Rutland City, Vermont
2025 Local Hazard Mitigation Plan

Photo credit: Michael Talbott

Inundation Flooding at the Intersection of US Route 7 and Clover Street
August 4, 2023 (DR4744)

FEMA Approval Pending Adoption Date: October 14, 2025
Municipal Adoption Date: October 20, 2025
FEMA Formal Approval Date: October 23, 2025

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

FEMA

November 13, 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 *Rutland City, Vermont 2025 Local Hazard Mitigation Plan* effective **October 23, 2025** through **October 22, 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 City of Rutland, 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: 2025.11.13 13:10:53 -05'00'

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
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Prepared by the Rutland City Local Hazard Mitigation Team
Bill Lovett, Fire Chief/Emergency Management Director
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Tyler Richardson, Executive Administrator
Andrew Strniste, Planning and Zoning Administrator[1]
Ed Bove, Planning Director

Technical Assistance by the Rutland Regional Planning Commission (RRPC)

Revised in December 2025 to reflect amendments made to the City's Land Use Regulations in November 2025.

[1]Andrew terminated employment with the City on November 1, 2024. The City's Board of Aldermen voted on November 18 to nominate Ed Bove as his replacement. The position was then formally renamed to Planning Director.

Table of Contents

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 City of Rutland's resilience to natural hazard impacts.

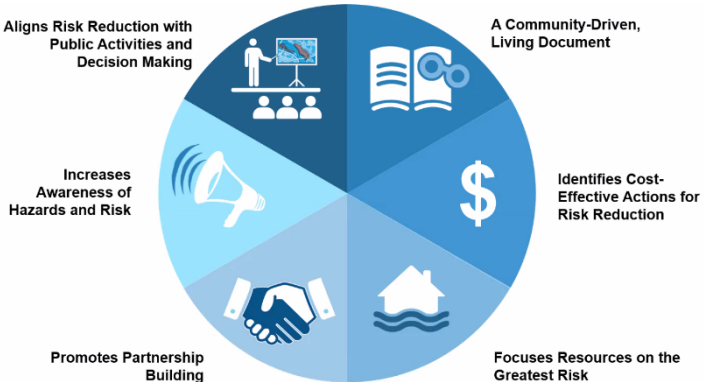
Hazard Mitigation is any sustained policy or action that reduces or eliminates long-term risk to people and property from the effects of natural hazards. All levels of government have come to recognize that it is less expensive to prevent disasters than to repeatedly repair damage after a disaster has 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 City 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:

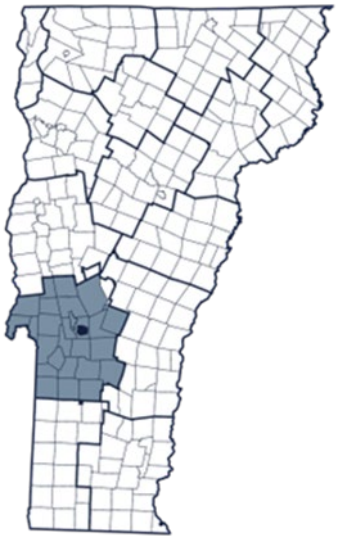


Source: FEMA LHMP Skill Share Workshop 2021

Furthermore, the City 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 Rutland City resides within the Vermont Valley, a physiographic region characterized by gentle slopes, deep and well-drained soils, wetlands, and floodplains. The City's development was based on their proximity to several key natural resources such as slate, marble, and limestone. Development patterns that emerged during the nineteenth century evolved around railroad and industrial uses; the placement of the rail yard dictated a street grid that remains in place today. The central business district arose across from the rail yards, industrial uses were located close to rail spurs, and residential neighborhoods grew where they were convenient to employment of the time. Vigorous industrial activity carried Rutland City well into the twentieth century, supplementing the less compact commercial development that took place along US Routes 4 and 7.



Rutland City is the largest community in Rutland County and the fourth largest community statewide. It also houses one of the county's three State-designated Downtowns. Downtown is a hub for shops, galleries, restaurants, and community events. It also houses civic services for municipal and State governments alike. Downtown-based public transportation includes Amtrak, Vermont Translines, and the Marble Valley Regional Transit District (MVRTD, or "The Bus"). Amtrak provides access to larger cities both in and out of Vermont, while MVRTD has bus routes serving sixteen total municipalities countywide.

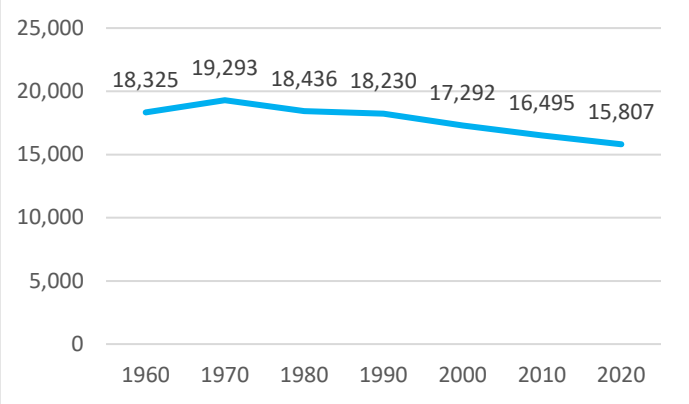
The development trends of the nineteenth and twentieth centuries resulted in a crosspatch of landscape legacies. Downtown retains an attractive

historic building stock, which is primarily utilized by businesses. Along Routes 4 and 7, growth occurred in the form of automobile-centric development styles that date back to the 1950s. Characteristics of this style include less dense commercial development areas, single use areas further separating residential areas from employment centers, and a lack of open public space. Smaller uses have evolved in and between neighborhoods scattered throughout the City, though there is little commercial or industrial land left to be developed. Single and multi-family homes constitute an estimated 80% of the current land use, with the greatest density surrounding the Downtown "core".

Properties of note in the Downtown area include the Rutland City Police Department, City Hall, Rutland District & Family Court, US Post Office, MVRTD Transit Center and Parking Garage, Community College of Vermont, Rutland Depot, and Rutland Plaza. Municipal fire and rescue are located just outside of Downtown.

Land Features Rutland City is situated in the broad Otter Creek Valley, nestled between the Green and Taconic Mountain ranges. The City has a total land area of 7.67 square miles or approximately 4,900 acres. It stands on mostly level and gentle sloping land, with elevation ranges of 500 to 1,000 feet above sea level. The landscape is defined by deep well-drained soils that typically support agriculture and wetlands. Due to the highly developed urban context, only relatively small parcels of prime agricultural soil remain in agricultural or forest use.

Demographics and Growth Potential The 2020 Decennial Census prepared by the U.S. Census Bureau shows an estimated population of 15,807 and 7,870 housing units. After peaking in 1970, the City saw a steady and gradual decline in population.



The median age in Rutland City is 46.9, modestly below the median age of 47.7 in the county. 23.1% of the population is 65 years or older and nearly 20% are considered disabled. The population density of the City is 1,730 people per square mile, compared to an overall state density of 68 per square mile.

The City has 121 seasonal units, which represents 1.5% of the total housing units. Of the permanent residences, 51% are site-built single-family units, 47% are multi-family units, and 2% are manufactured housing. There are 8 state-registered mobile home parks in the City. About 45% of residences are renter-occupied; 55% are owner-occupied.

Having nearly 20,000 residents in the 1970s, the City has demonstrated the capacity to accommodate a larger population base. It is poised to experience substantial growth through the means of infill development, renovation of its existing housing stock, the replacement and upgrade of old infrastructure, and the separation of its combined stormwater and sewer infrastructure, especially in the Downtown area.

Precipitation and Water Features Average annual precipitation is 40.3 inches of rain, with July being the wettest month. Average annual snowfall is 74.6 inches, with January being the snowiest month. Rutland City has about 137 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, Rutland City will see 0-1 days of extreme precipitation.

The Otter Creek and four major tributaries (East Creek, Moon, Mussey, and Tenney Brooks) and one minor tributary (Paint Mill Brook) flow through the City. Of these, East Creek and Otter Creek floodplains are the most significant. Other surface waters include Patch, Muddy, Rocky, Combination, and Piedmont ponds.

According to the Agency of Natural Resources, ±4.8% of the City's land area (236 acres) is Class II Wetlands. These play an important function in water absorption and holding capacity that reduces the hazards of flooding and replenishes ground-water supplies.

Average Temperatures The average high temperature for Rutland City is 80.2°F, with July being the hottest month. There are 3.1 days annually when the high temperature is over 90°F. The coldest month of the year is January, with an average nighttime temperature of just 7.1°F. There are 172 days annually when the nighttime low temperature falls below freezing.

Future projections from the University of California San Diego predict that by 2044, under scenarios of both intermediate and extreme greenhouse gas emissions, Rutland City will see 0-20 days above 90°F and 120-140 days below 32°F per year.

The Vermont Climate Action Office reports that the period from 2010-2020 was the warmest decade on record; if this trend continues, Rutland City will likely exceed 3.1 annual days of temperatures above 90°F by 2050.

Drinking Water and Sanitary Sewer Virtually 100% of Rutland City has municipal water service. As of 2020, the City provides water to ±6,050 accounts via a gravity-fed system. A weir and intake facility about 3 miles north withdraws the City's water supply from Mendon Brook. The drinking water system is made up of about 83 miles of water mains, a water filtration plant, and two 2.5-million-gallon storage tanks, with additional water storage facilities in nearby Rutland Town.

The municipal sewage system also serves virtually the entire City through a total of ±5,670 connections. Rutland City has a Combined Sewer System with points of combined sewer overflows on East Creek and Otter Creek. The sewage treatment facility located on Otter Creek is capable of handling 22.5 million gallons of flow a day.

Out of the 10 pump stations associated with the sewage treatment facility, 8 are owned by the City and are located on Belden Road, Clement Road, Dorr Drive, Grove Street, Laverne Drive, Northeast Drive, River Street, and Sherwood Road. The remaining two on Meadowlake Drive and US Route 4 are privately owned but maintained by the City.

The treatment facility also treats wastewater from the municipalities of Rutland Town, Mendon, and Killington via the privately owned Alpine Pipeline.

Transportation Rutland City is ±7.67 square miles in size with primary access via US Route 7 (north-south) and US Route 4 (east-west). According to 2024 VTrans Town Highway data, the City has ±76.3 municipal road miles: 6.0 miles Class 1; 13.8 miles Class 2; and 56.5 miles Class 3. In addition, there are 1.35 miles of State highway in Rutland City, for a total of ±77.6 miles of traveled highways, including Class 4 roads. 100% of the City's roads are paved, and many of the City's intersections are signalized.

Associated with the road network, the City has an extensive stormwater collection system with ±2,000 catch basins for the closed stormwater collection system and ±600 catch basins for the combined sewer system.

The City's 2020 road erosion inventory shows 45% of the road mileage and ±110 stormwater outfalls are hydrologically connected - meaning they are within 100-feet of a water resource (i.e., stream, wetland, lake, or pond). Proximity to water resources can make these assets more vulnerable to flooding and fluvial erosion.

The City's 2020 structures inventory (short structures and culverts) shows Rutland City has 18 short structures (bridges with 6'-20' span). The City also has ±43 culverts in the municipal road right-of-way; all were inspected in 2020 by the RRPC. Of these, 6 culverts are classified as being in "poor" or "critical" condition and should be considered for replacement and/or upgrade per the City's Road and Bridge Standards.

According to VTrans, there are 8 City-owned long structures (bridges with >20' span). Long structures are inspected every two years by VTrans through the Town Highway Bridge Program. The latest inspections occurred in 2024.

The local road network is maintained by 26 employees among three divisions of the City's Department of Public Works (Streets, Water Distribution, and Wastewater Collection). The highway garage is located on Lincoln Avenue, with an additional municipal garage on Spruce Street.

Electric Utility Distribution System Electric service to approximately 9,100 accounts is provided by Green Mountain Power via ten primary circuits. Average annual outage statistics between 2020 and 2024 are summarized in **Table 1** below.

Table 1: Outage Summary

Average Annual (2020-2024)	
Avg # of times a customer was without power in a year	0.50
Avg length of each outage in hours	1.66
Avg # of hours the typical customer was without power	0.83
2024 only	
Avg # of times a customer was without power in a year	0.83
Avg length of each outage in hours	1.80
Avg # of hours the typical customer was without power	1.50

The longest power outage affecting the greatest number of accounts was 5.20 hours; it occurred in 2023 and impacted 243 accounts. The longest outage between 2019 and 2023 lasted 36.28 hours; it occurred in 2022 and only affected one account.

Public Safety Fire protection is provided by the Rutland City Fire Department, which is supported by 28 full-time personnel. The Department is a member of the Rutland County Mutual Aid Association. Law enforcement is provided by the Rutland City Police Department, with support from Rutland County Sherrif's and Vermont State Police.

Emergency medical care is provided by the Regional Ambulance Service, including advanced paramedic services and transport. The City's hospital, Rutland Regional Medical Center (RRMC), is located on Allen Street.

Emergency Management As per the City's Local Emergency Management Plan (LEMP), the role of Emergency Management Director (EMD) is currently being fulfilled by the Fire Chief. The EMD works with others in the City to keep the LEMP up to date and coordinates with nearby towns and non-profit agencies that serve vulnerable populations. Rutland High School serves as the Regional Shelter for Rutland County.

Rutland High School
Photo Credit: Rutland Herald

4 PLANNING PROCESS

Plan Developers

A local Hazard Mitigation Planning Team participated in updating the Plan. Team members included the Fire Chief/EMD, Commissioner of Public Works, Planning and Zoning Administrator, Executive Administrator for the Mayor, and Emergency Preparedness Specialist from Vermont Department of Health.

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 a single jurisdiction LHMP update to the 2014 multi-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 25, 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 working meetings were not open to the public.

Aug-Nov 2024: Completed Phase 1 public engagement activities - see **Appendix C**.

Sept 12, 2024 Risk Assessment Workshop: 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 26, 2024 Planning Team Meeting: confirmed details of Community Profile (Section 3) and 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 Board of Aldermen and first public comment period.

Oct 21, 2024 Draft Plan Presentation: presented to Rutland City Board of Aldermen to encourage input from local government and the public that could affect the plan's conclusions and better integrate with City Initiatives. Meeting was recorded and aired on Public Access Television (PEGTV) and is available on their YouTube channel.

Oct 21-Nov 8, 2024 Draft Plan Public Comment Period: draft Plan posted for first public comment period. Opportunity for public comments was provided at November 4, 2024 Board of Aldermen meeting. Public comment period formally closed November 8, 2024. Draft Plan was discussed at November 18, 2024 Board of Aldermen meeting.

Dec 5, 2024 Planning Team Meeting: discussed comments received on Oct draft; finalized Hazard Identification and Risk Assessment (Section 5); and began work on Hazard Mitigation Strategy (Section 6).

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

Jan 8 and Jan 16, 2025 Mitigation Action Evaluation Workshops: evaluated broad range of possible actions to address the highest risk natural hazards (Section 6). Subject matter experts attended the Workshop to assist the planning team with action evaluation.

Jan 30, 2025 Planning Team Meeting: developed actions proposed for implementation (Section 6).

Feb 28, 2025 Planning Team Meeting: finalized actions proposed for implementation with input from Phase 2 engagement (Section 6); reviewed Plan Maintenance (Section 7) and Mitigation Strategy Update - Changes Since 2014 (Section 4).

Mar 10, 2025: finalized the full draft Plan. This is a critical milestone in the plan development process, and the draft plan was prepared for presentation to Board of Aldermen and last public comment period.

Mar 17, 2025 Draft Plan Presentation: presented to Board of Aldermen to encourage input from local government and the public. Meeting was recorded and aired on PEGTV and is available on their YouTube channel.

Mar 17 – Apr 21, 2025 Draft Plan Public Comment Period: draft Plan posted for last public comment period. Draft Plan discussed at April 21, 2025 Board of Aldermen meeting with opportunity for public comments – coincided with close of last public comment period. Meeting was recorded and aired on PEGTV and is available on their YouTube channel.

Apr 21, 2025 Approval to Submit for APA: Board of Aldermen granted approval to submit the draft plan for Approval Pending Adoption.

In addition to the local knowledge of Planning Team members and other relevant parties, several existing plans, studies, reports, and technical information were utilized in the preparation of this Plan. A summary of these is provided 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. [2]

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 Community Profile in Section 3 and the risk assessment and profiles in Section 5.

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

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

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

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.

2020 Rutland City Master Plan Referenced to develop the land use and development patterns section of the Community Profile and the mitigation strategy in Section 6.

[2]The City requested a breakdown of repetitive loss non-residential property types from FEMA Region 1; however, this breakdown was not available. The repetitive loss property types are reported in Section 5 as Single Family Residential, Other Residential, or Non-Residential.

2020 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.

2020 Road Erosion Inventory Referenced to develop the flood risk profile in Section 5 and mitigation actions to address floods in Section 6.

2019 City of Rutland Emerald Ash Borer Strategy Referenced to provide an example of risk-informed community decision-making in Mitigation Strategy Update – Changes Since 2014 (Section 4).

2019 Moon Brook Rutland City Stormwater Management Plan (SWMP) Used to develop the flood risk profile in Section 5 and mitigation actions to address floods in Section 6.

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

2014 Tenney Brook/East Creek Watershed SWMP Used to develop the flood risk profile in Section 5 and 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 floods, extreme heat, strong wind, and severe winter storms in Section 6.

2012 Stormwater Infrastructure Mapping Project Referenced to develop mitigation actions to address floods in Section 6.

2009 Upper Otter Creek Phase 2 Stream Geomorphic Assessment Referenced to develop the flood risk profile in Section 5 and mitigation actions to address floods in Section 6.

2008 Moon Brook Watershed River Corridor Plan Referenced to develop the flood risk profile in Section 5 and mitigation actions to address floods in Section 6.

2007 East Creek Phase 2 Stream Geomorphic Assessment Referenced to develop the flood risk profile in Section 5 and mitigation actions to address floods in Section 6.

2006 Moon Brook Phase 1 and 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 Used 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.

RRPC Local Liaison Reports of Storm Damage Used to develop the risk profiles and hazard histories in Section 5.

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

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

GIS Data Layers Incorporated into base mapping to assess and profile hazards, including, but not limited to, FEMA National Flood Hazard Layers and State River Corridor Layers.

OpenFEMA Dataset: Public Assistance Funded Project 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.

2008 Flood Insurance Study for Rutland County, Vermont Referenced for community profile in Section 3; however, given the age of the document, it provided little in terms of assessing and profiling current flood risk.

Mitigation Strategy Update - Changes Since 2014

In 2014, Rutland City identified the following natural hazards that they believed posed the highest risk to the community:

- Floods (inundation and flash) and fluvial erosion
- Winter storms with extreme cold, snow, ice
- High winds, hurricanes, tornadoes, and severe thunderstorms

As the City sought to implement the 2014 mitigation strategy, they looked for opportunities to incorporate information and recommendations from the 2014 Plan into other plans, programs, and procedures. There are also cases where, more generally speaking, the City clearly demonstrated and applied risk-informed decision making to their plans, programs, and procedures. Provided below are some examples.

The Board of Aldermen has worked closely with public works and public safety department heads to incorporate risk information and hazard mitigation goals into annual operating budgets.

The City also developed a Capital Improvement Plan (CIP) for municipal facilities and equipment in 2025. Integration into the budget and the CIP remain as ongoing priorities.

Rutland City approved amendments to their Flood Hazard Area Regulations in November 2025 that are modeled after the standards set by Vermont Department of Environmental Conservation's 2022 Model Bylaws. This ensures the Land Use Bylaws exceed the minimum requirements set by the National Flood Insurance Program (NFIP) and approximate the standards adopted by the State in its regulation of floodplains and river corridors.

The City collaborated with the Rutland Natural Resources Conservation District to identify opportunities for erosion control and improving drainage and absorption capacity through green stormwater management practices. This was done as part of the development of the 2014 Tenney Brook/East Creek Watershed Stormwater Master Plan (SWMP). Some of these projects, such as the bioretention area at Giorgetti Arena, were successfully implemented after the development of the SWMP.

As outlined in their 2019 Emerald Ash Borer (EAB) Strategy plan, the City took an aggressive approach to mitigate the impacts of an anticipated EAB infestation. Rutland City previously had 355 ash trees located within the road right-of-way. Of these, 235 were removed and replaced with other hardwood species, while 120 were chemically treated with pesticides directly injected into the plant tissue. Half of these remaining trees receive a new injection once every two years to enhance their resistance to EAB.

