Annex F (Danby)

Introduction and Purpose

Introduction

This annex is an All-Hazard Mitigation Plan for the Town of Danby when used with the appropriate sections of the regional mitigation plan.

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 communities of the Rutland Region more disaster resistant. This plan focuses on three critical natural disaster categories (flooding; winter storms; and high winds, hurricanes, and tornadoes). Additional natural and human-caused disaster categories are included to compliment the all-hazards planning approach.

This plan was written by community members and the Rutland Regional Planning Commission (RRPC) 2004 and updated between March and September 2009 by RRPC staff with input from the Select Board. With the assistance of FEMA mitigation specialists, this version was updated in 2012 to reflect the impact of Hurricane Irene on August 28, 2011.

The public, including representatives of businesses, schools, and non-profit organizations, was invited to participate at a duly-warned Select Board meeting in 2009 (date and documentation unavailable) and prior to the Select Board's action to adopt this plan on November 1, 2012. All organizations are encouraged to participate in mitigation planning efforts.

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. Based on the results of previous Project Impact efforts, 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.

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 river buffer areas
- 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 harms way
- Establish and enforce appropriate building codes
- Public information

Purpose

The purpose of this Hazard Mitigation Plan is to assist local governments identify all hazards facing the region and their community and identify strategies to begin reducing risks from identified hazards.

Community Background

Land Use and Development Patterns

The town of Danby is predominantly rural with several concentrated pockets of development. Danby Borough, also known as Danby Village, 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 Borough, 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.

Please refer to the Town Map to see the development patterns and further information.

Demographics and Growth Potential

Danby's population has seen minimal growth since 2000. Between 2000 and 2010, the population grew from 1,292 to 1,311, a 1.5% increase. Population growth that would impact the hazard mitigation program is not projected for Danby in the foreseeable future. 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, Baker Brook and Mill Brook to reduce the risk of fluvial erosion and flood damage. The SGA's Fluvial Erosion Hazard Zones will be incorporated into the bylaws as a mitigation action described in this plan.

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, however – 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 been 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 Borough, which is served by the Danby-Mt Tabor Fire District 1 town spring. This system includes a source water protection area south of the Borough.

Sewer Services

All sewer services in Danby are via 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 operates a primary fire station in the Borough 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.

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 Rescue Squad as needed.

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

Emergency Management Planning

Danby has an Emergency Operations Plan which outlines the key local personnel to contact in the event of an emergency and lists emergency operations centers and town shelter sites.

Community Disaster History

Winter Weather

Local Conditions—Danby

- Recorded precipitation related to winter weather events in Danby is between 4-12 inches.

Floods

Local Conditions—Danby

- January 1996—Countywide flooding, FEMA declared disaster, Cost to Danby—$62,429.
- December 2000—Countywide flooding, FEMA declared disaster, Cost to Danby—$116,235.
- August 2011—Countywide flooding from Tropical Storm Irene, FEMA disaster declarations for Public Assistance and Individual Assistance, total cost not yet available

Community Hazard Inventory and Risk Assessment

The inventory focuses on three major natural hazards: floods and fluvial erosion; winter storms; and high winds. Additional natural and human-hazards are listed subsequently for general planning consideration.

Hazards Analysis

What follows is an analysis of local hazards based upon review of the Hazards Analysis Map produced for the town (see attached), review of existing data, and information provided by local officials. Whenever possible, the issues identified below are represented on the Areas of Local Concern map (attached).

Floods and Fluvial Erosion

This is 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

Three rivers in Danby have undergone Stream Geomorphic Assessment (SGA); Baker Brook, Mill Brook, and Flower Brook. These studies and plans are vital in determining river and stream alterations, which affect water flows and could potentially lead to future flood damage. 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.

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.

The SGA information pertaining to Danby's rivers and streams is presented as an appendix to this annex. Baker and Mill Brooks are covered.

