

TOWN OF PITTSFORD, VERMONT LOCAL HAZARD MITIGATION PLAN

PREPARED BY THE TOWN OF PITTSFORD AND
THE RUTLAND REGIONAL PLANNING COMMISSION

FEMA Approval Pending Adoption Date: _____

Municipal Adoption Date: _____

FEMA Formal Approval Date: _____

INSERT PHOTO(S) FROM TOWN HERE

Note: Photos of hazards, meetings, sites in town, past disasters, etc. in town should be included as possible throughout the plan to make it more readable!

Town of Pittsford Local Hazard Mitigation Plan

PREPARED BY THE PITTSFORD LOCAL HAZARD MITIGATION COMMITTEE:

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RUTLAND REGIONAL PLANNING COMMISSION

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1. Introduction

The impact of expected, but unpredictable natural and human-caused events can be reduced through community planning. The goal of this plan is to provide an all-hazards local mitigation strategy that makes the Town of Pittsford more disaster resistant.

Hazard Mitigation is any sustained action that reduces or eliminates long-term risk to people and property from natural and human-caused hazards and their effects. FEMA and state agencies have come to recognize that it is less expensive to prevent disasters than to repeatedly repair damage after a disaster has struck. This plan recognizes that communities have opportunities to identify mitigation strategies and measures during all of the other phases of Emergency Management – Preparedness, Response and Recovery. Hazards cannot be eliminated, but it is possible to determine what the hazards are, where the hazards are most severe and identify local actions that can be taken to reduce the severity of the hazard.

2. Purpose

The purpose of this Hazard Mitigation Plan is to assist the Town of Pittsford, VT in identifying all hazards facing the community and identify strategies to begin reducing risks from identified hazards. Once adopted, the local mitigation plan is not legally binding; instead, it outlines goals and actions to prevent future loss of life and property.

Adopting and maintaining this Local Hazard Mitigation Plan will provide the following benefits:

- Make certain funding sources available to complete the identified mitigation initiatives that would not otherwise be available if the plan was not in place.
- Ease the receipt of post-disaster state and federal funding because the list of mitigation initiatives is already identified.
- Support effective pre- and post-disaster decision making efforts.
- Lessen the Town's vulnerability to disasters by focusing limited financial resources to specifically identified initiatives whose importance has been ranked.
- Connect hazard mitigation planning to community planning where possible.

The community vulnerabilities emphasized and addressed in this plan are:

- Flooding along low-lying areas
- Flooding at Glorioso Road
- Flooding at the gap between Cooley Bridge and Gorham Bridge.
- Homes on West Creek
- The Hard Property
- Vulnerable populations, such as the elderly at the Village Manor Home and children at Lothrop Elementary School, 5 Star Childcare, Sandra Laughlin's daycare, Elizabeth Eugair's daycare, and Jennifer Popp's daycare.
- Residents living east of Route 7 receive more power outages.

3. Community Background

Land Use and Development Patterns

Settlement patterns in Pittsford were initially determined by available waterpower, transportation routes, abundant quantities of high quality marble, and quality agricultural land. The combination of these factors led to the development of agriculture along the Otter Creek valley while industries were attracted to the Florence area of Pittsford because of the availability of raw materials, primarily marble, and the development of a railroad spur to serve this area.

The village of Pittsford developed above the Otter Creek flood plain on a major north-south transportation route (Route 7). Most of the town's commercial retail and services are located within the village area, though the overall character in the village is primarily residential.

The percentage of housing units in Pittsford that are occupied year-round is 96.5%, one of the highest in this tourism-based region.

Pittsford encompasses a broad range of land uses in addition to housing. These other land uses include heavy industrial mining and processing of minerals, manufacturing, commercial, protected open space, agriculture, and state facilities housing the Police and Fire Academy. The Fire Academy recently expanded their classroom and administrative space. As of 2010, xx% of the land in Pittsford was in active agricultural use – this is one of the highest percentages countywide.

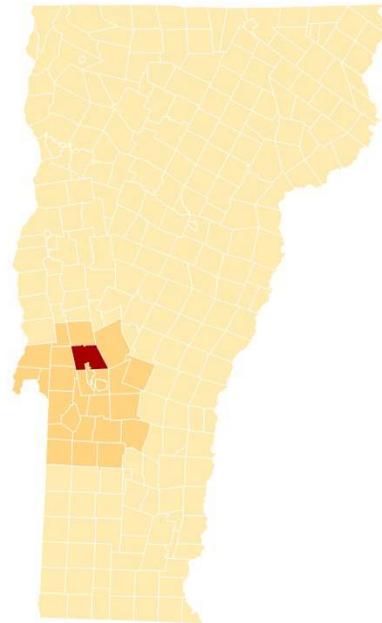
Recent development in town over the past decade has included: [list here](#). This development **has not** made the town more

vulnerable, since development **has not** occurred in flood zones or other hazardous areas.

Demographics and Growth Potential

The 2010 Census indicates a population of 2,991 in Pittsford. This is a -4.75% change from the 2000 population of 3,140 individuals.

Pittsford is a town aiming to grow over the next couple of decades in both the residential and industrial sectors. It already possesses a substantive amount of public infrastructure (water and sewerage systems, for example) compared to many other towns in the region.



Pittsford is noted here in red.

Land Features

Pittsford lies between the Taconic Mountains to the west and the Green Mountains to the east. The terrain in Pittsford to the west of the village of Florence is quite mountainous. On the west side of the Otter Creek is a wide valley which includes the village of Florence. The remainder of Pittsford

(east of Otter Creek) features more moderate hills and favorable soils for development and farming.

Precipitation and Water Features

Precipitation in Pittsford is average for the region. Water features include the wide Otter Creek and numerous other streams. In addition, Smith Pond and Burr Pond are located in Pittsford.

Water Supply and Sewer Services

Pittsford has a municipal water system that is supplied by springs on Nickwackett Mountain in Chittenden. The water supply is adequate for the town's needs at this time.

Pittsford has a sewer district covering much of the intensely developed areas along Route 7 and Route 3. The wastewater treatment plant was upgraded in 2002, and again in 2010-12. Other structures outside of this district rely upon on-site septic systems.

Transportation

Highways US 7 and US 3 traverse Pittsford, providing major north-south access for transportation of materials through the State. Other important roadways within Pittsford include Whipple Hollow Road (which is a major link to Route 4) and West Creek Road which is important for moving agricultural and industrial materials in and out of the valley surrounding Florence.

A major rail line passes through Pittsford running parallel to Otter Creek and providing access to the industrial area in Florence.

Pittsford has a total of 21 bridges. Three of these are wooden, covered bridges with a reduced carrying capacity compared to conventional bridges. Of

the total, 6 bridges are on the State highway system. Nine of the bridges have a span of over 20 feet (3 are town owned, 6 are state owned). Under new Federal regulations, any bridge 20 feet or over is eligible for Federal funding assistance.

Emergency Management

Pittsford has two fire stations – a main station in the Village and a substation at the OMYA plant in Florence. Both of the stations are operated by a 40-member volunteer department. Combined, the town's firefighting equipment resources consist of three pumpers, one tanker, a 75-foot ladder truck, an emergency generator truck, and a heavy rescue truck. Additional support is available through the Rutland County Fire Mutual Aid Association.

