion due to shallow rooted Japanese Knotweed in riverbeds.

Infectious Disease Outbreak is defined by the Vermont Department of Health as one that is caused by micro-organisms, such as bacteria, viruses and parasites as noted in the State Hazard Mitigation Plan. A COVID-like pandemic may be plausible but is unlikely to occur during the plan period. While tick-borne diseases have been experienced and will continue to be a seasonal challenge, the Baltimore residents believe protection from this hazard risk is local common knowledge.

Changes from Prior Plan Hazard Assessment

- Flooding continues to be a priority for the Town
- High Wind is now identified separately as a significant hazard impact from winter storms and severe weather events with a high probability of occurrence and prevalence of higher wind gusts.
- Wildland Fire has been dropped as a priority hazard given a low probability of occurrence over the past several years and isolated or minimal potential impact to the community.

- Extreme Cold continues to be a priority due to an increase in probability of occurrence and duration of events with climate change. The aging of Baltimore's residents, a more vulnerable population, was also a consideration.
- Ice Jams and Dam Failure are now recognized as potential impacts or secondary events due to infrastructure deficiencies and are covered under Flooding, the primary natural hazard that triggers them. Ice Jams and Dam Failures do not impact Baltimore as there are no rivers present.
- Structure Fire is now recognized as a secondary human-caused incident that can result from a natural hazard occurrence. The Town recognizes that these incidents may be secondary hazards to Wildland Fire, lightning, drought, and improper heating methods during extreme cold and can be addressed or reduced through mitigation of these natural hazards.
- Transportation incidents and Hazardous Material Spill are not considered natural hazards by FEMA although they are closely tied to road conditions following a hazard event. Therefore, the Town recognizes that transportation related hazards would be addressed through mitigation of natural hazards such as ice and heavy snow.
- Variability in temperatures, as well as the extremes for heat or cold, was discussed by the Town and worth noting here. Several remarked that the variability during the fall, winter, and spring seasons has become a trigger for the frequency of several hazards such as ice, heavy snow, flooding, and erosion.

5.2a Fluvial Erosion & Slope Failure

Flooding is a significant natural hazard event for Vermont and Windsor County. Flooding directly impacts mostly those properties located near or in flood prone areas. However, during severe events they can indirectly impact the whole community.

The Town does not have any rivers, only small brooks. However, the Town recognizes **fluvial erosion** as a high-impact hazard following local flood events. Fluvial erosion is the predominant form of flood damage in Vermont. High flows can cause sediment to become detached from road shoulders, causing washouts and road closures.

Flooding: History and Extent of Impact

Flooding is one of the most common types of natural hazards that occur frequently in Vermont. During the hazard assessment exercises, flooding was identified as the outcome from various weather events including hurricanes, tropical storms, ice jams, severe thunderstorms, or heavy rain events.

The impact of flooding a regional basis can be gleaned from **Table 5.2**, a listing of **FEMA Disaster Declarations for Windsor County** since 1990. It can be seen from this table that these are typically severe storms with heavy rains that cause flooding.

Table 5.2-1: Federal Disaster Declarations for Windsor County, VT

Federal Disaster Declarations: Windsor County 1990 – 2020(current)			
FEMA Disaster	**Date of Declaration**	**Description**	**Date Occurred**

4720-DR-VT	July 14, 2023	Vermont Severe Storms, Flooding, Landslides, & Mudslides	July 7, 2023-July 17,2023
3595-EM-VT	July 10, 2023	Vermont Flooding	July 9, 2023
3567-EM-VT	August 22, 2021	Tropical Storm Henri	August 22, 2021
DR-4532-VT	April 8, 2020	Vermont COVID-19	January 20, 2020
3437-EM	March 13, 2020	Vermont COVID-19	January 20, 2020
DR-4445-VT	June 14, 2019	Severe Storms and Flooding	April 15, 2019
4330	August 16, 2017	Severe Storms and Flooding	June 29, 2012
4207	February 3, 2015	Severe Winter Storm	December 9-12, 2014
4140	August 2, 2013	Severe Storms and Flooding	June 25-July 11, 2013
4022	September 1, 2011	Tropical Storm Irene	August 27-September 2, 2011
1790	September 12, 2008	Severe Storms and Flooding	July 21-August 12, 2008
1715	August 3, 2007	Severe Storms and Flooding	July 9-11, 2007
1698	May 4, 2007	Severe Storms and Flooding	April 15-21, 2007
1488	September 12, 2003	Severe Storms and Flooding	July 21-August18, 2003
1336	July 27, 2000	Severe Storms and Flooding	July 14-18, 2000
1307	November 10, 1999	Tropical Storm Floyd	September 16-21, 1999
1228	June 30, 1998	Severe Storms and Flooding	June 17-August 17, 1998
1101	February 13, 1996	Storms and Flooding	January 19-February 2, 1996
938	March 18, 1992	Flooding, Heavy Rain, Ice Jams	March 11, 1992

The Town of Baltimore has not been significantly impacted by historical flooding. The July 2023 statewide flooding event did not cause any damage in the Town. The Town did note that thawing out frozen culverts is a concern.

Flooding: Trends and Vulnerability

The Emergency Relief and Assistance Fund (ERAF) provides State funding to match Federal Public Assistance after federally declared disasters. Federal taxpayers reimburse eligible public costs at 75%. For disasters after October 23, 2014, the State of Vermont will contribute an additional 7.5% toward the costs. For communities that take specific steps to reduce flood damage the State will contribute up to 17.5% of the total cost, depending upon the number and level of steps taken. Baltimore currently has taken the necessary steps to reach the 17.5% level.

The Town has designated the following areas as vulnerable to flooding:

1. Beaver Pond, Beaver Pond wetland and the area of land within fifty (50) feet of the high water mark surrounding these waters;
2. The area of land within fifty (50) feet from the center line of the stream on both sides of Beaver Brook, Chandler Meadow Brook, Converse Brook and its branches and Hammonds Brook and its northerly and westerly branches; and

3. The high water mark of other unnamed ponds and wetlands in the community, and stream bank limits of other unnamed streams in the community.

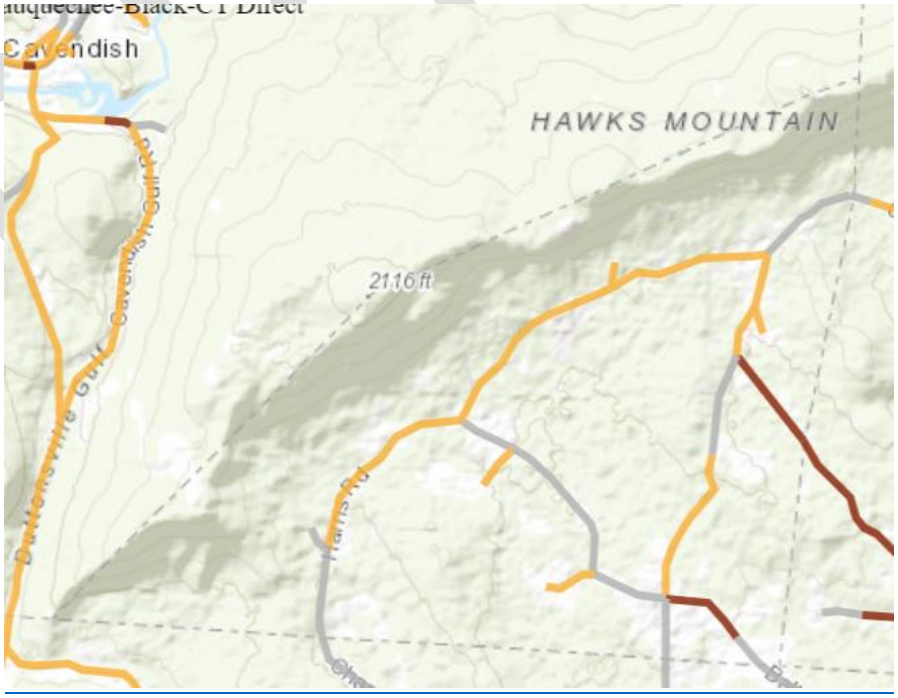
There currently no residences in these flood-prone areas, and the *Baltimore Unified Bylaws* limit development in these areas.

FEMA Flood maps for the town can be found online at: https://msc.fema.gov/portal/. The maps were last updated 9/28/2007.

Impervious surfaces and armored stream banks can contribute to flooding and fluvial erosion. There is currently very little impervious surface in Baltimore and residents want to keep it that way.

Culverts are also vulnerable to flood and fluvial erosion damage. Blocked or frozen culverts compromise the structural integrity and safety of the road crossing resulting in damage to adjacent properties. The majority of the Town's culverts have been upgraded and upsized. Bridge and Culvert Inventory assessments are conducted every three years and provide the Town with information used to plan for infrastructure replacements and upgrades. Of the 112 total culverts in Baltimore, 96 are rated "Excellent" or "Good," while only 1 is rated as critical.

