TOWN OF WEATHERSFIELD AND VILLAGE OF PERKINSVILLE, VERMONT:

LOCAL MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

ADOPTED BY THE TOWN: OCTOBER 15, 2018

ADOPTED BY THE VILLAGE: OCTOBER 15, 2018

PREPARED BY THE TOWN OF WEATHERSFIELD AND VILLAGE OF PERKINSVILLE WITH ASSISTANCE FROM THE SOUTHERN WINDSOR COUNTY REGIONAL PLANNING COMMISSION

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ACKNOWLEDGEMENTS

PROJECT STEERING COMMITTEE

ED MORRIS – TOWN MANAGER

HAL WILKINS – LAND USE ADMINISTRATOR

DALLAS CAREY – VILLAGE REPRESENTATIVE

WESLEY HAZELTINE – DPW SUPERVISOR

WILLIAM DANIELS – WPD CHIEF

JOSH DAUPHIN – WWVFD CHIEF

DARRIN SPAULDING – AVFD CHIEF

PROJECT COORDINATOR:

ALLISON HOPKINS – SENIOR PLANNER, SOUTHERN WINDSOR COUNTY RPC

PROJECT PARTICIPANTS:

WEATHERSFIELD TOWN SELECT BOARD

PERKINSVILLE VILLAGE TRUSTEES

LOCAL EMERGENCY PLANNING COMMITTEE #3

ASCUTNEY VOLUNTEER FIRE DEPARTMENT

WEST WEATHERSFIELD VOLUNTEER FIRE DEPARTMENT

SOUTHERN WINDSOR COUNTY REGIONAL PLANNING COMMISSION

VERMONT AGENCY OF TRANSPORTATION

VERMONT EMERGENCY MANAGEMENT

VERMONT AGENCY OF NATURAL RESOURCES

FEDERAL EMERGENCY MANAGEMENT AGENCY

NATIONAL WEATHER SERVICE

Town of Weathersfield 2018-2023 Local Hazard Mitigation Plan
October 2018

CERTIFICATE OF ADOPTION

Town of Weathersfield, VT
Selectboard

A Resolution Adopting the
Town of Weathersfield 2018-2023 Local Hazard Mitigation Plan

WHEREAS, the Town of Weathersfield has worked with the Southern Windsor County Regional Planning Commission to prepare an updated hazard mitigation plan for the town, to identify natural hazards, analyze past and potential future damages due to natural and man-made caused disasters, and identify strategies for mitigating future damages; and

WHEREAS, duly-noticed public meetings were held by the Weathersfield Selectboard on 10-15-18 to present and receive public comment on the draft Plan; and

WHEREAS, the updated 2018-2023 Weathersfield Local Hazard Mitigation Plan was submitted to the Division of Emergency Management and Homeland Security and the Federal Emergency Management Agency for review on Aug. 15, 2018; and

NOW, THEREFORE BE IT RESOLVED that the Town of Weathersfield Selectboard hereby adopts the Local Hazard Mitigation Plan for municipal use and implementation.

Duly adopted this 15th day of October, 2018.

Weathersfield Selectboard:

Kelly Murphy
Chair, Weathersfield Selectboard

Member

Member

Member

Member

Village of Perkinsville 2018-2023 Local Hazard Mitigation Plan
October 2018

CERTIFICATE OF ADOPTION

Village of Perkinsville, VT
Selectboard

A Resolution Adopting the
Town of Weathersfield 2018-2023 Local Hazard Mitigation Plan

WHEREAS, the Village of Perkinsville has worked with the Southern Windsor County Regional Planning Commission to prepare an updated hazard mitigation plan for the town, to identify natural hazards, analyze past and potential future damages due to natural and man-made caused disasters, and identify strategies for mitigating future damages; and

WHEREAS, duly-noticed public meetings were held by the Perkinsville Trustees on 10-15-18 to present and receive public comment on the draft Plan; and

WHEREAS, the updated 2018-2023 Perkinsville Local Hazard Mitigation Plan was submitted to the Division of Emergency Management and Homeland Security and the Federal Emergency Management Agency for review on July 15th, 2018; and

NOW, THEREFORE BE IT RESOLVED that the Perkinsville Trustees hereby adopts the Local Hazard Mitigation Plan for municipal use and implementation.

Duly adopted this 15 day of October, 2018.

Perkinsville Trustees:

Chair, Perkinsville Trustee

Member

Member

Member

Member

1.0 INTRODUCTION

The goal of this stand-alone Hazard Mitigation Plan is to help the community identify risks and provide local mitigation strategies it can take to make Weathersfield more disaster resilient.

What is Hazard Mitigation?

Hazard mitigation is an action taken to reduce or eliminate the long-term risk to human life and property from both natural and man-made hazards. The work done to minimize the impact of hazard events to life and property is called Hazard Mitigation Planning.

2.0 PURPOSE

The Federal Emergency Management Agency (FEMA), the Vermont Division of Emergency Management and Homeland Security (DEMHS), and local towns have come to recognize that it is less expensive to prevent disasters than to repeatedly repair damage after a disaster has struck. Hazards cannot be eliminated, but it is possible to determine what the hazards are, where the hazards are most severe, what is most likely to occur and identify what local actions can be taken to reduce the severity of the hazard and reduce their impacts on the community.

Hazard mitigation planning and strategies include the following benefits:

- structural or land improvements
- increased public education and awareness of hazards
- altering the hazard area to remove the hazard occurrence
- reducing the hazard frequency through structure or land treatment
- increased community support for specific actions to reduce future losses
- reduction in financial and physical losses caused by hazard events
- eligibility for hazard mitigation grants and aid
- strengthened partnerships

The Town of Weathersfield and Village of Perkinsville Multi-jurisdictional Hazard Mitigation Plan is a stand-alone plan to assist the town and village in identifying hazards within the town and identify strategies to reduce or eliminate these hazard risks. This Plan addresses and includes the Town's one incorporated village, the Village of Perkinsville. Reference to "Weathersfield", "town" and the "Town of Weathersfield" should be considered to include the Village of Perkinsville, unless specifically noted otherwise. This is because, aside from the village street lights, all maintenance and planning for the village is done by the Town. There is no separate localized data for the Village and is incorporated throughout this plan in discussion with the

town. There is no separate emergency management, highway, or administrative personnel for the village.

Previously, the Town of Weathersfield All Hazard Mitigation Plan was an annex to the Southern Windsor County Regional Planning Commission Multi-Jurisdictional All Hazard Mitigation Plan. The updated plan is intended to serve as a 'stand-alone' plan for the Town and Village and will focus on the hazards and mitigation programs best suited for them.

A partial list of revisions that have been made include:

- Reorganization/restructuring of the plan
- Revaluation of hazards using new methodology
- Update of data, tables and charts
- Review and update status of mitigation strategies
- Incorporation of new state initiatives on river corridor and fluvial erosion mitigation
- Identification of current mitigation strategies
- Maps

3.0 TOWN PROFILE

The array of land uses present in Weathersfield today represents the typical evolution of countless towns across New England. In its earliest days, Weathersfield consisted of widely scattered farms interspersed with the services they needed to survive. Centers grew up in Ascutney on the Connecticut River and Perkinsville on the Black River. Perkinsville was particularly robust with industries taking advantage of the water power from the Black River.

The lack of a centrally located "center" for the Town became an issue in the 1800's. Residents of Perkinsville resented having to travel the long distance and rough terrain to Ascutney to attend Town meetings. Weathersfield made an attempt to create a Town center at the height of the land on Weathersfield Center Road at almost the exact geographical center of the community. However, this didn't last and development continued to concentrate in Perkinsville and Ascutney. Town government has been located in both centers over time, with it currently being seated in Ascutney.

Many farms that once dominated the landscape have disappeared - as the various forms of farming became less and less profitable. Farm lands have been subdivided and developed as residences (for the most part) and the Town has become primarily a bedroom community. Commercial and industrial activities are small scale and tend to be located along the Town's major highways in the Ascutney area and at Downers. Perkinsville no longer supports the commerce and industry of its past and is primarily a concentration of residences.

According to the U.S. Census, the population of Weathersfield has increased from 2,788 in 2000 to 2,825 in 2010 (1.3%). Although the numbers have continued to increase over the last 30 years, the data reflects substantially diminished growth from that experienced during the 1970s. Within Weathersfield, the positive growth rate indicates the possibility for future development increasing the value and importance of regulatory tools such as flood hazard regulations and zoning regulations. These tools allow for the town to deter growth away from areas deemed unsafe and potentially prone to hazards. The current zoning map designates uses and areas of development which are sufficient to handle current development trends. No new development has occurred since the adoption of the last Plan that has affected the town's vulnerability to hazards.

4.0 PLANNING PROCESS

The local planning process used to develop this hazard mitigation plan follows guidance by the Federal Emergency Management Agency (FEMA) and the Vermont Division of Emergency Management and Homeland Security (DEMHS). Beginning in the spring of 2017, Southern Windsor County Regional Planning Commission (SWCRPC) staff reviewed the 2013 Weathersfield All Hazard Mitigation Plan, which at the time was an annex to the 2012 Southern Windsor County Regional Planning Commission Multi-Jurisdictional All Hazard Mitigation Plan to identify key areas for updates. The State of Vermont also recently adopted an updated Hazard Mitigation Plan in November of 2013 (Vermont HMP 2013), which was consulted during this update. This updated plan is intended to serve as a 'stand-alone' plan for Weathersfield and will focus on the hazards and mitigation programs best suited for the town.

4. 1 PUBLIC PROCESS

The Town of Weathersfield in partnership with the Southern Windsor County Regional Planning Commission established a plan of completion for the Weathersfield Local Hazard Mitigation Plan which included public meetings to discuss and complete the following:

- Complete hazard analysis and hazard extent
- Review hazard history and identify additional data to be included
- Review plan and identify mitigation strategies to address each high hazard
- Review past completed or on-going mitigation projects and actions
- Identify new mitigation projects and actions

4.2 PLAN UPDATE PROCESS

On June 5, 2017, SWCRPC staff met with the Weathersfield Hazard Mitigation Committee to begin the update process for this plan.[1] Participants discussed the purpose and timeline for updating the plan and groups/individuals that should be invited to meetings and made aware of the plan update. Most were familiar with the process, as the previous plan had been adopted only a few years prior. Changes discussed with the Town included new grouping of some hazards, new identified hazards, and new methodology for assessing and scoring each hazard which is described below in Section 5.1- Hazard Identification and Analysis. Attendees of the meeting collaborated in creating the hazard analysis seen in **Table 2: Hazard Identification and Analysis**. Hazards scoring below a 7 are identified but *not covered* in this plan. The reader is directed to the State Hazard Mitigation plan for these hazards. An additional brief discussion on why they are not included in this plan follows the analysis.

SWCRPC staff began the process of writing the new plan update by reviewing and updating hazard data used in the previous version of the Hazard Mitigation Plan. Revisions include updates to the town profile section; all data charts, tables and maps; incorporation of hazard events that occurred since the last plan revision, and integration of new relevant reports and documents, and the Town of Weathersfield Flood Hazard Area Regulations.

As part of the process in determining mitigation strategies, the group reviewed mitigation ideas from the FEMA Mitigation Ideas guidebook, the State of Vermont Hazard Mitigation Plan, and earlier planning discussions. New goals, objectives and potential future actions were identified, discussed, and prioritized, based on need, feasibility, cost/benefit and effectiveness in reducing hazard impact. The Hazard Mitigation Committee followed up with meetings in July and September 2017[2] to consolidate this input and determine a list of specific goals and associated objectives and actions for this update which are identified in **Section 6.**

SWCRPC incorporated input from these meetings into a revised draft plan which was submitted to the Hazard Mitigation Committee for review and comment prior to their meeting on October 30, 2017.[3] Member comments were discussed and incorporated into the draft.

All committee meetings were advertised and open to the public. Input was solicited by SWCRPC staff through meetings, email and digital postings in order to reach as many members of the community as possible including members of the Weathersfield Planning Commission, Selectboard, Town Manager, Emergency Management, AVFD, WWVFD, WPD, DPW, town personnel, and members of the Weathersfield public and surrounding towns. The meeting agendas included a section by section review of the previous plan with an emphasis on identifying the highest hazards facing the town and mitigation actions specific to the town. The

[1] See Sign-in sheet and agenda
[2] See Sign-in sheets
[3] See Sign-in sheet

previous version of the Weathersfield Hazard Mitigation Plan annex, Weathersfield Town Plan, a draft plan from a neighboring town, and the recently updated SWCRPC Regional Plan, were provided as examples to facilitate the discussion.

The final revised draft plan was put out for public comment and review by adjacent towns including Baltimore, Cavendish, Springfield, West Windsor and Windsor. This was done by posting an electronic copy on the town and SWCRPC websites and having a hard copy of the plan advertised and made available at the town office for public review and comment. Instructions included contacting Allison Hopkins at SWCRPC by phone or email, email address was provided. No comments were received from the public at the meeting or from the website postings. On January 25, 2018 the Weathersfield LHMP was distributed to adjacent towns for comment via email. Specifically, Weathersfield's Hazard Mitigation Committee, via SWCRPC, sent the plan to each of the neighboring Town Clerk's with a request to provide a copy to the Planning Commission and Selectboards. The adjoining towns were asked to provide comments and/or feedback via email to SWCRPC and the Hazard Mitigation Committee within 15 days. As of March 1, 2018 no feedback was received.

Following State Hazard Mitigation review, the Weathersfield Selectboard, with assistance from SWCRPC and the Hazard mitigation Committee, will review the plan at a publicly noticed meeting. At the meeting, a review of the prior plan and major changes in the update will be presented. The same process for the Village of Perkinsville will be completed with the Trustees following State review and FEMA approval for adoption certificate signature. Sign-in sheets will be added to the final approved pending adoption plan.

Participants were given an opportunity to voice their concerns and discuss areas of town most likely to be affected by these hazards, and comment on future goals and mitigation strategies that may be undertaken to reduce the risk of future harm and cost to the town. Changes in priorities, development, and local mitigation efforts were also considered throughout the revision process. The implementation schedule at the end of this document in **Table 9**, reflects the **2018-2023 Mitigation and Preparedness Actions and Projects** as determined during this process. Following the meetings, SWCRPC staff made the revisions and drafted a new, updated plan which is available for review at the Weathersfield Town Office and posted on the SWCRPC website (www.swcrpc.org).

The final adopted Weathersfield and Village of Perkinsville Local Hazard Mitigation Plan will also be posted on the SWCRPC website and available at the Weathersfield Town Offices.

Table 1 lists the mitigation and preparedness actions and projects from the previous 2013 Multi-Jurisdictional All Hazard Mitigation Plan for Weathersfield. Mitigation actions, listed in order of priority set at that time, are shown here with an additional column to indicate the status of each

as identified by the Town. Some of these action items have not been implemented or have been revaluated and/or carried over to the 2018-2023 Projects and Actions in **Table 8, Section 6.3**. Overall priorities in the community have remained the same from the previous 2013 Mult-Jurisdictional All Hazard Mitigation Plan, and the most significant concerns are still severe weather, fire, traffic incidents, hazardous materials spills/incidents, and flooding as is documented in **Table 2: Weathersfield Hazard Identification and Analysis**.

Table 1: Status of the past Hazard Mitigation and Preparedness Project and Actions

MITIGATION ACTION	TYPE OF ACTION	HAZARD ADDRESSED	RESPONSIBLE PARTY	TIME FRAME	FUNDING SOURCE	STATUS
Independent power supply for schools/government buildings	Preparedness, Mitigation	Severe Winter Weather, High Winds	Town Manager, Selectboard, School Board	2012-2015	Town budget, HMGP grant, school budget	Not complete; include
Culvert upgrade program, including those identified as undersized during TS Irene (Baltimore Road specifically)	Mitigation	Transportation Disruption, Flooding	Highway Department	Annual	Town highway budget, VTrans structures grant	Complete
Complete structural analysis of town hall, highway garage, and fire departments to assess vulnerability to highest hazards	Preparedness	Severe Winter Weather, High Wind Events, Flooding, Earthquake	Town Manager, Selectboard	2014-2016	HMGP grant	Not complete; removed due to cost
Complete study of critical facilities to identify deficiencies needing appropriate mitigation actions	Preparedness	Severe Winter Weather, High Wind Events, Flooding, Earthquake	Selectboard, Town Manager	2012-2013	Town budget, HMGP	Not complete; tie into EOC need
Carry out identified	Mitigation	Severe Winter Weather, High	Selectboard, Town Manager	2014-2016	Town budget,	Not complete;

retrofits outlined in the assessment study to ensure long-term stability of critical facilities		Wind Events, Flooding, Earthquake			HMGP	tie into EOC need
Hydrant system for Ascutney	Preparedness	Fire	Fire Commission, Ascutney VFD	2013-2015	Town funds	Partially complete; include
Continued hazardous materials training	Mitigation, Preparedness	Hazardous Materials Incident	Fire Departments	Ongoing	No cost	Complete; include
Redundant power supply for Perkinsville village	Mitigation, Preparedness	High Wind Events, Severe Winter Weather, Earthquake	Town Manager, Selectboard	2014-2016	HMGP grant, town budget	Removed; no history of outages
Emergency power for community water system	Mitigation, Preparedness	High Wind Events, Severe Winter Weather, Earthquake	Town Manager, Fire Commission, Selectboard	2014-2016	HMGP grant, town budget	Complete
The town will participate in Firewise programs including 'Communities Compatible with Nature'	Mitigation	Structure Fire, Wildfire	Selectboard, Fire Departments, Emergency Management Director	Ongoing	No cost to town	Complete; include children's version
Provide Firewise 'Be Firewise Around Your Home' brochure to property owners	Mitigation	Structure Fire, Wildfire	Planning Commission, Emergency Management Director	Ongoing	No cost to town	Not complete; no access to brochure
Conduct mitigation outreach to reduce the risk of earthquakes within town	Mitigation	Earthquake	Emergency Management Director, Fire Departments	2013-2014	No cost to town, SWCRPC	Not complete; removed no earthquake discussion

Conduct outreach on reducing ice hazards on individual property	Mitigation	Severe Winter Weather	Emergency Management Director, Fire Departments	2013-2014	No cost to town, SWCRPC	Not complete; removed due to feasibility
Conduct outreach on limiting wildfire fuel on individual property	Mitigation	Wildfire	Emergency Management Director, Fire Departments	2013-2014	No cost to town, SWCRPC	Complete
Incorporate findings of 2011 Commodity Flow Study into response planning	Mitigation	Hazardous Materials, Transportation Incident	Emergency Management Director, Road Foreman, Town Manager	2012-2014	No cost to town	Complete; include review of new study
Provide NFIP material to town residents	Mitigation	Flooding	Zoning Administrator, SWCRPC	2012-2014	No cost to town	Complete; include
Ensure adequate water supply through dry hydrants for fire protection	Mitigation	Structure Fire, Wildfire, Winter Storms	Ascutney Volunteer Fire Department, West Weathersfield Volunteer Fire Department	2014-2016	Town budget, dry hydrant grants (as available)	On-going

4.3 PLAN MAINTENANCE PROCESS

The future method for monitoring and evaluating the Weathersfield Local Hazard Mitigation Plan is discussed in detail here after agreement from appropriate parties occurred. A meeting will be held of the identified Hazard Mitigation Review Committee in partnership with the Weathersfield Selectboard on a biennial schedule based on plan adoption date. The purpose of these meetings will be to formally note status or progress in implementing strategies and evaluate current plan. An opportunity to provide public input will also be scheduled for all of the meetings. These efforts will be coordinated by the Assistant Town Clerk, Emergency Management Director and Selectboard representative. An effort will be made to involve representatives from the Village Trustees, Planning Commission, Fire Departments, Police Department, DPW, along with local volunteer boards and interested members of the public.