Please refer to the Areas of Local Concern Map for frequently flooded locations, and the Hazard Analysis Map for floodplain information. Please refer to the Regional Hazard Mitigation Plan, Table 2-D, *Potential Losses Due to Flooding* for worst case scenario damage estimates.

Winter Storms
Winter storms with snow, ice and freezing temperatures in various combinations are fairly commonplace in Danby.

Winter storms deliver more than 70 inches of snow annually. The town is prepared to handle snow and ice emergencies that are typical for the area, including total accumulations in excess of 30 inches and snowfall rates up to 2 inches per hour. 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.

High Winds, Hurricanes, and Tornadoes
Violent windstorms are possible here. Windstorms have occurred in the past but damage to structures was limited. Tornadoes have occurred elsewhere in Vermont. Most windstorms result in downed trees as well as damaged phone and power lines. Danby's road crew is prepared to handle issues related to road clearing and debris clean-up. Typically, utility companies respond quickly to handle issues related to utility lines.

The National Weather Service in Burlington issues a High Wind Warning when winds are expected to exceed 39-57 mph for at least one hour, or when any gusts of 58-73 mph are expected. This can occur in any season and when no precipitation is expected.

Earthquakes
Earthquakes are possible in Danby, but no more likely than elsewhere in the region. See regional section of the plan for further explanation.

Landslides and Erosion
Using USGS information, FEMA maps indicate that Danby has a low susceptibility to landslides and a low incidence of reported landslides, other than the two trouble spots mentioned below.

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 small slides in the past, the town has blasted out part of the hillside so that landslides 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.

Hail
Hail is a risk in town, especially to agricultural operations, but it is no more likely here than elsewhere in the region. See regional section of the plan for further explanation.

Lightning
Lightning is a risk but is no more likely here than elsewhere in the region. See regional section of the plan for further explanation.

Wildfires / Forest Fires
Forest fires are possible in the forested area of town during early spring, late summer, and early fall. The forests contain potential fuel for a serious conflagration, though typically the timber is not very dry so it doesn't spread very fast or far. In the past fires have been handled with local resources, including mutual aid.

Temperature Extremes
Temperature extremes are a risk, but are no more likely here than elsewhere in the region. See regional section of the plan for further explanation. Agricultural operations, especially dairy farming, require special care for both extreme cold and extreme heat.

Drought
In past droughts, residents of Danby have faired well. There are incidences of individual springs and wells running low or drying up, but in those circumstances the town springs could supply bottled water as needed. The remaining agricultural uses in town have not been substantially affected by drought in the recent past.

Fog
Fog is possible, but no more likely than elsewhere in the region. See regional section of the plan for further explanation.

Hazardous Materials
The greatest concern about hazardous materials relates to the presence of Route 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.

Please refer to the Regional Hazard Mitigation Plan, Table 2-B, *Tier II sites and Potential Damage to Surrounding Structures* as well as Table 2-C, *Potential Damage Along Transportation Corridors*, for potential loss estimates for vulnerable structures within these areas.

Structure Fires
Depot Road and Main Street are 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.

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

Radiological Incident
Danby is within a 50-mile radius of Vermont Yankee Nuclear Power Station. Please see regional section of plan for further details.

Dam Failures
No dams exist within Danby's borders.

Terrorism
These human-caused events are possible in Danby, but no more likely than elsewhere in the region. See regional section of the plan for further explanation.

Aircraft Crashes
Air traffic through Danby is rare. The town is not within the flight path to the airport.

Civil Disorder
This human-caused event is possible, but no more likely than elsewhere in the region. See regional section of the plan for further explanation.

Chemical and/or Biological Incident
These human-caused events are possible in Danby, but no more likely than elsewhere in the region. See regional section of the plan for further explanation.

Water Supply Contamination
No significant risk to the water supply exists at this time. The only public water supply is organized by Fire District 1. The source, south of the Borough, is protected.

Climate Change
Climate change may affect the town, but it is no more likely here than elsewhere in the region. See regional section of the plan for further explanation.

