Middletown Springs, Vermont
2025 Local Hazard Mitigation Plan

Coy Hill Road Damage – April 15, 2019 (Federal Disaster DR4445)

FEMA Approval Pending Adoption Date: July 28, 2025
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Technical Assistance by the Rutland Regional Planning Commission (RRPC)

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1 INTRODUCTION

The impact of expected, but unpredictable natural events can be reduced through community planning and action. The goal of this Plan is to advance mitigation investment to reduce risks posed by natural hazards and to increase the Town of Middletown Springs's resilience to natural hazard impacts.

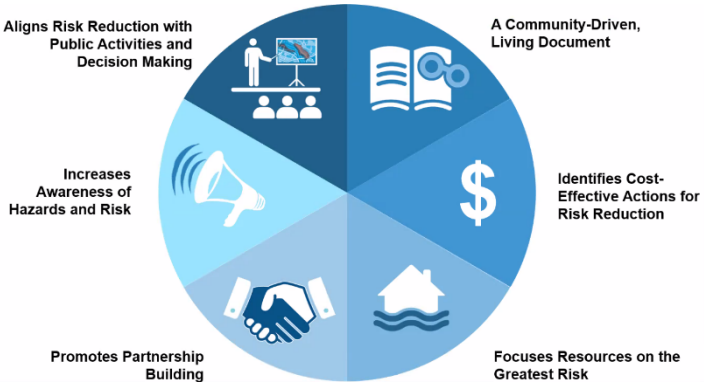
Hazard Mitigation is any sustained policy or action that reduces or eliminates long-term risk to people and property from the effects of natural hazards. All levels of government have come to recognize that it is less expensive to prevent disasters than to repeatedly repair damage after a disaster has struck. While the hazards cannot be eliminated, it is possible to identify what the hazards are, where their impacts may be most severe, and identify local actions and policies that can be implemented to reduce or eliminate the severity of the impacts.

This Plan recognizes that many hazards are interrelated and can cause cascading effects. Communities should therefore take a holistic approach to mitigation and integrate its principles and practices throughout government operations.

2 PURPOSE

The purpose of this Plan is to assist the Town in identifying all natural hazards facing the community, ranking them according to local vulnerabilities, and developing strategies to reduce risks from those hazards. Once adopted, this Plan is not legally binding; instead, it outlines goals and actions to prevent future loss of life and property.

The benefits of mitigation planning include:

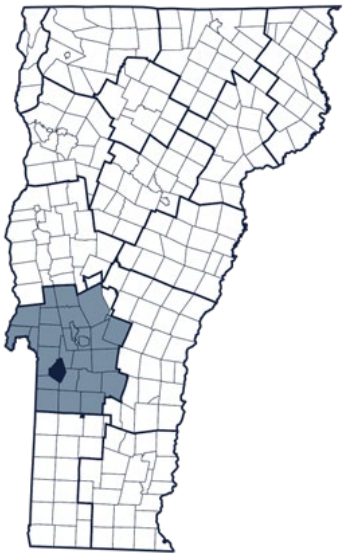


Source: FEMA LHMP Skill Share Workshop 2021

Furthermore, the Town seeks to be in accordance with the strategies, goals, and objectives of the 2023 State Hazard Mitigation Plan.

3 COMMUNITY PROFILE

Land Use and Development Patterns Middletown Springs began in 1784, when residents from the surrounding towns of Ira, Poultney, Wells, and Tinmouth petitioned the Vermont legislature to create a town bounded by the ridges that prevented them from attending meetings and worship services in their original town. The result is a uniquely shaped community defined by its encircling mountains.



Middletown Springs is a small rural community (the twenty-first largest) in Rutland County. Their village center is located at the four-way intersection of VT Routes 133 and 140. A community history of farming, industry, and resort tourism has left a legacy of elegant buildings along the main roads emanating from the village center.

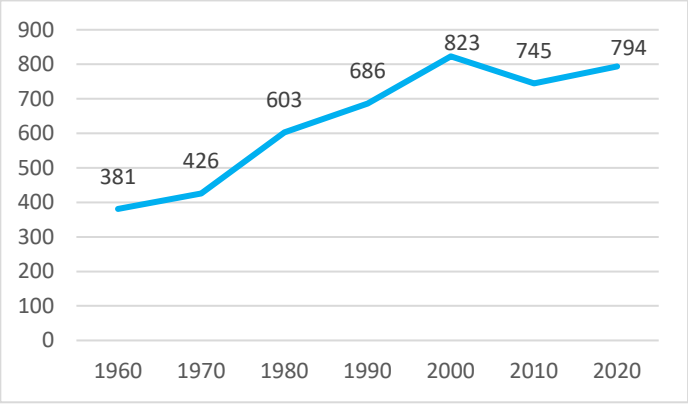
After starting as a center for mills, the local economy has seen the waxing and waning of agriculture as the dominant force. By the mid nineteenth century, industry returned to the Town, primarily in the form of manufacturing agricultural equipment. At the same time, the re-discovery of the Town's iconic mineral springs ushered in an era of tourism, with the Montvert Hotel in operation for thirty five years.

Today's technology and farming agribusiness culture favor large dairy enterprises. Middletown's hilly terrain and town culture do not favor such enterprises, resulting in a steady decline in large-scale agriculture. The Town is largely rural-residential, with a mixture of active agricultural lands, forestry lands, and home-based businesses.

The Green at the heart of the village is bordered by the Town's community church, the Middletown Springs Historical Society and its museum, fine historic houses, a country store, and the old cemetery. Right across from the Green is one of the Town's latest achievements, the new Town Office completed in 2023. The Town Garage, highway materials yard, transfer station, and Fire House are all located right behind the Green on North Street and Firehouse Lane. Other properties of significance in the village center include the Middletown Springs Elementary School, the Town Library, and Mineral Springs Park.

Land Features Aside from the relatively flat lands in the village and extending along the Poultney River, Middletown Springs has a very hilly terrain with steep forested ridgelines surrounding it. Elevations range from a low of around 660 feet along Route 140 on the west side of Town to over 2100 feet at the high points in the northeast side of town, with the village center mostly around 900 feet. The ridgelines and higher elevation areas are largely undeveloped. Because of their shallow soils and steep slopes, the ecosystems at higher elevations tend to be fragile and susceptible to damage.

Demographics and Growth Potential The 2020 Decennial U.S. Census shows a population of 794 and 409 housing units. After a period of steady growth in the second half of the twentieth century, the population has stabilized at around 800 people since 2000.



The median age in Middletown Springs is 56.1; considerably above the median age in Rutland County of 47.7. Around 27% of the population is 65 years or older and 17% are considered disabled.

Roughly 91% of Town residents were also residents in 2010. Of the new arrivals, about half came from other communities within Rutland County, and the other half from outside Vermont. The population density of the Town is 34 people per square mile compared to an overall state density of 68.

The Town has a sizable minority of seasonal or vacation homes, nearly one-third of the total land parcels. Of the permanent residences, 85% are site-built single-family units, 3% multi-family units, and 12% manufactured housing. A little less than 9% of residences are occupied by renters; 91% are occupied by homeowners.

Middletown Springs is not expected to grow significantly in the next decade due to several physical constraints - a lack of public water and wastewater utilities, certain soil types and hilly terrain, and its location with winding and narrow roads. In addition, there is strong public sentiment to maintain this rural character and historic settlement pattern.

Precipitation and Water Features Average annual precipitation is 44.9 inches of rain, with July being the wettest month. Average annual snowfall is 79.5 inches, with January being the snowiest month. Middletown Springs has about 145 precipitation days per year. Future projections from the University of California San Diego predict that by 2044, under scenarios of both intermediate and extreme greenhouse gas emissions, Middletown Springs will see 0-2 days of extreme precipitation.

Poultney River and many of its tributaries flow through Middletown Springs. Floodplains and riverbanks along the Poultney River and South Brook are significant natural resources. The Town is in the South Lake watershed of the Champlain Valley. Rainwater and snowmelt runoff is a regular feature of the landscape, with numerous year-round creeks, active springs, and intermittent and ephemeral waterways.

According to the Agency of Natural Resources, ±1.9% of the Town's land area (~274.3 acres) is Class II Wetland. These play an important role in water absorption and holding capacity, reducing flooding hazards and replenishing groundwater supplies.

Average Temperatures The average high temperature for Middletown Springs is 79.3°F, with July being the hottest month. There are 1.5 days annually when the high temperature is over 90°F, which is cooler than most places in Vermont. The coldest month of the year is January, with an average nighttime temperature of 8.5°F. There are 169.5 days annually when the nighttime low temperature falls below freezing, which is warmer than most places in Vermont.

Future projections from the University of California San Diego predict that by 2044, under scenarios of both intermediate and extreme greenhouse gas emissions, Middletown Springs will see 0-20 days above 90°F and 160-180 days below 32°F per year.

The Vermont Climate Action Office reports the period from 2010-2020 was the warmest decade on record; if this trend continues, Middletown Springs will likely exceed 1.5 annual days of temperatures above 90°F by 2050.

Drinking Water and Sanitary Sewer There are no municipal drinking water or sanitary sewer services in Middletown Springs. Homes and businesses rely upon individual wells for water supply and on-site septic systems for waste management.

Transportation Middletown Springs is ±23 square miles in size with primary access via Vermont Routes 140 (east-west) and 133 (north-south). According to 2024 VTrans Town Highway data, the Town has ±30.7 municipal road miles: 3.2 miles Class 2; 23.3 miles Class 3; and 4.2 miles Class 4. 13% are paved and 85% are gravel. In addition, there are 5.76 miles of State highway in Middletown Springs, for a total of ±36 traveled highways, including Class 4 roads.

The Town's 2018 road erosion inventory shows ±52% of the road mileage is hydrologically connected - meaning it is within 100 feet of a water resource (i.e., stream, wetland, lake, or pond). Proximity to water resources can make these sections of road more vulnerable to flooding and fluvial erosion.

The Town's 2022 structures inventory (short structures and culverts) shows Middletown Springs has 12 short structures (bridges with 6-20 foot span) and 360 culverts in the municipal road right-of-way. All culverts were inspected in 2022 by the RRPC. Of these, 39 culverts are classified as being in "poor" or "urgent" condition and should be considered for replacement and/or upgrade in accordance with Town Road and Bridge Standards.

According to VTrans, there are 4 town-owned long structures (bridges with >20 foot span). Long structures are inspected every two years by VTrans through the Town Highway Bridge Program.

The local road network is maintained by the municipal highway department, whose garage is located on North Street. The Town's two-person highway crew is hard-taxed to keep up with the three annual road phases of plowing, mud repair, and summer construction.

Electric Utility Distribution System Electric service to approximately 455 accounts is provided by Green Mountain Power via two primary circuits. Average annual outage statistics between 2020 and 2024 are summarized in **Table 1**.

Table 1: Power Outage Summary

Average Annual (2020-2024)	
Avg # of times a customer was without power in a year	3.56
Avg length of each outage in hours	4.30
# of hours the typical customer was without power	15.31
2024 only	
Avg # of times a customer was without power in a year	4.45
Avg length of each outage in hours	6.25
# of hours the typical customer was without power	27.78

The longest power outage affecting the greatest number of accounts between 2020 and 2024 was 6.81 hours and impacted 443 accounts in 2020. In 2023, there was a 4.93-hour long outage that affected 420 accounts. The longest outage between 2020 and 2024 lasted 67.63 hours; it occurred in 2024 and affected 29 accounts.

Public Safety Fire protection is provided by the Middletown Springs Fire Department, an all-volunteer organization. The Department is a member of the Rutland County Mutual Aid Association. Law enforcement is provided by contract with the Rutland County Sheriff's Department. Coverage is also available by the State Police as needed, though long delays are common.

Emergency medical care is provided by the Poultney Rescue Squad. Advanced paramedic services and transport is provided by the Regional Ambulance.

The nearest hospital is the Rutland Regional Medical Center, though specialist/medivac support is available at Dartmouth Hitchcock (53 miles) and the University of Vermont (70 miles).

Emergency Management As per the Town's Local Emergency Management Plan (LEMP), the role of Emergency Management Director (EMD) is currently being fulfilled by the Selectboard Chair (though these positions are not formally linked). The EMD works with others in town to keep the LEMP up to date and coordinates with nearby towns and non-profit agencies that serve vulnerable populations. The new Town Office serves as the emergency operations center when needed, as well as a cooling station during heat advisories.

Middletown Springs Town Office

4 PLANNING PROCESS

Plan Developers

A local Hazard Mitigation Planning Team participated in updating the Plan. Team members included the Selectboard Chair/EMD, Road Foreman, and town resident who is the District Manager for the Poultney-Mettowee Natural Resources Conservation District. It should be noted these team members also participated in the 2019 plan update.

The RRPC assisted with this Plan update. FEMA Building Resilient Infrastructure and Communities (BRIC) funds supported this process.

Plan Development Process

The 2025 Local Hazard Mitigation Plan is an update to the 2019 single jurisdiction mitigation plan. A summary of the process taken to develop the 2025 update is provided in **Table 2** and **Appendix C**.

Table 2: Plan Development Process

July 17, 2024 Planning Team Kick-off Meeting: discussed what an LHMP is; benefits of hazard mitigation planning; current plan status; planning process; and developed the public engagement strategy – see **Appendix C**. Planning Team meetings were not open to the public.

July-Sept 2024: Completed Phase 1 public engagement activities - see **Appendix C**.

Aug 7, 2024 Risk Assessment Workshop: confirmed details of the community profile (Section 3); completed risk assessment and began developing profiles for highest risk natural hazards (Section 5). Subject matter experts attended the Workshop to assist with risk assessments for Invasive Species and Infectious Disease.

Sept 4, 2024 Planning Team Meeting: finalized the Hazard Identification and Risk Assessment (Section 5) with input from Phase 1 engagement. This is a critical milestone in the plan development process, and the draft plan was prepared for presentation to the Selectboard and first public comment period.

Sept 12, 2024 Draft Plan Presentation: presented to Middletown Springs Selectboard to encourage input from local government and the public that could affect the plan's conclusions and better integrate with Town initiatives. Meeting was recorded and available on Town website.

Sept 12-Sept 26, 2024 Draft Plan Public Comment Period: draft Plan posted for first public comment period. Draft Plan discussed at Sept 26, 2024 Selectboard meeting with opportunity for public comments – coincided with close of first public comment period. Meeting was recorded and is available on Town website.

Oct 2024-Jan 2025: completed Phase 2 public engagement activities – see **Appendix C.**

Oct 2, 2024 Planning Team Meeting: discussed comments received on Sept draft; finalized hazard identification and risk assessment (Section 5); and began work on hazard mitigation strategy (Section 6).

Oct 17, 2024 Mitigation Action Evaluation Workshop: evaluated broad range of possible actions to address the highest risk natural hazards (Section 6).

Oct 30, 2024 Planning Team Meeting: continued work on hazard mitigation strategy; reviewed actions proposed in mitigation action plan (Section 6).

Nov 21, 2024: Planning Team Meeting: finalized the mitigation strategy (Section 6) with input from Phase 2 engagement; discussed mitigation strategy changes since 2019 (Section 4); confirmed plan maintenance details (Section 7). Planning Team then finalized the full draft Plan. This is a critical milestone in the plan development process and draft plan was prepared for presentation to the Selectboard and last public comment period.

Dec 12, 2024 Draft Plan Presentation: presented to Selectboard to encourage input from local government and the public. Meeting was recorded and available on Town website.

Dec 12, 2024-Jan 9, 2025 Draft Plan Public Comment Period: draft Plan was posted for last public comment period. Draft Plan discussed at Jan 9, 2025 Selectboard meeting with opportunity for public comments – coincided with close of last public comment period. Meeting was recorded and available on Town website.

Jan 9, 2025 Approval to Submit for APA: No public comments submitted, so Selectboard granted approval to submit the draft Plan for Approval Pending Adoption.

Jan 10, 2025 Final Draft Submission for APA: Final draft LHMP submitted to Vermont Emergency Management for Approval Pending Adoption.

In addition to Planning Team local knowledge and other relevant parties, several existing plans, studies, reports, and technical information were utilized in the preparation of this Plan. A summary of these is provided in **Table 3.**

Table 3: Existing Plans, Studies, Reports & Technical Information

2024 Local Emergency Management Plan Primarily used to identify local organizations that support vulnerable populations to ensure these organizations are invited to participate in the plan update.

2024 FEMA NFIP Insurance Reports Used to determine how many structures are insured, number of repetitive loss properties, and describe NFIP compliance in Section 6.

2023 State of Vermont Hazard Mitigation Plan Primarily referenced to develop the risk assessment and profiles in Section 5.

2023 State of Vermont Municipal Vulnerability Indicators Tool Referenced to develop the precipitation and temperature projections in Section 3, the risk assessment and profiles in Section 5, and Table 5 in Section 6.

2023 FEMA Local Mitigation Planning Handbook Used to ensure plan meets the Federal mitigation planning requirements, including those for addressing climate change.

2023 FEMA Hazard Mitigation Assistance Program Policy Guide Used to ensure plan meets the Federal mitigation planning requirements, including those for addressing climate change.

2023-2019 Green Mountain Power Outage Data Used to develop Table 1 in Section 3 and risk profiles in Section 5.

2022 Structures Inventory (culverts and short structures) Used to develop transportation information in Section 3, the flood risk profile in Section 5, and mitigation actions to address floods in Section 6.

2022 Poultney River Watershed Stormwater Master Plan Referenced to develop the flood risk profile in Section 5 and mitigation actions to address floods in Section 6.

2021 Vermont Climate Assessment Referenced to develop the flood risk profile in Section 5.

2020 United States Census Report Used to develop the Demographics and Growth Potential information in Section 3.

2018 Road Erosion Inventory Referenced to develop the flood risk profile in Section 5 and mitigation actions to address floods in Section 6.

2017 Middletown Springs Town Plan Referenced to develop Mitigation Strategy Update - Changes Since 2019 in Section 4 and mitigation strategy in Section 6.

2017 FEMA Region 1 Mitigation Ideas for Natural Hazards Used to develop mitigation actions to address impacts from severe winter storms, strong wind, and floods in Section 6.

2013 Stormwater Infrastructure Mapping Project Referenced to develop mitigation actions to address floods in Section 6.

2013 FEMA Mitigation Ideas Resource for Reducing Risk to Natural Hazards Used to develop mitigation actions to address impacts from severe winter storms, strong wind, floods, and extreme heat in Section 6.

2008 Flood Hazard Area Regulations Referenced to address NFIP compliance in Section 6.

2007 Poultney Tributaries Phase 1 Stream Geomorphic Assessment Referenced to develop the flood risk profile in Section 5 and mitigation actions to address floods in Section 6.

2006 Poultney River Phase 2 Stream Geomorphic Assessment Referenced to develop the flood risk profile in Section 5 and mitigation actions to address floods in Section 6.

VTrans Town Highway Bridge Inspection Reports Referenced to develop the flood risk profile in Section 5 and mitigation actions to address floods in Section 6.

Vermont Statewide Highway Flood Vulnerability and Risk Map Referenced to develop the flood risk profile in Section 5 and mitigation actions to address floods in Section 6.

VTrans Transportation Resilience Planning Tool Referenced to develop the flood risk profile in Section 5 and mitigation actions to address floods in Section 6.

Vermont Dam Inventory (VDI) Referenced to develop the flood risk profile in Section 5 and mitigation actions to address floods in Section 6.

National Oceanic and Atmospheric (NOAA) National Climatic Data Center's Storm Events Database Regional data for Western Rutland County used to develop the risk profile and hazard history in Section 5.

FEMA Disaster Declarations for Vermont Referenced to develop the risk profiles and hazard histories in Section 5.

OpenFEMA Dataset: Public Assistance Funded Project Summaries for Vermont Referenced to develop the risk profiles and hazard histories in Section 5.

Vermont Department of Health Referenced to develop the extreme heat risk profile in Section 5.

Vermont Agency of Natural of Natural Resources Referenced to develop the invasive species risk profile in Section 5.

