TOWN OF DANBY, VERMONT
LOCAL HAZARD MITIGATION PLAN

FEMA APPROVAL: JULY 12, 2016

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

Photos Courtesy: Bradley Bender

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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 all-hazards local mitigation strategy that makes the community of Danby 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.

Additionally, the Disaster Mitigation Act of 2000 (DMA 2000) establishes a national program for Hazard Mitigation that includes mitigation planning and eligibility requirements for state and local governments. The Act is aimed at reducing loss of life and property, human suffering, economic disruption and disaster costs. High priority should be given to mitigation of hazards at the local level with increased emphasis on assessment and avoidance of identified risks, implementing loss reduction measures for existing exposures and ensuring critical services/facilities survive a disaster.

Hazard Mitigation Strategies and Measures ***alter*** the hazard by eliminating or reducing the frequency of occurrence, ***avert*** the hazard by redirecting the impact by means of a structure or land treatment, ***adapt*** to the hazard by modifying structures or standards, or ***avoid*** the hazard by stopping or limiting development and could include projects such as:

- Flood-proofing structures
- Planting stream buffers
- Tying down propane/fuel tanks in flood-prone areas
- Elevating furnaces and water heaters
- Identifying and modifying high traffic incident locations and routes
- Ensuring adequate water supply
- Elevating structures or utilities above flood levels
- Identifying and upgrading undersized culverts
- Proactive land use planning for floodplains and other flood-prone areas
- Proper road maintenance and construction
- Ensuring critical facilities are safely located
- Buyout and relocation of structures in harm’s way
- Establish and enforce appropriate building codes
- Public information

2. PURPOSE

The purpose of this Hazard Mitigation Plan is to assist the Town of Danby in identifying all hazards facing the community and identify strategies to begin reducing risks from identified hazards.

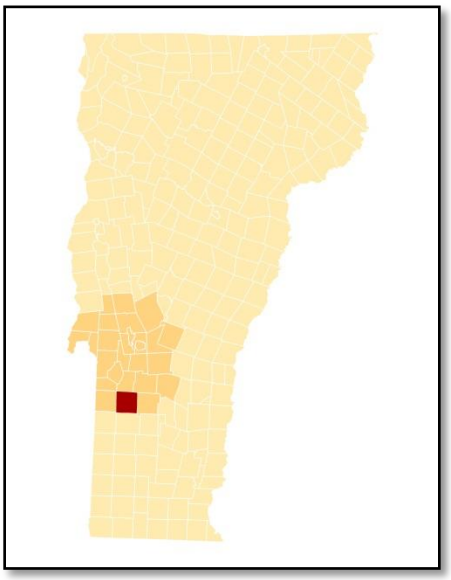
Adopting and maintaining this Local Hazard Mitigation Plan will provide the following benefits:

- 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 pre-disaster mitigation planning to community planning where possible.

3. COMMUNITY BACKGROUND

Land Use and Development Patterns

The town of Danby is predominantly rural with several concentrated pockets of development. Danby Village, also known as Danby Borough, is the largest population and commercial center in the community, and borders the Town of Mt. Tabor near US Route 7. Danby Four Corners, the second largest center and original settlement site, is in the approximate center of the town. Other concentrations of residents are in Scottsville, the West Side, and Quarry Hill.



Mineral extraction is a significant source of employment in Danby. The Danby Quarry in Dorset Mountain, south of the Village, has been in operation since 1906. Several small gravel pits are also in operation. Vermont Store Fixtures is a large employer in Danby. Agricultural activities, though in decline, remain important elements of the Town's landscape, as are silvicultural activities.

The Smokey House Center, an outdoor class classroom for at-risk teenagers and other Vermont youth, owns 1,000 acres of farmland and nearly 4,000 acres of forestland on Dorset and Woodlawn Mountains.

Permanent conservation easements have been placed on the highest elevation areas. Danby Village has a state Village Center Designation. This designation was reapplied for and received in September 2015.
Please refer to the Town Map (Appendix J) to see the development patterns and further information and to Section 6.3 for Changes in Development.

Demographics and Growth Potential

Danby's population has seen modest growth since 2000. Between 2000 and 2010, the population grew from 1,292 to 1,311, a 1.5% increase, and Danby ranks 15th in population among the Rutland Region's 27 communities. However, population growth is not projected for Danby in the foreseeable future. The median age in Danby is 44.2, which is considerably higher than the national mean of 37.2. Census 2010 identified 734 housing units in Danby, an increase of 87 (13%) since 2000. 19.0% of homes are limited to seasonal or occasional use.

During the plan update process, it was noted that no substantial changes in development patterns have occurred in Danby that would affect vulnerability or mitigation measures. Land use permit records do not exist because no zoning ordinance is in effect. No floodplain regulation permits have been issued in the past five years.

The Town of Danby adopted its Flood Hazard Regulations on June 5, 2008 which restricts development within Zones designated as "A" on Flood Maps. Furthermore, Danby has

participated in River/Stream Corridor planning which identifies recommendations from the Stream Geomorphic Assessment (SGA) for Flower Brook and Baker Brook/Upper Otter Creek to reduce the risk of fluvial erosion and flood damage. The SGA's Fluvial Erosion Hazard Zones will be incorporated into the town bylaws.

A Phase 2 SGA for Upper Otter Creek that includes Baker Brook completed in 2009 concluded that the watershed has been "significantly impacted by historic channel straightening and floodplain encroachment by railroad tracks, roads, and commercial and residential development. In response to these and other watershed stressors, the Upper Otter Creek is undergoing varying degrees of channel adjustment, predominately planform (or lateral migration), widening, and aggradation. In conclusion, the Danby, Wallingford, Rutland City, Rutland Town, Proctor, and Pittsford communities have the opportunity to provide long-term protection to the river corridor and encourage the reestablishment of functioning floodplain and healthy in-stream habitat through river corridor management, protection, and restoration."

Land Features

Danby is a mountainous town, located primarily within the Taconic Mountain range and stretching down to the Vermont Valley along the Otter Creek. Elevation ranges from 650 feet on the banks of the Otter Creek in the Vermont Valley to 3,750 feet at the peak of Dorset Mountain near the Dorset town border. The majority of the community – especially in the valleys – contains soils in the Paxton-Georgia-Amenia association common in the Taconic Mountains. These soils are generally very deep and moderately well drained. Where slopes exceed 15% or above 2,000 feet in elevation - including much of the southern and western parts of the town - the land is not able to support intensive development. In addition, all of the Town's woodlands are an important resource for aquifer recharge, plant and wildlife habitat, and recreation, as well as timber production.

Precipitation and Water Features

Precipitation in Danby is typical of the rest of the region with average annual precipitation in Danby recorded as 40-52 inches depending on elevation. Common winter snow storms deposit 2 to 12 inches of snow. The mountains feed a number of rivers and springs in the valley areas. Of these, Mill Brook, Flower Brook, and the Otter Creek have floodplains mapped by FEMA. Additional smaller brooks are not mapped but pose flooding and fluvial erosion hazards. In addition, Class II wetlands are found in the center of the town in the area surrounding Danby Pond. These play an important function in water absorption and holding capacity that thereby reduces the hazards of flooding and replenishes the groundwater supplies.

Water Supply

The majority of homes in Danby draw their water from springs and drilled wells. The exception to this is the Village, which is served by the Danby-Mt. Tabor Fire Volunteer Fire Company District 1 town spring. This system includes a source water protection area south of the Borough.

Sewer Services
All sewer services in Danby are served by individual on-site septic systems.

Transportation
US Route 7 provides the primary north-south access to Danby, with Danby-Pawlet Road serving as the main east-west route. The present network of 56 miles of roads in Danby serves the needs of current residents. The local road network is maintained by the town highway maintenance crew whose garage is located on Brook Road. Danby has a total of 37 bridges. Eight of those are state-owned and all eight are more than 20 feet in length. Under new federal regulations, any bridge 20 feet or over is eligible for federal funding assistance. All 29 of the town-owned bridges (includes culverts over 6 feet in length) are less than 20 feet long.

Emergency Response Resources
The Danby-Mt. Tabor Volunteer Fire Company, a private company, operates a primary fire station in the Village and a secondary station in Danby Four Corners. The Fire Company provides primary fire protection to both communities and has mutual aid agreements with towns in Rutland and Bennington Counties. In addition, the Fire Company performs search and rescue, vehicle extrication, and other emergency situations. The Village fire station is the focal point for many town events and serves as an alternative location for the elementary school in an emergency situation.

Law Enforcement in Danby is provided by a First and Second Town Constable, supplemented by the Vermont State Police as needed.

The nearest hospital is the Rutland Regional Medical Center. Ambulance service is provided by Manchester, Wallingford and Granville, NY Rescue Squads as needed.

Danby's emergency operations center is the Town Offices at 130 Brook Road in the Village and emergency shelters at the Danby Town Hall in Danby Four Corners, the Mountain View Baptist Church in Danby Four Corners, and the Congregational Church in the Village. Please refer to the Hazard Analysis map (Appendix H) for exact locations of the town's emergency operations center and emergency shelters.

The town's high risk populations have been identified as the Currier Memorial School in the Village, Otter Creek Campground on Rt. 7, and Home Daycare on Rt. 7.

Emergency Management Planning
Danby maintains an up-to-date Local Emergency Operations Plan (LEOP), last adopted in 2014, which outlines key local personnel to contact in the event of an emergency and lists emergency operations centers and town shelter sites. This plan is reviewed, amended if necessary, and adopted by the Selectboard on an annual basis.

4. PLANNING PROCESS

The Rutland Regional Planning Commission (RRPC) and the Town of Danby coordinated Danby's Local Hazard Mitigation Plan process. A Pre-Disaster Mitigation grant supported this process. Work on the update of the plan began in December of 2013 and continued until June of 2016.

RRPC staff discussed updating the plan with Town officials at a Selectboard meeting on December 12, 2013. The Danby Selectboard identified local officials and stakeholders to serve on a committee to review and update the plan and passed a motion in support of updating their Local Hazard Mitigation Plan. (Appendix B).