This strategy has yielded multiple benefits for the City. First, it reduces risk to public safety, as dead ash trees tend to be brittle and drop their limbs easily. It is also more cost effective to remove the trees while they are alive; dead trees are unsafe to climb and are thus twice as expensive to remove. Lastly, by replacing removed trees with a diversity of species, the City has bolstered the resilience of their urban tree canopy to future invasive attacks.

Rutland City has also made some progress in completing the mitigation actions identified in the 2014 Plan – see **Appendix B**.

One noteworthy accomplishment for the City is the floodproofing of the once-vulnerable wastewater pump stations on Dorr Drive and River Street. Before this, flooding caused equipment and control failures that prevented these pumps from conveying sewage properly. This scenario is problematic for the City as all their sewage, which moves in a south-west direction, is eventually intercepted by the River Street pump station. Keeping the system online removes the risk of significant backups that would prevent the City from processing sewage.

Additionally, existing infrastructure improvements completed since 2014 have decreased Rutland City's level of vulnerability. Two bridges, located on Dorr Drive (B2) and Ripley Road (B17), have been upsized, as well as various culverts located on Allen Street, Church Street, Forest Street, Grove Street, and Park Street. These structures were well beyond their useful life and/or in critical condition, but replacements in all cases involved an increase in bankfull width to reduce localized flooding impacts. This effort is ongoing, as outlined in **Table 6**.

Mitigation actions taken by Rutland City since 2014 have made the community more prepared and less vulnerable to future natural hazard impacts.

Rutland City has not experienced a significant increase in new development since 2014. (As noted in the Community Profile, little land in the City is left available for commercial or industrial development.) The majority of zoning permits issued during the past decade (1,162 total) cover changes in use, additions to existing buildings, and minor construction projects such as decks, sheds, and garages. In the past ten years, only 43 new homes have been constructed.

Data from the Vermont Department of Labor indicates that 76 new businesses were established from 2014 to 2023 (the latest year for which annual data is available). Given the City's limited outward sprawl, it is likely that most, if not all, these businesses inhabited existing spaces. It is not known which of these businesses is still active, with a net loss of 32 establishments during the same time frame.

There has been some development within the floodplain areas around Meadow Street and School Street, Clover Street and South Main Street, Pearl Street, and Forest Street. Most of this development is residential in nature, involving renovations of existing structures or homes (not substantial improvements), reconstruction of existing porches or decks, or the new construction of small accessory structures. The newly built accessory structures likely do not pose a major influence on the City's current level of vulnerability.

The growth potential statement on page 2 states that future growth in Rutland City will largely depend on infill development, the renovation of existing housing stock, and the replacement and upgrade of older infrastructure. One project of note is a lot at the corner of Center and Wales Streets that has stood vacant since 1973. Through the City's Tax Increment Finance (TIF) District (see page 25), the land is now poised to receive a $40 million investment in the form of a seven-story, mixed-use building featuring 99 hotel rooms, 26 market-rate apartments, a restaurant, and a rooftop bar.

While limited in scope, infrastructure buildout in the City has and will continue to occur. For example, the water distribution system in the South End neighborhood used to suffer from low flow and pressure, posing a risk to the City's ability to fight fires. Water mains have been upsized and/or expanded on Park Street and across Otter Creek on Campbell Road, Dorr Drive, and Ripley Road. This expansion in capacity now makes the system capable of supporting, for instance, a condominium development where it could not before.

Future residential growth is anticipated given the current statewide housing shortage and regional housing target for thousands of units in Rutland City in the coming decades. Given current land use regulations and restrictions, it is likely most of this growth will occur via the redevelopment of existing spaces. On Center Street, the City plans to install new sprinkler systems and sewer main connections for existing structures, allowing the conversion of currently vacant upper floors into apartments.

Changes in land use and development since 2014 have not made Rutland City more vulnerable to natural hazards.

A combination of the City Master Plan and Land Use Development Regulations guide development in Rutland City. The City feels that these controls are sufficient to limit future growth in hazard-prone areas.

To combat the declining trend in population seen following the peak of nearly 20,000 in 1970, the City has made a dedicated effort to bring more people to the area. Direct recruitment is supported by the Real Rutland Concierge Program, with over 225 people having relocated to Rutland County since 2016. Additional organizations provide incentives for relocation by redeveloping blighted structures (Rutland Redevelopment Authority) or supporting community events in the Downtown (Downtown Rutland Partnership).

The City has also seen some shift in key demographics since 2010 – age and homelessness. The median age of residents rose from ±42.1 in 2010 to ±46.9 in 2020, and the percentage of the population over 65 rose from approximately 16.7% to 23.1%. Following the COVID-19 Pandemic, the number of homeless individuals has grown, especially with the hotel-motel voucher program being pared down with higher prices and voucher caps in September 2024. These demographic changes, combined with the potential for new residents, may increase the City's vulnerability to natural hazards.

Since 2014, 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. [3]

As a result, Rutland City 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 and selecting mitigation actions for the 2025 Plan.

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

Changes in population demographics and weather patterns are the primary drivers for a shift in the City's mitigation priorities in 2025.

In 2025, Rutland City again ranked Floods; Strong Wind; and Extreme Cold, Snow, Ice as the community's highest risk hazards. A recent shift in focus from assessing hazard *events* to hazard *impacts* means hurricanes, tornadoes, and severe thunderstorms are no longer considered during the ranking process. The location of the highest risk hazards has not substantially changed since 2014.

The Planning Team, specifically the Fire Chief, noted that over the past decade, the cost of responding to natural hazard impacts is outpacing the costs of responding to structure fires. This trend will likely continue as climate change continues to worsen.

New to the list of highest risk hazards is Extreme Heat. Given an increase in frequency for these hazard events, the impacts of Extreme Heat on vulnerable populations are now a greater concern for the City. These impacts are amplified by the City's urban environment, which is characterized by high concentrations of asphalt and concrete surfaces. These materials are conducive to heat absorption and retention resulting in warmer temperatures when compared to more rural areas with greenspace; this is known as the Urban Heat Island Effect.

Finally, to better address the needs of Rutland City's vulnerable populations, when ranking an action's implementation priority in 2025, those that directly benefit a vulnerable population were ranked first priority – see **Table 6**.

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.

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** (see following page) and reflects the **highest risk hazards** the City 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
Inundation Floods	**14.00**	**40%** of survey respondents have experienced inundation flooding; **48%** of popup participants are concerned about floods.
Flash Floods / Fluvial Erosion	**11.25**	**57%** of survey respondents have experienced flash flooding; voted **#1** of top 3 hazards most likely to occur in the next 5 years.
Extreme Heat	**8.00**	**53%** of survey respondents have experienced extreme heat; **15%** of popup participants are concerned about extreme heat; voted **#3** of top 3 hazards most likely to occur in the next 5 years.
Strong Wind	**7.00**	**90%** of survey respondents have experienced strong wind; **18%** of popup participants are concerned about strong wind; voted **#2** of top 3 hazards most likely to occur in the next 5 years.
Extreme Cold, Snow, Ice	**6.00**	**50%** of survey respondents have experienced extreme winter storm impacts; **10%** of popup participants are concerned about extreme cold, snow, ice.

Table 4: Community Hazard Risk Assessment

Hazards	Probability	Potential Impact					Risk Score
		People	Infrastructure	Environment	Economy	Average	
Inundation Floods	**4**	**3**	**4**	**3**	**4**	**3.5**	**14.0**
Flash Floods/ Fluvial Erosion	**3**	**4**	**4**	**3**	**4**	**3.75**	**11.25**
Extreme Heat	**4**	**4**	**2**	**1**	**1**	**2.0**	**8.0**
Strong Wind	**4**	**2**	**2**	**1**	**2**	**1.75**	**7.0**
Extreme Cold/Snow/Ice	**3**	**3**	**2**	**1**	**2**	**2.0**	**6.0**
Invasives	3	1	2	3	2	2.0	6.0
Infectious Disease	3	4	1	1	2	2.0	6.0
Hail	1	1	1	1	2	1.25	1.25
Drought	1	1	1	1	1	1.0	1.0
Landslide	1	1	1	1	1	1.0	1.0
Wildfire	1	1	1	1	1	1.0	1.0
Earthquake	1	1	1	1	1	1.0	1.0

*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 Rutland City may be high, potential impacts will be highly dependent on the specific infectious agent or invasive.

For infectious disease, the team assumed an endemic level of spread. The team concluded the Vermont Department of Health, also located in Rutland City, is better equipped to mitigate any local 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 in the county, the Emerald Ash Borer. Given the successful implementation of the City's 2019 EAB Strategy, it is considered a lower-risk hazard. Scores did take into consideration the encroachment of Dutch Elm Disease and the increasing prevalence of Eurasian watermilfoil in Combination Pond and the City's drinking water reservoir.

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

Each of the **highest risk hazards** is 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. See the State Hazard Mitigation Plan for information on lower risk hazards.

Highest Risk Hazard Profiles

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, breaks in water distribution mains, downed power lines, loss of fuel storage tanks, fires, and release of hazardous materials.

As noted in the 2023 State Hazard Mitigation Plan and 2021 Vermont Climate Assessment, the most common recurring hazard event impacting Vermont communities is flooding. There are two types of flooding: inundation and flash flooding. Inundation is when water rises onto low lying land. Flash flooding is a sudden, violent flood which often entails stream bank erosion (fluvial 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, often associated with physical adjustment of stream channel dimensions and location during flood events. These dynamic and often catastrophic adjustments are due to bed and bank erosion of naturally occurring unstable stream banks, debris and ice jams, or 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 event occurred 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 flooding section, since the storm brought only large rainfall and flooding to the City, 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. Rutland City experienced an estimated $934,645 in FEMA Public Assistance-funded damage during Irene. The City also suffered the loss of two (2) of its public drinking water system operators.

From 2012 to December 2024, Rutland County experienced approximately $4 million in damages primarily due to three Disaster Declarations: $2 million in July 2017 (DR4330); $1 million in April 2019 (DR4445); $500,000 in July 2023 (DR4720); and $500,000 in July 2024 (DR4762).

In Rutland City, floods are a risk. 48% of popup participants are concerned about floods. Damages from Tropical Storm Irene were significant, resulting in at least $934,645 in impacts and 2 fatalities.

Rutland City is vulnerable to inundation flooding along sections of Otter Creek, East Creek, Moon, Mussey, and Paint Mill Brooks - areas of concern are shown on the following maps.

Unlike inundation floods, flash floods can occur any time there is heavy rain. As a result, flash floods are inherently sudden and unpredictable. In an urban area like Rutland City, stormwater collection systems can become overwhelmed in flash floods and cause flooding in low lying areas located outside of designated floodplains.

40% of survey respondents have experienced inundation flooding, while 57% of survey respondents have experienced flash flooding. According to the National Weather Service, floods kill more people than any other weather-related hazard (except extreme heat). 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. Areas of concern for the City where these populations are clustered include Bardwell House (on Merchants Row) and St. Joseph's Kervick Center (on Convent Ave).

Clover Street Swift Water Rescue in Aug 2023 (DR4744)
Photo credit: Michael Talbott

One survey respondent noted that renters living in flood zones are at particular risk, as – "*Landlords… refuse to fix the property after a flood or take any preventive measures to keep the house(s) from flooding. [They] are adding to the population of homeless individuals and families; if the individuals that live in these units choose to stay, they are becoming very ill.*"

With inundation flooding, there are cascading impacts involving infectious disease, as floodwater can contain numerous types of infectious agents and host insects that transmit disease. Mosquitos, for example, breed in standing water and when their population increases, so does the risk of diseases they transmit – such as West Nile Virus and Eastern equine encephalitis (EEE).

A wide range of infrastructure assets are at risk from flooding in Rutland City. There are four (4) buildings in the FEMA floodway and 332 buildings in the FEMA floodplain, as well as roads, culverts, bridges, pump stations, solar facilities, and recreational facilities.

336 buildings (4% of community structures) are in the Special Flood Hazard Area; residential and commercial properties, recreation facilities, and utilities.

According to FEMA, 5% of properties have flood insurance. In total, these eighteen policies cover $10,222,000 in value.

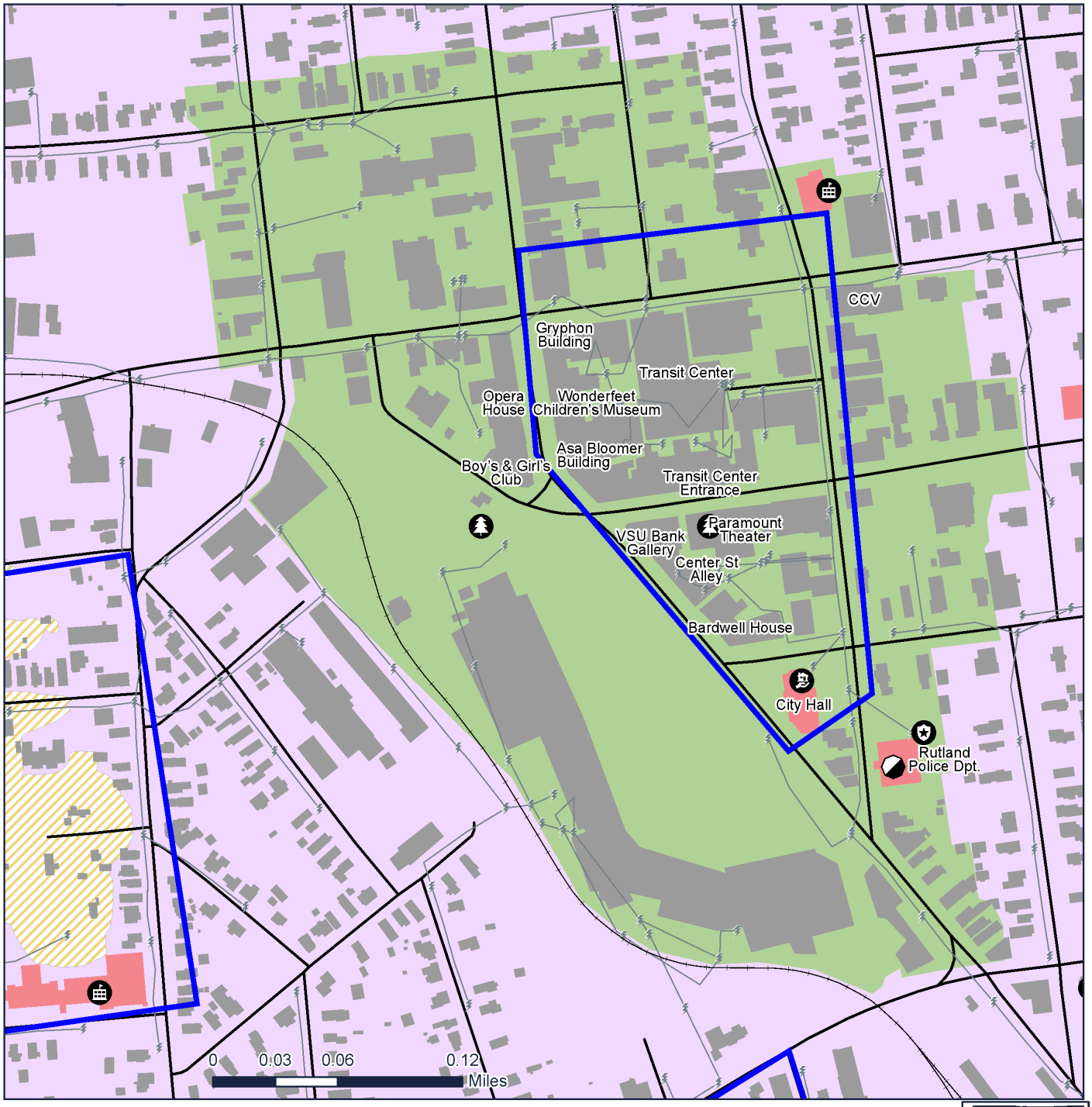
There are eight repetitive loss properties – two single-family residential, four other residential, and two non-residential.

Access to the municipal garage on Spruce Street can be cut off by inundation flooding. The wastewater pump stations on Dorr Drive and River Street were once vulnerable assets but have since been floodproofed (see page 7 for more details).

If the City's stormwater collection system is overwhelmed, significant sections of downtown may flood along Center Street and Merchants Row, including the Asa Bloomer Building, Bardwell House, and MVRTD Transit Center.

Culvert or stormwater collection system failures on roads considered locally important routes for through-traffic, short-cuts, detours, and/or access to critical facilities can have significant impacts. For example, the active replacement of a culvert on Allen Street in August 2023 combined with inundation flooding on South Main Street, Stratton Road, and Curtis Ave rendered RRMC completely inaccessible for several hours.

RUTLAND CITY - DOWNTOWN



Town Boundaries
Designated Downtown
Neighborhood Development Area
Critical Asset
Buildings
Roads
Bridges
Culverts
Power Lines
Rail Lines

Rivers & Streams

FEMA Floodplain
FEMA Floodplain

Flood Area of Concern
Inundation Flood

Waste Water Facilities

Emergency Operation Centers
School
Firehouse
Law Enforcement
Parks
Shelter
Hospitals
Parks selection

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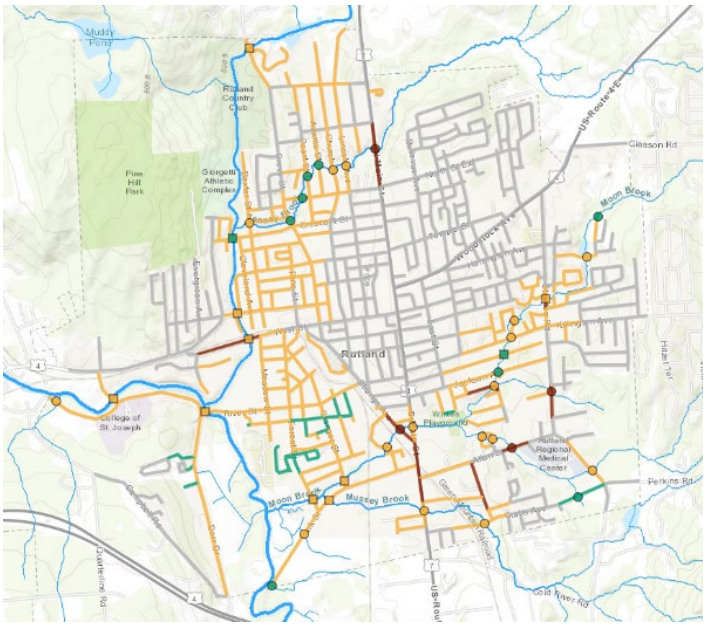
When roads are impacted by flooding, the City coordinates with the Fire Department and State Dispatch to close roads and set up detours. Road closures can create longer commute times and longer emergency service response times.

The City's outfall and road erosion inventories and VTrans Transportation Resiliency Planning Tool (TRPT) were used to identify locations and assets at risk. Road segments that exhibit high flood risk according to the TRPT include West Street, N Main Street, Strongs Avenue, S Main Street, Mussey Street, Allen Street, Perry Lane, and Stratton Road.



VTrans TRPT Flood Risk Results for Rutland City

The City identified several other locations as having a high flood risk based on experience:

- Chaffee Ave, Cleveland Ave, Earl Street, Meadow Street, Preville Ave, Water Street, and Meadow Street Park along East Creek.
- Clover Street, Killington Ave, Ronaldo Court, and White's Playground along Moon Brook.
- Brookside Mobile Home Park along Mussey Brook.
- Park Street near the confluence of Moon and Mussey brooks.
- Stratton Road where it intersects Paint Mill Brook.
- Clement Road along Otter Creek.
- Pearl Street along Tenney Brook.

As shown on the flood risk maps, these areas are densely developed with a mix of residential, commercial, and recreational assets.

In addition to stormwater runoff, ice or debris jams and dam failures can result in flash flooding in Rutland City. While uncommon, ice jams historically occurred on East Creek at the bridge connecting River Street with Dorr Drive (B2). This is no longer a concern after the installation of a new bridge with a greater deck height in 2015.