Law Enforcement in Pittsford is provided by a recently formed police department, whose officers must be trained and certified through the Vermont Police Academy. Additional assistance is provided by the Rutland County Sheriff's Department and Vermont State Police, as needed.

Pittsford First Response provides immediate care and patient stabilization services. The nearest hospital is the Rutland Regional Medical Center. Ambulance service is provided by Rutland Regional Ambulance, as needed.

Please refer to the Hazards Analysis map for the locations of town emergency operations centers and emergency shelters.

Emergency Management Planning

Pittsford updates its Local Emergency Operations Plan (LEOP) each year and works proactively to address any identified issues.

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Date	Event	Summary
1/7/15	Select Board meeting	Discussed the plan update process and assigned hazard mitigation committee members
7/29/15	Committee meeting	Discussed high risk hazards & vulnerabilities
8/26/15 And 9/10/15	Committee meetings	Reviewed updated draft plan, developed mitigation strategies
9/22/15- 10/7/15	Public comment period	Invited the public, neighboring towns, other organizations, etc. to comment on the draft plan
10/7/15	Public hearing	Provided the draft plan for public input

4. Planning Process

The Rutland Regional Planning Commission (RRPC) and the Town of Pittsford coordinated the Local Hazard Mitigation Plan update process. Hazard Mitigation Grant Program (HMGP) funds from FEMA supported this process. Work on the preparation and adoption of the

plan began in July 2015 and continued until month of year.

4.1 Public Participation

As shown in the description of the planning process below, the public and all relevant parties were provided both the opportunity and the means to participate in the plan update. This includes neighboring communities, local and regional agencies involved in hazard mitigation, agencies with the authority to regulate development, businesses, academia, and other private and non-profit interests. Notices were made in the Pittsford Town Offices, Rutland Regional Planning Office, RRPC and Town websites, and Front Porch Forum to inform the public and relevant parties of the plan update, how to access plan drafts, and how to provide input. Updated plan drafts were posted on the town and RRPC website throughout the planning process for the public to review.

4.2 Local Planning Process

RRPC staff discussed updating the plan with town officials in July of 2015. The Select Board identified local officials and stakeholders to serve on a committee to review and update the plan on January 7, 2015. The Select Board passed a motion in support of updating their Local Hazard Mitigation Plan (see Appendix E).

Hazard Mitigation Committee Members

Name	Affiliation(s)
Tom Hooker	Pittsford Fire Department; Selectman
J Michael Warfle	Pittsford Police Department
Helen McKinley	Pittsford Town Clerk and Treasurer
John Haverstock	Town Manager
Trish Lewis	Regional and Local Planning
Chad Eugair	Pittsford Highway Department

In addition to the local knowledge of committee members and other relevant parties, the following documents and resources were utilized in the preparation of this plan:

- National Oceanic and Atmospheric (NOAA) National Climatic Data Center's Storm Events Database
- National Weather Service (Burlington, VT) Recent Weather Event Summaries
- Vermont Department of Environmental Conservation Waste Management Interactive Database
- FEMA Disaster Declarations for Vermont
- OpenFEMA Dataset: Public Assistance Funded Project Summaries for Vermont
- U.S. Geological Survey National Water Information System- Stream Gage Data
- "Climate Variability and Socioeconomic Consequences of Vermont's Natural Hazards: A Historical Perspective" by Lesley-Ann Dupigny-Giroux, 2002, *Vermont History 70*: 19-39.
- United States 2000 and 2010 Census
- Rutland Herald Archives
- Rutland Region All Hazards Mitigation Plan (2012)
- State of Vermont Hazard Mitigation Plan (2013)
- FEMA Flood Insurance Rate Maps

- Relevant Stream Geomorphic Assessments and/or River Corridor Plans
- Town plan (2012) & land use bylaws (2010)

Utilizing the above resources, a thorough update of data was conducted by RRPC staff to take advantage of new data that may not have been available during the development of the previous Annex. Data sources on past hazard events were incorporated into the Community Hazard Inventory and Risk Assessment section, and local and regional policies/plans were incorporated into the Hazard Mitigation Strategy section. As discussed in the following section, the plan was also restructured to a single jurisdictional format. RRPC staff revised the plan throughout the planning process, circulating multiple draft plans to committee members and posting drafts on the town and RRPC website.

The hazard mitigation committee meetings were publicly warned in the following locations: Front Porch Forum, RRPC and Town of Pittsford office bulletin boards, and the RRPC and Town of Proctor websites. Each meeting provided an opportunity for public discussion, questions, and comments on the plan. Committee meeting agendas, notes, and sign-in sheets can be found in Appendix E. The first committee meeting was held on 7/29/2015 at the Pittsford Town Offices. Participants discussed the purpose and timeline for updating the plan, other groups/individuals that should be aware of the plan preparation, and damages that

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occurred in town from Tropical Storm Irene. Town maps were reviewed and the town's hazards were ranked according to their probability, impact, and risk level. The committee discussed high risk hazards in further detail. After this meeting a draft plan was developed by RRPC staff and circulated to committee members.

A second committee meeting was held on August 26th, 2015 at the Pittsford Town Offices. The committee reviewed the updated draft plan and made changes as necessary. The committee discussed and agreed upon the town's mitigation goals. Then committee members discussed the status of each mitigation action from the town's last plan, and identified new mitigation actions for the town. After this second committee meeting, RRPC staff communicated with committee members on an individual basis to gather final pieces of information, and the draft plan was finalized. The final draft plan was distributed to the entire committee for their review.

A 15 day public comment period for the draft plan was held from September 24th, 2015 to October 9th, 2015. The comment period was warned by posting at the town office, website, and other designated spaces in town; the RRPC office and website; and in the Rutland Herald (see Appendix E for notice). The following neighboring towns were invited by email to review and comment on the plan: Brandon, Chittenden, Rutland Town, Proctor, West Rutland, Castleton, Hubbardton, and Sudbury. These organizations were also emailed regarding the public comment period: Rutland Natural Resources Conservation District. And were told to email comments to Elysa Smigielski, RRPC, and John Haverstock, Town of Pittsford.

The draft plan was then submitted to the State Hazard Mitigation Officer (SHMO) on **date** for review. Required and recommended revisions received from the SHMO were addressed by working with the town's hazard mitigation committee members on an individual basis.

The plan was then submitted to FEMA Region I on **date** for review. Required and recommended revisions were received from FEMA Region I on **date**. RRPC staff worked with town officials to make the plan revisions, until FEMA's Approval-Pending Adoption (APA) was achieved on **date**. The final plan was reviewed by the Selectboard and adopted after the hearing on the same date. The final plan with the local adoption certificate was forwarded to FEMA Region I and the State Hazard Mitigation Officer, and on **date** final FEMA approval of the plan was granted.

4.3 Plan Evolution

A local hazard mitigation plan was originally adopted by the town as an Annex to the Rutland Region All Hazards Mitigation Plan in 2004, which received FEMA final approval in 2004. As noted in the State Hazard Mitigation Plan, regional planning commissions throughout Vermont are now mainly encouraging towns to create local mitigation plans as single jurisdictional documents rather than annexes, due to the issue of plan expiration being based on the first town that is approved in a regional effort. This plan is a single jurisdictional local hazard mitigation plan.

The following table provides an overview of the town's local hazard mitigation actions from the 2004 Annex along with their current status. Note that mitigation actions which are completed have been deleted from the Mitigation Actions & Projects Table in Section 6.5 of this plan.