The hazard mitigation committee meetings were publicly warned in the following locations: Town of Danby website, RRPC website, the town bulletin board, and Facebook.

The following individuals participated in committee meetings:

Hazard Mitigation Committee Members

Name	Affiliation
Janice Arnold	Town Clerk
Charles Bush	Road Foreman
Tom Johnston	EMC; Danby-Mt. Tabor Fire Department
Dan Garceau	Selectboard
Kenneth Abbott	Fire Chief

In addition to the local knowledge of committee members and other stakeholders, the following documents and resources were consulted in the preparation of this plan update:

- 2010 U.S. Census data
- Special Flood Hazard Area/FEMA Flood Insurance Rate Maps
- National Climate Data Center
- State of Vermont Tropical Storm Irene GIS data
- Vermont Department of Transportation High Crash Location Report, 2006-2010
- Agency of Natural Resources Waste Management Interactive Database
- Vermont Fire Marshal's Reports, 2009-2014
- Agency of Natural Vermont Resources Natural Resources Atlas
- National Weather Service Recent Weather Events Summaries
- FEMA Disaster Declarations, 1990-2013
- Vermont Agency of Natural Resources Stream Geomorphic Assessment: Final Reports, 2014

Utilizing these 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 original development of the plan. The State of Vermont also recently adopted an updated Hazard Mitigation Plan in November of 2013 (Vermont HMP 2013), which was given consideration during this update.

The first committee meeting was held on January 22, 2014 at the Danby Town Office. Participants discussed the purpose and timeline for updating the plan, other groups/individuals that should be aware of the plan update, 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 an updated draft plan was developed by RRPC staff and circulated to committee members. The second and third committee meetings were held on February 27 and June 11, 2014 at the Town Office. Participants reviewed the draft LHMP, reviewed the town's policies and current mitigation actions, and identified mitigation goals and new mitigation projects.

The draft plan was submitted first to Northwest Regional Planning Commission (NRPC) on July 30, 2014 for review as part of the PDM grant agreement between RRPC and NRPC. Then the plan was submitted to the State Hazard Mitigation Committee through the State Hazard Mitigation Officer (SHMO) on August 4, 2014 for review and comment and required revisions were made on August 6, 2014. Required and/or recommended revisions were made in the plan by working with the town's hazard mitigation committee members on an individual basis.

On July 29, 2014, a 15-day public comment period was warned in the following locations: Rutland Herald, the RRPC website, RRPC offices, and in the Town of Danby. The following neighboring community planning commissions and local organizations were invited to review and provide feedback on the plan in person at the next Danby Hazard Mitigation Committee meeting or by phoning the Danby Selectboard: Tinmouth, Pawlet, Mt. Tabor, Wallingford, Wells, Rupert and Dorset as well as the Vermont Railway Network, the U.S. Forest Service, the Rutland-Southern Vermont Regional Airport and the Danby Quarries. No public comments were received (see section 7.3 Continued Public Participation for strategies the town will use to increase citizen engagement in future hazard mitigation efforts).

The plan was then submitted to FEMA Region 1 on August 14, 2014 for review. Required and recommended revisions were received from FEMA Region 1 on February 12, 2015. RRPC staff worked with town officials to make the plan revisions, until conditional FEMA approval was achieved on …and then the final plan was reviewed by the Wallingford Selectboard and adopted on …. The adopted plan was forwarded to FEMA Region 1 and the State Hazard Mitigation Officer, and final FEMA approval of the plan was granted.

4.1 Plan Update Process

The Danby Local Hazard Mitigation Plan was originally adopted by the Town as an Annex to the Rutland Region All Hazards Mitigation Plan in 2004 and received FEMA final approval in 2004. From 2007 to 2009, RRPC staff worked with the town to update the plan and submitted an update draft to FEMA in 2009; in March of 2011 FEMA returned comments on the plan, revisions were made by RRPC staff and the town, and the plan was resubmitted to FEMA in early August of 2011. FEMA returned comments again in September of 2011 and the plan was formally adopted in February of 2012.

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, stand-alone 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 updated plan is intended to be a single jurisdictional local hazard mitigation plan.

The Danby plan has been updated and reorganized with the following sections updated/added during the update process:

Section of Plan	Changes Made
Introduction	Information on the Disaster Mitigation Act added
Purpose	Benefits of plan listed
Community Background	Census data and other information updated
Community Disaster History	Section deleted and incorporated into Community Hazard Inventory and Risk Assessment section
Planning Process	Section moved from end of document, additional details on process including: names of individuals involved, meeting locations and dates, list of sections updated, and the status of the towns current mitigation actions (shown below)
Community Hazard Inventory and Risk Assessment	List of hazards was consolidated/changed as necessary, risk assessment table added, organized discussion into high and low risk hazards, hazard information from regional and state hazard mitigation plans added, local hazard information updated, tables added on hazard history and hazard summary for high risk hazards
Hazard Mitigation Strategy	Mitigation goals from Regional and State Hazard Mitigation Plans added, additional information on NFIP, mitigation actions and projects reviewed and updated, tables reformatted
Plan Maintenance Process	Added methods to continue public involvement
Appendices	Maps updated with new data, certificate of adoption added, materials added documenting the planning process

The following table provides an overview of Danby's current local hazard mitigation actions along with their status.

Current Local Hazard Mitigation Actions

Mitigation Action	Status
Increase fire prevention in Historic District through education, plus maintenance and addition of water sources firefighting equipment.	In Progress: Three training/month are occurring including both individuals and equipment
Upgrade town garage to prevent runoff of salt and sand and to relieve congestion that could pose hazard to residents using the transfer station or town office.	In Progress: Town officials looked into moving the building. They're now collecting quotes for upgrading it
Upgrade undersized culverts on Danby Mountain Road; eliminate double pipes	In Progress: 150 culverts are either too small or need replacing. Work proceeding as local funds allow
Complete buy-out acquisition of flood damaged mobile home on Danby-Pawlet Road	Completed: mobile home bought out in June 2014
Install emergency power generators at key sites in town such as designated shelters, fire stations, and EOC locations	In progress: one portable generator has been installed at the Fire Station. Fire officials are now looking to purchase a permanent generator there
Upgrade culverts as needed to accommodate high water flows.	In Progress: 150 culverts are either too small or need replacing. Work proceeding as local funds allow
Incorporate proposed strategies into Annual Budget and/or Capital Improvement Plan	In Progress: Town officials are in the planning stages to do both. First priorities will be repairs to Town Office and Town Garage
Examine current Town Plan and ensure that identified hazard areas and needed strategies are addressed	In Progress: the new Town Plan is being redone in 2014

Mitigation Action	Status
Restrict large trucks from certain town roads.	Removed: it has been determined that this is not a major issue
Follow recommendations in SGAs to address fluvial erosion hazards. Create Fluvial Erosion Hazard Zone	In Progress: waiting to hear from state of Vermont on how to proceed
Attend regular training sessions on floodplain management and flood regulations administration	In Progress: town officials are hoping to attend training sessions in the near future
Retrofit municipal buildings vulnerable to structural damage from wind and ice	In Progress: of immediate concern is the Town Garage roof. Town Office is the next priority

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 Hazards Analysis Map produced for the town (see Appendix H), 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 I).

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 footnotes). This assessment resulted in the categorization of High and Low-Moderate risk level hazards for the town. Following the Risk Assessment table is a brief discussion of Low-Moderate risk hazards, and then a more detailed discussion of High risk hazards including tables on Hazard History and Hazard Summary.

Community Hazard Risk Assessment

Hazard	Probability[1]	Impact[2]	Risk Level[3]
Drought	Medium	Moderate	Moderate
Earthquakes	Low	Depends on location	Moderate
Floods, Fluvial Erosion, and Ice Jams	High	Moderate	**High**

Hazard	Probability[1]	Impact[2]	Risk Level[3]
Hail	Medium	Minor	Moderate
Severe Thunderstorms	Medium	Minor	Moderate
Hurricanes	Low	Low	Low
Tornadoes	Low	Low	Low
Landslides and Rockslides	Medium	Moderate	Moderate
Wildfires and Forest Fires	Medium	Depends on location	Moderate
Snow and Ice Storms	Medium	Moderate	Moderate
Other hazards considered (Appendix F)			
Aircraft Crashes	Low	Minor	Low
Disease Outbreak	Low	Major	Moderate
Highway and Railroad Accidents	Medium	Major	High
Structure Fires	Medium	Major	High
Hazardous Materials, Radiological and Chemical/Biological Incidents	Medium	Major	High
Terrorism	Low	Minor	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.

5.1 Low and Moderate Risk Natural Hazards

Note that the low and moderate risk hazards that are not considered a major threat to the community – drought, earthquakes, hail, landslides & rockslides, hurricanes, severe thunderstorms, tornadoes, snow and ice storms and wildfires - are not profiled in detail in this plan (i.e. do not include extent data, and history and location information) due to low probability, low impact and minimal town resources.

Despite the overwhelming impact that Tropical Storm Irene had on the Town in 2011, tropical storms are not included 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 Danby 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.

Also, the hazard of extreme temperatures has been omitted from this plan as it is not considered a significant hazard in the town of Danby (despite its presence in the State of Vermont Hazard

Mitigation Plan). Extremely cold temperatures can accompany snow and ice storms which are addressed in this plan.

Information on low risk hazards is provided with the intent of supplying general information - **and not to meet the requirements of the FEMA Review Tool.** For more detailed information on these hazards, please consult the State Hazard Mitigation Plan.

Drought

There have been dry spells in Vermont and in the Region, though they are commonly moderate or mild. The last protracted drought in Vermont occurred between 1964 and 1966. More recently, two statewide droughts were declared in June and July 1995 due to lack of rainfall. The state also experienced severe drought conditions in the summer of 2003 (State HMP 2013: 4-76). When dry spells occur, individual water wells are often affected and agricultural producers experience the greatest impact. On the whole, these problems have been sufficiently dealt with on a town and individual basis.