There are four (4) active dams in Rutland City listed in the Vermont Dam Inventory, a database managed by the VT Dam Safety Program:

1) Combination Pond Dam on Moon Brook is owned by the City and classified as a significant hazard potential dam. Water has crested this dam and flooded Sharon Drive in the past. This dam is in Poor Condition as of a 2023 inspection.
2) Piedmont Pond Dam on Moon Brook, west of Stratton Road, is privately owned and classified as a minimum hazard potential dam. This dam is in Poor Condition as of a 2017 inspection.
3) Patch Pond Dam on East Creek, west of US-7, is owned by Green Mountain Power and classified as a low hazard potential dam. Last inspected in 2024, its condition is fair.
4) Ripley Mills Dam on Otter Creek, north of Dorr Drive, is owned by OMYA Inc. and classified as a minimal hazard potential dam. Its condition and the latest year of inspection are unknown.

City-owned dams outside of city limits include the Rutland City Reservoir and Rutland City Reservoir Dike; the former has a high hazard potential rating and the latter a low hazard potential rating. Both are on East Creek in Rutland Town, which is the City's drinking water source. Last inspected in 2023, they are in Satisfactory Condition.

Flash floods can entail streambank or fluvial erosion. Excessive erosion has a negative impact on water quality and may result in increased turbidity and phosphorus transport or the release of legacy pollutants. The sediment mobilized by fluvial erosion can also contribute to aggradation and dammed streams.

The dramatic adjustments to stream channels caused by fluvial erosion are sudden and intense. They can also pose a significant risk to human life. In 2011, during Irene, two fatalities occurred while system operators checked on the City's drinking water system intake on Mendon Brook.

Existing studies helped identify locations and assets at risk from fluvial erosion. These include Stream Geomorphic Assessments and Stormwater Management Plans. The Planning Team identified Tenney Brook as most subject to fluvial erosion.

Stream Geomorphic Assessments (SGAs) provide information about the physical condition of streams and factors that influence their stability. These include a 2006 Phase 1 and 2 SGA for the Moon Brook Watershed; 2006 Phase 2 SGA for the Upper Otter Creek Watershed; 2007 Phase 2 SGA for the East Creek Watershed; 2008 Moon Brook Watershed River Corridor Plan; and 2009 Upper Otter Creek Phase 2 SGA. These studies identify priority locations for river corridor protection, planting stream buffers, stabilizing stream banks, removing berms, and removing/replacing human-placed structures (i.e., dams, bridges, culverts).

Dunklee Pond Dam overtopping in April 2019 (DR4445) – this dam was removed in 2021

Stormwater Master Planning 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 2019 Moon Brook SWMP recommended 20 projects to reduce environmental impacts of nutrient and sediment loading to Lake Champlain, as well as mitigate flood vulnerability to municipal or state road and drainage infrastructure. The 2014 Tenney Brook/East Creek SWMP recommended 18 projects for similar reasons.

The City is currently developing a Moon Brook Flow Restoration Plan, which will improve the resilience of this waterway during a flooding event.

Flood events with associated road closures can have a short-term impact on the local economy due to fewer shopping trips and commuter delays. Longer-term impacts may involve the temporary closure or permanent shutdown of local businesses. Damages to buildings and electrical systems are often costly and can have a significant impact on business assets.

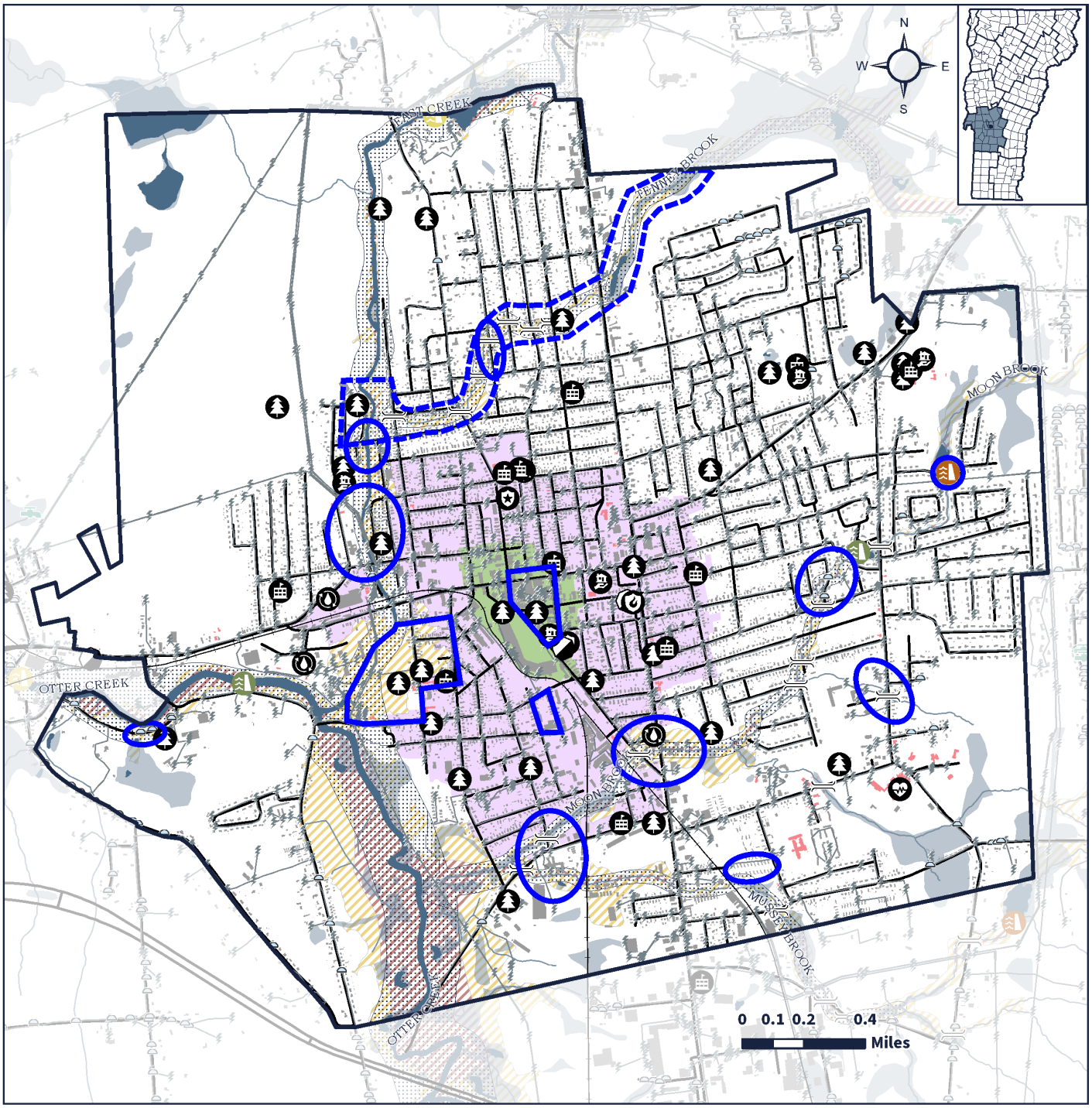
As the seat of the county, Rutland City is a major economic driver in the area. The disruption of major industries (i.e., recreation, education, health care, and government) would have impacts on employment, personal spending, and the provision of services on a county-wide level.

Floods Hazard History

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

8/4/2023: 2.5-4" rain: $150,000 local damage
7/11/2023: DR4720 2" rain: $60,631 local damage; $1.6 million regional damage
4/15/2019: DR4445 1-2" rain with significant snow melt: no reported 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 regional 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: $934,645 local damage; $55 million regional damage; $2.5 million regional crop damage
10/1/2010: 4-5" rain: $40,000 local damage
8/21/2009: 1"+ rain: $100,000 regional damage
6/14/2008: DR1778 3-5" rain: $2 million local damage
1/18/2006: 1 ½-2 ½" rain with significant snow melt: $50,000 regional damage

RUTLAND CITY - FLOOD RISKS



- Town Boundaries
- Designated Downtown
- Neighborhood Development Area
- Critical Asset
- Buildings
- Roads
- Bridges
- Culverts
- Power Lines
- Rail Lines
- Lakes & Ponds
- Rivers & Streams
- Wetlands
- River Corridors

FEMA Floodplain

- FEMA Floodplain
- FEMA Floodway

Flood Area of Concern

- Fluvial Erosion
- Inundation Flood
- Public Water Sources
- Waste Water Facilities

Dams

- Significant Hazard Potential
- Low Hazard Potential
- Minimal Hazard Potential
- Emergency Operation Centers
- School
- Firehouse
- Law Enforcement
- Parks
- Shelter
- Hospitals
- Parks selection

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Extreme Heat is an emerging concern for communities acclimated to cooler environments. Extreme heat events typically involve a combination of significantly high temperatures and high humidities. Multiple extreme heat event days in a row, during which the maximum temperature 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 2011-2024, 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 maple sugaring industry.

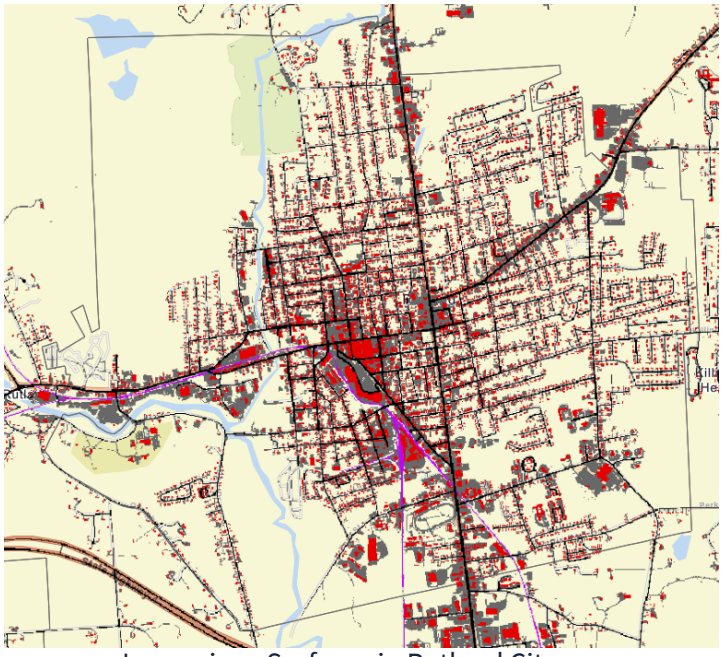
Extreme temperatures have and will continue to impact Rutland City. 53% of survey respondents have experienced extreme heat events; 33% believe one will occur in the next five years.

Vermont Department of Health data indicates state residents experience heat-related illnesses at around 87°F. While everyone is affected by hot weather, the risk of heat illness is greater for vulnerable populations, including outdoor workers, urban residents, and the homeless. Other at-risk indicators include living alone, having limited transportation options, and lacking access to air conditioning or other cooling options.

There is a cumulative total of 15 nursing homes and assisted living residential facilities in Rutland City. Most of these are older homes where HVAC and electrical services may not be up to standard. They are also sealed to protect residents against the effects of extreme cold, resulting in a heat-trapping effect. Should there be any mechanical failures to temperature regulation systems during an extreme heat event, multiple clusters of vulnerable populations would be at risk of heat stroke and exhaustion.

A survey respondent expressed similar concerns, emphasizing the importance of - "*AC units for the elderly, who are affected by increased heat and humidity... EMS calls increase markedly during heat waves, mostly for geriatric patients.*"

Rutland City's built environment is particularly vulnerable to the urban heat island effect (see page 8 for more details). This is due to higher concentrations of impervious surfaces and lower concentrations of tree cover.



Impervious Surfaces in Rutland City –
Vermont Municipal Vulnerability Indicators Tool

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's limited room for the slab to expand. Thermal expansion can swell bridge connections and induce their collapse, and railway tracks can experience buckling, the sagging of overhead lines, and the bending of rails.

A gradually warming climate will increase soil drying rates, contributing to drought-like conditions. Trees that are drought and heat stressed are more likely to experience breakage or succumb to disease or pest invasions.

Warmer water temperatures will increase the prevalence of harmful algal blooms and extend the growing season for Eurasian Watermilfoil (*Myriophyllum spicatum*), an invasive species prevalent in the City's drinking water reservoir.

Large manufacturers are relatively well-prepared for high-heat events. People may spend less if they are contributing more income towards the costs of cooling.

Extreme Heat Hazard History

These are the most up to date significant events impacting Rutland City. 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

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 2024, wind events resulted in over $3.5 million in property damage in Rutland County, with $802,000 in 2017 and $548,000 in 2022.

Strong wind is possible here; 90% of survey respondents have experienced a strong wind event. Rutland City is susceptible to high directional winds city-wide, especially in the north-east corner.

18% of popup 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 the Community Profile, the longest power outage between 2019 and 2023 lasted for 36.28 hours; it occurred in 2022 and affected only one account. In 2023, the City had a power outage lasting 5.20 hours that impacted 243 accounts.

While Table 1 (page 4) shows outages lasting a few hours on average, data from Green Mountain Power shows outages ranging from 5 to 23 hours occurred for an average of 26 accounts annually.

Loss of power during periods of extreme cold or heat can make sheltering in place challenging. Without a back-up supply of power, people need to be prepared to withstand potentially several days without power or otherwise seek alternative accommodations.

Downed trees within the road right-of-way are the root cause of many power outages. There are over 4,000 street trees in the City that pose this risk in a strong wind event. Fallen utility lines due to downed trees can cause power outages and disrupt communications, which are crucial in times of crisis.

During a disaster, municipal response is managed by the local Emergency Operations Center (EOC) at the Rutland City Police Department: this includes all communications from phone calls to internet browsing and 2-way radio. Critical facilities with backup power include the Police Department, Fire Department, City Hall, Rutland High School (regional shelter), and Rutland Regional Medical Center.

In addition to utility disruptions, downed trees can damage buildings and block road access.

Active collaboration with Green Mountain Power ensures Rutland City is well positioned to respond to power outages. While infrequent, the impacts of long-term power outages can be prohibitively expensive.

The primary environmental impact of concern for strong wind events is tree damage. Their damage or loss detracts from the quality of the environmental services they provide, such as stormwater management, carbon storage, air quality, and shade.

Strong wind with associated power outages can have a short-term impact on the local economy due to business closures or commutes blocked by downed trees or power lines.

Strong Wind Hazard History

These are the most up to date significant events impacting Rutland City. 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: 41 mph wind: $25,000 regional damage
1/10/2024: 50 mph wind: $50,000 regional damage
7/12/2022: 50-55 mph wind: $4,000 local damage
12/11/2021: 40 mph wind: $25,000 regional damage
3/1/2021: 46 mph wind: $35,000 regional damage
12/25/2020: 43 mph wind: $25,000 regional damage
8/4/2020: 45 mph wind: $25,000 regional damage
6/20/2019: 50 mph wind: $5,000 local damage
2/24/2019: 48 mph wind: $25,000 regional damage
9/6/2018: 50 mph wind: $5,000 local damage
4/1/2018: 56 mph wind: $50,000 regional damage
10/30/2017: 40 mph wind: $100,000 regional damage
5/5/2017: 43 mph wind: $25,000 regional damage
2/29/2016: 35 mph wind: $10,000 regional damage
10/28/2015: 40 mph wind: $50,000 regional damage
5/27/2014: 60 mph wind: $50,000 local damage
6/23/2013: 60 mph wind: $30,000 local damage
12/21/2012: 61 mph wind: $50,000 regional damage
10/29/2012: 50 mph: $25,000 regional damage
6/8-9/2011: 50-55 mph wind: $20,000 regional damage
4/16/2011: 50 mph: $20,000 regional damage
12/1/2010: 56 mph wind: $250,000 regional damage
7/21/2010: 55 mph wind: $50,000 local damage
3/5/2008: 43 mph wind: $25,000 regional damage
8/25/2007: 60 mph wind: $600,000 local damage
6/27/2007: 55 mph wind: $20,000 local damage
4/16/2007: DR1698 "Nor'icane": 69 mph wind: 3" snow and rain: $345,000 local damage; $3.5 million regional damage

Extreme Cold, Snow, and Ice events typically occur between the months of December and March in Rutland County. 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 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).

10% of popup participants are concerned about extreme winter storms. Winter weather impacts of greatest concern are equipment failures and limited pedestrian accessibility, which can occur City-wide. During longer storm events, power outages pose a potentially significant risk to many residents.

50% of survey respondents have experienced extreme cold, snow, or ice events. Winter storms create a higher risk of car accidents and extreme cold poses a higher risk of hypothermia and frostbite, especially if extreme temperatures coincide with power outages. Unlike other urban areas, much of the City's power lines are located above ground, meaning the loss of heat and communication services are more likely. Severe winter storms can put vulnerable populations at even greater risk, especially those relying on electrically powered medical devices.

The Fire Dept. has an established practice of checking on known vulnerable populations before and during the onset of a severe winter storm. When temperatures reach sub-zero values, warming shelters are available for the homeless and other vulnerable populations at BROC Community Action's office, the Elks Club, and Rutland United Methodist Church.

A leading cause of death and injury during winter storms is from car accidents. To lessen roadway impacts, the City employs a dozen plow trucks and a few sidewalk plows, although pedestrian accessibility can be compromised for longer periods, such as during long-duration winter storm events.

Given the City's highly urbanized character, there are no roads prone to drifting. Access roads and those adjacent to critical facilities (fire, police, hospital, etc.) are well maintained.

One city-wide risk that is difficult to predict in terms of location is the freezing and breaking of water distribution lines. Per the City's Water Distribution Regulations, the Department of Public Works maintains a list of individuals who run their water to prevent pipes from freezing. These individuals are located all over the City and are not concentrated in any one area.

Beyond this, trees or powerlines that are covered in ice or wet snow accumulation pose the greatest risk.

Like Strong Wind, the primary concern is tree damage. Rutland City's vulnerability lies with roadside trees falling in the road and/or on utility lines due to the weight of ice or wet snow accumulation. The resulting impacts include loss of the trees, utility disruptions, and road debris that requires clearing.

The City has numerous Norway Maples, a species that holds onto its leaves until late October. An early extreme winter weather event can be detrimental to this species' survival; their large leaf surface area holds more ice or wet snow accumulation, and the increased snow load makes them more prone to falls.

Given the City's predominantly urban nature, the greatest economic risk is to local businesses in the short-term. Potential impacts include school and daycare closures, employee and customer inaccessibility, commute delays, and frozen or burst pipes.

Three plow trucks at work during Dec 2017 winter storm
Source: City of Rutland Department of Public Works

Extreme Cold, Snow, and Ice Hazard History

These are the most up to date significant events impacting Rutland City. 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
1/16/2022: 6-10" snow: $20,000 regional damage
1/16/2021: 5-15" wet snow: $50,000 regional damage
12/16/2020: 19" snow: $10,000 regional damage
2/7/2020: 5-10" snow; ⅕" ice: $15,000 regional damage
3/22/2019: 4-12" wet snow: $15,000 regional damage
11/26/2018: 4-8" wet snow: $25,000 regional damage
1/13/2018: ½" freezing rain/sleet and flash freeze: $5,000 regional damage
3/14/2017: 15" snow: $25,000 regional damage
11/29/2016: Freezing rain, 1/10" ice: $20,000 regional damage
12/29/2015: 3-5" snow mixed with freezing rain/sleet: $20,000 regional damage
2/1-2/2015: Record cold month with 15-20+ days below zero and 10" snow: $10,000 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" wet snow: no reported local damage; $200,000 regional damage
3/12/2014: 16" snow: $20,000 regional damage
4/28/2012: record low in the 20s: $25,000 regional crop damage
3/6/2011: 6-12" snow, ¼" ice: $10,000 regional damage
2/23/2010: 6-30" snow: $200,000 regional damage
12/11/2008: 5-9" snow/glaze ice: $25,000 regional damage
2/14/2007: 15-35" snow and 0-10 degrees with wind of 15-25 mph creating windchills colder than 10 below zero; $200,000 regional damage
10/25/2005: 8-18" snow; $100,000 regional damage
3/5/2001: DR3167 20-30" snow: $19,000 local damage; $100,000 regional damage

Vulnerability Summary

Floods

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

Location *Inundation Flooding:* Combination Pond, Allen St, Baxter St, Center St, Chaffee Ave, Cleveland Ave, Clement Rd, Clover St, Dorr Dr, Earl St, Forest St, Granger St, Grove St, Killington Ave, Meadow St, Merchants Row, Mussey St, North Main St, Park Ave, Park St, Pearl St, Perry Ln, Rice Ave, Ronaldo Ct, School St, Sharon Dr, South Main St, Spruce St, Stratton Rd, Strongs Ave, Water St, West St

Fluvial Erosion: Adams St, Church St, Crescent St, Grove St, Lincoln Ave, North St, Oak St, Pearl St

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

Past Occurrence $2 million local; $55 million regional damage; $2.5 million regional crop damage

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

Extreme Heat

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

Location City-wide; Downtown District

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

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

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 City-wide, especially the north-east area

Extent 60-80 mph wind

Past Occurrence $600,000 local/$3.5 million regional damage

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

Extreme Cold, Snow, and Ice

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

Location City-wide

Extent 15-20+ days below zero; up to 35" snow; ½" freezing rain/sleet; ¼" ice

Past Occurrence $200,000 regional damage; $1.0 million regional crop damage

Future Probability Likely, <10% probability and >75% probability in a year

Survey Respondents Said….

