

Cornwall, Vermont All-Hazards Mitigation Plan

1.1. Planning Process

1.1.1. Current Plan Update Process

The Town of Cornwall Selectboard met and authorized its support for the creation of an All-Hazards Mitigation Plan for the Town and for this planning process.

An initial draft single jurisdiction plan was prepared by staff of the Addison County Regional Planning Commission (ACRPC) converting a previous draft annex to a regional plan into a single jurisdiction plan. The Cornwall Emergency Manager was tasked with bringing together residents from throughout the community to form a plan review/update committee. Those responding to the initial request were:

Kate Gieges – Cornwall Emergency Manager

Sue Johnson – Cornwall Town Clerk

Stu Johnson – Cornwall Road Commissioner

Raphe Worrick – Cornwall Fire Dept/Emergency Management network

Ken Manchester – Cornwall Highway Dept/Fire Dept/Emergency Management network

Marge Drexler – Cornwall Shelter manager/Emergency Management network

Norm Grenier – Cornwall Fire Dept/Emergency Management network

The committee met on 10/2/2014 to complete a Hazards Inventory and Risk Assessment matrix, brainstorm additional possible hazard locations, and to identify additional mitigation projects. **The committee met again on XXXXX to complete their review and brainstorming session.** The committee continued to make suggested changes via e-mail to confirm suggested revisions and corrections to the initial draft plan until initial submission to the Federal Emergency Management Agency (FEMA) on XXXXX.

Input on the draft plan was available from town residents during open meetings of the town Planning Commission and the Town Selectboard where copies of the draft plan were available for review. The town also made a copy of the plan available at the Town offices for review and on its website www.cornwallvt.com to reach a broader distribution. In addition, input was sought from the following persons representing emergency responders, Planning Commission, School Board and highway workers: XXXXX

Based on comments from this public process, the draft plan was further edited and forwarded to FEMA Region I on XXXXX for comments and preliminary approval. Comments were received back from FEMA reviewers on XXXXX.

Changes were made to the draft plan based on FEMA recommendations and an updated draft was completed on XXXXX. Upon completion of this draft, the plan was further circulated to the Town Selectboard and review/update committee.

After a final round of edits the resulting document was adopted by the Cornwall Selectboard on XXXXX. The final adopted plan was then forwarded to FEMA Region I for approval.

1.1.2. Opportunities for public comment

As indicated in 1.1.1, multiple opportunities for public comment were made available during the planning process:

- A plan review/update committee was assembled from volunteers on 10/2/2014 by the Town Emergency Manager.
- The plan was made available in the town office and on the Town website <http://www.cornwallvt.com> for public comment while in draft form.
- Meetings of both the Town Selectboard and the Town Planning Commission were open for public comment throughout the planning and draft phases of this plan.
- Outreach to specific community leaders involved in emergency services, education and public works was completed during XXXXX.

1.1.3. Opportunities for additional comments

Additional opportunities for regional and state-level comments in the draft stage were provided throughout the planning process.

- A copy of the draft plan was provided to the State Hazard Mitigation Officer Ray Doherty for comments which were received on XXXXX.
- An updated copy was sent to Ray Doherty for submission to FEMA on XXXXX
- A substantially completed draft was submitted to the State of Vermont Agency of Natural Resources staff for comment and resubmitted in XXXXX
- FEMA Region 1 staff received a draft for comment on XXXXX
- A copy of the draft plan was posted on the ACRPC website www.acrpc.org for regional review and notice was given during monthly meetings of ACRPC as to its availability.
- The bordering Communities of Shoreham, Whiting, Salisbury, Middlebury, Weybridge and Bridport were provided copies of the plan electronically and input was requested.

1.1.4. Extent of review

Throughout the planning process all sections of an earlier regional plan were reviewed for accuracy. Recently completed studies and newly developed data were included in the document. Examples of changes due to new data include addition of information from:

- 2013 Basic Emergency Operations Plan
- 2012 Cornwall Town Plan
- 2011 Addison County Regional Plan
- 2013 State of VT Hazard Mitigation Plan
- Recently declared disasters
- 2012 Report of the State Fire Marshall

1.2. Community Background

The Town of Cornwall, which celebrated its 250th anniversary in 2011, is located in west central Vermont about 10 miles east of the southern end of Lake Champlain. Cornwall is located in the southern portion of

Champlain Valley and has an area of 18,688 acres or roughly 29.2 square miles. It is bounded on the north by Weybridge, on the west by Bridport and Shoreham, on the south by Whiting, and on the east by Salisbury and Middlebury. Its village center is located southwest of Middlebury at the junction of Vermont Routes 30 and 74. A second smaller grouping of homes, West Cornwall, is located on Rte 74 along a north/south ridge which some have theorized is the remnant of a major rift fault which created the Champlain Valley.

Route #30, originally an old stage road, splits the town east/west. Route #125 passes through the northern half of Cornwall and serves as a major east/west route from New York through Middlebury and eventually to Route 100 in the center of the state. The eastern town line with Salisbury is formed by the Otter Creek which includes a large floodplain and is host to one of the states' largest floodplain forest/wetlands complexes known as the Cornwall Swamp.

Cornwall has seen a rapid increase in population since the 1960's when a large influx of new residents sought refuge from more urban areas during the "Back-to-the Land" movement. As of the 2010 census the population was at 1185 and is expected to grow to 1250 by 2015.

According to the 2010 census, there are 517 housing units in Cornwall, 40% of which were built prior to 1940. Of those units, 489 are year-round and 23 are seasonal. In Cornwall, most year-round homes are owner occupied structures (~79%), while 21% of homes are renter occupied. 87% of housing in Cornwall is single-family residences while the remainder (13%) are split into multi-family and mobile homes.

Cornwall has a workforce of just over 600 workers and 85% of them work outside of the town in nearby communities. One of the most affluent communities in the region, many of those working outside of town work in the health care and education professions in nearby Middlebury. Central Vermont Public Service is the sole provider of electrical power and landline telephone service is provided by OTT Communications. Cellular reception is available in many areas of town but is very limited in others due to the limited number of towers. To date, cellular phone companies have focused on serving the Route 7 corridor. Residents of Cornwall provide for their own water and sewage needs through wells and springs as well as individual on-site septic systems.

The Town of Cornwall is host to a combination local volunteer fire department and registered first response (EMS) squad. Fire services are provided by the Cornwall Volunteer Fire Department, a privately incorporated volunteer department with additional expanded capacity through mutual aid assistance from the members of the Addison County Firefighters Association. Cornwall Fire Department responded to a total of 67 calls in 2012 including 31 medical assists, 5 Auto accidents and 6 structure fires. Emergency Medical Services are also provided by the Cornwall Volunteer Fire Department with paramedic and ambulance support from the Middlebury Regional Ambulance. Patients are generally transported to Porter Medical Center in nearby Middlebury. Law enforcement in the Town is provided by the Vermont State Police. Routine traffic enforcement is provided under contract to the town by the Addison County Sheriff. The towns two constables provide the only community based law enforcement. The town is also an active participant in the Vermont State Police's Community Advisory Board.

The Town has an appointed Emergency Management Coordinator and has an ongoing Emergency Management Network which was started in 2007. The team uses a Local Emergency Operations Plan (LEOP) to coordinate response to larger incidents. The LEOP identifies the residence of the town emergency manager and that of the Town Clerk as the two primary emergency operations centers with the Town Hall as the primary back-up. Three emergency shelters are identified in the LEOP as the Town Hall, the Town Garage and the Municipal Building in nearby Middlebury. The LEOP also identifies high hazard areas and

vulnerable sites. Specifically called out are flooding along Swamp Road, the Peet air strip, roads subject to snow drift and power or telephone switching stations.

The Town is a member of the National Flood Insurance Program and, as such, has adopted zoning by-laws designating Flood Hazard Areas including associated regulations for administering those areas. Fortunately, much of the identified floodplain is associated with Otter Creek which floods regularly once or twice a year. This frequent flooding has effectively discouraged development in recent times due to difficulties in disposing of septage and the availability of alternate non-flooding sites in town.

1.3. Existing Adopted Plans which support Hazard Mitigation

The following plans pre-date this plan and are used to illustrate how the community, the Addison region and the State of Vermont have incorporated mitigation into standard planning mechanisms. As planning efforts continue forward, this plan will continue to inform and be integrated into these and other future planning processes.

