Town of Brandon Vermont
Local Hazard Mitigation Plan

FEMA Formal Approval Date: November 3, 2017

Prepared by the Brandon Hazard Mitigation Committee:

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With Technical Assistance Provided by the 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 Brandon 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 Brandon, 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:

High risk populations within Brandon include:

- Three Elderly Housing Facilities
  - Conant Square Inn (near post office): 19 units
  - Neshobe House: 25 units
  - Park Village—housing facilities (training school): 39 units in one building and 34 units in the other.
- Day Care Centers

The Agency of Human Services—Social and Rehabilitation Services lists 12 registered homes for child care and 6 licensed providers. The location of these centers is not identified by the Agency of Human Services, although contact information for each is provided.

  - Children's Growth Company—Park Village

The Wastewater Treatment Facility, located on Union St, along the Neshobe River, is vulnerable to flooding

Forest Dale is vulnerable to flooding

The houses on Newton Road, as well as the road itself, are vulnerable to flooding.

Downtown Brandon, where the town offices are located, is vulnerable to flooding, should a storm overwhelm the new overflow culvert.

Vulnerable Critical Infrastructure include the Wastewater Treatment Plant, the Champlain St Pump Station, and Newton Rd pump station. These infrastructure are vulerable to flooding.

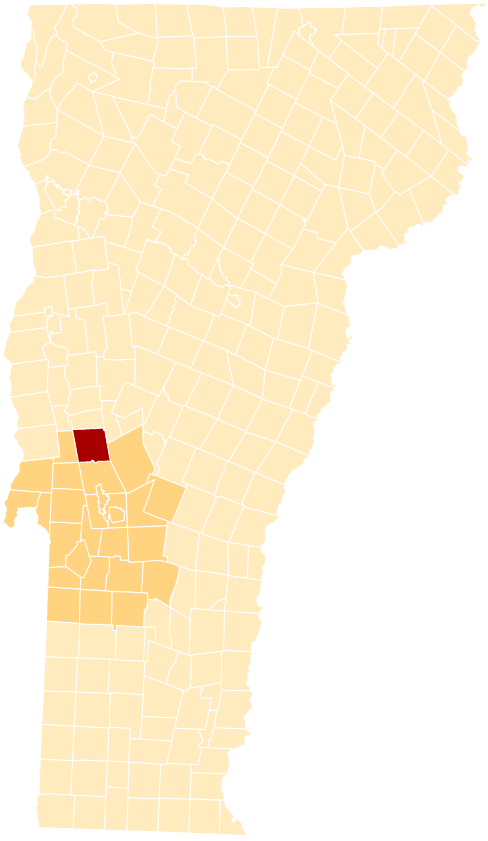
3 Community Background

Land Use and Development Patterns

Brandon's landscape is one of extremes. Elevations range from 357 feet to a peak of 2,345 feet. The southwest corner of the town is dominated by the northern range of the Taconic Mountains. The south-central and western portions of town fall within the Otter Creek Valley. The most dominant physical feature is the ridgeline of the Green Mountains that forms Brandon's eastern boundary. Especially within the Green Mountains, slopes can exceed 25%. In the higher elevations, surface runoff is high, and restoration of vegetative cover is slow, making these environments extremely fragile.

Brandon has the fourth largest population in the region. This residential base supports a full range of services—several industries, as well as a variety of shops and services. Outside of Brandon's two developed villages—Brandon Village and Forest Dale—wooded and open lands, wetlands and other habitat abound.

The Downtown of Brandon contains a distinct, historic downtown area that straddles the Neshobe River, with greens, churches, municipal buildings, stores, offices, restaurants and inns. A second, long standing cluster of development exists northeast of downtown in Forest Dale, where a few manufacturing businesses, the elementary school, churches, senior center, two general stores and residences are found. A third development cluster can be found northwest of downtown, at the old Brandon Training School site, which is now planned and developing into a mixture of business and residential uses, adjacent to an industrial park. Surrounding these clusters is generally open, rural and forested land with residential development, including home occupations and some dispersed non-residential uses. Agriculture is also a part of the Brandon landscape. There are 3 dairy and 2 vegetable farms remaining in the Town.



Although Brandon serves as a "sub-regional center" that exerts a market pull over a multi-town area, a large portion of the Brandon workforce commutes out of town to work.

Demographics and Growth Potential

According to 2007 population estimates by the U.S. Census Bureau, Brandon's total population is 3,917 equaling a little more than 6 percent of the region's overall population and making Brandon the 4th largest town in the region. However, similar to the rest of the region, historical growth rates within Brandon are slow, sometimes showing a slight decrease in population (for example, a decrease of –7.2% between 1990 and 2000).

For the past decade, the rate of growth (as reflected in number and types of zoning permits requested) has been fairly consistent, ranging between 110 and 180 permit requests per year, although the past three years have seen a minor slow-down, with no year topping 130 applications; most applications are for residential uses. Generally, growth has been strongest in the residential market. Significant growth is not anticipated within the foreseeable future.

Precipitation and Water Features

Precipitation in Brandon is typical of the rest of the region. The mountains feed a number of streams and rivers in the valley area. Of these, the Otter Creek and Neshobe River have designated floodplains by FEMA.