Natural hazard impacts they are concerned about:

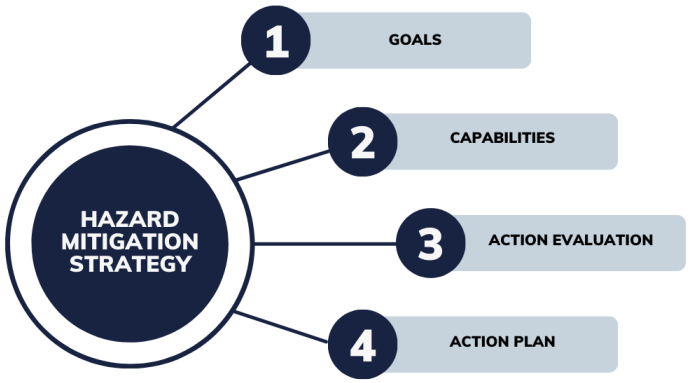
#1 Loss of life or injuries
#2 Damage or loss of roads, bridges, public utilities
#3 Damage to environmental resources
#4 Loss or damage to agricultural operations
#5 Business closure or loss

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 City to undertake to reduce future risk from potential hazards.



Mitigation Goals

The community's mitigation goal, which was supported by 79% of survey respondents, is to:

Increase Rutland City'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 medical, transportation, energy, and communications.***

See results in **Appendix C** for which assets engagement 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. Rutland City'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 City's staff and their skills and tools that can be used for mitigation planning and to implement actions. Out of all municipalities in Rutland County, the City is best equipped in this capability - see below for a summary of paid staff and appointed officials that can be used for this purpose.

Position or Department	Number
Board of Aldermen	One Board President, plus 10 additional board members
Building & Zoning and Health Officer	One Planning Director; one Zoning Administrator; one Building Inspector; one Assistant Building Inspector (and Health Officer); two Code Enforcers (and Assistant Health Officer)
City Clerk	One, plus Deputy City Clerk, Land Recording, and Purchasing Agent
City Treasurer	One, plus Payroll and four additional support staff
Department of Public Works (Streets, Water & Sewer)	One Commissioner (and Wastewater Division Manager); one City Engineer; one Associate City Engineer; one Engineer Technician; one Highway Operations Supervisor; one Water Division Manager; one Water Distribution Foreman; one Assistant Water Treatment Manager; one Wastewater Collection Foreman; one Wastewater Treatment Facility Chief Operator; and 39 additional support staff
Development Review Board	5-member Board
Economic Development (Rutland Redevelopment Authority)	One Executive Director, one Director of Grants and Outreach, and 7-member Board of Commissioners
Fire Department	One Fire Chief (and Emergency Management Director), one Deputy Fire Chief (and Emergency Management Coordinator), and 26 additional support staff
Forester and Arborist	One Forester and Arborist, plus Assistant Forester and Arborist
Mayor	One, plus Executive Administrator
Planning Commission	7-member Board
Police Department	One Police Chief, 39 sworn members, and 12 civilian support staff

To augment local resources, the City 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 Staff are trained on hazards and mitigation • High functioning local emergency management team • Coordination between departments is effective • Excellent record keeping system • Past success in securing grants for public infrastructure improvements • Established maintenance programs for cleaning culverts and roadside ditches as well as tree trimming within road ROW • Can augment local resources with neighboring communities • Community with a family atmosphere.

Areas for Improvement Better coordination with surrounding municipality (Rutland Town).

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.

City Master 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.

Capital Improvement Plan

Description: Comprehensive plan for the strategic purchasing of capital assets and the strategic construction of capital projects.
Relationship to Natural Hazard Mitigation Planning: Several Department of Public Works items related to flood mitigation are included in this plan. Equipment replacement planning strengthens the City's ability to maintain adequate road and debris clearing capabilities and infrastructure improvements are designed to minimize or eliminate flood impacts on local roads.

Road Stormwater Master Plan

Description: Prioritizes those infrastructure projects necessary to improve transportation network resiliency and water quality. Includes **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: Identifies several structural projects to improve stormwater drainage system capacity.

Moon Brook Rutland City and Tenney Brook/East Creek Stormwater Master Plans

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 flood 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.

Road and Bridge Standards

Description: Provide minimum codes and standards for construction, repair, maintenance of City 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.

Fire Department ISO Rating

Description: The Rutland City Fire Department's ISO Rating is 3. 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.

Buildings Ordinance

Description: Sets minimum requirements related to the (re)construction, repair, maintenance and use of dwellings and commercial and industrial buildings to protect public health, safety, and welfare.

Relationship to Natural Hazard Mitigation Planning: Building codes are designed to prevent structural failures, including those related to natural hazard impacts.

Public Utility Ordinances and Regulations

Description: Water, Sewer, and Stormwater ordinances establish minimum standards for design, construction, installation, control, and operation of the utilities.

Relationship to Natural Hazard Mitigation Planning: Adopted standards reduce risk and make utilities more resilient to natural hazard impacts.

Land Use Development Regulations

Description: Provides for orderly community growth promoting the health, safety, and general welfare of the community.

In Rutland City, the regulations include **zoning bylaws**, **subdivision regulations**, **flood hazard area regulations, and river corridor bylaws**.

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

Rutland City has local building codes under Title 9. Relevant sections include the (re)construction, repair, and use of dwellings and commercial and industrial buildings (§1021-1030); redevelopment compliance (§1050-1054); the removal of buildings along streets or highways (§1121-1129); and housing standards, including fire safety requirements (§1300-1323). For more details, readers should refer to Title 9, which is located on the City's website.

All structures must also meet Vermont 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.

Strengths City has a full-time Planning Director and full-time Zoning Administrator • City has one full-time Code Enforcer and one part-time Code Enforcer • Codes are adequately administered and enforced • Plans and regulations in place are being implemented and kept up to date • Capital Planning • Completed Stormwater Planning • Floodplain area regulations • River Corridor Bylaws.

Areas for Improvement Elements of hazard mitigation should be better integrated into City Master Plan • Continuity of operations planning • Update zoning to better guide smart development.

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

Rutland City's 2024-2025 City budget is $25,128,436, with $2,315,135 to fund the Streets Division of the Department of Public Works. In addition to property tax revenues, the Town collects a 1% local options tax and O&M fees for water and sewer services.

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

The City received approval from the Vermont Economic Progress Council to establish a Tax Increment Finance (TIF) District in 2025. Public infrastructure improvements funded through the TIF will include utility and transportation upgrades totaling almost $17 million in investment.

Strengths Well-funded budgets • Dedicated reserve funds that can be used to fund mitigation actions • Capital improvement planning and budgeting for reserve funds • 1% Local Option Tax that generates ~$1 million annually and can be used for capital projects.

Areas for Improvement More funding in annual budget for emergency planning, including a full-time position • Capital reserves for equipment need to be increased • Tax revenues are sufficient for daily operations to maintain the status quo, but limited in handling contingencies and/or improvements.

Outreach & Education The City has several outreach and education opportunities that could be used to implement mitigation activities and communicate hazard-related information (see upper right):

- American Legion, ARC Rutland Area, Boys and Girls Club of Rutland County, BROC, CEDRR, City of Rutland Fire Department, Come Alive Outside, Downtown Rutland Partnership, Elks Lodge, Friends of the Library, PEG TV, Project VISION, Rotary Club of Rutland, Rutland City Police Department, Rutland County Natural Resource Conservation District, Rutland County Parent Child Center, Rutland County Pride Center, Rutland County Solid Waste District, Rutland Herald, Rutland Historical Society, Rutland Regional Medical Center, Rutland Regional Planning Commission, Rutland South Rotary, Rutland Young Professionals, United Way of Rutland County, Vermont Farmers Food Center.
- City website, Front Porch Forum, several Facebook pages (Police, Fire, Department of Public Works).

Strengths Multiple programs/organizations already in place within the community • Particularly strong social media presence • Local newspaper that publishes weekly.

Areas for Improvement More consistent messaging across multiple departments • Could benefit from a paid communications officer • More accessible information to reach vulnerable populations, especially non-English speakers.

National Flood Insurance Program Compliance The City joined the National Flood Insurance Program (NFIP) in 1978. The effective date of the current Flood Insurance Rate Map (FIRM) and Flood Insurance Study is August 28, 2008. The City's Administrative Officer (i.e., the Zoning Administrator) enforces NFIP compliance through permit review requirements in its Flood Hazard Area regulations.

Rutland City'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 per FEMA P-758 SI/SD Desk Reference, May 2010. SI/SD is reviewed by the Rutland City Administrative Officer and regulated by the Rutland City Special Flood Hazard Area (SFHA) Regulations. A summarized description of articles related to administering SI/SD follows.

- Section 6503 defines SI/SD using the definition from 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.'"
- Section 6505 states that the substantial improvement of existing buildings is required to go through the conditional use approval process (overseen by the Development Review Board) before the issuance of a permit by the Administrative Officer.
- Section 6506 outlines who the Administrative Officer must submit copies of flood applications to and who the applicant must notify regarding these applications.
- If no floodway is designated at the time of application, Section 6507 states no substantial improvements shall be permitted in the SFHA, unless it is demonstrated that the cumulative effect will not result in an increase of the base flood level by more than one foot anywhere within the City.
- The Development Review Board reviews the flood application within the criteria set in Section 6508, which outlines development standards for substantial improvements for both residential and non-residential structures in the SFHA. This includes requirements relating to anchoring, materials, floodproofing, elevating structures at least one foot above the base flood elevation, and requirements specific to enclosed areas below the lowest floor.
- The Administrative Officer must adhere to Section 6510, which requires the administrative officer to maintain records of all permits, elevation data, and floodproofing certificates, including those for substantially improved buildings within the flood hazard area.
- Section 6511 authorizes the Administrative Officer to enforce provisions, including issuing penalties, and outlines procedure for submitting a declaration of violation to FEMA, where applicable.

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

1) Prepare, distribute, or make available NFIP insurance explanatory pamphlets or booklets at City Hall.
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.

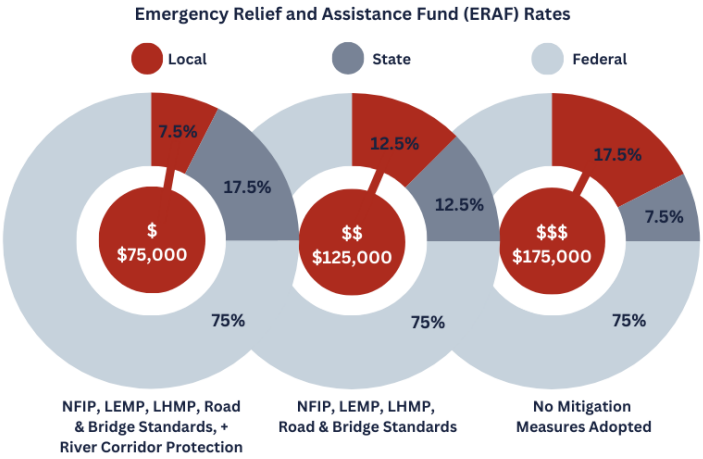
State Incentives for Flood Mitigation Vermont's Emergency Relief Assistance Funding (ERAF) provides state funding to match FEMA Public Assistance after federally declared disasters. Eligible public costs are generally reimbursed by FEMA at 75% with a 7.5% State match. The State will increase its match 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.

As of November 2025, Rutland City has attained a 17.5% ERAF rate with both the adoption of the 2025 Local Hazard Mitigation Plan and the inclusion of River Corridor overlay districts in its newly amended Land Use Regulations.



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

Mitigation Action Identification

The Hazard Mitigation Planning Team discussed the mitigation strategy, reviewed projects from the 2014 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: A flood study aims 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 Temperatures: The impacts of extreme temperatures (cold and hot) on public health can be lessened if residents know how to prepare and protect themselves.

Educate Residents about Flood Insurance: Flood insurance is available to anyone living in Rutland City as the municipality participates in the National Flood Insurance Program (NFIP). Residents can better protect their assets from flood damage if they are insured and know what steps to take to protect their homes when flooding is predicted.

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.

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. 79% 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 or second).

Natural hazards pose a unique threat to the City's vulnerable populations. Data has shown that underserved and marginalized populations tend to live in at-risk hazard-prone areas or 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 Rutland City's ability to limit the impacts of natural hazards, or 2) addressed an ongoing need that would provide significant benefit to the City 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

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	1	Yes
Update Road Erosion and Culvert Inventories	1	1	1	1	1	1	6	1	Yes
Plan for Road Right-of-Way Vegetation Management	1	1	1	1	1	1	6	1	Yes
Improve Stormwater Management by Completing a Stormwater Master Plan*	1	1	1	1	1	1	6	3	Yes
Improve Flood Resilience with a Flood Study*	1	1	1	1	1	1	6	1-2	Yes
Inspect Town Short-Structures and Review VTrans Bridge Inspection Reports for Town Long-Structures and Plan for Repairs to Prevent Flood-related Impacts like Scour	1	1	1	1	0	1	5	1	Yes
Update Land Use Bylaws to Require New Development to Bury Power Lines*	1	1	1	0	1	1	5	1	Yes
Map Heat Islands to Identify Vulnerable Neighborhoods	1	0	1	1	1	1	5	1	Yes
Improve Extreme Heat Resilience with Hot Weather Response LEMP Annex	1	0	1	1	0	1	4	1	Yes
Not Recommended for Implementation									
Adopt River Corridor Bylaws	1	1	1	-1	1	1	4	1	Yes
	Although initially considered politically infeasible by the Planning Team, the City decided to include the model DEC Flood Hazard regulations, including River Corridor Bylaws, in the revised Land Use Regulations adopted in Nov 2025. This action's status remains unchanged to document the team's original scoring.								
Update Personnel Policy to Recommend Vaccinations for Municipal Employees	1	0	1	-1	1	1	3	1	Yes
Adopt Local Building Codes for Structural Wind and Snow Loads	Not evaluated because the City has adopted local codes with these specifications to supplement statewide codes – see page 24 for additional information.								
Structure & Infrastructure Projects									
Recommended for Implementation									
Protect Power Lines and Roads by Inspecting and Removing or Bracing Hazardous Trees in Road ROW	1	1	1	1	1	1	6	2	Yes
Install Battery Storage, Back-up Generators or Quick Connect Wiring at Critical Facilities	1	1	1	1	1	1	6	3	Yes
Retrofit Critical Facilities to Strengthen Structural Frames to Withstand Wind and Snow Loads	1	1	1	1	1	1	6	3	Yes
Routinely Clean and Repair Stormwater Infrastructure	1	1	1	1	1	1	6	3	Yes
Increase Drainage/Absorption Capacities with Green Stormwater Management Practices	1	1	1	1	1	1	6	3	Yes
Increase Dimension of Drainage Culverts in Flood-Prone Areas	1	1	1	1	1	1	6	3	Yes
Remove Existing Structures from Flood-Prone Areas	1	1	1	1	1	1	6	3	Yes

Mitigation Action	Life Safety	Prop Protect	Tech	Political	Admin	Other Obj	Benefit Score	Est Cost	C/B
Structure & Infrastructure Projects (cont.)									
Increase Tree Plantings to Shade Parking Lots	1	1	1	1	1	1	6	2-3	Yes
Stabilize Outfalls	0	1	1	1	1	1	5	1	Yes
Install/Re-establish Roadside Ditches	0	1	1	1	1	1	5	1	Yes
Routine Clear Debris from Support Bracing Underneath Low-Lying Bridges	1	1	0	1	1	1	5	1	Yes
Insulate Shallow Buried Utility Mains/Services	1	1	1	0	0	1	4	3	Yes
Not Recommended for Implementation									
Elevate Roads Above Base Flood Elevation to Maintain Dry Access	1	1	-1	-1	0	1	2	3	No
Bury Power Lines	Not evaluated because this is determined on a case-by-case basis with permits.								
Anchor Roof-Mounted Mechanical Equipment on Critical Facilities	Not evaluated because all roof-mounted equipment has been anchored.								
Use Snow Fence on Critical Roads Prone to Drifting	Not evaluated because there are no critical roads prone to drifting.								
Floodproof Critical Facilities	Not evaluated because there are no critical facilities that require floodproofing.								
Natural Systems Protection									
Recommended for Implementation									
Establish Vegetative Buffers in Riparian Areas	1	1	1	1	1	1	6	1-2	Yes
Restore Floodplain	1	1	0	0	1	1	4	2-3	Yes
Not Recommended for Implementation									
Remove Significant Hazard Potential Dams	Not evaluated as Combination Pond, the only significant hazard potential dam in Rutland City, is planned to undergo modification and dredging to address thermal impairments.								
Remove Berms and/or Accumulated Debris from Stream to Restore Flood Capacity	Not evaluated as there are no known locations requiring these actions. The City will monitor this and implement projects, as needed.								
Stabilize Stream Banks									
Restore Incision Areas									
Outreach & Education Programs									
Recommended for Implementation									
How to Prepare for Extreme Temperatures – Cold and Hot	1	1	1	1	1	1	6	1	Yes
Keep the Ditches Clean Campaign	1	1	1	1	1	1	6	1	Yes
National Flood Insurance Program (NFIP)	1	1	1	1	1	1	6	1	Yes

*These actions are not included in Table 6 but rather are listed as examples of how the actions in this Plan will be incorporated into other plans and procedures – see page 39.

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 Rutland City.

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
City-wide; ±76 mile road network

LEAD PARTY
DPW Commissioner

FUNDING SOURCES
- City budget

PARTNERSHIPS
- Board of Aldermen

PROJECT TIMEFRAME
Oct-Dec Annually

PRIORITIZATION = FIRST

Update Road Erosion (REI) and Culvert Inventories: These inventories were completed in 2020 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
City-wide; ±76 mile road network and 43 culverts

LEAD PARTY
DPW Commissioner

FUNDING SOURCES
- VTrans

PARTNERSHIPS
- Rutland RPC
- ANR Municipal Roads Program

PROJECT TIMEFRAME
Both Updates: 2026 construction season

PRIORITIZATION = FIRST

Road Right-of-Way (ROW) Vegetation Management Plan: Hazard trees in the ROW can contribute to power and communication outages as well as debris in the roadway during winter storms and wind events. To increase roadside resilience, Rutland City will develop a plan to 1) identify community priorities, and 2) define actions for site-specific tree and roadside vegetation management.

ADDRESSED HAZARDS

Extreme Cold, Snow, and Ice
Primary Hazard

Strong Wind

TYPE OF PROJECT

Local Plans & Regulations

COMMUNITY LIFELINES TARGETED

Energy
Primary Lifeline

Communications

Transportation

Area of Impact
City-wide; ±76 mile road network

LEAD PARTY
DPW Commissioner

FUNDING SOURCES
- City budget

PARTNERSHIPS
- City Forester and Arborist
- VT Urban & Community Forestry
- VT Dept of Forests, Parks, & Rec

PROJECT TIMEFRAME
2026 construction season

PRIORITIZATION = FIRST

Flood Study: A flood study is a technical investigation of flood behavior for a river. The aim is to define existing flood behavior, including depths, extents, and velocities. This information can help inform building, land use planning, community awareness, and disaster management. The City has targeted the following tributaries for comprehensive study.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Local Plans & Regulations

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

Moon Brook (entirety)
Mussey Brook (entirety)
Tenney Brook (entirety)

LEAD PARTY

DPW Commissioner

FUNDING SOURCES

- City budget

PARTNERSHIPS

- Rutland RPC
- Watershed consulting

PROJECT TIMEFRAME

Modeling: By 2030 construction season

PRIORITIZATION = FIRST

Plan for Bridge Repairs: The City will inspect short structures and review long structure VTrans inspection reports to plan for flood-related bridge repairs such as scour and channel maintenance as needed based on the inspection results.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Local Plans & Regulations

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

18 Short Structures: see 2020 Short structure inventory for complete list
9 Long Structures: B2 River St; B4-6 State St; B14 Forest St; B15 Church St; B17 Ripley Rd; B19 West St; B23 Crescent St; B25 Grove St; B27 River St

LEAD PARTY

DPW Commissioner

FUNDING SOURCES

- VTrans

PARTNERSHIPS

- VTrans District 3

PROJECT TIMEFRAME

Short Inspections: 2026 construction season
Long Inspections: Review 2025 Construction Season

PRIORITIZATION = FIRST

Improve Extreme Heat Resilience: To supplement the City's general sheltering plan outlined in the local emergency management plan, the City will 1) map heat islands to identify vulnerable neighborhoods, and 2) prepare an annex that focuses on sheltering procedures for hot weather to better support hot weather resilience in the community.