The Vermont Transportation Resilience Planning Tool (TRPT) combines river science, hydraulics and transportation planning methods and is applied at a watershed scale. The Tool identifies bridges, culverts, and road embankments that are vulnerable to damage from floods and estimates risk based on the vulnerability and criticality of roadway segments and identifies potential mitigation measures based on the factors driving the vulnerability. A snippet of the Town is shown here while the full map is accessible online. Note*: improvements to the southern road segment were made in 2023.



National Flood Insurance Program (NFIP)

The Federal Emergency Management Agency (FEMA) has not designated any special flood hazard areas within Baltimore and the only Vermont Agency of Natural Resources designated river corridor area within town results from a 50' top of bank setback included on those streams too small to have mapped river corridor areas. However, flooding is identified as a significant natural hazard facing the town. As a result, the town has mapped flood prone areas and regulates development within these areas thus allowing residents to participate in the NFIP. There are currently no NFIP policies or claims filed; there have been no repetitive losses either.

The Town has in place a contract agreement with MARC staff to assist and advise the Zoning Administrator with project development review for compliance with Town floodplain regulations. MARC staff have received FEMA disaster training including the substantial damage assessment process with expertise in floodplain management. MARC staff will inform and assist the Zoning Administrator on regulating rebuilding damaged structures, improvements on existing structures, and any other proposed development in the floodplain and river corridor for compliance with the Town's floodplain regulations.

Following an event, a MARC staffer accompanies the Zoning Administrator on site visits to damaged properties, assists in the assessments and in implementing the substantial improvement/substantial damage provisions of the Town's FHARs. The Town did not need to conduct any substantial damage assessments from the recent flood event of July 2023.

5.2b Ice, Heavy Snow, and Extreme Cold

Hazard Assessment Scores: Ice – 2.6, Heavy Snow – 2.7, Extreme Cold – 2.1

Heavy Snow and **Ice** are significant natural hazard events for Vermont and Windsor County. Both have a high probability of occurrence and have the greatest impact on town infrastructure and can isolate some vulnerable residents.

Winter storms and **blizzards**, with **snow**, **ice**, **wind** and **extreme cold** in varying combinations, are fairly commonplace in Vermont, Windsor County and occur town wide in Baltimore. Heavy accumulation of snow can be accompanied by strong winds, cold and low wind chills. Drifting of snow from high winds causes low visibility and makes it difficult to keep roads clear. Heavy wet snows of early fall and late spring, as well as ice storms and **freezing rain**, often result in power outages and property damage, leaving people without adequate heating capability. Ice glazed roadways and sidewalks, difficult to detect, are extremely hazardous to pedestrians and motorists. Power and communication loss is often the result of downed trees from heavy wet snow or ice accumulation combined with strong wind gusts which pull down utility lines and can disrupt traffic and emergency response by making roads and driveways impassable.

Severe winter storms in the northeastern United States develop through the combination of weather and atmospheric conditions including the moisture content of the air, direction of airflow, collision of warm air masses coming up from the Gulf Coast, and cold air moving southward from the Arctic. Winter weather related Warnings, Watches and Advisories are issued by the local National Weather Service office based on local criteria.

A Nor'easter is a large weather system traveling from South to North, passing along, or near the Atlantic seacoast. Cyclonic winds impact the coast and inland areas from a northeasterly direction. The sustained winds may meet or exceed hurricane force.

Blizzards are defined by the National Weather Service as "sustained winds or frequent gusts of 35 mph or greater (and) considerable falling and/or blowing snow reducing visibility frequently to 1/4 mile or less for a period of three hours or more."

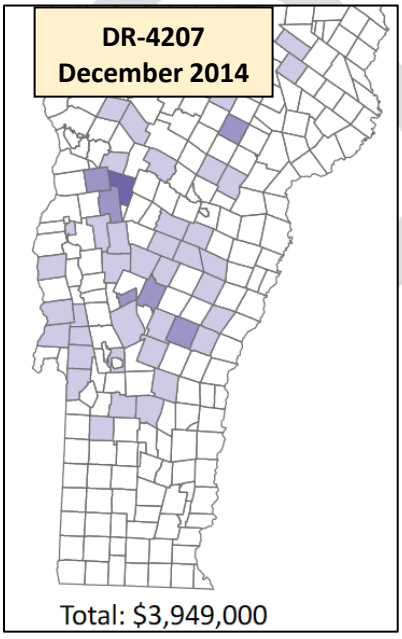
Ice Storms are defined by the National Weather Service as "occasions when damaging accumulations of ice are expected during freezing rain situations. Significant accumulations of ice are considered to be of ¼" or greater." Multiple sources state that a ¼ inch of ice accumulation from an ice storm can add 500 pounds of weight on the lines between two power lines.

Flash Freeze occurs when temperatures rapidly fall below freezing during precipitation with sudden severity in travel conditions. Extreme variations in topography and altitude on Vermont roadways make this a common hazard for motorists. Bridges and overpasses are particularly dangerous because they freeze before other surfaces.

Black ice is a deadly driving hazard defined as patchy ice on roadways or other transportation surfaces that cannot easily be seen. It is often clear (not white) with the black road surface visible underneath. It is most prevalent during the early morning hours, especially after snow melts on the roadways has a chance to refreeze over night when the temperature drops below freezing. Black ice can also form when roadways are slick from rain and temperatures drop below freezing overnight.

Extreme Cold temperatures are part of Vermont's climate tendency to stray above or below expected temperature values. What constitutes 'extreme cold' can vary and is based on what a population is accustomed to in their respective climates. For Baltimore, this hazard was assessed as having a relatively high probability of occurrence with high impact.

Heavy Snow, Extreme Cold, and Ice: History and Extent of Impact



There are no standard models or methodologies for estimating loss from winter storm hazards, however, extreme winter weather is considered a way of life in Vermont and many rural Towns are accustomed and prepared for these events.

While the history of winter storm events in Vermont and the historical damaged caused is extensive, Windsor County has been a designated area in only one federally declared disaster event over the past 20 years. DR-4207 occurred over a four-day period in mid-December 2014 when heavy, wet snow and ice resulted in more than 175,000 power outages in the region, the 2nd most power outages due to weather in

Vermont.[1] The damage assessment for Windsor County was estimated to be over $200,000 and impacted the northwest corner of the county.

A review of NOAA's database for Winter Storm events for Windsor County suggests that a snowfall of over 10 inches is likely to occur two to three times in a winter/early spring season. Snowfalls of over 24 inches have occurred at least once at most. Reports of ice accumulation of 1/10th inch or more are common over the course of a winter season.

TABLE 5.2-6: Notable Winter Storm Events in Windsor County, 2016-2022

Occurrence Date	Estimated Property Damage	Event Description
11/29/2016	$25,000	Ice accumulation less than one tenth of an inch. Numerous vehicle accidents from icy roads. Accident between a vehicle and a tractor-trailer resulted in a fatality.
3/14/2017	$20,000	Snowfall totals across Windsor County generally ranged from 12 to 24 inches.
3/31/2017	$25,000	Widespread 8 to 16 inches of a heavy, wet snow across the region. Scattered power outages from the snow loading on trees and power lines.
4/1/2017	$25,000	Widespread 8 to 16 inches of a heavy, wet snow fell across the region with scattered power outages from snow loading on trees and power lines.
12/12/2017	$20,000	A widespread 8 to 16 inches of snow fell across the region.
3/7/2018	$40,000	A long duration snow event dropped 12 to 26 inches across the region, with highest totals along the southern Green mountains. Scattered to numerous power outages occurred in areas of the heaviest snow fall.
3/13/2018	$20,000	Long duration snowfall event eventually delivered 10 to 20 inches across the region. Some isolated to scattered power outages were reported.
11/26/2018	$250,000	Light rain changed to a pasty, heavy wet snow that resulted in downed tree limbs and power outages. across VT. Snow accumulated 3 to 6 inches in the valleys but quickly rose to 12 to 20 inches above 1000 feet.
1/19/2019	$20,000	A widespread snowfall of 10 to 18 inches occurred across the region.
3/22/2019	$15,000	A heavy wet snow fell across the region with snowfall totals of 8 to 12 inches and higher totals in the higher elevations.
3/23/2020	$5,000	A period of heavy snow with 2-3 inches per hour rates moved through during the evening hours with storm total snowfall of 7-10 inches. Minor, isolated power outages.
12/16/2020	$ 20,000	Record snowfall described below
1/16/2021	$50,000	A heavy, wet snow fell across the region with totals ranging from 3 to 5 inches in the valleys to 18 inches in the higher terrain. Numerous power outages reported.
12/25/2021	NA	Ice accumulation of up to ¼" from freezing rain caused numerous vehicle accidents resulting in the closure of portions of I89 and 25 miles of I91.
2/3/2022	$50,000	Heavy snow and ice combination with 6-12 inches of snow followed with ¼" of ice causing numerous power outages.

Source: NOAA, National Centers for Environmental Information, accessed 8/22/23.

Over the past five years the NOAA has recorded 23 Winter Storm events for Windsor County, an average of four per year with the most impactful events occurring in the month of March. **Table 5.2-6** below is a sampling of historical winter storm events and the extent of their impact.