Water and Sewer Supply

Domestic water is supplied in the villages of Forest Dale and Brandon by Fire District # 1. The district employs a full-time manager to administer the water

system. Currently there are three supply wells, with an estimated capacity of 630 gallons/minute, 450 gallons/minute, and 700 gallons/minute respectively.
The water supply is stored in a variety of facilities, one being a 928,000 gallon glass-lined storage tank which was installed in 1989, a 500,000 gallon earth-covered concrete reservoir, and a 750,000 gallon water tower. The combined storage facilities, excluding the water town, hold a three-day supply of water. Since the water supplies available are well in excess of current demand, major expansions to the service area are not planned (but extensions to serve pockets of land or development near existing lines is considered).

The Town of Brandon owns and operates a secondary sewage treatment plant located south of Brandon Village and East of Union Street. Treated effluent is discharged into the Neshobe River. Sludge from the treatment beds is trucked to Rutland City. This system serves an area in and around Brandon Village, and also serves Forest Dale Village and surrounding areas. While the plant has more than enough capacity under normal operating conditions, heavy rains can overload the plant. Storm water runoff overloads the plant and has resulted in solid waste overflows/releases.

Transportation
Highways constitute the most significant component of Brandon's existing transportation system. US 7, a principal arterial, is the most heavily traveled road in Brandon, as it serves the entire western side of the State for long distance, "through" traffic as well as local trips. Of Brandon's highways, US 7 has the highest traffic volume, of approximately 10,000+ daily trips. VT 73 sees 2,000-4,000 daily trips on average, while town highways show much lower volumes, often less than 1,000 average daily trips. There are 70.5 miles of roads in the Town of Brandon, 12.9 miles of which are State highways.
Brandon has a total of 22 bridges, 11 over 20 feet long and 11 less than 20 feet long. Under new Federal regulations, any bridge 20 feet or over is eligible for Federal funding assistance. Bridge 114 on US 7 continues to be of concern to the Town. Should the bridge close during a disaster, an alternate route does not present itself. The bridge is old and repairs are beyond the town's means.

Emergency Management
Fire protection in Brandon is provided by the Brandon Fire Department, an all volunteer organization of 30 active members. A system of fire hydrants is maintained within Fire District # 1, which provides a high degree of firefighting effectiveness. Radial distance traveled from the fire station during an emergency is approximately three miles. The department is capable of reaching the outermost point in Brandon within four to six minutes. Equipment of the Fire Department includes two 1,000 GPM pumpers, one 750 GPM pumper, one van with fire fighting equipment, 15 back packs, a port-a-saw, a 2,100 gallon portable tank, as well as rescue equipment (spreader, cutter, air bags). The Brandon Fire Department is a member of the Rutland County Fire Mutual Aid, as well as the Addison County Fire Mutual Aid system.

The Brandon Police department, consisting of a chief, a Lieutenant, five full time and some part-time officers, provides protection services. The Police Department has seven cruisers. The Rutland County Sheriff's Department is presently under contract to provide coverage in Brandon as well. Additional coverage is provided by the Vermont State Police from Rutland and Middlebury. Communication and dispatching is handled through State Police dispatch in Rutland. Calls for local and State police assistance are received and transmitted from this station by either radio or phone. The Town also has 2 Constables.

The Brandon Area Rescue Squad serves the towns of Brandon, Leiscester, Sudbury and Goshen. The agency has approximately 30 full-time active members, all volunteers, who are on-call 24 hours a day, seven days a week. The nearest hospital is the Rutland Regional Medical Center.

Brandon's Fire Department, Public Works, Police and Rescue are all equipped with base, mobile and portable radio communications.

Emergency Management Planning
Brandon has a Basic Emergency Operation Plan (EOP), which is kept up to date. This plan will be reviewed, amended if necessary and adopted by the Selectboard on an annual basis. This plan provides a standardization of procedures and an outline of responsibilities for the protection of the residents of Brandon. It also provides a listing of all sites in the town with hazardous materials, with contact information.

4 Planning Process

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

Updating the Plan

RRPC staff discussed updating the plan with town officials in Brandon in June 2017, when the Brandon Zoning Administrator attended one of the LHMP Resource Meetings at RRPC on June 7, 2017. The town formed an LHMP committee. A thorough update of data was conducted by RRPC staff. 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.

Local and Public Participation

The hazard mitigation committee meetings were publicly warned in the following locations: RRPC and Town of Brandon office bulletin boards, and the RRPC and Town of Brandon websites. Each meeting provided an opportunity for public discussion, questions, and comments on the plan.

The first committee meeting was held on August 8, 2017 in Brandon at the Brandon 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 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.

The second ad third committee meetings were held on October 5 and October 6, 2017 respectively, at the Brandon 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.

A 14 day public comment period for the draft plan was held from October 4 - 20, 2017. 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 C for notice). The following neighboring towns planning commissions and emergency management directors were invited by email to review and comment on the plan: Sudbury, Hubbardton, Pittsford, Killington, West Haven, Leicester, Goshen, and Whiting . These organizations were also emailed regarding the public comment period: Poultney Mettowee and Rutland Natural Resources Conservation Districts.

All entities (surrounding towns, town residents, and local organizations) were told to mail, phone in, or email comments to Elysa Smigielski, RRPC, and/or town of Brandon. No comments were received during the entire update process.