ADDRESSED HAZARDS

Extreme Heat

TYPE OF PROJECT

Local Plans & Regulations

COMMUNITY LIFELINES TARGETED

Public Health
Primary lifeline

Safety & Security

Area of Impact

City-wide

LEAD PARTY

Emergency Management Director

FUNDING SOURCES

- City budget

PARTNERSHIPS

- DPW Commissioner
- Rutland RPC
- Vermont Department of Health

PROJECT TIMEFRAME

Develop in 2026 for adoption in April 2027

PRIORITIZATION = FIRST

Remove or Brace Hazard Trees in Road ROW: Rutland City has a documented history of bracing hazard trees within the road ROW where removal is not feasible or desirable. The City will continue to monitor and brace or 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

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Energy
Primary Lifeline

Communications

Transportation

Area of Impact
City-wide; ±76 mile road network

LEAD PARTY
DPW Commissioner

FUNDING SOURCES
- City budget

PARTNERSHIPS
- City Forester and Arborist
- Green Mountain Power

PROJECT TIMEFRAME
See ROW Vegetation Management Plan

PRIORITIZATION = FIRST

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. Rutland City has identified four critical facilities needing back-up power – Spruce Street Highway Garage, Wastewater Treatment Facility, Northeast School, and Northwest School. This action was listed in the 2014 multi-jurisdiction 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) Highway Garage
2) WWTF
3) Northeast School
4) Northwest School

LEAD PARTY
Emergency Management Director

FUNDING SOURCES
- FEMA/VEM Hazard Mitigation
- State Revolving Loan Fund

PARTNERSHIPS
- DPW Commissioner
- Rutland City Public Schools

PROJECT TIMEFRAME
Acquire by June 2030

PRIORITIZATION = FIRST

Structural Retrofits to Critical Facilities: Public buildings and critical facilities can be retrofit to withstand wind and snow loads and prevent roof collapse. The municipal highway garage on Spruce Street has had its roof blown off previously and needs 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
Spruce Street highway garage

LEAD PARTY
DPW Commissioner

FUNDING SOURCES
- FEMA/VEM Hazard Mitigation

PARTNERSHIPS
- Board of Aldermen

PROJECT TIMEFRAME
2030 construction season

PRIORITIZATION = FIRST

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 DPW's Street Division maintenance schedule, the Municipal Roads General Permit (MRGP), and MS4 permit.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

City-wide; ±76 mile road network and 43 culverts

LEAD PARTY

DPW Commissioner

FUNDING SOURCES

- City budget

PARTNERSHIPS

- ANR Stormwater Program

PROJECT TIMEFRAME

See Street Division's Maintenance Schedule, MRGP, MS4

PRIORITIZATION = FIRST

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 City's 2022 Phosphorus Control Plan 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) Gravel wetland; confluence of Moon and Mussey Brooks
2) Infiltration basin; Rutland Rec Center
3) See 2014 Tenney Brook/East Creek and 2019 Moon Brook SWMPs

LEAD PARTY

Rutland NRCD

FUNDING SOURCES

- Otter Creek CWSP
- City budget

PARTNERSHIPS

- Watershed Consulting

PROJECT TIMEFRAME

See MS4 Permit

PRIORITIZATION = FIRST

Adequately Size Culverts in Flood-Prone Areas: Undersized culverts can lead to road washouts and floods. Two actions from the 2014 Plan ("Replace North Street bridge to prevent continued damage" and "Upgrade bridge structure on Pearl Street") remain a priority. The City has identified several additional culverts that are prioritized for upsizing.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

1) Lincoln Ave (B1)
2) Jackson Ave (B4)
3) Stratton Rd (B9)
4) North St (B11)
5) Pearl St (B12)
6) Strongs Ave (B18)
7) See Culvert and MRGP Road Erosion Inventories for non-compliant culverts

LEAD PARTY

DPW Commissioner

FUNDING SOURCES

- VTrans
- FEMA/VEM Hazard Mitigation

PARTNERSHIPS

- VTrans District 3
- ANR Rivers Program

PROJECT TIMEFRAME

1) 2027 construction season
2) As feasible, by 2030 construction season (culverts 2) through 6))
7) See MRGP

PRIORITIZATION = FIRST

Remove Structures from Flood-Prone Areas: Removing structures from flood-prone areas to minimize future flood losses is a highly recommended long-term flood mitigation measure. There are two repetitive loss non-residential properties in Rutland City. There are 336 buildings in the FEMA-mapped Special Flood Hazard Areas, with four buildings in the floodway. Rutland City will conduct outreach to property owners most at risk to determine interest in a property buyout, starting with Clover St.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Food, Water, Shelter
Primary Lifeline

Safety & Security

Area of Impact

1) Clover St
2) 121 S Main St (Old Tire Warehouse)
3) 336 buildings in SFHA

LEAD PARTY

Planning Director

FUNDING SOURCES

- FEMA/VEM Hazard Mitigation

PARTNERSHIPS

- Emergency Management Director
- Vermont Emergency Management

PROJECT TIMEFRAME

Conduct all outreach by Dec 2028

PRIORITIZATION = FIRST

Increase Tree Plantings to Shade Parking Lots: Built areas tend to be hotter than nearby rural areas, as urban areas have a higher concentration of impervious surfaces. Adding trees can help reduce the urban heat island effect on hot days by providing shade and cooling through evapotranspiration.

ADDRESSED HAZARDS

Extreme Heat

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Public Health
Primary lifeline

Safety & Security

Area of Impact

City-wide

LEAD PARTY

DPW Commissioner

FUNDING SOURCES

- VT Urban & Community Forestry

PARTNERSHIPS

- City Forester and Arborist
- VT Urban & Community Forestry
- VT Youth Conservation Corp

PROJECT TIMEFRAME

Outreach and planning: By Dec 2025
Build: 2026 – 2028 construction seasons

PRIORITIZATION = FIRST

Stabilize Culvert Outfalls: Erosion at culvert outlets is common and can cause structural failure with serious downstream consequences. Properly stabilized outfalls protect channel bank stability and reduce erosion. Rutland City has identified the following locations where culvert outlet stabilization is needed.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

1) Crescent St (O2337)
2) Grove St (O2255)
3) Lincoln Ave (RUT011)

LEAD PARTY

DPW Commissioner

FUNDING SOURCES

- VTrans

PARTNERSHIPS

- ANR Municipal Roads Program

PROJECT TIMEFRAME

1) 2025 construction season
2) 2026 construction season
3) 2027 construction season

PRIORITIZATION = FIRST

Install/Re-establish Roadside Ditches: Properly installed and stabilized roadside ditches are critical to protect the integrity of the road. As of January 2025, Rutland City has five (5) road segments (1 segment = 328 ft) with ditches that must be improved to current municipal road standards.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

See MRGP Road Erosion Inventory for non-compliant road segments

LEAD PARTY

DPW Commissioner

FUNDING SOURCES

- VTrans

PARTNERSHIPS

- ANR Municipal Roads Program

PROJECT TIMEFRAME

See MRGP Improvement Schedule

PRIORITIZATION = SECOND

Routinely Clear Debris from Low-Lying Bridge Support Bracing: Regular maintenance will help structures continue to function properly and not create a hazard during a flood. Rutland City has identified three (3) low-lying bridges.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

1) River St (B2)
2) Crescent St (B23)
3) Grove St (B25)

LEAD PARTY

DPW Commissioner

FUNDING SOURCES

- City Budget

PARTNERSHIPS

- ANR River Engineer

PROJECT TIMEFRAME

As needed

PRIORITIZATION = SECOND

Insulate Shallow Buried Utility Mains/Services: Shallow water lines located above the frost level are prone to freezing, with the buildup of ice damaging the pipes and restricting or completely blocking water flow. Insulation is one of the most effective and least cost prohibitive ways to reduce heat loss and prevent water from freezing even at sub-zero temperatures. Rutland City has identified numerous locations where water distribution mains under private ownership would benefit from insulation.

ADDRESSED HAZARDS

Extreme Cold, Snow, and Ice

TYPE OF PROJECT

Structure & Infrastructure

COMMUNITY LIFELINES TARGETED

Food, Hydration, Shelter

Water Systems
Primary Lifeline

Area of Impact

City-wide

LEAD PARTY

DPW Commissioner

FUNDING SOURCES

- FEMA/VEM Hazard Mitigation
- Drinking Water State Revolving Fund

PARTNERSHIPS

- None

PROJECT TIMEFRAME

Conduct Outreach – Annually, starting in 2026

PRIORITIZATION = SECOND

Establish Vegetative Buffers: Rutland City will work with project partners to evaluate the feasibility of implementing vegetative buffer projects as recommended in previous stream geomorphic assessments and stormwater master planning.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Natural Systems Protection

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

East Creek Watershed
Upper Otter Creek Watershed
Otter Creek Watershed Tributaries
Moon Brook Watershed
Tenney Brook

LEAD PARTY

DPW Commissioner

FUNDING SOURCES

- Rutland NRCD
- Otter Creek CWSP
- FEMA/VEM Hazard Mitigation

PARTNERSHIPS

- Rutland NRCD
- ANR Rivers Program

PROJECT TIMEFRAME

Outreach: 2025 construction season
Feasibility Eval.: July 2025-June 2026
Project Recommendations: July 2026

PRIORITIZATION = FIRST

Restore Floodplain: Natural floodplains provide numerous flood risk reduction benefits by the storage of excess water, the reduction of flood peaks, velocities, and erosion, and the slowdown of runoff. The City has identified several locations where floodplain restoration would help mitigate localized flooding impacts.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Natural Systems Protection

COMMUNITY LIFELINES TARGETED

Safety & Security

Transportation
Primary Lifeline

Area of Impact

1) Moon Brook (entirety; emphasis on Strongs Ave & US Route 7 intersections)
2) Mussey Brook (State Fairgrounds)

LEAD PARTY

DPW Commissioner

FUNDING SOURCES

- FEMA/VEM Hazard Mitigation
- Otter Creek CWSP

PARTNERSHIPS

- Rutland NRCD
- ANR River Engineer

PROJECT TIMEFRAME

Outreach: 2025 construction season
Feasibility Eval.: July 2025-June 2026
Project Recommendations: July 2026

PRIORITIZATION = FIRST

Educate the Public about Severe Winter and Extreme Heat-Related Hazards: Rutland City will undertake education and awareness efforts by publishing information on Facebook, Front Porch Forum, and the City's website on ways to prepare for 1) severe winter related hazards (e.g., freezing pipes) and 2) extreme heat related hazards (e.g., heat stroke).

ADDRESSED HAZARDS

Extreme Cold, Snow, and Ice

Extreme Heat

TYPE OF PROJECT

Outreach & Education Programs

COMMUNITY LIFELINES TARGETED

Public Health
Primary Lifeline

Safety & Security

Area of Impact

City-wide

LEAD PARTY

Emergency Management Director

FUNDING SOURCES

- City budget

PARTNERSHIPS

- Ready.gov Tool Kits
- VT Department of Health
- Rutland City Public Schools

PROJECT TIMEFRAME

Spring and Fall Annually

PRIORITIZATION = SECOND

Educate the Public about Flood-Related Hazards: Rutland City will undertake education and awareness efforts by publishing information on Facebook, Front Porch Forum, and the City's website on 1) the importance of keeping roadside ditches and culverts clear of yard waste and other debris and 2) the availability of flood insurance through the NFIP and how to prepare for/recover from a flood event.

ADDRESSED HAZARDS

Floods

TYPE OF PROJECT

Outreach & Education Programs

COMMUNITY LIFELINES TARGETED

Safety & Security
Primary Lifeline

Area of Impact

City-wide

LEAD PARTY

Emergency Management Director

FUNDING SOURCES

- City budget

PARTNERSHIPS

- FloodSmart.gov Tool Kits
- Rutland City Public Schools

PROJECT TIMEFRAME

Spring Annually

PRIORITIZATION = SECOND

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: A brief description of what will be done to mitigate an issue identified in the hazard profile.
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 27).
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 22).
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.
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 28).

Integrating Into Existing Plans and Procedures

For Rutland City 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 City 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 current and future capital improvement planning for facilities and equipment during the annual budget process.
- The mitigation goal and risk assessment information can be incorporated into planned utility upgrades that will support residential and economic development within the TIF District.
- The mitigation goal and risk assessment information can be incorporated into the 2028 City Master Plan update, in particular its 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 floods and fluvial erosion.
- The mitigation goal and risk assessment information can inform the response and recovery procedures outlined in the Local Emergency Management Plan, especially the development of a Hot Weather Response annex.
- Flood-related mitigation actions to increase road resiliency can be implemented under the Municipal Road General Permit to control stormwater discharges from city roads and the stormwater collection system.
- The mitigation goal and risk information can inform the development of a City-wide stormwater master plan that emphasizes flood resilience and erosion control measures (existing SWMPs prioritize water quality.)
- The mitigation goal and flood-related mitigation actions in the stormwater impaired Moon Brook watershed can be implemented under the 2022 Rutland City Phosphorus Control Plan, the 2019 Moon Brook Stormwater Master Plan, and the Rutland City Municipal Separate Storm Sewer System Permit (MS4). These are designed to control stormwater runoff pollution in the portion of the Moon Brook watershed located in Rutland City.
- The mitigation goal and flood-related mitigation actions can be incorporated into the Moon Brook Flow Restoration Plan currently being developed by the City.
- "Require New Development to Bury Power Lines" is a mitigation action that can be incorporated into the next update of the City's Land Use Bylaws.
- The mitigation goal and risk information can be integrated into the mission of the Rutland Regional Disaster Cooperative (RRDC). This county-wide organization is currently being developed through a joint effort by the RRPC and Vermont Department of Health. By strengthening the coordination and sharing of knowledge and resources, RRDC may play a crucial role in bolstering the administrative and outreach and education capabilities of the municipalities in Rutland County.

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.

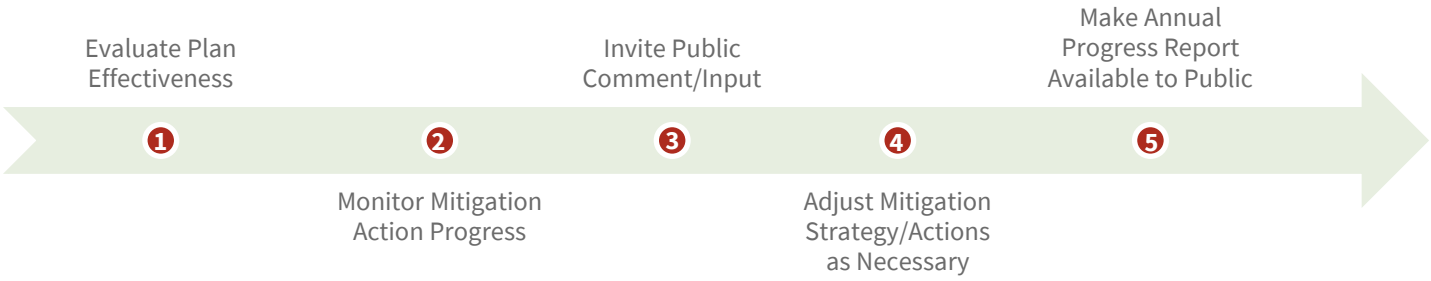
Rutland City will make every effort to maximize use of future Public Assistance Section 406 Mitigation opportunities when available during federally declared disasters.

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 Public Safety committee of the Board of Aldermen, with the assistance of the Emergency Management Director, will evaluate the effectiveness of the Plan in meeting the stated goals. Things to consider during this evaluation:

   - What disasters has the City (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 Emergency Management Director will assist the Public Safety committee in monitoring 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 Board of Aldermen 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 City 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.

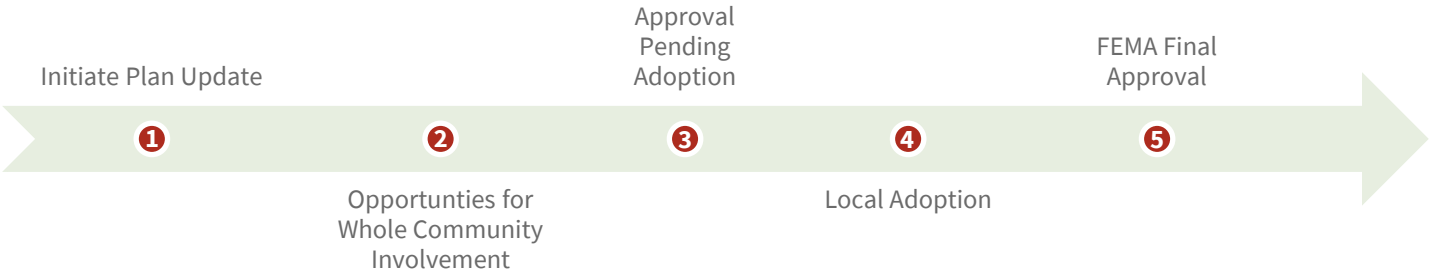
Table 7: Mitigation Action Status

Mitigation Action	2026	2027	2028	2029	2030
Local Plans & Regulations					
Plan for and Maintain Adequate Road and Debris Clearing Capabilities PRIORITY: First LEAD PARTY: DPW Commissioner TIMEFRAME: Oct-Dec Annually					
Update Road Erosion and Culvert Inventories PRIORITY: First LEAD PARTY: DPW Commissioner TIMEFRAME: Both updates: 2026 construction season					
Road Right-of-Way Vegetation Management Plan PRIORITY: First LEAD PARTY: DPW Commissioner TIMEFRAME: 2026					
Flood Studies for Moon, Mussey, and Tenney Brooks PRIORITY: First LEAD PARTY: DPW Commissioner TIMEFRAME: Modeling for all by 2030					
Plan for Bridge Repairs PRIORITY: First LEAD PARTY: DPW Commissioner TIMEFRAME: Short Structure Inspections in 2026; Long Structure Inspection Reviews 2025					
Map Heat Islands to Identify Vulnerable Neighborhoods PRIORITY: First LEAD PARTY: DPW Commissioner TIMEFRAME: 2026-2027					
Develop Hot Weather Response LEMP Annex PRIORITY: First LEAD PARTY: Emergency Management Director TIMEFRAME: 2026-2027					
Structure & Infrastructure Projects					
Remove Hazard Trees in Road Right-of-Way PRIORITY: First LEAD PARTY: DPW Commissioner TIMEFRAME: See ROW Vegetation Management Plan					
Install Back-up Power at Critical Facilities (Shelters) PRIORITY: First LEAD PARTY: Emergency Management Director TIMEFRAME: Acquire all by 2030					
Structural Retrofit for Spruce St Highway Garage PRIORITY: First LEAD PARTY: DPW Commissioner TIMEFRAME: 2030					
Routinely Clean and Repair Stormwater Infrastructure PRIORITY: First LEAD PARTY: DPW Commissioner TIMEFRAME: See Street Division's Maintenance Schedule, MRGP and MS4 permits					

Mitigation Action	2026	2027	2028	2029	2030
Install Green Stormwater Management Practices PRIORITY: First LEAD PARTY: Rutland NRCD TIMEFRAME: See MS4 permit					
Adequately Size Culverts in Flood-Prone Areas PRIORITY: First LEAD PARTY: DPW Commissioner TIMEFRAME: 2027 (Lincoln Ave); others as feasible through 2030					
Remove Structures from Flood-Prone Areas PRIORITY: First LEAD PARTY: Planning Director TIMEFRAME: Outreach by December 2028					
Increase Tree Plantings to Shade Parking Lots PRIORITY: First LEAD PARTY: DPW Commissioner TIMEFRAME: 2025-2028					
Stabilize Culvert Outfalls PRIORITY: First LEAD PARTY: DPW Commissioner TIMEFRAME: 2025-2027					
Install/Re-establish Roadside Ditches PRIORITY: Second LEAD PARTY: DPW Commissioner TIMEFRAME: See MRGP schedule					
Routinely Clear Debris from Low-Lying Bridges PRIORITY: Second LEAD PARTY: DPW Commissioner TIMEFRAME: As needed					
Insulate Shallow Buried Utility Mains/Services PRIORITY: Second LEAD PARTY: DPW Commissioner TIMEFRAME: Outreach annually starting in 2026					
Natural Systems Protection					
Evaluate Feasibility of Establishing Vegetative Buffers PRIORITY: First LEAD PARTY: DPW Commissioner TIMEFRAME: 2025-2026					
Evaluate Feasibility of Restoring Floodplains PRIORITY: First LEAD PARTY: DPW Commissioner TIMEFRAME: 2025-2026					
Outreach & Education Programs					
Educate the Public about Severe Winter, Extreme Heat, and Flood-Related Hazards PRIORITY: Second LEAD PARTY: Emergency Management Director TIMEFRAME: Spring and Fall Annually					

5-Year Updates

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



1. As of April 2025, BRIC funding is no longer available to assist municipalities in paying for planning services to update the Local Hazard Mitigation Plan. If BRIC or a similar federal grant were to become available, the Rutland City Emergency Management Director should contact Vermont Emergency Management (VEM) to apply for funding in 2028 – approximately 2 years before the Plan expires. It is assumed that the Emergency Management Director will serve as the primary point of contact for the Plan update.