[1] 2018 Vermont State Hazard Mitigation Plan

Local snow totals can vary tremendously. A recent snowfall event in December 2020 recorded snow rates of 4+ inches per hour for 6 to 8 hours across much of Windsor County. Local reports for the December snowfall event had nearby towns of Springfield and Ludlow the hardest hit with recorded totals of 41 inches.

In 2021, for the Windsor County region, there were a total of seven winter weather events as listed in NOAA. Of these seven, three were heavy snow events of 8-12 inches, and four were heavy wet snow, freezing rain or sleet causing power outages which is indicative of the extreme variance in temperatures during the winter season due to climate change.

The following instances of **extreme cold** have occurred in recent years:

- February 3-4, 2023: An arctic airmass entered Vermont, with temperature readings of 15 to 30 below zero and wind chills of 20 to 45 below zero. Some specific low temperatures included -25 in Ludlow and -16 in Springfield. The last occurrence of something this widespread and intense, although brief, was in January 26-27, 1994.
- January 14-15, 2022: Dangerously cold wind chills of 25 to 35 below zero were observed across the region with actual air temperatures of 10 to 15 below zero Friday evening through midday Saturday. Overnight minimum temperatures Saturday night-Sunday morning were 10 to 20 below zero with calm/light winds.
- January 7-8, 2015: Temperatures by early evening of January 7th were zero to 10 above zero with winds of 15 to 30 mph that created wind chills colder than 20 to 30 below zero through the overnight into the morning hours of January 8th. Actual morning low temperatures on January 8th were 10 below to 20 below zero in Windsor County.

There is no specific region in Vermont that is more vulnerable to ice storms, according to *the 2018 Vermont State Hazard Mitigation Plan*. The state plan identifies accumulations for ice storms in December 2008 and January 1998 of 1/2-3/4" of ice plus 1-2" of sleet and 3" of ice, respectively. Local data for ice storms is not available. There are no standard loss estimation models or methodologies for the winter storm hazards. Potential losses from winter storms are, in most cases, indirect and therefore difficult to quantify (SHMP 2018).

Residents have not observed large variations of snow and ice within the town. They did note that residences on wooded properties are more vulnerable to possible damage to structures and powerlines.

Heavy Snow, Extreme Cold, and Ice: Trends and Vulnerability

According to the 2014 National Climate Assessment, there is an observable increase in severity of winter storm frequency and intensity since 1950. While the frequency of heavy snowstorms has increased over the past century, there has been an observed decline since 2000 and an overall decline in total seasonal snowfall (SHMP 2018).

This is consistent with the local low temperature and snow data and can be visualized when a trendline is applied as shown in **Figures 5.2-4 and 5.2-5**. The area is seeing a greater range in temperature extremes which make for more hazardous conditions for flooding and icing. In the current year, 75-degree swings in winter temperatures ranged from -20.9 to 53.1°F in January and -2.9 to 72.1°F in February.

Figure 5.2-4: Annual Snowfall Trend

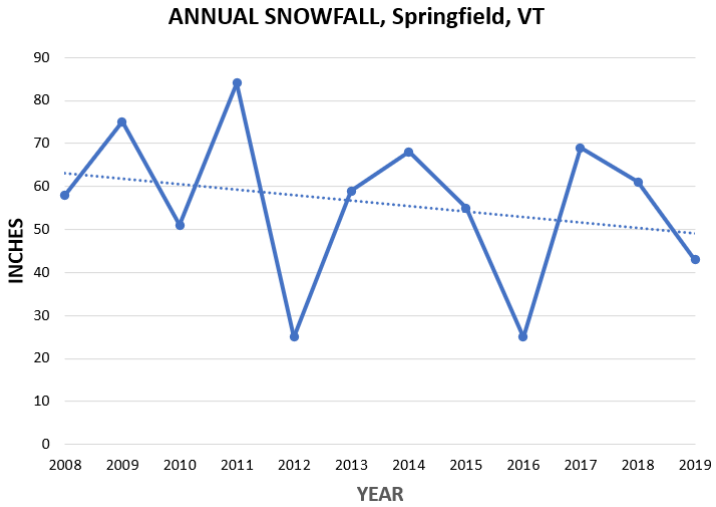
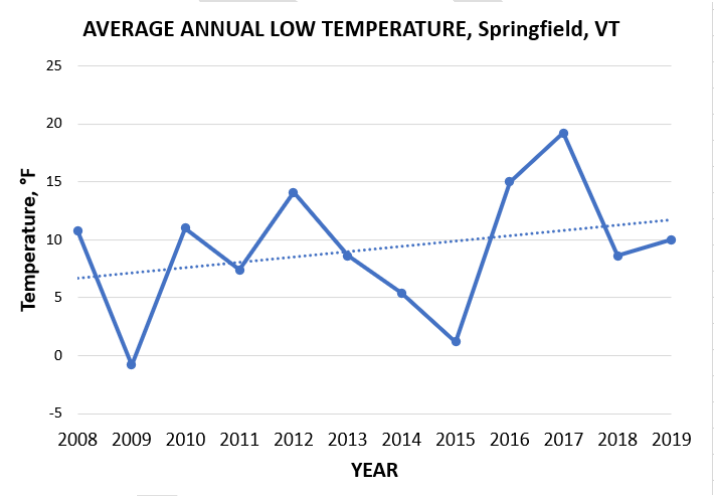
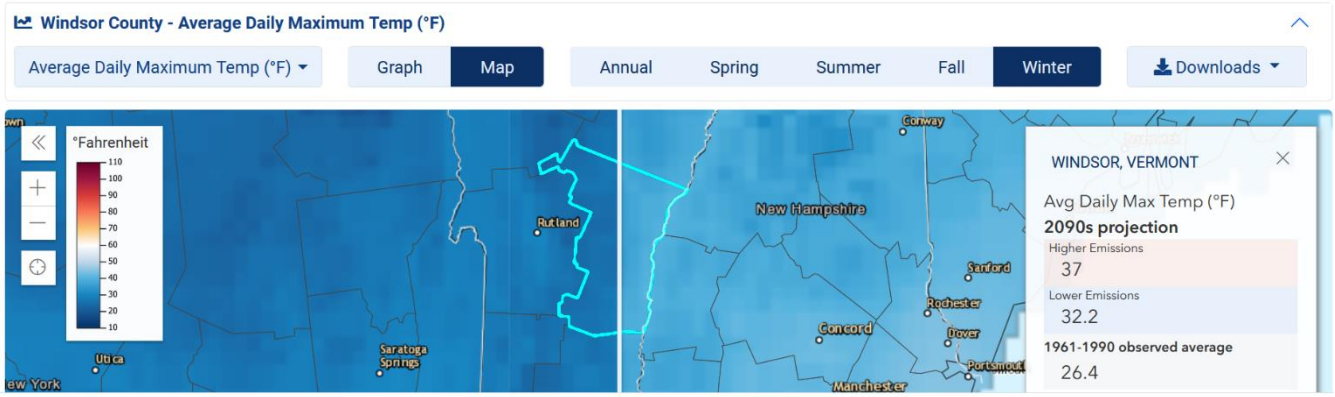
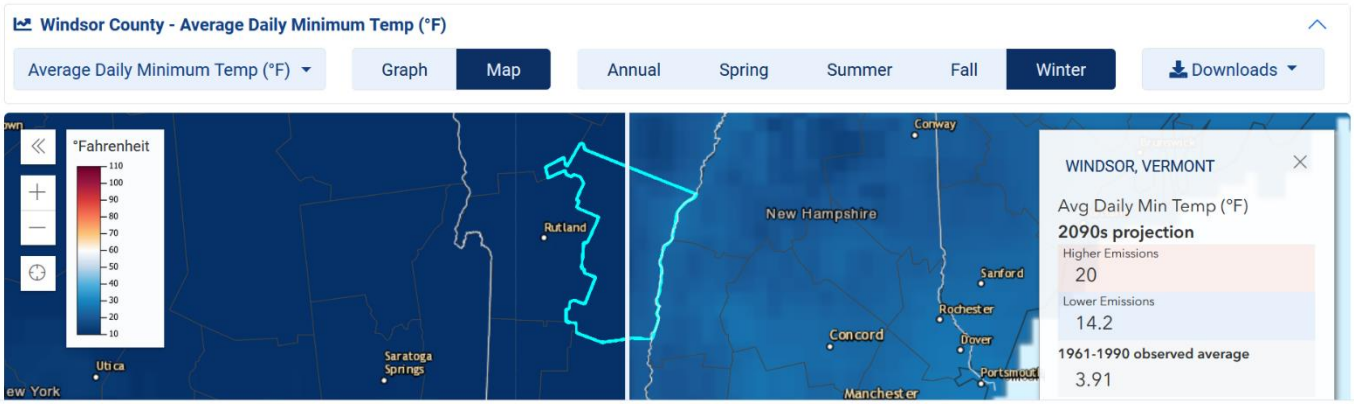


Figure 5.2-5: Annual Low Temperature



Data from Climate.gov's map generator, Climate Explorer, compares historical to projected temperatures in the divided images below. According to this source, average daily maximum winter temperatures are projected to rise above freezing to 37°F by the 2090's for Windsor County with higher emissions compared to observed historical averages of 26°F. If emissions are lower, the maximum will reach 32°F. The average daily minimums winter temperatures will also rise to 20°F over the same period compared to 4°F, observed historical averages.