Also, it should be noted that all of the HazardMitigation Actions in this plan (except for the ones pertaining to zoning updates), are also included in the VERI Report. The VERI Report and the corresponding mitigation actions were vetted by the Brandon Community at numerous public meetings, including the final meeting in March 2015, at which 20 members of the community ranked and scored the mitigation actions. That input was taken into consideration in this plan.

The draft plan was then submitted to DEMHS hazard mitigation planning staff for review. Required and recommended revisions received from DEMHS 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 for review. Upon receiving FEMA's Approval-Pending Adoption (APA) status, 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.

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. This plan is a single jurisdictional local hazard mitigation plan.

There has not been a change in the town's mitigation action priorities between this plan update and the 2012 plan. All plans, including this one, have placed flooding mitigation as the highest town priority, as flooding is the highest and most prevalent risk hazard in the town.

The town will incorporate the hazard mitigation concepts and actions from this plan in to their next town plan update, slated for 2018. The Hazard Mitigation Committee is unsure of incorporaton of mitigation actions and concepts from the 2004 plan, since all members of the committee obtained their town positions after 2011 and therefore were not involved in the previous mitigation action plan development.

Recent development in town over the past decade has included the construction of single family homes. In a typical year, the Town of Brandon will see 2-3 new residential houses built – and they have always been built outside of the floodplain.

Commercial development in Brandon includes infill development - where new businesses will locate themselves in existing structures.

While there is not a lot of new construction activity in town, there is a lot of rehabilitation of exisiting structures.

The strict flood regulations adopted by the town in 2011 ensure that all new construction, infill construction, and rehabilitation of sturctures complies with flood mitigation measures, and that the construction/ development reduces the vulnerability of the structures to floods.

Thus, development has not made the town more vulnerable, since development has not occured in flood zones or other hazardous areas.

The hazard mitigation actions from 2004 are located in Appendix D.

Additional Resources

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:

The Vermont Economic Resiliency Initiative (VERI) Report for Brandon, VT. Compiled by the VT Agency of Commerce and Community Development in July 2015

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)

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 Local Hazards and Vulnerabilities Map produced for the town (see Appendix B), review of existing data, and information provided by local officials and stakeholders. Whenever possible, the issues identified below are represented on the map in Appendix B.

Local Vulnerabilities

The vulnerabilities identified in Section 2 of this plan drive this hazard mitigation plan and the town's mitigation strategies, in order to reduce potential losses in the community.

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 (i.e. Drought, Extreme Temperatures, Earthquakes, Hurricanes and Tropical Storms, Ice Jams, Landslides and Rockslides, Tornadoes, and Wildfires and Forest Fires) in the community are not profiled in detail in this plan. For more detailed information on these hazards, please consult the State Hazard Mitigation Plan. Despite the overwhelming impact that Tropical Storm Irene had on the Town in 2011, tropical storms are not profiled in this plan due to the low incidence and low probability of the high winds that are usually associated with Tropical Storms. If and when Brandon is affected by a tropical storm, the effect on the town is flooding, and therefore flooding caused by Tropical Storms is covered in the flooding profile.

Hazard	Probability[1]	Impact[2]	Risk Level[3]
Climate Change	*	*	*
Drought	Low	Low	Low
Earthquakes	Low	Low	Low
Extreme Temperatures	Low	Low	Low
Floods and Fluvial Erosion	High	High	**High**
Hurricanes and Tropical Storms	Low	Moderate	Low
Ice Jams	Low	Low	Low
Landslides and Rockslides	Low	Low	Low
Thunder and Wind Storms/Hail	High	High	**High**
Snow and Ice Storms	High	High	**High**
Tornadoes	Low	Low	Low
Wildfires and Forest Fires	Low	Medium	Low

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

High Risk Hazard Inventory*

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, and snow and ice storms – 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.

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). The town does not have a high incidence or high probability of ice jams.

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

*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.

Storm Irene, which dropped up to 10-11 inches of rain in some areas of Rutland County (State HMP 2013: 4-61). Although the storm was technically a tropical storm, the effects of the storms are profiled in this flooding section, due to the fact that the storm brought only large rainfall and flooding to the town, not the high winds typically associated with tropical storms. This caused most streams and rivers to flood in addition to severe fluvial erosion.

Flooding is the greatest risk to the Town of Brandon, as the Neshobe River has experienced numerous major flood events. The town experienced extensive damage along the Neshobe River when it flooded in 1927, 1938, and 2011. According to the VERI report, the town has several repeat flood damage sites along the Neshobe River: the Wastewater Treatment Facility, Newton Rd, Union St, and the downtown area (Center St and Conant Square). The town has experienced some spring time flash flooding, and it has also experienced fluvial erosion along Wheeler Rd. Wheeler Rd is currently undergoing a bank stabilization, to prevent further erosion.

In late May 2017, the town completed an overflow culvert project in the downtown. This overflow culvert proved to be a success when it diverted high storm flows through the downtown during the July 1, 2017 flooding event.

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. 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). 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, and the resulting damages usually takes form in uprooted trees, downed power lines, and crop damage.