Additional outreach will continue to garner input from community members which have not been included in previous hazard mitigation planning efforts. The Town of Weathersfield and SWCRPC recognize the importance of public participation in hazard mitigation planning and will continue to provide opportunities for public comment and review during future plan revisions and updates.

The Hazard Mitigation Committee, with assistance from SWCRPC, will be responsible for monitoring this plan to ensure that progress is made on identified mitigation actions and that resources and funding opportunities are sought. To accomplish this, the Hazard Mitigation Committee has included the following action items to formalize the process for monitoring and evaluating the Hazard Mitigation Plan. This may include the following tasks following plan adoption:

- Coordinate responsible parties to review adopted plan action items and implementation process.
- Outline chronological tasks and timeline for implementing each action.
- Confer with SWCRPC to compile a comprehensive list of all available funding opportunities.
- Seek guidance on matching funding options with the Town's mitigation plan.
- Request assistance with grant applications where appropriate.

The Hazard Mitigation Committee, with assistance from SWCRPC, will be responsible for monitoring plan progress on a biennial basis and provide these updates to the Selectboard, Trustees and Planning Commission at a public meeting. These discussions will cover the progress and next steps for implementing the Hazard Mitigation Plan actions and projects. Monitoring may result in the addition of new projects, a revision of some strategies or a change in time frame or priorities as the cost/benefit of a project is further evaluated and funding becomes available. The Hazard Mitigation Committee will also be responsible for reviewing the Hazard Mitigation Plan during other planning activities to ensure proposed mitigation actions remain in line with current town goals, strategies, and policies.

The plan will be assessed by the Hazard Mitigation Committee for effectiveness based on the following:

- Whether progress had been made toward each goal with the implementation of at least one associated action item as identified in **Table 4,** and

- Percentage of strategies fully implemented compared to prior plan period following adoption of plan. Over the prior plan period, about **50%** of identified strategies were fully implemented.

Four years into the five year plan revision process, the SWCRPC and Local Emergency Planning Committee 3 (LEPC3) will assist the Weathersfield Hazard Mitigation Committee in revising and updating this plan to incorporate issues which have been identified during the ongoing mitigation meetings. The Weathersfield Local Hazard Mitigation Plan update process will begin in February 2022 assuming a February 2018 plan adoption, with the first public meeting of the Hazard Mitigation Committee. All public meetings will be warned following town protocols.

Following the meeting, a draft plan will be made available for public comment. The plan will be available on the SWCRPC website www.swcrpc.org, Weathersfield town website http://www.Weathersfieldvt.com/, and paper copies will be available at the town office. A second publicly warned meeting will be held no later than April 2022 in which any substantial revisions gathered during the public input period will be discussed. The SWCRPC will make all necessary edits to the plan and provide the Hazard Mitigation Committee with a revised version for final review. Subsequently, the plan will be sent to the Vermont State Hazard Mitigation Officer for referral to FEMA for Approval Pending Adoption (APA). Following APA, the town may then adopt the Weathersfield Local Hazard Mitigation Plan and forward a copy of the adoption resolution for FEMA to complete the plan approval and adoption process.

4.4 PLAN INTEGRATION PROCESS

It is the intent of the town, once this plan is formally approved by FEMA, to incorporate recommended mitigation strategies in the town's future planning activities and planning resources as indicated in **Table 7: Existing Weathersfield Resources for Mitigating Hazards** under 'Opportunities for Improving Effectiveness". The Weathersfield Hazard Mitigation Committee will encourage the assimilation of hazard mitigation strategies by providing guidance through cross-board communication in the development and implementation of updates to the Town Plan, Local Emergency Operations Plan, annual capital budget planning, road standards and maintenance programs, and in the update of town bylaws and ordinances. Additionally, SWCRPC will assist the Town of Weathersfield in incorporating hazard mitigation, in general, and these specific mitigation actions, in particular, into the next Town Plan rewrite.

It is anticipated that formal and effective communication on the implementation of these mitigation actions, as proposed under Plan Maintenance Process in Section 4.3, will not only help to ensure their completion but will serve to increase awareness of the importance of mitigation, as well as preparedness, in dealing with natural hazards.

5.0 RISK AND VULNERABILITY ASSESSMENT

The following assessment addresses the Town of Weathersfield and Village of Perkinsville's vulnerability to all of the hazards identified by the Hazard Mitigation Committee during the hazard analysis. The likelihood of occurrence and impact to the town & village were used to assess their vulnerability to each hazard.

5.1 HAZARD IDENTIFICATION AND ANALYSIS

A hazard vulnerability assessment began with an inventory of all possible hazards, both natural and man-made. The assessment considers the frequency of occurrence, the anticipated amount of warning time and potential impact to the community of each hazard to determine the relative risk each poses. The ranking methodology used for the analysis ranked the frequency of occurrence, warning time, and potential impact on a scale from 1 to 4, as detailed below the table. A new addition of *Probability of Occurrence over the Plan Cycle*, with a 1 to 4 scale, rounds out the final hazard score. The overall final hazard score provided is a sum of these scores. Due to limited personnel resources, the Hazard Mitigation Committee agreed to concentrate mitigation efforts for this plan on the most critical hazards which scored a seven, or greater, shown in bold in the Hazard Analysis below. This is a change from the process used in the previous plan. Some hazards were identified as low vulnerability and rare occurrence to the town during this update process. For this reason, and others discussed later in the plan, these hazards are not profiled in this local plan. The reader is directed to the State of Vermont Hazard Mitigation Plan for an overall hazard profile. The hazards, which scored below a seven, are considered rare, but may still occur. The results of this analysis is shown in **Table 2: Weathersfield Hazard Identification and Analysis** on the next page.

A discussion of each of these hazards is given in the proceeding subsections including regional and local data records with a narrative description and its historical impact on Weathersfield.

Table 2: Weathersfield and Perkinsville Hazard Identification and Analysis

Hazard	Frequency of Occurrence	Potential Impact	Warning Time	Hazard Score	Probability of Occurrence over Plan Cycle	Final Hazard Score
Flood/Fluvial Erosion	**4**	**3**	**1**	**8**	**3**	**11**
Severe Weather (Thunderstorm, Lightning, High Wind, Micro/Marco Bursts)	**4**	**2**	**3**	**9**	**3**	**12**
Hail Storms	2	1	3	6	2	8
Landslide	2	2	1	5	1	6
Hurricanes/Tropical Storms (to be profiled under Flood/Fluvial Erosion)	2	3	1	6	2	8
Wildfire	**3**	**1**	**4**	**8**	**3**	**11**
Extreme Temperatures	**3**	**2**	**1**	**6**	**3**	**9**
Structure Fire	**4**	**1**	**4**	**9**	**3**	**12**
Dam Failure	**3**	**1**	**4**	**8**	**2**	**10**
Ice Jams	1	1	1	3	2	5
Drought	**3**	**4**	**1**	**8**	**2**	**10**
Earthquake	2	1	4	7	1	8
Tornado	1	1	2	4	1	5
Severe Winter Weather	**3**	**2**	**1**	**6**	**3**	**9**
Traffic Incidents	**4**	**1**	**4**	**9**	**3**	**12**
Hazardous Materials	**3**	**4**	**4**	**11**	**2**	**13**

Spills/Incidents						

Methodology Used For Hazard Analysis

Frequency of Occurrence: Probability

1 = Unlikely	<1% probability of occurrence in the next 100 years (less than 1 occurrence in 100 years)
2 = Occasionally	1–10% probability of occurrence per year, or at least 1 chance in next 100 years (1 to 10 occurrences in 100 years)
3 = Likely	>10% but <100% probability per year (at least 1 chance in next 10 years)
4 = Highly Likely	100% probable in a year (an annual occurrence)

Probability of Occurrence over Plan Cycle (5 years)

1 = Unlikely
2 = Occasionally
3 = Likely

Warning Time: Amount of time generally given to alert people to hazard

1 = More than 12 hours
2 = 6–12 hours
3 = 3–6 hours
4 = None–Minimal

Potential Impact: Severity and extent of damage and disruption

1 = Negligible	Isolated occurrences of minor property damage, minor disruption of critical facilities and infrastructure, and potential for minor injuries
2 = Minor	Isolated occurrences of moderate to severe property damage, brief disruption of critical facilities and infrastructure, and potential for injuries
3 = Moderate	Severe property damage on a neighborhood scale, temporary shutdown of critical facilities, and/or injuries or fatalities
4 = Major	Severe property damage on a town-wide or regional scale, shutdown of critical facilities, and/or multiple injuries or fatalities

5.2 DETAILED HAZARD ANALYSIS

While the town may be affected by many hazards, the detailed hazard analysis and potential loss estimates listed in this plan have been identified as having a 'high' likelihood of occurrence within Weathersfield. While the Village of Perkinsville was incorporated in 1928 and currently includes 5 Trustees. However, aside from the village street lights, all maintenance and planning is done by the Town. There is no separate localized data for the Village and is incorporated throughout this plan in discussion with the town. All planning, budgeting, and maintenance is done by the Town of Weathersfield. There is no separate emergency management personnel for the village.

Note that the Town determines the extent of impact of natural hazards by its effect on the community and its residents with regard to their safety and the availability of town services, as well as property and infrastructure damage. The safety of residents is considered in terms of both the potential level of risk, such as death due to local home fires, as well as the number of residents affected, as with damage to town infrastructure or loss of town services from a flood event. It should also be noted that the town considers secondary hazards in its assessment of the primary hazard. For example, of the hazards assessed, those that were determined to be a "way of life" in rural Vermont, are typically considered less significant hazards, though they occur frequently such as Snow or Blizzard hazards. Small rural towns are accustomed to dealing with this type of weather and the town and its residents are well prepared to handle it. However, the secondary hazards from severe winter weather, such as structural fires from indoor heating methods and power outages from downed power lines, would have a significant impact on the town and be reflected in the Severe Winter Weather score.

The following hazards have been identified as having a 'high' total impact score based on the methodology above:

SCORE	HAZARD
13	Hazardous Materials
12	Traffic Incidents
12	Severe Weather
12	Structure Fire
11	Wildfire
11	Flash Flood / Inundation Flood / Fluvial Erosion
10	Dam Failure
10	Drought
9	Extreme Temperatures
9	Severe Winter Weather

In relation to hazards faced by the Town of Weathersfield, unless specifically noted, these hazards face all areas of the Town, including the incorporated Village of Perkinsville, to some degree. Where differences exist, they are noted. The term "Weathersfield" or "Town of

Weathersfield" should be taken to mean the entire town area, including the incorporated village.

The types of hazards having the greatest impact on a regional basis can be gleaned from **Table 3**, a listing of **FEMA Disaster Declarations for Windsor County** since 1990. It can be seen from this table that these are typically severe storms with heavy rains that cause flooding. Other hazards such as fires, ice jams and hazardous spills are more localized and characteristic of a town's topography, roadways, and land use. Weathersfield is a small rural town and much of the town-specific data for these localized hazards does not exist.

The town is currently investigating, and seeking additional training, on the municipal use of the VT-Alert system.

Previous occurrence hazard data specific to Weathersfield has been provided where available. However, where no town-specific data exists, the most relevant available data or information has been provided, such as county, regional or state data, or data from a bordering town. Weathersfield, together with SWCRPC, will strive to improve the recording and maintenance of local hazard data. The hazards not addressed in this plan update along with the justification for not including them are outlined below.

Hazard Not Profiled	**Justification**
Hail Storms	Not a common occurrence and not a concern.
Landslide	Do not occur regularly and no current areas of major concern.
Hurricanes/Tropical Storms	The Town is too far north from the Atlantic coast. Vermont does not have any coastline.
Ice Jams	Ice jams have historically not been a problem for the town or village. Not an area of concern.
Invasive Species	Considered rare. Town would rely on state to assist individuals and commercial ag producers in mitigation and response to invasive outbreak.
Earthquake	Incredibly low occurrence in town and village and low magnitude on the Richter Scale. Not a concern.
Tornado	Historically have not occurred in Town.

TABLE 3: Federal Disaster Declarations for Windsor County VT

Federal Disaster Declarations: Windsor County 1990 – 2017		
FEMA Disaster Number	**Date of Declaration**	**Description**
4330	August 16, 2017	Severe Storms and Flooding
4207	February 3, 2015	Severe Winter Storm
4140	August 2, 2013	Severe Storms and Flooding
4120	June 13, 2013	Severe Storms and Flooding
4066	June 22, 2012	Severe Storm, Tornado, and Flooding
4043	November 8, 2011	Severe Storms And Flooding
4022	September 1, 2011	Tropical Storm Irene
4001	July 8, 2011	Severe Storms And Flooding
1995	June 15, 2011	Severe Storms And Flooding
1951	December 22, 2010	Severe Storm
1790	September 12, 2008	Severe Storms and Flooding
1784	August 15, 2008	Severe Storms, Tornado, and Flooding
1778	July 15, 2008	Severe Storms and Flooding
1715	August 3, 2007	Severe Storms and Flooding
1698	May 4, 2007	Severe Storms and Flooding
1559	September 23, 2004	Severe Storms and Flooding
1488	September 12, 2003	Severe Storms and Flooding
1428	July 12, 2002	Severe Storms and Flooding
1358	January 18, 2001	Severe Winter Storm
1336	July 27, 2000	Severe Storms And Flooding
1307	November 10, 1999	Tropical Storm Floyd
1228	June 30, 1998	Severe Storms and Flooding
1184	July 25, 1997	Excessive Rainfall, High Winds, Flooding
1124	June 27, 1996	Flooding
1101	February 13, 1996	Storms and Flooding
1063	August 16, 1995	Heavy Rain, Flooding
990	May 12, 1993	Flooding, Heavy Rain, Snowmelt
938	March 18, 1992	Flooding, Heavy Rain, Ice Jams
875	July 25, 1990	Flooding, Severe Storm

I. Hazardous Materials Spills/Incidents (local concern)

There are 21 sites in Town that have sufficient types and/or quantities of hazardous materials that require reporting through 20 VSA, Chapter 1, and Public Law 99-499, 42 USC 9601 "Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III Emergency Planning and Community Right to Know".

Impact and Geographic Area of the Hazard

The largest quantities of hazardous materials used in Weathersfield are flammable or combustible liquids: heating fuels and automotive fuels. Other types of HazMat incidents that should be anticipated at vehicle and heating fuel dispensing depots include spills, leaks, fires and explosions. Propane, in high volumes, is stored and moved frequently through Ascutney, coming from Claremont and can be expected to be involved in a high percentage of hazardous materials incidents. Major incidents occurring at/on Downers, 5, I-91 and 131 could disrupt traffic and essential services until corrective action has been completed. These corridors are identified as the most probable locations of a major incident.

Several areas of town are vulnerable to traffic related hazardous material releases: Interstate 91, VT 106, Vt 5, and VT 131 the major hazardous material transportation corridor in town, runs adjacent to several public buildings, critical facilities, recreation and residential areas. Within the Village, significant densities of residential and some commercial structures are within close proximity to Downers and 131. A chemical spill on a majority of the mentioned roads could have an impact water quality. There are a number of critical facilities near these primary hazardous materials routes, including the:

- Elementary School
- Local EOC's
- Town Hall
- Fire Departments
- Town Garage

The Southern Windsor/Windham Counties Solid Waste District operates a household hazardous waste disposal program year round. Residents may bring household hazardous waste to designated drop off sites where the waste is disposed of properly minimizing environmental threats. The Town is a member of the District.

There are multiple sources of data available on hazardous materials spills both in Vermont and in the Town of Weathersfield; each provides a different picture of the frequency of hazardous materials spills. However, the Vermont Agency of Natural Resources Spills Database includes a more comprehensive listing of hazardous materials spills within the Town of Weathersfield since the year 2005.