Continuity of Government / Record Retention
As referenced in the regional section of the plan, Vermont is one of three states that keep vital records and property information decentralized in municipalities. These municipal records document ownership of land, land transfers, property taxes, public rights of way, as well as evidence that properties are in compliance with local ordinances and of the owners' fiscal obligations., as well as vital statistics and actions of local boards and town meeting records. Quite simply, securing and preserving town records is essential. See regional section of the plan for further explanation.

Highway and Railroad Accidents
Route 7 carries a high traffic volume and runs parallel to a rail line through the eastern edge of Danby. However, no sites of particular concern were noted by Town officials.

Risk Assessment
Of all the hazards discussed above, floods and fluvial erosion, winter storms, and high winds are the most damaging in Danby.

Existing Programs, Projects and Activities (including Hazard Mitigation and Preparedness Actions)

The current or recently completed programs, projects or activities are listed below and in the chart outlining policies and plans.

- *Emergency management planning* – efforts in town include participation in the regional Local Emergency Planning Committee and coordination with the local elementary school to test evacuation and other emergency response procedures.

- *Culvert inventory and upgrades* – a culvert inventory has been completed which identifies trouble spots and maintenance needs. In addition, a number of culverts have been upgraded to handle high water flows in a number of locations that presented problems in the past, such as on Brook Road.

- *Landslide/erosion prevention on Brook Road* – Awareness is required; a trouble spot that caused road damage and blockages in the past was blasted out in order to move the hillside back from the road.

- *Landslide/erosion prevention near Town Office* - A guard rail has been moved back in order to keep traffic away from the problem spot in the road. A longer-term solution may be needed.

- *Water system upgrade* – Within the last 10 years the town's water supply system (which serves the historic village area in the vicinity of Depot Road) has been upgraded to make it safer and more stable. This includes building a spring house and instituting a regimen for regular testing of the water quality.

- *Tree trimming/Power line protection* – Danby town officials are diligent in spotting areas where trees might pose a problem to power lines. These are reported to the power company who trims back the trees to a safe distance.

- *Fire Prevention* – A new 1,250 gallon pumper/tanker with foam was purchased in 2007. In order to help prevent fires, burn permits are required for private burn piles. At Smokey House Center, a pond is available to provide extra water to fight fires at that site. In addition, town volunteer personnel train in forest firefighting.

- *Fire Communications* – Within the past couple of years, the fire department has installed a new communications tower and upgraded its radios in order to enhance communication capabilities with surrounding towns and Rutland County Fire Mutual Aid Association.

- *Disease prevention* – Annual rabies vaccinations for pets are available at the Town Office.

- *Protection of town records* – The town office has a vault to protect records from damage or theft/vandalism.

- *River/Stream Corridor planning:* Recommendations in SGAs are followed to reduce the risk of fluvial erosion and flood damage.

TOWN POLICIES AND PLANS			
Existing Policies	**Description**	**Effectiveness/Enforcement/ Hazard that is addressed**	**Gaps in Existing Policies**
Town Plan	Policies and Vision for Future Land Use **Adopted 6/5/2009**	Policies provide protection and limited development in the following areas: • Shallow Soils • Unstable soil • Flood Plain • Elevations above 2,000 Feet • Wetlands • Water Resources	
Basic Emergency Operations Plan (formerly Rapid Response Plan)	Overview of emergency response procedures **Adopted 2010**	Key personnel, Emergency Operation Center & shelter location	
Fire Mutual Aid	Mutual Aid agreements with Rutland County Fire Mutual Aid and towns in Bennington County	Supplemental fire protection from surrounding towns	
Emergency Shelters	Large sites for housing in the event of evacuation or prolonged power loss	There are four shelters in Town: Fire House, Town Hall, Elementary School and Church. Only the Fire House is Red Cross Approved.	Not all shelters are Red Cross approved.