The town is not as vulnerable to thunderstorms/ windstorms as it is to flooding. Typically towns' vulnerability to thunder and windstorms are power outages. The town could be vulnerable to a power outage caused by a thunder/wind storm, however, should a wind event knock down a tree and disrupt power service to the Town Office. Violent windstorms are possible here. Most windstorms result in downed trees, damaged phone and power lines, and crop losses. Should a wind affect the power lines in the downtwon center, power disruption could affect all or many of the public buildings/critical facilities: the churches, library, schools, town office, post office, and/or fire station. The powerlines are situated behind these buildings, as are the trees, making the power lines vulnerable to downed trees. **The town has reduced its vulnerability to power outages by having numerous generators in town. There are generators in the Neshobe School (a designated shelter), the American Legion (a designated shelter), the waste water treatment plant, the highway dept, and the fire dept. The town is currently seeking a generator for the Town Office.**

Winter 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).

The town is not as vulnerable to snow and ice storms as it is to flooding. Typically towns' vulnerability to snow and ice storms are power outages and loss of road accessibility. However, the town could be vulnerable to a power outage caused by ice/wet snow accumulation on power lines or trees falling on powerlines due to weight of ice accumulation in a storm, especially if the outage disrupts power service to the Town Office. Also, snow accumulation has not made the town vulnerable to loss of road accessibility. The town's fleet of snow plows has ensured that roads – especially Route 7 – are accessible, even in major snow accumulation events. Should a snow and/or ice storm affect the power lines in the downtown area, power disruption could affect all or many of the public buildings/critical facilities: the churches, library, schools, town office, post office, and/or fire station. **The town has reduced its vulnerability to power outages by having numerous generators in town. There are generators in the Neshobe School (a designated shelter), the American Legion (a designated shelter), the waste water treatment plant, the highway dept, and the fire dept. The town is currently seeking a generator for the Town Office.**

Hazard History

Extent Impact

Floods

7.1.2017: Heavy rained caused flooding. Causing more than $500,000 in damage in Brandon.

8.28.2011: Tropical Storm Irene. Causing more than $800,000 in damage in Brandon.

2.13.2008: Flash flooding in Forest Dale , Causing $100,000 in damages in town

7.24.2003: Flash flooding in Forest Dale , Causing $25,000 in damages in town

Spring 2003: The Otter Creek flooded due to snowmelt five separate times. Cumulative damages were approximatley $19,000.

April 1993 -March 2003: Rt 73 closed for a week or two every winter and/or spring due to Otter Creek flooding

4.1.1998: Otter Creek flooded, causing $10,000 in damages in town

6.13.1996: Flash flooding, causing $10,000 in damages in Brandon

6.28-30.1973: 6 inches of rain and flooding.

3.21.1936: First flood due to rain and snowmelt, plus second flood due to intense rainfall. Statewide damages ~$1 million.

11.3.1927: Statewide flooding. 5-10 inches of heavy rainfall on frozen ground. Statewide damages: $35 million including 1,000+ bridges, hundreds of miles of roads and railroad, and 84 deaths.

Thunderstorms and High Winds

7.22.2016: Thunderstorms, hig wind, and hail. Caused $15,000 in damage in Brandon.

6.27.2008: Thunderstorms and high winds. Caused $10,000 in damage in Brandon

8.16.2007: Thunderstorms and high winds. Caused $75,000 in damage in Brandon

6.27.2007: Thunderstorms and high winds. Caused $10,000 in damage in Brandon

4.16.2007: Thunderstorms and high winds. Caused $25,000 in damage in Brandon

6.29.2004: Thunderstorms and high winds. Caused $5,000 in damage in Brandon

6.15.2002: Thunderstorms and high winds. Caused $5,000 in damage in Brandon

3.28.2000: Thunderstorms and high winds. Caused $3,500 in damage in Brandon

6.13.1996: Thunderstorms and high winds. Caused $5,000 in damage in Brandon

Winter Storms
12.9.2014: 10-20 inches of snow.
3.12-13.2014: Winds with gusts to 35-40 mph . 8-24 inches snow
12.26.2012: Snowfall rate of 1-2 inches per hour. Accumulations between 6-18 inches.
2.23.2010: 6 to 30" snow
1.2.2010: Snow
12.11.2008: Combined snow and sleet accumulation in central and northern Vermont ranged from 5 to 9 inches along with a glaze coating of ice.
4.15-16.2007: "Nor'icane"—A mixture of snow and rain . winds of 60 to 80 mph. 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, hundreds of downed trees and power lines as well as extremely slick and treacherous roads that resulted in many vehicle accidents.
2.14.2007: 30" snow.
12.6.2003: 12 and 18 " of snow

Hazard Summary

Flooding
Location: town-wide, but especially along the Neshobe River in Forest Dale and in downtown Brandon, and along the Otter Creek at Rt 73

Vulnerable Assets: Houses, bridges, culverts, wells, pump stations, businesses.
Extent: Tropical Storm Flooding: Up to 7" of rain (Tropical Storm Irene). The Neshobe River jumped its banks in downtown Brandon, and the downtown had 6' of flooding.
Riverine Flooding: Otter Creek floods every spring and floods Rt 73
Flash Flooding: Data currently Unknown

Fluvial Erosion: Bank erosion along Wheeler Rd

Impact: Up to $800,000 in damage caused to houses and infrastructure (Tropical Storm Irene, 2011)

Probability: High

Thunderstorms and High Winds
Location: town-wide
Vulnerable Assets: houses, trees, powerlines, roads
Extent: Golf ball sized hail (1"), high winds (up to 80 mph)
Impact: Up to $75,000 in damages caused to houses and infrastructure (August 16, 2007 storm)
Probability: High

Winter Storms
Location: town-wide
Vulnerable Assets: houses, trees, powerlines, roads
Extent: Up to 22" of snow. Up to 0.5" ice
Impact: The Public Works Director estimates that each major snow storm causes $15,000-20,000 of damages. These snow storms include the December 2014, march 2014, December 2012, February 2010, and February 2007 storms.
Probability: High

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.