   Once funding is secured and the grant agreement between the City and State is in place, the Emergency Management Director can issue a request for proposals (RFP) to procure planning services per 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 City 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 Board of Aldermen to submit the Plan for VEM/FEMA approval. Plan approval is accomplished in two steps – the first is Approval Pending Adoption. The City 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 City receives Approval Pending Adoption, the Board of Aldermen should adopt the Plan as soon as their next regular meeting.

5. Once adopted, the City can submit the Plan for VEM/FEMA Final Approval. The City 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

City of Rutland, Vermont Board of Aldermen

A Resolution Adopting the Rutland City, Vermont 2025 Local Hazard Mitigation Plan

WHEREAS the Rutland City Board of Aldermen recognizes the threat that natural hazards pose to people and property within the City of Rutland; and

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

WHEREAS adoption by the Rutland City Board of Aldermen demonstrates its commitment to hazard mitigation and achieving the goals outlined in the Rutland City, Vermont 2025 Local Hazard Mitigation Plan.

NOW THEREFORE, BE IT RESOLVED BY THE CITY OF RUTLAND, VERMONT, THAT:

Section 1. In accordance with 24 VSA §872, the Rutland City Board of Aldermen adopts the Rutland City, Vermont 2025 Local Hazard Mitigation Plan. While content related to the City of Rutland may require revisions to meet the plan approval requirements, changes occurring after adoption will not require the City of Rutland 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 6 in favor and 0 against, and ___ abstaining, this 20 day of October 2025.

By: David W Allaire (signature)
President of the Board of Aldermen

DAVID W. ALLAIRE (print name)
President of the Board of Aldermen

ATTEST: By: Susan A. Clark (print name)

MITIGATION ACTIONS FROM 2014 PLAN

Vulnerability: Flooding of Bridges and Low-Lying Areas

Improve flood resiliency of Dorr Drive pump station through floodproofing and elevation of equipment.

Who: DPW When: No year listed How: Hazard Mitigation Grant Program Priority: None listed

2025 Update: Complete; achieved the intended results.

Replace North Street bridge to prevent continued damage.

Who: DPW When: 2017-2019 timeframe How: Local Resources Priority: None listed

2025 Update: Remains a priority.

Upgrade bridge structure on Pearl Street.

Who: DPW When: 2015-2017 timeframe How: Local Resources Priority: None listed

2025 Update: Remains a priority.

Enlarge culverts where railroad crosses waterways.

Who: DPW/State of VT When: 2015-2017 timeframe How: No potential funding sources listed
Priority: None listed

2025 Update: Remains a priority.

Follow recommendations in River Corridor Plans and SGAs to address fluvial erosion hazards.

Who: Planning Commission/ANR When: 2017-2019 timeframe How: No potential funding sources listed
Priority: None listed

2025 Update: Remains a priority.

Vulnerability: Power Outages to Homes and Critical Facilities

Install generators or hookups at key shelters.

Who: EMD When: 2015-2017 timeframe How: Hazard Mitigation Grant Program Priority: None listed

2025 Update: Partially complete; the daytime shelter (City Hall) and Regional overnight shelter (Rutland High School) have generators. Shelters without generators include Grace Congregational Church, Northwest School, Northeast School, Elks Club, and BROC.

PUBLIC ENGAGEMENT SUMMARY

Community Engagement Strategy

During the kickoff meeting, the Rutland City 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:

The City of Rutland 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 City 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/rutlandlhmp25

Physical flyers were posted at City Hall, Grand Union, and the Rutland Recreation Community Center. Online notices were posted on the Fire Dept 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: ANR River Engineer for Southwestern VT, DEC Western VT Floodplain Manager, Otter Creek CWSP, Rutland City Department of Public Works, Rutland City Fire, Rutland City Police, Rutland Natural Resources Conservation District, VDH Emergency Preparedness Specialist, VTrans District 3 Manager and Admin.
2) City Authorities Regulating Development: Associate Engineer, Building Inspector, City Clerk, Code Enforcement/Asst. Health Officer, Community & Economic Development Chair, Development Review Board Chair, Health Officer/Asst. Building Inspector, Mayor, Planning Commission Chair, President of the Board of Aldermen, Public Safety Commission Chair, Zoning Administrator.
3) Neighboring Towns: Town Administrator, Selectboard Chair, Planning Commission Chair, Town Clerk, EMD, and Health Officer for Rutland Town.
4) Business, Schools, Private Orgs.: Chamber and Economic Development of the Rutland Region, Community College of Vermont, Northeast Primary School, Northwest Primary School, Rutland City Supervisory Union, Rutland High School, Rutland Intermediate School, Stafford Technical Center, Rutland Redevelopment Authority.
5) Non-Profit Organizations: ARC Rutland, Bayada Home Health, Bayada Home Care, Bennington-Rutland Opportunity Council, Housing Trust of Rutland County, Marble Valley Regional Transit District, Project VISION, Rutland Regional Medical Center, Rutland County Pride, Rutland County Restorative Justice Center, Rutland Mental Health Services, SW Vermont Council on Aging, Turning Point Recovery Center, 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 SW 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 City employed five engagement methods: survey, workshop, pop-ups, presentation to the Board of Aldermen at a public meeting, and public comment period.

A survey was administered both online and in paper format and was open from Aug 5-Sep 15, 2024. A total of **30 surveys** were submitted. A summary of the survey results is provided below.

The City conducted a workshop on Sept 12, 2024 with the planning team and two subject matter experts to complete the community hazard risk assessment. Noah Hoffman, from Vermont Department of Forest, Parks, and Recreation, 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 City conducted "pop-up" events at the Farmer's Market on Aug 17, Aug 24, Aug 31, and the Whoopie Pie Fest on Sept 14, 2024. By "meeting people where they are", the City collected additional input from demographics that may not have otherwise been engaged. At the pop-ups, people placed dot stickers on the natural hazards of most concern and vulnerable assets. This method captured a total of **129 responses**. A summary of pop-up feedback is provided below.

Physical notices of the public presentation at the Oct 21, 2024 Rutland City Board of Aldermen meeting were posted at the Police Department, Recreation Community Center, Godnick Center, and City Hall. Online notices were posted on the RRPC Website and Facebook page.

The draft Plan was presented at the Oct 21, 2024 Rutland City Board of Aldermen meeting to encourage input from the local government and the 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 City initiatives. The meeting was recorded and aired on Public Access Television (PEGTV) and is available on PEGTV's YouTube channel.

Following the Oct 21, 2024 Board of Aldermen meeting, the draft Plan was posted for an 18-day public comment period on the landing page; it was also available in hard copy at City Hall. Notice of the comment period was posted on RRPC Website, RRPC Facebook page, and City of Rutland DPW and direct emailed to all five segments of the Whole Community listed above. Notices included instructions to email comments to the Rutland Regional Planning Commission or attend the Nov 4, 2024 Board of Aldermen meeting to share input.

The public comment period concluded on Nov 8, 2024. One (1) comment was received about insufficiently sized culverts located between US Route 7 and Otter Creek. This concern was incorporated into the actions examined for the mitigation action plan implementation in **Table 6**.

The Board of Alderman completed their review on Nov 18, 2024 when they discussed the draft Plan at their regular public meeting.

Positive reception from local officials. No additional inquiries or comments received from the public or Whole Community partners.

Phase 2 Engagement Activities

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

The City conducted two (2) workshops on Jan 8 and Jan 16, 2025 with the planning team and four (4) subject matter experts to complete the mitigation action evaluation (see following page):

- Kyle Medash – ANR Floodplain Manager
- Ted Gillen – City of Rutland Assistant Engineer
- Patrick Griffin – Enman Kesselring Consulting Engineers
- Eric Pulver – VDH Emergency Preparedness Specialist

The Planning Team also invited Josh Carvajal (ANR River Engineer) and Timothy Smith, (City of Rutland Forest and Arborist), but they were unfortunately unable to attend. Results of the mitigation action evaluation are presented in **Table 5**.

A survey to seek public reaction to the proposed mitigation goal and actions was administered online and was open from Feb 3 – Feb 28, 2025. Notice of the survey was provided via social media and direct emailed to all segments of the Whole Community. A total of **29 surveys** were received**.** A summary of the survey results is provided below.

Finalize Draft Plan To help finalize the draft, the Plan was presented to the Board of Aldermen at a public meeting and posted for a final public comment period. Physical notices of the presentation were posted at the Police Department, Recreation Community Center, Godnick Center, and City Hall. Online notices were posted on the landing page, RRPC Website and RRPC Facebook page.

The final draft Plan was presented at the Mar 17, 2025 Board of Aldermen 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 aired on PEGTV and is available on their YouTube channel.

Following the Mar 17, 2025 Board of Aldermen meeting, the final draft Plan was posted for a 4-week public comment period on the landing page; it was also available in hard copy at City Hall. Notice of the comment period was posted on RRPC Website, RRPC Facebook page, and City of Rutland DPW Facebook page and direct emailed to all five segments of the Whole Community. Notices included instructions to email comments to the RRPC or attend the Apr 7, 2025 Board of Aldermen meeting to share input. The public comment period concluded on Apr 21, 2025.

To allow time for review by the Board Committee of Public Safety, the Board of Aldermen discussed their comments on the final draft plan at their regular meeting on Apr 21, 2025. A summary of their comments and resulting draft Plan edits is provided here:

- The Public Safety Committee clarified the status of work being done at Combination Pond. The dam is not being removed as initially stated, but it is undergoing modification and dredging. Given this information, the Planning Team agreed to exclude "Remove Significant Hazard Potential Dams" from **Table 6** on page 31. **Table 5** was modified to classify this mitigation action as "Not Recommended for Implementation."

Additional input received during the public comment period is presented below and on page A-20.

- The Otter Creek CWSP director suggested including the CWSP as a potential funding source for the "Establish Vegetative Buffer" and "Restore Floodplain" mitigation actions. These additions were made to **Table 6** on page 37.
- The Green Mountain Power Chief Dam Safety Engineer corrected the following for Patch Pond Dam: condition (from unknown to fair), hazard potential classification (from significant to low), and latest inspection year (from 2011 to 2024). These changes were made on pages 14 and 16.
- The Green Mountain Power Lead of Grid Resiliency provided updated data (including the year 2024) for average annual outage statistics. **Table 1** was updated on page 4 to reflect these changes.

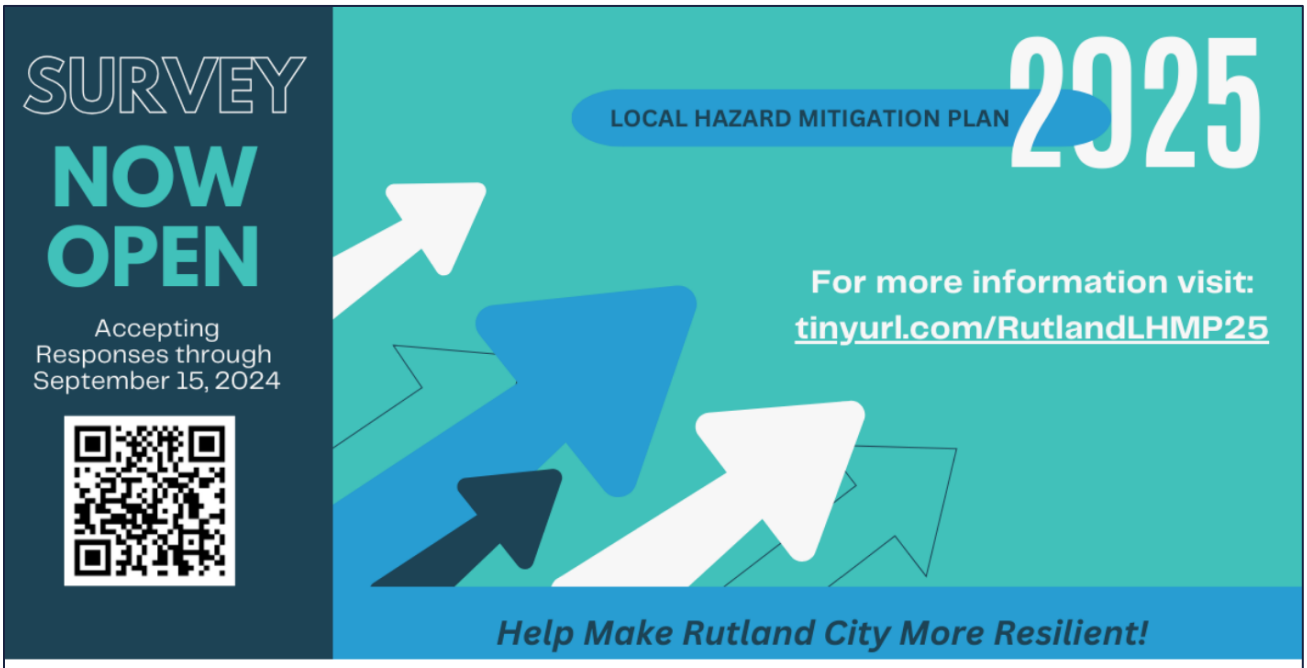
Appendix Table 1. Rutland City Community Engagement Strategy

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)	8/5/2024
	Gather Data & Assess Risk	Survey	Solicit (public feedback from Whole Community on potential natural hazard impacts)	8/5/2024 – 9/15/2024
		Pop-up Events	Solicit (see above)	8/17, 8/24, 8/31, and 9/14/2024
		Workshop	Integrate (evaluate broad range of risks)	9/12/2024
		Board of Aldermen Presentation	Notify (inform local officials of Plan progress)	10/21/2024
		Public Comment Period	Solicit (feedback from Whole Community on draft Hazard Identification and Risk Assessment)	10/21/2024 – 11/8/2024
2	Develop Mitigation Strategy	Workshop	Integrate (evaluate broad range of mitigation actions)	1/8/2025 and 1/16/2025
		Survey	Solicit (reaction from Whole Community on Mitigation Strategy and actions)	2/3/2025 – 2/28/2025
	Finalize Draft Plan	Board of Aldermen Presentation	Notify (inform local officials of Plan progress)	3/17/2025
		Public Comment Period	Solicit (feedback from Whole Community on final draft Plan)	3/17/2025 – 4/21/2025

Examples of Phase 1 Engagement Materials

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

KICK-OFF EMAIL BLAST



Rutland City 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 April 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 City 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 City's planning team includes: William Lovett, Fire Chief; Bob Protivansky, Public Works Commissioner; Tyler Richardson, Executive Administrator; Andrew Strniste, Planning & Zoning Administrator; and Eric Pulver, Vermont Department of Health.

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:

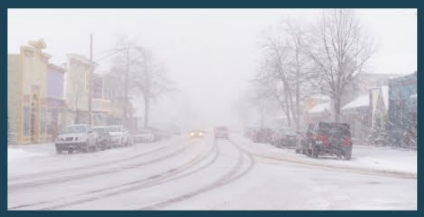
- Visiting our information table at the Farmer's Market on Saturdays in August or at the Whoopie Pie Fest on September 14, 2024.
- Take our online survey: **tinyurl.com/Rutland-LHMP25-SURVEY**. The survey will remain open until September 15, 2024.

For more information visit: tinyurl.com/RutlandLHMP25

KICK-OFF PHYSICAL FLYER

Rutland City

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

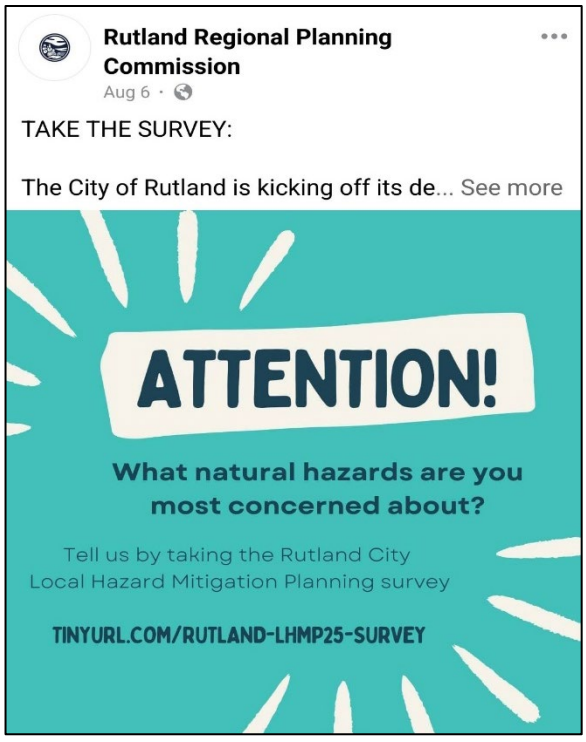
- Aug 2024: Plan Update Kick-off
- Sept-Oct 2024: Assess Risks & Identify Hazards
- Nov-Dec 2024: Develop Mitigation Strategy
- Jan-Feb 2025: Finalize Draft Plan
- Apr 2025: Adopt Plan

ACT NOW!