Flood Plain Ordinance	Flood Hazard Regulations **Adopted 06/05/08**	Restricts development within Zones designated as "A" on Flood Maps.	
Culvert Inventory	Survey and report on condition and location of all culverts in town	Decreases local match required for state funding to upgrade culverts	An update was underway in summer 2012
Stream Geomorphic Assessments (SGA) for Baker Brook, Mill Brook, and Flower Brook	River corridor planning	Actions suggested reduce the risk of fluvial erosion hazards and flood damage	Completed. SGAs need to be integrated into corridor plans and Fluvial Erosion Hazard Zones need to be created.

Risk Reduction Goals

Through current plans, policies and mitigation actions, Danby is working to decrease flood and erosion damage and power outage incidents. Other less hazardous risks are also being addressed.

Identified Hazard Mitigation Programs, Projects and Activities

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 following 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?

The ranking of these criteria is largely based on best available information and best judgment as many projects are not fully scoped out at this time. The actions are listed in the table below in order of how they scored based upon this ranking system (36 is the highest possible score).

Actions from 2004 that remain listed in the first table include updates on what has been accomplished. Actions from 2004 that have been deleted are listed in the second table with accompanying reasons for removal.

Acronyms

CDBG	Community Development Block Grant	HSU	Vermont Homeland Security Unit
EOC	Local Emergency Operations Center	RC&D	Resource Conservation and Development
FEMA	Federal Emergency Management Agency	USDA	United States Department of Agriculture
HMGP	Hazard Mitigation Grant Program	VEM	Vermont Emergency Management

Note: In the table below, time frames are defined as follows: Short term equals 6 months to one year. Medium term equals 1-3 years. Long term equals 4+ years

Programs, Projects and Activities, including Mitigation and Preparedness Actions

PRIORITY SCORE & ORIGIN	MITIGATION ACTION	HAZARD CATEGORY	WHO IS RESPONSIBLE	APPROX. TIME FRAME & POTENTIAL FUNDING SOURCES	INITIAL IMPLEMENTATION STEPS	STATUS
36 2004 Plan	Increase fire prevention in Historic District through education, plus maintenance and addition of water sources firefighting equipment.	Structure Fires	Emergency Management Team	• Medium Term • Local Resources	Raise awareness of fire prevention mechanisms such as smoke alarms, sprinkler systems, fire extinguishers, etc.	Continue annual support for Fire Department in town budget
36 2004 Plan	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.	Water Supply Contamination, Highway and Railroad Accidents	Selectboard, Road Commissioner , Road Foreman	• Long-term • State and Local Resources	Consider need, identify new location, and conduct feasibility study	Initial conversations underway by Selectboard
35 New to this Plan	Upgrade undersized culverts on Danby Mountain Road; eliminate double pipes	Floods and Fluvial Erosion	Road Commissioner	• Short-term • HMGP Funds and Town Highway Budget	Apply for HMGP funding	Application considered but not eligible; use local funds as part of regular culvert replacement
35 New to this Plan	Complete buy-out acquisition of flood damaged mobile home on Danby-Pawlet Road	Floods and Fluvial Erosion	Selectboard	• Short-term • HMGP and CDBG funds	Completed; awaiting FEMA decision	Application submitted for HMGP in March 2012
35 2004 Plan	Install emergency power generators at key sites in town such as designated shelters, fire stations, and EOC locations	High Winds	Selectboard; Emergency Management Director	• Med-term • HSU funds through VEM and Town Budget	Apply for funding from HSU or other equipment grants	Will apply when funding announced annually by VEM.