Status of Hazard Mitigation Actions

Mitigation Action	Status
Incorporate proposed strategies into Annual Budget and Capital Improvement Plan	In progress
Install generator at the sewer treatment plant	In progress
Continue to work on road, bridge, and culvert improvements as needed.	In progress
Confirm emergency shelter status of churches	In Progress/Revised. The following facilities have been identified as emergency shelters: Lothrop Elementary School, Otter Valley Fire Department, Town Offices, and the Police Academy (which has generators). The Town is also working with the Red Cross Shelter Initiative.
Examine town plan, bylaws, and development regulations to ensure identified hazard areas are addressed.	In progress

5. Community Hazard Inventory and Risk Assessment

What follows is an analysis of local natural hazards and human-caused hazards based upon review of the Hazard Analysis Map produced for the town (see Appendix C), review of existing data, and information provided by local officials and stakeholders. Whenever possible, the issues identified below are represented on the Areas of Local Concern Map (see Appendix D).

5.1 Local Vulnerabilities

Through the hazard inventory and risk assessment described in the following pages, the town found that its most significant vulnerabilities to natural hazards include:

- Flooding of Low Lying Areas
- Power Outages to Homes and Critical Facilities
- Vulnerable Populations – Children and the Elderly

These identified vulnerabilities drive this hazard mitigation plan and the town’s mitigation strategies, in order to reduce potential losses in the community.

5.2 Risk Assessment

The Risk Assessment table below lays out all the hazards identified for the town and covered in this plan. Each hazard was discussed by committee members and ranked in terms of its Probability and Impact, and then given an overall Risk Level (see table endnotes). This assessment resulted in the categorization of High and Low Risk Level hazards for the town. Following the Risk Assessment table is a detailed discussion of High Risk hazards including tables on Hazard History and Hazard Summary. Note that the Low Risk hazards that are considered to have low incidence and low probability in the community are not profiled in detail in this plan.

Hazard	Probability ¹	Impact ²	Risk Level ³
Climate Change	*	*	*
Drought	Low	Low	Low
Earthquakes	Low	Low	Low
Floods and Fluvial Erosion	High	High	High
Landslides and Rockslides	Low	Low	Low
Severe Thunderstorms	High	High	High
Snow and Ice Storms	High	High	High
Tornadoes	Low	Low	Low
Wildfires and Forest Fires	Medium	Medium	Medium

¹ **High** likelihood of happening: Near 100% probability in any given year.

Medium likelihood of happening: 10% to 100% probability in any given year (at least once in the next 10 years).

Low likelihood of happening: 1% to 10% probability in any given year (at least once in the next 100 years).

² **Minor** impact: Isolated occurrences of minor property damage, minor disruption of critical facilities and infrastructure, and potential for minor injuries.

Moderate impact: Occurrences of moderate to severe property damage, temporary shutdown of critical facilities, and/or injuries or fatalities.

Major impact: Severe property damage on a town-wide scale, shutdown of critical facilities, and/or multiple injuries or fatalities.

³ Based on Probability and Impact, is the risk level: **High** or **Low**? Risk is defined as the potential for damage, loss, or other impacts created by the interaction of hazards with community assets.

5.3 High Risk Hazard Inventory

A discussion of each High Risk hazard is included in the proceeding subsections, and the Areas of Local Concern map identifies the location of these hazards (see Appendix D). Each High Risk hazard below includes a table of the Hazard History based on County-wide FEMA Disaster Declarations (DR-#) plus information from local records, a narrative description of the hazard, and a comprehensive Hazard Summary table. Since detailed local information is not available for some historical hazard events, those events are summarized in the Hazard History tables regarding state or countywide impacts.

Climate Change*

Climate change is defined by the Intergovernmental Panel on Climate Change as "... a change in the state of the climate that can be identified by changes in the mean and/or variability of its properties, and that persists for an extended period, typically decades or longer. It refers to any change in climate over time, whether due to natural variability or as a result of human activity." The 2014 Vermont Climate Assessment (based on the National Climate Assessment) shows that the average annual temperature in Vermont has increased by 1.3 degrees Fahrenheit since 1960, and 45% of that temperature change took place since 1990. The growing season in the state has lengthened due to warming, along with a shorter freezing period in the winter. Average annual precipitation has also increased 5.9 inches, and again much of that change (48%) has occurred only since 1990.

Looking ahead, it is projected that temperatures in Vermont will rise by another 2 to 3.6 degrees Fahrenheit by the year 2050. Precipitation will continue to increase, particularly during wintertime and in mountainous areas. More weather extremes will occur in Vermont, such as record-breaking high temperatures and high-energy lightning storms. The impacts of these projected trends in Vermont will be more severe natural disasters, increased energy demands, power outages, high stream flows and flooding, stress on trees, changes to agriculture, and changes to recreation and tourism seasons. It is clear that the already felt and future effects of climate change will intensify a variety of other hazards, such as flooding/fluvial erosion, severe thunderstorms, and winter storms.

The town will not be profiling climate change as a high risk hazard due to the present day difficulty of analyzing storm history for climate change trends and for identifying specific examples of climate change. However, the Town understands and appreciates the importance of cataloging weather events in an effort to understand how certain natural hazards may change in their intensity and/or frequency as a result of climate change. The Town acknowledges that by continuing the efforts of compiling a complete storm record for the high risk hazards – flooding, thunderstorms, snow and ice storms, and wildfires – the Town may, in the future, analyze the presence and effects of climate change within the Town.

Floods and Fluvial Erosion

Flooding is the overflowing of rivers, streams, drains and lakes due to excessive rain, rapid snow melt or ice as well as overflow of banks caused by sudden high water flow due to breaching of dams (both human-made and natural dams caused by beavers or debris build-up). Flooding of land adjoining the normal course of a stream or river has been a natural occurrence since the beginning of time. If

these floodplain areas were left in their natural state, floods would not cause significant damage. Development has increased the potential for flooding because rainfall that used to soak into the ground or take several days to reach a river or a stream via a natural drainage basin now quickly runs off streets, parking lots and rooftops and through human-made channels and pipes.

Hazard History- Flooding

Seasonal Flooding: Depot and Elm Streets receive seasonal flooding every spring. These streets often receive enough flooding to become closed. Normal spring runoff causes bridge closures and flooding every year.

August 31, 2011: Tropical Storm Irene (DR 4022). Approximately 8" of rain fell in 18 hours in Pittsford. Culverts had a difficult time dealing with the water flow in East Pittsford, and several culverts blew out in the Florence section of town. Roads in town that suffered flooding and culvert damage include Meadow Lake Drive, Fire Hill Road, West Creek Road, and Chittenden Road. Flooding partially immersed all 4 covered bridges and in total caused \$75,000 in road, bridge, and culvert damages. 97.5% of the damage costs were reimbursed by FEMA and the State of Vermont.

August 2004: Showers and thunderstorms with very heavy rainfall flooding affects Pittsford infrastructure.

April 1, 1998: Spring flooding along the Otter Creek, especially from Rutland to Brandon. A few of roads continued closed due to washouts and water on roads. Approximate costs to Pittsford were \$2,500.

May 11, 1996: Rain caused by cold front on Saturday and Sunday with between 1 1/2 and 3 1/2 inches of rainfall. The rain mixed with wet snow above the 2000 foot level Sunday with 1 to 3 inches of snow accumulating in the mountains. Otter Creek flooding from Rutland to Brandon, with approximate costs to Pittsford of \$1,250.