Earthquakes

Vermont is considered to be an area with low to moderate seismic activity. The two strongest recorded quakes measured in Vermont were of a magnitude 4.1 on the Richter scale. One was centered in Swanton and occurred in 1943, and the second occurred in 1962 at Middlebury. The Swanton quake caused little damage, but the Middlebury quake did result in broken windows, cracked plaster and falling objects. Earthquakes centered outside the state have also affected Vermont. Two quakes of 5.5 magnitude occurred in New Hampshire in 1940. In 1988, an earthquake with a magnitude 6.2 was centered in Saguenay, Quebec and caused shaking in the northern two thirds of Vermont (State HMP 2013: 4-91).

Thrust faults can be found throughout the Rutland Region. These fault lines generally run north/south. On the western side of the region, a fault line cuts through the center of Benson and West Haven. Other fault lines are found in the central part of the region. One runs east/west through Pittsford, West Rutland, Ira, Middletown Springs, Tinmouth and Danby. A third is found that begins in Ira, crosses west to Poultney, and then south through Wells and Pawlet. On the eastern side of the region, two fault lines can be found crossing through the eastern portion of Killington. Despite the presence of these fault lines, there have been no incidences of reported damages due to earthquakes in this region.

Hail

On May 18, 2004 a broken line of strong to severe thunderstorms impacted parts of Rutland County in southern Vermont with large hail and damaging winds. A National Weather Service survey team determined the cause of the damage was from thunderstorm straight-line winds. On May 29, 2001, a Rutland County-wide hail storm was reported with ¼" hailstones (NCDC). 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.

Reported hail events often accompanied heavy thunderstorms and gusty winds. Property damages reported from the hail incidents have typically been associated with uprooted trees, downed power lines, and crop damages. 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.

Landslides and Rockslides

According to USGS maps, the central part of the Rutland Region has a low susceptibility to landslides with less than 1.5% of the mapped area likely to experience one. On the other hand, the eastern and western parts of the region have a high susceptibility to landslide events, and a moderate level of actual occurrences. These higher risk areas coincide with the Green Mountains and parts of the Taconic Mountain ranges. The far western part of the region is characterized by clay soils and the shores of some major lakes. Nothing found through research or interviews indicates a regional significance for this hazard, other than a 1983 landslide event that resulted in $11,300 in damages in Rutland (State HMP 2013: 4-89).

There are a couple of areas within Danby that have experienced landslides or erosion-related problems. In the case of Brook Road, which has been blocked by slides in the past, the town has blasted out part of the hillside to that slides no longer affect the road. A second spot, close to the Town Office, suffers from an erosion problem that damages the pavement of the road. The town has instituted a temporary measure to re-align traffic flow by moving the guardrail back. A longer term solution is needed, and the town has researched possible solutions such as shoring up the hillside with concrete footings.

Hurricanes

Hurricanes, including named tropical storms, also pose high wind hazards. For a discussion of the extensive damages that resulted from Tropical Storm Irene in 2011, see the Floods, Fluvial Erosion, and Ice Jams section.

Severe Thunderstorms

Severe thunderstorms are a threat to the Town of Danby. The National Climate Data Center and the National Weather Service list the following storms to affect Danby and nearby towns in recent years:

- August 2011: Strong thunderstorm with wind and reports of numerous trees blown down from West Pawlet to Danby.
- October 7-9, 2005: Heavy rain county-wide from the remnants of Tropical Storm Tammy with rainfall amounts between 3-4 inches.
- July 14, 2005: Severe thunderstorm and winds blew down power lines in Danby with $10,000 in damages reported.
- August 1, 2005: Severe thunderstorm and winds in Danby blew down power lines and $10,000 in damages were reported.
- September 27, 2002: Heavy rain county-wide from the remnants of Tropical Storm Isidore with rainfall amounts as high as 2".
- June 30, 2001: Thunderstorm and lightning county-wide with $5,000 damage reported.

Severe thunderstorms can produce high winds, lightning, flooding, rains, large hail, and even tornadoes (State HMP 2013). One severe thunderstorm struck eastern Vermont on July 6, 1999, downing hundreds of large trees in a few minutes. From 2004 to 2010, for thunderstorms that

caused more than $200,000 in damage, Rutland County experienced nearly $2 million in property damages.

Tornadoes

The state can also experience tornadoes that are capable of damaging or destroying structures, downing trees and power lines and creating injuries and death from collapsing buildings and flying objects. Tornadoes are less common than hail storms and high winds, but have occurred throughout Vermont. According to the National Climatic Data Center, from 1991 to 2010 Vermont experienced an average of one tornado each year (State HMP 2013: 4-55). Despite the low incidence of tornadoes within the Rutland Region, there have been numerous high wind events in the region, particularly in the towns bordering Lake Bomoseen and the mountain towns of the region.

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, and 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.

Downed trees and utility lines are the most common impacts. Green Mountain Power, the electric utility, typically responds quickly to outages, although residents should be prepared for several days without power. The town's road crew handles clearing downed trees in a timely fashion.

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 has only been one winter storm related Federally-declared Disaster (the ice storm of January 1998 – DR 1201). Rutland County was not included in that disaster declaration.

Wildfires

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.

Much of the forests in the eastern section of the region (including Danby) are within the jurisdiction of the Green Mountain National Forest. Should an uncontrolled wildfire occur, remote access would be difficult over mountainous terrain and this access issue increases what would be a relatively low risk to a moderate one. ATVs would be needed and water would have to carried in most cases. A wildfire could easily spread beyond the town boundary to other towns and could potentially lead to the evacuation of homesites/camps in the path of the fire. But, since most of the land in Danby is undeveloped forest land and since there are not dense clusters of development, impacts from a wildfire would likely be isolated and/or minor. Vulnerable assets in the town would include mostly trees and a few houses.

5.2 High Risk Hazards

A discussion of each significant hazard is included in the following subsections, and the Areas of Local Concern map identifies the location of these hazards (see Appendix I). 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.

Floods, Fluvial Erosion, and Ice Jams

Floods, Fluvial Erosion and Ice Jams History

Date	Event	Location	Impact[1]
August 2011	Flooding; FEMA Declared Disaster	Town-wide: Parker Road, Lilly Hill Road, Green Hill Road, Short Cut before Lily Hill Road, Danby-Pawlet Road, Jim Town Road, Scottsville Road, Danby Mountain Road, Keeler Road, Main Street, Brook Road, Bromley Road, Oaker Road	$197,775 in FEMA Public Assistance Funds. Mobile home and house destroyed; town-wide road, bridge and culvert damage
December 2000	Flooding; FEMA Declared Disaster	Town-wide	$116,235
January 1996	Flooding; FEMA Declared Disaster	Town-wide	$62,429
September 16-21, 1999 (DR 1307)	Tropical Storm Floyd	Statewide	No data
April 1-2, 1998	Flash flooding from spring flooding	County-wide	$10,000
March 29-30, 1998	Flash flooding from dramatic snowmelt and rapid rises on rivers	County-wide	$20,000
January 8-9, 1998	Flash flooding; rainfall amounts of 3-5 inches	County-wide	$5,000
June 28 –	Flooding and Fluvial	Statewide	Statewide damages

Date	Event	Location	Impact[1]
30, 1973	Erosion		estimated at $64 million
March 11-21, 1936	Flooding and Fluvial Erosion	Statewide	$1 million in damages in Vermont
November 3, 1927	Flooding and Fluvial Erosion	Statewide	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.

Flooding is by far the greatest hazard in Danby. Mapped flood hazard areas in town are limited to the Otter Creek and major streams floodplain, but the overall mountainous terrain can cause flooding and erosion along all waterbodies, damaging culverts and roads. Flooding, especially flash flooding, can impact areas in town that are located outside of designated floodplains, including along streams confined by narrow valleys. Fluvial Erosion refers to streambed and streambank erosion, often associated with physical adjustment of stream channel dimensions and location during flood events. The mountainous areas of town are especially vulnerable to erosion.

In Danby, road damage due to flooding usually occurs on narrow and steep roadways, low-lying roadways that follow a frequently flooded waterbody, or roads segments near curves in the river. Specific problem areas are listed below:

- Brook Rd— runs in a tight valley along the Mill Brook, crossing at several points and making several sharp turns
- Easy Street
- Danby Mountain Road
- Little Village Road
- Green Hill Road
- Colvin Hill Road
- Kelly Hill Road
- Lilly Hill Road

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, 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. As of the writing of this plan, the total amount of FEMA Public Assistance funds disbursed throughout Rutland County for Tropical Storm Irene is $11.8 million. FEMA has also disbursed Individual

Assistance payments of $1.6 million in home repair assistance, $303,317 in rental assistance, and $155,921 in other needs assistance throughout Rutland County (State HMP 2013).

Rain from Tropical Storm Irene totaled between 5 and 6 inches on August 27-28, 2011, causing significant damage to many roads and at least two homes. Flooding occurred on small streams as well as Otter Creek. Mill Brook in Danby Village destroyed one historic structure. A mobile home on western side of town was made unlivable when fluvial erosion undermined its foundation. Complete road repairs took multiple weeks; at least 8 roads sustained major damage. Although rainfall rates never exceeded 2 inches per hour, saturated ground conditions before the event directed all precipitation into surface waters causing immediate flooding. At Center Rutland, Vermont, the USGS gauge recorded a peak of 17 feet on the Otter Creek, which is 9 feet above flood stage. This gauge, the closest, is located approximately 20 miles downstream from Danby Village.

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.

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 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).

Three rivers in Danby have undergone Phase 1 Stream Geomorphic Assessment (SGA); Baker Brook, Mill Brook, and Flower Brook in 2005 and Phase 2 SGAs have been done for Flower Brook and a section of the Otter Creek and Baker Brook in 2009. These studies and plans are vital in determining river and stream alterations, which affect water flows and could potentially lead to future flood damage, and potential fluvial erosion hazard areas. The SGAs, which lead to future River Corridor Plans, suggest potential remediation actions

that can be taken to reduce the risk of future flood damage including, planting stream buffers, stabilizing stream banks, removing berms, removing structures and restoring incision areas.

Danby is in the process of conducting a town-wide culvert inventory to survey and report on the condition of all 500 culverts in town. The inventory is expected to be completed in 2014.

Hazards such as flooding which also are addressed in the town's Local Emergency Operation Plan will be incorporated into Danby's Town Plan as well.