Cornwall Basic Emergency Operations Plan (Mitigation repairs identified)

- *Flooding on Swamp Road (Ongoing maintenance and upgrades)*
- *Trees across roads (Periodic assessment/cutting)*
- *Snow Drifts across roads (Snow Fence/natural barriers, increased monitoring & plowing)*
- *Undersized Culverts (Upgrade according to plan)*
- *Flooding on Rte 125 (VTrans)*

Cornwall Town Plan (2014) Goals that support Hazard Mitigation

- *Reduce safety hazards throughout Cornwall's transportation system*
- *Ensure that private roads and drives are constructed and maintained to minimum standards*
- *Maintain and, where necessary, improve the quality of Cornwall's groundwater, surface waters and wetlands.*

Cornwall Town Plan (2014) Statements supporting Hazard Mitigation

- *Promote and recognize the value of volunteerism in the provision of community services*
- *Continue to explore opportunities for coordinating services with neighboring towns and sharing resources such as equipment and personnel in a manner similar to the fire department's mutual aid system.*
- *Continue to support high quality fire and rescue services in town and ensure there is adequate access to all development for emergency vehicles.*
- *Continue to support the organizational and planning efforts of the Emergency Management Committee to insure adequate preparation fo potential large-scale weather related events.*
- *Work with landowners, land trusts, state and federal agencies...preserve functioning wetland systems.*
- *Encourage the gathering and analysis of information on the yield and quality of wells...support testing of water sources for pollutants. The town does not favor the construction of underground utility transmission infrastructure near wells and groundwater supplies.*
- *All corridors for transmission lines or pipes whether for electricity or gas, shall be located outside of populated sreas and away from residences, businesses and public buildings and spaces to provide the maximum margin for safety, noise and other impacts.*

- *Utilities shall fully explain to Town officials and Town emergency responders, and shall provide the necessary training, support and equipment for our emergency personnel to respond successfully to any emergency situation involving the infrastructure proposed.*

Cornwall Town Plan (2014) Recommended actions supporting hazard mitigation:

- *Complete the reconstruction (or relocation) of Route 125 at its intersection with Cider Mill Road in a manner that...provides adequate sight distance consistent with prevailing speeds on these roads.*
- *...revise the current intersection of Route 30 and Route 74 to provide a straightforward “T” intersection.*
- *Enter into substantive talks with VTrans when the next round of repaving approaches for Route 125 and 74 for the purposes of establishing paved shoulders, wide enough to accommodate bicycles, joggers and pedestrians.*
- *Maintain the town’s current standards for private roads to ensure they are in-keeping with state standards for safe access for emergency vehicles.*
- *Review and update zoning regulations to include specific setback requirements from riparian corridors*
- *Limit development in the floodplain to protect the ecological services that this area provides of mitigating flood hazards.*
- *Limit development in areas of steep slopes and other areas with high erosion potential.*

Addison County Regional Planning Commission Regional Plan (2011) Goals that support Hazard Mitigation

- *Work to restore and maintain stream equilibrium by developing and implementing river corridor plans.*
- *Reduce flooding and related damages through appropriate mitigation techniques.*
- *Encourage watershed based cooperation and educate towns and the general public about water quality and stream dynamics*
- *Provide communities the support they need to be proactive in reducing flood and erosion hazards by adopting appropriate zoning regulations to limit development in hazardous areas.*
- *Encourage proper maintenance and sizing of bridges, culverts and other structures to accommodate flow from storm events and to mitigate flood hazards.*
- *Reduce the loss of life and injury resulting from all hazards.*
- *Mitigate financial losses incurred by municipal, residential, industrial, agricultural and commercial establishments due to disasters.*
- *Reduce the damage to public infrastructure resulting from all hazards.*
- *Recognize the connections between land use, storm-water, road design/ maintenance and the effects from disasters.*
- *Ensure that mitigation measures are sympathetic to the natural features of the region’s rivers, streams and other surface waters; historic resources; character of neighborhoods; and the capacity of the community to implement them.*
- *Encourage hazard mitigation planning as a part of the Municipal Planning Process.*
- *Encourage municipalities and landowners to consider VT Agency of Natural Resources riparian guidelines for habitat and flood protection.*

State of Vermont Hazard Mitigation Plan (2013) Hazard Mitigation Goals

- *Ensure that current and proposed legislation and regulatory policies require effective hazard mitigation practices throughout the State.*

- *Ensure that grant-related funding processes allow for expedient and effective mitigation actions to take place at the municipal and State level.*
- *Provide timely and accurate technical assistance that supports hazard mitigation activities to regional and local jurisdictions as well as private sector partners.*
- *Identify state-level risks and vulnerabilities and protect or harden state infrastructure against hazards.*
- *Conduct hazard assessments, mapping and data collection projects to increase knowledge about both the hazards facing Vermont and the most effective mitigation actions for minimizing public exposure to hazards.*

1.4. Community Risk Assessment

The Town of Cornwall’s Hazard Mitigation Planning Committee reviewed the following hazards in its hazard inventory– Drought, Widespread Power Failure, Lake Flooding, Flash Floods, High Winds, Highway Accident/Hazardous Material Spill, Structure Fire, Wildfire, Winter Storm/Ice Storm, Earthquake, Rail Accident/Hazardous Materials Spill, Landslide, and Dam Failure.

In terms of overall vulnerability, the committee scored the following hazards as their five highest: **Widespread Power Failure, Transportation Accident/Hazardous Material Spill, Structure Fire, and Rail Accident/ Hazardous Material Spill**. The Town of Cornwall Risk Assessment conducted by the Hazard Mitigation Committee is located as Annex E. Table # 1 lists the federally declared disasters that included Addison County in the past 25 years:

Table #1: Federally declared disasters affecting Addison County

| Year | Date | Description | Dec. # | County Cost | Leicester |
|------|----------------|-------------------------------------|--------|----------------|----------------|
| 1973 | 7/6/1973 | Severe Storms, Flooding, Landslides | DR397 | \$ Unavailable | \$ Unavailable |
| 1976 | 8/5/1976 | Severe Storms, High Winds, Flooding | DR518 | \$ Unavailable | \$ Unavailable |
| 1977 | 9/6/1977 | Drought | EM3053 | \$ Unavailable | \$ Unavailable |
| 1989 | 8/4-5/1989 | Severe Storms, Flooding | DR840 | \$ 31,033 | \$ Unavailable |
| 1993 | 4/24-5/26/1993 | Flooding, Heavy Rain, Snowfall | DR990 | \$ 17,639 | \$ Unavailable |
| 1996 | 1/19-2/2/1996 | Storms, Flooding | DR1101 | \$ 130,529 | \$ Unavailable |
| 1998 | 1/6-16/1998 | Ice Storms | DR1201 | \$ 662,388 | \$ Unavailable |
| 1998 | 7/17-8/17/1998 | Severe Storms and Flooding | DR1228 | \$2,146,484 | \$ Unavailable |
| 2000 | 7/14-18/2000 | Severe Storms and Flooding | DR1336 | \$ 744,075 | \$ Unavailable |
| 2001 | 3/5-7/2001 | Snowstorm | EM3167 | \$ Unavailable | \$ Unavailable |
| 2004 | 8/12-9/12/2004 | Severe Storms and Flooding | DR1559 | \$ 365,661 | \$ 15,622 |
| 2008 | 6/14-17/2008 | Severe Storms and Flooding | DR1778 | \$ 486,850 | \$ Unavailable |
| 2008 | 7/21-8/12/2008 | Severe Storms and Flooding | DR1790 | \$ 438,900 | \$ 34,503 |
| 2011 | 4/23-5/9/2011 | Severe Storms and Flooding | DR1995 | \$ Unavailable | \$ Unavailable |
| 2011 | 8/26-9/2/2011 | Hurricane Irene | EM3338 | \$ Unavailable | \$ Unavailable |
| 2011 | 8/27-9/2/2011 | Tropical Storm Irene | DR4022 | \$ Unavailable | \$ 5,737 |
| 2012 | 5/29/2012 | Severe Storm, Tornado and Flooding | DR4066 | \$ Unavailable | \$ Unavailable |

1.4.1. Hazard Type, Location, Extent and Vulnerability

The following Hazard types have been identified and evaluated based on a risk vs. probability formula. The table shown in Annex E is a visual representation of that evaluation process for the Town of Cornwall.

- **Drought** – Local knowledge indicates dry spells are periodic in nature and would be considered moderate to severe every 10 years on the average. Four types of drought have been identified in the State of Vermont’s Hazard Mitigation Plan: meteorological, agricultural, hydrological and

socioeconomic. Within the Town of Cornwall the most obvious risks associated with drought include drying up of shallow wells (Hydrological) and reduced productivity of agricultural crops (Agricultural).

An extended drought period in the region occurred during the 1960s when much of Vermont experienced severe drought in 1964 and extreme in 1965 and 1966. The years following this drought period saw the development of several community-owned water systems in communities along Lake Champlain. Similar conditions could result in new calls for a public water supply in communities like Cornwall. Most recently, a dry period in 2000 saw a few residents in the region without water for several weeks which was finally relieved by fall rains. Direct costs of drought conditions tend to be borne by individual residents and therefore are difficult to track accurately. No direct costs to the town due to drought have been recorded in the past 25 years.