Extent/Probability

With ever-increasing numbers of trucks on Vermont's highways a large hazardous material spill seems inevitable. Both the Weathersfield highway crew and the Vermont Agency of Transportation are committed to improving highway safety, but the task continues to be overwhelming.

Perhaps the greatest risk that hazardous materials pose to the town is their release into the surrounding environment in a traffic incident. Traffic accidents have historically been the culprit for some of the largest hazardous material releases in the area. The Ascutney and West Weathersfield Fire Departments regularly train on hazardous awareness and are qualified to isolate a scene after an occurrence.

While fewer than half of the spills recorded in Weathersfield have consisted of hundreds of gallons of hazardous materials, the potential for a major spill exists. Routes 5 and 131, along with I-91, pose constant threats to the Town and Village due to the volume of traffic they see, particularly during prime tourist seasons. These routes serve as the main thoroughfares for trucks and other motor vehicles transporting a wide-range of goods, including a wide-range of hazardous materials, within the confines of Weathersfield. A truck accident and a resulting hazardous material spill could be exceedingly disastrous for the town and its residents.

Past Occurrences

Ascutney and West Weathersfield Fire and Rescue Department members have received HazMat awareness and ops level training. The Vermont HazMat response team would assist in responding to a HazMat incident. Luckily, there has not been a recent major large-scale hazardous materials spill.

- Late 1970s a train derailment in nearby Claremont, NH caused evacuations in Weathersfield. The trains were carrying ammonium chloride and other unknown chemicals.
- Early 1980's propane tank crashed into a brook on Weathersfield Center Road. Prompted evacuation of several nearby residents and shut down the road.
- 1981 – two tractor trailers with unknown chemicals collided at Exit 8 on Interstate 91. Prompted evacuation zone.
- Late 1980's a fuel truck went off the road on Cady Hill and tipped over. Close to becoming a significant incident.
- 1994 – dynamite truck caught fire on Bowen Hill Road. Forced a shutdown of Interstate 91 and evacuation of the Bowen Hill residential area.
- Late 1990's several tire fires set by kids at a salvage yard location off of Route 5. Since then the site has been mitigated by clean-up and removal of hazardous materials.
- 2001 – box truck rolled over behind the elementary school with an unknown chemical. The truck caught fire and prompted a whole school evacuation and determined evacuation zone.
- 2002 – head-on collision with propane truck at intersection. Has occurred multiple times since – potential for large scale incident as a major travel corridor for fuel delivery distribution routes.

II. **Traffic Incidents (local concern)**

Highway accidents are common in Weathersfield. Table 4 below lists high crash locations (HCL) recorded by the Vermont Agency of Transportation for the years 2010-2014.

Table 4: High Crash Locations in Weathersfield

Location	Mile Marker	ADT	Cras	Fatalities	Injuries
US-5, VT-131, VT-12	5.100 - 5.200	12,475	22	0	14
I-91	46.800 - 47.100	10,200	12	0	2
I-91	47.800 - 48.100	10,200	9	0	0
I-91	52.000 - 52.300	13,000	10	0	2
I-91	53.000 - 53.300	1,300	9	0	0
VT 106	4.102 - 4.402	2,380	6	0	2
Weathersfield Center Rd	1.230 - 1.530	1,200	5	0	0
Weathersfield Center Rd	4.930 - 5.230	1,500	6	0	1

Source: High Crash Location Report - Sections and Intersections 2010-2014 (VTrans, November 2015)

Accidents on roadways can cause property damage, bodily injury, or death. Highway accidents can also result in short term disruption of important local and regional travel corridors. A significant threat to the town posed by transportation incidents is the potential for releasing hazardous materials into the surrounding area, as discussed above. Community training exercises, relying on the expertise of the Fire Departments, has been and will continue to be conducted.

Some neighboring communities have chosen to add rumble strips to a portion of well-traveled town roads. With the noise and vibrations that rumble strips produce when drivers stray from the traveled lane, they are an effective countermeasure for preventing roadway departure crashes. They are also helpful in alerting plow drivers to the lane limits when heavy snow, fog or dust conditions reduce the driver's visibility.

Extent/Probability

During 2015 and 2016 officials from the Vermont Agency of Transportation, emergency personnel, town staff and others walked high crash locations along Weathersfield Center Road, Route 131 and Route 5. Since then significant tree removal has occurred, along with repositioning of stop line, at Weathersfield Center Road/131 intersection to improve driver's line of sight.

Past Occurrences

According to the Vermont Crash Query Tool and a search over the last 5 year plan cycle, the locations of multiple traffic incidents noted within Weathersfield are: Exit 8 on Interstate I-91, Intersection of Weathersfield Center Road, Downers, Intersection of Cascade Falls and along Weathersfield Center Road.

III. Severe Weather (Thunderstorm, Lightning, High Wind, Microbursts)

Lightning is a giant spark of electricity in the atmosphere between clouds, the air, or the ground[4]. In the early stages of development, air acts as an insulator between the positive and negative charges in the cloud and between the cloud and the ground. As lightning can strike up to 50 miles away from a thunderstorm, can carry up to 100 million volts of electricity, and can reach temperatures upward of 50,000 degrees Fahrenheit it proves extremely hazardous to human life. Lightning can also damage infrastructure, plants, and property, and can start forest fires. Lightning is the most unpredictable weather-related event. Although there are no historical records on the impact of this hazard, a combination of a severe lighting storm during a severe drought or dry spring conditions can ignite wildfires which can be devastating. According to the National Weather Service, lightning is the first thunderstorm hazard to arrive and the last to leave.

High wind events are infrequent events in the Town of Weathersfield; therefore, there is an acknowledged lack of previous occurrence data. That said, it is important to note that the entire town is equally at risk from the threat. High wind events can down numerous trees within minutes. Resulting in falling limbs and/or trees with vulnerabilities to power loss, telecommunications loss, church, structural damage, crop damage, residential and seasonal homes, public buildings, and utilities.

[4] NOAA.gov

High winds can result from hurricanes, tropical storms, summer thunderstorms, and tornadoes. The 2013 Vermont Hazard Mitigation Plan does not delineate high winds as a separate hazard, the plan states *'high winds pose a threat to the safety of Vermont's citizens and property.'* The National Weather Service issues wind advisories when sustained winds of 31-39 miles per hour are reached for at least one hour or gust between 46-57 miles per hour. In Vermont, high winds are most often seen accompanying severe thunderstorms. In fact, straight-line winds are often responsible for most of the wind damage associated with a thunderstorm. These winds are often confused with tornadoes because of similar damage and wind speeds. The ***Beaufort Wind Scale*** **shown below** can be used to predict damage based upon wind speeds.

In Weathersfield, the most common issues associated with high winds, during the winter, are the combination of heavy snowfall and high wind. These two circumstances combine to create widespread drifting along most north/south roads in town. Specifically mentioned were Skyline Drive, Little Canada, Reservoir Road, Gravlin Road, Center Road and West Camp Hill.

Beaufort Scale

Beaufort number	Wind Speed (mph)	Seaman's term		Effects on Land
0	Under 1	Calm		Calm; smoke rises vertically.
1	1-3	Light Air		Smoke drift indicates wind direction; vanes do not move.
2	4-7	Light Breeze		Wind felt on face; leaves rustle; vanes begin to move.
3	8-12	Gentle Breeze		Leaves, small twigs in constant motion; light flags extended.
4	13-18	Moderate Breeze		Dust, leaves and loose paper raised up; small branches move.
5	19-24	Fresh Breeze		Small trees begin to sway.
6	25-31	Strong Breeze		Large branches of trees in motion; whistling heard in wires.
7	32-38	Moderate Gale		Whole trees in motion; resistance felt in walking against the wind.
8	39-46	Fresh Gale		Twigs and small branches broken off trees.
9	47-54	Strong Gale		Slight structural damage occurs; slate blown from roofs.
10	55-63	Whole Gale		Seldom experienced on land; trees broken; structural damage occurs.
11	64-72	Storm		Very rarely experienced on land; usually with widespread damage.
12	73 or higher	Hurricane Force		Violence and destruction.

Damage from summer thunderstorms in Weathersfield has been historically limited in both scope and cost. ***Thunderstorms*** are caused by an updraft, which occurs when warm, moist air rises vertically into the atmosphere. The updraft creates a cumulus cloud, which will eventually be the thunderstorm cloud. Severe thunderstorm winds are brief in duration and bring gust in excess of 50 mph. Severe thunderstorms are capable of producing high winds, large hail, lightning, flooding, rains, and tornadoes.

Damaging wind from thunderstorms is much more common than damage from tornadoes. In fact, many confuse damage produced by "straight-line" winds and often erroneously attribute it to tornadoes. The source for damaging winds is well understood and it begins with the downdraft. Downbursts are defined as strong winds produced by a downdraft over a horizontal area up to 6 miles (10 kilometers). When the downdraft hits the ground, the air is forced to spread outwards in all directions, causing extremely powerful and damaging winds to fan out in all directions. Downbursts are further subdivided into microbursts and macrobursts.

Microbursts are downdrafts from thunderstorm that may reach speeds in excess of 80 mph. (State of Vermont Hazard Mitigation Plan 2013). Microbursts last for about five minutes. Because of their extremely fast winds, incredible wind shear and relatively small size, microbursts prove hazardous to aircraft and have been the cause of tragic airplane crashes[5].

Conversely, downbursts that span greater than 2.5 miles in radius are called *macrobursts.* Macrobursts can last nearly half an hour and produce wind speeds in excess of 130 mph. According to NOAA, macrobursts can produce wind damage comparable to and EF-3 tornado.

Impact and Geographic Area of the Hazard

The Town has experienced a variety of strong thunderstorm systems that develop that track from the West and from Canada. Typically, high winds accompany strong thunderstorms. Lightning is a typical accompanying hazard. Micro bursts with high wind speeds and high precipitation accumulations over brief periods often down trees and branches and power lines and can overwhelm local drainage networks for brief periods. There have been rare instances where lightning has caused barn fires and grass fires during dry periods. Power outages may occur resulting in significant loss of business as well as threatening public safety. Cleaning up debris following high wind events can be costly depending on the severity of the event.

There are no loss estimates for lightning because it is extremely difficult to predict where the event will occur and the type of associated structural damage. Damages could come in the form of destroyed electrical appliances, structure fires, or wildland fires. Death or serious injury could occur to individuals exposed to lightning. Private properties in nearby communities, such as Chester, have experienced residential lightning strikes. High elevations and areas around bodies of water such as lakes and ponds are more susceptible. Weathersfield's road crew is equipped with associated debris removal equipment.

[5] FAA: http://lessonslearned.faa.gov/ll_main.cfm?TabID=1&LLID=32&LLTypeID=2

Power failure is a common secondary hazard caused by severe weather and has an annual frequency within Weathersfield. Power outages can occur on a town wide scale and are typically the result of power lines damaged by high winds or heavy snow / ice storms but may also result from disruptions in the New England or national power grid as indicated by the widespread outages in 2003. Dead or dying trees in proximity to power lines pose a particular threat for power failure as these trees are often brought down by triggering events such as winter storms.

Potential loss estimates are difficult to predict for power failures as they are typically isolated in geographic area and short in duration. Therefore, power failures often have only minimal impact to people and property. Power failures usually result in minor inconveniences to residents however, longer duration events may result in the loss of perishable items and business losses. Power outages in winter months may result in the loss of home heating, ruptured water pipes and the resulting structural damage. The loss of home heating may be a contributing factor to the increase in structure fires during the winter months. Data on historical occurrences, extent of outage and associated costs is not available.

The Town has not acquired back-up power generation, which was noted as a problem following TS Irene, for the municipal office building or the town highway garage and will continue to pursue back-up power generation for these two important buildings/functions. The two local fire departments have emergency generators and can continue critical operations during times of power failure.

Extent / Probability

There have been 137 severe thunderstorm events in the County since 1980 according to the National Climatic Data Center. Of those, 83 are classified as severe thunderstorms with wind speeds of 50 kts or greater. Severe thunderstorms can cause power outages, property damage, transportation interruptions, affect businesses and can cause loss of life. Micro bursts with high wind speeds and high precipitation accumulations over brief periods often down trees and branches and power lines and can overwhelm local drainage networks for brief periods. Micro burst have occurred almost annually in the past 10 years according to project participants.

Lightning strikes in Windsor County average between 4-6 strikes per square mile each year based on data collected by NASA satellites between 1995 and 2002. There is very little data on lightning strikes in Town. Damages from lightning could come in the form of destroyed electrical appliances, structure fires, or wildland fires. Private property in nearby Chester, has recently experienced lightning strikes. Higher elevations and lake shore areas are more susceptible. Lightning can also damage infrastructure, plants, and property, and can start forest fires. Lightning is the most unpredictable weather-related event. According to the National Weather Service, lightning is the first thunderstorm hazard to arrive and the last to leave.

Past Occurrences

1998 – High Wind Event Thrasher Road approximately 50-100 acres of uprooted trees with accompanied loss of power for 1 week.

2017 – High wind event with multi-day power failure.

Lightning strikes in Windsor County average between 4-6 strikes per square mile each year based on data collected by NASA satellites between 1995 and 2002. Although there is very little data on lightning strikes in Town, there have been rare instances where lightning has caused barn fires and grass fires during dry periods.

IV. Structure Fire

Structure fires were specifically identified as having one of the highest possible risk to the town, with a Score of 12, due to their high probability of occurrence, short warning time and potential for catastrophic loss. Structure fires are common throughout Vermont during the winter months as residents heat their homes with wood or wood pellet burning stoves. With little or no warning, these fires can affect a single residential structure or spread to other homes, businesses or apartment complexes and can result in loss of property and life.

In 2016 the Ascutney and West Weathersfield Volunteer Fire Departments responded to 439 calls, 413 calls in 2015 and 357calls in 2014. Both Departments have noted a steady increase in motor vehicle and fire related incidents each year.

In Vermont, during 2013, there were 45,689 emergency incidents to which fire departments responded. National Fire Protection Association (NFPA) estimates show, while residential structure fires account for only 25 percent of fires nationwide, they account for a disproportionate share of losses: 83 percent of fire deaths, 77 percent of fire injuries, and 64 percent of direct dollar losses.

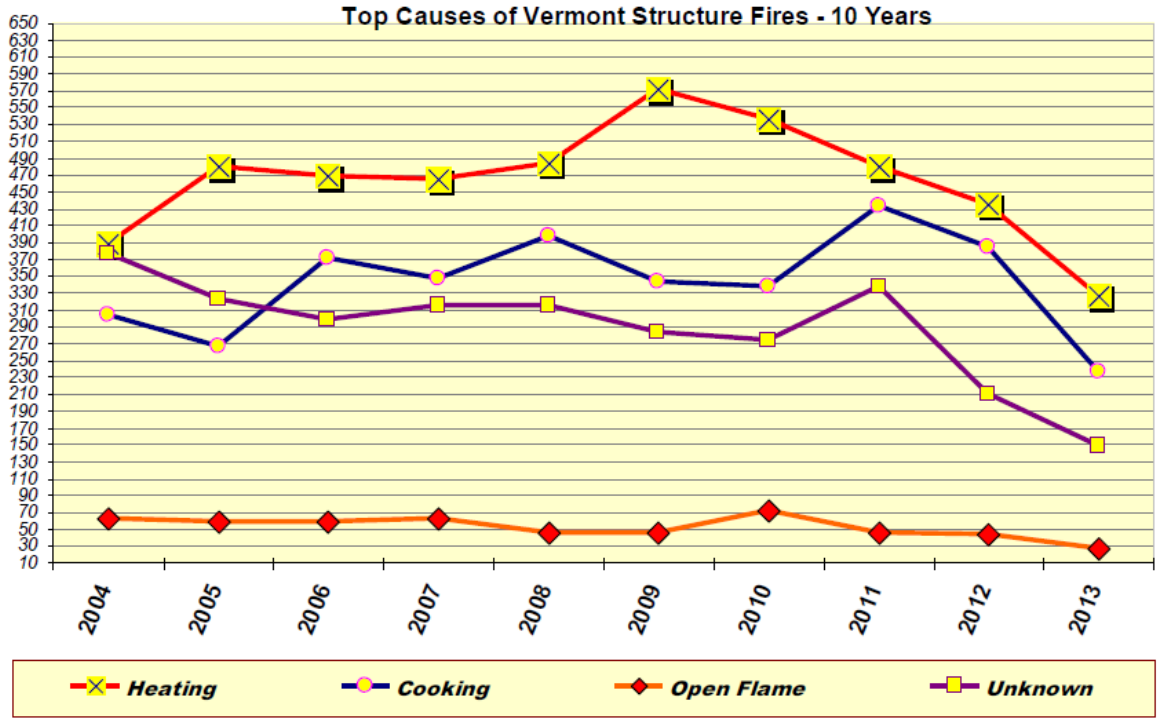
According to the 2013 Vermont Annual Fire Marshal Report, the fire death rate in Vermont had improved significantly over the past few years, however, it began to increase again in 2014 and has been disproportionately high since then, based on population. This is due, in part, to the large percentage of residents that live in small rural communities where emergency response time is delayed. Other characteristics of Vermont that lend toward greater loss from fire compared to other states are-

- 2nd highest percent of housing built before 1940
- 7th coldest state

- 2nd oldest median age where elderly are at higher risk - over the last 4 years, 68% of Vermont's fire deaths have been seniors over the age of 60
- 1st for per capita use of wood for heating

In 2013, Vermont reported a total of 2,739 incidences relating to structure and wildland (forest and brush) fires, 77% of which were structural fires. The leading cause of structure fires in Vermont are the result of heating incidents (39%) followed closely by cooking incidents (28%). Windsor County reported a total of 315 related fires, 73% of which were structure fires. Fires can be caused by improperly disposing of ashes with live coals from wood stoves or by faulty electrical wiring. The most significant common factor in fire fatalities in Vermont continues to be the absence of a functioning smoke detector in the sleeping area of residential structures.