For More Information

tinyurl.com/RutlandLHMP25

PHASE 1 SOCIAL MEDIA POSTINGS

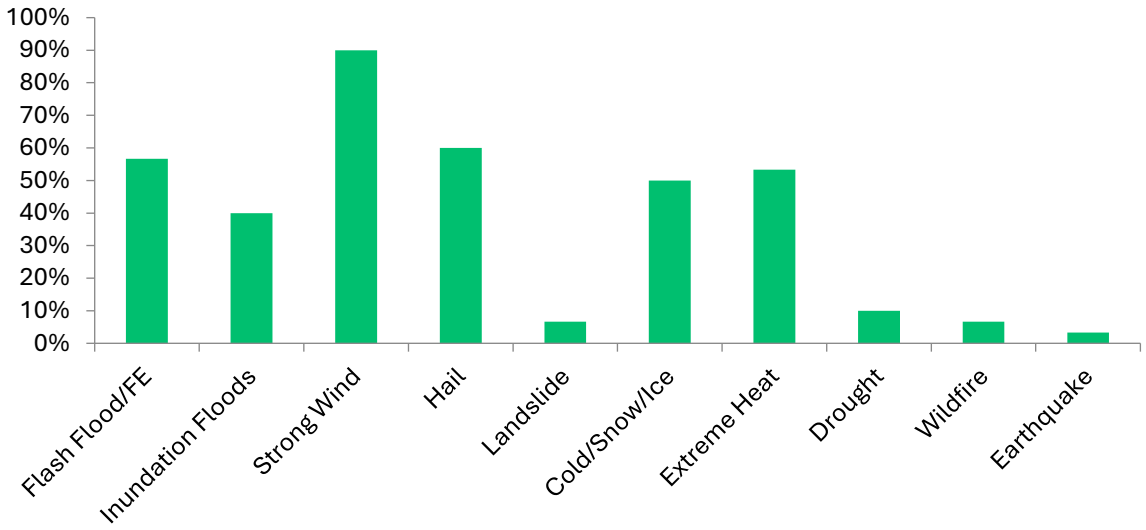


PHASE 1 ENGAGEMENT SURVEY RESULTS

1. **How long have you lived in or owned a business or property in Rutland City?**
   Less than one year **10%**
   One to five years **13%**
   More than five years **77%**

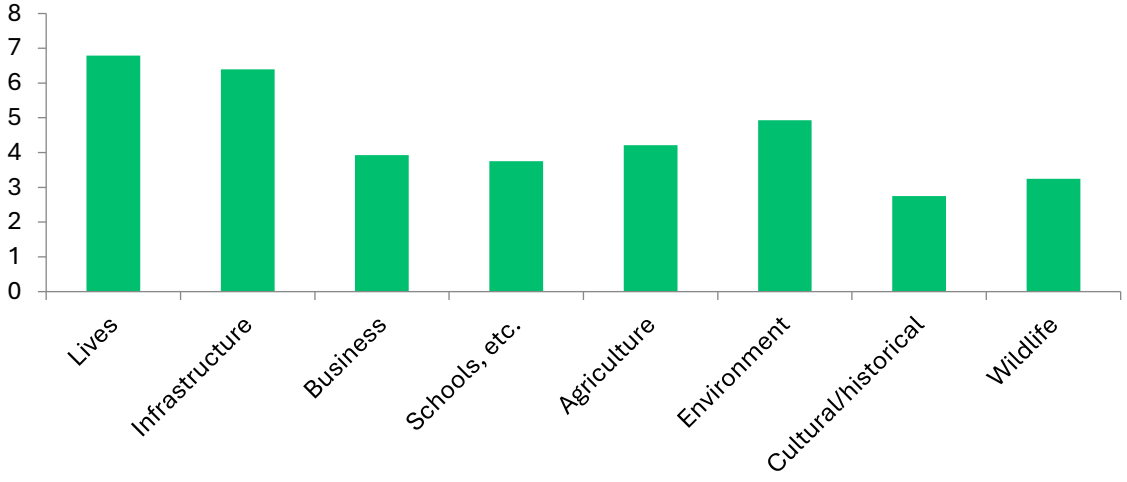
2. **Is your home or business property located in a FEMA designated floodplain?**
   Yes **3%**
   No **47%**
   I don't know **50%**

3. **Which of the following natural hazards have you or some you know experienced while living or doing business in Rutland City?**



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 Flash Floods **67%** #2 Strong Winds **53%** #3 Extreme Heat **33%** and Inundation Floods **33%**

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 regard to…**



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

I am not

Flood damage

I'm too new, haven't lived through any serious adverse events (1 strong wind, but damage was minimal)

The end of Park Street, and Cleveland Ave seem to flood frequently

Poor drainage in many areas which have had documented flooding

Flooding- downtown. Route 7 near Tap House. Stratton Road near Olivias Market

23 Piedmont Drive flash flooding

Meadow Street and Baxter and downtown Rutland

Moon Brook and water quality when storm water causes manholes to overflow onto Jackson Avenue.

There are flood prone areas around Moon Brook, East Creek, and Otter Creek. Downtown has had problems with flash flooding. The golf course saw flooding from a breached beaver dam, but that is part of a natural cycle of disturbance. Pine Hill Park is probably our greatest risk for wildfire during extreme drought since our first responders aren't necessarily set up for initial attack of non-urban/ non-structural fire.

Clover Street floods, culvert under route 7, moon brook, is too small, brook is channelized, needs widening and riparian restoration. West Rutland floods as well, likely similar issues… (legacy of farming and digging down streams / rivers to divert for agriculture, away from the functional floodplain).

Downtown

Power outages in northeast section of Rutland city

Downtown, Stratton, Georgetti area and more

Downtown area by Transit Center, Lower Park Street, Clover Street

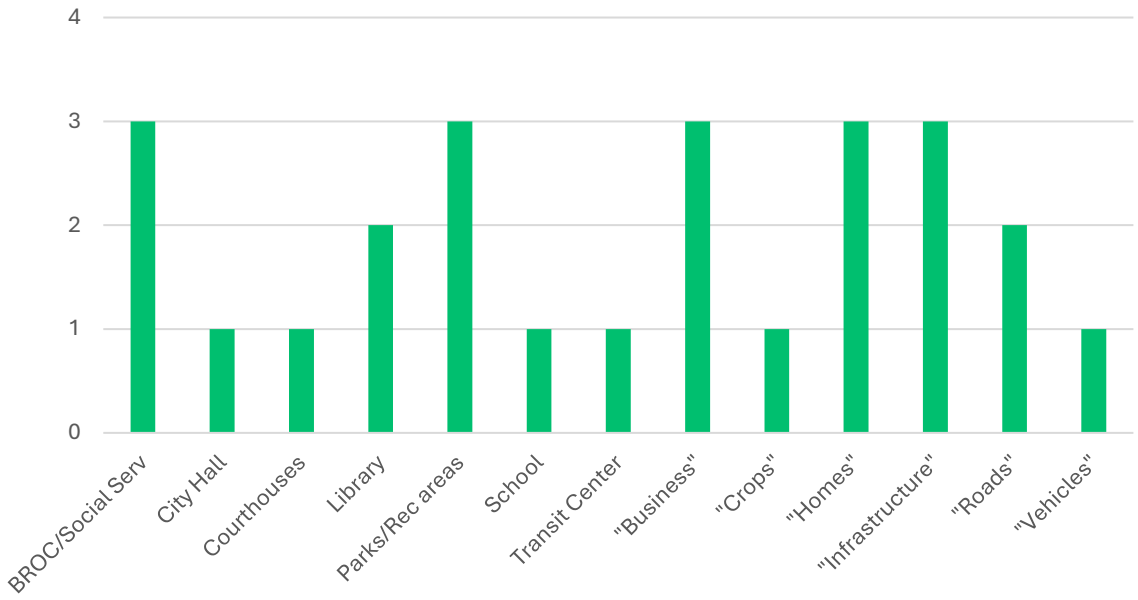
Houses that are built along the streams in downtown, neighborhood streets in general and Route 7 through town have terrible drainage

Downtown Rutland – Flooding; Area near the fairgrounds – Flooding. All areas are potentially impacted by ice/extreme winter weather.

Woodstock Ave by Stratton flooded dangerous streets. No proper drainage or improperly paved. N s text hill becomes ice and cars can not stop at rt7 intersection due to extreme ice and slope. Slope on Stratton sb from hs trying to stop at intersection when icy is a hazard. Bad flooding between Olivia's and gilrain during rains.

Moon Brook is showing some signs of inflated water paths.

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. (*Note: many respondents gave non-descriptive answers: these are marked by quotations.*)**



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

   Silt removal from salting during the winter.

   No

   Floods=Bad

   Landlords with apartment house(s) in flood zones refuse to fix the property after a flood or take any preventive measures to keep the house(s) from flooding are adding to the population of homeless individuals and families, if the individuals that live in these units choose to say they are becoming very ill. In short Natural Hazard/Disaster affecting homes owned by bad landlords that are never held accountable and use threats and eviction against tenants, causing extreme illness and/or homelessness. This includes the motels such as Travel Inn, both Rodeway Inn's, Quality Inn, Cortina Inn, Days Inn, Econo Lodge, Pine Tree Lodge, The Highlander Motel, etc.

   Has the city planned for the unlikely occurrence of a breach of the Chittenden Reservoir spillway and the subsequent catastrophic flooding that would result from that?

   We need to work on improving drainage and infrastructure.

   Flash flooding around 23 Piedmont Drive

   Plans for animals safety

Where to go during winter and keep warm and bring my dog

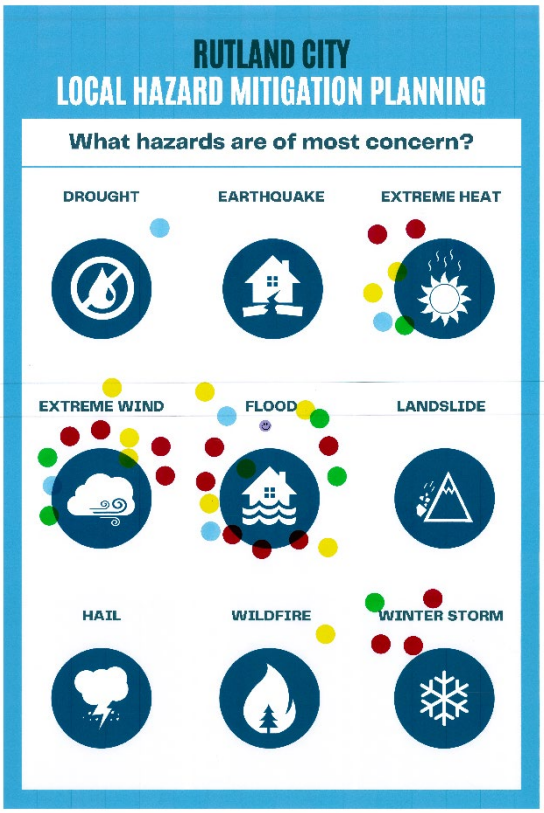
Flooding is obviously easy for people to understand and want to be prepared for. Wildfire, on the other hand, is hard to envision being an issue here. But, we are likely to be impacted by a wildfire, either in town or up the hill, during a period of extreme drought. I feel like we need to be aware of the potential impacts and response needs so that we aren't caught flatfooted if/ when the time comes.
Stable long term housing for the homeless. Safety from the elements and a cost effective assistance program to save on hotel fees. Also AC units for the elderly who are affected by increased heat & humidity. They are vulnerable. EMS calls increase markedly during heat waves, mostly for geriatric patients.

Snow plowing after a big storm usually takes days for it to be safe to drive on the road (neighborhoods and main routes)--that is unacceptable and dangerous. The roads should always be accessible in these situations, at least for emergency purposes. This past winter it was shocking to see the lack or urgency there was for making the roads as safe as possible.

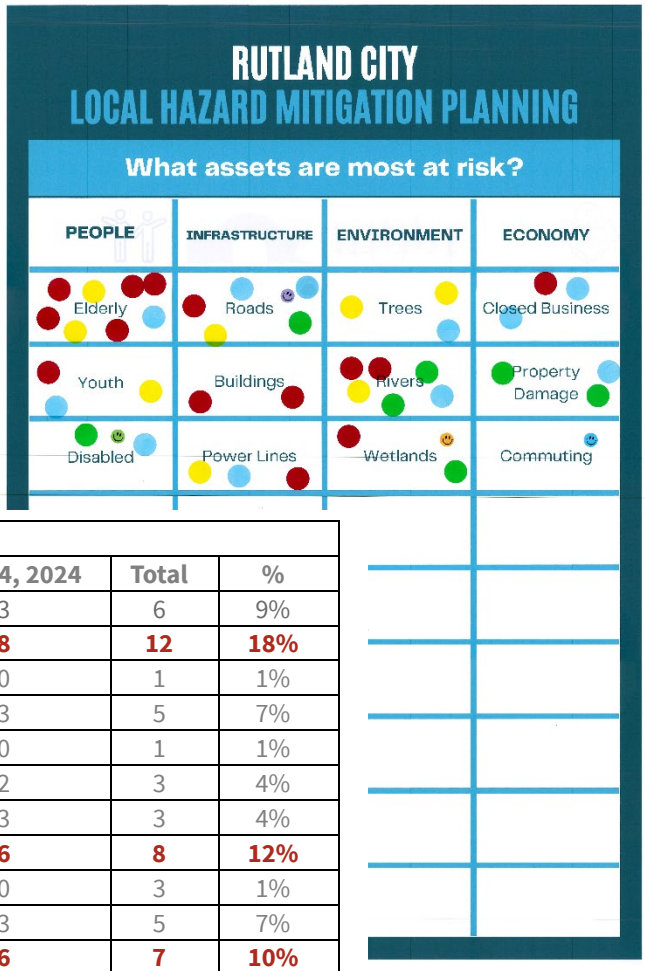
Stop clear cutting of forested lands in our city. We need them to prevent erosion and flooding and to protect the city wildlife. Stop permitting any additional solar panel areas that will cause disastrous permanent damage to our soil for generations and the land they are on is no longer properly draining leading to more flooding.

Ruggierio is clear cutting forested city acres of trees in wetlands above the N Main St tenney brook area pond river east side of N Main, the erosion will cause landslide and flooding will destroy slope. he is clear cutting that property and dumping truckloads of offsite dirt and other materials he has transported in from his other hazardous properties that will flood down into that waterway and other parts of the city in heavy rains. The city needs to retain all of the forested areas that are assuring with erosion control and generation oxygen and preventing noise pollution and protecting local wildlife and bats and birds and deer and bear and raccoons and fox and wild turkeys

PHASE 1 ENGAGEMENT POP-UP RESULTS



Question: What Hazards Are of Most Concern?				
Response	**Aug 17, 24, & 31, 2024**	**Sep 14, 2024**	**Total**	**%**
Drought	2	1	3	5%
Earthquake	0	0	0	0%
Extreme Heat	**3**	**6**	**9**	**15%**
Extreme Wind	**1**	**10**	**11**	**18%**
Flood	**14**	**16**	**30**	**48%**
Hail	0	0	0	0%
Landslide	1	0	1	2%
Wildfire	1	1	2	3%
Winter Storm	2	4	6	10%



Question: What Assets Are Most at Risk?				
Response	**Aug 17, 24, & 31, 2024**	**Sept 14, 2024**	**Total**	**%**
People: Disabled	3	3	6	9%
People: Elderly	**4**	**8**	**12**	**18%**
People: Homeless	1	0	1	1%
People: Youth	2	3	5	7%
Infrastructure: Bridges	1	0	1	1%
Infrastructure: Buildings	1	2	3	4%
Infrastructure: Power Lines	0	3	3	4%
Infrastructure: Roads	**2**	**6**	**8**	**12%**
Infrastructure: Water Supply	3	0	3	1%
Environment: Forests	2	3	5	7%
Environment: Rivers	**1**	**6**	**7**	**10%**
Environment: Water Bodies	1	0	1	1%
Environment: Wetlands	2	3	5	7%
Economy: Closed Businesses	2	3	5	7%
Economy: Commuting	0	1	1	1%
Economy: Property Damage	0	3	3	4%

Examples of Phase 2 Engagement Materials

Email Blasts
Social Media Postings
Public Comment Summary
Survey with Results

PHASE 2 EMAIL BLAST EXAMPLE – SURVEY #2

Maggie O'Brien

From: Maggie O'Brien
Sent: Monday, February 3, 2025 9:17 AM
To: Maggie O'Brien
Cc: Steffanie Bourque; ebove@rutlandcity.org
Subject: Public Notice: Rutland City LHMP: Survey #2 Launch

Good morning,

If you are receiving this email, you have been identified as a local official with the authority to regulate or oversee development. This includes a multitude of elected or appointed positions, such as: Zoning Administrator, Building Inspector, Code Enforcer, Development Review Board Chair, Planning Commission Chair, and Aldermanic Committee Chairs for Community & Economic Development and Public Safety. 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 Rutland City, we are writing to inform you that the second public engagement survey has gone live! From **February 3 – February 28**, we are seeking your reaction to the draft mitigation actions developed by the local Planning Team to address the City's highest risk natural hazards (Flooding, Extreme Heat, Strong Wind, and Severe Winter Storms). Let us know, based on your technical and/or local knowledge, if these actions are acceptable and practical for Rutland City to implement. You can access the survey directly at https://tinyurl.com/Rutland-LHMP25-Survey2 or navigate to the landing page at https://tinyurl.com/rutlandlhmp25, 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 EXAMPLES - PUBLIC COMMENT PERIOD

Maggie O'Brien

From: Maggie O'Brien
Sent: Tuesday, March 18, 2025 8:01 AM
To: Maggie O'Brien
Cc: Steffanie Bourque; Bill Sweet; Barbara Noyes Pulling; [redacted]
Subject: Rutland City Final Draft LHMP Available for Public Comment

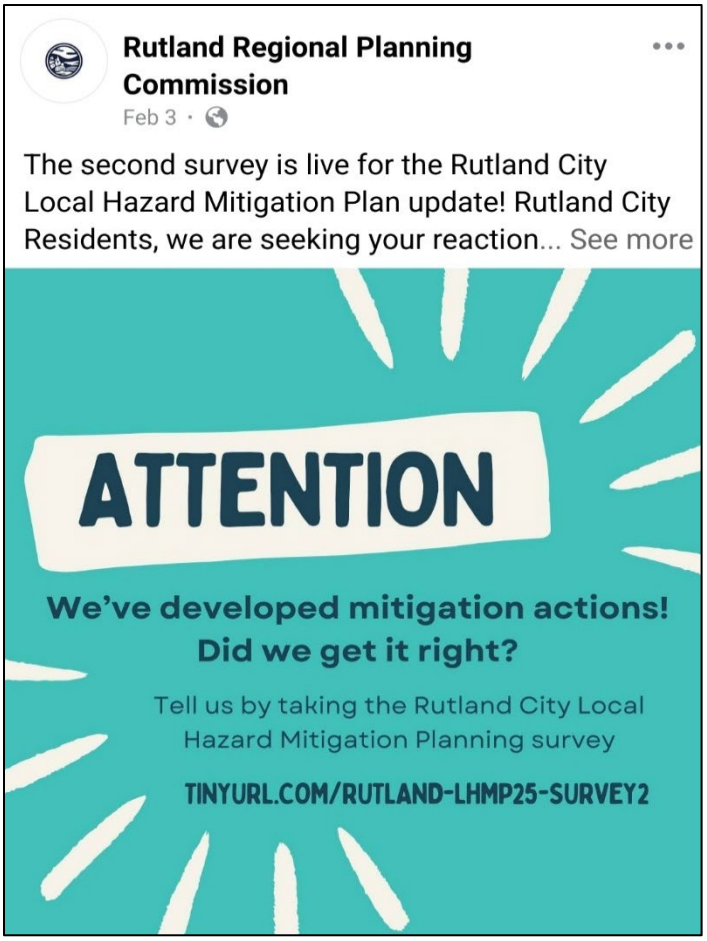
Good morning,

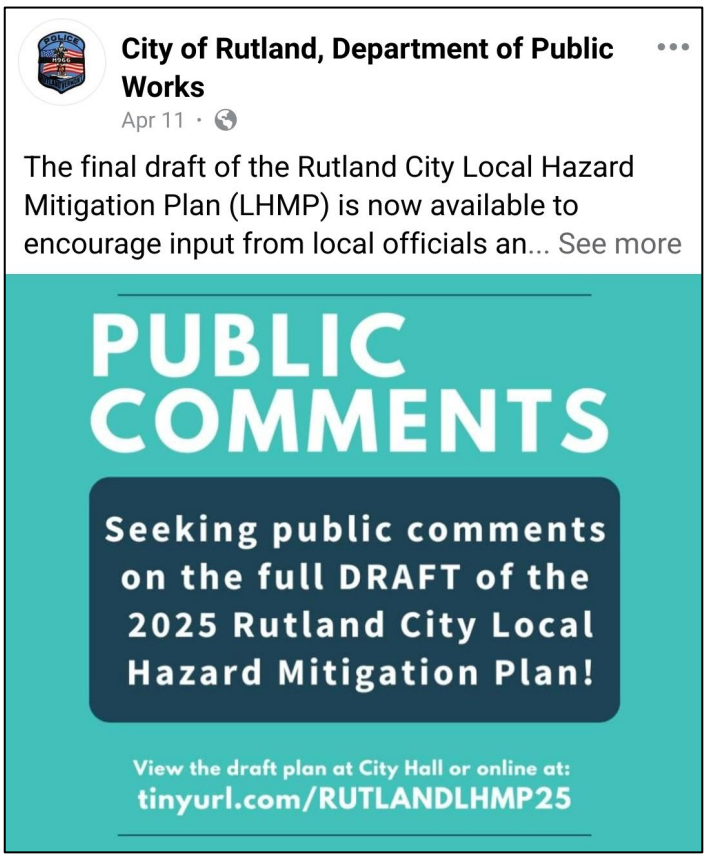
If you are receiving this email, you have been identified as key local official of the municipality adjacent to Rutland City (i.e., Rutland Town). FEMA requires any municipality involved in updating their Local Hazard Mitigation Plan (LHMP) to reach out to different segments of the "Whole Community" throughout the plan development process.