April 16, 1996: Rain began around midnight (4/16/96) and continued most of Tuesday (4/16/96). The heaviest rain fell across southern Vermont and along and east of the Green Mountains. The rain tapered off to rain and snow showers Tuesday night into Wednesday (4/17/96). A few roads were closed in Pittsford due to flooding, with total costs to Pittsford totaling \$10,000.

April 7, 1993: Otter Creek flooded and the towns of Clarendon, Pittsford, and Brandon were all affected. The flooding in Pittsford cost the town approximately \$1,700.

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June 28 – 30, 1973: Flooding due to up to 6 inches of rainfall. Statewide damages estimated at \$64 million

March 11-21, 1936: Flooding due to intense rains and snowmelt. \$1 million in damages in Vermont

November 3, 1927: Flooding due to heavy rains on frozen ground, the remnants of a tropical storm. Statewide damage of \$35 million including 1,000+ bridges, 100s of miles of roads and railroad, and 84 deaths

¹**Impact:** The effect of the hazard on people and property, including infrastructure damaged, fatalities, and dollar value of damage.

Floods can damage or destroy public and private property, disable utilities, make roads and bridges impassable, destroy crops and agricultural lands, cause disruption to emergency services, and result in fatalities. People may be stranded in their homes for a time without power or heat or they may be unable to reach their homes. Long-term collateral dangers include the outbreak of disease, loss of livestock, broken sewer lines or wash out of septic systems causing water supply pollution, downed power lines, loss of fuel storage tanks, fires and release of hazardous materials.

While inundation-related flood loss is a significant component of flood disasters, the more common mode of damage in Vermont is associated with fluvial erosion, streambed and streambank erosion, often associated with physical adjustment of stream channel dimensions and location during flood events. These dynamic and oftentimes catastrophic adjustments are due to bed and bank erosion, debris and ice jams, or structural failure of or flow diversion by human-made structures. An ice jam occurs when the ice layer on top of a river breaks into large chunks which float downstream and cause obstructions (State HMP 2013).

As noted in the State Hazard Mitigation Plan, “Flooding is the most common recurring hazard event in the State of Vermont” (2013: 4-7). Several major flooding events have affected the state in recent years, resulting in multiple

Presidential Disaster Declarations. From 2003 to 2010, Rutland County as a whole experienced roughly \$1.4 million in property damages due to flood events (State HMP 2013). The worst flooding event in recent years came in August of 2011 from Tropical Storm Irene, which dropped up to 8 inches of rain in some areas of Rutland County (State HMP 2013: 4-61). This caused most streams and rivers to flood in addition to severe fluvial erosion.

Floods are predictable in Pittsford, primarily along Otter Creek – a slow-rising river with a wide floodplain. Flooding concerns are primarily with road closures that restrict access and response times for emergency vehicles. Typically, damage to roads and structures is minimal. The main issue is with a cluster of houses built on land that is not within the floodplain, but which is surrounded by floodplain. To date, there hasn't been any damage to the structures themselves, but isolation is possible due to restricted access should Elm Street and Gorham Bridge Road be out of

commission. This situation has come to pass; local responders foresaw the problem and parked a fire truck close to this area so that once access was cut off, there would still be a response vehicle nearby.

Although fluvial erosion and river corridor studies have not been done in town, the town is interested in adopting river corridor protection language in the future.

There are 32 structures in town that are within FEMA's mapped special flood hazard area. This includes one structure that is a critical facility / public structure.

The State of Vermont and Rutland Regional Planning Commission are working together to conduct Phase 1 and Phase 2 Stream Geomorphic Assessments (SGA) on the rivers and streams in Pittsford. Once these studies are complete, a River Corridor Management Plan and Fluvial Erosion Hazard map can be developed.

Due to the significant damages caused by Tropical Storm Irene, the town now places a higher priority on flood mitigation. See Section 6.4 for activities that the town has taken to improve flood resilience, and Section 6.5 for flood mitigation projects that the town will pursue in the future.

Hazard Summary
Floods and Fluvial Erosion.

Location	Town wide. Especially along the Otter Creek, and Depot and Elm St.
Vulnerable Assets	Four Bridges. Houses.
Extent	Up to 8" of rain
Impact	Up to \$75,000 in damages
Probability	High

Severe Thunderstorms

Severe thunderstorms can produce high winds, lightning, flooding, rains, large hail, and even tornadoes. Thunderstorm winds are generally short in duration, involving straight-line winds and/or gusts in excess of 50 mph. Thunderstorm winds tend to affect areas of Vermont with significant tree stands as well as areas with exposed property and infrastructure and aboveground utilities. Thunderstorm winds can cause power outages, transportation and economic disruptions, and significant property damage, and pose a high risk of injuries and loss of life. Thunderstorms range in size and type. An ordinary thunderstorm consists of one cell with an updraft and downdraft and produce strong winds, rain, lightning, and even hailstones. Multicell cluster thunderstorms consist of several ordinary cell thunderstorms in the vicinity of each other. From 2004 to 2010, for thunderstorms that caused more than \$200,000 in damage, Rutland County experienced nearly \$2 million in property damage. (State HMP 2013: 4-38 to 4-42) Rutland County experienced severe thunderstorms on May 18, 2004 which included large hail (near one-inch diameter) and damaging winds up to ninety miles per hour (National Weather Service). Historically, the thunderstorm outbreaks of May 21-31, 1968 included lightning, hail and high winds across the State (Dupigny-Giroux 2002: 29).

Hail is a form of precipitation composed of spherical lumps of ice. Known as hailstones, these ice balls typically range from 5–50 mm in diameter on average,

with much larger hailstones forming in severe thunderstorms. The size of hailstones is a direct function of the severity and size of the thunderstorm that produces it. (State HMP 2013: 4-68) Much of the hail activity in Rutland County is scattered and varies in intensity. Most areas of the region have been affected by a hail event at some point. These events are not associated with any particular area within the county. Reported hail events often accompanied heavy thunderstorms and gusty winds. Property damage reported from the hail incidents have typically been associated with uprooted trees, downed power lines, and crop damage. Historic hail events include huge hailstones accompanying a tornado that passed over Pawlet and Manchester in June of 1782. In 1961, wind and hail hit the Rutland Fairgrounds lifting a cattle barn 50 feet from its foundation.

Violent windstorms are possible here; Pittsford is susceptible to high directional winds. Most windstorms result in downed trees, damaged phone and power lines, and crop losses. The town is geared to handle these situations, including back-up power generation capabilities.

A four-day closure of the sewer plant in April, 2007 was the result of power outages due to an intense storm dubbed the Norricane ; the closure resulted in the town having to haul solid waste to an alternate location.