Statewide, damage from winter storms can vary depending upon wind speeds, snow or ice accumulation, storm duration, tree cover and structural conditions such as heavy snow and ice accumulation on roof tops, barns, or aged structures in deteriorating condition. A roof may collapse with little or no warning, and one common misconception is that only flat roofs are susceptible to collapse. Residents can expect at least 60 pounds of weight per square foot on their infrastructure during winter months. Older residents need to be vigilant when clearing snow from walkways and driveways.

Vermont communities are 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 down 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 hazard or carbon monoxide poisoning. Many residents heat their homes with open flame heating sources including fireplace, wood, or pellet stoves, and will supplement with electric or kerosene space heaters. 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.

Green Mountain Power, the utility company that currently serves Baltimore, follows a regular tree-trimming schedule. Town officials believe this can be improved to mitigate damage and power outages caused by downed trees and tree limbs during events. Keeping surfaces clear of snow and ice is critical to the safety of residents. The lack of sidewalks poses added risk to residents who rely on walking during

winter weather to access public services. The frequency of ice events in the region requires sufficient Town inventories of sand and salt which can be difficult when supplies are limited.

Extreme weather conditions can also lower the distribution of cellular signals from a cell tower to the receiving device. Reliability of these communications for reporting an emergency can be compromised during extreme winter weather events. This can become a greater concern as there is a trend to eliminate home landlines to save utility costs is growing.

5.2c High Wind

Hazard Assessment Score: 2.0

High Winds can be generated from a thunderstorm, hurricane or tropical depression, a localized microburst, Nor'easter, 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 but tend to be localized.

Severe thunderstorms are a relatively common hazard in Vermont, particularly in the spring and summer months. Although typically short in duration, they can produce damaging winds, heavy rain and flooding, dangerous lightning, and large hail. Multicell cluster thunderstorms are likely to cause local flash flooding. It is the winds from these storms that have most impacted the town.

The downward draft from these storms can produce **microbursts** which are not uncommon in Vermont. These events can come with wind speeds in excess of 80 mph, and pose an additional threat to low flying aircraft, making it difficult for them to maintain altitude. Although less common in Vermont, **super cell thunderstorms** are the largest, longest lasting, and most devastating thunderstorms, which can produce **tornadoes** and widespread destruction of crops and property. **Tropical storms, hurricanes, nor'easters,** and **winter storms** can also cause high wind damage throughout the state.

The **Beaufort Wind Scale** shown below can be used to predict damage based upon wind speeds. The National Weather Service will issue Wind Advisories when sustained winds of 31-39 mph are reached for at least one hour or gust between 46-57 mph and High Wind Warnings for winds of 58 mph or higher. Thunderstorm winds tend to affect areas of Vermont with significant tree stands as well as areas with exposed property and infrastructure and aboveground utilities (SHMP 2018).

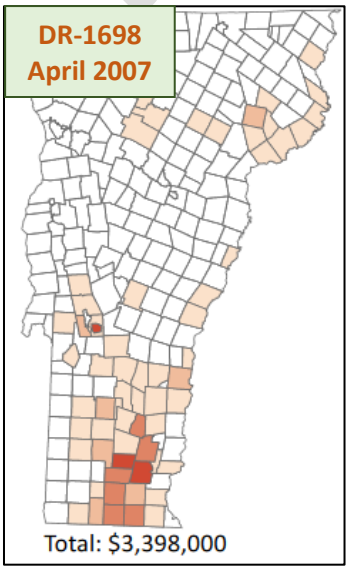
Power Failure is a common secondary hazard caused by high winds and occurs frequently within Windsor County. Power outages are most often isolated but can occur on a town-wide scale and are typically the result of power lines damaged by high winds, heavy snow, or ice storms, but may also result from disruptions in the New England or national power grid as occurred in the Northeast Blackout of 2003. Dead or dying trees in proximity to power lines pose a particular threat for power failure, as these trees are often brought down by triggering events such as high winds during a thunderstorm or a Nor'easter.

Beaufort Wind Scale		
Classification #	**Wind Speed**	**Land Conditions**
6	25 to 31 mph	Large branches in motion; whistling in telephone wires
7	32 to 38 mph	Whole trees in motion; inconvenience felt walking against wind
8 to 9	39 to 54 mph	Branches can break off trees; wind generally impedes progress; slate blows of roof; slight structural damage
10 to 11	55 to 72 mph	Damage to chimneys and TV antennas; trees broken or uprooted; considerable widespread structural damage
12 to 13	73 to 112 mph Hurricane	Peels surfaces off roofs; windows broken; mobile homes overturned; moving cars pushed off road; devastation
14 to 15	113 to 157 mph	Roofs torn off homes; cars lifted off ground; widespread devastation

**For the purposes of the Hazard Mitigation Plan, the scale is only shown above wind force 5; Data from NOAA*

High Wind: History and Extent of Impact

Since 2000, there have been six (6) Federal Disaster Declarations for high wind events in Vermont, excluding those related to Tropical Storm Irene and Hurricane Sandy. One example of the extent of a **high wind** event in Vermont was the Nor'easter of April 2007 that resulted in a Federal Disaster Declaration, DR-1698. "High winds during this April storm resulted in many trees down and damage to some private homes and public infrastructure, primarily in Southern Vermont" (SHMP 2018). Total Public Assistance for this event was $3,398,000 with the costliest damages in neighboring Windham County.



Since 2000, NOAA National Centers for Environmental Information's Storm Events Database recorded 30 High/Strong Wind events and 103 Thunderstorm Wind events that impacted Windsor County causing tree damage and power outages. Three of the strong wind events were the result of Tropical Storm Irene in August 2011, Hurricane Sandy in October 2012, and remnants of Tropical Storm Isaias in August 2020. Most of the thunderstorm wind events recorded sustained winds of 40-45 mph with damaging wind gusts of 50-65 mph and isolated damage. Other High Wind events are more widespread causing power outages up to 25,000 countywide. Most of the wind reported damage is due to **thunderstorm** activity from June through September and winter storms with **heavy snow** and **ice**. Over the past 5 years from 2018-2022, the Windsor County region averaged close to 10 strong wind events a year causing, on average, $30,000 per event.

Reports of damage due to downed trees in Windsor County are common when wind gusts begin to exceed 40 mph. Damage is typically localized in the form of downed trees and powerlines and isolated structural damage to buildings and vehicles.

High Wind: Trends and Vulnerability

Thunderstorms and associated hazards can occur anywhere in Vermont at any time of the year; however, spring and summer are the most common times for severe thunderstorms (SHMP 2018).

The frequency of high wind events has increased. It is anticipated that extreme weather conditions, due to climate change, will continue to impact the community in the form of high winds in Windsor County. This is supported by the NOAA data which shows that of the 98 reported Thunderstorm and High Wind events since 2000, 29, or 30%, have occurred over the past 5 years. The Town typically experiences 1 or 2 high wind events each year and has noted however that the mountains in Okemo and Ascutney provide some protection from high wind damage.

Power failures often have only minimal impact to people and property; however, longer duration events may result in major disruptions and business losses. Outages in Baltimore typically last only a few hours but can last for days if the outage is regional. The Town states that GMP is adequately responsive in making any needed repairs to bring the power back online. Potential loss estimates are difficult to predict as they are typically isolated in geographic areas and short in duration. Power outages in winter months may result in the loss of home heating, ruptured water pipes, and the resulting structural damage. The loss of home heating may be a contributing factor to the increase in structure fires during the winter months. Local data on historical occurrences, extent of outage and associated costs are not available.

Town assets are limited to the Town Office and the grading equipment; they are not particularly vulnerable to this hazard. Heavily tree-lined roads can experience frequent outages. Clearing overhanging, leaning, and dying trees near power lines is part of annual town-wide maintenance to minimize impact from high winds. The Town has reported damage to powerlines and local maple sugaring operations due to high winds.

6. Mitigation Program

The following sections detail the mitigation goals and potential mitigation strategies identified by the Town and compiled and organized by the HMPT to reduce the impact of the hazards assessed in this plan. The implementation schedule that follows in **Table 6.2-1: 2021-2027 Mitigation/Preparedness Strategies and Actions** is a comprehensive list of actions that the town has targeted for implementation during the five-year cycle of this plan.

6.1 Mitigation Goals and Objectives

Following the Hazard Analysis and Hazard Profile and review process as described in **Section 4**, the HMPT then agreed upon the following overarching goals and associated objectives below. Note that the numbers do not indicate goal priority but are used to identify actions that support it.