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.

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.

Town Capabilities

There are seven salaried persons working for the town, including the the town manager, clerk, zoning administrator, highway foremen, and the economic development director. The town has over seventy hourly employees. The planning commission and select board members are all volunteers. The town's annual town budget is $2.9 million.

Because Brandon is limited in new growth, the existing capabilities of the town handle most issues easily. However, the town does not currently have a capitol improvement plan. The town has ackowledged the potential benefits of adopting such a plan, like planning for new equipment and for infrastructure repairs. The town does not always have the capacity to take on new grants and update policies and plans, but the town does have the capacity to contract with the RRPC, to have RRPC assist with grant writing and policy writing.

With regard to mitigation action implementation, the Town has existing capabilities within the Public Works Department to undertake the replacement of culverts and bridges. The Public Works department routinely works closely with the RRPC to apply for and implement Better Roads Grants and culvert inventories. The Town Manager also has the ability to seek grant funding for assistance with mitigation action implementation. The Town Manager, Public Works Director, and Administrator to the Town Manager have worked closely and developed a strong partnership for the purpose of applying for mitigation related grants. This partnership took hold during TS Irene, guided the town through FEMA funded rehabilitation construction projects, and continues to this day. This trio is capable of leading the town through current and future mitigation grants and projects, including the mitigation

action projects listed in this plan. However, up until 2015 the town had a full time staff member who was a Certified Flood Plain Manager. This is a skill that would be desirable to have again in town.

Flooding: The town has increased its flood reduction efforts since the flooding events of TS Irene. Since 2011, the town has raised a section of Union St, stabilized the eroding bank of Wheeler Rd, constructed an overfolw culverrt in downtown, mitigated flooding on Rt 73, and revised zoning to make the flood regulations more strict. In addition to accomplishing the mitigation action projects in this plan, the town should also seek the opportunity to collaborate with RRPC, DEC, ANR, and numerous private funders such as the High Meadows group to increase flood resiliency outreach in the town and increase flood resiliency education to town residents.

Fire protection: There are 30 volunteer fire fighters in Brandon. The station is outfitted with two full class A pumpers, a tanker, a 75' aerial, a utility pickup, and an ATV. The village is protected with a hydrant system. The Fire Department also has 1/2 mile of hose that allows them to extend the area of protection 1/2 mile past the last hydrant.

Vulnerable populations: The town has an elementary school, a high school, numerous senior centers, and one children's center. These vulnerable populations are noted in the town's Local Emergency Operations Plan, and the town has protocol for assisting these populations in the event of flood or power outage.

Power loss: The town receives its power from Rutland City and Middlebury. Power outages in the town typically only span 8-10 hours. The number of generators in the town helps lessen the impact of power outages.

Communications: The fire station has radios for the station and all trucks. Verizon is the predominant cell servicer in the town, and the entire town has cell coverage. Forest Dale is the only area that sometimes has spotty cell service.

Town Policies and Programs that Mitigate Hazards

Municipal Plan: The Town Plan was last adopted in February 22, 2016

Opportunities for Improvemet: Town should contract with the Rutland Regional Planning Commission for assistance with the town plan update.

Land Use Bylaws: Adopted April 10, 2017

Opportunities for Improvemet: The town should adopt final river corridor bylaw langauge into the zoning regulations as soon as possible

Local Emergency Operations Plan: Last adopted on April 10, 2017

Opportunities for Improvemet: Town should collaborate with Emergency Management Planners at Rutland RPC on the LEOP update.

Flood Hazard Area Regulations: Re-Adopted November 21, 2011

Opportunities for Improvemet: The town should continue to work with RRPC to ensure that the regulations are up to date at all times.

River Corridor Regulations: Interim Status

Opportunities for Improvemet: The town should continue to work with the RRPC to discuss options related to this regulation. The town should adopt final river corridor language as soon as possible.

Road and Bridge Standards: Adopted on April 8, 2013

Opportunities for Improvemet: No improvement needed at this time.

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 1978. Currently there are 66 structures in town located in the Special Flood Hazard Area, and 15 of those structures are covered by flood insurance. Four of those structures are critical facilities. There are 5 structures in town - homes along Newton Road - that are deemed by FEMA to be repetitive loss properties. The town's EMD , the town manager, and the Zoning Administrator enforce NFIP compliance.

The town has discussed the following actions as possible actions the Town could take to continue NFIP compliance:

1. Distribute literature to residents on flood insurance
2. Adopt river corridor protection language in to the flood hazard regulations bylaw.
3. Ensure that flood plain and river corridor maps are kept up to date, by requesting mapping assistance from the RRPC.

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/floodplain protection bylaw that meets or exceeds the Vermont Agency of Natural Resources 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.