The chart below depicts the top causes of Vermont Structure Fires over a 10 year period, which clearly shows Vermont heating is the number one cause of structure fires followed by cooking. [6]



2013 Annual Fire Marshal Report

Impact and Geographic Area of the Hazard

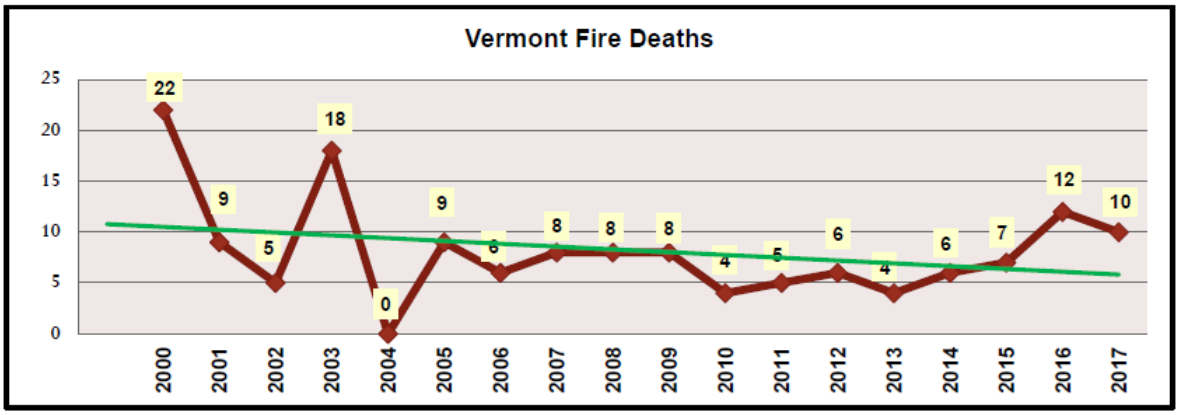
Structure fires can occur anywhere. There are wood frame buildings susceptible to structure fire scattered throughout the Town. Public buildings in town include the town

[6] 2013 Vermont Fire Marshal Annual Report

offices, library, post offices, school and fire department. Most buildings were built before modern fire-resistant construction materials and methods were developed. Most of the new residences have been built to state fire code standards. The risk of general property damage due to structure fire is highest at agricultural businesses with farm buildings often built close by each other and susceptible to fire passing from one structure to another.

Extent/Probability

Structure fires are reported in the annual *Vermont State Fire Marshal Report* which provides yearly fire statistics from reporting departments. In the 2017 State Report, there were 40,764 emergency incidents statewide of which 2,458 were fire incidents. Ascutney and West Weathersfield Volunteer Fire Departments reported a total of 36 fire incidents in 2017. Structure fires range from residential smoke alarms, chimney fires from wood stoves, garage fires, and grease fires in residential kitchens and full on structure fires. Windsor County reported a total of 328 related fires in 2015[7] - 239 structure fires, (3rd highest County in Vermont), and 89 wildland fires (2nd highest County in Vermont). In 2017, A total of 10 civilian fatalities were reported due to fire in Vermont, All fatal incidences except one were structural.[8] According to the 2017 data compiled by the National Fire Incident Reporting System (NFIRS) for Vermont, fire departments reported a total of 2,458 incidences relating to structure fires with an estimated dollar loss of $21,029,493, or $8,555 per incident. Over the past five years the highest average annual dollar loss per structure fire in Vermont was $14,400.



2017 Annual Fire Marshal Report- total state data

TABLE 5: Annual NIFRS Data for Vermont

[7] County data was not reported in 2017.
[8] 2015 Vermont Fire Marshal Annual Report

Year	Fire Departments Reporting	Fires Reported	Estimated Dollar Loss by Fire Departments	Insurance Companies Reporting/ Total	Fire Claims Reported	Reported Dollar Loss by Insurance Companies
2012	194	2,233	$ 17,840,192	860	839	44,510,095
2013	194	2,116	$ 26,485,951	615	878	50,911,724
2014	228	2,114	$ 30,412,139	615	1,130	50,589,356
2015	230	2,198	$ 25,112,224	606	939	45,574,673
2016	228	3,138	$16,919,906	**644**	**706**	**57,098,292**
2017	**172**	**2,458**	**$ 21,029,493**	Data not currently available		

2017 Annual Fire Marshal Report – NFIRS data for Vermont

Table 6 shows historical trends for Windsor County Fire Response Statistics. The paragraph below discusses local fire statistics, both responses and incidents. Note that mutual aid is included under total responses which is significantly higher than the number of fire incidents occurring in Weathersfield.

TABLE 6: 'Annual Report of the State Fire Marshal' for Windsor County[9]

YEAR	Windsor County		
	Structure Fire Responses	Wildland Fire Responses	Total
2009	177	68	245
2010	181	70	251
2011	181	70	251
2012	201	101	302
2013	229	86	315
2014	-	-	-
2015	239	89	328

Weathersfield residents remain particularly vulnerable to structural fires, which are more likely to cause physical harm and damage to homes, because many of the residents heat their homes using wood or pellet burning stoves and other riskier means. More rural residents are at additional risk due to a higher fire response time. Enhanced efforts to inform residents of safe home heating and installation of smoke detectors is the most effective way to help mitigate this threat.

[9] Vermont 2015 Annual Report of the State Fire Marshal

There are a number of recognized fire protection problems for the community, including the following: development in areas distant from the center of the Town, development on class 3 and 4 roads, distance from water sources in the Town (rivers, hydrants and/or fire ponds), inaccessibility to fires that may spread from the forest, and inadequate snow removal (for building access). Roughly 5 dry hydrants have been installed in strategic locations within the past several years. In addition, 3-4 dry hydrants have recently undergone major repair and upgrade. Some recent work has been done to discuss dry hydrant locations with perspective builders and residents with pond access. There are additional areas that could potentially be utilized to this end, and a comprehensive survey may prove an effective means of determining this if more sites are needed. At present, though, the town continues to work with property owners for potential installation of new dry hydrants at strategic locations based on a mapping exercise in conjunction with SWCRPC. **Map 8** shows the current dry hydrant locations, with a 1 mile buffer shown around each hydrant, and paints a clear picture of underserved locations.

Past Occurrences

2015 – Yankee Motel fire

2015 – Green Dragon Farm house fire

2016 – Moore's farm house fire

V. **Wildfire**

Wildland Fires**,** which include forest, brush, crop or grassland fires, are relatively uncommon events in the State of Vermont, particularly large wildfire events. A wildfire is defined as *'An unplanned, unwanted wildland fire including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to put the fire out.'* [10]

The State Hazard Mitigation Plan's analysis of wildfire threat states that *"Wildfire conditions in Vermont are typically at their worst either in spring when dead grass and fallen leaves from the previous year are dry and new leaves and grass have not come out yet, or in late summer and early fall when that year's growth is dry".*

In addition to precipitation, a particular town's vulnerability to large wildfires is directly related to the proportion and continuity of acreage that is forested, pasture and cropland. In Weathersfield, this represents 80% of total town land cover. Wildfire typically comes in the form of grass fires. Forest fires are rare however the fuel potential for large fires exist. Grass fires occur in spring and early summer as fields are cleared of

[10] 2013 Vermont Fire Marshal Annual Report

fall and winter debris. It can be anticipated that small brush and wildfires will continue to occur throughout Weathersfield at a similar rate in coming years, however, given the current land cover and correct seasonal conditions the threat of a large wildfire remains.

Wildland fire calls in town range from less than 1 acre to 10 acres in size. Agriculture emergencies, such as barn fires, pose a unique risk for first responders. Animal behavior and barn fire logistics must be considered during response. Many agricultural buildings store a variety of hazardous materials. Structures that are relatively close raise the risk for multiple structure fire.

Impact and Geographic Area of the Hazard

An assessment of town structures vulnerable to structural fire would be based on age and proximate location to other high risk structures. Community assets are not particularly vulnerable to wildfires as they are typically located in town centers and away from large tracts of forested and vegetative land. However, with expectations of more frequent drought conditions and increased wildfire risk, the town will plan to use available resources, like Firewise programs, to educate community on how to minimize the risk of brush and wildfires and to issue dry weather alerts when the risk wildfire is high.

Firewise, a community outreach program through the National Fire Protection Association provides guidance, resources, and training on protecting homes and property from wildfire hazards. The Firewise website (www.firewise.org) is an excellent resource for literature and community mitigation actions. Also, the Annual Fire Marshal Report offers informational resources for municipalities and property owners on fire safety.

Extent / Probability

Throughout Weathersfield, there are large tracks of forested land that could be at risk during sustained dry periods. The entire Town has minimal wildfire protection due to the on-call basis of the Fire Department. The potential for wildfire increases with the increase of fuel loads. Structures in forested areas without adequate fire breaks are difficult to access due to their remote nature, and are more susceptible than others. A wildfire complex similar to what occurs in Florida, Texas, and western states during dry periods, has not occurred in the Town.

Fire assistance is provided to protect people, property, and natural resources from uncontrolled wildfire events by working with town Forest Fire Wardens, regional partners, and federal agencies. A report from the *2015 Spring Fire Season Summary*

published by the *Vermont Department of Forests, Parks, and Recreation* provided Fire Statistics below for the State of Vermont which indicates that the average number of acres burned per wildfire incident over a 10 year period (2005-2014) was 2.2 acres. Using this average to estimate the extent of wildfire hazard for Weathersfield would give an annual loss of about 11 acres. This can be compared with large fire activity in the spring of 2015 including a 26-acre forest fire in Andover caused by a re-kindled brush fire; a 47-acre forest fire in Brattleboro, sparked by a downed powerline; and a 137-acre forest fire in Norwich, also caused by a downed powerline. These incidents occurred during a moderately dry spring for Windsor County when red flag warnings were issued by the National Weather Service.

Fire Statistics

	2015 Fire Statistics		10-Year Average 2005-2014	
Official reports – reports have been verified by warden or FPR				
	#Fires	#Acres	#Fires	#Acres
March	2	1	9	29
April	38	50	62	142
May	51	284	19	30
Year to date	91	335	90	201

2015 Spring Fire Season Summary/Vermont Dept. of Forests, Parks and Recreation.

Although wildfire incidents in Weathersfield have been low in recent years, the probability of occurrence remains high, particularly with the projection of more extreme temperatures due to climate change. With expectations of more frequent drought conditions and increased wildfire risk, the town will plan to use available resources to educate community on how to minimize the risk of brush and wildfires and to issue dry weather alerts when the risk of wild fire is high. While the state puts out fire danger information in a daily report, the local fire danger warning can still be decided at the local level. In the past, like the 2016 summer season, the town has issued a no burn policy. In addition, penalties can now be issued for the time and materials used to fight a burn that was started by unpermitted burns. No wildland fires have been reported in recent years in Weathersfield.

Past Occurrences

1989 – 2 day burn Army Corps of Engineers property

Early 2000's – 106/Reservoir Road 7 acre brush fire

2012 & 2013 - 10 acre Gravelin Road brush fire

2013 - Wilgus State park– repetitive bank fire due to arson

VI. Flood/Fluvial Erosion

Tropical Storm Irene, in late August, 2011 brought much devastation to the Town of Weathersfield. Several roads were completely washed away, leaving a river bed instead of a road. Bridges were destroyed and culverts were washed downstream. Large tracts of land were washed away and approximately seven structures (including bridges and culverts) were damaged and needed full or substantial replacement. Several residents in the western part of town were left homeless. The flood also had significant effects on streams, ponds and wetlands with impacts on their very character and the natural values and services these waters provide the people of the Town and environment. Flood waters realigned stream channels laterally, streambeds were downgraded as well as aggregated, and large quantities of wood (whole trees, limbs, etc.) were introduced as a result of streambank erosion of adjacent riparian woodlands.

The total road and bridge damage sustained by the Town of Weathersfield is estimated at over half a million dollars. Many of the Town's roads were impacted by the storm and required repairs. In addition, numerous culverts required either replacement or repair.

Flash floods are a significant hazard to the Town of Weathersfield and occur yearly. The town is susceptible to both flash flooding, frequently caused by summer thunderstorms and spring snow runoff, and fluvial erosion hazard flooding. Rivers and streams produce fluvial erosion, in which weathered sediment is picked up for transport, and moved to new locations. It can range from slight bank erosion to major changes in river channel location. Flash flooding typically occurs during summer when a large thunderstorm or a series of rain storms result in high volumes of rain over a short period of time. Higher-elevation drainage areas and streams are particularly susceptible to flash floods. The National Weather Service describes a flash flood as: *Flooding that begins within 6 hours, and often within 3 hours, of the heavy rainfall (or other cause)*[11].

Fluvial Erosion is erosion caused by rivers and streams, and can range from gradual bank erosion to catastrophic changes in river channel location and dimension during high flow conditions. While some flood losses are caused by inundation (i.e. waters rise, fill, and damage low-lying structures), most flood losses in Vermont are caused by "fluvial erosion". Reasons are Vermont's geography, extreme climate, deep snows, destructive

[11] National Weather Service Definitions

ice jams and intense rainstorms. Centers of commerce in villages and towns became concentrated along river banks, forests were cleared, and many rivers moved or channelized to accommodate this development rendering them unstable and prone to fluvial erosion. [12]

Weathersfield, like many other towns within the region, is at risk for fluvial erosion hazard flooding events due to its steep slope headwaters and narrow valleys. Extent data in the form of acres/feet from the most severe historical flooding event is unavailable. Fluvial erosion is often associated with flash flooding and can result in catastrophic damage to property and infrastructure when a rapid adjustment of a stream channel occurs. Erosion is exacerbated by failure of infrastructure including roads, culverts, bridges and dams. Secondary hazard as a result of flooding can be costed by the capital required to repair and replace these structures, however, these reparation costs from past fluvial erosion events are not specifically identified as separate from the flooding event that caused it. Severe damage left from fluvial erosion caused by Tropical Storm Irene has widened river beds and stripped river banks bare of natural vegetation making them more susceptible to additional erosion and landslides. While flood losses due occur from inundation, most flood losses in Vermont are caused by fluvial erosion. Reasons are Vermont's geography, extreme climate, deep snows, ice jams and intense rainstorms.

The town has three watersheds that function independently of one another (Mill Brook – Connecticut River in the north, the Black River in the west, and the Little Sugar River – Connecticut River in the east). This reduces the chances that a singular storm event will impact the entire town at the same time and/or scale. Stream geomorphic assessments for the major watershed in Weathersfield, the Black River, has been completed with a 2016 update to include smaller tributaries that drain directly to the Connecticut River. These tributaries include Mill Brook in Weathersfield, Blood Brook, Spencer Brook and some unnamed tributaries[13]. River Corridor Protection Areas have been mapped and are available online at the Vermont Agency of Natural Resources.[14] Designated River Corridor Protection Areas delineate those areas where development is subject to erosion hazard risks and are also referred to as Fluvial Erosion Hazard (FEH) Zones. The Black River is a scenic and somewhat shallow river that flows across a rock and boulder-strewn channel into Weathersfield from Cavendish. The North Branch has a particularly wide floodway and associated floodplain. Like the Black River and the North Branch, Branch Brook is fairly shallow and strewn with rocks and boulders.

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[12] Municipal Guide to Fluvial Erosion Hazard Mitigation, Vermont Agency of Natural Resources

[13] Black River Watershed Updated Water Quality/Aquatic Habitat Assessment Report Including direct tribs to Connecticut River Mill Brook, Blood Brook, Spencer Brook
http://dec.vermont.gov/sites/dec/files/documents/wsmd_mapp_basin10_black_river_assessment_report_2016.pdf

[14] The ANR FLOOD READY link below shows river corridors overlays comparable to FEH zones

http://maps.vermont.gov/ANR/Html5Viewer/Index.html?configBase=http://maps.vermont.gov/Geocortex/Essentials/ANR/REST/sites/Focus_on_Floods/viewers/FocusOnFloodsHTML/virtualdirectory/Resources/Config/Default

The Black River Corridor Plan identifies erosion hazard areas and potential ways to address erosion threats to property. Future development must be directed away from locations that are prone to damages from both inundation and erosion.

Some options for mitigating fluvial erosion hazards include:

- Environmentally-friendly river restoration techniques
- Natural channel design
- Remove or relocate threatened structures
- Erosion and landslide hazard maps
- Limiting new investments in river corridors
- Meet with State Geologist to inspect landslide activity and receive structural appraisal of landslide damaged embankments
- Fluvial erosion/river corridor bylaws

Flood hazard areas are depicted on **Map 5**. These areas serve as flood storage areas during periods of heavy rain and spring snow melt, and may serve other important functions as agricultural fields, wildlife habitat and wildlife travel corridors. These areas also present limitations to development due to the hazards of flooding and related damage.

Currently, Weathersfield is a participatory, non-sanctioned member of the National Flood Insurance Program and regulates development in the floodplain through the enforcement of the Weathersfield Flood Hazard Area Regulations. Residents or business owners with buildings in or near the floodplain may purchase flood insurance through the National Flood Insurance Program (NFIP). Any development in flood hazard areas requires local flood hazard review. These special flood hazard areas are primarily subject to inundation flooding. Conservation of the broad floodplains along the Connecticut River, including extensive farmland north and south of downtown, will maintain flood storage capacity, which will help mitigate flooding in the lower elevations of the downtown area. Flood Hazard Area Regulations should be reviewed and updated to conform to new state and federal laws, and model regulations as they become available.