Mitigation Strategy Update - Changes Since 2019

In 2019, Middletown Springs identified the following high risk hazards that they believed the community was most vulnerable to:

- Rain/thunderstorms with associated fluvial erosion, inundation flooding, high winds, and/or hail.
- Winter storms with associated extreme cold, snow, ice, and high winds.

Middletown Springs effectively integrated information from the 2019 Plan into budgets and other plans.

As the Town sought to implement the 2019 mitigation strategy to address their high risk hazards, they looked for opportunities to incorporate information and recommendations from the 2019 Plan into other plans, programs, and procedures. Provided below are some examples.

The Selectboard has worked closely with the Road Foreman to incorporate risk information and hazard mitigation goals into annual highway maintenance budgets and capital planning for municipal facilities and equipment. This remains an ongoing priority.

The Planning Commission is currently updating the Middletown Springs Town Plan. Last adopted in 2017, the Town Plan serves as the Town's framework and guide for reaching community goals, including those for how future growth and development should proceed. The risk information and hazard mitigation goals from the 2019 Local Hazard Mitigation Plan helped inform the Town Plan's flood resilience and land use policies and actions. These policies and actions support the goal of mitigating risks to public safety, critical infrastructure, historic structures, and municipal investments posed by flooding and fluvial erosion.

In 2019, Middletown completed its first road erosion inventory and Road Stormwater Management Plan (RSWMP) as required by the Municipal General Roads Permit (MRGP). The MRGP is required by the Vermont Clean Water Act and is intended to protect water quality by reducing stormwater-related erosion from municipal roads. The RSWMP includes an Implementation Table with the results of the road erosion inventory.

The Town has made significant progress in bringing its roads and drainage systems (culverts, ditches, turnouts, conveyance zones) up to basic maintenance MRGP standards. Several actions identified in the 2019 Plan were implemented through the RSWMP – see **Appendix B**. These improvements not only protect water quality, but also make the roads more resilient to flash flooding.

The Town worked with the Poultney-Mettowee Natural Resources Conservation District (PMNRCD) to identify opportunities for natural systems protection projects in Middletown. This was done as part of the development of the 2022 Poultney River Watershed Stormwater Master Plan. Many of the proposed projects are now included as mitigation actions in this Plan – see **Table 6**.

Middletown Springs also made significant progress in completing other mitigation actions identified in the 2019 Plan – see **Appendix B**. They have much to be proud of. One noteworthy accomplishment is the construction of a rain garden north of the Fire House in 2024. Rain gardens are a type of bioretention practice that mimic the volume reduction services provided by natural systems. By reducing peak flows, local flooding from small and medium storms is also reduced. This mitigation investment has 1) strengthened the community's Transportation lifeline, and 2) reduced risk to municipal infrastructure.

Mitigation actions taken by Middletown Springs since 2019 have made the community more prepared and less vulnerable to future natural hazard impacts.

Looking back over the past five years, Middletown has not experienced significant changes in development or population. As described in the Community Profile above, Middletown's population stabilized at around 800 people following the peak in 2000. Growth potential is also believed to be limited by a lack of developable land, a lack of public water and sewer utilities, and a strong public sentiment to maintain the rural character and historic settlement pattern of the Town.

So, changes in development and population since 2019 have not made Middletown Springs more vulnerable to natural hazards. Rather, the primary drivers for a shift in the Town's mitigation priorities in 2025 are changing weather patterns and increased awareness of emergency management's role in handling natural hazard impacts.

Increased awareness and changing weather conditions have most influenced the Town's 2025 mitigation strategy.

This shift is best emphasized in two respects. The first is the addition of Extreme Heat as a highest risk hazard in the 2025 Plan. Compared to 2019, the Extreme Heat hazard has a much higher probability and risk score. Given an increase in frequency for these hazard events, Extreme Heat impacts on vulnerable populations is now a greater concern for Middletown Springs. This is demonstrated by the Town's development and adoption of a Hot Weather Response Plan in 2022.

The second is the Town's growing concern over the impacts of mud season - see the Extreme Cold, Snow, and Ice profile in Section 5 for more information.

Since 2019, the acceleration of climate change has been increasing the frequency, duration, and intensity of storms, floods, fires, and extreme temperatures in Vermont. Local communities are feeling the impacts of climate change now, and these multi-hazard trends are expected to continue to increase in severity over the next century[1].

As a result, Middletown Springs considered the effects of future conditions, like climate change, on the type, location, and range of intensities of identified hazards when conducting the risk assessment for the 2025 Plan.

The list of assessed hazards was also expanded in the 2025 Plan to include invasive species and infectious disease, which are identified in the 2023 State Hazard Mitigation Plan.

In this Plan, natural hazards are defined as:

- Geological hazards including landslides and earthquakes.
- Environmental and climatic hazards including flooding, wind, hail, snow and ice storms, extreme temperatures, drought, wildfire, and invasive species.
- Biological hazards including infectious disease that can become epidemics or pandemics.

[1] FEMA Hazard Mitigation Assistance Program and Policy Guide, March 23, 2023

Subject matter experts from the Vermont Agency of Natural Resources and the Vermont Department of Health assisted the Planning Team with the risk assessments for invasive species and infectious disease. Invasive species ultimately scored as a highest risk hazard for the Town.

The 2025 risk assessment is presented in **Table 4**. The highest risk hazard impacts the Town believes they are most vulnerable to remain consistent to 2019, along with two (2) *new* additions:

- Extreme cold, snow, ice
- Flash floods/fluvial erosion
- Strong wind
- *Invasive species*
- *Extreme heat*

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

This same sentiment is expressed in many of the mitigation goals of the 2019 Plan. Some 2019 goals are not explicitly called out in the 2025 Plan; rather, their guiding principles influenced the identification, evaluation, and implementation of mitigation actions in Section 6.

When evaluating mitigation actions, the Town selected actions that support the mitigation goal and are acceptable and practical for the community to implement. This is in alignment with one of the goals from the 2019 Plan - "Ensure that mitigation measures are sympathetic to… the capacity of the community to implement them".

Unlike the 2019 Plan, mitigation actions that directly benefit a vulnerable population were assigned a "first priority" score in this Plan – see **Table 6**.

The Town's approach to hazard mitigation has evolved since 2019. They have experienced new and more intense hazard events that have shifted their goals and priorities.

5 HAZARD IDENTIFICATION AND RISK ASSESSMENT

Local Vulnerabilities and Risk Assessment

The Planning Team completed a risk assessment for a broad range of natural hazards, consistent with those in the 2023 State Hazard Mitigation Plan.

Hazards were ranked based on 1) probability of occurrence and 2) potential impact on community assets - people, infrastructure, the environment, and local economy. The assessment considered the effects of future conditions, like climate change, on the type, location, and range of intensities of identified hazards.

The ranking process is presented in **Table 4** and reflects the **highest risk hazards** the Town believes it is most vulnerable to. Highest risk hazards are those with a higher probability of occurrence and/or more severe or extensive impacts on community assets.

A summary of the risk assessment, including input from Phase 1 engagement activities, is provided here:

	Risk Score	Phase 1 Engagement Input
Extreme Cold, Snow, Ice	**10.00**	**64%** of survey respondents have experienced extreme cold, snow, ice events; **22%** of popup participants are concerned about extreme winter storms
Flash Floods/ Fluvial Erosion	**10.00**	**52%** of survey respondents have experienced flash flooding; **17%** of popup participants are concerned about floods; voted **#2** of top 3 hazards most likely to occur in the next 5 years
Strong Wind	**7.00**	**100%** of survey respondents have experienced strong wind events; **26%** of popup participants are concerned about strong wind; voted **#1** of top 3 hazards most likely to occur in the next 5 years
Invasive Species	**6.00**	(Not surveyed)
Extreme Heat	**5.00**	**56%** of survey respondents have experienced extreme heat; **13%** of popup participants are concerned about extreme heat; voted **#3** of top 3 hazards most likely to occur in the next 5 years

Table 4: Community Hazard Risk Assessment

Hazards	Probability	Potential Impact					Risk Score
		People	Infrastructure	Environment	Economy	Average	
Extreme Cold/Snow/Ice	**4**	**2**	**3**	**3**	**2**	**2.50**	**10.00**
Flash Floods/ Fluvial Erosion	**4**	**2**	**3**	**3**	**2**	**2.50**	**10.00**
Strong Wind	**4**	**3**	**2**	**1**	**1**	**1.75**	**7.00**
Invasives	**3**	**2**	**1**	**3**	**2**	**2.00**	**6.00**
Extreme Heat	**4**	**2**	**1**	**1**	**1**	**1.25**	**5.00**
Inundation Floods	2	2	2	3	1	2.00	4.00
Infectious Disease	2	4	1	1	1	1.75	3.50
Drought	2	1	1	2	2	1.50	3.00
Hail	1	2	1	1	2	1.50	1.50
Landslide	1	1	1	2	1	1.25	1.25
Wildfire	1	2	1	1	1	1.25	1.25
Earthquake	1	1	1	1	1	1.00	1.00

*Score = Probability x Average Potential Impact

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

Infectious Disease and Invasive Species

This Plan must assess the risk of all hazards identified in the 2023 State Hazard Mitigation Plan, including infectious disease and invasive species. These hazards are of a unique and diverse nature. While their probability of occurrence in Middletown Springs may be high, potential impacts will be highly dependent on the specific infectious agent or invasive.

For infectious disease, the team assumed an epidemic level of spread. They concluded the Vermont Department of Health (VDH), located in nearby Rutland City, is better equipped to mitigate any outbreaks. Therefore, the team considered it a lower-risk hazard for the municipality.

For invasive species, the team focused on a specific forest pest of high concern, the Emerald Ash Borer (EAB), due to a confirmed detection in Middletown Springs and the proximity of other confirmed sightings in the nearby communities of Poultney and West Rutland. They concluded that the probability of infestation is likely, and minor to moderate impacts justified mitigation. Therefore, the team considered invasives as a higher-risk hazard.

Given the diverse nature of these hazards, they cannot be fully explored in this Plan. Readers should look to VDH for more information on infectious disease and the Vermont Agency of Natural Resources for more information on invasive species, including terrestrial and aquatic invasives.

Each of the **highest risk hazards** are profiled in this section. Lower risk hazards do not justify mitigation due to a lower probability of occurrence and/or negligible impacts and are not profiled in this Plan.[2] See the State Hazard Mitigation Plan for information on lower risk hazards.

Highest Risk Hazard Profiles

Extreme Cold, Snow, and Ice events typically occur between the months of December and March in the Rutland Region. They can include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation. Events can also be associated with Strong Wind or Floods, increasing the potential hazard impacts.

The costs of these storms come in the form of power outages due to heavy snow or ice, damaged trees, school closings, and traffic accidents.

From 2001 to 2010, Rutland County experienced $2.27 million in property damage from winter storms, including Disaster Declarations DR3167 in 2001 and DR1698 in 2007.

From 2011 to July 2024, the County experienced $2.72 million in damage, with $465,000 in property damage due to a 10" - 20" heavy, wet snowfall across the county in December 2014 (DR4207) and $1 million in crop damage due to a hard freeze in May 2023 (S5470).

22% of popup participants are concerned about extreme winter storms. Winter weather impacts of greatest concern are power outages and loss of road accessibility.

64% of survey respondents have experienced severe winter storm events. Winter storms create a higher risk of car accidents, and extreme cold poses a higher risk of hypothermia and frostbite, especially if they coincide with power outages. Extreme winter storms can put vulnerable populations at even greater risk, especially the homeless and those relying on electric-powered medical devices.

This concern was echoed by a survey respondent who stated – "*At some point it's likely that someone will have a medical emergency which becomes life threatening due to loss of power and/or impassible roads due to storm damage.*"

See the Strong Wind profile below for more information about the Town's vulnerability to power outages.

Snow accumulation and ice events typically do not result in loss of road accessibility. However, the Town relies on a two-person crew to ensure all roads are accessible, even in major accumulation events. This can result in it taking longer to clear all roads. The Town-maintained western stretch of Route 140 to the Poultney town line has substantial traffic volumes, and its maintenance during a severe winter storm is a particular burden on the Town's limited highway resources.

Roads historically prone to drifting include Dudley Road, Spruce Knob Road, Lookaway Road, Coy Hill Road, and Route 140. These roads are no longer a concern for the Town (except Route 140) due to recent structural development and/or a minimal number of impacted households. Roads adjacent to critical facilities (Fire House, Town Office, Town Garage, Elementary School) are well maintained.

Overhead utility lines that are covered in ice or wet snow accumulation pose the greatest risk to infrastructure. Trees along the roadside may also fall in the road or on powerlines due to the weight of ice or wet snow accumulation.

"Mud season" is a growing concern—the period between winter and spring when the ground thaws and freezes, causing mud on gravel roads. As hard winter freezes become less common, Middletown Springs is experiencing thaw-freeze cycles earlier, complicating plowing on its gravel roads.

The primary concern is tree damage, which detracts from the quality of their services, including stormwater management.

[2] All FEMA-declared disasters in Rutland County since the last Plan update in 2019 have been reviewed. This includes those related to hazards not profiled, such as DR-4532 for the COVID-19 pandemic.

Given the Town's predominantly rural nature, agriculture products are vulnerable here. Beyond farm products, local businesses are at risk in the short-term; potential impacts include employee and customer inaccessibility, commute delays, and frozen pipes.

Extreme Cold, Snow, and Ice Hazard History

These are the most up to date significant events impacting Middletown Springs. All damages are to property unless otherwise noted. Rutland County Disaster Declarations are depicted in **bold**.

5/18/2023: S5470 record low in the 20s: $1 million regional crop damage
2/3/2022: 8-12" snow mixed with freezing rain: $50,000 regional damage
1/16/2021: 3-6" wet snow: $10,000 regional damage
2/7/2020: 8-12" snow; ¼" ice: $20,000 regional damage
3/22/2019: 9" snow: $15,000 regional damage
1/13/2018: ½" freezing rain/sleet: $5,000 regional damage
3/14/2017: 18" snow: $25,000 regional damage
2/1-2/2015: Record cold month with 15-20+ days below zero and 10" snow: $15,000 regional damage
1/7/2015: 0-10 degrees with wind of 15-30 mph creating wind chills colder than 20-30 below zero: no reported local damage
12/9/2014: DR4207 10-20" snow: no reported local damage; $250,000 regional damage
3/12/2014: 20" snow: $35,000 regional damage
3/6/2011: 6-12" snow, ¼" ice: $10,000 regional damage
2/23/2010: 6-30" snow: $100,000 regional damage
12/11/2008: 5-9" snow/glaze ice: $50,000 regional damage
1/26/2005: 3" snow: $15,000 regional damage
3/5/2001: EM3167 2-18" snow: $1,780 local damage

Floods can damage or destroy property; disable utilities; destroy or make impassable roads and bridges; destroy crops and agricultural lands; cause disruption to emergency services; and result in fatalities.

People may be stranded in their homes without power, heat, or communication or they may be unable to reach their homes. Long-term collateral dangers include disease outbreaks, loss of livestock, washout of septic systems causing water supply pollution, downed power lines, loss of fuel storage tanks, fires, and release of hazardous materials.

As noted in the 2023 State Hazard Mitigation Plan and 2021 Vermont Climate Assessment, flooding is the most common recurring hazard event impacting Vermont communities. There are two types of flooding: inundation and flash flooding. Inundation occurs when water rises onto low-lying land. Flash flooding is a sudden, violent flood that often entails fluvial (i.e., streambank) erosion.

While inundation-related flood loss can be a significant component of flood disasters, the more common mode of damage in Vermont is fluvial erosion. Fluvial erosion is often associated with the physical adjustment of stream channel dimensions and locations during flood events. These dynamic and often catastrophic adjustments are due to bed and bank erosion of naturally occurring unstable stream banks, debris and ice jams, or structural failure of or flow diversion by human-made structures.

"Damage from high flows is the single most costly type of disaster in Vermont, primarily due to the erosive power of water. Many roads and culverts conflict with the room needed by streams and rivers."
2021 Vermont Climate Assessment

Several major flood events have affected Rutland County in recent years, resulting in multiple Disaster Declarations. From 2001 to 2010, the County experienced roughly $2.6 million in property damage due to flood events. The worst flood came in August 2011 from Tropical Storm Irene (DR4022), which dropped up to 10-11 inches of rain. Irene caused 2 deaths, $55 million in property damage, and $2.5 million in crop damage in Rutland County.

Although Irene was technically a tropical storm, its effects are profiled in this floods section, as Irene brought only large rainfall and flooding to the Town and not the strong wind typically associated with tropical storms. This caused most streams and rivers to flood in addition to widespread and severe fluvial erosion. Middletown Springs experienced approximately $102,000 in local damage during Irene - $26,710 Individual Assistance; $68,970 Public Assistance; and $6,340 National Flood Insurance (NFIP) claims.

From 2012 to December 2024, Rutland County experienced approximately $3.5 million in damages primarily due to four Disaster Declarations: $2 million in July 2017 (DR4330); $1 million in April 2019 (DR4445); $500,000 in July 2023 (DR4720)[3]; and $50,000 in July 2024 (DR4762).

In Middletown Springs, floods are a risk. 17% of popup participants are concerned about floods. Damages from Tropical Storm Irene were significant, resulting in approximately $102,000 in impacts.

Middletown is vulnerable to inundation flooding primarily along the Poultney River; however, the severity and extent of damages from inundation flooding are typically minor. Mineral Springs Park on Burdock Avenue is the community asset survey respondents are most concerned about losing due to inundation flooding. In addition, there are 40 buildings in the FEMA floodplain, as well as roads, culverts, and bridges.

40 buildings (7% of community structures) are in the Special Flood Hazard Area; mostly single family or mobile homes and accessory buildings.

According to FEMA, 5% of properties have flood insurance. These policies cover $598,000 in value. **There are no repetitive loss properties.**

Unlike inundation floods, flash floods can occur any time the area has heavy rain. These flood events can impact areas outside designated floodplains, including along streams confined by narrow valleys (also known as River Corridors). A wide range of assets are at risk from flash floods. There are 20 buildings in State-mapped River Corridors as well as roads, culverts, bridges, and dams.

52% of survey respondents have experienced flash flooding. According to the National Weather Service, floods kill more people than any other weather-related hazard. Most flood-related deaths occur while driving a vehicle into flood waters.

For those sheltering in place, the greatest risk beyond the floodwaters themselves is their ability to isolate. The rapid and erosive destruction of nearby infrastructure may render flooded areas inaccessible. The result is people becoming trapped and requiring swift water rescues or critical assets such as medical services becoming unavailable. Vulnerable populations, especially those with limited range of motion, face the greatest risk of isolation from life-supporting services.