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Hazard History Thunderstorm

7/8/2014	Thunderstorm with high winds (Estimated gusts of 50 knots)	\$20,000 in damages
5/27/2014	Thunderstorm with one inch hail	No damages reported
6/23/2013	Thunderstorm with high winds (Estimated gusts of 60 knots)	\$20,000 in damages
6/2/2013	Thunderstorm with one inch hail	No damages reported.
6/8/2011	Thunderstorm with high winds (Estimated gust of 55 knots)	\$10,000 in damages.
7/19/2008	Thunderstorm with hail	No damages reported
8/16/2007	Thunderstorm with high winds (Estimated gusts of 60 knots)	\$100,000 in damages
7/31/2004	Thunderstorm with high winds (Estimated Gusts of 50 knots)	\$5,000 in damages.
6/9/2004	Thunderstorm with high winds (Estimated Gusts of 50 knots)	\$5,000 in damages
5/1/2003	Thunderstorm with high winds (Estimated gusts of 50 knots)	\$5,000 in damages
7/6/1999	Thunderstorm with high winds	\$10,000 in damages
8/24/1998	Thunderstorm with high winds	\$10,000 in damages
7/15/1995	Thunderstorm with high winds	\$50,000 in damages

Source: NOAA National Climatic Data Center

Snow and Ice Storms

In the Rutland Region, most winter weather events occur between the months of December and March. Throughout the season, winter weather events can include snowstorms, mixed precipitation events of sleet and freezing rain, blizzards, glaze, extreme cold, the occasional ice storm, or a combination of any of the above. Events can also be associated with high winds or flooding, increasing the potential hazard.

Total regional damages due to winter weather events peak at over \$1,000,000 per month in January, February, and March. The costs of these storms come in

the form of power outages due to heavy snow or ice accumulations, damaged trees, school closings and traffic accidents. From 2002 to 2010, Rutland County experienced \$1.1 million in property and crop damages from winter storms (State HMP 2013). There have only been two winter storm related federally declared Disasters in the county (the ice storm of January 1998 – DR 1201, and the severe winter storm of December 2000 – DR

1358). Historically, the winter storm of December 1969 brought record snowfall amounts and snowdrifts to Vermont, and later freezing rain caused prolonged power outages (Dipugny-Giroux 2002: 26).

Hazard History - Snow and Ice Storms

March 12, 2014: Snow began across Vermont around dawn on March 12th and fell heavily at times during the afternoon through overnight hours into the morning of March 13th before ending. In addition to heavy snowfall accumulations, strong northeast-north winds with gusts to 35-40 mph at times caused considerable blowing and drifting of the snow. Pittsford received 22 inches of snow total.

February 13-14, 2014: Snow began to overspread southern Vermont during the mid-morning hours of February 13th, not reaching the Canadian border until the evening commute. There were two bands of heavy snowfall, snowfall rates of 1-2+ inches an hour, that moved across the region. The first band moved across southern and eastern Vermont during the afternoon hours of February 13th and again during the early morning hours of February 14th. Pittsford received 22 inches of snow from this storm.

December 27, 2012: Snow overspread Vermont from south to north between between 8 pm and Midnight of December 26th and fell heavily at times (snowfall rate of 1-2 inches per hour) throughout the day before diminishing during the evening hours, ultimately dropping 10 inches of snow on Pittsford.

February 23, 2010: A heavy wet snow fell across Vermont that resulted in snowfall accumulations of 6 to 30 inches with the higher amounts in the higher terrain of central and southern Vermont. The weight of the heavy snow accounted for widespread power outages across the region that resulted in upwards of 50,000 customers without power

December 11-12, 2008: Precipitation began and predominantly fell as freezing rain across southern Vermont from late afternoon of the 11th through the morning of the 12th. Snow began across central and northern Vermont during the night of the 11th, then changed over

Town of Pittsford Local Hazard Mitigation Plan

to freezing rain, freezing drizzle, and sleet across central and northern Vermont early on December 12th, before it changed back to a brief period of snow prior to ending around midday. Combined snow and sleet accumulation in central and northern Vermont ranged from 5 to 9 inches along with a glaze coating of ice. Ice accumulation across southern Vermont ranged from one quarter to one half an inch.

February 26-27, 2008: Snow overspread Vermont during the morning of the 26th and continued through the afternoon hours of the 27th before tapering to scattered snow showers by evening.

Snowfall accumulations across Vermont were 6 to 12 inches with localized amounts around 15 inches in favored northwest slopes. In addition, brisk northwest winds of 15 to 25 mph with higher gusts created blowing and drifting snow.

April 16-17, 2007: “Noricanne”—A mixture of snow and rain overspread the area during the late morning of the 15th and eventually the precipitation changed to snow as the intensity of the precipitation increased during the afternoon and continued into the early morning hours of the 16th, before gradually ending by mid-morning on the 16th. The heaviest precipitation and largest snowfall totals were across the east-facing higher terrain of the Green mountains, while the least amounts occurred in the valleys on the west side of mountainous regions. Snowfall totals were generally 4 to 7 inches in the valleys with locally up to a foot along the east-facing slopes of the higher elevations of the Green mountains. This was a heavy, wet snow that caused numerous power outages, as well as extremely slick and treacherous roads that resulted in numerous vehicle accidents. Pittsford in particular received 4 inches of precipitation and 53 mph winds.

December 6-7, 2003: Snow developed across the area by late morning on December 6th, and became steady and heavy during the afternoon and evening. Another burst of heavy snow occurred overnight of December 6th into early Sunday, December 7th. Snow accumulations were generally between 12 and 18 inches across Rutland County

January 7, 2002: A storm system moved up the east coast during Sunday, January 6, 2002. It reached Long Island, NY Sunday evening and then moved northeast into the Gulf of Maine Monday morning, January 7th. Snow began around 6 PM on the 6th of January, and reached heavy criteria around 1 AM on the 7th of January. Heavy snow fell during the night, with accumulations by morning between 6 and 15 inches.

¹**Impact:** The effect of the hazard on people and property, including infrastructure damaged, fatalities, and dollar value of damage.

Wildfires and Forest Fires

(State HMP 2013: 4-82)

A wildfire is the uncontrolled burning of woodlands, brush, or grasslands. Wildfires can be a result of naturally occurring influences such as lightning, extreme drought and heat, and human influences such as a discarded cigarette butt, improperly extinguished campfire, or a stray spark from nearby railroad tracks. The potential for threat of wildfires is dependent upon topography and slope, surface fuel characteristics, recent climate conditions, current meteorological conditions, and fire behavior. According to FEMA, there are four categories of wildfires that can occur throughout the United States:

1. *Wildfires*: Fueled by natural vegetation; typically occur in national forests and parks, where federal agencies are responsible for fire management and suppression.
2. *Interface or Intermix Fires*: Urban wildfires in which vegetation and the built environment provide fuel.
3. *Firestorms*: Events of such an extreme intensity that effective suppression is virtually impossible; occur during extreme weather and generally burn until conditions change or the available fuel is exhausted.
4. *Prescribed Fires and Prescribed Natural Fires*: Fires that are intentionally set or selected natural fires that are allowed to burn for beneficial purposes.

The Rutland Region is heavily forested, particularly in the mountainous areas. Many towns have reported incidences of forest fires, particularly during periods of dry conditions, but in the last half century no major wildfires/forest fires or damages

due to such have been reported in the region. However, drought conditions in 1999, 2000, 2001, 2005, and 2012 led to a statewide burning ban to reduce the risk of fire. The risk of wildfires and forest fires is considered to be statewide, with the exception of built-up areas like Rutland City (State HMP 2013: 4-83). Most recently, the Vermont Wildland Fire Program Annual Report for Calendar Year 2013 showed that statewide 125 fires were reported totaling 273 acres. This included a 22.5 acre woods fire in Pittsford and a 4.5 acre woods fire in Benson, both in April of 2013.