Owners with property in a special flood hazard area should be aware that, as a result of the 2012 Biggert-Waters Flood Insurance Reform Act, subsidized flood insurance rates are being phased out. Anyone purchasing a new flood insurance policy will need an Elevation Certificate (EC). Owners of older structures with Lowest Floor Elevations (including basement) below the Base Flood Elevation (BFE) may face very high flood insurance rates unless they adapt the structure to make it safer from flood damage.

Currently there are 32 buildings within the special flood hazard area in Town, and of those 5 buildings have flood insurance.

Extent / Probability

The 2012 SWCRPC Multi-Jurisdictional All Hazard Mitigation Plan provides a detailed history of past flooding. **Table 7** below shows FEMA Disaster Declarations for Windsor County from 1970-2016. The table shows that, of the 36 disaster declarations listed for Windsor County, 30 were related to flooding. It is noted that not all of these events had an impact on Weathersfield and some less severely than on other towns.

Table 7 - Federal Disaster Declarations: Windsor County 1970 - 2017		
FEMA Disaster Number	**Date of Incident**	**Description**
4330	June 29 – July 1, 2017	Severe Storms and Flooding
4207	February 3, 2015	Severe Winter Storms
4163	January 29, 2014	Severe Winter Storms
4140	August 2, 2013	Severe Storms and Flooding
4120	June 13, 2013	Severe Storms and Flooding
4066	June 22, 2012	Severe Storm, Tornado, and Flooding
4043	November 8, 2011	Severe Storms And Flooding
4022	September 1, 2011	Tropical Storm Irene
4001	July 8, 2011	Severe Storms And Flooding
1995	June 15, 2011	Severe Storms And Flooding
1951	December 22, 2010	Severe Storm
1816	January 14, 2009	Severe Winter Storm
1790	September 12, 2008	Severe Storms and Flooding
1784	August 15, 2008	Severe Storms, Tornado, and Flooding
1778	July 15, 2008	Severe Storms and Flooding
1715	August 3, 2007	Severe Storms and Flooding
1698	May 4, 2007	Severe Storms and Flooding
1559	September 23, 2004	Severe Storms and Flooding
1488	September 12, 2003	Severe Storms and Flooding
1428	July 12, 2002	Severe Storms and Flooding
1358	January 18, 2001	Severe Winter Storm
1336	July 27, 2000	Severe Storms And Flooding
1307	November 10, 1999	Tropical Storm Floyd
1228	June 30, 1998	Severe Storms and Flooding
1201	January 15, 1998	Ice Storms
1184	July 25, 1997	Excessive Rainfall, High Winds, Flooding
1124	June 27, 1996	Flooding
1101	February 13, 1996	Storms and Flooding
1063	August 16, 1995	Heavy Rain, Flooding

990	May 12, 1993	Flooding, Heavy Rain, Snowmelt
938	March 18, 1992	Flooding, Heavy Rain, Ice Jams
875	July 25, 1990	Flooding, Severe Storm
840	September 11, 1989	Severe Storms, Flooding
712	June 18, 1984	Severe Storms, Flooding
518	August 15, 1976	Severe Storms, High Winds, Flooding
397	July 6, 1973	Severe Storms, Flooding, Landslides

Local roads north of VT Route 131 are vulnerable to Mt Ascutney's influence on weather and storm water runoff. The Town needs to expand drainage capacities of culverts, bridges, and ditching to accommodate increasingly high storm water runoff rates.

The failure of bridges and culverts in Weathersfield, as well as other towns throughout southern Vermont, during Tropical Storm Irene, was primarily due to their being undersized and incapable of handling the 100-year flood frequency stream flow event. Undersized culverts restrict stream flow, particularly during high flow events, resulting in increased streambed scour and bank erosion both up and downstream of the crossing. Blocked culverts compromise the structural integrity and safety of the road crossing and may result in damage to adjacent properties. Vermont State has begun to focus its efforts on "hydrologically-connected" road segments to improve overall flood resiliency of roadways and will be adopting new *Municipal Roads General Permit (MRGP) Standards* in 2018 for these segments.

Tropical Storm Irene demonstrated the importance of not allowing residential and commercial structures in floodplains and river corridors. These areas were inundated during the flood and were depositional sites for sediments and debris transported downstream during the event. While agricultural uses were negatively affected by flooding, losses were temporary and relatively less costly than if floodplain development had been permitted.[15] Fluvial erosion extent data in the form of acres/feet from the most severe historical flooding event is unavailable.

Past Occurrences

One of the worst widespread flood disasters recorded in the State of Vermont that occurred in November, 1927, dropped nearly 10 inches of rain on frozen ground causing extensive damage statewide. Relatively recent widespread flooding occurred in June, 1973, when up to 6 inches of rain fell resulting in $64 million in damage. However, over the past several years, flooding has occurred in limited areas from intense, scattered storm events and ground saturation from persistent and excessive rainfall. This

[15] 2014 Weathersfield Town Plan

characterized the pattern of flooding in 2011 in Vermont during which there were four regional disaster declarations issued due to flooding and fluvial erosion. The fourth was Tropical Storm Irene in late August when up to 11 inches of rain fell in some areas of the State and up to 8 inches in the Weathersfield area. According to the *2013 State of Vermont Hazard Mitigation Plan*, studies show that areas of the State can expect a greater frequency of flooding with an increase in extreme rainfall amounts.[16]

Significant damage occurred to Routes 131 and 106 in both Weathersfield and Cavendish during Tropical Storm Irene. During Tropical Storm Irene, the North Branch caused substantial damage at the bridge on Ascutney Basin Road and Branch Brook caused significant damage to Branch Brook Road and VT Route 131.

A significant rain event in July 2012 caused widespread erosion along areas of 106.

A significant rain event in July 2017 caused widespread erosion and washouts along town roads.

These recent situations highlight the need for additional investigation, contingency planning and alternative means of access to areas that may be cut off from emergency services in a future flood event.

VII. Dam Failure

Dams are manmade structures built to impound water. Dams are built for many purposes including water storage for potable water supply, livestock water supply, irrigation, or fire suppression. Dams can also be built for recreation, flood control and hydroelectric power. Dams may also be multifunction, serving two or more of these purposes. Dam failure is when the structure is breeched and potentially can cause inundation of downstream areas and property. Dam failures can occur at any time in a dam's life; however, failures are most common when water storage for the dam is at or near design capacity. At high water levels, the water force on the dam is higher and several of the most common failure modes are more likely to occur. Correspondingly, for any dam, the probability of failure is much lower when water levels are substantially below the design capacity for the reservoir.

In Weathersfield, there are 5 dams in the area identified on **Map 4: Water and Elevation Resources.** However, historically, it has been the unmarked beaver dams and a number of private ponds with vulnerable dams that have been a cause of flooding in the past. While there is no historical data available on the extent or frequency of private dam or beaver dam failure in Weathersfield, dam failure typically occurs with high rain events

[16] 2013 State of Vermont Hazard Mitigation Plan, p 4-9

which tend to cause general flooding. Therefore, the impact from dam failure alone is difficult to determine but can be assumed to contribute to flood damage to roadways and road infrastructure. Vulnerable community assets to dam failure are the same as with flooding as may be residential structures located near high risk dams. The town has no jurisdiction with private ponds and dams, but will address this hazard through road maintenance and upgrades.

The U.S. Army Corps of Engineers controls adjacent land use and manages water levels for areas in the Connecticut River and the Black River / North Springfield Reservoir. This high level of federally managed waterway control is unique and provides a level of active flood management that benefits the Town.

Impact and Geographic Area of the Hazard

Specific dams mentioned as a concern to not only roads and culverts, but private residences as well include Beaver Pond Road and Tarbell Hill Road.

Extent/Probability

The Town is primarily concerned with smaller private pond dams, which could flood adjacent neighboring landowners and damage public infrastructure. A dam failure on Tarbell Hill Road has washed out portions of the road in the past. Damage costs are unknown. In addition, a recent tabletop exercise held with the Army Corps of Engineers highlighted notification plans and updates to the Emergency Action Plan.

VIII. Drought

Drought is defined as a water shortage with reference to a specified need for water in a conceptual supply and demand relationship. Vermont has recently gone through several years of drought, leaving groundwater and surface water reservoirs at very low levels.

Impact and Geographic Area of the Hazard

It is a complex phenomenon that is difficult to monitor and assess because it develops slowly and covers extensive areas, as opposed to other disasters that have rapid onsets and obvious destruction. Also unlike most disasters, the effects of drought can linger long after the drought has ended. It is an inherent, cyclical component of natural climatic variability and can occur at any place and any time. It is difficult to determine the onset, duration, intensity and severity of drought, all of which affect the consequence and mitigation techniques. High winds, low humidity and extreme temperatures can all amplify the severity of the drought.

Potable water for the majority of the Town is from on-site wells, while sections of Ascutney Village along Route 5 are served by a municipal water system provided by the Ascutney Fire District #2. This system currently serves about 200 users located in the Country Estates mobile home park and in parts of the Village and extending out to the Irving Gas Station on VT Route 131.

This system is served by two wells located near the end of Cherry Lane and a 42,000-gallon storage tank located inside the water storage pump house. The Village of Perkinsville is served by all private wells and on-site septic systems, although there are several shared systems.

The Fire Departments rely heavily on surface water for use in fighting fires. The Town's ability to fight fires can be severely hampered during a prolonged period of extreme drought, particularly when the risk of brush and wildfires are high. The Town, like many rural towns in Vermont, also rely on private wells for potable water. Even during minor periods of drought some shallow wells have experienced reduced water supply.

The last protracted drought in Vermont occurred between 1964 and 1966. More recently, two statewide droughts were declared in June and July 1995 due to lack of rainfall. The state also experienced notable drought conditions in summer 2003 and summer/early fall 2007 when groundwater shortages were evident (State HMP 2013: 4-76). When dry spells occur, individual water wells are often affected and agricultural producers experience the greatest impact.

Extent and Probability

The Vermont State Hazard Mitigation Plan identifies four types of drought:

1. *Meteorological Drought:* A reduction in rainfall from a normal precipitation pattern in regard to the amount, intensity or timing of the event as well changes in the temperature, humidity and wind patterns.

2. *Agricultural Drought:* Deficient moisture conditions that cause a lasting effect on crops and non-natural vegetation.

3. *Hydrological Drought:* The effects of decreased precipitation on surface or subsurface water supply.

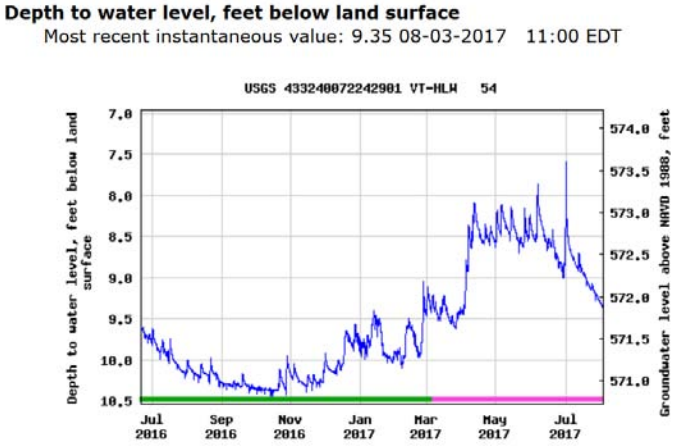
4. *Socioeconomic Drought:* Occurs when the consequences of drought start to affect the socioeconomic sector.

Local knowledge indicates dry spells are periodic in nature and would be considered severe about every 10 years on the average.

According to the State Climatologist, the State of Vermont experienced extreme severe drought conditions over a three year period in 1963, 1964, 1965o. In 1999, the state experienced drought conditions for 9 months from January through September that caused concern as reservoirs began to dry and crops became damaged. In 2002, most of Vermont was categorized as being in a moderate drought for several months and many farm water shortages were being reported to the state. Conditions have improved since then.

While rare in occurrence and relatively brief in duration, droughts have impacted residential and commercial water supplies, and commercial agriculture operations. A drought for extended periods could cause significant impacts to the economy particularly in the agricultural sector. In the last 10 years there have been direct costs to the town due to drought conditions.

The graph below charts recent ground water levels for Windsor County.



Past Occurrences

- Mid 2000's – 20-30 residences impacted in Country Estates Park and required water buffalo service for over one week due to loss of water.
- Mid 2000's – Weathersfield Bow Association went weeks without water due to significant drought conditions and required essential water services.
- 2016 – 10 Wheeler Camp residences without water for a few days.
- 2016 – 20-30 residences in Colonial Manor were without water due to drought conditions for the entire summer.

- 2016 – State formed the Vermont Drought Task Force to serve as a planning and information resource for municipalities, farmers and individuals throughout Vermont.
- Spring 2017 – Eastern Windsor County experienced multiple months of moderate to severe drought as determined by the U.S. Drought Monitor

IX. Extreme Temperature

Extreme Cold temperatures are part of Vermont's climate tendency to stray above or below expected temperature values. While long range forecast models are projecting a general temperature increase of 4°F by 2100, with warmer winters, the Weathersfield area, has experienced recent extreme cold temperatures during winter months. This presents a greater concern given the heating methods and age and condition of housing structures in rural Vermont. In recent history for the neighboring Town of Cavendish during the month of January in 2009, there were 13 days of below 0 F temperatures; -18°F for three consecutive days. [17] While not nearly as severe, there were 5 consecutive days of 5 F and below temperatures in the nearby town of Hartland as recently as 29 December 2017 - 2 January 2018.[18] During that time, low temperatures ranged from -14 F to -23 F.

Extent and Probability

Extreme temperature is an atmospheric hazard and can impact the entire Weathersfield planning area. The extent of extreme cold events can be defined by the record low temperatures. Over the last 20 years, extreme cold temperatures have ranged between -25 to 30 degrees Fahrenheit, with wind chills ranging from -30 to 45 degrees. Colder events are possible in the planning area. Combined loss of power events during times of extreme cold, associated with wind or ice storms, are of concern to the town.

Past Occurrences

Freezing temperatures are common during winter months in this region. The Vermont Hazard Mitigation Plan states Vermont is characteristically known for straying below expected temperature values; this has been true since the 1920s. The plan also states that extreme cold events, including frost, have occasionally occurred in the summer. These instances have been detrimental to the growing season in the past. Maple syrup production is a major industry in the county, and extreme cold events slows sap flow and has shut down production during these periods of extreme cold. There are no deaths or injuries associated with extreme cold events, but death and injuries are possible. Extreme cold events also have the potential to damage infrastructure such as water

[17] www.usclimatedata.com
[18] NOAA: National Environmental Satellite, Data, and Information Service.

mains; though there are no damages recorded for events, it is possible damages have occurred, but are unreported.

- Since 2013, the Burlington Free Press reported a record low for the area of -37 degrees.
- Associated Press reported a record low of -20 F set in Burlington on January 4, 2018

While **extreme heat** does occur occasionally, the committee discussed past occurrences of extreme heat and determined that a reprieve from the heat often comes before serious issues result, and therefore decided to remove it from further analysis.

X. Severe Winter Weather

Winter storms and blizzards, with snow, ice, and freezing temperatures in varying combinations, are fairly commonplace in Weathersfield and occur town wide. Heavy wet snows of early fall and late spring, as well as ice storms, can result in property damage and in loss of electric power, leaving people without adequate heating capability. Power loss is often the result of downed trees, which can also disrupt traffic and emergency response by making roads and driveways impassable.

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

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

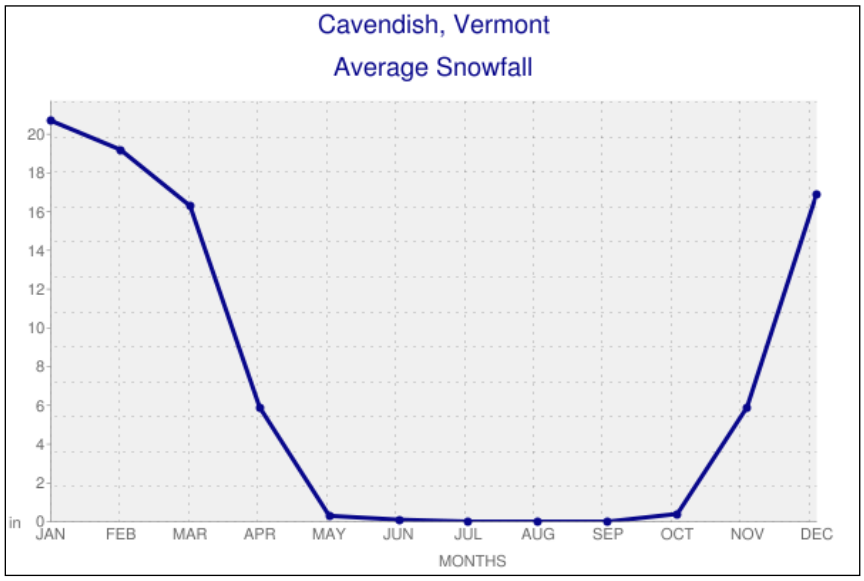
A Nor'easter is a large weather system traveling from South to North, passing along, or near the Atlantic seacoast. As the storm approaches New England and its intensity becomes increasingly apparent, the resulting counterclockwise cyclonic winds impact the coast and inland areas from a northeasterly direction. The sustained winds may meet or exceed hurricane force. There are no standard models or methodologies for estimating loss from winter storm hazards, however, extreme winter weather is considered a way of life in Vermont and many rural Towns are accustomed and prepared for these events. The Dolan-Davis Nor'easter Classification Scale shown below is utilized to determine the severity of Nor'easters:

CLASS	% OF STORMS	AVERAGE RETURN	AVERAGE PEAK WAVE	AVERAGE DURATION IN

		INTERVAL	IN FEET	HOURS
1 WEAK	49.7	3 DAYS	6.6	8
2 MODERATE	25.2	1 MONTH	8.2	18
3 SIGNIFICANT	22.1	9 MONTHS	10.8	34
4 SEVERE	2.4	11 YEARS	16.4	63
5 EXTREME	0.1	100 YEARS	23.0	96

The Dolan-Davis Nor'easter Classification Scale

Blizzards are defined by the National Weather Service as "sustained winds or frequent gusts of 35 mph or greater (and) considerable falling and/or blowing snow reducing visibility frequently to 1/4 mile or less for a period of three hours or more[19]." Damage from blizzards snow and ice storms can vary depending upon wind speeds, snow or ice accumulation, storm duration, and structural conditions (such heavy snow and ice accumulation on large, flat roofed structures). The following figure shows average monthly snowfall amounts for Cavendish, which is just west of Weathersfield. Weathersfield residents can expect at least 60 pounds of weight per square foot on their infrastructure during winter months.