Please refer to the Areas of Local Concern Map (Appendix I) for frequently flooded locations and the Hazard Analysis Map (Appendix H) for floodplain information.

Floods, Fluvial Erosion, and Ice Jams Summary

Hazard	Location	Vulnerable Assets	Extent[1]	Impact[2]	Probability[3]
Floods, Fluvial Erosion, and Ice Jams	**Town-wide**	Residences, roads, bridges, culverts along Baker and Mill Brooks; village center	Tropical Storm Flooding: Up to 8" of rain (In Tropical Storm Irene, 8" of rain fell in 12 hours). Fluvial Erosion: Between 5-10 acres affected (Tropical Storm Irene). Exact data is unavailable. Riverine Flooding: High water mark shows a water level of three feet above ground (1927 Flood). Spring Flooding: Flood waters will reach the top of the river banks and possibly spill over the	$197,775 in FEMA Public Assistance Funds. Mobile home and house destroyed; town-wide road, bridge and culvert damage	**Medium**

			top. Ice James: no data are available.		

[1]**Extent:** The strength, magnitude, or characteristics of the hazard 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.

[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).

5.3 Non-Natural Hazards

Non-natural hazards are not profiled in detail in this plan with history, extent, and location information. Information on non-natural hazards is provided with the intent of supplying general information - and not to meet the requirements of the FEMA Review Tool.

Aircraft Crashes

The Rutland-Southern Vermont Regional Airport (located just south of Rutland in Clarendon) generates some commercial and private air traffic, primarily jets and small aircraft. These types of aircraft carry small numbers of passengers and are not likely to cause a major catastrophe in the event of a crash, but nonetheless the associated fuel fires are something for which the region needs to be prepared. Also, since statistically speaking most crashes occur upon take-off and approach to an airport, the Rutland-Southern Vermont Regional Airport has taken a number of steps to improve visibility and other issues to increase the safety of these maneuvers.

In addition to traffic to and from this airport, there are reports of a number of low-flying, high-speed Air Force jets over parts of the region. There are also helicopters serving the hospital and other major facilities such as CVPS and VELCO. Again, the casualty count is likely to be low should one of these aircraft crash, but the related fuel fires are the biggest concern.

Dam Failure

Dams can fail for various reasons, including structural failure, poor maintenance, overtopping due to flooding, movement of the dam foundation or soil erosion, and intentional acts of destruction (State HMP 2013: 4-95). The Vermont Agency of Natural Resources Dam Safety Section conducts periodic inspections of non-federal dams, categorizing dams based on the potential loss of life and property damage downstream in the event of failure. There are no dams in Danby.

Disease Outbreak

The Vermont Department of Health has stated that there is speculation about possible connections between warmer temperatures and a number of emerging infectious diseases (e.g., eastern equine encephalitis, anaplasmosis, and babesiosis) and disease vectors. However, the occurrence of these diseases or the presence of their vectors in Danby or in Vermont has not occurred on a significant scale. Flooding due to the more frequent intense rainfall events projected for the Northeast may also increase mold problems and other water-borne disease outbreaks in homes and businesses.

Terrorism

Terrorism and civil hazards include actions that people *intentionally* do to threaten lives and property. They may range from a single person on a shooting rampage to a cyber-attack that harms computer systems to the organized use of weapons of mass destruction (WMD). According to the State Hazard Mitigation Plan (2013), the most probable (though unlikely) attack is still a conventional bombing, hostage taking, kidnapping or shooting. A WMD attack must still be considered a rare event, but with the potential for catastrophic consequences. The most likely scenario of a WMD event in Vermont would involve the detonation of an improvised explosive device at a chemical facility (such as bulk liquid propane storage or manufacturing facility) near a large population center proximate to the Vermont/Canadian border. Within Danby, there are three "Tier II" facilities reporting the presence of hazardous materials on-site that hypothetically could be subject to this type of hazard.

Civil Disorder

There have been a limited number of situations in the past when the potential for civil disorder existed. These have typically been surrounding labor disputes at major employers. In such situations, trained Sheriff's Department and State Police resources are brought in for crowd control. Rutland City Police Department has personnel trained and equipped to deal with such situations as well. In addition, any pre-organized events which require a public event permit are reviewed and a determination is made as to how many State Police officers are required to be hired to monitor the event. In the case things really get out of hand, the Governor has the authority to activate the National Guard and other resources to assist.

Hazardous Materials, Radiological and Chemical/Biological Incidents

Hazardous Materials, Radiological and Chemical/Biological Incidents History

Date	Event	Location	Extent	Impact
2005	Underground storage tank removed. Contamination found.	Master Property	Low	Minor
2003	Underground storage tank removed. Contamination found. Investigation needed.	Smokey House Center-Cottage Property	Moderate	Minor
1997	Underground fuel oil storage tank removed. Contamination found.	Danby Four Corners Store	Low	Minor
1990	Oil Spill	Smokey House	Moderate	Minor

1989	Fuel tank accident & spill	Town Office	Low	Minor
1987	Fuel oil tank pull improperly done. Petroleum release observed (sheen on water table).	Smokey House	Low	Minor

Hazardous materials accidents can occur anywhere there is a road, rail line, pipeline or fixed facility storing hazardous materials. Almost the entire region is at risk of an unpredictable accident of some type. Most accidents are small spills and leaks, but some result in injuries, property damage, environmental contamination and other consequences. These materials are poisonous, corrosive, flammable, and radioactive or pose other hazards. Major accidents may result in an off-site release of hazardous or toxic materials. The overall objective of chemical emergency response planning and preparedness is to minimize exposure from a wide range of accidents that could produce off-site levels of contamination in excess of Levels of Concern (LOC) established by the U.S. Environmental Protection Agency. Minimizing this exposure reduces the consequences of an emergency to people in the area near facilities which manufacture, store, and process hazardous materials.

Large volumes of hazardous materials are transported daily to and through the region by railroad and highway. Within Rutland Region, there are a number of public and private fixed facilities that produce or use hazardous materials. These facilities must report annually to the Department of Public Safety under the Community Right-To-Know Program. Some typical examples include diesel fuel, gasoline or propane in quantities larger than 10,000 lbs.; greater than 100 lbs. of oxygen, carbon dioxide, paint, lead, ammonia, chlorine, sawdust, sand, road salt, battery acid, hydraulic oils, cement, pesticides, and fertilizers; and explosives in amounts requiring a license from DPS. A more complete list can be found on the Vermont Emergency Management EPCRA website (http://vem.vermont.gov/programs/epcra).

Coordinating procedures for hazardous materials response are found in the Region's Emergency Operations Plan for Hazardous Materials. (The Region's Emergency Operations Plan for Hazardous Materials is a plan for use in responding to and recovering from a release of hazardous materials or toxic materials. In 2005, the Rutland Region Local Emergency Planning Committee—LEPC #2—expanded the plan into a draft Rutland Region All Hazard Emergency Response Guide; the draft plan is currently in the process of being updated and adopted. This plan addresses the range of potential emergency situations and the appropriate measures to be implemented to minimize exposure through inhalation, ingestion or direct exposure.

In terms of radiological incidents, mishandling and improper disposal or storage of medical wastes and low-level radioactive products from medical use are also a hazard to the Rutland Region. In addition, parts of the Southeast section of the Rutland Region are within a critical distance of the Vermont Yankee Nuclear Power Station. Specifically, Mount Holly, Mount Tabor, Danby and Wallingford are within a 50-mile radius of Vermont Yankee Nuclear Power Station. At this distance, the towns are considered to be within the "Ingestion Pathway Zone."

The greatest concern about hazardous materials relates to the presence of US Rt. 7 and the rail line along the eastern border of Danby. These transportation corridors present a possibility of a hazardous material spill. Some structures would be vulnerable to such a hazard, but the greatest concern is for possible environmental damage to the Otter Creek and the associated Wildlife Management Area.

In 2012, there were three "Tier II" sites identified in Danby: Verizon Wireless (chemicals); Whites Fuel Stop (fuel); and Pike Industries (fuel, lead and chemicals).

Since 1987, there have been nine hazardous waste sites identified in Danby, one of them was classified as Medium Priority with the state: Smokey House Center's Cottage Property. Since 1980, the town has had 25 hazardous materials spills.

Please refer to the Hazard Analysis Map (Appendix H) for the location of "Tier II" facilities and the surrounding structures potentially affected by a hazardous material incident.

Hazardous Materials, Radiological and Chemical/Biological Incidents Summary

Hazard	Location	Vulnerable Assets	Extent	Impact	Probability
Hazardous materials spills	**Rt. 7 and along rail line along eastern border of town**	**Otter Creek; especially Otter Creek Wildlife Management Area**	**Severe to river ecosystem**	**Potential damage to river aquatic life**	**Medium**

Highway and Railroad Accidents

As a rural area, the Rutland Region depends on its highways for the movement of goods and people, including commuters and tourists. Similarly, the Region's rail system moves goods and people along one route - via Amtrak's Ethan Allen Express. Road accidents are frequent and can cause loss of life. Rail accidents are infrequent and have not caused injuries or loss of life in the Rutland Region.

Highway and Railroad Accidents History

Date	Event	Location	Extent	Impact
2010	Railroad derailment with propane tanks. No leaks; monitored for 2-3 days	Near Otter Creek Campground	Low	Minor
2007	Car accident on railroad tracks	Mt. Tabor Inn, Rt. 7	Low	Minor
Ongoing	Car accidents	Rt. 7	Low	Minor

Danby/ Mt. Tabor had 12 motor vehicle accidents that required EMS response according to the most recent Vermont Department of Public Safety Division of Fire Safety, State Fire Marshal's Report (2012).

There are no high crash sites within the Town of Danby although some are found on Route 7 as it passes through Mt. Tabor. There are several stretches of road in the town that are of concern especially due to a high volume of truck traffic. Speed limit signs are in place and speed limits are being enforced.