Hazard Mitigation Goals and Objectives

1. Provide protection and reduce risk to the community from the Impact of Hazard Events.
    a. Implement action items that reduce the risk of potential loss of life, injuries, negative health impact, and property damage.
    b. Implement action items to minimize financial losses due to hazard events incurred by the community including residents and business owners.
    c. Implement action items to improve resiliency of our built and natural environment including public infrastructure, and recreational, cultural, and historic assets.
    d. Maintain, enhance, and raise awareness of the Local Emergency Management Plan and Local Hazard Mitigation Plan.
2. Raise community awareness of the Hazard Risks, Resiliency Resources and Mitigation Planning.
    a. Encourage hazard mitigation planning to be incorporated into other municipal and community planning efforts.
    b. Review progress on implementation of the hazard mitigation plan during publicly noticed meetings (Selectboard, Planning Commission).
    c. Improve and enhance efforts to increase public knowledge of hazards and resources.
3. Improve effectiveness of future Hazard Mitigation Planning efforts.
    a. Develop a process for tracking plan implementation over the plan period and incorporate phased planning for large or complex projects.
    b. Be proactive in seeking funding opportunities for hazard mitigation projects.
    c. Improve local engagement in reporting vulnerabilities and hazard events.

6.2 Hazard Mitigation/Preparedness Strategies and Actions

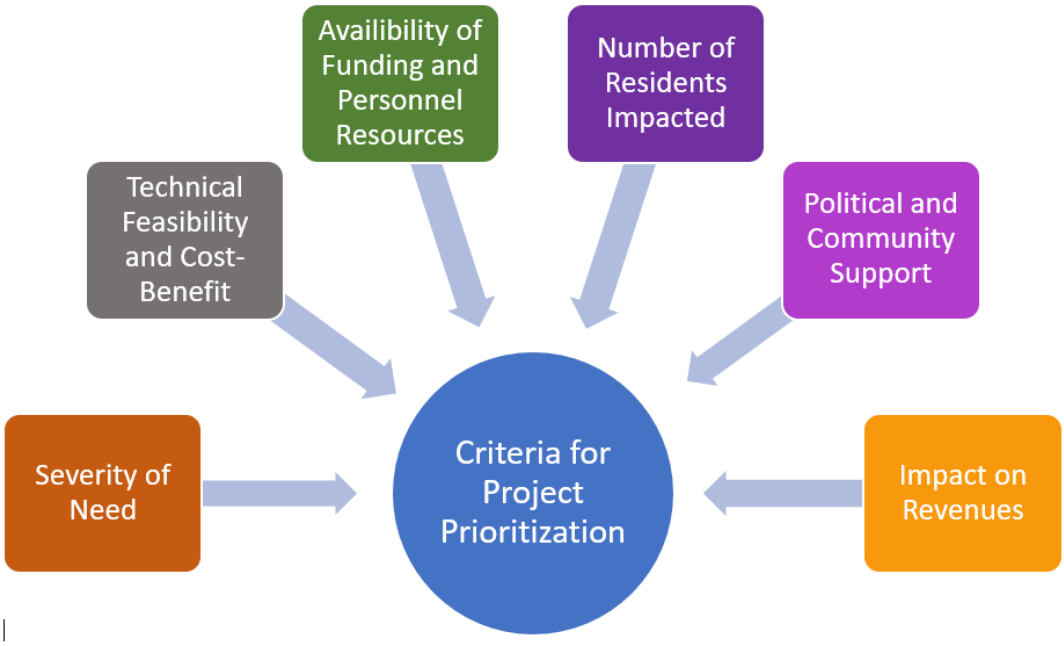
Throughout the planning process, efforts were made to identify actions that would address the Town's vulnerabilities and achieve the goals and objectives outlined above.

These mitigation actions have been chosen by the Team as the most effective and feasible actions to be taken during this plan period to lessen the impacts of the hazards identified in **Section 5**. Some of the actions from the previous plan have been carried over or modified either because they have been expanded or because of their on-going cyclical nature. Compared to the previous Hazard Mitigation Plan, below are changes in the selection of hazards addressed and changes in the approach on formulating goals and actions:

6.2a Changes from Prior Plan

- The Town's **method of hazard assessment** was modified to resemble that used by the State. The hazard impact assessment was expanded to differentiate between the probability of a weather hazard event and the probability of the hazard impact which can be common to other weather events. Community impact was broken down into four categories (life, economy, infrastructure, and environment) and assessed individually.
- **Flooding and Fluvial Erosion** have become of greater concern than in the previous plan with a current major flood event during the writing of this plan.
- **Infectious Disease** and **Invasive Species** are new hazards to be recognized in the assessment exercises with recent experiences from the COVID Pandemic and tree infestations.
- **More local hazard data** has been obtained and presented.
- Changes were made with the development of **specific mitigation goals and objectives** and in **methodology for prioritizing actions** to be sure they address these goals to improve plan effectiveness.
- A formalized process for **plan monitoring** was developed to improve plan effectiveness and an effort was made to better **correlate mitigation actions** to the Town Plan goals and recommendations.

6.2b Prioritization of Strategies and Actions



For this update, the Team selected a method for prioritization of strategies and actions based on three categories – High, Moderate, and Low compared to a more ad-hoc basis in the prior plan. It was decided that this methodology would improve overall progress on implementation with a focus on higher priority actions. Compared to a specific scoring process, this methodology for prioritization offers the following benefits:

- Provides needed flexibility as priorities can change over time.
- Allows the Town to take advantage of all funding opportunities as they arise.
- Implies that several actions can progress simultaneously.
- Works well for larger or complex phased projects.
- Encourages the Town to keep all proposed actions in mind.

To assign action priority, a number of criteria were taken together, in addition to the Hazard Analysis Score in **Section 5.1** but weighted subjectively. These criteria are depicted above and listed below.

- Severity or immediacy of need. This subjective assessment would consider the potential extent of risk in terms of structural damage repair costs, level of safety risk to residents, and probability of occurrence.
- Number of residents impacted that would benefit from mitigation.
- Availability of funding and personnel resources to implement the project. Availability of town, state or federal funds, and availability of town personnel and MARC staff.
- Strong community support and little or no political opposition or reduction in revenue.
- In considering costs, the Town prioritized based on the following for projects: low $0-$1000, medium $1,000-$10,000, and high $10,000+
- Project feasibility and cost-benefit. Note that Baltimore is a small town and does not currently have the capacity to determine the cost/benefit of each proposed action. However, prior to pursuing any mitigation project, the Town would consider the costs and benefits of the project using FEMA methodology.

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Table 6.2-1: 2023-2028 Mitigation/Preparedness Strategies and Actions

High Priority
Moderate Priority
Low Priority

MITIGATION ACTION OR STRATEGY	TYPE[1]	HAZARD ADDRESSED	RESPONSIBLE PARTY[2]	TIME FRAME	FUNDING SOURCE[3]
Carried Over from Prior Plan:					
Annually update and maintain current Local Emergency Management Plan.	P	All	**EMD,** MARC	Annually each Spring	MARC assistance
Seek funding for the installation of an additional dry hydrant at the Bergeron site	M	All	**MARC**, Selectboard	2024	MARC
Work with MARC to conduct annual culvert and ditch inspection program and complete maintenance or upgrades based on inventory.	M	Flood, Fluvial Erosion	**Road Foreman,** MARC	Annual/Ongoing	Town Budget, MARC, VTrans
Provide extreme weather planning materials to Town residents by including information in the Annual Town Report and on the Town Website.	M	Extreme Heat, Extreme Cold	**Town Clerk**, MARC	Implement for 2024 Annual Town Report	
Proactively reach out to GMP with identified trees that are susceptible to causing downed power lines and trees that are susceptible to or infested by emerald ash borer. *Most trees are not within Town ROW.	M	All	**Road Foreman**, MARC	Ongoing	Town Budget
Provide “FireWise” materials to Town residents by including information in the Annual Town Report and on the Town Website; opportunity to collaborate with Springfield.	M	Wildfire, Extreme Heat	**Town Clerk**, MARC	Implement for 2024 Annual Town Report	