Average Monthly Snowfall Cavendish (neighbor town), Vermont

Local data for snow and extreme cold is not available for the Town. However, the National Weather Service in Burlington, VT, recorded the following extreme events:

As of March 16, 2017, a maximum recorded snowfall event of 33.1 inches occurred from 2-3 January, 2010, with the second highest recorded snowfall of 30.4" occurring from 14-15 March,

[19] National Weather Service Glossary

2017. The same service recorded extreme cold temperature events as of July 22, 2013 to be, approximately, -30 degrees in 1/1994, 2/1979, 1/1957 and 12/1933.

Damage from blizzards can vary depending upon wind speeds, snow accumulation, storm duration, and structural conditions (such as heavy snow and ice accumulation on large, flat roofed structures). The assessed value of all residential and commercial property in Weathersfield is $2,943,477[20]. Assuming a range of town-wide damage of 1% to 5%, a heavy snow or ice storm could result in $29,435 to $147,174 of total damage.

Ice Storms are defined by the National Weather Service as "occasions when damaging accumulations of ice are expected during freezing rain situations. Significant accumulations of ice pull down trees and utility lines resulting in loss of power and communication. These accumulations of ice make walking and driving extremely dangerous. Significant ice accumulations are usually accumulations of ¼" or greater."[21] Multiple sources state that a ¼ inch of ice accumulation from an ice storm can add 500 pounds of weight on the lines between two power lines. In Weathersfield, community assets most vulnerable would be the secondary impact of downed utility lines from this hazard. Ice storms have a significant impact on Northern New England, with high elevation locations being the most severely impacted.

Impact and Geographic Area of the Hazard

Winter storms and blizzards, with snow, ice, and freezing temperatures in varying combinations, are fairly commonplace in Weathersfield and occur town wide. Heavy wet snows of early fall and late spring, as well as ice storms, can result in property damage and in loss of electric power, leaving people without adequate heating capability. Power loss is often the result of downed trees, which can also disrupt traffic and emergency response by making roads and driveways impassable.

Past Occurrences

- Early 2000's ice storm turned into a loss of power event for 3 days. A couple with a generator in the house died.

- In the winter of 1997-1998, a severe ice storm in close by Reading caused major disruption with a week-long power outage. Ice storms have a significant impact on Northern New England, with high elevation locations being the most severely impacted.

- 2010 – barn collapse, killing animals inside, due to snow loads on roof.

[20] Weathersfield Grand List as of 2016
[21] National Weather Service Glossary

- 2013 – local gas station awnings began to collapse due to snow weight. State came to inspect and evaluate – requirement was made to shovel off and remove weight.

- Continued evaluation and shoveling of flat school roof due to concerns – has since been mitigated as new school has peaked roof.

- There are no records of severe winter storm damage in recent years.

6.0 MITIGATION PROGRAM

The following sections detail the mitigation goals, objectives, and potential mitigation actions identified by the Town and compiled and organized by the Hazard Mitigation Committee to reduce the impact of the hazards assessed in this plan. The implementation schedule that follows in **Table 8** is a comprehensive list of actions that the town has targeted for implementation during the five year cycle of this plan.

6.1 GOALS AND OBJECTIVES

The following sections detail the mitigation goals, objectives, and potential mitigation actions which the town has identified to aid in the reduction of threats posed by the hazards detailed in this plan. The implementation schedule that follows is a table of actions that the town has targeted for implementation during the five year cycle of this plan.

The 2017 Weathersfield Town Plan identifies the following recommendations which support hazard mitigation. In general, there needs to be better integration of hazard mitigation planning in the Town Planning process.

- To move people and goods with minimum interference to residents and commercial activities.
- To enable residents to move safely, efficiently, and easily from one part of the community to another.
- To minimize pedestrian-vehicular conflict points.
- Seek funding for an engineering study to address water and wastewater needs within the Village of Perkinsville.

- Update the Capital Budget and Program to include other capital costs including:
  - Providing additional space for the Police Department;
  - Expanding storage space in the Town Offices;
- Improve the town's highway garage, including energy upgrades, heating system upgrades, installing an emergency generator, and providing a potable water system; and installing a highway garage floor drain wastewater system.
- Flood proofing the transfer station and removing it from the special flood plain;
- Establishing fire-fighting water supply to supplement the fire pond in Weathersfield Bow;
- Establishing fire-fighting water supply for the village of Ascutney;
- Inventory fire-fighting water supplies for the Town and develop a plan for needed additional dry hydrants.
- Other facility improvements as identified in the Weathersfield All-Hazard Mitigation Plan.

- Identify and develop an emergency operations center for the Town.
- Develop a public disaster plan which includes energy related emergencies, e.g. what to do in case of power outage or a fuel outage.
- The town shall evaluate flood risks for all new driveway permits and require driveways to be located outside of flood prone areas.
- Fully integrate flood resiliency planning and state/federal flood hazard regulations into the Weathersfield Zoning Bylaws.
- Encourage Town officials to receive certification training in local road and flood plain management.
- Develop a capital improvements plan that includes projects that implement flood resilience strategies for priority town highways and structures.
- More actively educate residents and land owners about local, regional, and state land use policy changes for development within river corridors and flood prone areas.

Following the Hazard Analysis and the public involvement process for this update, the Hazard Mitigation Committee then reviewed the prior goals and strategies **(Table 1),** Existing Resources below **(Table 8)**, and the Town Plan recommendations (above). The intent was to get a better overall sense of whether, and to what extent, hazard mitigation had been incorporated into current Town plan goals and programs. The Hazard Committee then formulated the following overarching goals below.

The following general goals and objectives were identified by the Hazard Mitigation Committee to reduce or avoid long term vulnerabilities to identified hazards:

Hazard Mitigation Goals and Associated Objectives

1. Provide protection to Weathersfield community from impact of hazardous events.
    a. Reduce potential for loss of life, injuries and property damage from hazard events.
    b. Maintain and enhance Local Emergencies Operation Plan.
2. Improve efforts to raise municipal awareness of the Local Hazard Mitigation Plan and incorporate Plan goals, objectives and actions into other Town planning processes and related projects.
    a. Ensure implementation through improved monitoring of 2018-2023 Hazard Mitigation Plan.
    b. Recognize and incorporate hazard mitigation in the Weathersfield Town Plan, Unified Bylaws, Permits, Road Standards and Maintenance Programs.
3. Increase community resiliency to hazardous events.
    a. Increase community awareness of local hazards and the Hazard Mitigation Plan.
    b. Improve efforts to help minimize and address financial losses due to hazard events incurred by residents and business owners.
4. Reduce future economic impact and disruption caused by hazard events on public and historic infrastructure, and municipal programs.

6.2 EXISTING PROGRAMS

The following programs, policies, and regulations are currently being implemented throughout the Town of Weathersfield, including the village of Perkinsville, and help to reduce the towns' long-term susceptibility to hazards. These programs reduce the effects of hazards to existing, new, and future buildings, infrastructure, and critical facilities by preventing their location in identified and known hazard areas and by ensuring that the infrastructure and buildings are designed to minimize damage from hazard events.

The town currently participates in the NFIP program and will continue to regulate floodplain use through the Weathersfield Flood Hazard Regulations last updated and adopted on October 21, 2013. The town will continue to enforce these regulations to maintain future NFIP compliance. As outlined in the regulations, the Zoning Administrator and Zoning Board of Adjustment, is charged with implementing and advising residents on development, as well as regulating construction within Flood Hazard Areas and NFIP compliance.

There have been no NFIP insurance claims filed since 1978 and there are no repetitive loss properties in the Town of Weathersfield.

The following authorities, policies, programs, and resources related to hazard mitigation are currently in place and/or being implemented throughout the Town of Weathersfield, including the village of Perkinsville, in addition to the NFIP. All capabilities addressed in the plan for the town, apply to the Village of Perkinsville. These programs reduce the effects of hazards to existing, new, and future buildings, infrastructure, and critical facilities by preventing their location in identified hazard areas and ensuring that infrastructure and buildings are designed to minimize damage from hazard events. The Committee analyzed these programs for their effectiveness and noted any improvements that may be needed.

Table 8: Existing Resources for Mitigating Hazards: Authorities, Policies and Programs

Resource	Description	Effectiveness in implementing HM Goals	Opportunities for Improving Effectiveness
Town Plan	Plan for coordinated town-wide planning for land use, municipal facilities, etc.	Effective. Revised and adopted in 2017.	Plan is updated now on an 8-year cycle, the next revision should identify additional mitigation strategies
Local Emergency Operations Plan	Basic municipal procedures for emergency response	Outlines procedures for call-outs, evacuations, etc.; last updated in 2017	Plan is reviewed every year following town meetings; statewide template restricts additional functionality
School Emergency Response Protocol	School procedures for emergency response	Utilizes template provided by the state, provides a checklist for school administrators and first responders for use in an emergency situation. Recently partially revised.	Coordinating response procedure among planning tools may improve effectiveness. Meeting between local FDs to go over needed.
LEPC 3 All Hazards Emergency Resource Guide	Outlines resources available to town in emergency situations	Effective through providing data and resources to town first responders; updated late 2015.	Should be revised to include resources specific to Weathersfield
Mutual Aid – Emergency Services (3 groups)	Agreement for regional coordinated emergency services	Effective through providing additional emergency support during atypical events	All mutual aid agreements have been formalized
Mutual Aid – Public Works	Agreement for regional coordinated emergency highway maintenance services	Effective in providing additional highway support and resources during atypical events	All mutual aid agreements should be formalized; current monthly RF meetings.

Road Standards	Design and construction standards for roads and drainage systems	Effective through continued use	Continued implementation of road standards is critical to effectiveness
State Road Standards	State design and construction standards for roads and drainage systems have been adopted	Effectiveness will improve with new Municipal General Road Permit which will consider hydrologically connected road segments. Continued implementation is critical to effectiveness.	Greater consideration of hydrological nature of road segments with new MRGP standards will improve effectiveness
Subdivision Regulations	Regulates the division of land, standards for site access and utilities	Effective through continued use; amended in 2014 and under current review.	Continued enforcement and updates are critical for effectiveness
Site Plan Review	Reviews plans for development	Effective in limiting development in hazard areas	Continued use of this tool will help prevent additional hazards
Flood Hazard Area Regulations	Regulates development in FEMA flood hazard areas	Effective in limiting development in identified hazard areas; under current review.	Continued updates and enforcement are critical for continued effectiveness
Zoning Bylaw	Regulates development	Effective through continued use and implementation; recent revision 2017	Continued enforcement and updates as needed are critical for effectiveness
National Flood Insurance Program (NFIP)	Provides ability for residents to acquire flood insurance	In Zoning Bylaw	None identified
Maintenance Programs	Bridge & Culvert Inventory	Effective at tracking and planning infrastructure upgrades	Inventories should be updated when feasible
Access Permits	Regulates driveway access along town-maintained roads	Effective in limiting the number of road cuts, thereby reducing the potential for traffic accidents; in current update process.	Continued enforcement of access permit regulations are critical in maintaining effectiveness
Local Emergency Planning Committee 3	Volunteer organization involved in regional hazard mitigation efforts	Effective and important contributor in the hazard mitigation planning process	Additional participation from town government would be beneficial
Southern Windsor County RPC	Regional organization working to further emergency management and hazard mitigation goals	Effective in assisting town in the adoption of new regulations and the revision of planning documents	The RPC should focus on improving the planning process and investigate additional sources of historical and statistical data for identified hazards

6.3 2018-2023 MITIGATION AND PREPAREDNESS ACTIONS AND PROJECTS

The Weathersfield Hazard Mitigation Committee discussed each mitigation strategy and found that many projects are still ongoing and/or are still relevant. In most cases, the past identified strategies have been left in place because of their ongoing and cyclic nature, for example, the incorporation of strategies into the town capital budget and planning documents. They identified the following **Mitigation and Preparedness Actions and Projects** for implementation during the 2018-2023 planning period. These mitigation actions have been chosen by the town as the most cost/effective and feasible actions to be taken during this plan period to lessen the impacts of both known and potential hazards identified in **Section 5**.

The instructions were to choose which should be included in the five year plan, based on cost (including considering the feasibility to complete or initiate in that time) versus benefit (or need). The Weathersfield Hazard Mitigation Committee kept in mind the following benefits while creating **Table 9**:

- structural or land improvements
- increased public education and awareness of hazards
- altering the hazard area to remove the hazard occurrence
- reducing the hazard frequency through structure or land treatment
- increased community support for specific actions to reduce future losses
- reduction in financial and physical losses caused by hazard events
- eligibility for hazard mitigation grants and aid
- strengthened partnerships

The Committee determined that the method of prioritizing mitigation strategies and actions be changed from a specific numbered priority order of individual action items to a 'categorizing' of priorities based on two categories – High and Moderate (see color coded legend below). It was decided that a more general prioritization methodology would improve overall progress on implementation for the follow reasons:

- Offers the needed flexibility as priorities can change over time.
- Allows the Committee to take advantage of all funding opportunities as they arise.
- Implies that several actions can progress simultaneously.
- Encourages the Committee to keep all proposed actions in mind.

To assign priority category, a number of criteria (below) were taken together but weighted subjectively. A "High" priority action would typically score higher in the Hazard Analysis and have greater weight for the first two criteria listed below than those with a "Moderate" priority. The following identified programs, projects and activities are future mitigation strategies for the Town of Weathersfield. Proposed Mitigation Actions are prioritized on an ad-hoc basis by considering all of the following:

- Severity or immediacy of need and greatest potential impact. This subjective assessment would consider the potential extent of vulnerability in terms of structural damage repair costs, level of safety risk to residents impacted, and probability of occurrence.
- Number of residents impacted by hazard that would benefit from mitigation.
- Availability of funding and personnel resources to implement the project. Availability of town, state or federal funds, and availability of town or SWCRPC personnel are considered.
- Availability of grant funding, and application assistance.
- Favorable cost/benefit based on logic or FEMA methodology. Higher priority projects would be those requiring low capital but have high community outreach potential for a high scored hazard, projects more likely to be eligible for grant funding, and projects where the estimated cost of repairs following a potential disaster (the benefit) is apparent, or likely higher than the cost of mitigation based on past experience. For example, the dollar benefit over the cost of proactively prioritizing and implementing culvert upgrades would include the cost of otherwise having to replace a washed out road.

The mitigation measures performed in the last several years have been a result of major events such as Tropical Storm Irene. It can be expected that an unforeseen disaster would most likely change these priorities. When considering maintenance and replacement of highway infrastructure each year, Weathersfield refers primarily to its bridge and culvert inventory as well as its Road Surface Management Plan. Weathersfield also takes into consideration grant funding that may be available to assist in these projects.