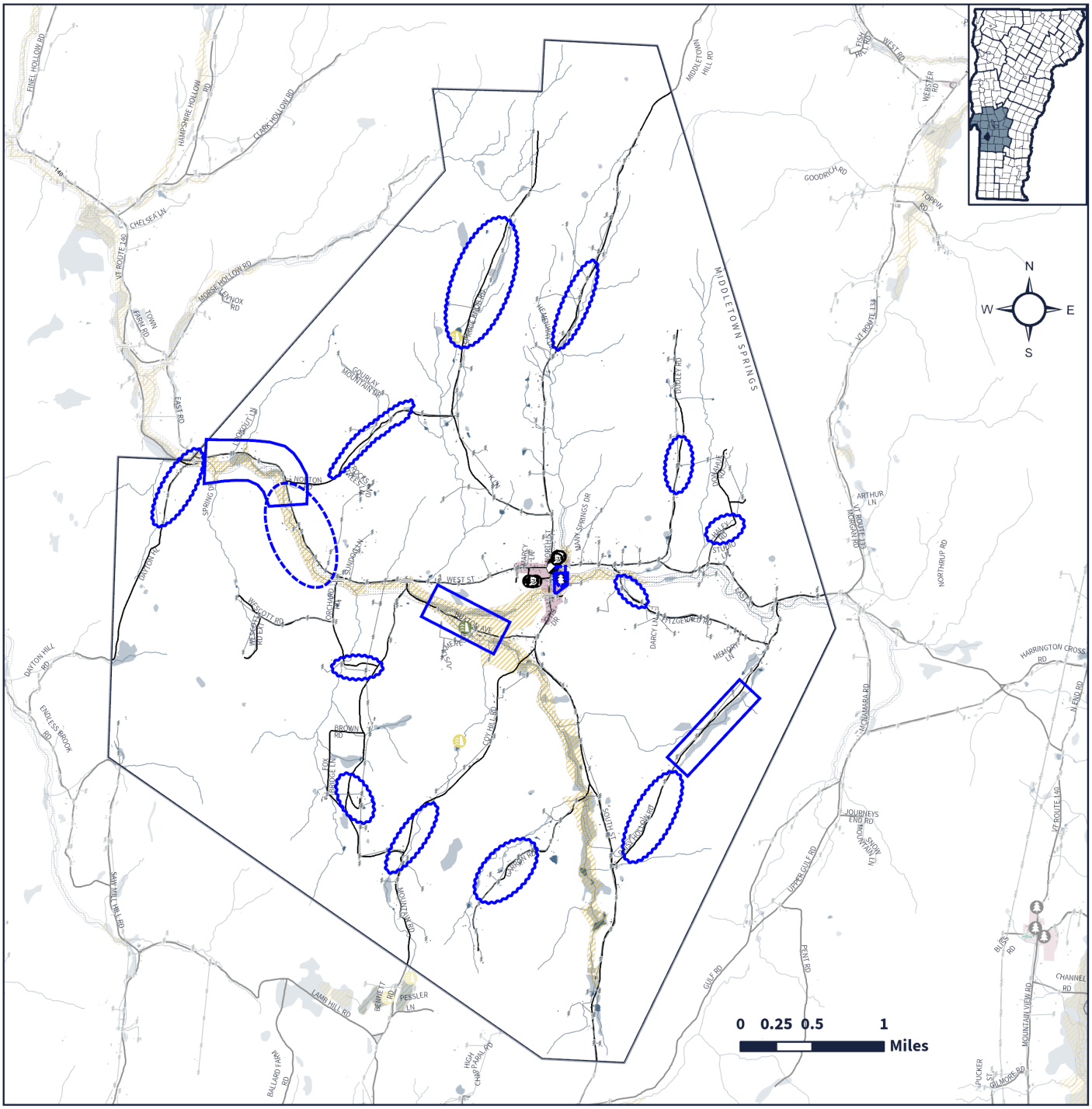
The most common type of flash flood damage is road washouts. When runoff volumes exceed the capacity of the stormwater drainage system (i.e., ditching and culverts), washouts can occur. The Town's structures and road erosion inventories, ANR's Municipal Vulnerability Indicators Tool, and VTrans Highway Flood Vulnerability and Risk tools were used to help identify locations and assets at risk from flash flooding. Areas of concern are shown on the following map.

Flash floods periodically wash out sections of nearly every gravel road in Middletown Springs. The most recent event occurred in April 2019 (DR4445) with approximately $70,000 in local damage.

Dayton Hill Road Washout – April 2019

[3] While DR4720 damages included land and mudslides linked to fluvial erosion, these hazards did not manifest in Middletown Springs and are omitted from this Plan based on a lack of recent available data.

MIDDLETOWN SPRINGS - FLOOD RISKS



- Town Boundaries
- Designated Village Boundaries
- Buildings
- Roads
- Power Lines
- Bridges
- Culverts
- Public Water Sources
- Lakes & Ponds
- Wetlands
- Rivers & Streams
- River Corridors

FEMA Floodplain

- FEMA Floodplain

- Shelter
- Fire House
- Local Emergency Operation Centers
- Schools
- Parks

Dams

- Significant Hazard Potential
- Low Hazard Potential
- Minimal Hazard Potential

Flood Area of Concern

- Flash Flood
- Fluvial Erosion
- Inundation Flood

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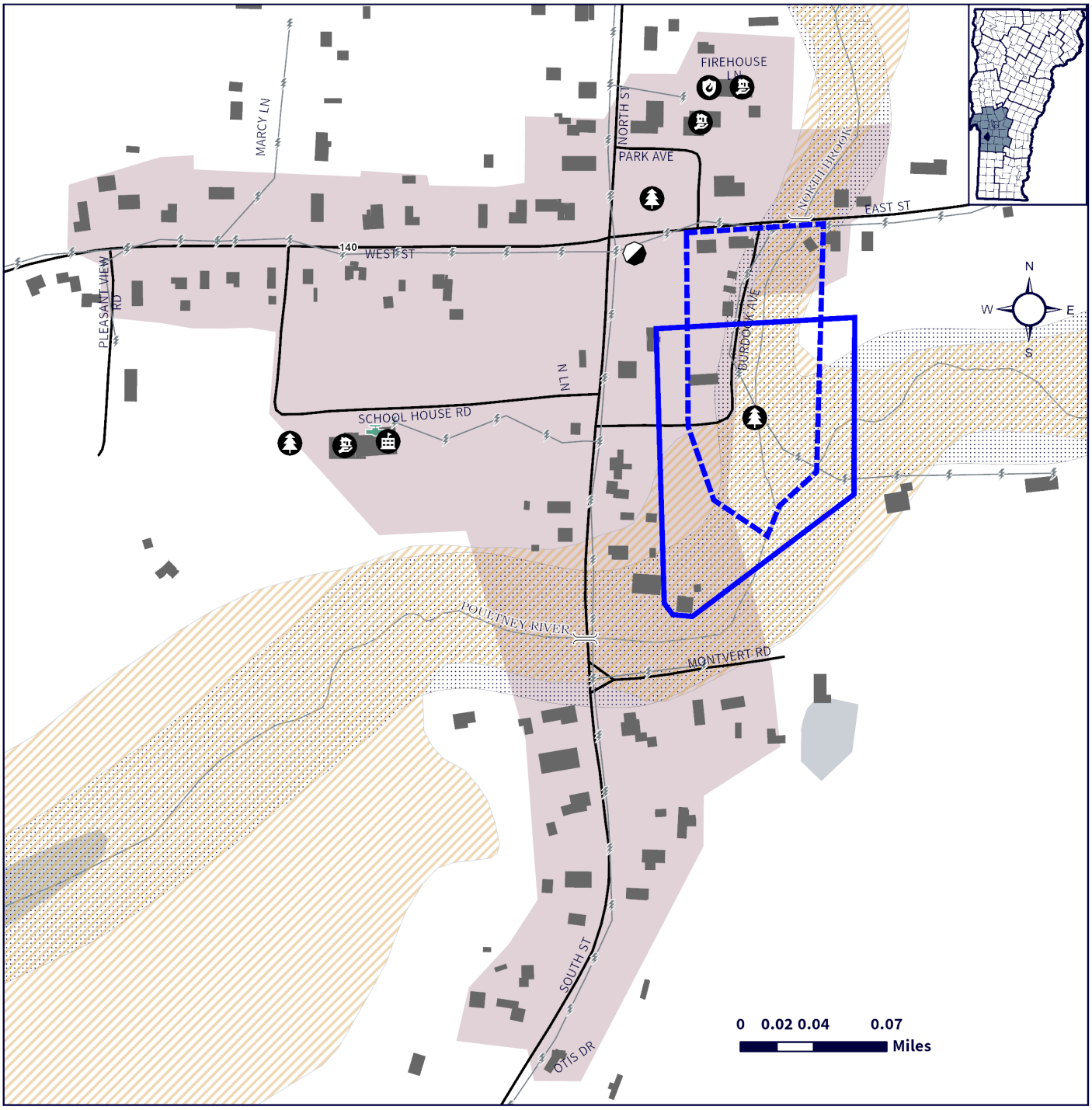
MIDDLETOWN SPRINGS - VILLAGE CENTER



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FEMA Floodplain

- FEMA Floodplain

- Shelter
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- Local Emergency Operation Centers
- Schools
- Parks

Flood Area of Concern

- Fluvial Erosion
- Inundation Flood

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Culvert failures and road washouts can have a significant negative impact on the Town, especially if they occur on roads considered locally important routes for through-traffic, short-cuts, detours, and/or access to critical facilities.

When roads are impacted by flooding, the Town coordinates with the Fire Department and State Dispatch to close roads and set up detours. Road closures can create longer commute times and longer emergency service response times.

In addition to stormwater runoff from roads, ice or debris jams and dam failures can result in flash flooding in Middletown Springs. Although they are not common, the Town does have the potential for ice or debris jams – particularly in the Poultney River along Route 140.

There are three (3) dams in Middletown listed in the Vermont Dam Inventory, a database managed by the VT Dam Safety Program. Buxton's Pond Dam, located on South Brook, is privately owned and classified as minimal hazard potential (Note: The Town stated nothing remains of this dam besides the earthwork). Fenton Dam, located on Vail Brook, is privately owned and classified as low hazard potential. Coy Brook Dam, located on Coy Brook, is owned by the Town and is classified as low hazard potential. The two low hazard potential dams are in good condition as of their last inspections in 2023. There are no high hazard potential dams in Middletown Springs.

As mentioned previously, flash floods often entail stream bank or fluvial erosion. Excessive erosion can trigger land or mudslides.[3] It also has a negative impact on water quality, potentially resulting in increased turbidity, enhanced phosphorus transport, or the release of legacy pollutants. The sediment mobilized by fluvial erosion can also contribute to aggradation and dammed streams.

Two areas of particular concern for the Town include North Brook between Route 140 and the confluence of the Poultney River, and Poultney River adjacent to West Street near the Norton Road intersection. The latter underwent infrastructure reinforcements following Irene but is still monitored as a potential stress point.

Existing studies helped identify other locations and assets at risk from fluvial erosion. These include a 2006 Phase 2 Stream Geomorphic Assessment and Stream Corridor Plan for the Poultney River watershed; a 2007 Phase 1 Stream Geomorphic Assessment for the Poultney River watershed; and the Stormwater Master Plan for the Poultney River Watershed completed in March 2022.

Stream Geomorphic Assessments (SGAs) provide information about the physical condition of streams and factors that influence their stability. The 2006 and 2007 Poultney River watershed SGAs identify priority locations for river corridor protection, planting stream buffers, stabilizing stream banks, removing berms, and removing or replacing human-placed structures (dams, bridges, culverts).

Stormwater Master Planning (SWMP) involves identifying stormwater, sediment, nutrient, and septic inputs to waterways and designing projects to mitigate those inputs. These projects eliminate inputs at the source through green stormwater infrastructure, septic system improvements, back road projects, or improving floodplain access within the stream network to increase sediment attenuation.

The 2022 Poultney River Watershed SWMP recommended 51 projects, including eight (8) in Middletown Springs, to reduce the environmental impacts of nutrient and sediment loading to Lake Champlain, as well as mitigate flood vulnerability to municipal or state road and drainage infrastructure.

As weather patterns shift and we see larger storms and more frequent freeze-thaw cycles, the Town will monitor for signs that rivers that have historically been stable are becoming less stable, with increased erosion, widening, trees falling in from its banks, etc.

As the above studies demonstrate, environmental impacts from flooding can be significant. This can in turn have an adverse impact on local tourism and recreation. Flood events with associated road closures can also have a short-term impact on the local economy due to fewer shopping trips and commuter delays.

Floods Hazard History

These are the most up to date significant events impacting Middletown Springs. All damages are to property unless otherwise noted. Rutland County Disaster Declarations are depicted in **bold**.

7/11/2023: DR4720 2" rain: no reported local damage; $500,000 regional damage

8/24/2020: 2-3" rain: $10,000 regional damage

4/15/2019: DR4445 1-2" rain with significant snow melt: $47,536 local damage; $1 million regional damage

7/1/2017: DR4330 3-4" rain the previous 3-4 days with flash flooding on 7/1/17: no reported local damage; $2 million regional damage; $100,000 vegetable crop damage

6/25-7/11/2013: DR4140 heavy rain over multiple days: no reported local damage; $420,000 regional damage

8/28/2011: DR4022 Tropical Storm Irene with ±5" rain: $102,080 local damage ($26,710 Individual / $68,970 Public / $6,340 NFIP); $55 million regional damage; $2.5 million crop damage

1/18/2006: 1 ½-2 ½" rain with significant snow melt: $50,000 regional damage

12/16/2000: DR1358 2-4" rain: $27,470 local damage

Strong Wind, as defined by FEMA's National Risk Index, is damaging wind that exceeds 58 mph. It can occur alone, such as during straight-line wind events, or can accompany other natural hazards, including severe thunder and/or winter storms.

From 2001 to 2010, Rutland County experienced nearly $7.9 million in property damage, with the most significant damage from an April 16, 2007 event totaling $4.5 million.

From 2011 to July 2024, wind events resulted in just under $3.5 million in property damage in Rutland County, with $802,000 in 2017 and $548,000 in 2022.

Strong winds are possible here; 100% of survey respondents have experienced a strong wind event. Middletown Springs is susceptible to high directional winds town wide. Many storms with high winds result in downed trees as well as damaged phone and power lines, buildings, and other property.

26% of pop-up participants are concerned about strong wind. It poses a threat to lives, property, and vital utilities primarily because of flying debris or downed trees and power lines.

As noted in this Plan's Community Profile, the longest power outage between 2020 and 2024 lasted for 67.63 hours; it occurred in 2024 and affected 29 accounts. In 2020, the Town had a power outage lasting 6.81 hours that impacted 97% of accounts.

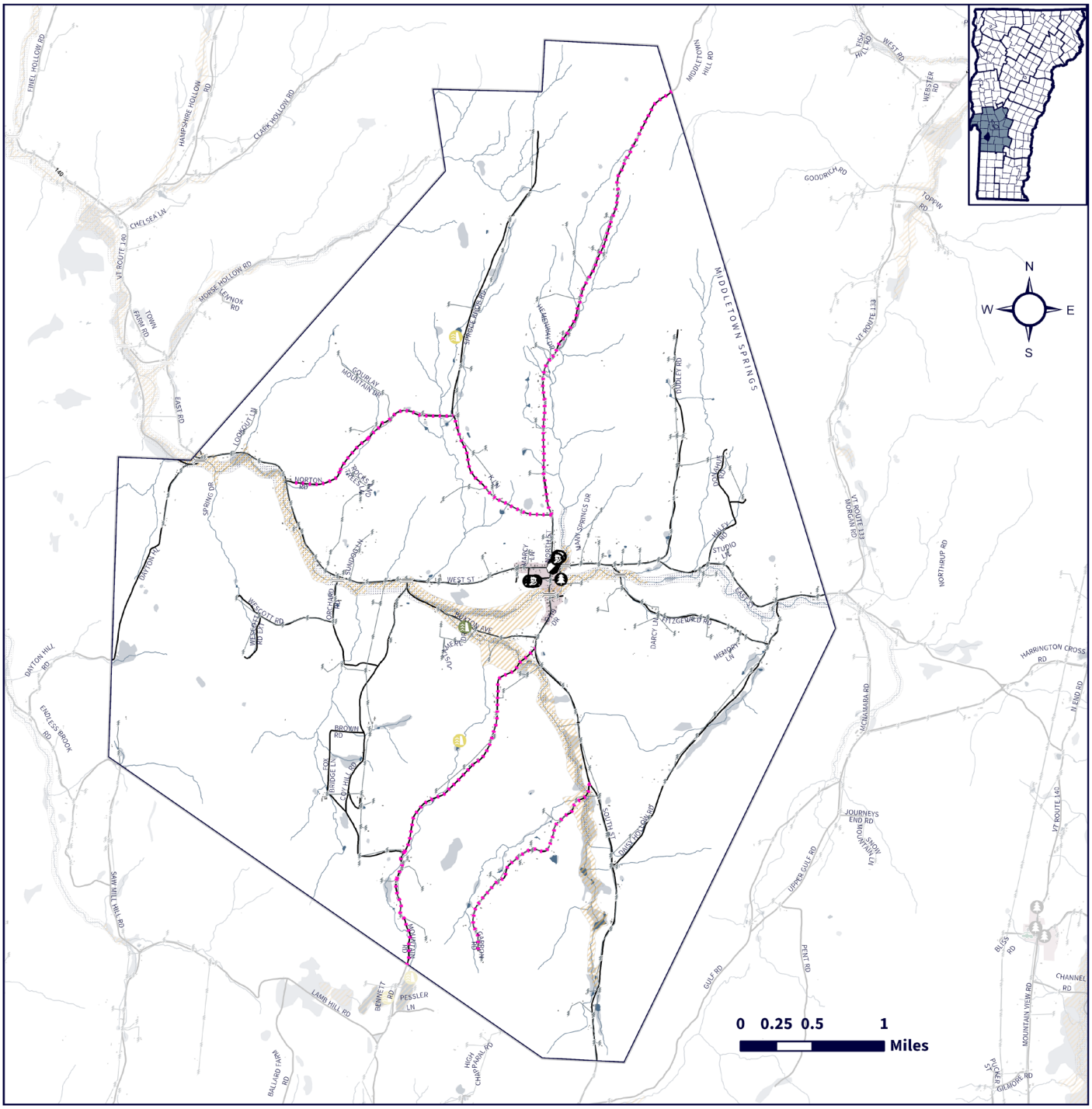
Loss of power during periods of extreme cold or heat can make sheltering in place challenging. Because there is no municipal water system, when there is a power outage, those that rely on a private well are also without water. Without a back-up supply of power, people need to be prepared to withstand potentially several days without power or seek alternative accommodations.

Downed trees within the road right-of-way are the root cause of many power outages. Roads that pass through dense wooded areas are prone to downed trees, which can lead to fallen power lines. Areas of particular concern are shown on the following map.

Power outages are also the main reason for disrupting communications, which are crucial in times of crisis. The loss of phone service is of particular concern for Middletown's more remote homes, vulnerable populations, and seasonal residents. Landline phones that have been converted from copper wire to fiber rely on an in-home battery back-up. The battery life is typically less than eight hours, whether the phone is used or not. Though many residents use cell phones, service in Middletown Springs is spotty, further complicating the problem of contacting emergency services during power outages.

Telecommunications are also needed for warning systems before a disaster, as well as for response during and recovery after. During a disaster, municipal response is managed by the local emergency operations center (EOC): this would include all communications from phone calls to internet browsing and 2-way radio.

MIDDLETOWN SPRINGS - HIGH WIND RISKS



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- River Corridors

FEMA Floodplain

- FEMA Floodplain
- Shelter
- Fire House
- Local Emergency Operation Centers
- Schools
- Parks
- High Wind Area of Concern

Dams

- Low Hazard Potential
- Minimal Hazard Potential

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The only critical facility with backup power is the Fire Station. Critical facilities not equipped with backup power include the Town Office (EOC), Middletown Springs Elementary School (primary shelter), Community Church (alternate shelter), St. Anne's Church, and Town Library.

In addition to power outages, downed trees can damage buildings and block road access. Several survey respondents expressed concern about roadsides becoming more dangerous as trees grow bigger and age. One respondent stated – "*Trees that need to be removed near roads and powerlines need to be a priority in this town. The continued power losses due to downed lines and no access due to closed roads is unsafe for the residents of our town. High wind events will continue in the future, and not doing anything now, will lead to misfortune later.*"

Like extreme cold, snow, ice events, the primary environmental impact of concern is tree damage.

Strong wind with associated power outages can have a short-term impact on the local economy due to business closures.

Strong Wind Hazard History

These are the most up to date significant events impacting Middletown Springs. All damages are to property unless otherwise noted. Rutland County Disaster Declarations are depicted in **bold**.