The community vulnerability to drought would be considered MODERATE to LOW based on a limited overall impact to the community with a relatively common period of occurrence.

- **Widespread Power Failure** – Based on local knowledge, widespread power outages are a common yet low impact event throughout the Town of Cornwall. The town is served via four primary trunk lines:
 - North end – Weybridge
 - South end – Whiting
 - North Central – North of Morse Road/Sperry Cross Road
 - South Central – South of Sperry Cross Road/ Clark Road

Summertime power outages caused by severe summer storms mostly cause inconvenience to residents unless extended outages impact a family's frozen food supply or their ability to pump water from deep wells. Possible during all seasons of the year, the lack of power becomes particularly an issue during winter as it often translates into lack of heat as well.

Widespread outages have been common through much of the past 50 years with limited overall impact to the community. However, extended outages during winter months coupled with extreme cold have periodically resulted in more extensive damage associated with freezing pipes particularly in private residences. The Town of Cornwall has retrofitted both its town hall and town garage with emergency generators in the past few years to allow for emergency use as emergency operations centers and for the use of the town hall as an emergency shelter.

In 1998 a severe ice storm hit much of northern Vermont and much of the Addison region. No community in the region was spared damage by downed power lines. Power outages continued for several days as remote power lines were accessed by off-road vehicles. Subsequent mitigation activities by power companies have re-routed many of those remote lines onto town highway rights of way and an increased pruning effort has reduced the impact of a similar event would it happen today.

The community vulnerability to Widespread Power Outage would be considered HIGH based on a high likelihood of occurrence (near 100% possibility within the next year) and a moderate (<75%) geographic impact within the town.

Widespread power outages have been extensively mitigated in the past few years effectively reducing the community's vulnerability. Actual vulnerability could be considered LOW based on limited unmitigated impacts to infrastructure, health, and environment.

- **Flood/Flash Flood** - Based on the results of overlaying the FIRM flood maps with the location of the E911 points, there are no structures in the town that are vulnerable to potential flooding. This lack of at-risk structures can be heavily attributed to the topographic conditions surrounding the Lemon Fair and Otter Creek. Both of these rivers have extensive floodplains which have, over the years, not been compromised by human interference. These floodplains effectively mitigate damages by slowing currents in these rivers and by reducing the levels of flooding experienced. Otter Creek was an exceptional example of this following tropical storm Irene when flooding all along the river downstream of Rutland resulted in very limited damages.

Damages within the Town of Cornwall are usually limited to the closure of Swamp Road when waters rise. Once waters have subsided, it is usually a matter of clearing away debris which has settled on the road from the flooding. Increased commuting times are the primary issue when the road is closed due to high water. Wetland restoration by the Nature Conservancy and others consisting of plugging drainage ditches in the Cornwall Swamp area promises to extend Swamp Road closures by retaining flood waters longer.

The Town of Cornwall has been hit with 2 presidentially declared disasters in the past 10 years as a result of flash flooding which resulted in \$13,889 in FEMA reimbursements in 2009 and most recently in XXXXX for damages incurred in 2012. Partially due to an ongoing culvert upgrading policy, Cornwall was spared much of the heavy damage which impacted much of Vermont due to flash flooding from tropical storm Irene in 2011. This allowed the town highway crew to generously assist other, more heavily impacted, communities.

Since the desirability of a "home on the water" is quite high, pressure to develop additional lands along our rivers, lakes and floodplains is increasing. Limitations for development in floodplains alone may not sufficiently address the hazards associated with proximity to the river and further limitations that address erosion and flash flood hazards should be considered.

The community vulnerability to a Flooding incident is HIGH based on the likely (near 100% probability in the next 25 years) occurrence of an incident with the potential for limited (10% to <25% of the community including homes and infrastructure) impact.

- **High Winds** – High winds come in many forms in Addison County and are included in damages associated with Hurricane, Tornado and Hail Storms. In addition to these specific events, high winds are often associated with collisions of major weather fronts when high pressure and low pressure systems create extreme gradients between them. The National Weather Service issues a wind advisory for sustained winds of 31 to 39 mph or gusts of 46 to 57 mph. Winds of greater than 58 mph triggers a High Wind Warning.

Beaufort Wind Scale

| MPH | Beaufort # | Description | Effects |
|-------|------------|-----------------|---|
| 0-1 | 0 | Calm | Calm; Smoke rises straight up |
| 1-3 | 1 | Light Air | Wind motion causes smoke to drift slowly |
| 4-7 | 2 | Slight Breeze | Leaves rustle, wind is felt on exposed skin |
| 8-12 | 3 | Gentle Breeze | Leaves and small twigs in constant motion |
| 13-18 | 4 | Moderate Breeze | Small branches move; dust and loose paper raised |
| 19-24 | 5 | Fresh Breeze | Small trees sway; |
| 25-31 | 6 | Strong Breeze | Large branches sway; overhead wires “whistle” |
| 32-38 | 7 | Near Gale | Whole trees in motion; walking into wind takes effort |
| 39-46 | 8 | Gale | Twigs break off trees; cars veer on the road |
| 47-54 | 9 | Severe Gale | Branches break; Light structural damages |
| 55-63 | 10 | Whole Gale | Trees blown over; considerable structural damage |
| 64-73 | 11 | Storm | Widespread structural damages |
| 74+ | 12 | Hurricane | Considerable and widespread damage to structures |

Locally developing thunderstorms due to convective forces in the atmosphere can generate high winds, such as those experienced in parts of eastern Vermont on July 6, 1999, downing hundreds of large trees in a few minutes. In June of 2005 and in July of 2003, locally developing lines of thunderstorms resulted in a combined total of over \$150,000 in damages to communities in Addison County. Another high wind event occurred in 2007 to the south of Addison County which resulted in the so-called Nor-easter. This storm became a presidentially declared event (DR 1698) and resulted in over \$1,000,000 in reported damages.

The State can also experience tornadoes, which 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. Since 1953 40 tornadoes have been recorded in the State ranging from F1 to F2 on the

Fujita Scale. These storms killed 9 people and caused over \$8.4 million dollars in estimated property damage.

Addison County experienced two of those storms. In June of 1965, a twister touched down resulting in \$37,000 in damage and one death. Another in 1983 struck the northern portion of the county and resulted in crop losses exceeding \$500,000.

Remnants of Hurricanes striking New England are a rare but possible occurrence in all of Vermont and Cornwall has not been spared. Hurricanes in 1938 and 1950 are still remembered by older residents when barns collapsed and animals needed to be rescued or put down due to injuries.

While Cornwall has managed to avoid many of the larger events, localized strong winds have resulted in occasional loss of roofs on lesser maintained structures.

The community vulnerability to a High Wind incident is MODERATE based on the moderately likely (25% chance) occurrence of an incident with the potential for limited (10% to <25% of the community including homes and infrastructure) impact.

- **Landslide/Erosion Hazard** – Due to historic patterns of development, landslide/erosion issues are generally limited to erosive actions of high water on streambanks in town. Much of the erosion susceptible property along the rivers and their floodplains is currently in agricultural use and is not currently at risk. However, future development along the rivers is still possible due to the limited protection provided by basic NFIP requirements adopted by Cornwall.

Community vulnerability to an Erosion/Landslide incident is MODERATE based on a moderate probability of occurrence (25 year interval) and relatively small area impacted. The communities risk could change depending on future development since the area most susceptible to erosion is not currently protected by NFIP-based bylaws.

- **Lightning** – Severe storms which include lightning along with wind and rain events are a common occurrence in Cornwall during summer months. Lightning strikes routinely cause fires to trees along ridge tops and less commonly start fires in structures. Fires associated with lightning strikes to inhabited buildings occur fewer than once every five years on average. More common is loss of power and damage to electronic equipment in homes where there has been a proximity strike. Anecdotally, there are multiple reports each year of electronic equipment unprotected by surge suppressors which are damaged by lightning strikes. Generally, these homeowners file insurance claims for damages and total annual damages in the entire community likely do not exceed \$10,000.

Town buildings located in the Cornwall village area and homes located along the ridge at Bingham Road are more highly susceptible to lightning strike than other areas due to the height of the public structures and the general elevation of the ridge.

Community vulnerability to lightning strike is considered LOW due to the limited and scattered effects of strikes combined with the very common occurrence.

- **Hazardous Materials Incidents** - There are no sites in town that have sufficient types and/or quantities of hazardous materials to require reporting, however, several local farms likely store fuels in excess of the quantities which require reporting. In addition, two local businesses provide agricultural chemicals and supplies to local farmers in retail sized packaging. In aggregate, the quantities could represent a significant hazard should a multiple package spill occur. A 2014 census of businesses using chemicals in the community was conducted by the Cornwall Volunteer Fire Dept. That census showed:

???????????