High Priority
Moderate Priority

Table 9: Proposed Hazard Mitigation Programs, Projects and Activities

MITIGATION ACTION	TYPE OF ACTION	HAZARD ADDRESSED	RESPONSIBLE PARTY	TIME FRAME	FUNDING SOURCE
Independent power supply for schools/government buildings	Preparedness, Mitigation	Severe Winter Weather, High Winds	Town Manager, Selectboard, School Board	Q2 2019	Town budget, HMGP grant, school budget
Culvert upgrade (identify culvert 1 remaining),	Mitigation	Transportation Disruption, Flooding	Highway Department	Q1 2019	Town highway budget, VTrans structures grant
Annual culvert inspection program	Preparedness	Flooding	Highway Department	Implement program : Q1 2019	Town budget, SWCRPC assistance, VTrans
Complete study of critical facilities to identify deficiencies prior to use as EOC	Preparedness	ALL	Selectboard, Town Manager, EMD	Q3 2020	Town budget, HMGP
Carry out identified retrofits outlined in the assessment study to ensure long-term stability of critical facilities	Mitigation	ALL	Selectboard, Town Manager	Q2 2022	Town budget, HMGP
Dry hydrant mapping and needs assessment	Preparedness	Fire	Fire Commission, Fire Departments, SWCRPC	Summer 2018	Town funds, SWCRPC assistance
Continued specialized hazardous materials training and exercises	Mitigation, Preparedness	Hazardous Materials Incident	Fire Departments	Fall 2018 and Fall 2020	VEM, Town funds

Cell booster acquisition for Highway Department	Preparedness	ALL	Highway Depatment, Selectboard	Winter 2018	Highway funds, Town Budget
Conduct outreach to schools regarding fire safety information	Preparedness	Wildfire, Structure Fire	Emergency Management Director, Fire Departments	Q1 2019	Fire Department budget, Town funds
Review State of Vermont 2017 Commodity Flow Study	Mitigation	Hazardous Materials, Transportation Incident	Emergency Management Director, Road Foreman, Town Manager	Winter 2018	No cost to town
Hydrant system for Ascutney needs discussion	Preparedness	Fire	Fire Commission, Ascutney VFD	Q3 2019	Town funds
Stone line ditch – Amsden Hollow Road	Mitigation	Flooding	Road Foreman, Town Manager, Selectboard	Summer 2018	VTrans
Research funding opportunities WWVFD station repairs	Preparedness	ALL	Fire Chief, Town Manager, Selectboard	Summer 2018	Town Budget
Incorporate new MRGP Standards in identifying and prioritizing vulnerable hydrologically-connected roadways and implement required practices to meet standards *as funding*	Mitigation	Flood, Transportation	Highway, SWCRPC	2018-2023 2Q for review, 4Q to install (annuall y)	Better Roads, MRGIA, VTrans, Town Funds/ No cost to Town to plan and prioritize, Moderate to High to install

becomes available					
Provide NFIP material to town residents	Mitigation	Flooding	Zoning Administrator, SWCRPC	Ongoing	No cost to town
The town will participate in Firewise programs including 'Communities Compatible with Nature'	Mitigation	Structure Fire, Wildfire	Selectboard, Fire Departments, Emergency Management Director	Ongoing	No cost to town

Significant Mitigation Actions In-Progress, or completed, since last plan update

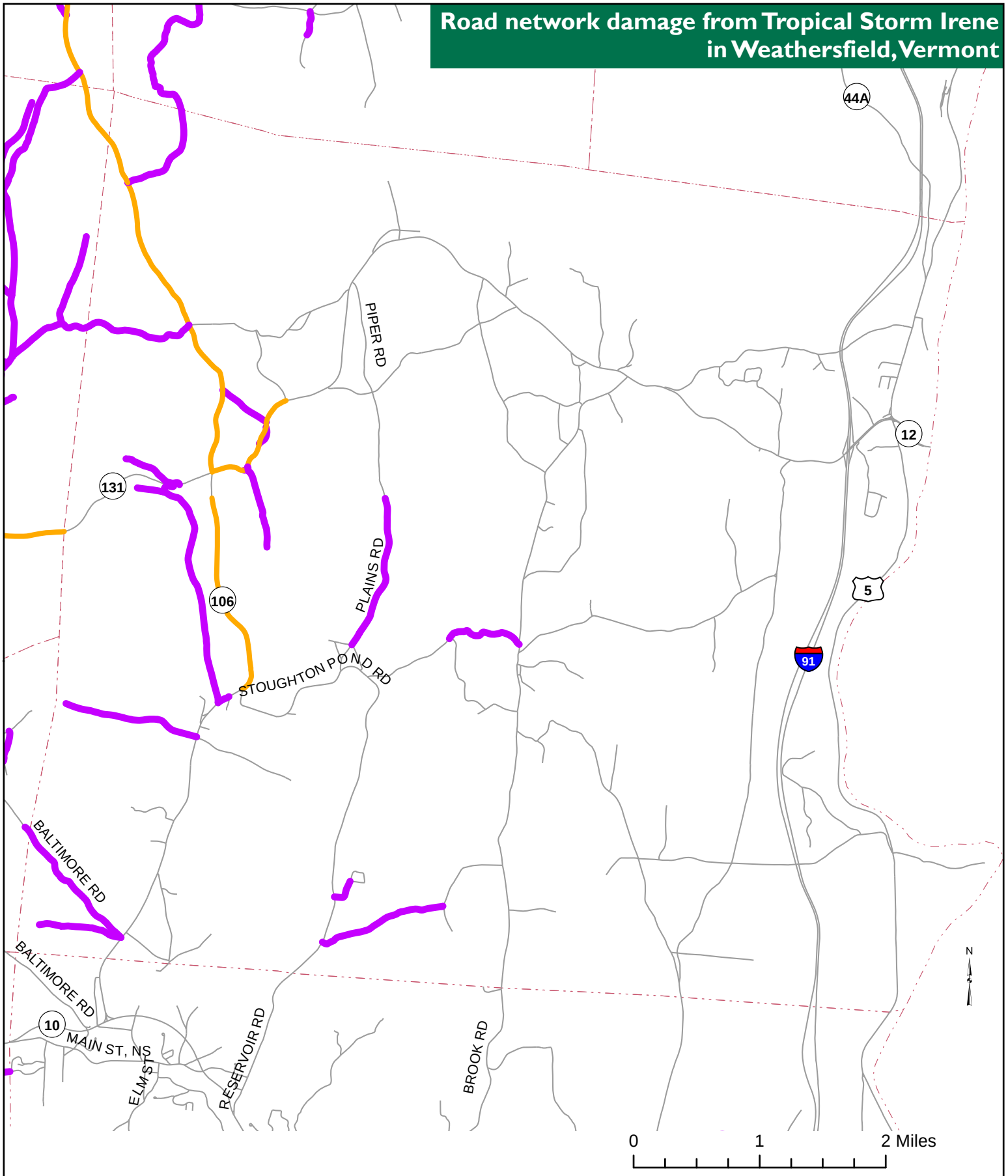
1. Baltimore Road – replaced four culverts with box culverts.
2. Tarbell Hill Road – streambank restoration mitigation project.
3. Tarbell Hill Road – replaced culverts.
4. Tarbell Hill Road – raised road.
5. Thrasher Road – replaced two culverts with box culverts.

6.4 INTEGRATION

Weathersfield uses all of the tools listed throughout the plan for current and future activities with the town. For example: the Local Emergency Operation Plan has a contact list that is used for response purposes in the case of a hazard event, and is updated every year after Town Meeting. The list includes updates to vulnerable geographic locations, as well as important contact information. Town Road and Bridge Standards are followed by the town and Weathersfield just competed updating their culvert inventory in 2015. The mitigation action and goals identified in this plan will be reviewed annually by the Selectboard and Trustees at a meeting prior to Town Meeting Day. Additionally, the SWCRPC will work with the Weathersfield Planning Commission to incorporate ideas into the next Town Plan rewrite. The goals of this hazard mitigation plan will be incorporated

in the rewrite to ensure that emergency preparedness and mitigation planning efforts are included in the Town Plan, with particular attention to include the projects in the Mitigation Actions Table. As each referenced plans and regulations are updated, they will better incorporate hazard mitigation. This will assist with ensuring that this plan is utilized and project follow-through occurs.

Road network damage from Tropical Storm Irene in Weathersfield, Vermont



Class 1 Local Road Damage
State Road Damage
Local Road Damage
Insignificant damage or undamaged road
Town boundary

Data sources:
Road centerline (VTrans 2010)
Town boundary (VCGI 2010)
Town road damage (from Town staff collected by SWCRPC Sept- Oct 2011)
State road damage (from VTrans, 2011 TS_Irene_BridgeAndHighwayClosureData.mdb)

Map drawn January 13, 2012

Map for planning purposes only. Not for regulatory interpretation.

SWCRPC
SOUTHERN WINDSOR COUNTY REGIONAL PLANNING COMMISSION
PO Box 320, Ascutney, VT 05030
www.swcrpc.org

Emergency Planning Map

All Hazard Mitigation Plan
Town of Weathersfield, Vermont

READING
WEST WINDSOR
WINDSOR
CAVENDISH
Cornish
Claremont
Charlestown
SPRINGFIELD
CHESTER
BALTIMORE
CHURCHILL RD
KIMBALL FARM RD
FELCHVILLE GULF RD
ASCUTNEY BASIN RD
SENNA RD
WESTON HTS
44A
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HENRY GOULD RD
HIGH MEADOW RD
TARBELL HILL RD
STEVENS RD
GREENBUSH RD
EAST RD
LITTLE ASCUTNEY RD
TARBELL HILL RD
LOTTERY LN
AMSDEN SCHOOL RD
PIPER RD
GULF RD
GRAVELIN RD
SOUTH MOUNTAIN RD
WHEELER CAMP RD
JARVIS EXT
BEAVER POND RD
WEATHERBEE HILL RD
DAN JARVIS RD
VICTORY CIR
COWDREY RD
BRIAN JONES RD
CHERRY LN
THRASHER RD
SUNSET BLVD
RILEY DR
VICTORY DR
LAVIGNE RD
PLAINS RD
LITTLE CANADA RD
JEFFREY LN
GOULDEN RIDGE RD
MOUNTAIN VIEW DR
TENNEY HILL RD
GROUT RD
BRANCH BROOK RD
UPPER FALLS RD
STOUGHTON POND RD
TH 22
PLAINS RD EXT
PLAINS RD EXT
CADY HILL RD
PERKINS HILL RD
WEATHERSFIELD CENTER RD
CENTER GROVE RD
YEWELL LN
ASA GROUT LN
DAKE HILL RD
GIRD LOT RD
MEADOW LN
COOKS POND RD
ROBERTS RD
MELODY LN
SKYLINE DR
DIVOLL PASTURE RD
E CAMP HILL RD
DOWNER HILL RD
BOWEN HILL RD
FERRY RD
TH 68 OLD BOW RD
W CAMP HILL RD
STOKES RD
BROOK RD
EUREKA RD
TOWN FARM RD
TOWN HWY 5
CARLEY RD
GRAVES RD
QUARRY RD
HIGH ST
MILL RD
MAPLE ST
ROBINSON RD
LYONS DR
JOHN JENSEN RD
BALTIMORE RD
DRUMLIN RD
RESERVOIR RD
BUTTERFIELD HILL RD
KENDRICKS CORNER RD
GREEN VALLEY RD
AIRPORT RD
WELLWOOD ORCHARD RD
CLARK ST
MAPLE ST
MILL RD
BERRY RD

0 0.5 1 Miles

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Inset - Ascutney

RUNNING BEAR TRL
COUNTRY SKYLINE BLVD
FIRST ST
STARDUST CIR
MAPLE LN
RED
SUNSET BLVD
TRAILS END
THIRD ST
THRASHER RD
FIRE HOUSE LN
RILEY DR
JENNESS RD
MARTIN ST
TURNER PL
TILLMAN DR
GARDEN WAY
VILLAGE VIEW LN
CEMETERY RD
ASCUTNEY STORE RD
OLD BRIDGE RD
HIDDEN GLEN RD
LAWRENCE FARM RD
TENNEY HILL RD

0 0.15 0.3 Miles

- Town Offices and Facilities
- Fire Station
- Current School Site
- VTrans Garage
- US Army Corps of Engineers
- Electric Substation
- Dry Hydrant
- Municipal Hydrant
- Pressurized Hydrant
- Other Hydrant
- Hazardous Waste Site
- Hazardous Waste Facility
- Hazardous Waste Generator
- Telecommunications Tower

- Transmission Line
- Interstate
- US and State Highway
- Class 2 Town Highway
- Class 3 Town Highway
- Road in New Hampshire
- River
- Lakes and Ponds

- Village of Perkinsville
- Weathersfield Boundary
- Other Town Boundaries

Data Sources: Major Buildings (E911 2013 & RPC 2013), Telecommunications Facilities (Natural Resources Board 2007 & RPC 2013), Hydrants (VT E-911 2017), Hazardous Waste Facilities (VT DEC 2006), Hazardous Waste Sites (VT DEC 2017), Hazardous Waste Generators (VT DEC 2015), Transmission Lines (VCGI 2003 & RPC 2013), Roads (VTrans 2017 and NHDOT 2016), Town & Village Boundaries (VCGI 2016 & NHGranit 2009), Waterbodies (VHD 2008).

VT State Plane, Meters, NAD 83

For planning purposes only.
Not for regulatory interpretation.

Data depicted on this map is based on best available information.

SWCRPC
SOUTHERN WINDSOR COUNTY REGIONAL PLANNING COMMISSION
P.O. Box 320, Ascutney, VT 05030
802-674-9201 www.swcrpc.org

Map Drawn August 17, 2017

Transportation Map

All Hazard Mitigation Plan
Town of Weathersfield, Vermont

READING
CAVENDISH
WEST WINDSOR
WINDSOR
SPRINGFIELD
CHESTER
BALTIMORE
Claremont
Cornish
Charlestown
Windsor Rd
Windy Hill Rd
Andrews Rd
Main St
Old High Bridge Rd
Jarvis Hill Rd
No Name
Meadow Rd
River Rd
Calavant Hill Rd
NH Route 12A
Vermont
CHURCHILL RD
KIMBALL FARM RD
FELCHVILLE GULF RD
SENNA RD
ASCUTNEY BASIN RD
HENRY GOULD RD
HIGH MEADOW RD
TARBELL HILL RD
STEVENS RD
GREENBUSH RD
EAST RD
LITTLE ASCUTNEY RD
PIPER RD
GULF RD
GRAVELIN RD
SOUTH MOUNTAIN RD
WHEELER CAMP RD
JARVIS EXT
DAN JARVIS RD
BEAVER POND RD
WEATHERBEE HILL RD
LOTTERMAN LN
AMSDEN SCHOOL RD
PLAINS RD
LITTLE CANADA RD
JEFFREY LN
LAVIGNE RD
VICTORY DR
VICTORY CIR
COWDREY RD
BRIAN JONES RD
THRASHER RD
CHERRY LN
SUNSET BLVD
RILEY DR
TENNEY HILL RD
GOULDEN RIDGE RD
MOUNTAIN VIEW DR
GROUT RD
BRANCH BROOK RD
UPPER FALLS RD
PLAINS RD EXT
PLAINS RD EXT EXT
STOUGHTON POND RD
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PERKINS HILL RD
ASA GROUT LN
WEATHERSFIELD CENTER RD
CENTER GROVE RD
YEWELL LN
DAKE HILL RD
GIRD LOT RD
ROBERTS RD
MELODY LN
HIGH ST
MILL RD
MAPLE ST
GRAVES RD
QUARRY RD
ROBINSON RD
BALTIMORE RD
LYONS DR
JOHN JENSEN RD
DRUMLIN RD
RESERVOIR RD
BUTTERFIELD HILL RD
COOKS POND RD
MEADOW LN
SKYLINE DR
DIVOLL PASTURE RD
E CAMP HILL RD
W CAMP HILL RD
DOWNER HILL RD
BOWEN HILL RD
FERRY RD
TH 68 OLD BOW RD
TOWN HWY 85
BROOK RD
EUREKA RD
TOWN FARM RD
CARLEY RD
WELLWOOD ORCHARD RD
STOKES RD
KENDRICKS CORNER RD
GREEN VALLEY RD
AIRPORT RD
BERRY RD
CLARK ST
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MILL RD
WESTON HTS
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Inset - Ascutney

RUNNING BEAR TRL
COUNTRY SKYLINE BLVD
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RED MAPLE LN
SUNSET BLVD
TRAILS END
THIRD ST
THRASHER RD
FIRE HOUSE LN
BRIAN JONES RD
JASON SMITH RD
RILEY DR
JENNESS RD
MARTIN ST
TURNER PL
TILLMAN DR
GARDEN WAY
VILLAGE VIEW LN
CEMETERY RD
ASCUTNEY STORE RD
OLD BRIDGE RD
HIDDEN GLEN RD
TENNEY HILL RD
LAWRENCE FARM RD
Windy Hill Rd
Windsor Rd
Andrews Rd
Main St
Jarvis Hill Rd
No Name
Vermont
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- State owned bridge (Over 20ft long)
- State owned culvert or bridge between 6ft and 20ft
- Town owned bridge
- Town maintained culvert
- State Airport
- Bus Route
- Interstate
- US and State Highway
- Class 2 Town Highway
- Class 3 Town Highway
- Class 4 Town Highway
- Legal Trail
- Forest Road
- Private Road
- Road in New Hampshire
- River
- Lakes and Ponds
- Village of Perkinsville
- Weathersfield Boundary
- Other Town Boundaries

VT State Plane, Meters, NAD 83

For planning purposes only.
Not for regulatory interpretation.

Data depicted on this map is based on best available information.

Note: There is no railroad in town.

Data Sources: Bridges & Culverts (Town and SWCRPC 2014 www.vtculverts.org and VTrans 2017), Airport (VTrans 2012), Bus Route (Windham Regional Commission 2014), Railroad (VTrans 2014), Roads (VTrans 2017 and NHDOT 2016), Town & Village Boundaries (VCGI 2016 & NHGranit 2009), Waterbodies (VHD 2008).

SWCRPC
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Map Drawn August 17, 2017

Water and Elevation Map

All Hazard Mitigation Plan
Town of Weathersfield, Vermont

READING
CAVENDISH
WEST WINDSOR
WINDSOR
BALTIMORE
CHESTER
SPRINGFIELD
Cornish
Claremont
Charlestown
Bloodsucker Pond
Quarry Pond
Stoughton Pond
Cooks Pond
Springfield Reservoir
North Springfield Reservoir
North Branch Black River
Black River
Connecticut River
44A
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Elevation Map

Ascutney North
Mount Ascutney
Pierson Peak
Little Ascutney Mountain
Pikes Peak
Pinnacle Rock
Butterfield Hill
Downer Hil
Tolles Hill
Camp Hill
0 0.75 1.5 Miles

- Hill or Mountain Summit (small map only)
- Dam
- River Corridor
- Wetland
- Floodway
- Floodway fringe (Floodplain)
- Dam Inundation Area
- Slope of 24% or above (small map only)
- River
- Lakes and Ponds
- Interstate
- US and State Highway
- Class 2 Town Highway
- Class 3 Town Highway
- Village of Perkinsville
- Weathersfield Boundary
- Other Town Boundaries

Special Flood Hazard Areas (SFHA), including the Floodway and Floodway Fringe (i.e. Floodplain), are shown on this map for planning purposes only. This is not the official map for regulatory flood hazards.