34 2004 Plan	Upgrade culverts as needed to accommodate high water flows.	Floods and Fluvial Erosion	Road Crew	• Med Term • Town highway budget	Incorporate into each budget cycle	Considered in Road Commissioner request during annual budget process
34 2004 Plan	Incorporate proposed strategies into Annual Budget and/or Capital Improvement Plan	Multiple Hazards	Selectboard Planning Commission	• Short-Term • Local Resources	Incorporated in next Budget Cycle	Considered in Road Commissioner request during annual budget process
33 2004 Plan	Examine current Town Plan and ensure that identified hazard areas and needed strategies are addressed	Multiple Hazards, especially Floods and Fluvial Erosion	Planning Commission/ Selectboard	• Med-term • Municipal Planning Grant	Incorporated in next Town Plan update	Will occur in 2014 as Town Plan is revised.
32 New to this Plan	Restrict large trucks from certain town roads.	Highway and Railroad Accidents	Selectboard/ Road Crew	• Short Term	Redirect trucks from Danby Hill Road to Brook Road.	Truck route signs installed
31 New to this Plan	Follow recommendations in SGAs to address fluvial erosion hazards. Create Fluvial Erosion Hazard Zone	Floods and Fluvial Erosion	Selectboard/ Planning Commission Agency of Natural Resources	• Long term • No funding required	Incorporate Fluvial Erosion Hazard Zones into bylaws	Zoning ordinance is not foreseen. Update to flood bylaws has not been discussed.
30 New to this Plan	Attend regular training sessions on floodplain management and flood regulations administration	Floods and Fluvial Erosion	Town Clerk; Selectboard	• Med-term • Town budget	Contact VEM & DEC for upcoming training sessions	Will attend when offered, including annual VLCT events
26 New to this Plan	Retrofit municipal buildings vulnerable to structural damage from wind and ice	Winter Storms	Selectboard Chair	• Long-term • Town Budget	Apply for funding from HSU or other equipment grants	Will consider in annual budget.

2004 Programs, Projects, and Activities Deleted from This Annex

2004 PRIORITY SCORE	MITIGATION ACTION	Who is Responsible	Approx. Time Frame & Potential Funding Sources	Initial Implementation Steps	Reason for Removal
34	Upgrade culverts along Brook Road to accommodate high water flows.	Road Crew	• Med Term • Local Resources	Incorporate into next budget cycle	Problem improved by replacement of select culverts.
31	Shore up the hill near the Town Office to prevent further landslides/erosion.	Town Officials	• Long Term • State and Local resources	Perform engineering study to determine best solution, seek funding to implement	State agency said stabilization work not required.

Plan Update: Mitigation Strategies

The Danby Plan Update Committee discussed each mitigation strategy and carefully reviewed the town Action and Evaluation Prioritization Matrix. The committee found that many projects are still relevant. In some cases, strategies were left in place because of their constant or cyclic

nature such as increasing fire protection in the historic district, incorporation of strategies into the town capital budget and planning documents, the examination of land use documents to ensure they address identified hazards and the upgrade and replacement of culverts.

The Town has completed several strategies related to improving flooding conditions (upgrading culverts), landslide/erosion prevention (bank on Brook Road blasted), water system upgrade, fire protection (new pumper/tanker purchased)(new communications tower) and emergency management planning (school evacuation drills). Other strategies such as upgrading the town garage to prevent runoff, shoring up the hill near the town office and installing emergency power generators at key sites were not accomplished and remain on the list.

The Town set out a new strategy to help avoid conflicts with river flooding and meandering and are investigating a Fluvial Erosion Hazard map as an overlay to the official land use map.

National Flood Insurance Program (NFIP) Compliance

The NFIP was created by Congress 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 address new construction, including manufactured homes, as well as major renovations and other development in the floodplain. The regulations encourage elevating and flood-proofing existing buildings. Specific details are listed in the regional section of the plan.

The 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. There are no repetitive loss properties in Danby. Two properties in town have flood insurance as of September 30, 2011.

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. A full list of compliance actions are provided in the regional section of the plan. Local examples include:

Regular Training: The town clerk and other local officials will take advantage of regular NFIP offered in the region by FEMA, the Vermont League of Cities and Towns, and the Vermont Department of Environmental Conservation.