Highway and Railroad Accidents Summary

Hazard	Location	Vulnerable Assets	Extent	Impact	Probability
Highway and Railroad Accidents	Route 7, White's Fuel Stop, Pike's Gravel Pit, Parrish Hill, Brook Road	Otter Creek Campground	Moderate	Potential of 1-2 fatalities every 5 years	Medium

Structure Fires

In terms of average annual loss of life and property, structure fires, often referred to as the "universal hazard" because they occur in virtually every community, are the most frequent hazard facing most Rutland Region communities. Less frequent than individual fires are major downtown fires that can destroy town centers and necessitate a large response, often requiring economic aid for recovery. A fire in an unprotected downtown can be devastating. "Vermont has the highest per capita death rate from fire in the nation. This is the deadliest form of disaster throughout the state. In 2000, there were 831 structural fires in the state, 12 of which resulted in 22 civilian deaths, 20 of which occurred at residences. Although there have been requirements for smoke detectors in rental housing for over 20 years, and requirements for smoke detectors in single family dwellings since 1994, there was only one building involved in the fatal fires in 2000 that had evidence of working smoke alarms" (State of Vermont Emergency Operations Plan 2005, Section II, p 11).

Depot Road is lined with historic wooden structures in a compact village development. These buildings are, for the most part, not sprinkled and therefore pose a significant fire risk. However, that risk has been somewhat mitigated by the presence of fire hydrants supplied by the town spring that would help to combat a fire quickly.

Danby/ Mt. Tabor had 13 structure fires in 2012 according to the most recent Vermont Department of Public Safety, Division of Fire Safety, State Fire Marshal's Report.

Please refer to the Areas of Local Concern Map (Appendix I) for orientation to number and types of structures located within this hazard area.

Structure Fires History

Date	Event	Location	Extent	Impact
2005	Dwelling fire	Danby Village	Severe	$125,000

In the 10-year period from 2004-2013, the town's fire department received 50 structure fire calls; 13.26% of the department's total calls. The total fire dollar loss from these fires was $196,800. Between 2004 and 2013, the most frequent type of fire reports were 15 building fires; 30 chimney/flue fires; and 12 grassfires.

Structure Fires Summary

Hazard	Location	Vulnerable Assets	Extent	Impact	Probability
Structure Fires	Town-wide	Village, school, Vermont Store Fixtures	Moderate	Potential loss of life and major damage to residential homes and public buildings. $196,800 in property losses from 2004-2013.	Medium

6. HAZARD MITIGATION STRATEGY

6.1 Mitigation Goals

Danby's main mitigation goals are…

- Provide information to public about mitigation of hazards with special emphasis on establishing alert systems and resource lists.
- 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 pre-disaster 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.

Danby also strives to align with the overarching priorities of the State of Vermont Hazard Mitigation Plan:

- Local jurisdictions should use the State Hazard Mitigation Plan as a source of information and guidance.
- The state must prepare for the impacts of climate change on natural hazards.
- Private and public sector agencies should partner to mitigate hazards.

Above all, in the aftermath of Tropical Storm Irene, the town has placed a priority on identifying flood hazards – both from inundation and fluvial erosion – to protect citizens, property and infrastructure in the future.

6.2 Existing Mitigation Authorities, Policies, Programs, and Resources

Danby's ongoing and recently completed hazard mitigation programs, projects, and activities are listed below and in the table outlining policies and plans.

Flooding Issues: Recognizing the need to address the issue of flooding, the Town adopted policies in 2009 providing protection and limited development in the Town Plan.

School Emergency Response: The Fire Department has emergency response procedures in place for incidents at the school.

Local Emergency Operations Planning: Efforts in town include participation in the regional LEOP and coordination with the local elementary school and vulnerable populations to test evacuation and other emergency response procedures.

Emergency Shelter Preparedness: The town needs Red Cross approval for its four emergency shelters. It is also looking for a site for large scale evacuations or long-term power disruptions.

Downtown Fire Protection: Fire hydrants have been installed in the village center, although fighting a large fire could strain the capacity of the municipal water system.

Fire Mutual Aid – Supplemental fire protection has been arranged with several surrounding towns.

Roads and Bridge Standards – The Town has adopted road and bridges standards to improve safety, reduce lifecycle costs, and address environmental concerns.

Culvert Inventory and Upgrades: A culvert inventory has been prepared to identify trouble spots and maintenance needs. In addition, a number of culverts have been upgraded to handle high water flows in a number of locations across the Town

River/Stream Corridor Planning: SGAs and corridor plans are followed to reduce the risk of fluvial erosion and flood damage.

Town Policies and Plans that Mitigate Hazards

Existing Policies	Description	Gaps in Existing Policies
Town Plan	Policies and vision for Future Land Use. Adopted 6/5/2015 Policies provide protection and limited development in the following areas: • Shallow soils • Unstable soil • Floodplain • Elevations above 2,000 feet • Wetlands Water resources	The Planning Commission will work on draft Town Plan language supportive of conserving floodplains and wetlands, and reducing hazards experienced by residents in a large flood in 2017/2018.
School Emergency Response Plan	Overview of emergency response procedures for incidents at the elementary school	The fire department, police and emergency crews will be working together in an ongoing review of this plan in 2017-2021.
Local Emergency Operations Plan	Overview of emergency response procedures. Adopted 2014; addresses a variety of hazards and response procedures. Must be updated annually and submitted to RRPC by May 1st.	It is the responsibility of the Emergency Coordinator to ensure that the LEOP recognize that many of the critical facilities in town are in the floodplain and that all emergency responder equipment should be moved when flooding is imminent.

Existing Policies	Description	Gaps in Existing Policies
Fire Mutual Aid	Supplemental fire protection from surrounding towns Mutual Aid agreements with Rutland County Fire Mutual Aid and with towns in Bennington County	Completed – there is no need to expand on or improve this policy.
Maintenance Programs	Road, bridge, town garage maintenance plan and schedule	Culvert, road and bridge inventories complete – there is no need to expand on or improve this policy except for ongoing maintenance. ~~Lack of local funding.~~
Emergency Shelters	Large sites for housing in the event of evacuation or prolonged power loss. There are four shelters in Danby: Fire House, Town Hall, Elementary School, and the Church.	The Town is considering sites for a shelter in the event of evacuation or prolonged power loss. The Town is also in the process of getting Red Cross approval for its current four shelters. ~~None of the shelters are Red Cross approved.~~
Floodplain Ordinance	Flood Hazard Regulations. Adopted 6/5/2008 Restricts development within Zones designated as "A" on flood maps	The Planning Commission is responsible for enforcing the floodplain ordinance and will work on including language to prevent development in Fluvial Erosion Hazard Areas in 2017/2018.
Road and Bridge Standards	Town has adopted road and bridge standards which improve safety, reduce lifecycle costs, address environmental concerns for transportation networks.	High Bridge needs repairs; state funding pending.
Culvert Inventory	Survey and report on condition and location of all 500+ culverts in town. Decreases local match required for state funding to upgrade culverts	Complete – there is no need to expand on or improve this policy. ~~Not complete. Due in 2014 after GPS info is gathered.~~
Stream Geomorphic Assessments (SGA) for Baker Brook, Mill Brook, and Flower Brook	River corridor planning; Actions suggested reduce risk of fluvial erosion hazards and flood damage	Completed SGAs for Baker Brook, Mill Brook and Flower Brook. The Planning Commission is responsible for incorporating the studies now need to be developed into a river corridor plan and fluvial erosion hazard zones. The Commission will work on draft language in 2017/2018. ~~SGAs need to be integrated into river corridor plans and Fluvial Erosion Hazard Zones need to be created.~~

6.3 Changes in Development

Damage from Tropical Storm Irene has resulted in the removal of several of the most vulnerable structures in the flood plain. Since adopting Flood Plain Regulations on June 16, 2008, little development has occurred within Wallingford's SFHA. For several properties that are close to base flood elevation, the required reviews of applications to renovate or construct residential structures were found to be time-consuming and relatively expensive for the property owner. The reviews however clarified what structural improvements or flood insurance were necessary. These review processes and insurance costs are likely to discourage future development in SFHA.

6.4 National Flood Insurance Program (NFIP) Compliance

The National Flood Insurance Program (NFIP) is a voluntary program organized by FEMA that includes participation from 20,000 communities nationwide and 231 Vermont towns and cities. Combined with floodplain mapping and floodplain management at the municipal level, the NFIP participation makes affordable flood insurance available to all homeowners, renters, and businesses, regardless of whether they are located in a floodplain.

The NFIP was instituted in 1968 to make flood insurance available in those communities agreeing to regulate future floodplain development. 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; 2) allow non-residential structures to be elevated or dry flood proofed (the flood proofing must be certified by a registered professional engineer or architect); 3) require anchoring of manufactured homes in flood prone areas. The community must also maintain a record of all lowest floor elevations or the elevations to which buildings in flood hazard areas have been flood proofed.

In return for adopting floodplain management regulations, the federal government makes flood insurance available to the citizens of the community. In 1973, the NFIP was amended to mandate the purchase of flood insurance as a condition of any federally regulated, supervised or insured loan on any construction or building within the 100-year floodplain. In 2012, Congress passed the Biggert-Waters Flood Insurance Reform Act to reduce subsidies for structures built before the NFIP was instituted (called pre-FIRM structures). Over 50 percent of Vermont's NFIP policies are pre-FIRM, which means that flood insurance premiums for many will double or more over the ensuing years.

While the NFIP floodplain management criteria are administered by States and communities through their floodplain management regulations, FEMA's role is to provide technical assistance and to monitor communities for compliance with the minimum NFIP criteria.

Danby has participated in the NFIP since 1980, and its current effective map date is August 28, 2008. The town's flood hazard area regulations are outlined in its Flood Hazard Area Regulations adopted in 2008. The town has no repetitive loss properties, but has 17 structures in its Special Flood Hazard Area. It is planning to attend training sessions on floodplain

management and flood regulations administration. It is also planning to create fluvial erosion hazard zones. Danby officials will continue to ensure it is in compliance with NFIP requirements as appropriate.

6.5 Other Incentives for Disaster Mitigation

Emergency Relief Assistance Funding (ERAF) provides state funding to match federal Public Assistance after federally-declared disasters. Eligible public costs are reimbursed by federal taxpayers at 75%. For disasters after October 23, 2014, the State of Vermont will contribute an additional 7.5% toward the costs. For communities that take specific steps to reduce flood damage the State will contribute 12.5% or 17.5% of the total cost.