Data Sources: Dams (ANR 2009), Floodway and Floodway fringe (Floodplain) (FEMA 2008), River Corridor (ANR 1/2/2015), Wetland (VSWI, ANR 2010), Dam Inundation Area (VT Dept of Emergency Management 2008), Steep slopes (derived from 10m Digital Elevation Model, USGS/ VCGI 2012), Hill or Mountain Summit (Unknown source), Roads (VTrans 2017), Town & Village Boundaries (VCGI 2016 & NHGranit 2009), Waterbodies (VHD 2008).

VT State Plane, Meters, NAD 83

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Not for regulatory interpretation.

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Map Drawn August 17, 2017

Current Land Use Map

All Hazard Mitigation Plan
Town of Weathersfield, Vermont

READING
CAVENDISH
WEST WINDSOR
WINDSOR
SPRINGFIELD
CHESTER
BALTIMORE
Cornish
Claremont
Charlestown
CHURCHILL RD
KIMBALL FARM RD
FELCHVILLE GULF RD
SENNA RD
ASCUTNEY BASIN RD
TARBELL HILL RD
STEVENS RD
GREENBUSH RD
EAST RD
TARBELL HILL RD
LITTLE ASCUTNEY RD
HENRY GOULD RD
HIGH MEADOW RD
PIPER RD
GULF RD
GRAVELIN RD
SOUTH MOUNTAIN RD
JARVIS EXT
WHEELER CAMP RD
BEAVER POND RD
DANJARVIS RD
WEATHERBEE HILL RD
LOTTERY LN
AMSDEN SCHOOL RD
PLAINS RD
LITTLE CANADA RD
JEFFREY LN
LAVIGNE RD
VICTORY DR
VICTORY CIR
COWDREY RD
BRIAN JONES RD
CHERRY LN
SUNSET BLVD
THRASHER RD
RILEY DR
TENNEY HILL RD
GOULDEN RIDGE RD
MOUNTAIN VIEW DR
WESTON HTS
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UPPER FALLS RD
MILL RD
HIGH ST
QUARRY RD
STOUGHTON POND RD
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PLAINS RD EXT
PLAINS RD EXT
CADY HILL RD
PERKINS HILL RD
WEATHERSFIELD CENTER RD
CENTER GROVE RD
YEWELL LN
DAKE HILL RD
ASA GROUT LN
MEADOW LN
COOKS POND RD
GIRD LOT RD
ROBERTS RD
MELODY LN
FERRY RD
GRAVES RD
ROBINSON RD
MAPLE ST
LYONS DR
JOHN JENSEN RD
DRUMLIN RD
RESERVOIR RD
BALTIMORE RD
BUTTERFIELD HILL RD
KENDRICKS CORNER RD
GREEN VALLEY RD
AIRPORT RD
STOKES RD
WELLWOOD ORCHARD RD
W CAMP HILL RD
E CAMP HILL RD
SKYLINE DR
DIVOLL PASTURE RD
DOWNER HILL RD
BOWEN HILL RD
TH 68 OLD BOW RD
TOWN HWY 85
BROOK RD
EUREKA RD
TOWN FARM RD
CARLEY RD
MILL RD
MAPLE ST
CLARK ST
BERRY RD

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Inset - Ascutney

CHERRY LN
SUNSET BLVD
THRASHER RD
RILEY DR
BRIAN JONES RD
JASON SMITH RD
TENNEY HILL RD
MARTIN SHED RD
CEMETERY RD
HIDDEN GLEN RD
LAWRENCE FARM RD
91
131
12
5

0 0.15 0.3 Miles

- Town Offices and Facilities
- Library
- Fire Station
- Current School Site
- VTrans Garage
- Post Office
- US Army Corps of Engineers
- Electric Substation
- Other civic or public meeting place
- Education
- House of worship
- Commercial
- Industrial, Manufacturing, Gravel pits/ Quarry, etc
- Campground, Hotel or Motel
- Farm
- Residential (including mobile home)
- Substation and other utilities
- Other buildings
- Cemetery
- State Airport
- Protected Lands
- Town Owned Land
- School District Land

- Interstate
- US and State Highway
- Class 2 Town Highway
- Class 3 Town Highway
- River
- Lakes and Ponds
- Village of Perkinsville
- Weathersfield Boundary
- Other Town Boundaries

VT State Plane, Meters, NAD 83

For planning purposes only.
Not for regulatory interpretation.

Data depicted on this map is based on best available information.

Data Sources: Buildings (VT E911 2017), Major Buildings (RPC 2013), Electric Substation (RPC 2013), Town Owned Land and School District Lands (Town/ RPC 2014), Protected Lands (including Conserved) (VCGI 2016 and Upper Valley Land Trust 2013), Airport (VTrans 2012), Cemeteries (VTrans 2001 & RPC 2013), Roads (VTrans 2017), Town & Village Boundaries (VCGI 2016 & NHGranit 2009), Waterbodies (VHD 2008), Aerials (NAIP 2016)

SWCRPC
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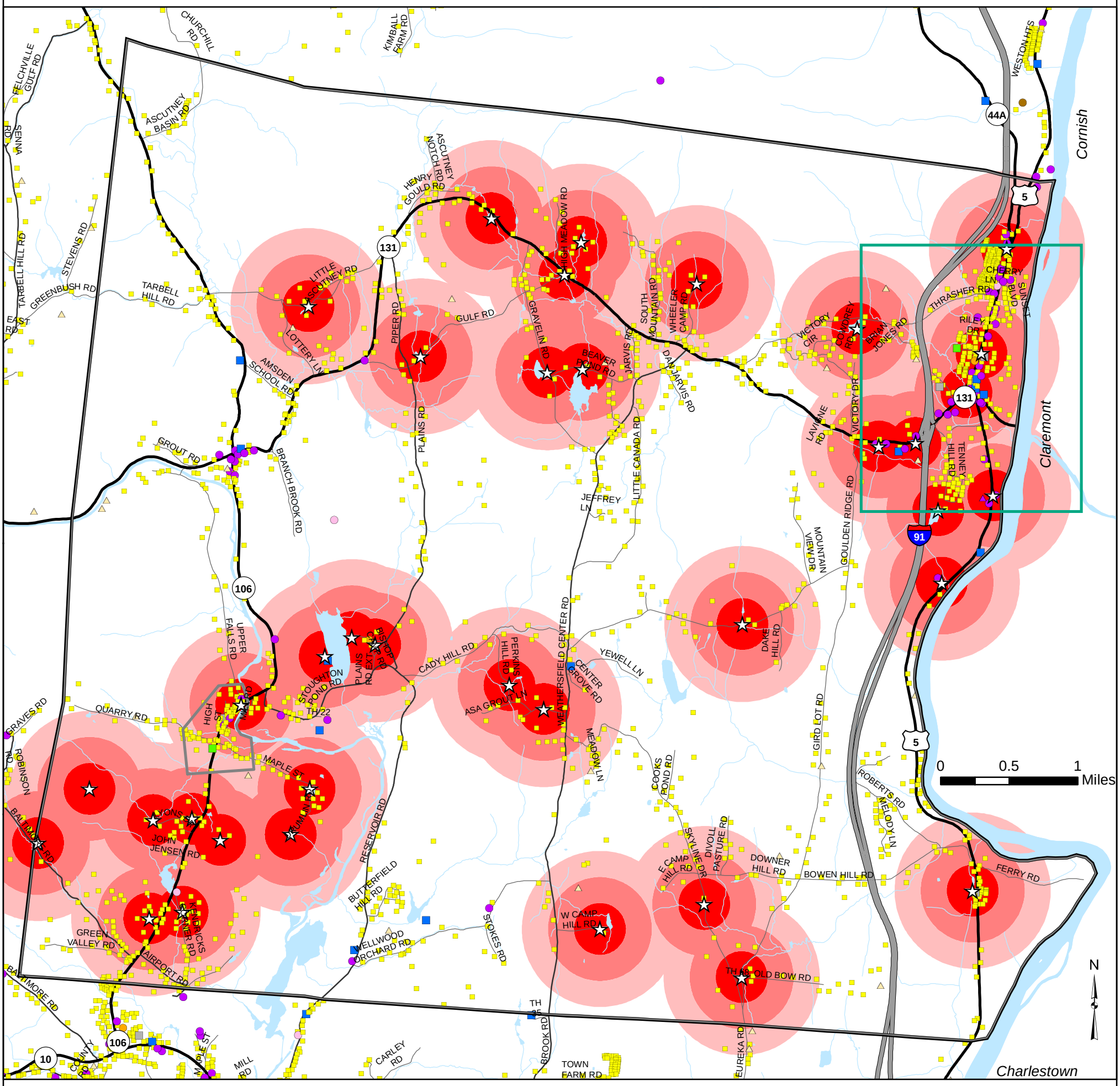
Map Drawn August 17, 2017

Town of Weathersfield, Vermont
West Weathersfield FD and Ascutney Volunteer FD

Hydrants Map
Last modified 10/03/2017



- ☆ Hydrants
- 1,000 foot buffer around hydrant
- 2,000 foot buffer around hydrant
- 3,000 foot buffer around hydrant
- Civic or public meeting place
- Education
- House of worship
- Commercial
- Industrial, Manufacturing, Gravel pits/ Quarry, etc
- Campground, Hotel or Motel
- Farm
- Residential (including mobile home)
- Substation and other utilities
- Other buildings
- Interstate
- US and State Highway
- Class 2 Town Highway
- Class 3 Town Highway
- River
- Lakes and Ponds
- Village of Perkinsville
- Weathersfield Boundary

Data Sources: Hydrants (WWFD and AVFD with RPC 2017), Hydrant Buffer (RPC 2017), Buildings (E911 April 2016), Roads (VTrans 2015), Town & Village Boundaries (VCGI 2012 & NHGranit 2009), Rivers and Ponds (VHD 2008)

VT State Plane, Meters, NAD 83

For planning purposes only. Not for regulatory interpretation. Data depicted on this map is based on best available information.

SWCRPC
SOUTHERN WINDSOR COUNTY REGIONAL PLANNING COMMISSION
P.O. Box 320, Ascutney, VT 05030
802-674-9201 www.swcrpc.org

Map Drawn 10/31/2017

VOLUNTEER FORM TO DOCUMENT IN-KIND SERVICES - MATCH INFORMATION

PROGRAM: HMGP
DATE OF MEETING: June 5, 2017
MEETING LOCATION: Town Hall - Weathersfield
TOPIC: LHMP
MEETING TIME: 7:30 AM - 9:30 AM

VOLUNTEER ATTENDEES - CLAIMED

No.	NAME	AFFILIATION	MILEAGE ROUND TRIP	MEETING HOURS	TOTAL MILEAGE	TOTAL TIME
					0.535	$22.79
1	Ed Morris	Town Manager	0.5	2	0.27	45.58
2	Hal Wilkins	Land Use Department	70	2	37.45	45.58
3	Dallas Carey	Village Rep	20	2	10.70	45.58
4	Darrin Spaulding	AVFD	8	2	4.28	45.58
5	Michael Lewallen	EMC	5	2	2.68	45.58
6	Westley Hazeltine	DPW	5	2	2.68	45.58
7	William Daniels	WPD	24	2	12.84	45.58
8	Lynn Etsy	Selectboard/Fire Commission	10	2	5.35	45.58
9	Josh Dauphin	WWVFD	12	2	6.42	45.58
10					-	-
11					-	-
12					-	-
13					-	-
14					-	-
		Sub Total	**154.50**	**18.00**	**$82.66**	**$410.22**

FEDERALLY SUPPORTED PERSONNEL - CAN NOT CLAIM

No.	NAME	AFFILIATION				
					0	$0.00
1	Allison Hopkins	SWCRPC	0.5	2	0.27	45.58
2					-	-
3					-	-
4					-	-
		Sub Total	**155.00**	**20.00**	**$0.27**	**$45.58**

Total volunteer In-kind $492.88

VOLUNTEER FORM TO DOCUMENT IN-KIND SERVICES - MATCH INFORMATION

PROGRAM: HMGP
DATE OF MEETING: July 26, 2017
MEETING LOCATION: Town Hall - Weathersfield
TOPIC: LHMP
MEETING TIME: 7:30 AM - 9:30 AM

VOLUNTEER ATTENDEES - CLAIMED

No.	NAME	AFFILIATION	MILEAGE ROUND TRIP	MEETING HOURS	TOTAL MILEAGE	TOTAL TIME
					0.535	$22.79
1	Ed Morris	Town Manager	0.5	2	0.27	45.58
2	Hal Wilkins	Land Use Department	70	2	37.45	45.58
3	Dallas Carey	Village Rep	20	2	10.70	45.58
4	Darrin Spaulding	AVFD	8	2	4.28	45.58
5	Michael Lewallen	EMC	5	2	2.68	45.58
6	Westley Hazeltine	DPW	5	2	2.68	45.58
7					-	-
8					-	-
9					-	-
10					-	-
11					-	-
12					-	-
13					-	-
14					-	-
		Sub Total	**108.50**	**12.00**	**$58.05**	**$273.48**

FEDERALLY SUPPORTED PERSONNEL - CAN NOT CLAIM

No.	NAME	AFFILIATION				
					0	$0.00
1	Allison Hopkins	SWCRPC	0.5	2	0.27	45.58
2					-	-
3					-	-
4					-	-
		Sub Total	**109.00**	**14.00**	**$0.27**	**$45.58**

Total volunteer In-kind $331.53

VOLUNTEER FORM TO DOCUMENT IN-KIND SERVICES - MATCH INFORMATION

PROGRAM: HMGP
DATE OF MEETING: September 18, 2017
MEETING LOCATION: Town Hall - Weathersfield
TOPIC: LHMP
MEETING TIME: 7:30 AM - 9:30 AM

VOLUNTEER ATTENDEES - CLAIMED

No.	NAME	AFFILIATION	MILEAGE ROUND TRIP	MEETING HOURS	TOTAL MILEAGE	TOTAL TIME
					0.535	$22.79
1	Ed Morris	Town Manager	0.5	2	0.27	45.58
2	Hal Wilkins	Land Use Department	70	2	37.45	45.58
3	Dallas Carey	Village Rep	20	2	10.70	45.58
4	Darrin Spaulding	AVFD	8	2	4.28	45.58
5	William Daniels	WPD	24	2	12.84	45.58
6	Josh Dauphin	WWVFD	18	2	9.63	45.58
7					-	-
8					-	-
9					-	-
10					-	-
11					-	-
12					-	-
13					-	-
14					-	-
15					-	-
		Sub Total	**140.50**	**12.00**	**$75.17**	**$273.48**

FEDERALLY SUPPORTED PERSONNEL - CAN NOT CLAIM

No.	NAME	AFFILIATION				
					0	$0.00
1	Allison Hopkins	SWCRPC	0.5	2	0.27	45.58
2					-	-
3					-	-
4					-	-
		Sub Total	**141.00**	**14.00**	**$0.27**	**$45.58**

Total volunteer In-kind $348.65

VOLUNTEER FORM TO DOCUMENT IN-KIND SERVICES - MATCH INFORMATION

PROGRAM: HMGP
DATE OF MEETING: October 30, 2017
MEETING LOCATION: Town Hall - Weathersfield
TOPIC: LHMP
MEETING TIME: 7:30 AM - 9:00 AM

VOLUNTEER ATTENDEES - CLAIMED

No.	NAME	AFFILIATION	MILEAGE ROUND TRIP	MEETING HOURS	TOTAL MILEAGE	TOTAL TIME
					0.535	$22.79
1	Ed Morris	Town Manager	0.5	1.5	0.27	34.19
2	Josh Dauphin	WWVFD	20	1.5	10.70	34.19
3	Darrin Spaulding	AVFD	5	1.5	2.68	34.19
4	Michael Lewallen	EMD	18	1.5	9.63	34.19
5					-	-
6					-	-
7					-	-
8					-	-
9					-	-
10					-	-
11					-	-
12					-	-
13					-	-
14					-	-
15					-	-
16					-	-
17					-	-
18					-	-
		Sub Total	**43.50**	**6.00**	**$23.27**	**$136.74**

FEDERALLY SUPPORTED PERSONNEL - CAN NOT CLAIM

No.	NAME	AFFILIATION				
					0	$0.00
1	Allison Hopkins	SWCRPC	0.5	1.5	0.27	34.19
2					-	-
3					-	-
4					-	-
		Sub Total	**44.00**	**7.50**	**$0.27**	**$34.19**

Total volunteer In-kind $160.01

VOLUNTEER FORM TO DOCUMENT IN-KIND SERVICES - MATCH INFORMATION

PROGRAM: HMGP
DATE OF MEETING: October 15, 2018
MEETING LOCATION: Town Hall - Weathersfield
TOPIC: LHMP - SB Adoption
MEETING TIME: 7:00 PM

VOLUNTEER ATTENDEES - CLAIMED

No.	NAME	AFFILIATION	MILEAGE ROUND TRIP	MEETING HOURS	TOTAL MILEAGE	TOTAL TIME
					0.545	$23.71
1	Ed Morris	Town Manager	0.5	1	0.27	23.71
2	Josh Dauphin	WWVFD	20	1	10.90	23.71
3					-	-
4					-	-
5					-	-
6					-	-
7					-	-
8					-	-
9					-	-
10					-	-
11					-	-
12					-	-
13					-	-
14					-	-
15					-	-
16					-	-
17					-	-
18					-	-
		Sub Total	**20.50**	**2.00**	**$11.17**	**$47.42**

FEDERALLY SUPPORTED PERSONNEL - CAN NOT CLAIM

No.	NAME	AFFILIATION				
					0	$0.00
1					-	-
2					-	-
3					-	-
4					-	-
5					-	-
6					-	-
7					-	-
		Sub Total	**20.50**	**2.00**	**$0.00**	**$0.00**

Total volunteer In-kind $58.59