Highway accidents also, could result in a release of hazardous materials. A 1000 foot buffer was superimposed over state highways and all class 1 and 2 town roads that represent a possible impact area should a large hazardous material spill occur on these highways. Based on this analysis, there are ??? structures that could be impacted should an incident with a vehicle carrying HAZMAT occur.

Essential facilities which could be impacted by such a spill within the Town of Cornwall are:

- Cornwall Town Hall/Office
- Bingham Memorial School
- Cornwall Fire Stations #1 or 2

- **Highway/Transport Accidents**

The Town also recognizes certain locations along town and state highways are high accident locations(HAL). Three HALs have been identified in the Town of Cornwall through police and VTrans reports:

- Route #125 at the Lemon Fair bridge
- Route #30 at the Cider Mill Road intersection
- Route #30 south of Park Hill Road

The community vulnerability to a Hazardous Materials incident is HIGH based on the likely possibility of an incident and its potential for critical impact.

- **Structure Fire** – Responses by the Cornwall Fire Department for structure fires have averaged less than ? over the past few years. The town’s well trained and equipped fire department including access to mutual aid from neighboring departments helps reduce risks to life and loss of property.

New development has not had a huge impact on fire risk due to improved construction methods. State codes for commercial construction have fire protection embedded within the standards. Unfortunately, risks to firefighters continue to escalate as newer construction materials often produce a dangerous combination of gasses when burned.

The community vulnerability to a Structure Fire incident is MODERATE based on the highly likely (near 100% probability in the next year) occurrence of an incident with the potential for negligible (<10% of the community) impact. In reality, due to a relatively high level of preparedness, the community vulnerability to structure fire could be considered LOW.

- **Wildfire** – In spite of an active agricultural base, much of the Town of Cornwall is forested. Consequently, many structures in the town would fall within an urban/wildfire interface. This increased risk for forest fire due to proximity is moderated by the so-called “Teflon Forest”

conditions of the Northeastern US. While moisture levels generally tend to be higher than in the fire-plagued western forests, scattered periods of drought can increase fire danger levels to *Extreme* particularly during spring and fall seasons when dry leaves cover much of the forest floor.

In addition, springtime burning of open fields has been a longstanding historic practice thought to improve field fertility. Every year, a few of these fires get out of control and threaten houses and outbuildings.

Within the past 50 years, forests have been closed to recreation state-wide 3 times due to extreme fire conditions. While these incidents have not resulted in large-scale damage in the Town of Cornwall, the conditions existed for widespread forest fires. In addition, an unusually dry spring will often result in a no-burn proclamation most recently seen in 2009.

Vermont Wildfire Statistics

| Year | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|-----------|------|------|------|------|------|------|------|------|------|------|
| # fires | 189 | 100 | 101 | 86 | 221 | 118 | 81 | 115 | 95 | 88 |
| # Acres | 295 | 146 | 95 | 250 | 547 | 254 | 180 | 138 | 164 | 84 |
| Ave. Size | 1.56 | 1.46 | .95 | 2.91 | 2.48 | 2.15 | 2.22 | 1.20 | 1.73 | .95 |

Addison County Wildfire Statistics

| Year | 2006 | 2007 | 2008 | 2009 | 2010 |
|---------|------|------|------|------|------|
| # fires | 2 | 4 | 6 | 10 | 1 |
| # Acres | .5 | 9 | 10 | 4.5 | 1.2 |

Increased development within the urban/wildfire interface continues throughout the state and Cornwall has not escaped that trend. It is becoming increasingly important that residences and essential facilities be constructed with an eye toward wildfire resistance by establishing a no-burn zone around structures and by providing suitable water supplies for fire fighting to more remote residences.

The community vulnerability to wildfire is considered MODERATE based on a high likelihood of occurrence (100% in any given year) and a low overall impact to the community.

- **Winter Storm/Ice Storm** –Severe winter storms are common throughout Vermont. When conditions are predicted, the National Weather Service issues warnings ranging from a Winter Storm Warning (heavy snowstorm predicted within 24 hours) to Blizzard Warning (sustained wind and snow with gusts up to 35 mph for at least 3 hours) to Heavy Snow Warning (accumulations of over 6 inches in a 24 hour period).

With a regular occurrence of a significant snow or ice storm, the town feels the impact of a winter storm most on the infrastructure of the community. The town is able to keep the roads open and treated for most storms and rarely has lost the ability to keep up with a winter storm due to the Town’s high preparedness level and ongoing mitigation actions. Fortunately, the regular occurrence of winter storms also causes most residents to maintain a high level of preparedness for winter storms.

In 1998 a severe ice storm hit much of northern Vermont and the Town of Cornwall was not spared. Power outages continued for several days as remote power lines were accessed by off-road vehicles. P/A reimbursable damages associated with this storm topped \$45,000.

In March of 2001, the so-called “Town Meeting Day” snow event caused reduced ability for residents to travel to the voting booth due to hazardous conditions. **Some of the additional costs of keeping roads open on voting day ???, were reimbursed through State and Federal assistance.**

As recently as February 2007, a significant snowstorm coupled with high wind nearly crippled much of Vermont including the Addison County region which suffered a reported \$237,000 in damages. This “Valentines’ Day Blizzard” stressed the resources of most local communities, including the Town of Cornwall, to capacity but did not result in a federal declaration.

As population growth and housing expands along remote road corridors, increasing dependency on local roads by the new homeowners requires changes in winter maintenance. The town has, thus far, been able to keep up with those increased demands on its services through additional hires and equipment purchases.

Without that preparedness level, the community vulnerability to Winter Storm/Ice Storm would be considered HIGH based on the highly likely (near 100% probability in the next year) occurrence and the high (>75% of the community) impacted.

- **Earthquake** – Surprising as it is to some, Vermont is classified as an area with “moderate” seismic activity. This can be compared to the west coast of the U.S., which is classified as “very high” and the north-central states classified as “very low.” Sixty-three known or possible earthquakes have been centered in Vermont since 1843 (*Ebel, et al 1995*). 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 on July 6, 1943, and the second occurred in 1962 in nearby Middlebury. The Swanton quake caused little damage, but the Middlebury quake did result in broken windows, cracked plaster and falling objects (*VEM, 1995*).

Earthquakes centered outside the state have also occasionally been felt in Vermont. Twin quakes of 5.5 occurred in New Hampshire in 1940. In 1988, an earthquake with a magnitude 6.2 on the Richter scale took place in Saguenay, Quebec and caused shaking in the northern two thirds of Vermont (*Ebel, et al 1995*).

In May 2001 and again in the summer of 2010, earthquakes in the 5.0-5.5 range have been felt in Cornwall with epicenters in New York and Quebec respectively.

Based on information provided by the Vermont Geological Survey, Department of Environmental Conservation, Agency of Natural Resources, HAZUS outputs for the region are summarized as follows:

The Middlebury Once-in-500 year earthquake (5.7 magnitude) could cause significant damage in Addison County. The Goodnow, NY Once-in-500 year earthquake (6.6 magnitude) could cause shaking just above the lower limit for building damage. The Montreal, Quebec (6.8 magnitude) and

the Tamworth, NH (6.2 magnitude) Once-in-500 year earthquakes probably would not cause damage in Addison County. Only the loss data from the Middlebury and Goodnow events are shown below:

Middlebury Scenario:

- Building damage – HAZUS estimates that over 1600 buildings will receive at least moderate damage. This is a little more than 13% of the total number of buildings in the county. (16% of buildings in Cornwall would be 102). HAZUS also estimates that all essential facilities (hospital, schools, police stations and fire stations will receive at least moderate damage. 7 families would be predicted to be displaced from their homes and will need temporary shelter in Cornwall.
- Transportation & utility systems – HAZUS estimates minimal disruption of the transportation and utility systems. However, over 9000 households in the region are expected to be without electrical power for up to three days.
- Casualties – Minimal casualties are also expected with less than twenty-five requiring medical attention and less than three needing hospitalization in the region.
- Economic loss – Direct building losses are estimated at > \$83 million and business interruption losses are expected to be as much as \$105 million. HAZUS estimates that although there was minimal damage to the transportation system the loss would still be close to \$15 million. Approximately \$4.4 million would be needed to repair damaged communications systems.