4/3/2024: 52 mph wind: $50,000 regional damage
2/28/2024: 48 mph wind: $25,000 regional damage
9/15/2021: 50 mph wind: $10,000 local damage
3/1/2021: 39 mph wind: $20,000 regional damage
8/21/2020: 50 mph wind: $10,000 local damage
8/4/2020: 45 mph wind: $35,000 regional damage
7/6/2019: 50 mph: $5,000 local damage
2/24/2019: 48 mph wind: $25,000 regional damage
4/1/2018: 63 mph wind: $50,000 regional damage
10/30/2017: 40 mph wind: $100,000 regional damage
7/1/2017: 50 mph wind: $2,000 local damage
5/5/2017: 64 mph wind: $500,000 regional damage
8/5/2014: 50 mph wind: $2,000 local damage
12/21/2012: 61 mph wind: $50,000 regional damage
12/1/2010: 52 mph wind: $100,000 regional damage
5/8/2010: 50 mph wind: $5,000 local damage
4/16/2007: DR1698 "Nor'icane": 69 mph wind, 3" snow and rain: $5,615 local damage $3.5 mil regional damage

Invasive Species are typically introduced to non-native ecosystems by human activity, both intentional and accidental. Not every non-native species is invasive; the organism must be capable of causing harm to the environment, the economy, or human health to qualify. The exact nature of these harms varies by species, but commonalities include a change in native species composition, a disruption of natural ecosystem functions, and millions of dollars spent annually on control and spread prevention measures.

Though many aquatic and terrestrial invasives currently inhabit Vermont, forests pests are most relevant given their impacts on local trees. Examples include the Asian long horned beetle, oak wilt, and spotted lanternfly. This Plan examines the impacts posed specifically by emerald ash borer (*Agrilus planipennis*), an exotic beetle, given the data available for this species. Emerald Ash Borer (EAB) is well established in Rutland County and was first detected in Middletown Springs in 2018.

EAB larvae burrows through the inner layer of the ash tree's bark, impeding the tree's ability to conduct water and nutrients throughout the tree. Lacking sufficient water and nutrients, healthy ash trees can die within 1-4 years of exhibiting the first signs of invasion.

Once detected, it is virtually impossible to eradicate or contain invasive species. Millions of dollars are spent in Vermont each year for long-term management and asset protection.

Those working to remove an infested tree are at the greatest risk of injury. Once infested, the tree becomes brittle, significantly increasing the risk and complexity of its removal.

Infested trees along roads become hazards as they die and pull down powerlines or fall in the roadway, as well as add to riverine debris during high precipitation events.

Because 5% of Vermont's trees are ash, the State's forest composition is vulnerable to EAB. While it is present in most Vermont counties, its population is low, and it has infested only a small percentage of the state's total ash trees.

Sullivan Woods, the Town's only tract of municipal forest, is about 14 acres in size and has a documented history of invasive species sightings. While the location and number of ash trees at risk is currently unknown, the Town believes Sullivan Woods is a recreational asset at risk as the spread of invasive forest pests continues.

EAB has serious financial implications for forest landowners and municipalities in the form of productive timber losses and costs to remove ash trees from along roadsides. It would be difficult to assign financial losses for Rutland County specifically, so this information is not included.

Emerald Ash Borer (EAB) Hazard History

Because invasive species often spread over a long period of time, identification of a hazard event concerning invasive species is rather difficult. FEMA also does not declare federal disasters for invasive species outbreaks.

Extreme Heat is an emerging concern for communities acclimated to cooler environments. Excessive heat events involve a combination of significantly high temperatures and high humidities. Multiple excessive heat event days in a row, during which the heat index meets or exceeds 90°F, are known as heatwaves. Vermont's "heat season" typically lasts from May to September.

From 2001-2010, Rutland County experienced one heatwave, which occurred in August 2006. From 2011-2020, Rutland County experienced five heatwaves, four of which occurred during the Vermont heat season. The fifth, which occurred in March 2012, resulted in $650,000 in damage to the regional maple sugaring industry.

Extreme temperatures have and will continue to impact Middletown Springs. 56% of survey respondents have experienced extreme heat events; 44% believe one will occur in the next five years.

Vermont Department of Health data indicates state residents experience heat-related illnesses at around 87°F. The individuals most susceptible to heat illnesses include vulnerable populations, outdoor workers, and the homeless.

Other at-risk indicators include living alone, having limited transportation options, and lacking access to air conditioning or other cooling options. Given the reliance on drilled wells, access to potable water may be hindered by increased rates of evapotranspiration.

The materials used in transportation infrastructure exhibit a limited range of heat tolerance. Asphalt can melt and crack upon cooling, while concrete can buckle if there is limited room for the slab to expand. Thermal expansion can swell bridge connections and induce their collapse.

A gradually warming climate can increase soil drying rates, contributing to drought-like conditions. Trees that are heat stressed are more likely to succumb to disease or pest invasions. Conversely, warmer air can hold more water vapor, which may in turn influence the frequency and magnitude of extreme precipitation. The Town has experienced a noted increase in uprooted trees falling due to saturated soil conditions.

Higher temperatures and reduced snowpack can impact maple sugar production, an industry with an established presence in Middletown. Dairy farms and apple orchards will also have less production, as they require cooler temperatures to produce profitable yields.

Extreme Heat Hazard History

These are the most up to date significant events impacting Middletown Springs. All damages are to property unless otherwise noted. Rutland County Disaster Declarations are depicted in **bold**.

7/20/2020: 95°F temps with an excessive heat index of 95-100°F for four days; no reported damages

6/23/2020: 90°F temps with an excessive heat index of 95-100°F for six days; no reported damages

7/6/2018: 90°F temps with an excessive heat index of 95-110°F for six days; no reported damages

3/22/2012: 70 and 80°F temps, with maximums 30-40°F above normal for four days; $650,000 regional damage to maple sugaring industry

7/21/2011: 95°F temps with an excessive heat index of 100-108°F for four days; no reported damages

8/1-8/2/2006: 90°F temps with an excessive heat index of 100-105°F; no reported damages

Survey Respondents Said….

Natural hazard impacts they are concerned about:

#1 Loss of life or injuries
#2 Damage or loss of roads, bridges, public utilities
#3 Damage to environmental resources
#4 Loss or damage to agricultural operations
#5 Loss of wildlife

Vulnerability Summary

Extreme Cold, Snow, and Ice

Vulnerable Assets people (especially older adults, children, and sick); highway infrastructure; power lines; telecommunications systems; crops/agriculture products; trees; local businesses

Location Town-wide; drifting locations - Route 140; potential ice/debris jam – bridge #B3 on Route 140

Extent 15-20+ days below zero; up to 30" snow; ½" freezing rain/sleet; ¼" ice

Past Occurrence $1,780 local property damage; $250,000 regional property damage; $1 million regional crop damage

Future Probability Highly Likely, >75% probability in a year

Floods

Vulnerable Assets people (especially older adults, children, and sick); highway infrastructure; buildings; dams; municipal park; rivers and streams; local businesses

Location *Inundation Flooding:* along Poultney River; Daisy Hollow Road, Lookout Lane, Spring Drive and Buxton Ave; Mineral Springs Park

Flash Flooding: Norton Road, Spruce Knob Road, North Street, Dudley Road, Haley Road, Fitzgerald Road, Daisy Hollow Road, Garron Road, Coy Hill Road, Dayton Hill Road, Orchard Road; Poultney River

Fluvial Erosion: along Poultney River and its tributaries; Burdock Ave, portions of West St; Mineral Springs Park

Extent ±5" rain; extent data for fluvial erosion is unavailable

Past Occurrence $102,080 local property damage; $55 million regional property damage; $2.5 million regional crop damage

Future Probability Highly Likely, >75% probability in a year

Strong Wind

Vulnerable Assets people (especially older adults, children, and sick); highway infrastructure; buildings; power lines; telecommunications systems; trees; local businesses

Location Town-wide; North Street, Norton Road, Spruce Knob Road, Coy Hill Road, Mountain Road, Garron Road

Extent 60-80 mph wind

Past Occurrence $10,000 local property damage; $3.5 million regional property damage

Future Probability Highly Likely, >75% probability in a year

Invasive Species

Vulnerable Assets people; highway infrastructure; power lines; trees

Location road right-of-way; Sullivan Woods; other forested areas

Extent Unknown, first detection in 2018

Past Occurrence Unknown

Future Probability Likely, at least 1 chance in next 10 years

Extreme Heat

Vulnerable Assets people (especially older adults, children, and sick); highway infrastructure; crops/agriculture products; trees; local businesses

Location Town-wide

Extent up to 95°F temps; heat indices up to 110°F; six days

Past Occurrence $650,000 regional damage to maple sugaring industry

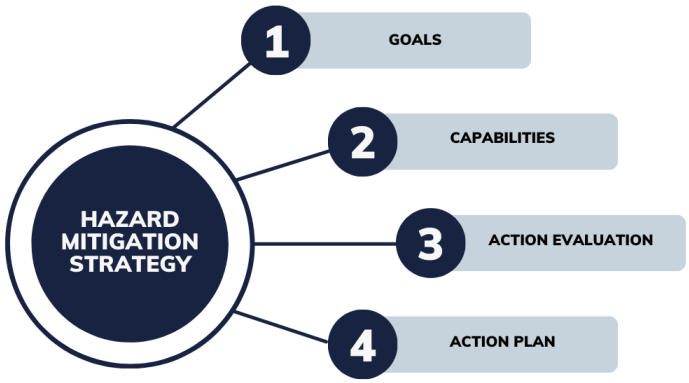
Future Probability Highly Likely, >75% probability in a year

The Hazard Identification and Risk Assessment is the foundation for the Mitigation Strategy.

6 HAZARD MITIGATION STRATEGY

The highest risk natural hazards and vulnerabilities identified in the previous section of this Plan directly inform the hazard mitigation strategy – the core of the mitigation plan.

The mitigation strategy has four main components: goals, community capabilities, action evaluation, and an action plan with the most appropriate activities for the Town to undertake to reduce future risk from potential hazards.



Mitigation Goals

The community's mitigation goal, which was supported by 100% of survey respondents, is stated here.

Increase Middletown Springs's resilience to natural hazards by advancing mitigation investments. These investments will ultimately reduce or avoid long-term risks to:

- ***People,***
- ***Homes and neighborhoods,***
- ***The local economy,***
- ***Cultural and historic resources,***
- ***Ecosystems and natural resources, and***
- ***Community Lifelines such as transportation, energy, and communications.***

See results in **Appendix C** for the assets respondents thought were most important to protect against potential future extreme weather impacts.

Community Lifelines

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

Community Lifelines are organized into seven categories:

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

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

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

1. Power Grid
2. Fuel

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

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

1. Facilities HAZMAT, Pollutants, Contaminants

Community Capabilities

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

Administrative & Technical This capability refers to the Town's staff and their skills and tools that can be used for mitigation planning and implementing actions. Such resources are limited in Middletown Springs: for example, one volunteer serves all the Emergency Management roles described in Section 3. Other municipal staff that can be used for mitigation planning and implementing specific mitigation actions include: a part-time Town Clerk, part-time Treasurer, a full-time Road Foreman, and one full-time Highway Department employee (a position that is currently vacant).

In addition to paid staff, there is a 5-member Selectboard, 3-member Planning Commission, 3-member Conservation Commission, and Fire Warden.

To augment local resources, the Town has formal mutual aid agreements for emergency response – fire and public works. Technical support is available through the RRPC in the areas of land use planning, emergency management, transportation, GIS mapping, and grant writing. Technical support is also available through the State ANR for floodplain bylaw administration and VTrans Districts for hydraulic analyses.

Strengths Core staff are trained on hazards and mitigation • Core staff are trained in emergency management and understand its role in hazard mitigation • Coordination between local departments is effective • Strong working relationship with State ANR and VTrans.

Areas for Improvement Maintenance programs to reduce risk could be more robust, particularly for stormwater management • Develop an emergency communications plan because cell coverage is poor and fiber optic land line batteries last only 8-hours • Update sheltering agreements with Red Cross • Small pool of volunteers creates burn out and limited time commitments • Difficulty staffing skilled labor/local positions • Periodic table and field exercises to test and strengthen inter-agency coordination.

Planning & Regulatory These capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards. Examples of planning capabilities that can either enable or inhibit mitigation include land use plans, capital improvement programs, transportation plans, stormwater management plans, disaster recovery and reconstruction plans, and emergency preparedness and response plans. Examples of regulatory capabilities include the enforcement of zoning ordinances, subdivision regulations, and building codes that regulate how and where land is developed, and structures are built.

The Town does not have any local building codes. Vermont has adopted statewide codes for commercial building fire safety and energy standards. The energy code also applies to residential buildings. Codes enforced by Vermont's Division of Fire Safety are the 2015 National Fire Protection Association (NFPA) 1 Fire Code; 2015 NFPA 101 Life Safety Code; the 2015 International Building Code (IBC); 2017 NFPA 70 National Electrical Code; 2021 International Code Council (ICC) International Plumbing Code; and the 2015 National Board Inspection Code from the National Board of Boiler and Pressure Vessel Inspectors.

Town Plan

Description: A framework and guide for how future growth and development should proceed.
Relationship to Natural Hazard Mitigation Planning: Includes goals and policies related to flood resilience and land use.

Road Stormwater Management Plan

Description: Prioritizes those infrastructure projects necessary to improve transportation network resiliency and water quality. Includes the **Road Erosion Inventory Report**.
Relationship to Natural Hazard Mitigation Planning: Improvements are designed to minimize or eliminate flood impacts on hydrologically connected road segments.

Stormwater Infrastructure Mapping Study

Description: Developed up to date municipal drainage system maps and established locations for BMP stormwater retrofit sites.
Relationship to Natural Hazard Mitigation Planning: Identified several structural projects to improve stormwater drainage system capacity.

Poultney River Watershed Stormwater Master Plan
Description: Identify stormwater inputs and develop prioritized projects to mitigate stormwater water quality problems.
Relationship to Natural Hazard Mitigation Planning: Projects accomplish multiple goals-water quality and mitigation.

Local Emergency Management Plan
Description: Establishes lines of responsibility and procedures to be implemented during a disaster and identifies high risk populations, hazard sites, and available resources.
Relationship to Natural Hazard Mitigation Planning: Includes actions for tracking events and response actions including damage reports to facilitate funding requests during recovery. This type of information can be essential to preparing hazard mitigation project applications for FEMA funding.

Fire Department ISO Rating
Description: The Middletown Springs Fire Department's ISO Rating is 9. This rating is a score from 1 to 10 that indicates how well-protected the community is by the local fire department.
Relationship to Natural Hazard Mitigation Planning: Everyone wants to keep family, home, and business safe from fires. The ISO rating is a measure of the effectiveness of a community's fire services.

Flood Hazard Area (FHA) Regulations
Description: Apply to all areas in Middletown Springs identified as areas of special flood hazard.
Relationship to Natural Hazard Mitigation Planning: Ensures the design and construction of development in flood and other hazard areas are accomplished in a manner that minimizes or eliminates the potential for flood loss or damage to life and property.

Road and Bridge Standards
Description: Provide minimum codes and standards for construction, repair, maintenance of town roads and bridges.
Relationship to Natural Hazard Mitigation Planning: Standards include management practices and are designed to ensure travel safety, minimize damage to road infrastructure during flood events, and enhance water quality protections.

Strengths Town employs capital planning for facilities and equipment, employing restricted funds to which budget funds are allocated each fiscal year • Road standards are adequately administered and enforced • Stormwater master planning • Elements of hazard mitigation are included in other local plans.

Areas for Improvement Existing land use ordinance to reduce inundation flood hazard impacts is not adequately administered and enforced (Flood Hazard Area Regulations) • Protect river corridors from new encroachment (River Corridor Bylaws) • Continuity of operations planning.

Financial These capabilities are the resources that a community has access to or is eligible to use to fund mitigation actions. Like the Administrative and Technical capability, these resources are limited for Middletown Springs.

Middletown Spring's 2023-2024 town budget is $864,300, with $499,525 to fund the Highway Department.

Although the Town has not done so in the past, it is eligible to incur debt through general obligation bonds to fund mitigation actions.

Strengths Maximizing grant opportunities available through VTrans for transportation infrastructure projects
• Established reserve funds for highway equipment and materials and public facilities.

Areas for Improvement Losing out on funding opportunities due to size/diversity of existing grants and lack of administrative capacity and expertise.

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

- Middletown Springs Historical Society, Middletown Springs Volunteer Fire Department, Friends for Education, Friends of the Library, Poultney Mettowee Conservation District, WellsSprings community engagement
- Town website, Front Porch Forum, several Facebook pages (Town, Library, Historical Society).

Strengths Multiple programs/organizations are already in place in the community • Strong social media presence • Active physical and digital monthly town newsletter.

Areas for Improvement None currently.

National Flood Insurance Program Compliance The Town joined the National Flood Insurance Program (NFIP) in 1985. The effective date of the current Flood Insurance Rate Map (FIRM) is August 28, 2008. The Administrative Officer enforces NFIP compliance through permit review requirements in its Flood Hazard Area regulations.

Middletown's regulations outline detailed minimum standards for development in flood hazard areas defined as FEMA Special Flood Hazard Areas and Floodway Areas. The regulations also require administering Substantial Improvement and Substantial Damage (SI/SD) requirements in accordance with FEMA P-758 SI/SD Desk Reference, May 2010. SI/SD is reviewed by the Middletown Springs Administrative Officer/Board of Adjustment and regulated by the Middletown Springs Special Flood Hazard Area Regulations. See below for a summarized description of articles demonstrating NFIP compliance:

- Section V of the regulations requires any substantial improvement to any existing structure to receive conditional use approval from the Middletown Springs Board of Adjustment before the Administrative Officer may issue a permit.
- The Board reviews the standards outlined in Section VI which meet or exceed NFIP requirements.
- Article VIII outlines procedures for submitting an application, referrals, properly filing and maintaining records, permit validity, hearings, decisions, and appeals.
- Article IX outlines procedures for enforcement if a violation exists and establishes the duty of the Administrative Officer to enforce the provisions of the regulations.
- Article XI defines substantial improvement and substantial damage the same as found in 44 CFR Part 59; as noted in federal code: "'substantial improvement' includes structures which have incurred 'substantial damage', regardless of the actual repair work performed.'"

The Town discussed the following as possible actions to continue NFIP compliance:

1) Prepare, distribute, or make available NFIP insurance explanatory pamphlets or booklets at the Town Office.
2) Participate in NFIP training offered by the State and/or FEMA.
3) Work with ANR Regional Floodplain Manager to address the administering of the NFIP following a major storm.

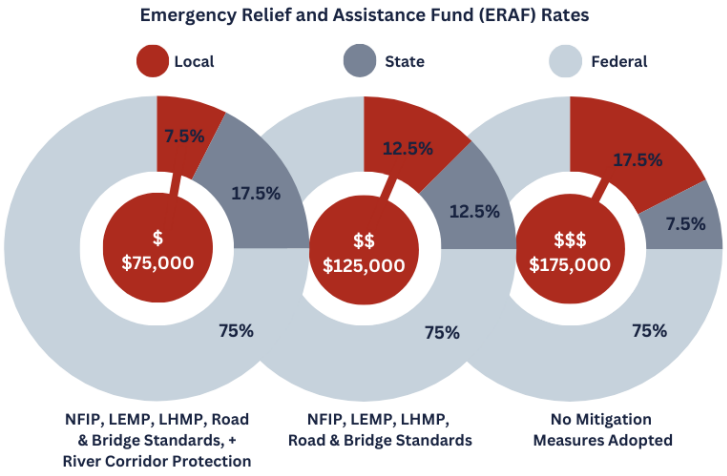
State Incentives for Flood Mitigation Vermont's Emergency Relief Assistance Funding (ERAF) provides state funding to match FEMA Public Assistance after federally declared disasters. Eligible public costs are generally reimbursed by FEMA at 75% with a 7.5% State match. The State will increase its match to 12.5% or 17.5% if communities take steps to reduce flood risk as described below.

12.5% funding for communities that have adopted four (4) mitigation measures:

1) NFIP participation;
2) Town Road and Bridge Standards;
3) Local Emergency Plan; and
4) Local Hazard Mitigation Plan.

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

Middletown will retain their 12.5% ERAF rate with adoption of the 2025 Local Hazard Mitigation Plan. To increase their ERAF rate to 17.5% the Town would have to adopt River Corridor Bylaws.