New funding criteria for ERAF:

- 12.5% for eligible communities that have adopted four mitigation measures:
  1. National Flood Insurance Program (participate or have applied);
  2. Town Road and Bridge Standards – (annually certify adopted standards that meet or exceed the standards in the current: 2014-2016 *VTrans Orange Book: Handbook for Local Officials;*
  3. Local Emergency Operations Plan (adopt annually after town meeting);
  4. Local Hazard Mitigation Plan - Adopt a FEMA- approved local plan (valid for five years) or, submit a draft plan to FEMA Region 1 for review.

17.5% ERAF funding for eligible communities that also have adopted:
5) Maintenance of an active rate classification (class #1 through 9) under FEMA's Community Rating System (CRS) that includes activities that prohibit new structures in mapped flood hazard zones… or
6) Adoption of a Fluvial Erosion Hazard (FEH) or other river corridor or floodplain protection by-law that meets or exceeds the Vermont Agency of Natural Resources (ANR) FEH model regulations and scoping guidelines.

Danby already has already completed three actions on this list: NFIP participation, adopted Town Road and Bridge Standards, and is in the process of submitting a draft Local Hazard Mitigation Plan to FEMA. Town officials are debating whether to complete additional disaster planning measures, such as adopting a Local Hazard Operations Plan and River Corridor Plans for several local rivers.

6.6 Mitigation Actions and Projects

The Danby plan update committee discussed each mitigation strategy and carefully reviewed the town Mitigation Strategy Scoring Criteria (Appendix F). The committee found that many projects are still ongoing or are still relevant. In some cases, strategies were left in place because of their ongoing and cyclic nature, for example, the incorporation of strategies into the town capital budget and planning documents.

Flooding Issues: Recognizing the need to address the issue of flooding, particularly after Tropical Storm Irene, the Town is including a number of flood hazard mitigation measures in this current plan, including ensuring flood hazard areas are addressed in zoning, identifying fluvial erosion hazard areas, and culvert inspection and upgrades.

The committee considered additional mitigation strategies, such as:

- Building Design/Codes/Use Regulations
- Community Preparedness Activities
- Financial & Tax Incentives
- Hazard Control & Protective Works
- Insurance Programs
- Land Use Planning/Management
- Science & Technology
- Mitigation Committee
- Protection/Retrofit of Infrastructure & Essential Facilities
- Public Awareness/Training & Education
- Public Health/Emergency Medical Care/Education
- Public Protection
- Laws/Ordinances/Inspections

The following identified programs, projects and activities are future Mitigation Strategies for the Town of Danby. These mitigation strategies have been chosen by the town as the most appropriate policies and programs to lessen the impacts of potential hazards.

The strategies were prioritized using an action evaluation and prioritization scoring sheet (see Appendix G). Each potential project was scored and ranked according to priority. The scoring matrix includes STAPLEE criteria, which includes benefit-cost considerations. Mitigation actions and projects proposed in this plan should undergo more rigorous benefit-cost analysis by the town before action is taken.

New Mitigation Actions and Projects

Priority Score	Hazards Mitigated	Mitigation Action	Local Leadership	Funding Resources	Target Start (month/year)	Target End (month/year)
36	Wildfires	Install dry hydrants to provide year-round access to water sources or fire ponds by fire equipment to mitigate wildlife threat	Fire chief	Matching grants RC&D	01/2016	09/2020
31	Flooding: inundation and fluvial	Identify specific road projects to upgrade culverts and/or	Road commissioner with	Town funds	12/2015	12/2017

	erosion	roadside ditches to reduce erosion and flooding	community input			
30	Structure fires and wildfires	Promote public education related to fire hazard and distribute materials to school and town office	Danby/Mt. Tabor Fire Company	Town funds	01/2016	12/2018
30	Flooding	Upgrade undersized culverts on Danby Mountain Road and eliminate double pipes. Upgrade culverts as needed to accommodate high water flows	Road commissioner	Town funds	12/2015	12/2020
29	Flooding: inundation and fluvial erosion	Stabilize stream banks (beginning with Brook Road)	Selectboard and Road Commissioner	Town funds	12/2015	12/2020
28	Flooding: inundation and fluvial erosion	Identify specific flood-related projects and apply for pre-disaster grants	Selectboard	Town and state/federal funding, such as HMPGs	12/2015	12/2019
28	All hazards	Examine current Town Plan and ensure that identified hazard areas and needed strategies are addressed	Planning Commission	Town funds and state/federal HMPGs	06/2018	09/2020
28	Flooding: inundation and fluvial erosion	Attend regular training sessions on floodplain management and flood regulations administration	Selectboard	Town and state funds	12/2015	09/2020
25	Structure fires	Increase fire protection in the Historic District through education, plus maintenance and addition of water sources and firefighting equipment	Danby/Mt. Tabor Fire Company	Donations; fundraisers	01/2016	12/2019
25	Flooding: fluvial erosion	Follow recommendations in SGAs to address fluvial erosion hazards. Create Fluvial Erosion Hazard Zones	Selectboard	Towns and state funds	12/2015	12/2020
	All hazards	Incorporate proposed	Selectboard	Local tax	03/2016	03/2020

24		strategies into Annul Budget and/or Capital Improvement Plan		revenues and/or state funds		
23	Public health and environmental pollution	Upgrade town garage to prevent runoff of salt and sand and to relieve congestion that could pose a hazard to residents using the nearby transfer station or town office	Selectboard	Tax revenues	06/2016	03/2018
23	Severe winter, wind or thunderstorms	Retrofit municipal buildings vulnerable to structural damage from wind and ice	Selectboard	Town funds	01/2016	12/2019
22	Severe winter, wind or thunderstorms	Upgrade electrical systems in municipal structures to prevent damage from surge and fluctuating current during winter or wind storms	Selectboard	Town funds	01/2016	12/2017

7. PLAN MAINTENANCE PROCESS

7.1 Routine Plan Maintenance

The 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. 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 Coordinator (EMC) will lead this. This meeting will allow the Selectboard and EMC, 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 EMC check in (either before or after the annual meeting) with the lead agencies on each of the identified mitigation actions in section 6.6 of this plan to monitor the progress made on each project. The State Hazard Mitigation Officer is available to work with the town on updating its plan. Town officials should also incorporate elements of this Hazard Mitigation Plan when updating the municipal plan, zoning regulations, flood hazard bylaws, etc.

The plan should be updated every five years in accordance with the following procedure:

1. The Selectboard will appoint a team to convene a meeting of the Review/Update committee six months before the plan expires. The town's Emergency Management Director will chair the committee, and other members should include local officials such as Selectboard, Fire Chief, Zoning Administrator, Constable, Road Commissioner, Planning Commission, and the public. The Rutland Regional Planning Commission and town organizations should be involved as well. Town Administrator Sandi Switzer will be tasked with maintaining and updating the plan.

2. The committee will discuss the process to determine if the evaluation criteria are still appropriate or modifications or additions are needed due to changing conditions since the last update occurred. Data needs will be reviewed, data sources identified and responsibility for collecting information will be assigned to members.

3. A draft report will be prepared based on these evaluation criteria and in conformance with the FEMA *Local Mitigation Plan Review Guide* document.
   - 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.
   - 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. Any public feedback received will be addressed appropriately in the plan.

6. The plan will be submitted to the State Hazard Mitigation Officer (SHMO). Any SHMO comments will be addressed in the plan.

7. The plan will be submitted to FEMA Region 1, and FEMA comments will be addressed in the 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 interested parties.

11. The final plan (with adoption certificate) will be submitted to FEMA Region 1 for final approval.

Programs, Initiatives, and Projects Review

Although the plan should be reviewed in its entirety every five years as described above, the Town may review and update its programs, initiatives and projects more often directly with the State Hazard Mitigation Officer based on changing local needs and priorities.

For instance, the Town of Danby will examine its current Town Plan and ensure that identified hazard areas and needed strategies are addressed. In addition, it will incorporate proposed mitigation strategies into the town annual budget.

7.2 Post-Disaster Review Procedures

Should a declared disaster occur, a special review will occur in accordance with the following procedures:

1. Within six (6) months of a declared emergency event, the Town will initiate a post disaster review and assessment. Members of the State Hazard Mitigation Committee will be notified that the assessment process has commenced.

2. This post disaster review and assessment will document the facts of the event and assess whether existing Hazard Mitigation Plans effectively addressed the hazard.

3. A draft After Action Report of the review and assessment will be distributed to the hazard mitigation committee.

4. A meeting of the committee will be convened by the Selectboard to make a determination whether the plan needs to be amended. If the committee determines that NO modification of the plan is needed, then the report is distributed to local communities.

5. If the committee determines that modification of the plan IS needed, then the committee drafts an amended plan based on the recommendations and forwards to the Selectboard for public input.

6. The Selectboard adopts the amended plan after receiving approval-pending-adoption notification from FEMA.

7.3 Continued Public Participation

Maintenance of this plan and implementation of the mitigation strategy will require the continued participation of local citizens, agencies, and other organizations. To keep the public aware of and involved in local hazard mitigation efforts, the town will consider taking the following measures:

- Discuss the plan at least annually at a Selectboard meeting to determine if a review is necessary
- Provide hazard mitigation information at Town Meeting
- Post the plan on the town website
- Selectboard will review past plan update/review 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, etc.
- Solicit public input at Selectboard meetings.