Goodnow Scenario:

- Building damage – HAZUS estimates that over 600 buildings will receive at least moderate damage. This is a little more than 5% of the total number of buildings in the county. (5% of buildings in Cornwall would be 34) HAZUS also estimate that all essential facilities (hospital, schools, police stations and fire stations will receive at least moderate damage. 3-4 families are predicted to be displaced from their homes and will need temporary shelter.
 - Transportation & utility systems – HAZUS estimates minimal disruption of the transportation and utility systems. However, over 4000 households are expected to be without electrical power for up to three days in the region.
 - Casualties – Minimal casualties are also expected with less than six requiring medical attention and only one needing hospitalization.
 - Economic loss – Direct building losses are estimated at > \$17 million and business interruption losses are expected to be as much as \$24 million. HAZUS estimates that although there was minimal damage to the transportation system the loss would still be close to \$3.6 million. Approximately \$0.9 million would be needed to repair damaged communications systems.
- **Dam Failure** – Cornwall has no significant dams identified in the State’s dam inventory database.

The community vulnerability to Dam Failure would be considered LOW based on the low likelihood (10% probability in the next year) of occurrence and the Low (<5% of the community) impacted

1.5. Community Mitigation Strategies

1.5.1. Hazard Mitigation Goals by Hazard Type

Each hazard type identified in Section 1.4 “Community Risk Assessment” can be mitigated dependent on the willingness to do so at the local, state or federal level. For example, the mitigation of flood damage is basically a simple fix- don’t allow anything in the floodplain that can’t afford to be lost and when it is lost, don’t replace it. This would include all forms of infrastructure whether it be homes, highways, dams or croplands. Unfortunately, political will can rarely stand up to the simplicity of mitigation.

The Town of Cornwall has identified that its goals for hazard mitigation are to reduce and/or avoid all long and short term vulnerabilities to the hazards identified in section 1.4. In doing so, it also recognizes that political will and lack of funding stand in the way of many mitigation projects. The town particularly supports local residents’ efforts to mitigate their personal risks. The Town also supports projects that lead to a positive benefit vs. cost evaluation and which the voters can afford.

1.5.2. Ongoing Mitigation Strategies by Hazard Type

All Hazards:

The Town of Cornwall’s Emergency Management Network is a well organized and active presence in Cornwall. Their mitigation strategy is to increase the awareness of all hazards planning and preparedness in the school.

Drought

Most homeowners with shallow wells have learned to live with the inconvenience of dry spells by purchasing bottled water and using public toilets and laundries for the short periods they would be without a dependable water supply. When the inconvenience has become too much, many of these homeowners have mitigated the problem by drilling deep wells. Increasingly, home mortgages are requiring a dependable deep well water supply as a condition of a loan.

Agricultural activities highly dependent on water such as fruit and vegetable crops can be severely impacted by lack of rain. Most of these businesses have mitigated the effects of periodic droughts by providing irrigation systems. Other farms, dependent on crops to feed livestock rather than humans, are highly impacted by low water supplies and may be dependent on a USDA disaster declaration to find relief.

Reduced water supplies also impact the community’s fire fighting capabilities. Since no public water supply is available, the contract fire department is highly dependent on surface water supplies for fire fighting. The Cornwall Volunteer Fire Department is active in installing dry hydrants in deep water ponds and streams to make access to water easier within the Town of Cornwall. As housing continues to expand into rural areas, the potential lack of a dependable water supply for fighting fire is becoming an issue.

As a mitigation measure shared with structure fire and wildfire, future development may need to be required to provide fire ponds as part of an impact assessment. Cornwall's current subdivision regulations call for "adequate" water supply to be provided for any subdivision.

Widespread Power Failure

Many private residences have back-up power sources and essential Town facilities like the Town Hall/Office and Bingham Memorial School have been retrofitted in recent years.

As population growth and housing expands along remote road corridors, increasing reliance on dependable power by the new homeowners requires changes in line maintenance. Central Green Mountain Power (GMP), the utility servicing the Town of Cornwall has an ongoing program of line clearing and relocation to ensure outages are kept to a minimum. In addition, recent improvements to the transmission system in northwest Vermont have provided redundant systems to bring electric power to the region.

The Town of Cornwall supports development of a robust and redundant local electric generation and transmission system for its residents. This support is limited to that which can prove that the benefit to local residents outweighs the societal costs associated with industrial generation and transmission degradation of the local landscape.

Flood/Flash Flood

The Town has been a member in good standing of the NFIP for over 30 years. There are no identified "Repetitive Loss" properties located in Cornwall. **One** flood insurance policy is in effect for a residence in the town and is insured for **\$280,000**.

The Town of Cornwall adopted the 2013 version of road and bridge standards as recommended by VT AOT on **4/1/2013**. These standards address road and bridge construction, are designed to mitigate local traffic issues and are particularly designed to mitigate potential damages due to flooding and flash flooding. The standards address culvert sizing, ditch treatments and driveway access to reduce flood-caused erosion. **The adopted standards are attached as Annex F of this mitigation plan.**

The town supports the Vermont Culvert Database VOBCIT by updating records whenever they replace or upgrade culverts.

The Town supports continued compliance with the NFIP and would support Community Rating System (CRS) improvements where the benefits to the town's residents would outweigh the costs of additional administration and compliance.

High Winds

Residents of the Town generally do not recognize high wind as a hazard which can be mitigated with the exception of the effects previously discussed under widespread power failure.

Newly constructed buildings may have tie downs between roof and side walls but no building codes exist within the community that require construction to any particular standard.

Where high wind hazards have been recognized, it is usually a function of damage that might be caused if a tree were to be blown over and its effect on a residents' home. For this reason, some trees are removed from the landscape to reduce their vulnerability to high wind events. The Town of

Cornwall supports removal of dead and hazardous trees in the town right-of-ways to mitigate the hazards associated with their falling either on town highways or on power lines.

Landslide/Erosion Hazard

Unfortunately, the relatively short lives (compared to geologic time) of property owners lead them toward the belief that the river has always been stable and that it is poor management that causes channel migration rather than the unstoppable forces of nature.

In the most current Town Plan, adopted in 2012, the town planning commission indicates a desire to reduce the erosion of river banks and the resultant sedimentation which cause nutrient loading into the river systems. By encouraging vegetative buffers along riverbanks it is believed that future erosion will be reduced.

Adoption of zoning regulations which would require a buffer along all riverbanks could be difficult to adopt as property owners often do not recognize the threats associated with river channel migration over time.

Lightning

The town has mitigated potential damage to Town-owned structures due to lightning strike by installing lightning rods to channel the electrical energy directly to ground rather than through the structure's electrical system.

Most larger privately owned structures in vulnerable locations have similarly installed lightning rod systems to protect them from lightening strike with the encouragement from insurance companies and extension agents.

The Town has no adopted building standards which would require this action but feels the risk to private residences should be borne by each resident on their own.

Hazardous Materials and Highway Transport Accidents

A representative from the Town of Cornwall is an active member of the Local Emergency Planning Committee in planning for hazardous materials incidents. The Town mitigates risk to local responders by reporting its Tier II facilities as required at both the state and local levels.

The nearby Town of Middlebury is host to a regional HazMat Decontamination trailer, providing mitigation through proximity of response resource.

The Town zoning bylaws **section 500** specifically limits storage of flammable liquids above ground and within specified distances of schools, hospitals, libraries, and religious institutions. In addition, Town zoning bylaws limit storage of hazardous materials in the mapped floodplain.

A representative from the town sits on the local Transportation Advisory Committee, a regional group whose purpose is to prioritize potential transportation related projects within the region. This group rates High Accident Locations (HAL) highly in prioritizing projects to mitigate the risks associated with these locations by changing alignments, added signage and reduced speeds. **Funding a safety study of the HALs on Route 30 would be an appropriate request for the ACRPC annual TAC grants.**

Structure Fire

Installation of dry hydrants at water supply locations can increase the availability of and speed in which water can be accessed for firefighting purposes. The Town of Cornwall supports installation of these hydrants as funding permits and suitable locations can be identified.

Actions identified under the Drought hazard would also mitigate structure fire and wildfire risk in future developments.

Wildfire

Cornwall has an active fire warden who requires permits prior to any outdoor burning in the town. This process includes a site visit at the proposed burn site and a subsequent issuance of a permit. Enforcement is usually limited to a warning if the fire seems lit out of ignorance and can result in fines if the fire department is called out.

The town has no guidelines for home construction in place that would limit the risk to wildfire in Cornwall. Actions taken as described above should limit the setting of uncontrolled outdoor fires and should result in an overall limited risk. In addition, fire ponds required as an impact assessment should mitigate future fire risk in future developments.

Winter Storm/Ice Storm

Mitigation activities by power companies have re-routed many of the remote lines along town highways since a 1998 ice storm and an increased pruning effort has reduced the impact of a similar event would it happen today.

The Town of Cornwall generally mitigates its winter storm risk through preparedness activities in the form of appropriately sized equipment and training. The periodic cutting of brush along town highways also mitigates the effects of large winter storm events by reducing their ability to act as snow fence dropping windblown snow into the town highway system.