In the event of a $1,000,000 recovery project, the dollar value shown would be the municipality's responsibility.

Mitigation Action Identification

The Planning Team discussed the mitigation strategy, reviewed projects from the 2019 Plan, and identified possible new actions from the following categories for each of the highest risk natural hazards identified in Section 5.

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

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

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

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

Local Plans & Regulations Examples

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

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

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

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

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

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

Structure & Infrastructure Project Examples

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

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

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

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

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

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

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

Natural Systems Protection Examples

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

Outreach & Education Program Examples

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

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

Mitigation Action Evaluation

As described in **Appendix C**, the Planning Team invited several community members with local knowledge to participate in the mitigation action evaluation workshop. Unfortunately, none of the invited participants attended the Oct 17, 2024 workshop, so the action evaluation was done by only the Planning Team.

For each mitigation action identified, the Planning Team evaluated its potential benefits and/or likelihood of successful implementation. Actions were evaluated against a range of criteria, including a planning level assessment of whether the costs are reasonable compared to the probable benefits. Results of this evaluation are presented in **Table 5**.

Mitigation Action Plan for Implementation

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

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

A community survey was used to seek public reaction to the proposed mitigation goals and actions. 100% of respondents agreed with the mitigation goal and there was wide support for the proposed actions – see **Appendix C**.

For proposed actions, the Planning Team then 1) assigned a responsible party to lead the completion of each action; 2) identified potential funding; 3) defined a timeframe for implementation; and 4) ranked each action's priority (first, second).

Natural hazards pose a unique threat to the Town's vulnerable populations. Data has shown that underserved and marginalized populations tend to live in at-risk hazard-prone areas or in homes with substandard construction. The data also suggests that this segment of the community is less likely to fully recover after a disaster.[4] When ranking an action's priority, those that directly benefit a vulnerable population were ranked first priority.

Proposed actions also ranked first priority if they 1) represented routine activities critical to Middletown's ability to limit the impacts of natural hazards, or 2) addressed an ongoing need that would provide significant benefit to the Town if pursued sooner rather than later. The action plan is presented in **Table 6.**

[4] FEMA Hazard Mitigation Assistance Program and Policy Guide, March 23, 2023

Table 5: Mitigation Action Evaluation and Prioritization

Mitigation Action	Life Safety	Prop Protect	Tech	Political	Admin	Other Obj	Benefit Score	Est Cost	C/B
Local Plans & Regulations									
Recommended for Implementation									
Integrate Mitigation into Capital Improvement Programs and Planning	1	1	1	1	1	1	6	1	Yes
Plan for and Maintain Adequate Road and Debris Clearing Capabilities	1	1	1	1	1	1	6	2	Yes
Evaluate Options for Making Gravel Roads More Resilient to Mud Season	1	1	1	1	1	1	6	1	Yes
Inspect Town Short-Structures and Review VTrans Bridge Inspection Reports [5] for Town Long-Structures and Plan for Repairs to Prevent Flood-related Impacts like Scour	1	1	1	1	1	1	6	1	Yes
Determine if There Is Public Support to Manage Development in Erosion Hazard Areas by Adopting River Corridor Bylaws	1	1	1	0	1	1	5	1	Yes
Update Road Erosion and Culvert Inventories	0	1	1	1	1	1	5	1	Yes
Develop a Road Right-of-Way Vegetation Management Plan, Including an Ash Tree Inventory	1	1	1	0	1	1	5	1	Yes
Not Recommended for Implementation									
Improve Flood Resilience with a Flood Study	Planning Team did not evaluate this action because this work was conducted during the development of the 2022 Poultney River Watershed Stormwater Master Plan.								
Improve Extreme Heat Resilience with Hot Weather Response Plan	Planning Team did not evaluate this action because the Town has a Hot Weather Response Plan; see current Local Emergency Management Plan (LEMP).								
Structure & Infrastructure Projects									
Recommended for Implementation									
Routinely Clean and Repair Stormwater Infrastructure	0	1	1	1	1	1	5	3	Yes
Elevate Roads Above Base Flood Elevation to Maintain Dry Access	0	1	1	1	1	0	5	1	Yes
Install/Re-establish Roadside Ditches	0	1	1	1	1	1	5	2	Yes
Install Battery Storage, Back-up Generators or Quick Connect Wiring at Critical Facilities	1	0	1	1	1	1	5	2-3	Yes
Retrofit Critical Facilities to Strengthen Structural Frames to Withstand Wind and Snow Loads	1	1	1	0	1	1	5	3	Yes
Increase Drainage/Absorption Capacities with Green Stormwater Management Practices	0	1	1	1	1	1	5	2	Yes
Increase Dimension of Drainage Culverts in Flood-Prone Areas	1	1	0	1	0	1	4	3	Yes
Protect Power Lines by Inspecting and Maintaining Hazardous Trees in Road ROW	1	1	1	0	0	1	4	2	Yes
Not Recommended for Implementation									
Use Snow Fence on Critical Roads Prone to Drifting	Planning Team did not evaluate this action because there are no critical roadways vulnerable to drifting.								

[5] VTrans inspects all town-owned long structures under the State's Town Highway Bridge Program every two years. Inspection reports are available on the VTrans website.

Mitigation Action	Life Safety	Prop Protect	Tech	Political	Admin	Other Obj	Benefit Score	Est Cost	C/B
Structure & Infrastructure Projects (cont.)									
Insulate Shallow Buried Utility Mains/Services	Planning Team did not evaluate this action because there are no known shallow buried utility mains or service lines.								
Stabilize Culvert Outfalls	Planning Team did not evaluate this action because there are no known outfalls requiring stabilization.								
Routine Clear Debris from Support Bracing Underneath Low-Lying Bridges	Planning Team did not evaluate this action because there are no municipal low-lying bridges with support bracing.								
Remove Existing Structures from Flood-Prone Areas	Planning Team did not evaluate this action because none of the structures in the floodplain are identified as repetitive loss properties, and the costs would not outweigh the perceived benefits.								
Floodproof Critical Facilities	Planning Team did not evaluate this action because there are no critical facilities that require floodproofing.								
Bury Power Lines	Planning Team did not evaluate this action because Green Mountain Power has authority over the power lines, and the Town has little say over whether the lines are buried or not.								
Anchor Roof-Mounted Mechanical Equipment on Critical Facilities	Planning Team did not evaluate this action because there are no critical facilities with roof-mounted mechanical equipment.								
Increase Tree Plantings to Shade Parking lots	Planning Team did not evaluate this action because there are few paved parking lots in Town, and the costs would not outweigh the perceived benefits.								
Natural Systems Protection									
Recommended for Implementation									
Remove Berms from Stream to Restore Flood Capacity	0	0	1	0	1	1	3	1	Yes
Establish Vegetative Buffers in Riparian Areas	0	0	1	0	1	1	3	1	Yes
Not Recommended for Implementation									
Stabilize Stream Banks	Planning Team did not evaluate this option because streambank stabilization has not been necessary in most cases. The Poultney-Mettowee Natural Resource Conservation District will continue to monitor the North Brook segment where previous stabilization work has been done.								
Remove Significant Hazard Potential Dams	Planning Team did not evaluate this action because there are no significant or high hazard potential dams in Town.								
Restore Floodplain	Planning Team did not evaluate this action because PMNRCD has determined the Poultney River has adequate floodplain access, and there are no known project locations in Middletown Springs at this time.								
Restore Incision Areas	Planning Team did not evaluate this action because there are no known waterways experiencing stream channel incision at this time.								
Outreach & Education Programs									
Recommended for Implementation									
Educate the Public on Preparing for Extreme Winter Weather	1	1	1	1	1	1	6	1	Yes
Educate the Public on Preparing for Extreme Heat	1	0	1	1	1	1	5	1	Yes
Educate the Public About Identifying and Reporting Invasive Species	0	1	1	1	1	1	5	1	Yes
Keep the Roadway Ditches Clean Campaign	0	1	1	1	1	0	4	1	Yes
Not Recommended for Implementation									
Assist Vulnerable Populations	Planning Team did not evaluate this action because the Town already has a procedure for assisting vulnerable populations in its Local Emergency Management Plan. See **Appendix C** for programs serving vulnerable populations in Middletown Springs. According to the Vermont Municipal Vulnerabilities Indicators tool, populations of concern in Middletown include the elderly, the youth, those with disability/chronic conditions, those without access to a vehicle, and those who are Hispanic or multi-racial.								

Table 5 Evaluation Criteria:

Life Safety –Will the action be effective at protecting lives and preventing injuries?
Property Protection –Will the action be effective at eliminating or reducing damage to structures and infrastructure?
Technical – Is the action a long-term, technically feasible solution?
Political – Is there overall public support/political will for the action?
Administrative – Does the community have the administrative capacity to implement the action?
Other Community Objectives – Does the action advance other community objectives, such as capital improvements, economic development, benefit a vulnerable population, environmental quality, or open space preservation?

Rank each of the above criteria in Table 5 with a -1, 0, or 1 using the following table:
1 = Highly effective or feasible
0 = Neutral
-1 = Ineffective or not feasible

Estimated Cost – 1 = less than $50,000; 2 = $50,000 to $100,000; 3 = more than $100,000
C/B – Are the costs reasonable compared to the probable benefits? Yes or No

Table 6: Mitigation Action Plan

Plan for and Maintain Adequate Road and Debris Clearing Capabilities: A leading cause of death and injury during winter storms is from automobile accidents, so it is important to plan for and maintain adequate road and debris clearing capabilities. This includes capital planning and annual funding to support the facilities (highway garage and equipment), and an appropriate number of staff needed to maintain the transportation network in Middletown Springs.

ADDRESSED HAZARDS

Extreme Cold, Snow, and Ice
Primary Hazard

Strong Wind

TYPE OF PROJECT

Local Plans & Regulations

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact
Town-wide; ±31 mile road network

LEAD PARTY
Selectboard

FUNDING SOURCES
- Not applicable

PARTNERSHIPS
- None

PROJECT TIMEFRAME
To coincide with preparing annual Town budget each Dec

PRIORITIZATION = FIRST PRIORITY

Evaluate Options for Making Gravel Roads More Resilient to Mud Season: Flooding impacts on gravel roads can be exacerbated during the time of year when snow begins to melt and spring rains arrive, commonly known as "mud season". In extreme cases, soil saturation due to poor sub-surface drainage and a high water table can make gravel roads impassable and require road closure. Middletown Springs will investigate options to improve the sub-surface drainage, such as a French Mattress.

ADDRESSED HAZARDS

Extreme Cold, Snow, and Ice

TYPE OF PROJECT

Local Plans & Regulations

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact
Town-wide; ±25.5 mile gravel road network

LEAD PARTY
Road Foreman

FUNDING SOURCES
- VTrans Grant Programs [6]

PARTNERSHIPS
- RRPC

PROJECT TIMEFRAME
Investigate options by Dec 2025

PRIORITIZATION = FIRST PRIORITY

[6] See the Vermont Agency of Transportation's "Show Me the Money" Guidance for a complete list of potential funding sources.

Plan for Bridge Repairs: Several town bridges are vulnerable to flooding. The Town will ensure short structures are inspected on a routine basis and long structure VTrans inspection reports are reviewed and used to plan for flood-related bridge repairs such as scour and channel maintenance. Middletown Springs has identified the following structures.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Local Plans & Regulations

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact
Short structure: BR-4 (West St)
Long structures: B7M (West St), B19 (Fitzgerald Rd), B21 (Wescott Rd), B22 (Coy Hill Rd)

LEAD PARTY
Road Foreman

FUNDING SOURCES
- VTrans Grant Programs[6]

PARTNERSHIPS
- VTrans District 3

PROJECT TIMEFRAME
2026 construction season
2028 construction season
2030 construction season

PRIORITIZATION = FIRST PRIORITY

Determine Public Support for Adopting River Corridor Bylaws: River Corridor Bylaws can be used in conjunction with Flood Hazard Area Regulations to manage development in areas prone to impacts. This action was listed in the 2019 Middletown Springs Local Hazard Mitigation Plan and remains a priority.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Local Plans & Regulations

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact
Town-wide

LEAD PARTY
Planning Commission

FUNDING SOURCES
- Not Applicable

PARTNERSHIPS
- None

PROJECT TIMEFRAME
Municipal Plan Survey Results by March 2025

PRIORITIZATION = FIRST PRIORITY

Update Road Erosion and Culvert Inventories: These inventories were completed in 2018 and serve as the basis for asset management. Inventories should be kept up-to-date annually, with a full reassessment every 5 years.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Local Plans & Regulations

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact
Town-wide; ±31 mile road network and 360 culverts

LEAD PARTY
Road Foreman

FUNDING SOURCES
- VTrans Grant Programs[6]

PARTNERSHIPS
- Rutland RPC
- ANR Municipal Roads Program

PROJECT TIMEFRAME
2025 construction season

PRIORITIZATION = FIRST PRIORITY

Road Right-of-Way (ROW) Vegetation Management Plan: Hazard trees in the road ROW can contribute to power and communication outages as well as debris in the roadway during winter storms and wind events. This hazard is exacerbated by the possibility of Emerald Ash Borer infestation. To increase roadside resilience, Middletown Springs will develop a plan to 1) identify community priorities and 2) define a plan of action for site-specific tree and roadside forest management. This will include an inventory of ash trees to assess the scope of impact from EAB and, if warranted, prioritize trees for treatment and removal.

ADDRESSED HAZARDS

Extreme Cold, Snow, and Ice
Primary Hazard

Strong Wind

Invasive Species

TYPE OF PROJECT

Local Plans & Regulations

COMMUNITY LIFELINES TARGETED

Energy
Primary Lifeline

Communications

Transportation

Area of Impact

Town-wide; ±31 mile road network

LEAD PARTY

Road Foreman

FUNDING SOURCES

- VT Urban & Community Forestry Grants

PARTNERSHIPS

- Tree Warden
- VT Urban & Community Forestry
- VT Dept of Forests, Parks, & Rec

PROJECT TIMEFRAME

Partner outreach by Dec 2025
Complete plan by Dec 2027

PRIORITIZATION = FIRST PRIORITY

Routinely Clean and Repair Stormwater Infrastructure: Regular maintenance is one of the most effective ways to mitigate the impacts of floods. Routine cleaning and repairs of catch basins, ditches, and culverts will be done according to the Highway Department's maintenance schedule and the Municipal Roads General Permit (MRGP).

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

Town-wide; ±31 mile road network and 360 culverts

LEAD PARTY

Road Foreman

FUNDING SOURCES

- Town Highway Budget

PARTNERSHIPS

- ANR Municipal Roads Program

PROJECT TIMEFRAME

See Highway Department's Maintenance Schedule and MRGP

PRIORITIZATION = FIRST PRIORITY

Elevate Roads Above Base Flood Elevation to Maintain Dry Access: Middletown Springs has successfully done this with Spruce Knob Road. The Town has identified an additional location where this action would be beneficial in maintaining accessibility for residents.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

Daisy Hollow Road (±640 ft)

LEAD PARTY

Road Foreman

FUNDING SOURCES

- FEMA/VEM Hazard Mitigation Grants

PARTNERSHIPS

- Vermont Emergency Management

PROJECT TIMEFRAME

By construction season 2030

PRIORITIZATION = FIRST PRIORITY

Install/Re-work Roadside Ditches: Properly installed and stabilized roadside ditches are critical to protect the integrity of the road. As of October 2024, Middletown Springs has 24 road segments (1 segment = 328 ft) with ditches that must be improved to current municipal road standards. Of these, 11 are very high priority, 9 are high priority, and 4 are moderate priority.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

1) See MRGP Road Erosion Inventory for non-compliant road segments

LEAD PARTY

Road Foreman

FUNDING SOURCES

- VTrans Grant Programs[6]

PARTNERSHIPS

- ANR Municipal Roads Program

PROJECT TIMEFRAME

See MRGP Improvement Schedule

PRIORITIZATION = FIRST PRIORITY

Structural Retrofits to Critical Facilities: Public buildings and critical facilities can be retrofit to withstand wind and snow loads and prevent roof collapse. Middletown Springs has a salt and sand shed that is in severe structural decay and in need of upgrades to meet current building codes.

ADDRESSED HAZARDS

Extreme Cold, Snow, and Ice
Primary Hazard

Strong Wind

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

1) Town salt and sand shed

LEAD PARTY

Selectboard

FUNDING SOURCES

- Vermont Municipal Bond Bank

PARTNERSHIPS

- None

PROJECT TIMEFRAME

2026 construction season

PRIORITIZATION = FIRST PRIORITY

Adequately Size Culverts in Flood-Prone Areas: Undersized culverts can lead to road washouts and floods. An action from the 2019 Plan ("Completing an engineering evaluation to address scour on wing walls, footings, and bottom for concrete box culvert just upstream on Coy Hill Road bridge") remains a priority.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

1) Route 140 (BR-4)
2) See Culvert and MRGP Road Erosion Inventories for non-compliant culverts

LEAD PARTY

Road Foreman

FUNDING SOURCES

- VTrans Grant Programs[6]
- FEMA/VEM Hazard Mitigation Grants

PARTNERSHIPS

- VTrans District 3
- ANR Rivers Program
- Vermont Emergency Management

PROJECT TIMEFRAME

Engineering: 2026 construction season
Construction: 2027 construction season

PRIORITIZATION = FIRST PRIORITY

Remove Hazard Trees in Road ROW: Middletown will remove hazard trees within their road ROW and/or request removal by Green Mountain Power if also within the power line ROW in accordance with their Road ROW Vegetation Management Plan.

ADDRESSED HAZARDS

Extreme Cold, Snow, and Ice
Primary Hazard

Strong Wind

Invasive Species

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Energy
Primary Lifeline

Communications

Transportation

Area of Impact

Town-wide; ±31 mile road network

LEAD PARTY

Road Foreman

FUNDING SOURCES

- Rural Roadside Ash Tree Removal Grant
- Town Highway Budget

PARTNERSHIPS

- Tree Warden
- Green Mountain Power

PROJECT TIMEFRAME

See ROW Vegetation Management Plan

PRIORITIZATION = FIRST PRIORITY

Install Back-up Power at Critical Facilities: Battery storage cells and generators (standby or portable) can provide a secondary source of power to a facility during an emergency. Middletown Springs has identified three critical facilities needing back-up power – Town Office, Elementary School, and St. Anne's Church. This action was listed in the 2019 Middletown Local Hazard Mitigation Plan and remains a priority.

ADDRESSED HAZARDS

All Hazards
Including Extreme Cold

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Energy
Primary Lifeline

Food, Water, Shelter

Area of Impact

1) Town Office
2) Elementary School
3) St. Anne's Church (future library)

LEAD PARTY

Selectboard

FUNDING SOURCES

- FEMA/VEM Hazard Mitigation Grants

PARTNERSHIPS

- Middletown Elementary School
- Middletown Springs Public Library

PROJECT TIMEFRAME

Acquire by Nov 2025

PRIORITIZATION = SECOND PRIORITY

Install Green Stormwater Management Practices: Green infrastructure uses vegetation, soils, and other elements and practices to restore some of the natural processes required to manage stormwater. The 2022 Poultney River Watershed Stormwater Master Plan and the Town of Middletown Springs has identified the following projects.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

1) 49 West Street
2) Firehouse Lane
3) Park Ave
4) Pleasant View Road
5) South Street

LEAD PARTY

Poultney Mettowee NRCD

FUNDING SOURCES

- South Lake Champlain Clean Water Service Provider

PARTNERSHIPS

- VT Youth Conservation Corp

PROJECT TIMEFRAME

By 2030 construction season

PRIORITIZATION = SECOND PRIORITY

Establish Vegetative Buffers: Middletown Springs will work with project partners to explore options to slow erosion along the banks of the Poultney River and Vail Brook.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Natural Systems Protection

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

Poultney River Watershed: along Poultney River and Vail Brook.