MITIGATION ACTION OR STRATEGY	TYPE[1]	HAZARD ADDRESSED	RESPONSIBLE PARTY[2]	TIME FRAME	FUNDING SOURCE[3]
From Town Plan Recommendations:					
Incorporate new MRGP Standards in identifying and prioritizing vulnerable hydrologically-connected roadways and implement required practices to meet standards *as funding becomes available*.	M	Flood, Fluvial Erosion	**Road Foreman**, MARC	2023-2028	VTrans (Better Roads, GIA), MARC
Fully integrate flood resiliency and fluvial erosion planning and State/Federal flood hazard regulations into the Baltimore Zoning bylaws; for example, the Town shall regulate development to preserve upland forests, wetlands, and vegetated stream buffers.	M	Flood, Fluvial Erosion	**Planning Commission**, MARC	Q4 Annually	Town Budget, MARC
Provide flood resiliency outreach materials in the Annual Town Report and on the Town Website, to include: natural resources map, flood-proofing information, stormwater management techniques, and flood insurance information.	M	Flood, Fluvial Erosion	**Town Clerk,** MARC	Implement for 2024 Annual Town Report	Town Budget, MARC
From Town Input, Survey, MARC Recommendations, and Technical Document Review					
Identify residents that require assistance within 24-72 hours and assist them with CARE program enrollment; provide application in the Annual Town Report and on Town Website.	M	All	**Town Clerk,** MARC	Implement for 2024 Annual Town Report	Town Budget, MARC
Research funding opportunities for broadband improvements; faster internet is needed to create a backup (Cloud storage) for critical Town records to include Listers data.	P	All	**MARC**, Selectboard	2024	MARC
Inform residents via Town website and Town Report of informational/planning resources prior to anticipated severe weather and extreme temperature events, with a focus on vulnerable populations.	P	Extreme Heat, Extreme Cold, High Wind, Drought	**Town Clerk,** MARC	Implement for 2024 Annual Town Report	Town Budget, MARC

MITIGATION ACTION OR STRATEGY	TYPE[1]	HAZARD ADDRESSED	RESPONSIBLE PARTY[2]	TIME FRAME	FUNDING SOURCE[3]
Consider and incorporate, if applicable, Hazard Mitigation Actions into each section of the Town Plan goals, policies, and recommendations during the next plan update.	M	All	**Planning Commission**, MARC	2024	Town Budget, MARC
Inform residents via Town website and Town Report of informational resources on invasive species management and removal.	M	Tree Warden, MARC	**Town Clerk,** MARC	Implement for 2024 Annual Town Report	Town Budget, MARC
Work with MARC and neighboring towns to establish a formal agreement for local sheltering.	P	All	**MARC**, EMD	2024	MARC, Town Budget
Establish surge protection on critical electronic equipment at the Town Office.	P	All	**Selectboard,** Town Clerk	2024	Town Budget

[1] M – Mitigation, P – Preparedness

[2] Responsible Party: Responsible Party is shown in **Bold** and others listed are support entities

HMPT- Hazard Mitigation Planning Team
MARC- Mount Ascutney Regional Commission
EMD- Town Emergency Management Director

[3] Funding Sources:

Town Funding
TOB - Town Operating Budget
TCB – Town Capital Budget

FEMA and Vermont State Department of Emergency Management (VEM)
HMA - Hazard Mitigation Assistance Grant Program (VT State Department of Emergency Management)
HMGP – Hazard Mitigation Grant Program (acquisition, infrastructure, planning, outreach)
BRIC – Building Resilient Infrastructure and Communities Grant Program
FMA - FEMA Flood Mitigation Assistance Program
EMPG – Emergency Management Performance Grant (VT State Department of Emergency Management)
FPSG – FEMA Fire Prevention & Safety Grant

Vermont Agency of Natural Resources (ANR)

ERGP - Ecosystem Restoration Grant Program
DIBG – Design/Implementation (Clean Water) Block Grant Program
RCCEG – River Corridor Conservation Easement Grant (ERPG)

Vermont Agency of Commerce and Community Development (ACCD)
CDBG – VT ACCD Community Development Block Program
HPG – Historic Preservation Grant Programs

Vermont Department of Fire Safety Programs (VDFS)

Vermont Transportation Agency (VTrans)
MRGIA – Municipal Roads Grants-In-Aid Program
BRGP – Better Roads Grant Program
THSGP – Town Highway Structures Grant Program
THC2RP – Town Highway Class 2 Road Program
MHSMP – Municipal Highway Stormwater Mitigation Program
TAP – Transportation Alternatives Program

Conservation Programs (CP)
VMG – Vermont Watershed Grant
VLT – Vermont Land Trust
CRC – Connecticut River Conservancy
VRC – Vermont River Conservancy

American Rescue Plan Act (ARPA) - Coronavirus State and Local Fiscal Recovery Funds & related future funding opportunities

MARC Brownfields Reuse Program Grants (MBRP) – EPA Brownfields Grants through MARC

Vermont Urban & Community Forestry (UCF)
EABG - Emerald Ash Borer Grant Program
CCFC-Community Caring for Canopy Grants

Other

VCF-Vermont Community Foundation
VCC-Vermont Conservation Commission
SGSG- Vermont Natural Resources Council Small Grants for Smart Growth
BGS – Building and General Services
New England Grass Roots Environmental

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6.3 Plan Monitoring and Maintenance Process

Plan Monitoring Process

With the Town Manager as lead responsible party, the HMPT will be monitoring this plan as outlined below, to ensure that progress is made and identified mitigation actions are implemented as resources or opportunities become available. The Town will work with its regional partners, including MARC, to identify funding opportunities and for assistance with funding applications.

New to this plan update is an effort to formalize a method for monitoring and evaluating the Town's progress on action items and to improve local hazard data collection and public awareness and participation. The monitoring process has been identified as an action item to be implemented annually (at a minimum) over the plan period and will include a noticed annual meeting of the Hazard Mitigation Planning Team, to review and track the following:

- progress on **Mitigation/Preparedness Strategies and Actions** listed in **Table 6.2-1**;
- changes or improvements in effectiveness of **Capabilities and Resources** in **Table 4.3-2**;
- updates to local, regional, or State hazard data occurrences and extent;
- changes in prioritization of identified hazards;
- consistency with other Town Plan goals, policies, and recommendations, and
- whether stated goals and objectives are being met

This new method for monitoring plan progress will be implemented gradually over the plan period. Once fully established, it will include an annual review to be conducted by the HMPT prior to the Town's annual budgeting process each fall with the completion of **Hazard Mitigation Plan Monitoring Form** in **Appendix F.** Monitoring forms will be completed identifying any progress made for each action and plans for the coming year. Completed forms will become part of this plan and distributed to the appropriate boards and commissions and made available for public viewing on the Town website. Following the review meeting by the Team, an update on plan progress is to be reported once each year at a scheduled Selectboard meeting which is publicly noticed with an agenda.

For these scheduled public meetings, representatives of the Planning Commission, Selectboard, Town staff, and interested members of the public will be encouraged to attend. Participants will be asked during these review periods to express their concerns and experiences with natural hazards, identify new vulnerabilities and suggest additional mitigating measures. All public input during the annual plan monitoring process will be noted.

During the monitoring process, the Town will consider and incorporate appropriate hazard mitigation actions from **Table 6.2-1** as part of the budgeting process each year in the fall and as part of the planning process for updates to the Town Plan, Flood Hazard Area Regulations, Access Permits, and any other related planning, as well as for future community development projects, as appropriate. The HMPT will also be responsible for ensuring proposed mitigation actions remain in line with current town goals, strategies, and policies.

Plan Maintenance Process

The Town will apply for grant funding to update the LHMP in 2025 and reconvene the Hazard Mitigation Planning Team at the direction of the Selectboard Chair by the 2nd quarter of 2026 to kick-off the update process and secure consultant services for assistance in the planning process. The Selectboard Chair will again reach out to the community for additional volunteers to participate as members of the Hazard Mitigation Planning Team for the new plan period.