Appendix A

CERTIFICATE OF ADOPTION
Town of Danby, Vermont
Selectboard

A Resolution Adopting the Danby Local Hazard Mitigation Plan

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

WHEREAS, the Danby Hazard Mitigation Plan recommends the implementation of actions specific to the community to mitigate against damage from natural hazard events; and

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

Duly adopted this 9th day of June, 2016

Chair of Selectboard

Member of Selectboard

Member of Selectboard

ATTEST

Town Clerk

Appendix B

Selectboard Motion of Support

TOWN OF DANBY, VT

130 Brook Road
P. O. Box 231
Danby, VT 05739

Phone: 802-293-5136
Fax: 802-293-5311

Chip Wright, Chairman 802-293-5102
Hope Blucher—802-293-5036
Daniel Garceau –802-293-5895
Bill Gormley-802-779-3475
Margo Stone-802-325-3015

DEC 20 2013

December 12, 2013

Local Hazard Mitigation Plan

The Town Selectboard supports the process of reviewing and updating its Local Hazard Mitigation Plan, which will be accomplished with the support of Rutland Regional Planning Commission (RRPC) staff and with the engagement of the public. The Selectboard appoints the following individuals to serve on an advisory committee to the RRPC, to participate in this process:

Kenneth Abbott

Thomas Johnston IV

Daniel Garceau

Charles Bush

Janice Arnold

Dated at Danby, Vermont, this 12th day of December, 2013.

Chairman, Board of Selectmen

Appendix C

LHMP Committee Meeting #1 Sign-Up Sheet

Group: Danby Topic: LHMP

Meeting Location: Danby Town Offices Meeting Date: 1-22-2014 Meeting Length: 1:30 Page __ of __

Name	Affiliation	Email or Phone	Miles Round Trip
JANICE ARNOLD	TN CLK/TREASURER	802-293-5136	8
Charles Bush	Rd Foreman	293 5137	8
TOM JOHNSTON	DMT FD	THJOVI@VERMONTEL.NET 770-2234	4
DAN CANCEAU	TH SELECTMAN	DANCANCEAU@COMCAST.NET	4
Kenneth F Abbott	Fire Chief	MARYAN63@VERMONTEL.NET	4

Appendix D

LHMP Committee Meeting #2 Sign-Up Sheet

Group: Danby Topic: LHMP

Meeting Location: Danby Town Offices Meeting Date: 1-22-2014 Meeting Length: 1:30 Page __ of ___

Name	Affiliation	Email or Phone	Miles Round Trip
JANICE ARNOLD	TN CLK/TREASURER	802-293-5136	8
Charles Bos.	~~St~~ Road Forman	293 5137	8
TOM JOHNSTON	DNY. FD	T4JOVT@VERMONTEL.NET 770-2234	4
DAN CANCEAU	TN SELECTMAN	DANCANCEAU@COMCAST.NET	4
Merrill F Abbott	Fire Chief	MARY AN 63@ VERMONTEL.NET	4

Appendix E

LHMP Committee Meeting #3 Sign-Up Sheet

Group: Danby LHMP Topic:

Meeting Location: Danby Town Office Meeting Date: 6-11-14 Meeting Length: Page __ of ___

Name	Affiliation	Email or Phone	Miles Round Trip
Tom Johnston	EMC		
DAN GARCEAU	SELECT BD MEMBER	dangarceau@comcast.net	
Ken Abbott	Fire Chief		

Appendix F

Mitigation Strategy Scoring Criteria

The list documents the questions (criteria) considered in establishing an order of priority. Each of the following criteria was rated according to a numeric score of **"1" (indicating poor), "2" (indicating average)** and **"3" (indicating good)**.

- Does the action reduce damage?
- Does the action contribute to community objectives?
- Does the action meet existing regulations?
- Does the action protect historic structures or structures critical to town operations?
- Can the action be implemented quickly?
- Is the action socially acceptable?
- Is the action technically feasible?
- Is the action administratively possible?
- Is the action politically acceptable?
- Is the action legal?
- Does the action offer reasonable benefits compared to its cost of implementation?
- Is the action environmentally sound?

Appendix G

Mitigation Strategy Scoring Sheet

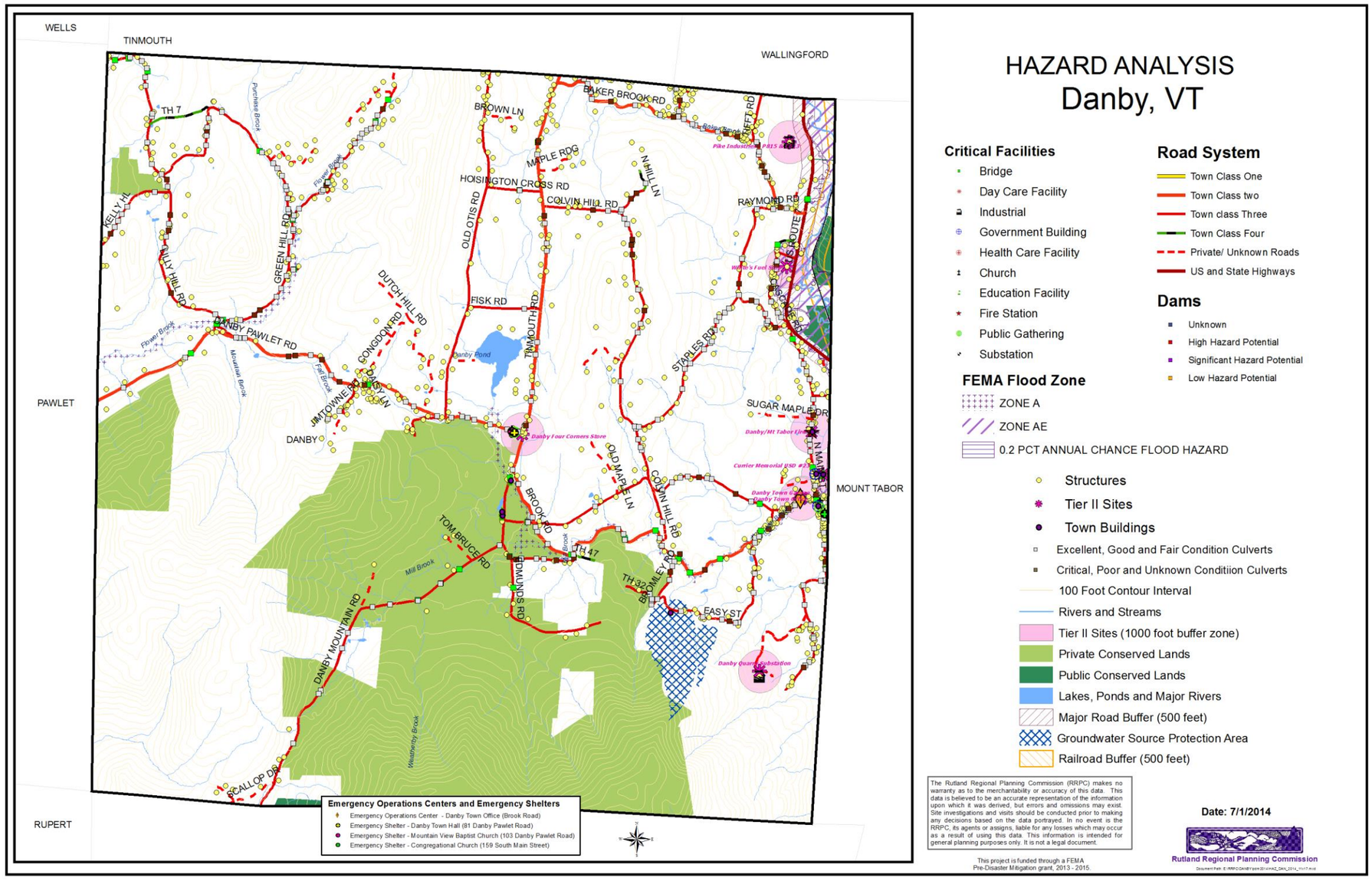
Action Evaluation and Prioritization Matrix — **Town: Danby**

3 = Good 2 = Average 1 = Poor

Mitigation Action	Reduce Damage	Contribute to Town Objectives	Meet Regulations	Protect sensitive structures	Implemented quickly	Socially acceptable	Technically Feasible	Administratively Realistic	Politically Acceptable	Legal	Reasonable cost to benefit	Environmentally sound	TOTAL
Stablize stream banks (beginning with Brook Road)	3	3	2	2	2	2	2	3	3	2	3	2	29
Identify specific flood-related projects and apply for pre-disaster grants	3	3	4	3	1	2	2	3	2	2	1	2	28
Identify specific road projects to upgrade culverts and/or roadside ditches to reduce erosion and flooding	3	3	3	3	1	2	3	3	2	2	3	3	31
Install dry hydrants to provide year-round access to water sources or fire ponds by fire equipment to mitigate wildlife threat	3	3	3	3	3	3	3	3	3	3	3	3	36
Promote public education related to fire hazard and distribute materials to school and town office	3	3	2	1	3	3	3	3	3	2	3	1	30
Increase fire protection in the Historic District through education, plus maitenance and addition of water sources and firefighting equipment	3	3	2	2	1	2	1	2	3	2	2	2	25
Upgrade town garage to prevent runoff of salt and sand and to relieve congestion that could pose a hazard to residents using the nearby transfer station or town office	3	2	2	2	1	2	2	2	2	1	2	2	23
Upgrade undersized culverts on Danby Mountain Road and eliminate double pipes. Upgrade culverts as needed to accommodate high water flows	3	3	3	3	2	2	3	3	2	2	2	2	30
Incorporate propsed strategies into Annul Budget and/or Capital Improvement Plan	2	3	2	1	2	2	2	2	2	2	2	2	24
Examine current Town Plan and ensure that identified hazard areas and needed strategies are addressed	3	3	3	3	3	3	3	3	3	2	3	2	28
Follow recommendations in SGAs to address fluvial erosion hazards. Create Fluvial Erosion Hazard Zones	3	2	2	3	1	2	2	2	2	2	2	2	25
Attend regular training sessions on floodplain management and flood regulations administration	3	3	3	3	3	3	3	3	3	2	2	3	28
Retrofit municipal buildings vulnerable to structural damage from wind and ice	3	2	2	2	1	2	1	2	2	2	2	2	23
Upgrade electrical systems in municipal structures to prevent damage from surge and flucuating current during winter or wind storms	2	2	2	2	1	2	1	2	2	2	2	2	22