LEAD PARTY

Poultney Mettowee NRCD

FUNDING SOURCES

- South Lake Champlain Clean Water Service Provider
- FEMA/VEM Hazard Mitigation Grants

PARTNERSHIPS

- Poultney Mettowee NRCD
- ANR Rivers Program
- VT Youth Conservation Corp

PROJECT TIMEFRAME

Analyze Options: 2025 construction season
Construction: 2026 construction season

PRIORITIZATION = SECOND PRIORITY

Remove Berms to Restore Flood Capacity: Middletown Springs will work with project partners to explore options to restore the flood capacity of the Poultney River. This action was recommended for implementation in the 2006 Poultney River Phase 2 Stream Geomorphic Assessment and remains a priority to address.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Natural Systems Protection

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

Poultney River; upstream of the waterfall and old Daisy Hollow bridge

LEAD PARTY

Selectboard

FUNDING SOURCES

- South Lake Champlain Clean Water Service Provider
- FEMA/VEM Hazard Mitigation Grants

PARTNERSHIPS

- Poultney Mettowee NRCD
- ANR Rivers Program

PROJECT TIMEFRAME

Analyze Options: 2025 construction season
Construction: 2027 construction season

PRIORITIZATION = SECOND PRIORITY

Educate the Public about Severe Winter and Extreme Heat-related Hazards, Invasive Species Identification and Reporting, and Keep the Ditches Clean Campaign: Middletown Springs will undertake education and awareness efforts by publishing information in the Middletown Springs Newsletter and Front Porch Forum on 1) severe winter storm-related hazards (e.g., freezing pipes); 2) extreme heat related hazards (e.g., heat stroke); 3) identifying and reporting invasive species such as EAB; and 4) the importance of keeping the municipal road ditches free of yard waste and other debris

ADDRESSED HAZARDS

All hazards

TYPE OF PROJECT

Outreach & Education Programs

COMMUNITY LIFELINES TARGETED

Public Health
Primary Lifeline

Safety & Security

Transportation

Area of Impact

Town-wide

LEAD PARTY

Selectboard

FUNDING SOURCES

- Not Applicable

PARTNERSHIPS

- Ready.gov
- VT Dept of Forests, Parks, & Rec
- VT Department of Health
- VT Fish & Wildlife
- VT Urban & Community Forestry

PROJECT TIMEFRAME

Develop Materials and Schedule for Messaging:

- Extreme Heat: By June 1 (see LEMP), annually
- Extreme Cold: In October, annually
- Roadside Ditches: In July, annually
- Invasives: By December 2025

PRIORITIZATION = SECOND PRIORITY

Navigating Table 6

The Mitigation Action Plan includes a series of "mini-project profiles", one for each action recommended for implementation in **Table 5**. Each profile consists of the following elements:

Mitigation Action Description: Explains the action's relevance to Middletown Springs and whether the action was previously listed in the 2019 Plan or another plan with ties to hazard mitigation.
Addressed Hazard: Indicates the type of highest risk hazard the action addresses.
Type of Project: Indicates the project type category to which the action belongs (see page 25).
Community Lifelines Targeted: Indicates which critical government and business functions responsible for preserving human health and safety or economic security will benefit from this action (see page 21).
Area of Impact: Indicates the location where the action will be implemented and the spatial extent of the action's outcomes. "Town-wide" is used for actions that apply throughout the municipality.
Lead Party: Identifies who is responsible for administering each action.
Funding Sources: Identifies a potential funding source to implement the action. The Town is ultimately responsible for determining the specific funding source to be utilized when the action is implemented. Where the funding source is "not applicable", work is completed by town officials who volunteer their time.
Partnerships: List individuals, agencies, or resources that may be able to help identify funding sources, complete grant applications, and/or implement the action.
Project Timeframe: Provides the expected schedule for completion based on available time and resources.
Prioritization: Indicates the relative importance of each action based on a set of criteria (see page 26).

Integrating Into Existing Plans and Procedures

For Middletown Springs to succeed in reducing long-term risk to natural hazards, the goals, vulnerability information, and mitigation actions in this Plan will be integrated throughout government operations. When activities are connected, they not only reduce risk and increase resilience, but also accomplish other objectives such as environmental protection, economic development, financial stability, and land use planning.

The Town can achieve integration into existing plans and procedures to support risk-informed community planning in the following ways:

- Funding for mitigation actions can be prioritized in capital planning for facilities and equipment and in the annual budget process.
- The mitigation goal and risk assessment information can be incorporated into the ongoing Town Plan update, particularly the Land Use and Flood Resilience chapters. Ensuring all identified hazard areas are addressed in the Town Plan is an action from the 2019 Local Hazard Mitigation Plan that remains a priority.
- The mitigation goal and risk assessment information can be incorporated into the review and potential update of the 2008 flood hazard area regulations. Examining these regulations to ensure they are adequately administered and enforced is an action from the 2019 Local Hazard Mitigation Plan that remains a priority.
- Flood-related mitigation actions to increase road resiliency can be implemented under the Municipal Road General Permit to control stormwater discharges from town roads.
- Flood-related mitigation actions can be implemented under the stormwater management plans for the Poultney River Watershed.
- "Installing Back-up Power at Critical Facilities" is a mitigation action that can support the response procedures outlined in the Local Emergency Management Plan, especially the cooling centers designated in the Hot Weather Response annex.

Section 406 – Public Assistance Program

Section 406 mitigation measures are funded under the FEMA Public Assistance Program. The 406 funding provides discretionary authority to fund mitigation measures in conjunction with the repair of the disaster-damaged facilities, so it is limited to declared counties and eligible damaged facilities. Section 406 is applied on the parts of the facility that were damaged by the disaster and the mitigation measures that directly reduce the potential of future, similar disaster damages to the eligible facility.

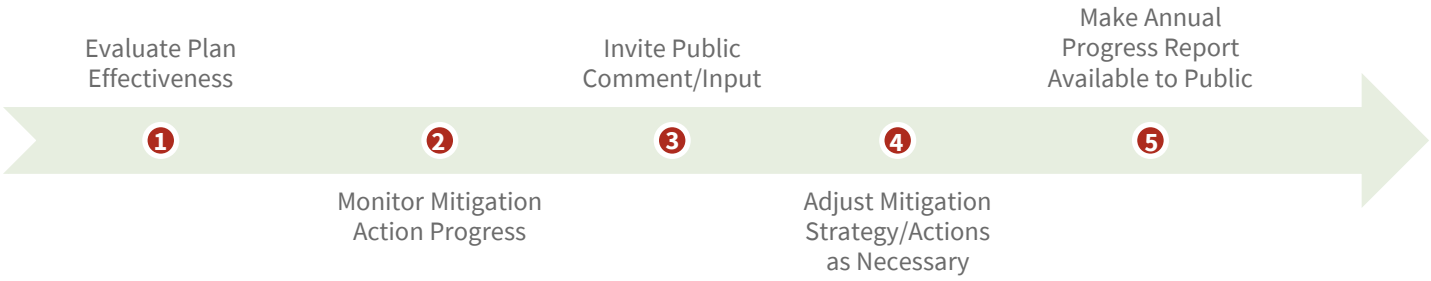
Middletown Springs will make every effort to maximize use of future Public Assistance Section 406 Mitigation opportunities when available during federally declared disasters.

7 PLAN MAINTENANCE

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

Annual Evaluation and Monitoring

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



1. The Selectboard will evaluate the effectiveness of the Plan in meeting the stated goals. Things to consider during this evaluation:

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

2. Next, the Selectboard will monitor mitigation action progress. Things to consider:

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

   The status (e.g., in progress, complete) of each action should be recorded in **Table 7**. If the status is "in progress", note whether the action is on schedule. If the action is not on schedule, describe any problems, delays, or adverse conditions that will impair the ability to complete the action.

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

   - Are there any new stakeholders to include?
   - What public outreach activities have occurred? At minimum, the Town will publicly post notice of meetings when the plan is being evaluated.
   - How can public involvement be improved?

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

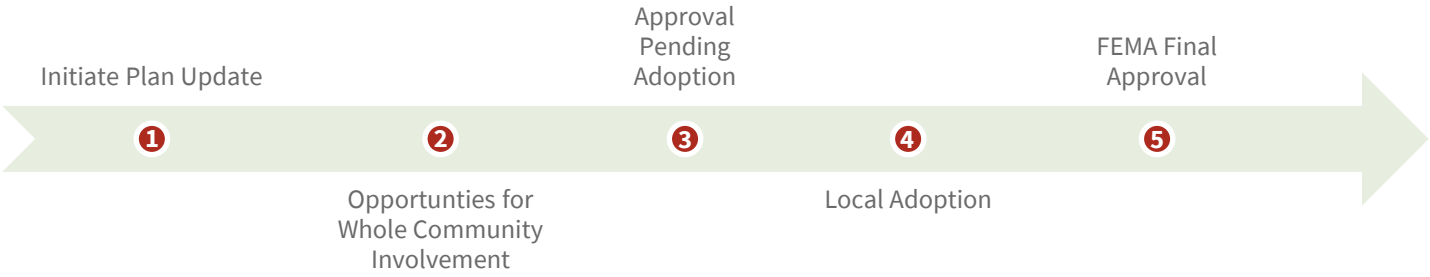
5. A report (or record in the form of meeting minutes) of the annual evaluation and monitoring will be made available to the public.

Table 7: Mitigation Action Status

Mitigation Action	2026	2027	2028	2029	2030
Local Plans & Regulations					
Plan for and Maintain Adequate Road and Debris Clearing Capabilities					
Evaluate Options for Making Gravel Roads More Resilient to Mud Season					
Plan for Bridge Repairs					
Determine Public Support for Adopting River Corridor Bylaws					
Update Road Erosion and Culvert Inventory					
Develop Road ROW Vegetation Management Plan					
Structure & Infrastructure Projects					
Routinely Clean and Repair Stormwater Infrastructure					
Elevate Roads above Base Flood Elevation to Maintain Dry Access					
Install/Re-establish Roadside Ditches					
Structural Retrofits to Critical Facilities					
Adequately Size Culverts in Flood-Prone Areas					
Remove Hazard Trees in Road ROW					
Install Back-Up Power at Critical Facilities					
Install Green Stormwater Management Practices					
Natural Systems Protection					
Establish Vegetative Buffers					
Remove Berms to Restore Flood Capacity					
Outreach & Education Programs					
Educate the Public on Preparing for Extreme Winter Weather					
Educate the Public on Preparing for Extreme Heat					
Educate the Public About Identifying and Reporting Invasive Species					
Keep the Roadway Ditches Clean Campaign					

5-Year Updates

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



1. Currently, funding to assist municipalities in paying for planning services to update the Local Hazard Mitigation Plan is available through FEMA's Building Resilient Infrastructure and Communities grant program. If using this grant, Middletown Springs Selectboard Chair should contact Vermont Emergency Management (VEM) to apply for funding in 2028 – approximately 2 years before the Plan expires. It is assumed that the Selectboard Chair will serve as the primary point of contact for the Plan update.

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

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

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

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

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

5. Once adopted, the Town can submit the Plan for VEM/FEMA Final Approval. The Town should submit for Final Approval approximately 1 month before the Plan expires to ensure there is no gap in coverage between updates. The FEMA Final Approval date starts the clock on the effective dates of the 5-year Plan.

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

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

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

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

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

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

By: _____ (signature)
Selectboard Chair

_____ (print name)
Selectboard Chair

ATTEST: By: _____ (print name)

MITIGATION ACTIONS FROM 2019 PLAN

Mitigation Action	Lead Party	Timeframe	2025 Status
Local Plans and Regulations			
Integrate Mitigation into Capital Improvement Programs and Annual Budget	Selectboard	Ongoing	Remains ongoing priority
Determine if There is Public Support to Manage Development in Erosion Hazard Areas by Adopting River Corridor Bylaws	Planning Commission	1/1/20 – 12/31/20	Remains ongoing priority
Improve Stormwater Management Planning by Completing a Stormwater Management Plan	Poultney Mettowee Conservation District	7/1/20 – 6/30/21	Complete
Complete Road Erosion and Culvert Inventories and Develop Road Stormwater Management Plan	Road Foreman	8/1/19 – 12/31/19	Complete
Plan for and Maintain Adequate Road and Debris Clearing Capabilities	Selectboard & Road Foreman	Ongoing	Remains ongoing priority
Examine current Town Plan to ensure identified hazard areas are addressed	Planning Commission	At next Town Plan Update in 2025	Remains ongoing priority until Town Plan completion
Examine flood hazard area regulations to ensure they are being adequately administered and enforced	Selectboard and Planning Commission	7/1/19 – 12/31/19	Remains ongoing priority
Structure and Infrastructure Projects			
Increase Drainage/Absorption Capacities with Low Impact Development Practices: (1) Construct rain garden just north of Fire House (in lieu of the practice previously engineered for the Town Green) (2) Explore potential for bioretention area just south of Schoolhouse Road (3) Explore potential for bioretention area behind 49 West Street	Road Foreman	(1) 7/1/19 – 12/31/19 (2) 7/1/20 – 12/31/20 (3) 7/1/20 – 12/31/20	(1) Complete (2) No longer a priority[7] (3) Remains ongoing priority
Increase Dimension of Drainage Culverts in Flood-Prone Areas: (1) Haley Road – 1 culvert (2) Norton Road – 1 culvert (3) Spruce Knob Road – 1 culvert	Road Foreman	(1) 7/1/20 – 12/31/21 (2) 7/1/20 – 12/31/21 (3) 7/1/19 – 12/31/20	(1) Complete (2) Complete (3) Complete
Develop a List of Prioritized Driveways that Either Need Culvert or Need an Upsized Culvert	Road Foreman	1/1/20 – 12/31/20	List never developed; not seen as a priority
Routinely Clean and Repair Stormwater Infrastructure	Road Foreman	Annually or as needed	Remains ongoing priority
Review VTrans Bridge Inspection Reports and Plan for Identified Repairs to Prevent Scour: (1) Bridge #0007M West Street (2) Bridge #00019 Fitzgerald Road – voided and scoured area along downstream side of abutment #1 should be cleaned out and filled in with a kneewall (3) Bridge #00021 Wescott Road (4) Bridge #00022 Coy Hill Road	Road Foreman	7/1/19 – 12/31/19	Remains ongoing priority

[7] The Town identified this area as lacking meaningful water transit, so this project was removed from consideration.

Mitigation Action	Lead Party	Timeframe	2025 Status
Engineering Evaluation to Address Concrete Box Culvert (just upstream of Coy Hill Bridge) Scour on Wing Walls, Footings, and Bottom	Selectboard & Road Foreman	1/1/20 – 12/31/2023	Remains ongoing priority
Elevate Roads Above Base Flood Elevation to Maintain Dry Access: (1) Spruce Knob Road	Road Foreman	7/1/19 – 12/31/20	Complete
Protect Power Lines by Inspecting and Maintaining Hazardous Trees in Road ROW	Road Foreman	Annually or as needed	Remains ongoing priority
Install Back-up Generators or Quick Connect Wiring at Critical Facilities: (1) Future Town Office (2) Elementary School (3) Community Church	Selectboard	1/1/2020 – 12/31/2025	Remains ongoing priority (third location is now St. Anne's Church)
Re-establish Roadside Ditches	Action not selected for implementation in 2019		
Stabilize Outfalls	Action not selected for implementation in 2019		
Retrofit Critical Facilities to Strengthen Structural Frames to Withstand Wind and Snow Loads	Action not selected for implementation in 2019		
Remove Existing Structures from Flood-Prone Areas	Action not selected for implementation in 2019		
Bury Power Lines	Action not selected for implementation in 2019		
Natural Systems Protection			
As part of the Poultney River Stormwater Master Planning Effort: (1) Identify locations where increased riparian buffers would benefit stormwater mitigation; (2) Identify locations where streambank stabilization would mitigate impacts of flooding and high stream flows; (3) Identify locations where berms exist and investigate potential benefits and landowner willingness for removal; (4) Map incision areas and if possible, note the potential erosion risks posed by incision.	Selectboard & Poultney Mettowee Conservation District	7/1/20 – 6/30/21	Complete
Education and Awareness Programs			
Educate Property Owners about Freezing Pipes and other winterization practices by including mitigation information in Middletown Springs newsletter & Front Porch Forum	Selectboard	Annually in October	Remains ongoing priority

PUBLIC ENGAGEMENT SUMMARY

Community Engagement Strategy

During the kickoff meeting, the Planning Team came to a consensus on a 2-phase Community Engagement Strategy – see **Appendix Table 1**. This Strategy was designed to ensure that underserved and socially vulnerable populations had an opportunity for equitable involvement throughout the entirety of the plan development process (i.e., from kickoff to final draft).

This Strategy also ensured the involvement of the Whole Community. For the purposes of this Plan, the Whole Community is comprised of 1) local and regional agencies involved in hazard mitigation; 2) entities with authority to regulate development; 3) neighboring towns; 4) representatives of business, schools/academia, and other private organizations that sustain community lifelines; and 5) representatives of nonprofit organizations, including those that work directly with or provide support to vulnerable populations.

A Goal Statement was developed to guide the planning team's public outreach throughout the planning process:

Middletown Springs will:

- ***Notify the Whole Community about the plan update at the kickoff, mid-point draft, and final draft;***
- ***Solicit feedback from the Whole Community about the frequency and impacts of various natural hazards, and strategies and mitigation methods that should be prioritized; and***
- ***Integrate from the Whole Community perspectives and information about hazard impacts and likelihoods, and priorities for potential mitigation actions.***

Phase 1 Engagement Activities

Kick-off To notify the Whole Community of the Plan Update, the Town conducted a robust advertising campaign. A landing page was created to provide a dedicated online source for all information related to the planning process and opportunities for community engagement. The landing page url: https://tinyurl.com/mtslhmp24

Physical flyers were posted at the Town Office, U.S. Post Office, Library, and Crossman's General Store. Online notices were posted on the Town Facebook page, Front Porch Forum, RRPC website, and RRPC Facebook page.

Project communications were sent to the following segments of the Whole Community:

1) Hazard Mitigation Agencies: DEC Western VT Floodplain Manager, Middletown Springs Volunteer Fire Dept, Middletown Springs Road Foreman, Poultney-Mettowee Natural Resources Conservation District, South Lake Champlain CWSP, VDH Emergency Preparedness Specialist, VTrans District 3 Projects Manager.
2) Authorities Regulating Development: Middletown Springs Selectboard Members, Middletown Springs Planning Commission Members.
3) Neighboring Municipalities: Selectboard Chair, Planning Commission Chair, Town Clerk, and EMD for Towns of Ira, Poultney, Tinmouth, and Wells (+Town Manager for Poultney).
4) Business, Schools, Private Organizations: Community and Economic Development of the Rutland Region, Greater Rutland County Supervisory Union, Middletown Springs Elementary School, Solid Waste Alliance Communities, Wells Springs District School Board.
5) Non-profit Organizations: ARC Rutland, Bayada Home Health, Bayada Home Care, Bennington-Rutland Opportunity Council, Housing Trust of Rutland County, Middletown Springs Historical Society, Poultney Rescue Squad, Rutland Regional Medical Center, Rutland County Pride, Rutland County Restorative Justice Center, Rutland Mental Health Services, Southwestern Vermont Council on Aging, United Way of Rutland County, Vermont Association for the Blind and Visually Impaired, Vermont Center for Independent Living, Vermont Free and Referral Clinics, Visiting Nurses Association and Hospice of the Southwest Region.

Copies of example kick-off engagement materials are included below.

No inquiries or comments received from Town officials, the public, or Whole Community partners in response to project kick-off notices.

Gather Data & Assess Risk To inform the Hazard Identification and Risk Assessment section of the Plan, the Town employed five (5) engagement methods: survey, workshop, pop-ups, presentation to the Selectboard at a public meeting, and public comment period.

A survey was administered both online and in paper format and was open from Aug 1-Aug 21, 2024. Notice of the survey was included in plan kick-off communications. To encourage participation, the Town offered a raffle for free transfer station tickets for completing the survey. **A total of 25 surveys were submitted.** A summary of the survey results is provided below.