Forest fires are possible in the forested area of town during late summer and early fall. The forests contain potential fuel for a serious conflagration, though typically the timber is not very dry so it doesn't spread very fast or far. However, in the 1950s, a wildland fire on Fire Hill lasted two weeks. In the past, fires have been handled with local resources, including mutual aid.

Town of Pittsford Local Hazard Mitigation Plan

Hazard History- Wildfires

Date	Event	Location	Impact ¹
2011	Forest Fire	Mountain top fire at LaBrake Road	Several acres burned. Mutual Aid event.
2005	Forest Fire	Fire Hill Road	30 acres of private forest burned. Mutual Aid Event

¹**Impact:** The effect of the hazard on people and property, including infrastructure damaged, fatalities, and dollar value of damage.

Draft

6. Hazard Mitigation Strategy

The high risk hazards and vulnerabilities identified in the previous section of this plan directly inform the hazard mitigation strategy outlined below, which the community will strive to accomplish over the coming years. The mitigation strategy chosen by the town includes the most appropriate activities to lessen vulnerabilities from potential hazards.

6.1 Mitigation Goals

The hazard mitigation committee discussed mitigation goals, and recognized that due to the significant impacts of Tropical Storm Irene in 2011 the town now puts a higher priority on flood mitigation. The committee identified the following as the community's main mitigation goals to reduce or avoid long-term vulnerabilities to identified hazards

- Reduce the loss of life and injury resulting from all hazards.
- Mitigate financial losses incurred by municipal, residential, industrial, agricultural and commercial establishments due to disasters.
- Reduce the damage to public infrastructure resulting from all hazards, especially flooding and fluvial erosion.
- Encourage hazard mitigation planning as a part of the municipal planning process.
- Encourage the adoption and implementation of existing mitigation resources, such as River Corridor Plans and Fluvial Erosion Hazard Maps, if available.
- Recognize the connections between land use, storm-water road design and maintenance and the effects from disasters.
- Ensure that mitigation measures are sympathetic to the natural

features of community rivers, streams and other surface waters; historic resources; character of neighborhoods; and the capacity of the community to implement them.

6.2 Existing Authorities, Policies, Programs and Resources

The hazard mitigation plan is one of several plans and policies that influence local land use decisions. The town's ongoing and recently completed hazard mitigation authorities, policies, programs, and resources are listed below. These programs illustrate the community's capabilities regarding hazard mitigation, and show the town's commitment to incorporating mitigation into other planning mechanisms. The mitigation planning process is continual, and as new issues arise the town will incorporate new information into local plans and other documents as appropriate.

Insert list/narrative of town's existing mitigation efforts/programs, adapted from Annex

Flooding: The town has adopted standards for upgrading culvert size and bridge dimensions when work is done on those structures. The town has done a significant amount of work on these in the past few years due to a sizable bond that was passed and does not have any major priority projects outstanding at this time beyond maintenance and upkeep.

Hazardous Materials: Town fire department is well-staffed and trained. Access to materials for dealing with HazMat is available through OMYA and mutual aid.

Fire protection: Pittsford is the only town in our region with a waiting list for fire

Town of Pittsford Local Hazard Mitigation Plan

volunteers. The 40+ member force holds a successful fundraising event each year that helps pay for equipment and operations. A second fire station is located at OMYA to serve that business as well as other facilities on the west side of town. This helps ensure that flooding of Otter Creek doesn't restrict fire protection in that area.

Vulnerable populations: Town fire works closely with school and Village Manor to conduct evacuation drills and other emergency procedures. The town has access with notice to school buses, which are now stored at Otter Valley Union High School in Brandon.

Power loss: Town office, town garage, police academy and fire station all have back-up generators in place. Additional generators are available to assist with emergencies in town in the event of extended power loss. The Public Safety Training Facility is an approved Red Cross shelter, which is well-equipped for emergency situations.

Communications: Town has purchased new radios and an alert siren to enhance communications, and conducts regular monthly testing.

Town Policies and Programs that Mitigate Hazards

Existing Policies/Plans	Description	Opportunities for Improvement
Municipal Plan	Last adopted in 2012	Mitigation actions from this plan should be incorporated into the next Town Plan update.
Land Use Bylaws	Last adopted 2010	
Local Emergency Operations Plan	Adopted 5/6/2015	
Road Maintenance Programs	Culvert Inventory, Fall 2015. Winter Maintenance Program, 2012.	
Flood Hazard Area Regulations	Adopted 2008. The town's zoning administrator works with the Planning Commission to implement the floodplain ordinance.	
Road and Bridge Standards	Adopted 2/20/2013	
Source Protection Plans	Summer 2015	
Community Protection	Police Department, formed in 2011, adopted the Police Academy Manual. The Town participates in Table Top Exercises for Chittenden Dam.	

6.3 National Flood Insurance Program Compliance

The National Flood Insurance Program (NFIP) is a voluntary program organized by FEMA that includes participation from roughly 20,000 communities nationwide and the majority of Vermont towns and cities. Through floodplain mapping and floodplain management at the municipal level, NFIP participation makes affordable flood insurance available to homeowners, renters, and businesses, regardless of whether they are located in a floodplain.

As a participant in the NFIP, a community must adopt regulations that:

1. Require any new residential construction within the 100 year floodplain to have the lowest floor, including the basement, elevated above the 100 year flood elevation. The community must maintain a record of all lowest floor elevations or the elevations to which buildings in flood hazard areas have been flood proofed;
2. Allow non-residential structures to be elevated or dry flood proofed; and
3. Require anchoring of manufactured homes in flood prone areas.

The town joined the NFIP in 1988. Currently there are 32 structures in town located in the Special Flood Hazard Area, and 6 of those structures are covered by flood insurance. There are no structures in town deemed by FEMA to be repetitive loss properties. For the community's continued compliance with NFIP requirements, the following actions will be taken (these NFIP compliance actions are also included in the Mitigation Actions and Projects table, with prioritization scores):

- Insert NFIP compliance actions (such as identifying local fluvial erosion zones and how the zones support existing local flood hazard ordinances and land use bylaws to reduce building damage; making NFIP, insurance and building code information available to local public; participate in State or FEMA training that addresses flood hazard planning and management)

6.4 Other Incentives for Flood Mitigation

Vermont's Emergency Relief Assistance Funding (ERAF) provides state funding to match federal Public Assistance after federally-declared disasters. Eligible public costs are generally reimbursed by federal taxpayers at 75%, and the State of Vermont will contribute an additional 7.5% toward the costs. For communities that take specific steps to reduce flood risk the State will increase its contribution to 12.5% or 17.5% of the total cost:

12.5% funding for eligible communities that have adopted four mitigation measures:

1. National Flood Insurance Program participation;
2. Town Road and Bridge Standards;
3. Local Emergency Operations Plan; AND
4. Local Hazard Mitigation Plan

17.5% funding for eligible communities that *also* have:

1. FEMA's Community Rating System (CRS) participation; OR
2. Fluvial Erosion Hazard (FEH) or other river corridor/flood plain protection bylaw that meets or exceeds the Vermont Agency of Natural Resources

Town of Pittsford Local Hazard Mitigation Plan

FEH model regulations and scoping guidelines.

The town currently qualifies for 7.5% ERAF funding since it has completed these actions: Adopted the 2013 road and bridge standards, adopted the town's local emergency operations plan, and joined the National Flood Insurance Program.