Mitigation Actions and Projects

The town's hazard mitigation committee discussed the mitigation strategy, reviewing projects from the last plan and considering new actions for the town to pursue from the following categories:

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

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.

Mitigation Action Priority Scoring

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.

Also, the priority levels indicated in the Mitigation Actions and Projects table take in to account the scores in the Benefit Cost Analysis table, as well as the determination by the hazard mitigation committee of the need for the project. The Benefit Cost analysis table was therefore used as a tool to analyze, discuss, and determine the need and suitability of each project. Therefore, a project may have received a low scoring number in the table, but the committee may have deemed the project important and granted it a high priority.

A project deemed to have a high priority is a project that the hazard mitigation committee identified as: physically possible in the timeframe noted, financially possible with the funding mechanisms noted, and of high importance with regard to hazard mitigation. Projects scored with a medium priority typically were missing one of the attributes identified above, and projects scored as low priority were missing enough attributes to be deemed either low possibility or of low importance.

Worksheet for Calculating Each Mitigation Action's Benefit to Cost Ratio

Benefits

Benefits include protection of life and property; increase in public safety; and damage reduction / prevention.

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 $75,000
2 = $75,000- $500,000
1 = Over $500,000

Implementation

Consider the technical feasibility as well as the social/political acceptance of the project.

3 = 6 months or less
2 = 6 months to a year
1 = over a year

Mitigation Actions and Projects

Vulnerability: Flooding of Bridges and Low Lying Areas

Replace Rt 53 Bridge. The Rt 53 bridge over the Neshobe River in Forest Dale is undersized, (it does not accomodate all floods), and should be replaced with a larger span to reduce risk for bridge closure, damage to surrounding property, and impacts to local businesses due to bridge closure. The project will significantly reduce flood and erosion risk affecting two businesses with nine employees, a state highway that is a major connector, and several private residences.

Who: Public Works Dirctor. Town Manager When: 2018-2019 How: HMGP, VT Structures Grant Priority: High

Replace Wheeler Rd Bridge. The abutments for the Wheeler Road Bridge over the Neshobe River are in poor condition and the bridge is undersized (it does not accomodate all floods). This project will significantly reduce flood and erosion risks along Wheeler Rd and Vt Route 73, helping ensure this critical throughway is kept open during floods.

Who: Public Works Director. Town Manager When: 2019-2020 How: HMGP, VT Structures Grant Priority: High

Stabilize or Relocate Wastewater Treatment Facility. Brandon's businesses are highly dependent on a functioning Wastewater Treatment Facility (WWTF), however flooding and erosion have negatively affected Brandon's WWTF for years. The WWTF is aging and major upgrades will be rquired in the near future, at which point steps to reduce flood risks should be considered in any proposed upgrades or planning of a new facility. This could include the reconnection of adjacent floodplains to take thepressure off the existing WWTF location, or the planning of a new facility in a different location outside of he flood hazard zones. This will ensure that the WWTF remains up and running after an event, ensuing businesses can remain open for employees and customers as this facility services over 1,000 residential and commercial connections.

Who: Select Board. Public Works Director. Town Manager When: 2021-2025 How: HMGP Priority: High

Revise Zoning to require that new development be built to BFE+ 2'.

Who: Select Board. Planning Commission When: 2018-2019 How: RRPC Assistance Priority: Moderate

Table of the Benefit Cost

Project	Benefits *Benefits include protection of life and property; increase in public safety; and damage reduction / prevention.* 3 = fulfills all benefits listed above 2 = mostly fulfills benefits listed above 1 = fulfills only 1 or 2 benefits listed above
Replace RT 53 Bridge	3
Replace Wheeler Rd Bridge	3
Stabilize/Relocate Waste Water Treatment Facility	3
Flood Proof Downtown Businesses	3
Remapping of FIRM	2
Remove Berms on RT 53	2
Buyouts on Newton Rd	3
Zoning Revisions	3

Revise Zoning to Ensure New Development will not be Vulnerable to Flooding or Erosion. This includes adopting State River Corridor Protection Language

Who: Select Board. Planning Commission When: 2018-2019 How: Assitance from RRPC Priority: Moderate

Floodproof Downtown Businesses. Multiple buildings in downtown Brandon were flooded during Tropical Storm Irene and one was destroyed. Flood risk may be lowered with the completion of the overflow culvert project, however some risk of flood damage will likely remain during extreme floods. Floodproofing projects (such as sealing off buildings to prevent water infiltration) would protect nine businesses and the town offices, protectng a total of 83 employees.

Who: Town Manager When: 2019-2020 How: HMGP Priority: High

Remove Berms Downstream of Route 53 in Forest Dale Historic berms along the south bank of the Neshobe River downstream of VT Route 53 in Forest Dale restrict the river's access to a forested floodplain in an areas of major flood flow and sediment transport. Berm removal would allow the river to access an undeveloped floodplain upstream of an area along Newton Rd, where homes were floodedd during Tropical Storm Irene and the July 1, 2017 flooding. This then reduces flooding and erosion risks and protects several homes and one business with five employees.

Who: Public Works Director. Town Manager When: 2018-2019 How: HMGP, VT Structures Grants Priority: High

Home Buyouts Along Newton Rd. Numerous homes along Newton Rd were flooded during Tropical Storm Irene and the July 1, 2017 flooding. Removing these homes entirely would prevent future repeat damage to these homes, and would create more floodplain access.