The Town conducted a workshop on Aug 7, 2024 with the planning team and two subject matter experts to complete the community hazard risk assessment. Lisa Thornton, from the Agency of Natural Resources, and Eric Pulver, the Emergency Preparedness Specialist with the Vermont Department of Health attended the workshop to assist with the risk assessments for Invasive Species and Infectious Disease. Results of the risk assessment are presented in **Table 4**.

The Town conducted "pop-up" events at the Transfer Station on Aug 3, Aug 10, and Aug 17, 2024. By "meeting people where they are", the Town collected additional input from demographics that may not have otherwise been engaged. At the pop-ups, people were asked to place dot stickers on the natural hazards of most concern and vulnerable assets. **This method captured a total of 63 responses**. A summary of pop-up feedback is provided below.

Online notices of the public presentation at the Sept 12, 2024 Middletown Springs Selectboard meeting were posted on the Town Facebook Page, Front Porch Forum, RRPC Website, and RRPC Facebook page.

The draft Plan was presented at the Sept 12, 2024 Selectboard meeting to encourage input from the local government and public on the Hazard Identification and Risk Assessment results. Input at this milestone is critical as feedback could affect the plan's conclusions and ensure that it integrates with other Town initiatives. The meeting was recorded and is available on the Town website.

The draft Plan was posted for a 2-week public comment period from Sept 12-26, 2024. It was available on the landing page and at the Town Office. Notice of the comment period was posted on the Town's Facebook page, Front Porch Forum, RRPC Website and Facebook page. The draft Plan and notice of the comment period were direct emailed to all five segments of the Whole Community.

Notices included instructions to email comments to the Rutland Regional Planning Commission or attend the Sept 26, 2024 Selectboard meeting to share input. Review of the draft Plan by the Selectboard and public concluded on Sept 26, 2024.

Positive reception from local officials. No input received from the public or Whole Community partners during public comment period.

Phase 2 Engagement Activities

Develop Mitigation Strategy To inform the Mitigation Strategy section of the plan, the Town employed four (4) engagement methods: workshop, survey, presentation to the Selectboard at a public meeting, and public comment period.

The Town intended to conduct a workshop to evaluate a broad range of possible mitigation actions with the planning team and several interested parties, including: the Town Clerk, a Selectboard Member, a Conservation Commission member, and someone with connections to regional social service agencies.

Unfortunately, none of the confirmed participants attended the Oct 17, 2024 workshop, so the action evaluation was done by only the Planning Team. Results of the action evaluation are presented **in Table 5.**

A survey was administered both online and in paper format and was open from Nov 1-Nov 22, 2024. Notice of the survey was posted on the landing page, Town Facebook page, Front Porch Forum, RRPC Website, and RRPC Facebook page. **A total of 4 surveys were submitted**. A summary of the survey results is provided below.

Finalize Draft Plan Online notices of the public presentation at the Dec 12, 2025 Middletown Springs Selectboard meeting were posted on the landing page, Town Facebook Page, Front Porch Forum, RRPC Website, and RRPC Facebook page.

The final draft Plan was presented at the Dec 12, 2024 Selectboard meeting to encourage input from the local government and public on the mitigation strategy and final draft plan. Input at this milestone is critical as it is the last opportunity to weigh in on the plan contents before submittal for Approval Pending Adoption. The meeting was recorded and is available on the Town website.

The final draft Plan was posted for a 4-week public comment period from Dec 12, 2024 - Jan 9, 2025. It was available on the landing page and at the Town Office. Notice of the comment period was posted on the Town's Facebook page, Front Porch Forum, RRPC Website, and RRPC Facebook page. The final draft plan and notice of the comment period was direct emailed to all five segments of the Whole Community.

Notices included instructions to email comments to the Rutland Regional Planning Commission or attend the Jan 9, 2025 Selectboard meeting to share input. Review of the final draft Plan by the Selectboard and public concluded on Jan 9, 2025.

The Selectboard discussed their comments on the final draft plan at their regular meeting on Jan 9, 2025. A summary of their comments is provided here:

Positive reception from local officials. No input received from the public or Whole Community partners during public comment period.

Appendix Table 1. Middletown Springs Community Engagement Strategy

Engagement Phase	Project Milestone	Outreach Method	Purpose	Dates
1	Kick-Off	Landing page, flyers, social media, email blast	Notify (inform the Whole Community of the Plan update)	7/30/2024
	Gather Data & Assess Risk	Survey	Solicit (feedback from Whole Community on potential natural hazard impacts)	7/30/2024 – 8/21/2024
		Pop-up Events	Solicit (see above)	8/3, 8/10, 8/17/2024
		Workshop	Integrate (evaluate broad range of risks)	8/7/2024
		Selectboard Presentation	Notify (inform local officials of Plan progress)	9/12/2024
		Public Comment Period	Solicit (feedback from Whole Community on draft Hazard Identification and Risk Assessment)	9/12/2024 – 9/26/2024
2	Develop Mitigation Strategy	Workshop	Integrate (evaluate broad range of mitigation actions)	10/17/2024
		Survey	Solicit (reaction from Whole Community on Mitigation Strategy and actions)	11/1/2024 – 11/22/2024
	Finalize Draft Plan	Selectboard Presentation	Notify (inform local officials of Plan progress)	12/12/2024
		Public Comment Period	Solicit (feedback from Whole Community on final draft Plan)	12/12/2024 – 1/9/2025

Examples of Phase 1 Engagement Materials

Physical Flyer
Social Media Postings
Email Blast
Survey with Results
Pop-up Posters with Results

KICK-OFF FLYER

Middletown Springs

LOCAL HAZARD MITIGATION PLANNING

Plan Purpose

- Increase Awareness
- Identify Actions
- Focus Resources
- Communicate Priorities

The Local Hazard Mitigation Plan outlines our long-term strategy to reduce natural disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage.

Take our online survey to share what natural hazards you are most concerned about:

HELP US

PREPARE FOR RESILIENCY!

Planning Schedule

- Aug 2024: Plan Update Kick-off
- Sept 2024: Assess Risks & Identify Hazards
- Oct 2024: Develop Mitigation Strategy
- Nov 2024: Finalize Draft Plan
- Jan 2025: Adopt Plan

ACT NOW!

For More Information
tinyurl.com/MTSLHMP24

SOCIAL MEDIA POSTINGS

SOCIAL MEDIA POSTINGS

KICK-OFF EMAIL BLAST

Middletown Springs Launching our Hazard Mitigation Planning Process

Every five years, municipalities update their Local Hazard Mitigation Plans, or LHMPs. Ours is due to be updated by January 2025. We do an LHMP for a few reasons:

- It qualifies us for a higher rate of reimbursement for work we do after declared disasters.
- It makes us eligible for a variety of State and Federal grant programs.
- Most importantly, it helps us focus Town time and investments on the hazards that are most likely to occur, and most likely to have economic and public-safety impacts.

The Rutland Regional Planning Commission will guide us through the renewal of our LHMP, thanks to a grant we received from Vermont Emergency Management. The Town's planning team includes: Herb Childress from the Selectboard and Emergency Management, Bill Reed from the Highway Department, and Hilary Solomon from the Poultney Mettowee Natural Resources Conservation District.

Throughout the planning process, we have targeted opportunities for community input. As we get the plan update underway in August and September, we'll be completing a risk assessment and identifying the natural hazards that are of greatest concern. We want to hear from our residents about what natural hazards you are most concerned about! Share your feedback by:

- Visiting our information table at the Transfer Station on Saturdays in August.
- Take our online survey: **tinyurl.com/MTS-LHMP24-SURVEY**. If you complete the survey, you'll be entered into a raffle for a chance to win 3 dump tickets! The survey will remain open until August 21, 2024.

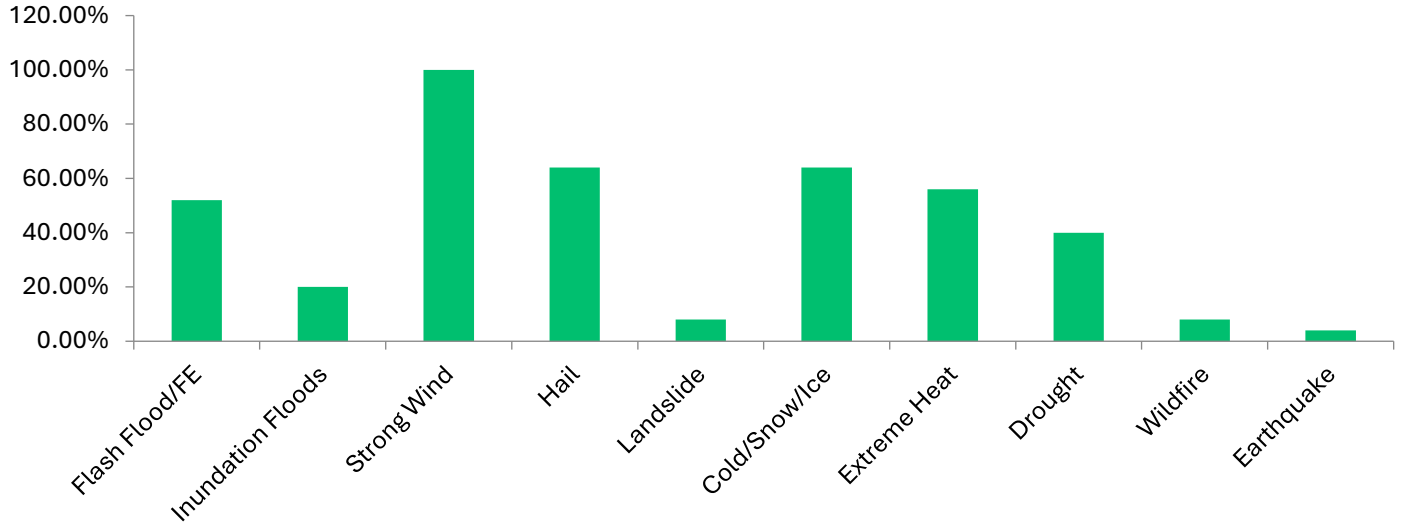
For more information visit: tinyurl.com/MTSLHMP24

PHASE 1 ENGAGEMENT SURVEY RESULTS

1. **How long have you lived in or owned a business or property in Middletown Springs?**
   Less than one year **0%**
   One to five years **12%**
   More than five years **88%**

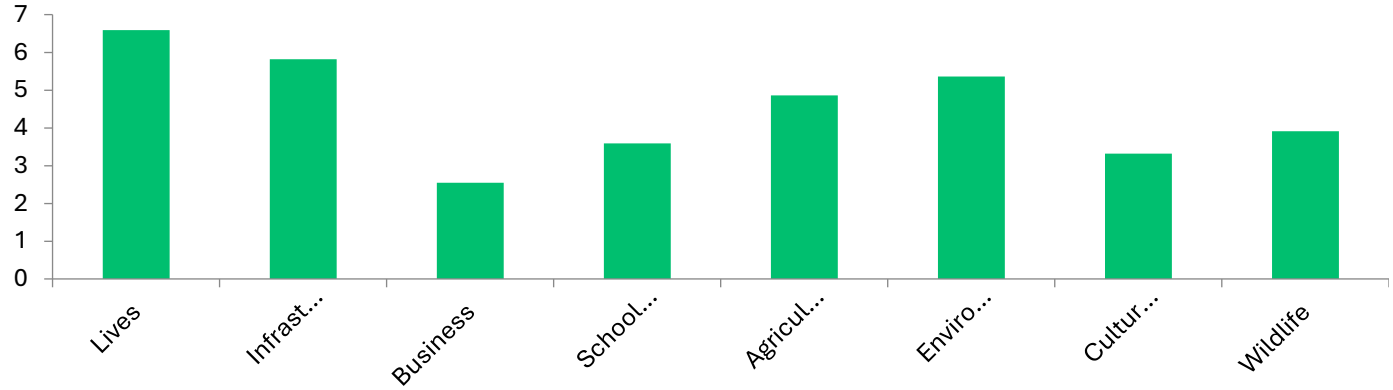
2. **Is your home or business property located in a FEMA designated floodplain?**
   Yes **0%**
   No **88%**
   I don't know **12%**

3. **Which of the following natural hazards have you or someone you know experienced while living or doing business in Middletown Springs?**



4. **Of the natural hazards listed in Question 3, what are the top three you think are likely to occur in the next five years?**
   #1 Strong Wind **92%** #2 Flash Floods **56%** #3 Extreme Heat **44%** (#4 Extreme Cold, Snow, Ice **40%**)

5. **Which potential natural hazard impacts are most concerning to you? Rank from 1 to 8. It would be most concerning to experience damage or loss in regards to…**



6. **Are you aware of any location(s) in Middletown Springs that appear more prone to the impacts of flooding, ice, wind, or wildfires? Describe any past damages or recurring incidents in these areas.**

Our backroads are heavily overgrown with mature trees. The town and GMP standards for tree trimming are inadequate. The town and GMP need to be more aggressive clearing trees in the right of way. Garron and other roads are almost routinely dealing with power outages and road hazards due to poor maintenance of roadside trees.

Our dirt roads must be at risk of erosion with flash flooding, but I don't live on one so I can't name one that's particularly prone.

Loss of power from wind and/or ice on North Rd

Springs Park – flooding

Burdock Rd. was flooded in Hurricane Irene and is a vulnerable low-lying location

Down by the springs lowland; anywhere with wind damage taking down trees; anywhere with the rest.

Poultry River basin

I think roadsides are becoming more dangerous in wind as the trees along them grow bigger and older.

Any area along the Poultney River

Down by the river areas…flooding

Trees that need to be removed near roads and powerlines need to be a priority in this town. The continued power losses due to downed lines and no access due to closed roads is unsafe for the residents of our town. High wind events will continue in the future, and not doing anything now, will lead to misfortune later.

Poultney River at Mineral Springs Park and at bridges

Burdock Drive areas, near the Poultney River or its tributaries, road/stream interfaces, steep areas

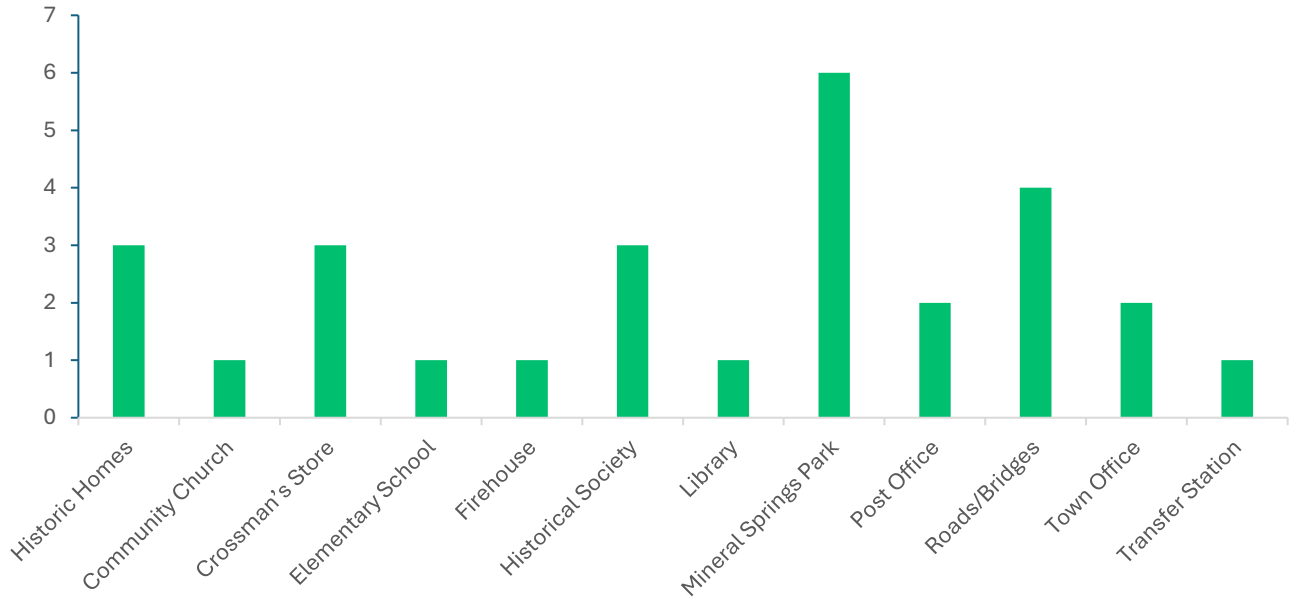
Areas along the river, esp. in the village

Places located lower down and next to the river along 140

Fitzgerald Road

North Brook Damage along embankments at Mineral Spring Parks due to flooding. Flooding in the park as well

7. **List any specific community assets you are concerned about losing because of natural hazard impacts. Examples might include a local business or employer, a community gathering place, or a cultural or historical site.**



8. **Anything else related to natural hazard risks or impacts you would like to provide for consideration and incorporation into the Middletown Springs Local Hazard Mitigation Plan?**

Just cut trees.... | Tree trimming or elimination to avoid loss of power

Too many dead or close to dead trees over roadways, in ditches & over wires.

I guess this is handled by homeowners' property insurance, but losing trees in a storm is my biggest concern. This includes in Sullivan Woods, which is owned by the town. I think we should set aside funds to clean up fallen trees to keep this recreational asset safely open to all residents.

I think having a deputy fire marshall to assist James in notification and possible enforcement will be increasingly important in drought times.

Heat emergencies are of substantial concern as they are going to continue to get worse, impacting vulnerable populations, wildlife, water resources, businesses and pretty much everything on the list above. We need to address this by reducing our fossil fuel use and increasing the use of solar, wind and water power sources asap

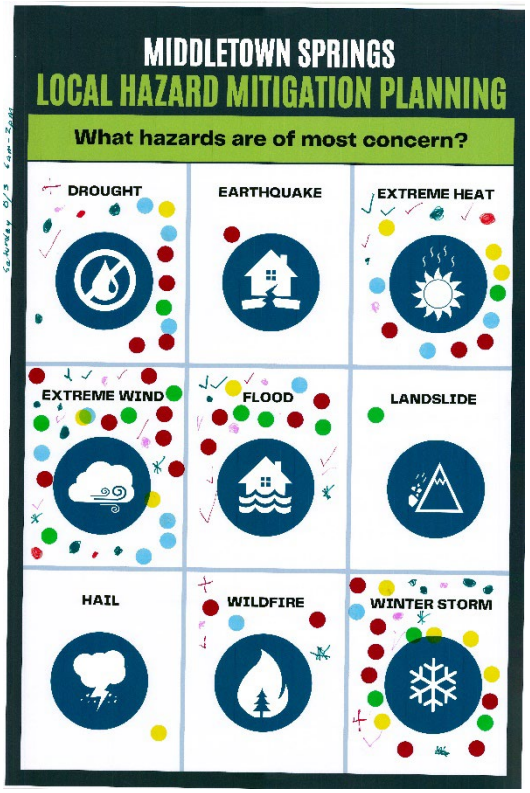
Flood mitigation with roadways; trees and power lines; dry weather and burn restrictions...

Power outages are not mentioned by name in this survey, and I think they should be talked about. They could be a significant hazard as people have become more reliant on electricity.

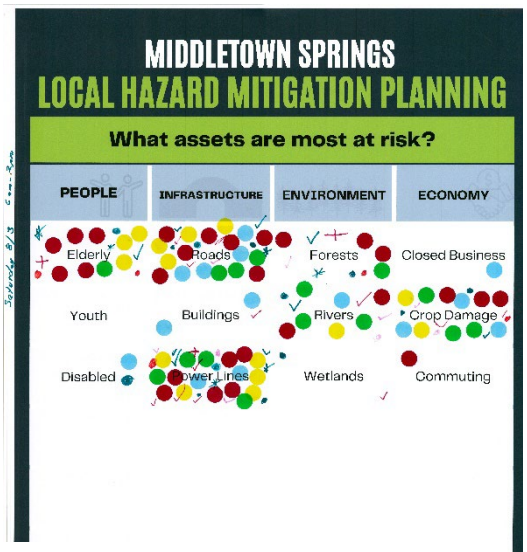
There once was a plane that landed on a hillside...behind Rising Meadow Pottery. I could see another similar issue.