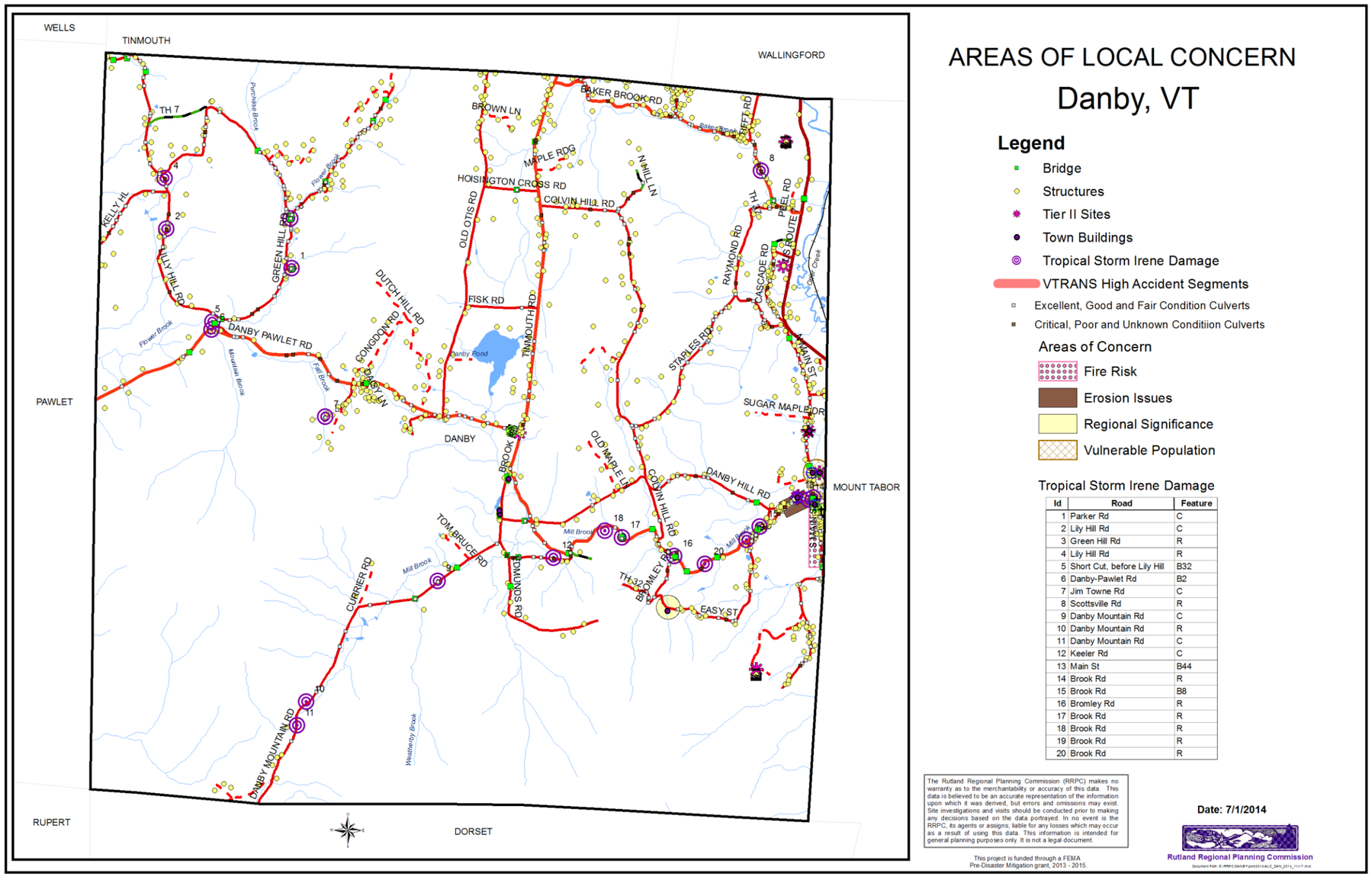
Appendix H

Hazard Analysis Map



Appendix I

Areas of Local Concern Map



AREAS OF LOCAL CONCERN

Danby, VT

Legend

- Bridge
- Structures
- Tier II Sites
- Town Buildings
- Tropical Storm Irene Damage
- VTRANS High Accident Segments
- Excellent, Good and Fair Condition Culverts
- Critical, Poor and Unknown Conditiion Culverts

Areas of Concern

- Fire Risk
- Erosion Issues
- Regional Significance
- Vulnerable Population

Tropical Storm Irene Damage

Id	Road	Feature
1	Parker Rd	C
2	Lily Hill Rd	C
3	Green Hill Rd	R
4	Lily Hill Rd	R
5	Short Cut, before Lily Hill	B32
6	Danby-Pawlet Rd	B2
7	Jim Towne Rd	C
8	Scottsville Rd	R
9	Danby Mountain Rd	C
10	Danby Mountain Rd	R
11	Danby Mountain Rd	C
12	Keeler Rd	C
13	Main St	B44
14	Brook Rd	R
15	Brook Rd	B8
16	Bromley Rd	R
17	Brook Rd	R
18	Brook Rd	R
19	Brook Rd	R
20	Brook Rd	R

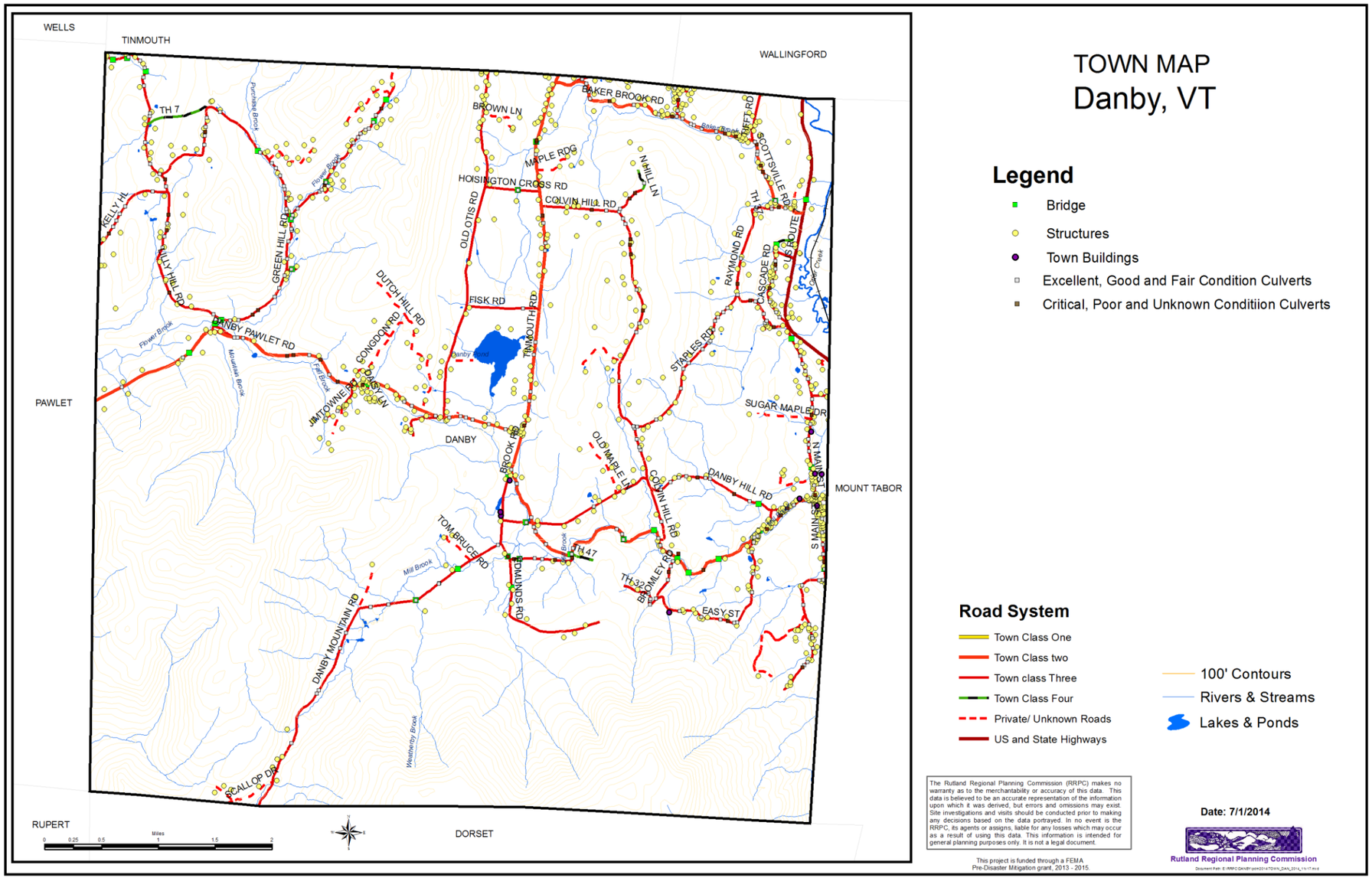
This project is funded through a FEMA Pre-Disaster Mitigation grant, 2013 - 2015.

Date: 7/1/2014

Rutland Regional Planning Commission

Appendix J

Town Map



Appendix K

Public Comment Period Notice

Notice of Public Comment Period
for Draft Local Hazard Mitigation Plans

The Towns of Chittenden, Clarendon, Danby and Sudbury are preparing Local Hazard Mitigation Plans. A 15 day public comment period for each draft plan will be held from July 29, 2014 to August 12, 2014, pursuant to 44 CFR Chapter 1 Section 201.6(a). Each plan can be found for review on the Rutland Regional Planning Commission website: http://www.rutlandrpc.org. For those towns with official town websites, the plans are also available on those sites. To request a hard copy of a plan, contact Barbara Noyes Pulling at the Rutland Regional Planning Commission, (802)775-0871. Copies of the plans are available at the Rutland Regional Planning Commission, 67 Merchants Row in Rutland, as well as at the town offices of Chittenden, Clarendon, Danby and Sudbury. Please submit plan comments by email to Barbara@rutlandrpc.org, or by mail to Rutland Regional Planning Commission, P.O. Box 965, Rutland, VT 05702. Comments must be submitted by August 12, 2014 to be considered. Please direct questions to Laura Keir, Rutland Regional Planning Commission, (802)775-0871.