Who: Public Works Director. Town Manager When: 2017-2019 How: HMGP Priority: High

Remapping the Downtown Flood Insurance Rate Maps. The overflow culvert that was constructed in downtown Brandon in May 2017 changed the hydraulic capacity and flow of the Neshobe River, in the area where the river flows through downtown Brandon. This changes the floodplain in the downtown area, thus necessitating remapping.

Who: Town Manager When: 2020-2021 How: HMGP Priority: High

Analysis for the Mitigation Actions

Cost 3 = less than $75,000 2 = $75,000- $500,000 1 = Over $500,000	**Implementation** *Consider the technical feasibility as well as the social/political acceptance of the project.* 3 = 6 months or less 2 = 6 months to a year 1 = over a year	**Score**
1	1	5/9
1	1	5/9
1	1	5/9
1	3	7/9
2	3	7/9
2	2	6/9
1	1	5/9
3	3	9/9

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.

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 this plan to fill out the Mitigation Action Tracker Table below in an effort to monitor the progress made on each project.

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. The mitigation actions will be mentioned in these aforementioned plans, and the Planning Commission and Selectboard will ensure that the Town Plan and Zoning bylaws do not negate the mitigation actions of this plan. 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:

The Selectboard will appoint the EMD to convene a meeting of the hazard mitigation committee. The EMD 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.

Data needs will be reviewed by the committee, data sources identified, and responsibility for collecting information will be assigned to members.

RRPC planners will coordinate with the planning commission and select board when the town rewrites its town plan. RRPC planners will ensure that the mitigation actions from this plan are referenced in the town plan.

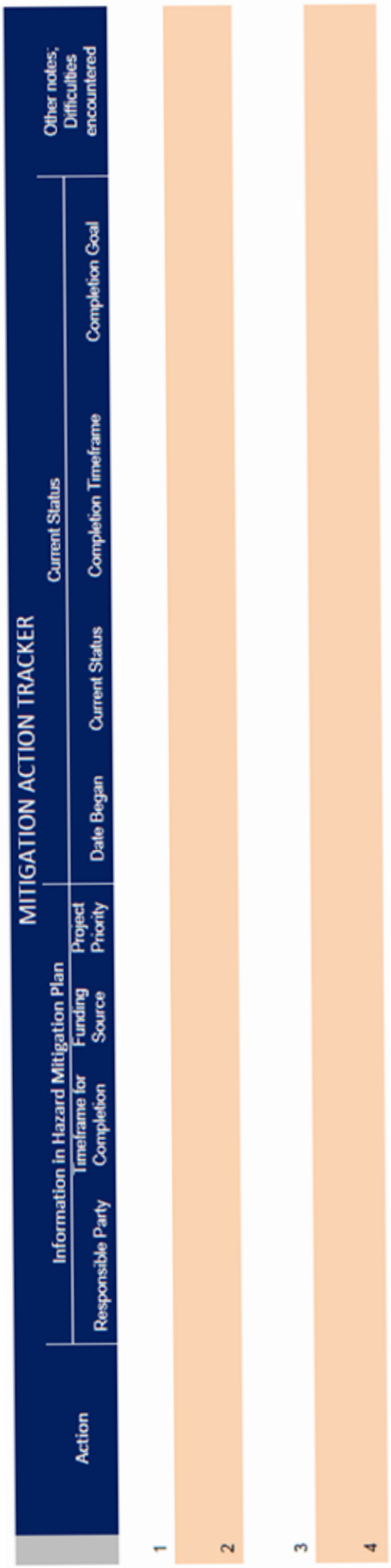
Continued Public Participation

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.

The plan will be posted on the town and RRPC websites, with directions to reach out to the town Select Board, town EMD, or RRPC planners with comments or questions.

The Mitigation Actions will be reviewed at Town Meeting, as a way to educate the residents on the hazard mitigation plan and to garner support for the budget for mitiation actions.

Mitigation Action Tracker Table



MITIGATION ACTION TRACKER									
	Action	Information in Hazard Mitigation Plan				Current Status			Other notes; Difficulties encountered
		Responsible Party	Timeframe for Completion	Funding Source	Project Priority	Date Began	Current Status	Completion Timeframe	Completion Goal	
1										
2										
3										
4										

Appendix A: Certificate of Adoption

CERTIFICATE OF ADOPTION
Town of Brandon, Vermont
Selectboard

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

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

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

WHEREAS, the Public Safety Director 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 Brandon adopts the Town of Brandon, Vermont Local Hazard Mitigation Plan.

Duly adopted this 2nd day of Nov, 2017.