Loss of important tree species, introduction of invacive or new species or pathogens

PHASE 1 ENGAGEMENT POP-UP RESULTS



Question: What Hazards Are of Most Concern?				
Response	**Aug 3, 2024**	**Aug 10 & 17, 2024**	**Total**	**%**
Drought	16	8	24	13%
Earthquake	1	1	2	1%
Extreme Heat	19	5	24	13%
Extreme Wind	**36**	**13**	**49**	**26%**
Flood	**21**	**11**	**32**	**17%**
Hail	1	3	4	2%
Landslide	1	1	2	1%
Wildfire	7	2	9	5%
Winter Storm	**28**	**14**	**42**	**22%**



Question: What Assets are Most At Risk?				
Response	**Aug 3, 2024**	**Aug 10 & 17, 2024**	**Total**	**%**
People: Disabled	2	3	5	3%
People: Elderly	**16**	**13**	**29**	**16%**
People: Youth	0	0	0	0%
Infrastructure: Buildings	3	0	3	2%
Infrastructure: Communications	0	1	1	1%
Infrastructure: Power Lines	**33**	**6**	**39**	**22%**
Infrastructure: Roads	**28**	**14**	**42**	**23%**
Environment: Forests	9	2	11	6%
Environment: Rivers	12	8	20	11%
Environment: Wetlands	2	3	5	3%
Economy: Closed Businesses	1	0	1	1%
Economy: Commuting	1	1	2	1%
Economy: Crop Damage	19	4	23	13%

Examples of Phase 2 Engagement Materials

Social Media Postings
Email Blasts
Survey with Results

SOCIAL MEDIA POSTINGS

SOCIAL MEDIA POSTINGS

PHASE 2 EMAIL BLAST EXAMPLE

Good morning,

If you are receiving this email, you have been identified as an agency involved in hazard mitigation activities at the local and regional level. This includes local highway departments, local emergency management and response, regional bodies such as PMNRCD and CWSP, and State bodies such as the DEC, VDH, and VTrans. FEMA requires any municipality involved in updating their Local Hazard Mitigation Plan (LHMP) to reach out to different segments of the "Whole Community" throughout the plan development process.

On the behalf of Middletown Springs, we are writing to inform you that the second public engagement survey has gone live! From **November 1 – November 22**, we are seeking your reaction to the draft mitigation actions developed by the local Planning Team to address the Town's highest risk natural hazards. Let us know, based on your technical and/or local knowledge, if these actions are acceptable and practical for Middletown Springs to implement. You can access the survey directly at https://tinyurl.com/MTS-LHMP24-SurveyB or navigate to the landing page at https://tinyurl.com/MTSLHMP24, which will also let you see where we're at in the plan development process. Any questions should be directed to maggie@rutlandrpc.org.

Best,
Maggie

PHASE 2 EMAIL BLAST EXAMPLE

Good morning,

If you are receiving this email, you have been identified as a **key local official (Selectboard Chair, Planning Commission Chair, Town Clerk, and EMD) of the municipalities adjacent to Middletown Springs**. This includes the Town of Ira, Town of Poultney, Town of Tinmouth, and Town of Wells. FEMA requires any municipality involved in updating their Local Hazard Mitigation Plan (LHMP) to reach out to different segments of the "Whole Community" throughout the plan development process, including municipal contacts in neighboring municipalities.

On the behalf of Middletown Springs, we are providing you with notice that the Town is accepting their second round of public comments for the complete draft of the 2025 Middletown Springs Local Hazard Mitigation Plan (LHMP). You can drop by the Town Office at 5 South Street or visit https://tinyurl.com/MTSLHMP24 to view a copy of the draft. All comments, including suggested revisions, should be sent to me at maggie@rutlandrpc.org. To accommodate the holidays, the public comment period will remain open until **January 9**; the Middletown Selectboard meeting held that evening will be the final opportunity to submit feedback.

Please do not hesitate to reach out if you have any questions.

Best,
Maggie

PHASE 2 ENGAGEMENT SURVEY RESULTS

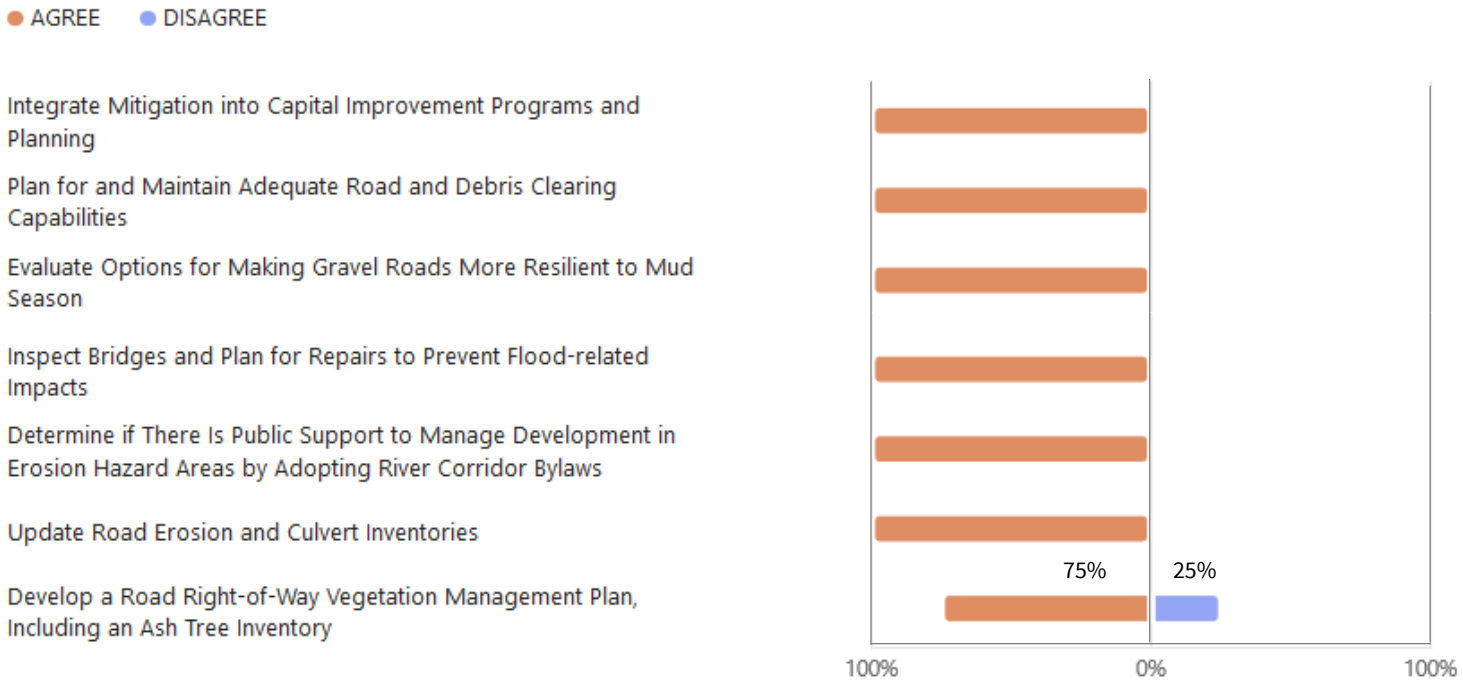
1. **Evaluate the community's primary mitigation goal: "To increase Middletown Springs's resilience to natural hazards by advancing mitigation investments. These investments will ultimately reduce or avoid long-term risks to people; homes and neighborhoods; the local economy; cultural and historic resources; ecosystems and natural resources; and Community Lifelines such as transportation, energy, and communications."**

   I AGREE with the direction of the goal statement **100%**
   I DISAGREE with the direction of the goal statement **0%**

2. **If you disagree with the goal statement, explain why. Is there something missing we should consider?**

   No responses submitted.

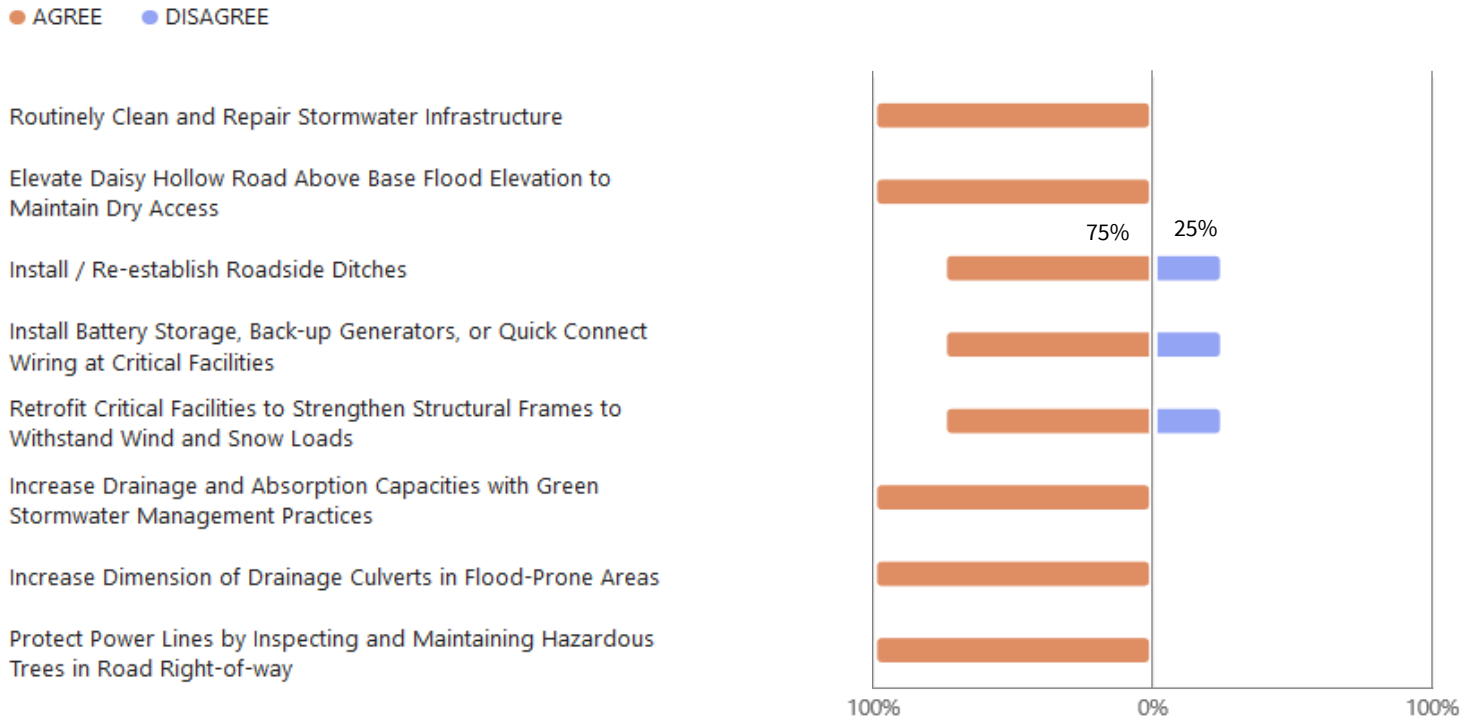
3. **Indicate if you agree or disagree that the following Planning and Regulatory mitigation actions are acceptable and practical for Middletown Springs to implement over a five year period. These actions include plans, policies, or regulations that influence the way land and buildings are developed and built.**



4. **Is there something missing we should consider?**

   "Add community garden"

5. **Indicate if you agree or disagree that the following Structure & Infrastructure Project mitigation actions are acceptable and practical for Middletown Springs to implement over a five year period. These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area.**

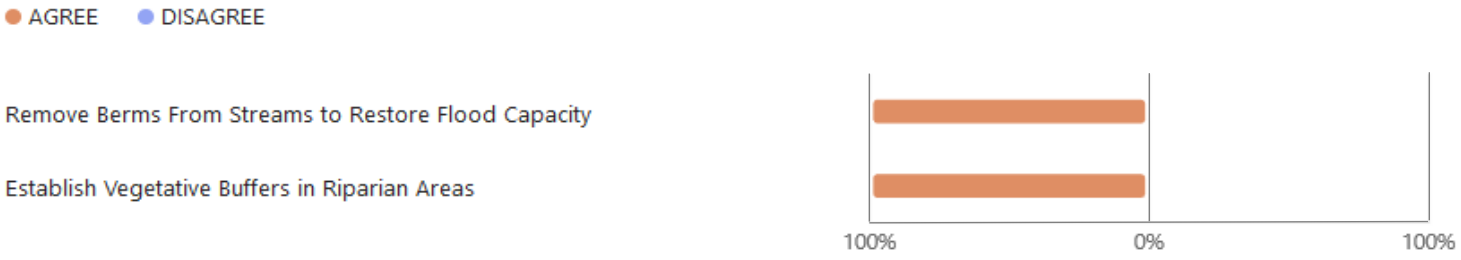


6. **Is there something missing we should consider?**

   "Install street lights on garron road"

   "Clean up old Culverts after roadwork is done"

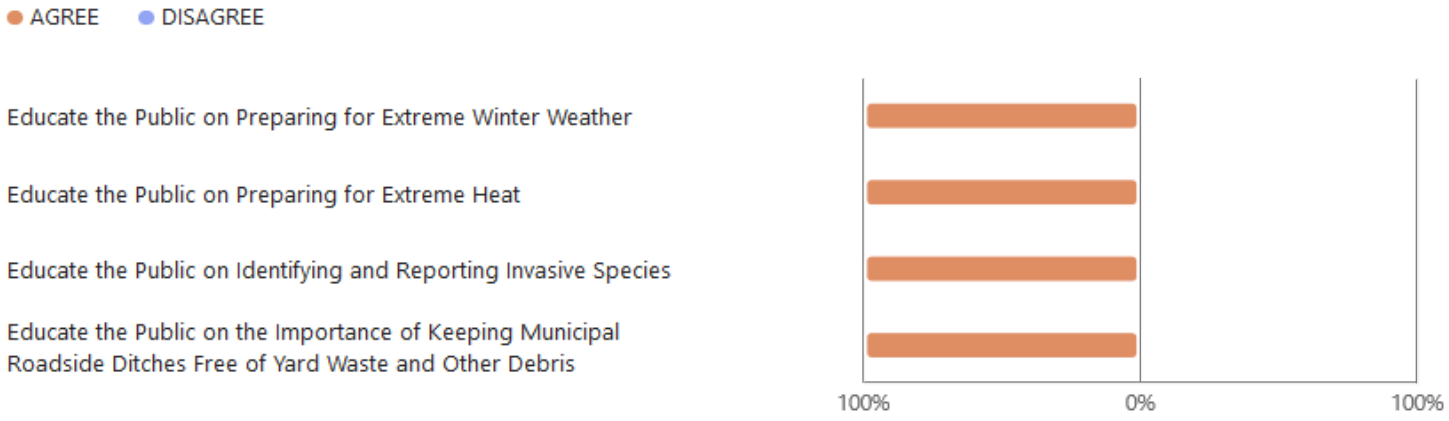
7. **Indicate if you agree or disagree that the following Natural Systems Protection mitigation actions are acceptable and practical for Middletown Springs to implement over a five year period. These actions help minimize damage and losses and preserve or restore the functions of natural systems.**



8. **Is there something missing we should consider?**

   No responses submitted.

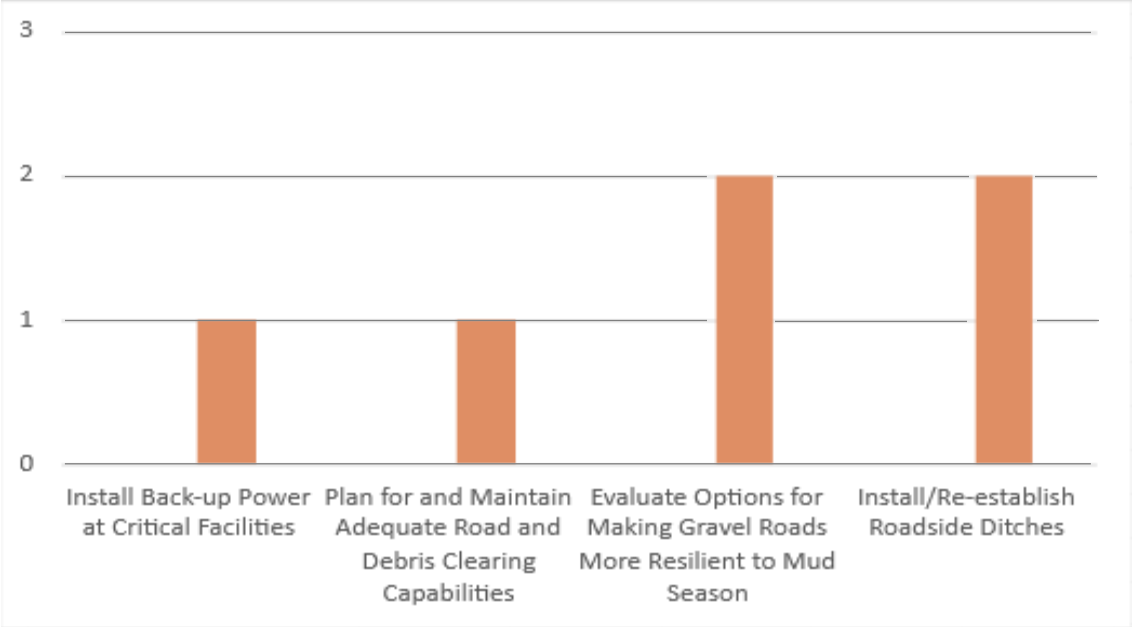
9. Indicate if you agree or disagree that the following Outreach and Education mitigation actions are acceptable and practical for Middletown Springs to implement over a five year period. These actions inform and educate the public about hazards and potential ways to mitigate them.



10. Is there something missing we should consider?

"Have fines for littering"

11. Out of all the mitigation actions presented, which three (3) are the most important for Middletown Springs to implement?



Responses NOT included due to ambiguity:
"Flood resistant"
"Structures & Infrastructure, natural systems protection and education & outreach strategies"

FEMA APPROVAL LETTER

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

FEMA

August 26, 2025

Stephanie A. Smith, Hazard Mitigation Section Chief | State Hazard Mitigation Officer
Vermont Emergency Management
45 State Drive
Waterbury, Vermont 05671-1300

Dear Stephanie Smith:

As outlined in the FEMA-State Agreements for FEMA-4744-DR-VT, FEMA-4720-DR-VT, FEMA-4695-DR-VT, FEMA-4621-DR-VT, FEMA-4532-DR-VT, and FEMA-4474-DR-VT, your office has been delegated the authority to review and approve local mitigation plans under the Program Administration by States Pilot Program. Our Agency has been notified that your office completed its review of the *Middletown Springs, Vermont 2025 Local Hazard Mitigation Plan* effective **August 25, 2025** through **August 24, 2030** in accordance with the planning requirements of the Robert T. Stafford Relief and Emergency Assistance Act (Stafford Act), as amended; the National Flood Insurance Act of 1968, as amended; the National Dam Safety Program Act, as amended; and Title 44 Code of Federal Regulations (CFR) Part 201.

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

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

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

Thank you for your continued commitment and dedication to risk reduction demonstrated by preparing and adopting a strategy for reducing disaster losses. Should you have any questions, please contact Alexis Meehan at (202) 394-6439 or alexis.meehan@fema.dhs.gov.

Sincerely,

CHRISTOPHER J MARKESICH Digitally signed by CHRISTOPHER J MARKESICH
Date: 2025.08.26 13:52:25 -04'00'

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

cc: Caroline Paske, State Hazard Mitigation Planner, VEM
Matthew Hand, State Hazard Mitigation Planner, VEM
Richard Verville, Mitigation Division Director, DHS, FEMA Region 1
Alexis Meehan, Community Planner, DHS, FEMA Region 1