Draft

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6.5 Mitigation Actions and Projects

The town’s hazard mitigation committee discussed the mitigation strategy, reviewing projects from the last plan and considering

1. **Prevention:** Land use bylaws, open space preservation, building codes, etc.
2. **Property Protection:** Acquisition, relocation, elevation, flood-proofing, etc.
3. **Public Education & Awareness:** Website with maps, public outreach programs, real estate disclosures, etc.
4. **Natural Resource Protection:** Green storm water infrastructure, low impact development bylaws, protection of steep slopes, etc.
5. **Emergency Services Protection:** Protect critical facilities, warning

new actions for the town to pursue from the following categories:

- capabilities, and infrastructure; generators for critical facilities; etc.
- 6. **Structural Projects:** Culvert upsizing, bridge upsizing, floodplain restoration, etc.

Each potential project was considered regarding the benefits it would provide to the town, and the costs required for implementation— resulting in an overall Benefit-Cost Score which is included in the mitigation actions and projects table, with the highest scores indicating the most benefit and least cost. Mitigation actions and projects proposed in this plan should undergo more rigorous benefit-cost analysis by the town before action is taken.

Benefit. <i>Benefits include protection of life and property, increase in public safety, damage reduction and / or prevention.</i> 3 = Fulfills all benefits listed above. 2 = Mostly fulfills benefits listed above. 1 = Fulfills only 1 or 2 benefits listed above.	Cost. 3 = Less than \$25,000. 2 = \$25,000 - \$100,000. 1 = Over \$100,000	Implementation. <i>Consider the technical feasibility as well as the political/social acceptance of the project.</i> 3 = 6 months or less. 2 = 6 months to 1 year. 1 = Over 1 year
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The following mitigation actions and projects are future mitigation strategies identified for the community. Note that the municipality will make every effort to maximize use of future Public Assistance Section 406 Mitigation opportunities when available during federally declared disasters.

Implementation Score
 Consider how technically feasible the project is as well as how socially/politically acceptable it is.

- 3 = Under 6 months.
- 2 = 6 months to one year
- 1 = Over one year

Mitigation Actions and Projects

Vulnerability: Flooding of Bridges and Low Lying Areas

Flooding of the West Creek River along can cut off access to Elm Street, West Creek Road, and the Cooley and Gorham bridges. This is not only a problem for residents who wish to access their home or who wish to flee the area in a major storm, but it also causes problems for emergency vehicles that need to gain access.

Priority	Mitigation Action	Local Leadership	Funding Resources	Target Start/Target End
High	Culvert Upsizing on Fire Hill Rd and Chittenden Rd. The current culverts are not large enough to handle storm flows, and will be replaced with box culverts.	Select Board. Highway Foreman	VTrans Structures Grant	May 2016-September 2016
High	Culvert Upsizing on Fire Hill Road and Chittenden Road. Many culverts will need to be replaced with box culverts.	Select Board. Highway Foreman	VTrans. HMGP	May 2017-September 2017
Moderate	Replace the bridge in the town's recreation area. The footings and abutments of the bridge are too close together, and therefore the bridge constricts the flow of water in Sugar Hollow Brook. This constriction speeds up the flow of the water and causes erosion.	Select Board	HMGP	June 2019 – September 2019
(Preparedness Action) Plantings along the Sugar Hollow Brook, to lessen the impact of the erosion caused by the narrow bridge (discussed above)				

Vulnerability: Power Outages to Homes and Critical Facilities

Priority	Mitigation Action	Local Leadership	Funding Resources	Target Start/Target End
High	Generator for the Waste Water Treatment Plant. This plant uses the same electric that the Water Department Offices use. Therefore, a generator would not only keep the Waste Water treatment plant open but it would also keep the water department offices open. This has public health implications, and is viewed as a critical mitigation action by the town.	Water and Sewer Commission	HMGP	September 2015 – April 2016

Vulnerability: Vulnerable Populations – the elderly and children

Priority	Mitigation Action	Local Leadership	Funding Resources	Target Start/Target End
	(Preparedness Action). Emergency Contact “op-in”. Create a smart phone alert system that would notify residents of impending storms. This would be advertised especially to vulnerable populations – the elderly and childcare providers.	Town Manager, Town Web Host		2016/2017

Table of the Benefit Cost Analysis for the Mitigation Actions

Project	Benefit. <i>Benefits include protection of life and property, increase in public safety, damage reduction and / or prevention.</i> 3 = Fulfills all benefits listed above. 2 = Mostly fulfills benefits listed above. 1 = Fulfills only 1 or 2 benefits listed above.	Cost. 3 = Less than \$25,000. 2 = \$25,000 to \$100,000. 1= Over \$100,000	Implementation. <i>Consider the technical feasibility as well as the political/social acceptance of the project.</i> 3 = 6 months or less. 2 = 6 months to 1 year. 1 = Over 1 year	Score
Bridge Replacement	1.5	2	3	6.5/9
Culvert Upsizing	3	1	3	7/9
Generator	2	3	3	8/9

*Any culvert and bridge replacements will be subject to the State Stream Alteration Permit, as these are Vermont’s ‘codes and standards’. Therefore, all culvert ‘replacements’ described in this plan inherently anticipate upsizing the structure where appropriate to ensure resiliency

Acronyms

- AFG Assistance to Firefighters Grant
- AOT Vermont Agency of Transportation
- BBR Vermont Better Back Roads Program
- CDBG Community Development Block Grant
- DEMHS Vermont Division of Emergency Management & Homeland Security
- EOC Emergency Operations Center
- FMA Flood Mitigation Assistance Program
- HMGP Hazard Mitigation Grant Program
- HRRR High Risk Rural Roads Program
- HSU Vermont Homeland Security Unit
- MPG Municipal Planning Grant
- PDM Pre-Disaster Mitigation Program
- RC&D Resource Conservation and Development
- USDA United States Department of Agriculture

7. Plan Maintenance Process

This hazard mitigation plan is dynamic. To ensure that the plan remains current and relevant, it is important that it be monitored, evaluated, and updated periodically.

7.1 Monitoring and Evaluation

The plan will be evaluated and monitored annually at an April Selectboard meeting along with the evaluation of the town's Local Emergency Operations Plan (LEOP). The town Emergency Management Director (EMD) will lead this effort. This meeting will allow the Selectboard and EMD, along with the public, to monitor the town's progress in implementing mitigation actions, identify future activities, and update the plan as needed; as well as evaluate the plan by discussing its effectiveness at accomplishing the mitigation goals identified in it. A large component of this meeting involves having the Selectboard and EMD check in with the lead agencies on each of the identified mitigation actions in section 6.5 of this plan to monitor the progress made on each project.

7.2 Updating

The State Hazard Mitigation Officer is available to work with the town on updating its plan. Town officials will work to incorporate elements of this hazard mitigation plan into other local planning mechanisms, such as the municipal plan, zoning regulations, flood hazard bylaws, etc. This plan will be thoroughly updated at a minimum every five years in accordance with the following procedure, which will include revision of all aspects of the plan:

1. The Selectboard will appoint the EMD/other town official to convene a meeting of the hazard mitigation committee. The

EMD/other town official will chair the committee, and other members should include local officials such as Selectboard members, fire chief, zoning administrator, constable/police chief, road commissioner, Planning Commission members, health officer, as well as representatives of other organizations such as businesses, historical society, etc.