Land Acquisition: The town will carefully consider the acquisition of land in floodplains and at other locations where fluvial erosion poses a risk to public and private infrastructure. This land should be preserved permanently as open space. FEMA funding opportunities, including the Hazard Mitigation Grant Program, can provide partial financial support for acquisition of homes damaged by previous floods. Property owners must express voluntary interest in selling land to the town. This is a medium priority compliance action if key landowners are willing to sell.

Public Outreach: FEMA publishes many useful brochures and guidebooks for the general public and local zoning officials on the NFIP. The documents are free of charge and can be placed in town offices and other public locations. Materials can be ordered online at http://www.fema.gov/business/nfip or by calling (800) 480-2520. This is a medium priority compliance action.

Plan Initial Approval and Maintenance Procedures

Plan Initial Approval Procedures

In addition to public involvement in the initial development of the plan, opportunities for public comment included a presentation to the Danby Selectboard and consultation with key town personnel such as the road commissioner. The complete mitigation planning effort is described in the regional mitigation plan beginning on page 7; a full list of local officials involved in the process begins on page 10 in the regional document.

After further review and comment by the Danby Selectboard, the draft local annex and associated regional section of this Hazard Mitigation plan were presented to the State Hazard Mitigation Committee through the State Hazard Mitigation Officer (SHMO) for review and comment. The SHMO will issue a recommendation for forwarding to FEMA Region I. After receipt of comments from FEMA Region I, final changes will be made and the resulting document adopted by the Danby Selectboard. The final plan will then be forwarded to FEMA Region I for formal approval.

Routine Plan Maintenance Procedures

The Hazard Mitigation Plan is dynamic and should not be fixed. To ensure that the plan remains current and relevant, it is important that it be updated periodically. **The plan must be updated at least every five years** in accordance with the following procedure beginning in advance of the expiration date. The update procedure should begin in early 2016 if the plan is adopted in 2012.

1. The Danby Selectboard will appoint a team to convene a meeting of the Review/Update committee.

2. The committee will discuss the process to determine if the evaluation criteria is 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 Hazard 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 have the opportunity to review the draft report. Consensus will be reached on changes to the draft.

5. Changes will be incorporated into the Plan.

6. The Plan will be reviewed by Vermont Emergency Management and FEMA Region

7. VEM and FEMA comments will be addressed in Plan.

8. The Selectboard will notify and schedule a public meeting and the review/update committee prepares presentation.

9. The public will participate in the presentation and provide comments on draft report.

10. The Selectboard will incorporates community comments into draft report.

11. The Selectboard will finalize and adopt the report and distribute to interested parties.

Programs, Initiatives and Projects Review

The plan must be reviewed in its entirety every five years as described above.

In addition, the Town will review and update its programs, initiatives and projects more often directly with the State Hazard Mitigation Officer (SHMO) based on changing local needs and priorities, and following declared disasters (see below.)

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 Review/Update 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.

Certificate of Adoption
Town of Danby, Vermont
Selectboard

A Resolution Adopting the Rutland Region Hazard Mitigation Plan, including a component Annex for Danby, Vermont

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 Annex as part of the Rutland Region Hazard Mitigation Plan analyzes natural hazards and assesses risks within the community; and

WHEREAS, the Danby Annex as part of the Rutland Regional 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 Rutland Region Hazard Mitigation Plan with the Danby Annex.

Duly adopted this _____ day of _____, _____.

_____
Chair of Selectboard

_____ _____
Member of Selectboard Member of Selectboard

ATTEST

_____
Town Clerk

Certificate of Adoption
Town of Danby, Vermont
Selectboard

A Resolution Adopting the Rutland Region Hazard Mitigation Plan, Including a component Annex for Danby, Vermont

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WHEREAS, the Danby Annex as part of the Rutland Regional 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 Rutland Region Hazard Mitigation Plan with the Danby Annex.

Duly adopted this 1ST day of NOVEMBER, 2012.

Chair of Selectboard

Member of Selectboard

Member of Selectboard

ATTEST

Town Clerk