On behalf of Rutland City, I am notifying you that their local planning team has completed their work to update the City's LHMP. The final draft is being shared now to encourage input from local officials and the public. The comment period is open from **March 17 – April 21, 2025**. City Hall has a physical copy available for viewing, or you may click here to download a PDF of the Plan. Email all comments, including suggested revisions, to me at maggie@rutlandrpc.org. For more information on the Rutland City LHMP update process, visit https://tinyurl.com/rutlandlhmp25.

Best,
Maggie

PHASE 2 SOCIAL MEDIA POSTINGS





PHASE 2 PUBLIC COMMENTS SUMMARY

Comment 1: Hello, I am resident of city of Rutland. I have deep concerns about plans for worst case scenario that Chittenden Reservoir collapses, and how long will it take the water to reach the city of Rutland.
The Pittsford Dam collapsed in 1947, and the water levels in some neighborhoods of Rutland had water reaching the second floor of homes.
would Chittenden Reservoir be worse than the flooding of 1947?
What elevation is safe for not being in the initial flooding? My friend suggested going to about mendon orchard, until the waters receed.
Finally. Where are there designated emergency shelters in Rutland for housing people displaced by flooding, by tornados, and by hurricanes?
Are there designated emergency shelters that allow people to bring their pets?

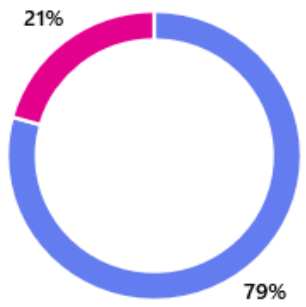
Response 1: While classified as a High Hazard Potential Dam, the Planning Team did not consider including Chittenden Reservoir in this plan. This is for two reasons: first, the Reservoir is owned by Green Mountain Power (GMP), not the City, and second, the City actively maintains an emergency operations plan for the Reservoir, which includes evacuation procedures. GMP maintains an emergency action plan with information regarding potential dam emergencies and the Reservoir's modeled inundation areas; this information is provided directly to the officials charged with emergency response in the affected municipalities. Interested citizens should contact the City's Emergency Management Director, Chief Bill Lovett, at blovett@rutlandcity.org to learn more. This is also the primary contact to learn more about designated emergency shelters.

This was the only comment received from the general public during the public comment period. For comments specific to segments of the Whole Community, refer to page A-5.

PHASE 2 ENGAGEMENT SURVEY RESULTS

1. **Evaluate the community's primary mitigation goal: "To increase Rutland City'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 medical, transportation, energy, and communications."**

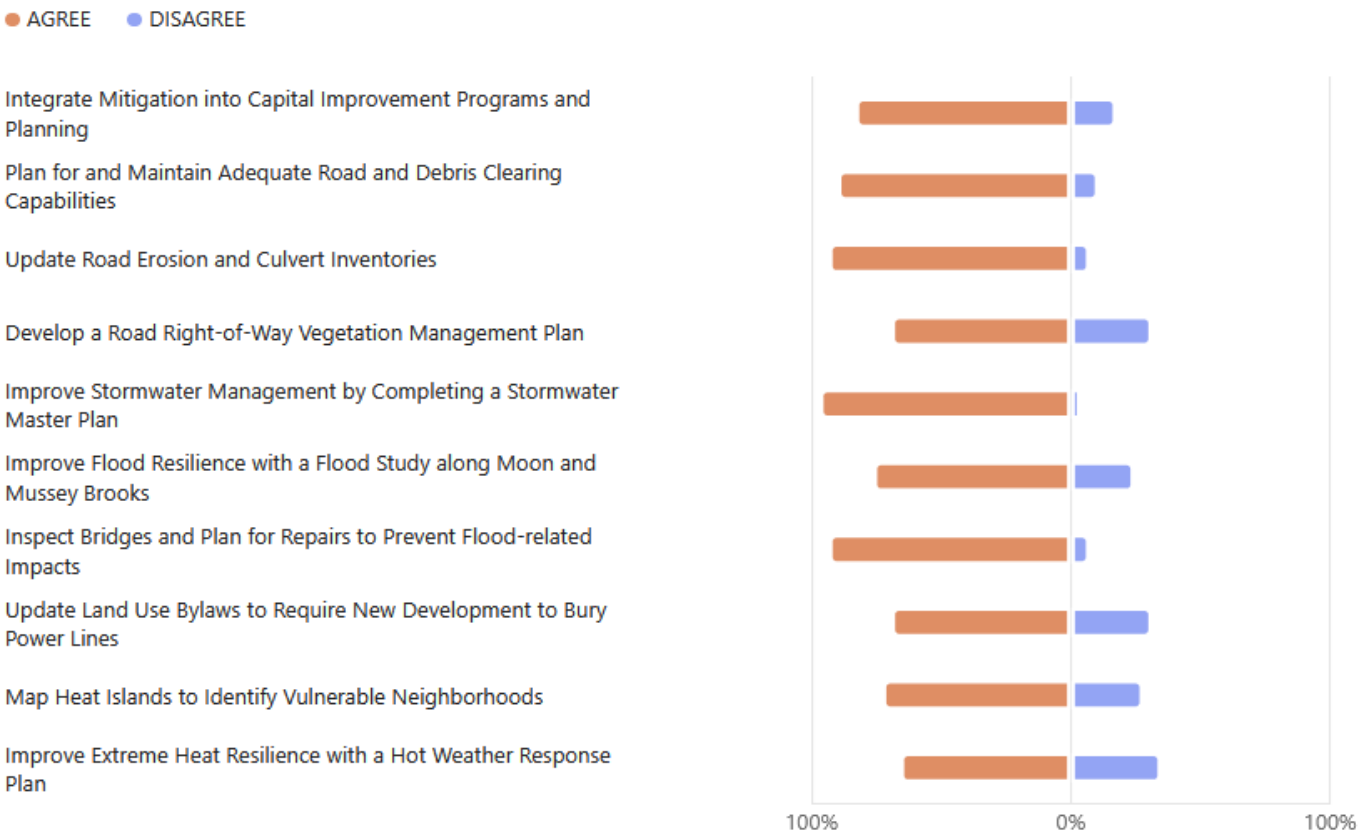
I AGREE with the direction of the goal statement.	23
I DISAGREE with the direction of the goal statement.	6



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

ID ↑	Name	Responses
1	anonymous	What are the investment
2	anonymous	The people of Rutland need resilience now immediate SOS for our community. People need to be lifted up
3	anonymous	The people of Rutland need resilience now immediate SOS for our community. People need to be lifted up
4	anonymous	When you say investment where is the money coming from. Way over taxed in the City already. Cannot afford to pay for more!
5	anonymous	the cost
6	anonymous	Let's not spend dollars on fixing something that we can not control, such as Extreme heat?

3. **Indicate if you agree or disagree that the following Planning and Regulatory mitigation actions are acceptable and practical for Rutland City 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.**



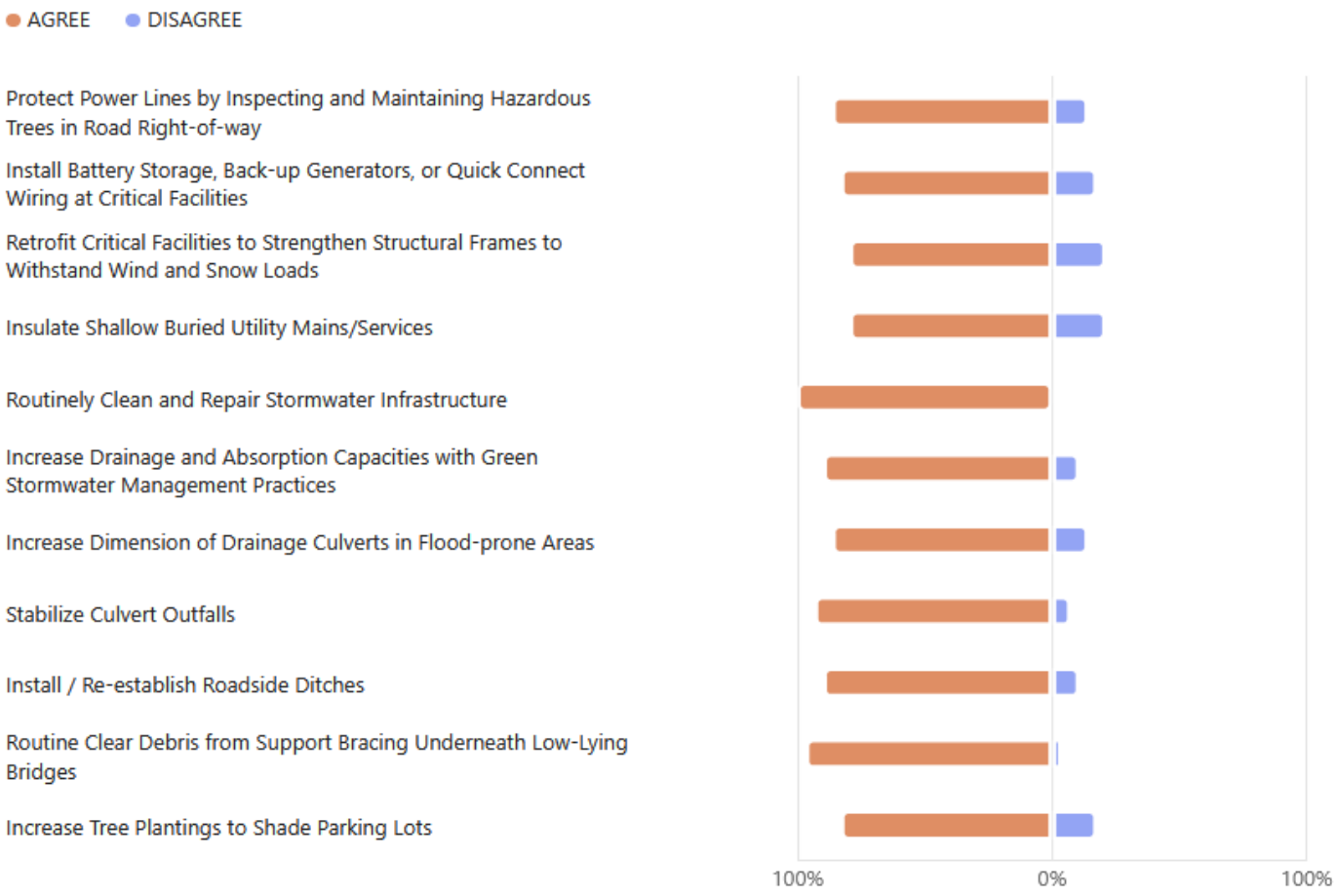
4. **Is there something missing we should consider?**

ID ↑	Name	Responses
1	anonymous	The people living in thecommunity living in constant fear they too will soon be homeless as landlords price gouge their customers.
2	anonymous	The people living in thecommunity living in constant fear they too will soon be homeless as landlords price gouge their customers.
3	anonymous	I thought this was a survey about Rutland City
4	anonymous	Where is the money coming from?
5	anonymous	When replacement and enlargement of a culvert under Strongs Ave for Moon brook is on the books, don't let it sit for 2 decades and watch the neighborhood get flooded multiple times and still not bother to do the project that would stop bottlenecking the water into our homes! Notice problem, plan to fix problem, then fix the problem! Stop not doing anything just cause we're a poor neighborhood!
6	anonymous	Wildland Urban Interface risk mapping under dry windy conditions. Pine Hill Park has had large fires in the past, and likely will in the future. Multiple homes, jail, GE, are in the immediate interface. Addressing the fire risk will allow you to effectively compete for federal community wildfire defense grants. Also develop a veg management plan for powerline right of ways that consider wildfire risk...not just business as usual

4. **(continued) Is there something missing we should consider?**

7	anonymous	General upkeep will address much of this- like cleaning the culverts, maintaining the roads and sidewalks and retaining the current tree stock.
8	anonymous	No
9	anonymous	Funding flood survivor emergency recovery efforts.

5. **Indicate if you agree or disagree that the following Structure & Infrastructure Project mitigation actions are acceptable and practical for Rutland City 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?**

ID ↑	Name	Responses
1	anonymous	Community engagement plan for crisis management of the population
2	anonymous	Community engagement plan for crisis management of the population
3	anonymous	Instead of shade trees why not put up solar panels to cover the parking lots?

6. **(continued) Is there something missing we should consider?**

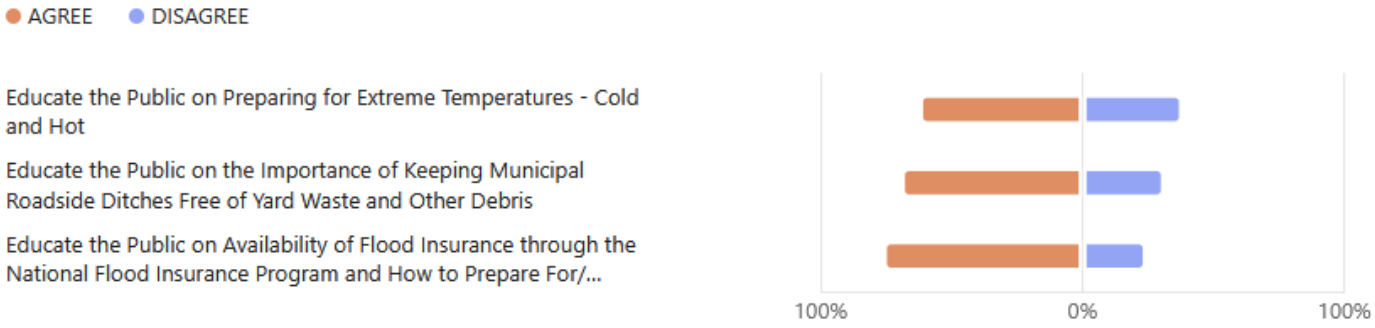
4	anonymous	Where are the funds coming from?
5	anonymous	.
6	anonymous	You could also put in solar panels to increase shade in parking lots like rutland highschool did.
7	anonymous	No
8	anonymous	Improve Stormwater Management by Completing a Stormwater Master Plan;

7. **Indicate if you agree or disagree that the following Natural Systems Protection mitigation actions are acceptable and practical for Rutland City 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?**

ID ↑	Name	Responses
1	anonymous	I thought this was a survey about Rutland City
2	anonymous	Money?
3	anonymous	.
4	anonymous	I have called and reported for years about fallen trees in Moon Brook causing daming and have been brushed off. Was told it's my job to clean out river behind my property, except daming trees are behind city owned properties. And no one seems to care how this affects us poor citizens. And it's not my job to pay someone to get permits to remove trees from someone else's property!
5	anonymous	Powerline right of way vegetation management....not slash and jack potting fuels in powerline corridors. Consider prescribed Fire in Pine Hill Park and other areas in Wildland urban interface.
6	anonymous	No

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



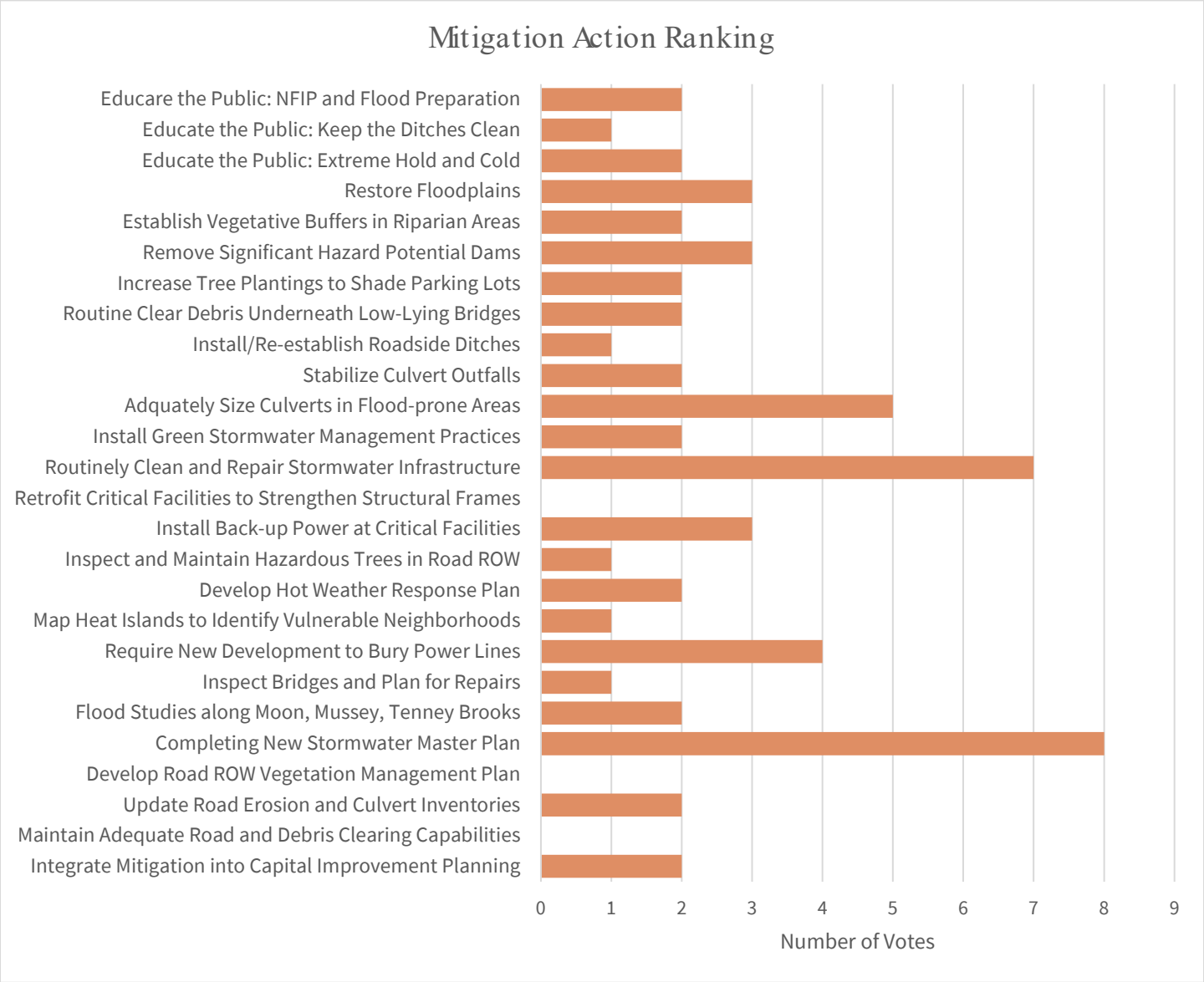
10. **Is there something missing we should consider?**

ID ↑	Name	Responses
1	anonymous	I thought this was a survey about Rutland City
2	anonymous	I cant get flood insurance. How can I get protection?
3	anonymous	Common sense
4	anonymous	Adding solar to municipal buildings
5	anonymous	Flood insurance is not affordable and some of us have been put on the most expensive fema list cause of how often we flood, even though it's ONLY because of inadequate infrastructure, unkept rivers and neglect. Fema is not the best option. The best option is to increase the river depths and widths to handle more draining water before causing damage to homes. The city has grown and little Moon and Mussey Brooks can't handle what the city is now demanding them to drain when a downpour happens.
6	anonymous	Introduce wildfire education and defensible space info
7	anonymous	No
8	anonymous	Execute an ongoing public education effort utilizing all forms of available media and public presentation opportunities.

Public Comment Response: Wildfires

As shown above, one survey respondent submitted multiple comments in relation to wildfire risk impacts and mitigation actions. In the Community Hazard Risk Assessment (Table 4), Wildfires received a low risk score given their low probability and the City's limited extent of forested land. This plan therefore does not address wildfires in the mitigation strategy. In response to this concern, the Planning Team agreed to consider wildfire preparation and response plans for the City's annual Local Emergency Management Plan update.

11. Out of ALL the mitigation actions (not categories) presented, which three (3) are the most important for Rutland City to implement?



Other Responses:

People survey on how to help this community survive.

I thought this was a survey about Rutland City

Tell us where the money will come from to do this?

Wow I like them all

Clean out rivers of daming debris, even if it disturbs some wildlife, they'll adapt, they lived somewhere before the trees was there!

All areas are important