Chair of Selectboard

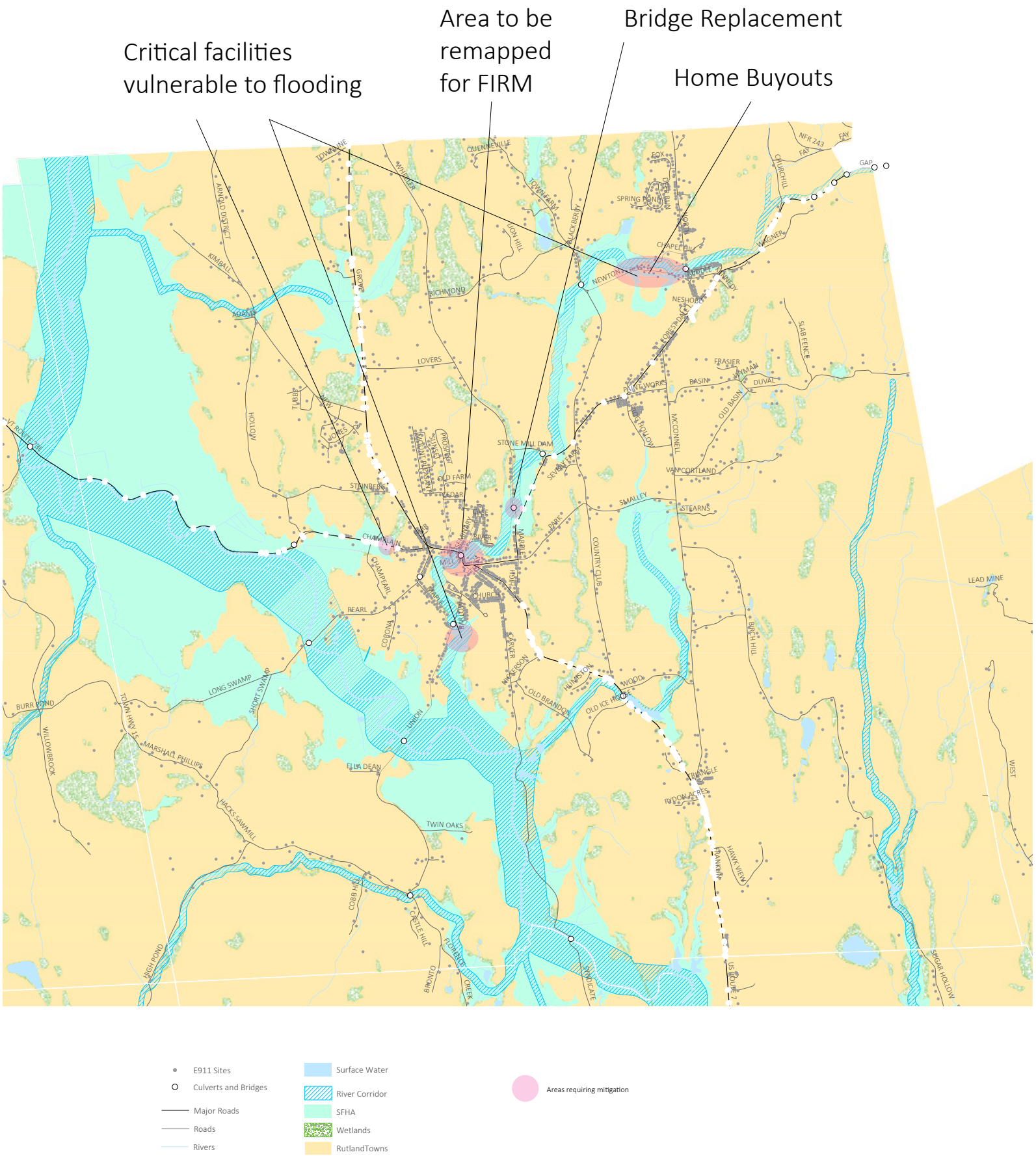
Member of Selectboard

Member of Selectboard

ATTEST

Town Clerk

Appendix B: Local Hazards and Vulnerabilities Map



Town of Brandon Local Hazard Mitigation Plan Public Comment Period

The Local Hazard Mitigation Plan is an all-hazards planning tool that includes mitigation actions and strategies to protect the towns from future flood and storm events. The draft plan is located in the Brandon Town Office, and the public may provide input through October 20, 2017. Comments may be submitted to Elysa Smigielski at the Rutland RPC: elysa@rutlandrpc.org / 802-775-0871, or to the Brandon Town Offices.

Appendix D: Mitigation Actions from the 2004 Plan

Purchase generator or back-up power system for Neshobe Elementary School.
Status: Complete

Relocate Town Offices out of flood hazard zone.
Status: Complete - flood proofed

Upon completion of Fluvial Geomorphic Assessments, contract with a GIS serve to create maps with property lines
Status: Complete

Increase capacity to fight large fires by upgrading/renovating municipal water infrastructure to address leaks in the system.
Status: In progress

Raising 500' section of Pearl Street above floodline
Status: Town raised a section of Union St

Address accident potential in village with Route 7 upgrade
Status: In progress

Fire Proof the Town Clerks Office
Status: All records are in a vault

Update contact information of sites harboring hazardous materials
Status: This is Tier Two reporting, not a mitigation action

Flood Proof Town Clerks Office
Status: completed

Examine current zoning and ensure that identified hazard areas are addressed.
Status: This is a maintenance project, not a mitigation action

Bridge 114 rehabilitation
Status: in progress

Address flooding and access problems on Rt. 73.
Status: complete

Examine current Town Plan and ensure that identified hazard areas and needed strategies are addressed
Status: This is a maintenance project, not a mitigation action

Incorporate proposed strategies into Annual Budget and Capital Improvement Plan
Status: This is a maintenance project, not a mitigation action

**** Please note that the priority scores for these actions are not shown here, as the priority ranking system from the 2004 plan is not compatible with the ranking system used in this plan.***