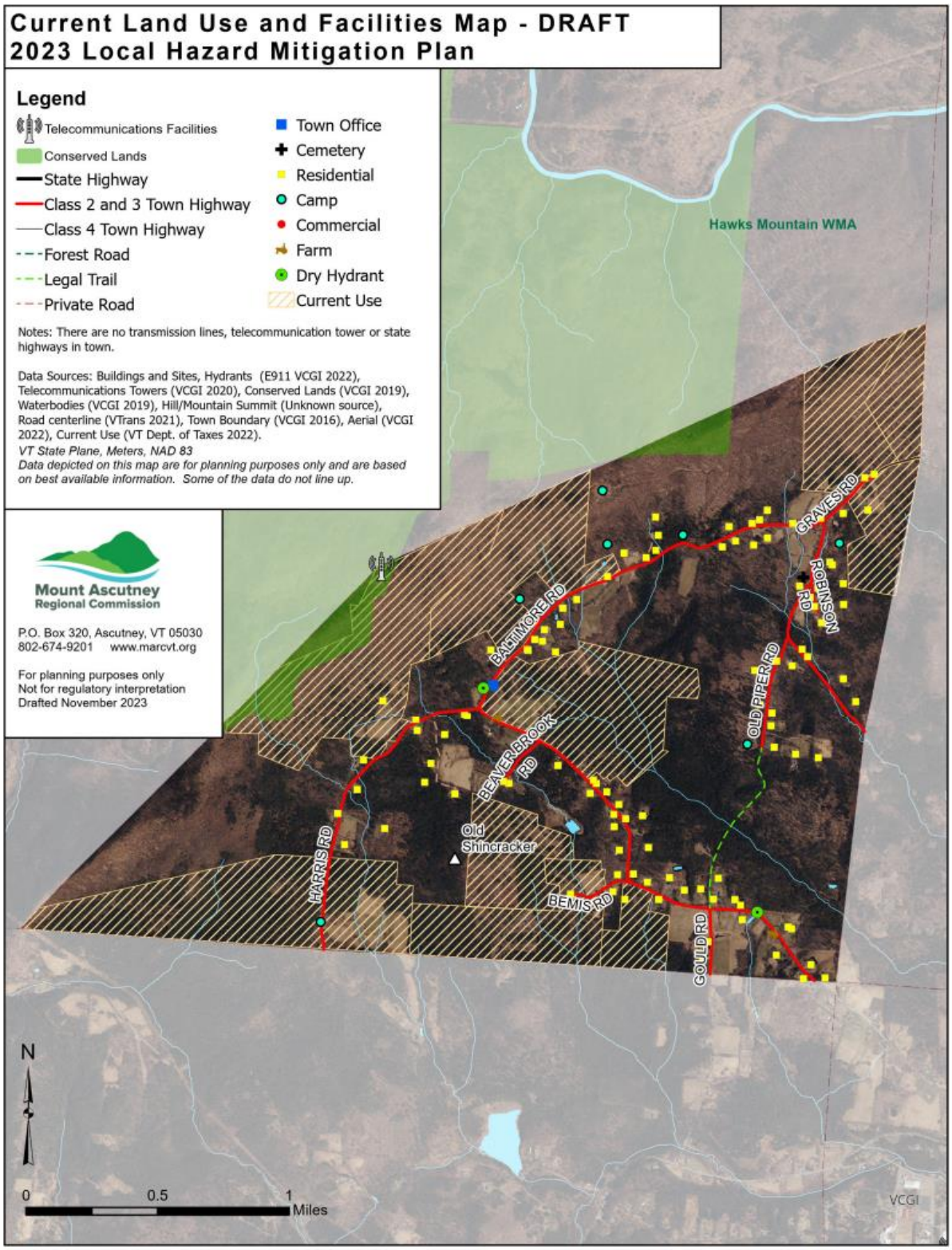
The Town will review the prior plan progress and monitoring forms. The Team will conduct the planning activities as outlined in the Process Flow Chart **(Appendix B**) and incorporate the plan monitoring information gathered during the annual reviews, updated hazard data, town and regional plans, and new relevant reports and studies. All public meetings will be warned following town protocols.

A preliminary draft plan will be made available for public comment on the town and regional websites, on the Town of Baltimore Facebook page and hard copies will be available at the town office. A second publicly warned meeting will be held in the 3rd quarter of 2027, during which any substantial revisions gathered during the public input period will be discussed. All final edits and revisions will be made, and a final draft will be provided to the Hazard Mitigation Planning Team for final review by the end of 2027.

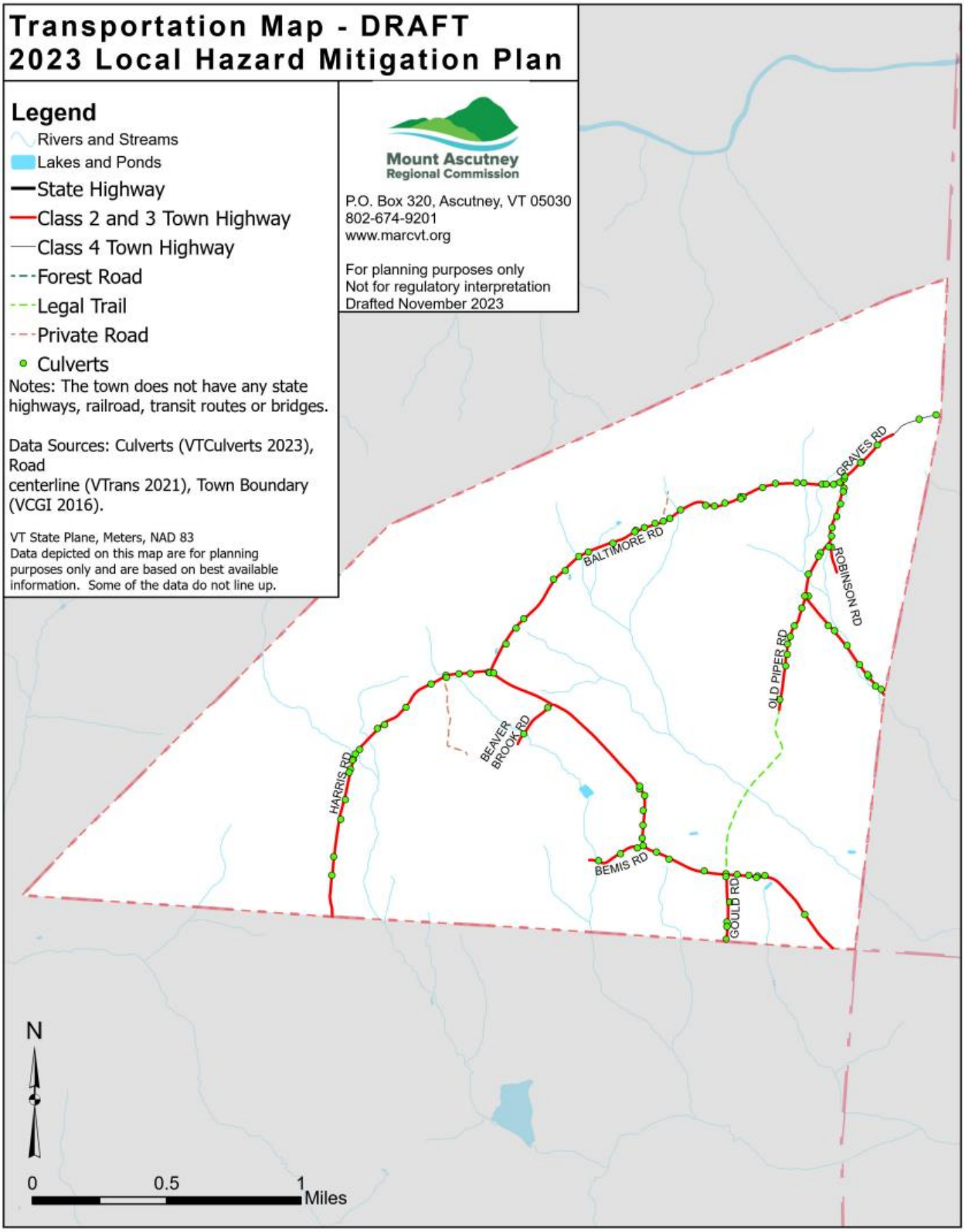
Subsequently, the plan will be sent to Vermont Emergency Management for review, approval, and referral to FEMA for Approval Pending Adoption (APA) to be completed by the 2nd quarter 2028. Following the receipt of APA, the Baltimore Town Selectboard may then adopt the updated Local Hazard Mitigation Plan and forward a copy of the adoption resolution to FEMA to complete the plan approval and adoption process before this plan expires at the end of 2028.