Earthquake

Despite the probability of an earthquake within the next 50 years, most town residents do not even attempt to mitigate its hazard.

The Town of Cornwall has also not identified earthquake as a hazard it feels is imminent enough to justify much in the way of mitigation actions.

Dam Failure

The Town of Cornwall does not generally address dam failure mitigation in its day-to-day activities leaving the protection of the public up to State dam safety inspectors. Since the only registered dam would impact the neighboring town and not Cornwall, there is little concern and mitigation actions have been left up to the State and Federal authorities.

The Town Planning Commission has considered writing of water impoundment construction standards into its zoning regulations. The intent of such standards would be to limit the volume of water which could be stored in a man-made impoundment and therefore limit risk.

1.5.3. Proposed Mitigation Actions and Projects by Hazard Type

In developing the following list of proposed mitigation actions and projects, care was taken to include only those projects which could be considered reasonable and feasible based primarily on cost and political willingness.

All Hazards

Acquire back-up power capacity for the Bingham Memorial School

Estimated cost: \$15,000-\$20,000

Source of Funds: Town General Fund, HMGP

Responsibility: Emergency Manager

Timeframe: 3-7 years as funds allow

Institute an EM preparedness/Fire Safety education program in the school

Estimated cost: \$200-\$300

Source of Funds: Town Emergency Management, School Budget

Responsibility: Town EM Coordinator/Fire Dept

Timeframe: Yearly ongoing

Purchase EBS/NOAA emergency radios for use in appropriate locations throughout town

Estimated cost: \$200-\$300

Source of Funds: Town Emergency Management Budget

Responsibility: Town EM Coordinator

Timeframe: 1-3 years

Prepare an agricultural emergency response plan for local farms

Estimated cost: \$200-\$300

Source of Funds: Town Emergency Management budget

Responsibility: Town EM Coordinator

Timeframe: 2-3 years

Conduct drills and exercises to test plans

Estimated cost: \$0

Source of Funds: Volunteer time

Responsibility: Town Emergency Manager/Fire Dept

Timeframe: Yearly ongoing

Drought

The Town supports recent changes to state rules which require a potable water supply and septic plans in place prior to granting a subdivision and supports groundwater protection efforts around both public and private water supplies. DRB requires water and wastewater as part of subdivision review.

Estimated cost: \$0

Source of Funds: none

Responsibility: Town DRB

Timeframe: as applications are presented

Widespread Power Failure

Green Mountain Power (GMP), the utility serving the Town of Cornwall has ongoing programs of line clearing and relocation to ensure outages are kept to a minimum. The town balances its support for these efforts with residents desires to keep the beauty of tree-lined streets and roads.

No local action necessary-cost \$0

Flood/Flash Flood

The Town supports continued enrollment in the NFIP to allow residents the option of purchasing flood insurance on their properties. As a part of continued compliance, the Town supports participation in NFIP training for the Zoning Administrator when offered by the State or NFIP.

Estimated cost: \$200-\$300

Source of Funds: Town General Fund Planning and Zoning budget

Responsibility: Town Zoning Administrator

Timeframe: Yearly ongoing

The Town also supports exploring requirements for entry into the Community Rating System of the NFIP

Estimated cost: Negligible

Source of funds: Town general fund.

Responsibility: Joint, planning commission, Zoning Administrator and Selectboard

Timeframe: 1-3 years as time allows

The following specific road projects have been identified which will serve to mitigate the effects of flooding and/or flash flooding in the road network system to be implemented as funding allows:

- State Route 125 box culvert replacement/rebuild
Estimated cost: \$???
Source of funds: State highway budget/HMGP
Responsibility: Joint Town Highway, Selectboard, VTrans
Timeframe: Ongoing
- Upgrade cross culverts from Trombley to Gorton properties on West Street
Estimated cost: \$????
Source of funds: Town highway budget/HMGP
Responsibility: Joint Town Highway contractor and Selectboard
Timeframe: Ongoing
- Upgrade and lengthen 3ft culvert south of Bolduc Farm on West Street
Estimated cost: \$????
Source of funds: Town highway budget/HMGP
Responsibility: Joint Town Highway contractor and Selectboard
Timeframe: Ongoing
- Upgrade 30” culvert South of Payne Farm on West Street
Estimated cost: \$5,000 annual cost
Source of funds: Town highway budget/HMGP
Responsibility: Joint Town Highway contractor and Selectboard
Timeframe: Ongoing

- Upgrade and lengthen 18” culvert west of Beaver Brook bridge on Sperry Road
Estimated cost: \$????
Source of funds: Town highway budget/HMGP
Responsibility: Joint Town Highway contractor and Selectboard
Timeframe: Ongoing
- Add a “blowout” pipe at the multi-plate culvert west of the asphalt on Wooster Road
Estimated cost: \$?????
Source of funds: Town highway budget/HMGP
Responsibility: Joint Town Highway contractor and Selectboard
Timeframe: Ongoing
- Add a “blowout” pipe at the 4’ pipe in the “gut” on Clark Road
Estimated cost: \$?????
Source of funds: Town highway budget/HMGP
Responsibility: Joint Town Highway contractor and Selectboard
Timeframe: Ongoing
- Add a cross culvert on the east slope of the “gut” on Clark Road
Estimated cost: \$?????
Source of funds: Town highway budget/HMGP
Responsibility: Joint Town Highway contractor and Selectboard
Timeframe: Ongoing
- Add additional cross culverts or improve ditches south of Severy Farm on Delong Road
Estimated cost: \$?????
Source of funds: Town highway budget/HMGP
Responsibility: Joint Town Highway contractor and Selectboard
Timeframe: Ongoing

High Winds

The town generally supports limiting damages due to high winds by removing dead and dying trees within the town right-of-way that could fall during a high wind event.

Estimated cost: \$5,000 annual cost

Source of funds: Town highway budget.

Responsibility: Joint Town Highway contractor and Selectboard

Timeframe: Ongoing

Landslide/Erosion Hazard

The Town supports adoption of a Fluvial Erosion Hazard Overlay district in its zoning bylaw rewrite.

Estimated cost: \$2,000 as part of an overall rewrite

Source of funds: Municipal planning grants.

Responsibility: Joint Selectboard and Planning Commission

Timeframe: 0-3 years

Lightning

The Town feels the risk to private residences of lightning strike should be borne by each resident on their own.

No local action necessary-cost \$0

Hazardous Materials and Highway Transport Accidents

The Town has identified the following high risk location on the highway system and supports mitigation of the hazard in any future construction/reconstruction activities:

- The intersection of US Rte #30 and Cider Mill Road is a high accident location and efforts should be taken to reduce that risk.
Estimated cost: None to town
Source of funds: State highway budget.
Responsibility: Joint Selectboard and State AOT
Timeframe: 0-5 years
- The area around the base of the “Ledges” on Route 74 is a high accident location and efforts should be taken to reduce that risk.
Estimated cost: None to town
Source of funds: State highway budget.
Responsibility: Joint Selectboard and State AOT
Timeframe: 0-5 years
- The area on Route 74 from the “Old Red Barn” site to the junction of Clark Road is a high accident location and efforts should be taken to reduce that risk.
Estimated cost: None to town
Source of funds: State highway budget.
Responsibility: Joint Selectboard and State AOT
Timeframe: 0-5 years

Structure Fire

The Town supports efforts by the fire department to install dry hydrants throughout town.

Estimated cost: None additional beyond annual FD support

Source of funds: Federal Rural fire protection grants and town FD funds

Responsibility: CVFD

Timeframe: Annual as grant funding allows

The Town supports upgrading of driveway standards in the planning commission zoning bylaw rewrite to support basic accessibility for emergency vehicles to all structures in town.

Estimated cost: \$2,000 as part of an overall rewrite

Source of funds: Municipal planning grants.

Responsibility: Joint Selectboard and Planning Commission

Timeframe: 0-3 years

Wildfire

The Town supports the fire warden system requiring outdoor burn permits prior to any outdoor burning.

Estimated cost: None

Source of funds: Town General Fund

Responsibility: Joint Selectboard and Fire warden

Timeframe: Ongoing annual efforts

The Town believes it is the homeowner's responsibility to mitigate their susceptibility to wildfire through "firewise" practices.

No local action necessary-cost \$0

Winter Storm/Ice Storm

The Town supports ongoing efforts by power companies to mitigate power outages due to ice storms by pruning and tree removal activities.

No local action necessary-cost \$0

Manage vegetation in the ROW to minimize allow space for heavy/wet snow and ice events

Estimated cost: \$5,000 annual cost

Source of funds: Town highway budget

Responsibility: Joint Town Highway contractor and Selectboard

Timeframe: Ongoing

Create "living snow fences" in cooperation with landowners where feasible

Install snow fences annually where drifting snow commonly occurs

Estimated cost: \$2,000 annual cost

Source of funds: Town highway budget/HMGP

Responsibility: Joint Town Highway contractor and Selectboard

Timeframe: Ongoing

Earthquake

The Town does not believe the risks associated with earthquake are large enough to require any town building retrofits at this time.