2. Data needs will be reviewed by the committee, data sources identified, and responsibility for collecting information will be assigned to members. The committee will also discuss incorporating mitigation requirements into other planning mechanisms, such as comprehensive or capital improvement plans.
3. A draft report will be prepared by the committee based on the following evaluation criteria and in conformance with the FEMA Region 1 *Local Mitigation Plan Review Tool*.
 - Changes in community and government processes, which are hazard-related and have occurred since the last review.
 - Progress in implementation of plan initiatives and projects.
 - Effectiveness of previously implemented initiatives and projects.
 - Evaluation of unanticipated challenges or opportunities that may have occurred between the date of adoption and the date of the report.
 - Evaluation of hazard-related public policies, initiatives and projects.

Town of Pittsford Local Hazard Mitigation Plan

- Review and discussion of the effectiveness of public and private sector coordination and cooperation.
4. The Selectboard will review the draft report. Consensus will be reached on changes to the draft.
 5. Changes will be incorporated into the plan. The draft plan will be made available for public comment, by posting at the town office and on the town website. Any public feedback received will be addressed appropriately in the plan.
 6. The plan will be submitted for review to the State Hazard Mitigation Officer (SHMO), and any SHMO comments will be addressed in the plan.
 7. The plan will be submitted for review to FEMA Region 1, and FEMA comments will be addressed in plan until FEMA Approval-Pending-Adoption (APA) is achieved.
 8. The Selectboard will notify and schedule a public meeting and the hazard mitigation committee will prepare a presentation.
 9. A public meeting will be held where the public will review the plan update.
 10. The Selectboard will adopt the plan and distribute to all relevant parties and post on the [town/RRPC](#) website.
 11. The final adopted plan (with adoption certificate) will be

submitted to FEMA Region 1 for final approval.

7.3 Continued Public Participation

Maintenance of this plan and implementation of the mitigation strategy will require the continued participation of local citizens, agencies, neighboring communities, and other organizations. To ensure that all relevant parties have the opportunity and means to participate in the planning process, the town will take the below measures to increase citizen participation in hazard mitigation. In each case where the plan is publicized, it will be made clear as to how citizens can access plan drafts and submit feedback regarding the plan (for example, the provision of a plan draft on the town's website with an online form to submit plan comments).

- Provide hazard mitigation information at Town Meeting, and at other community events such as farmer's markets, etc. Gather feedback on risks, vulnerabilities, hazard history, and mitigation strategies.
- Post the hazard mitigation plan on the town website and at the town office.
- Selectboard will review past hazard mitigation committee members and consider whether new members should be added. Representatives of local businesses, nonprofits, academia, etc. should especially be considered.
- Notify the public of committee meetings through town bulletin boards, newsletter, newspaper, website, Front Porch Forum, other social media, etc.
- Circulate a town-wide survey regarding citizen's ideas and information on hazard mitigation.
- *Etc. etc. etc.*

¹**Extent:** The strength, magnitude, or characteristics of the hazard (potential worst case scenario) regardless of the people and property affected.

²**Impact:** The effect of the hazard on people and property, including infrastructure damaged, fatalities, and dollar value of damage (potential worst case scenario).

³**Probability:** Likelihood of hazard occurring based upon past events.

High: Near 100% probability in any given year.

Medium: 10% to 100% probability in any given year (at least once in the next 10 years).

Low: 1% to 10% probability in any given year (at least once in the next 100 years).

Draft

APPENDIX A- Certificate of Adoption

CERTIFICATE OF ADOPTION
Town of Pittsford, Vermont
Selectboard

A Resolution Adopting the Town of Pittsford, Vermont Local Hazard Mitigation Plan

WHEREAS, the Town of Pittsford has worked with the Rutland Regional Planning Commission to identify natural and human-caused hazards, analyze past and potential future damages due to disasters, and identify strategies for mitigation of future damages; and

WHEREAS, the Town of Pittsford, Vermont Local Hazard Mitigation Plan analyzes hazards and assesses risks and vulnerabilities within the community; and

WHEREAS, the Town of Pittsford, Vermont Local Hazard Mitigation Plan recommends the implementation of actions specific to the community to mitigate against damage from hazard events; and

WHEREAS, the Town official will be responsible for annually monitoring and evaluating the Plan, and updating this Plan at least every five years; and

NOW, THEREFORE BE IT RESOLVED that the Town of Pittsford adopts the Town of Pittsford, Vermont Local Hazard Mitigation Plan.

Duly adopted this _____ day of _____, _____.

Chair of Selectboard

Member of Selectboard

Member of Selectboard

ATTEST

Town Clerk

Draft

Draft

APPENDIX D- Areas of Local Concern Map

Note: If possible, zoom in on any more developed areas for a more readable/detailed map inset.

Draft

APPENDIX E- Documentation of the Planning Process

Resolution

Resolved that the Pittsford Select Board hereby endorses the Hazard Mitigation Planning process and hereby appoints the following individuals to serve on a Committee to assist the Town Manager in preparing a single jurisdictional Local Hazard Mitigation Plan, through public meetings wherein public input is solicited.

~~Emergency Management Coordinator Odell Johnston,~~

Fire Chief Thomas Hooker

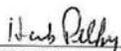
Police Chief Mike Warfle

Highway Foreman Shawn Erickson

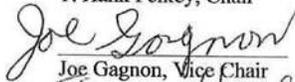
Patricia Lewis, Town Resident

~~Helen M. Pelkey, Town Resident- Clerk~~

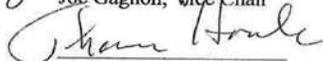
Resolved on this 7th day of January, 2015.



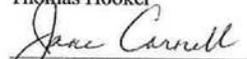
T. Hank Pelkey, Chair



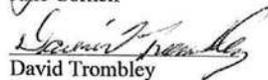
Joe Gagnon, Vice Chair



Thomas Hooker



Jane Cornell



David Trombley

Meeting #1
July 29, 2015

Pittsford Local Hazard Mitigation Plan Committee

Sign in Sheet

Name	Affiliation(s)	Email
Thomas Hooker	Pittsford Fire Dept	T.Hooker@pittsfordvt.com
J Michael WARBLE	Pittsford Police Dept	Policechief@pittsfordvt.com
Helen McKinlay	Pittsford Town Clerk & Treasurer	clerktreasurer@pittsfordvt.com
John Horenstich	Town	manager@pittsfordvt.com
Chad Euger	Pittsford Highway	
Trish Lewis	Regional & local Planning	solfire@phoenix-farm.com

Meeting #2
August 26, 2015

Pittsford Local Hazard Mitigation Plan Committee

Sign in Sheet

Name	Affiliation(s)	Email
John Haverslock	Town of Pittsford	manager@pittsfordvermont.com
J MICHAEL WANKLE	Pittsford Police	policechief@pittsfordvermont.com
Chad Eugair	Highway Dept. Pittsford	
Helen McKinlay	Town Clerk	clerktreasurer@pittsfordvermont.com
Trish Lewis	Pittsford Planning ^{Regional}	solfire@phocstarm.com

Meeting #3
September 10, 2015

Pittsford Local Hazard Mitigation Plan Committee

Sign in Sheet

Name	Affiliation(s)	Email
John Haverstock	Town of Pittsford	Manager@pittsfordvermont.com
J Michael Warfle	Pittsford Police	Policechief@pittsfordvermont.com
Chad Eugair	Highway Dept. Pittsford	
Monika Gengler-Katzer	RRPC	monika@rutlandrrp.org

Draft