Appendix A: Maps

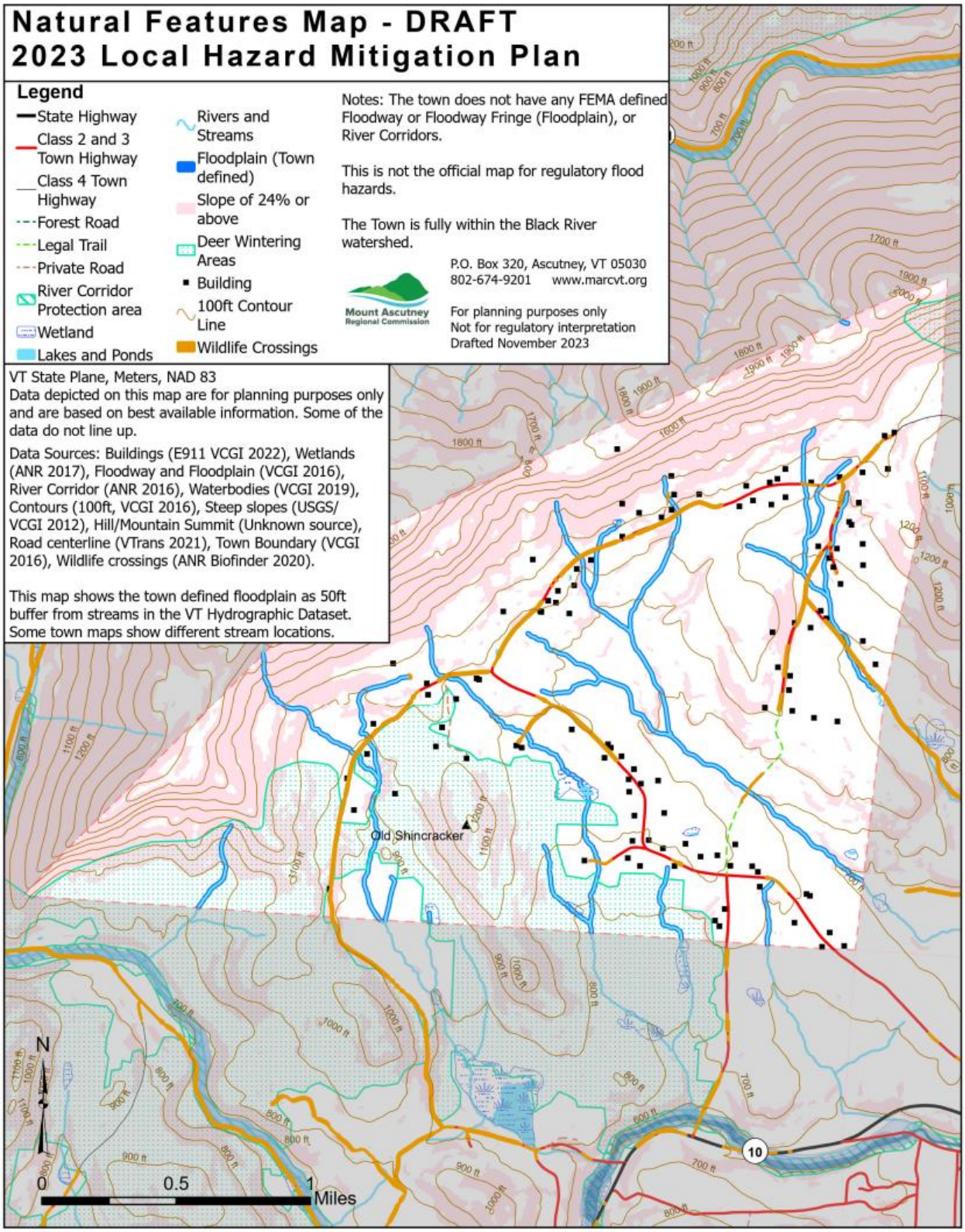
Current Land Use and Facilities



Transportation



Natural Features



Appendix B: Process Flow Chart

[Insert when completed]

Appendix C: Public Involvement Documents

VOLUNTEER FORM TO DOCUMENT IN-KIND SERVICES - MATCH INFORMATION - 2023

PROGRAM: 2023 Baltimore LHMP Update
DATE OF MEETING: August 16, 2023
MEETING LOCATION: Baltimore Town Office & Zoom
TOPIC: Public Meeting 1
MEETING TIME: 6:30pm-7:30pm

VOLUNTEER ATTENDEES - CLAIMED

No.	NAME	AFFILIATION	MILEAGE ROUND TRIP	MEETING HOURS	TOTAL MILEAGE	TOTAL TIME
					0.655	$31.80
1	Roland Doucette	Planning Commission	1	1	0.66	31.80
2	John Lomachinsky	Resident	2	1	1.31	31.80
3	Joan Whaley	Planning Commission	1	1	0.66	31.80
4	Wayne Wheelock	Planning Commission	1	1	0.66	31.80
5	Loreen Billings	Planning Commission	2	1	1.31	31.80
6	Walter Rich	Selectboard Chair	2	1	1.31	31.80
7	Sandy Rich	Assistant Town Clerk	2	1	1.31	31.80
8					-	-
9					-	-
10					-	-
11					-	-
12					-	-
13					-	-
14					-	-
15					-	-
16					-	-
17					-	-
18					-	-
19					-	-
20					-	-
21					-	-
22					-	-
23					-	-
24					-	-
25					-	-
26					-	-
27					-	-
28					-	-
29					-	-
30					-	-
		Sub Total	11.00	7.00	7.21	222.60

6/28/05 One Meeting Form

TOTAL MATCH	229.81

VOLUNTEER FORM TO DOCUMENT IN-KIND SERVICES - MATCH INFORMATION - 2023

PROGRAM: **2023 Baltimore LHMP Update**
DATE OF MEETING: September 20, 2023
MEETING LOCATION: Baltimore Town Office & Zoom
TOPIC: Public Meeting 2
MEETING TIME: 6:30pm-7:30pm

VOLUNTEER ATTENDEES - CLAIMED

No.	NAME	AFFILIATION	MILEAGE ROUND TRIP	MEETING HOURS	TOTAL MILEAGE	TOTAL TIME
					0.655	$31.80
1	Loreen Billings	Planning Commission	2	1	1.31	31.80
2	Walter Rich	Selectboard Chair	2	1	1.31	31.80
3	Roland Doucette	Planning Commission	1	1	0.66	31.80
4	Sandy Rich	Assistant Town Clerk	2	1	1.31	31.80
5	Wayne Wheelock	Planning Commission	1	1	0.66	31.80
6	Joan Whaley	Planning Commission	1	1	0.66	31.80
7	Kevin Gould	Planning Commission	2	1	1.31	31.80
8					-	-
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13					-	-
14					-	-
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25					-	-
26					-	-
27					-	-
28					-	-
29					-	-
30					-	-
		Sub Total	11.00	7.00	7.21	222.60

TOTAL MATCH	229.81

6/28/05 One Meeting Form

VOLUNTEER FORM TO DOCUMENT IN-KIND SERVICES - MATCH INFORMATION - 2023

PROGRAM: 2023 Baltimore LHMP Update
DATE OF MEETING: October 25, 2023
MEETING LOCATION: Baltimore Town Office & MS Teams
TOPIC: Public Meeting 3
MEETING TIME: 6:30pm-7:30pm

VOLUNTEER ATTENDEES - CLAIMED

No.	NAME	AFFILIATION	MILEAGE ROUND TRIP	MEETING HOURS	TOTAL MILEAGE	TOTAL TIME
					0.655	$31.80
1	Loreen Billings	Planning Commission	2	1	1.31	31.80
2	Kevin Gould	Planning Commission	2	1	1.31	31.80
3	Wayne Wheelock	Planning Commission	1	1	0.66	31.80
4	Joan Whaley	Planning Commission	1	1	0.66	31.80
5	Roland Doucette	Planning Commission	1	1	0.66	31.80
6					-	-
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28					-	-
29					-	-
30					-	-
		Sub Total	7.00	5.00	4.59	159.00

TOTAL MATCH	163.59

6/28/05 One Meeting Form

Meeting 4 Attendance Sheet

Selectboard Meeting Attendance Sheet

Volunteer Review Time (Outside Meeting Hours)

Appendix D: Stakeholder Engagement

Municipal Representatives / Hazard Mitigation Planning
Selectboard, Chair
Planning Commission, Chair
Planning Commission members
RPC Commissioner
Assistant Road Commissioner
Town Clerk

Other local Stakeholders engaged in the process:
Mount Ascutney Regional Commission, Assistant Planner
Mount Ascutney Regional Commission, Planner

Distribution of Plan Draft and Indivtation to Participate i
Cavendish Elementary School, Principal
Chester-Andover Elementary, Prinicpal
Green Mountain High School, Principal
Green Mountain Power
CARE VT
VNA
SEVCA
Senior Solutions
The Moover

Neighboring Towns:

Town of Cavendish
- Town Clerk
- Town Manager
- Selectboard, Chair
- Planning Commission, Chair
- Emergency Management Director
- **Cavendish has no zoning/no Zonir*

Town of Chester
- Town Clerk
- Town Manager
- Selectboard, Chair
- Planning Commission, Chair
- Planning Commission, Vice Chair
- Planning and Zoning Administrator
- Emergency Management Director

Town of Springfield
- Town Clerk
- Town Manager
- Selectboard, Chair
- Planning Commission, Chair
- Planning and Zoning Administrator
- Emergency Management Director

Town of Weathersfield
- Town Clerk
- Town Manager
- Selectboard, Chair
- Planning Commission, Chair
- Planning and Zoning Administrator
- Emergency Management Director

Appendix E: Survey Results

Survey Results

Appendix F: Town Plan Review

Recommendations Related to Hazard Mitigation

From the Baltimore Town Plan (Adopted 2016, Amended 2018)

- Develop and implement a stormwater management plan. Some of the possible implementation strategies include completing an inventory of municipal roads and their connections to surface waters, upgrading ditches, ensuring roads are correctly crowned, and upgrading culverts.
- Have the road commissioner identify road sections, bridges, and culverts that need maintenance or replacement.
- Structural deficiencies in transportation infrastructure should be addressed as soon as possible.
- Seek funding sources to improve the emergency preparedness conditions of the roads.
- Request hydraulic studies, estimate costs, and seek funding for the replacement of all undersized culverts.
- Maintain enrollment in the National Flood Insurance Program.
- Protect existing water resources and wetlands from contamination or disruption from development.
- Ensure that streams, brooks, and watercourses are maintained in a natural state
- To minimize the risk of flooding, upland forests and wetlands shall be preserved and vegetated stream buffers shall be maintained
- Encourage the protection of river corridors, flood plains, wetlands and upland forest areas that attenuate and moderate flooding and erosion
- Discourage the removal of in-stream debris except as necessary to protect public safety or prevent property damage
- Encourage on-going emergency preparedness and response planning.
- Encourage property owners to review the Natural Resources map and consider flood proofing their property, implementing storm water management techniques, and/or purchasing flood insurance.

Appendix G: Plan Monitoring Form

PLAN MONITORING FORM

(TO BE ADDED AFTER FINALIZING ACTION TABLE)