No local action necessary-cost \$0

The Town believes it is the responsibility of private homeowners to be ready for earthquakes. The town generally believes that building construction standards are the responsibility of each private homeowner.

No local action necessary-cost \$0

Dam Failure

The Town of Cornwall does not generally address dam failure mitigation in its day-to-day activities leaving the protection of the public up to State dam safety inspectors.

No local action necessary-cost \$0

The Town Planning Commission, is considering writing of water impoundment construction standards into its zoning regulations. The intent of such standards would be to limit the volume of water which could be stored in a man-made impoundment and therefore limit risk.

Estimated cost: \$2,000 as part of an overall rewrite

Source of funds: Municipal planning grants.
Responsibility: Joint Selectboard and Planning Commission
Timeframe: 0-3 years

1.5.4. Project Prioritization process

Projects and actions included in Annex A were all evaluated and prioritized. Mitigation actions identified in Section 1.5.3, however, are considered the jurisdiction's priority mitigation actions based on cost and political will to implement. The actions identified in Section 1.5.3 are in order of priority for each hazard from top to bottom, top being highest priority, to bottom being lowest priority. Before undertaking these projects, they will additionally be prioritized based on their feasibility and benefit vs cost review. A minimum C/B result of 1.0 will be required prior to any request for federal mitigation funds. All projects will be reviewed for progress after any local disaster declaration and annually as part of overall town budgeting.

1.6. Routine Plan Maintenance Procedures

Any 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 will be updated at a minimum every five years in accordance with the following procedure:

1. The Cornwall Selectboard assembles a Review/Update Committee.
2. The Committee will discuss the process to determine if any 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/updating information will be assigned to members.
3. Other Town plans (Emergency Operations Plan, Town Plan, Road Plan, etc) will be reviewed to ensure a common mitigation thread still exists throughout.
4. A draft update will be prepared based on these evaluation criteria:
 - 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.
5. Selectboard members will have an opportunity to review the draft update. Consensus will be reached on any changes to the draft.
6. The Selectboard will notify and schedule a public meeting to ensure adequate public input.
7. The Selectboard will recommend incorporation of community comments into the draft update.

1.6.1. Programs, Initiatives and Projects Review

Although the plan should be reviewed in its entirety every five years as described above, the Town should review and update its programs, initiatives and projects annually as the town budget is created. This review will ensure that, whenever possible, progress can be reviewed and projects either added or removed from the towns work plan based on changing local needs and priorities.

1.6.2. 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.
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 report of the review and assessment will be created by a Review/Update Committee.
4. The committee will 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.
5. If the committee determines that modification of the plan IS needed, then the committee drafts an amended plan based on its recommendations and forwards to the Selectboard for public input.
6. The Selectboard adopts the amended plan.

Annex A

Mitigation Measures by Hazard Type

Mitigation measures for “all-hazards” have been adapted from a flood mitigation approach developed by French Wetmore, of Wetmore and Associates in Park Forest, Illinois, into six categories:

- Prevention – measures intended to keep a hazard risk problem from becoming worse. They ensure that future development does not increase hazard losses. Examples would include: Planning and Zoning, Open space preservation, Land Development regulations, Storm water management.
- Property Protection – measures used to modify buildings, or their surroundings, subject to hazard risk rather than prevent the hazard from occurring. Examples are: Acquisition of vulnerable properties, Relocation from hazard prone areas, Rebuild or modify structures to reduce damage by future hazard events, Flood-proofing of flood-prone buildings.
- Natural Resource Protection – measures intended to reduce the intensity of hazard effects as well as improve the quality of the environment and wildlife habitats. Erosion and sediment control and Wetlands protection are examples.
- Emergency Services – measures that protect people before and after a hazard event. That would include: Warning, Response, Critical facilities protection, Health and safety maintenance.
- Structural Projects – measures that involve construction of man-made structures to control hazards. Some examples would include: dams, reservoirs, debris basins, channel modifications, storm sewers, elevated roadways.
- Public Information – activities intended to inform and remind people about hazardous areas and the measures to avoid potential damage and injury. Examples are: Outreach projects, Real estate disclosure, Technical assistance, Community education programs.

The following suggested Mitigation Measures were taken from the website of the Northeast States Emergency Consortium (NSEC).

ALL HAZARDS

- Map vulnerable areas and distribute information about the hazard mitigation strategy and projects.
- Provide information to contractors and homeowners on the risks of building in hazard-prone areas.
- Develop a list of techniques for homeowner self-inspection and implementation of mitigation activities.
- Organize and conduct professional training opportunities regarding natural hazards and hazard mitigation.
- Distribute NOAA weather radios.
- Develop sound land use planning based on known hazards.
- Enforce effective building codes and local ordinances.
- Increase public awareness of community hazards.
- Provide sites that are as free as possible from risk to natural hazards for commercial and industrial activities.
- Consider conservation of open space by acquisition of repetitive loss structures.
- Consider conservation of open space by acquisition of areas identified as “vulnerable or at risk”
- Ensure a balance between residential growth, conservation of environmental resources through a detailed analysis of the risks and vulnerability to natural hazards.

- Conduct joint planning and sharing of resources across regions, communities, and states.
- Establish a hazard mitigation council.
- For future proposed development design guidelines, incorporate hazard mitigation provisions, including improved maps.
- Consider adding a "safe room" requirement for all new buildings.
- Establish incentives to encourage business owners and homeowners to retrofit buildings with hazard-resistant features.
- Teach disaster and hazard awareness in schools.

FLOOD

Flood Hazard Mitigation Measures for Communities:

- Developing and enforcing all-hazards building codes,
- Adopting incentives to encourage mitigation
- Developing administrative structures to support the implementation of mitigation programs
- Mitigation should be incorporated into future land use plans through riparian corridor protection, limiting flood hazard area development, and other measures.
- Developing and conducting public information campaigns on hazard mitigation should be a priority.
- Participate in the National Flood Insurance Program (NFIP).
- Conduct watershed geomorphic assessments.
- Encourage riparian corridor protection.

Flood Hazard Mitigation Measures for Individuals:

How to Protect Your Property:

- Keep insurance policies, documents, and other valuables in a safe-deposit box. You may need quick, easy access to these documents. Keep them in a safe place less likely to be damaged during a flood.
- Avoid building in a floodplain. Some communities do not permit building in known floodplains. If there are no restrictions, and you are building in a floodplain, take precautions, making it less likely your home will be damaged during a flood.
- Raise your furnace, water heater, and electric panel to higher floors or the attic if they are in areas of your home that may be flooded. Raising this equipment will prevent damage. An undamaged water heater may be your best source of fresh water after a flood.
- Install check valves in building sewer traps to prevent flood water from backing up into the drains of your home. As a last resort, when floods threaten, use large corks or stoppers to plug showers, tubs, or basins.
- Seal walls in basements with waterproofing compounds to avoid seepage through cracks.

- Consult with a construction professional for further information if these and other damage reduction measures can be taken. Check local building codes and ordinances for safety requirements.
- Contact your local emergency management office for more information on mitigation options to further reduce potential flood damage. Your local emergency management office may be able to provide additional resources and information on ways to reduce potential damage.

HAZARDOUS MATERIALS

Hazardous Material Hazard Mitigation Measures for Communities:

FEMA's National Mitigation Action Plan suggests that state and local mitigation plans include the following:

- Developing and enforcing all-hazards building codes,
- Adopting incentives to encourage mitigation
- Developing administrative structures to support the implementation of mitigation programs
- Mitigation should be incorporated into land use management plans.
- Developing and conducting public information campaigns on hazard mitigation should be a priority.

Natural hazard events have often triggered technological hazards such as ruptured pipelines and building fires, clearly linking the natural and technological risks. Accordingly, the National Mitigation Strategy, as an all-hazards strategy, will build upon existing programs that mitigate technological hazards, and focus on the critical importance of coordination among efforts to mitigate hazards, regardless of the source of the risk.

- Recognize the dangers posed by hazardous materials.
- Identify places where hazardous materials are likely to be encountered.
- Understand when a hazard may exist.
- Contact the appropriate persons or agencies to give or receive specific hazardous materials information.
- Identify procedures to minimize personal and community exposure to hazardous materials.

Hazardous materials events can and do occur as independent events. Natural hazard events, however, have often triggered technological hazards such as ruptured pipelines and building fires, clearly linking the natural and technological risks. Accordingly, the National Mitigation Strategy, as an all-hazards strategy, will build upon existing programs that mitigate technological hazards, and focus on the critical importance of coordination among efforts to mitigate hazards, regardless of the source of the risk.

Communities can and should:

- Recognize and identify the dangers posed by hazardous materials in the community.
- Identify industries and other locations places where hazardous materials are stored and used.
- Develop a community hazardous materials emergency plan.
- Develop an early warning and notification system.

- Work with local businesses and industry to Identify procedures to minimize personal and community exposure to hazardous materials.

Hazardous Materials Hazard Mitigation Measures for Individuals: Individual and families should develop a personal plan of what to do in case of a hazardous materials accident.

How to Plan for a Hazardous Materials Incident:

- Learn to detect the presence of a hazardous material.
- Many hazardous materials do not have a taste or an odor. Some materials can be detected because they cause physical reactions such as watering eyes or nausea. Some hazardous materials exist beneath the surface of the ground and can be recognized by an oil or foam-like appearance.
- Contact your Local Emergency Planning Committee (LEPC) or local emergency management office for information about hazardous materials and community response plans.
- Find out evacuation plans for your workplace and your children's schools.
- Be ready to evacuate. Plan several evacuation routes out of the area.
- Ask about industry and community warning systems.
- Have disaster supplies on hand.
- Flashlight and extra batteries
- Portable, battery-operated radio and extra batteries
- First aid kit and manual
- Emergency food and water
- Non-electric can opener
- Essential medicines
- Cash and credit cards
- Sturdy shoes
- Develop an emergency communication plan. In case family members are separated from one another during a hazardous materials accident (this is a real possibility during the day when adults are at work and children are at school), develop a plan for reuniting after the disaster. Ask an out-of-state relative or friend to serve as the "family contact." After a disaster, it's often easier to call long distance. Make sure everyone knows the name, address and phone number of the contact person.

STRUCTURE FIRE

Fire Hazard Mitigation Measures for Communities:

FEMA's National Mitigation Action Plan suggests that state and local mitigation plans include the following:

- Developing and enforcing all-hazards building codes,

- Adopting driveway and water supply standards for new development.
- Adopting incentives to encourage mitigation
- Developing administrative structures to support the implementation of mitigation programs
- Mitigation should be incorporated into land use management plans.
- Developing and conducting public information campaigns on hazard mitigation should be a priority.

The United States Fire Administration (USFA) serves as the national focus on reducing fire deaths, injuries, and property losses. In 1974, Congress passed the Federal Fire Prevention and Control Act which established the USFA and the fire research program at the National Institute of Standards and Technology (NIST). The USFA works to involve the public and private sector to reduce losses through public education, arson detection and control, technology and research, fire data collection and analysis and fire service training and education. NIST performs and supports research on all aspects of fire with the aim of providing scientific and technical knowledge applicable to the prevention and control of fires.

Fire Hazard Mitigation Measures for Individuals:

How to Protect Your Property:

- Keep lawns trimmed, leaves raked, and the roof and rain-gutters free from debris such as dead limbs and leaves.
- Stack firewood at least 30 feet away from your home.
- Store flammable materials, liquids and solvents in metal containers outside the home at least 30 feet away from structures and wooden fences.
- Create defensible space by thinning trees and brush within 30 feet around your home.
- Landscape your property with fire resistant plants and vegetation to prevent fire from spreading quickly.
- Post home address signs that are clearly visible from the road.
- Provide emergency vehicle access with properly constructed driveways and roadways, at least 12 feet wide with adequate turnaround space.
- Make sure water sources, such as hydrants and ponds, are accessible to the fire department.
- Burning yard waste is a fire hazard. Check with your local fire agency on a non-emergency number for fire permit requirements and restricted burning times.
- Use fire resistant, protective roofing and materials like stone, brick and metal to protect your home. Avoid using wood materials that offer the least fire protection.
- Cover all exterior vents, attics and eaves with metal mesh screens no larger than 6 millimeters.
- Install multipane windows, tempered safety glass or fireproof shutters to protect large windows from radiant heat.
- Use fire-resistant draperies for added window protection.

- Have chimneys, wood stoves and all home heating systems inspected and cleaned annually by a certified specialist.
- Fire Alarm Safety requires checking on or installing fire alarms in your home.
- Residential sprinklers have become more cost effective for homes. Currently, they protect few homes.

How to Prepare for a Fire Emergency:

- Know how to contact fire emergency services in your area.
- Plan ahead. Make sure you and your family are prepared for a fire emergency.
- Develop and practice escape and evacuation plans with your family.
- Install smoke alarms on every level of your home. Test them monthly and change the batteries at least once a year. Consider installing the new long-life smoke alarms.

WINTER STORM

Winter Storm Hazard Mitigation Measures for Communities:

FEMA's National Mitigation Action Plan suggests that state and local mitigation plans include the following:

- Developing and enforcing all-hazards building codes,
- Adopting incentives to encourage mitigation
- Developing administrative structures to support the implementation of mitigation programs
- Mitigation should be incorporated into land use management plans.
- Developing and conducting public information campaigns on hazard mitigation should be a priority.

In addition, FEMA recommends the following actions to further protect communities from the effects of Winter Storms:

- Building code development and enforcement of snow loads
- Develop a storm water management plan for snowmelt
- Assuring adequate supplies of sand and salt
- Maintaining snow removal equipment so that it is ready to be deployed
- Retrofitting public buildings to withstand snowloads and prevent roof collapse
- Clearing roofs of excessive snow accumulations
- Develop a winter storm plan or annex to the local emergency management plan
- Develop a capability to monitor weather forecasts, conditions and warnings issued by the National Weather Service
- Identify appropriate shelters for people who may need to evacuate due to loss of electricity, heat or coastal flooding due to storm surge

- Assure that critical facilities such as police and fire stations and schools are accessible and equipped
- Clearing streets and roads of snow to assure the passage of public safety vehicles and general traffic.

Winter Storm Hazard Mitigation Measures For Individuals:

How to Protect Your Property:

- Make sure your home is properly insulated. If necessary, insulate walls and attic. This will help you to conserve electricity and reduce your home's power demands for heat. Caulk and weather-strip doors and windowsills to keep cold air out, allowing the inside temperature to stay warmer longer.
- Install storm windows or cover windows with plastic from the inside. This will provide an extra layer of insulation, keeping more cold air out.
- To keep pipes from freezing:
- Wrap pipes in insulation or layers of old newspapers.
- Cover the newspapers with plastic to keep out moisture.
- Let faucets drip a little to avoid freezing.
- Know how to shut off water valves.
- If the pipes freeze, remove any insulation or layers of newspapers and wrap pipes in rags. Completely open all faucets and pour hot water over the pipes, starting where they were most exposed to the cold (or where the cold was most likely to penetrate). A hand-held hair dryer, used with caution to prevent overheating, also works well.
- Consider storing sufficient heating fuel. Regular fuel sources may be cut off. Be cautious of fire hazards when storing any type of fuel.
- Before winter, be sure you install and check smoke alarms.
- Consider keeping safe emergency heating equipment:
- Fireplace with ample supply of wood.
- Small, well-vented wood, coal, or camp stove with fuel.
- Portable space heater or kerosene heater. Check with your local fire department on the legality of using kerosene heaters in your community. Use only the correct fuel for your unit and follow the manufacturer's instructions. Refuel outdoors only, and only when cool. Keep your kerosene heater at least three feet away from furniture and other flammable objects.
- When using alternative heat from a fireplace, wood stove, space heater, etc., use fire safeguards and ventilate properly. Fire hazard is greatly increased in the winter because alternate heating sources are used without following proper safety precautions.
- Install snow fences in rural areas to reduce drifting in roads and paths, which could block access to homes, barns, and animals' feed and water.

- If you live in a flood-prone area, consider purchasing flood insurance to cover possible flood damage that may occur during the spring thaw. Homeowners' policies do not cover damage from floods. Ask your insurance agent about the National Flood Insurance Program if you are at risk.

How to Plan for a Winter Storm:

- Understand the hazards of wind chill, which combines the cooling effect of wind and cold temperatures on exposed skin. As the wind increases, heat is carried away from a person's body at an accelerated rate, driving down the body temperature. "Wind chill" is a calculation of how cold it feels when the effects of wind speed and temperature are combined. A strong wind combined with a temperature of just below freezing can have the same effect as a still air temperature about 35 degrees colder.
- Service snow removal equipment before winter storm season. Equipment should be available for use if needed. Maintain it in good working order.
- Keep your car's gas tank full for emergency use and to keep the fuel line from freezing.
- Get training. Take an American Red Cross first aid course to learn how to treat exposure to the cold, frostbite, and hypothermia.
- Discuss with your family what to do if a winter storm WATCH or WARNING is issued. Designate one household member as the winter storm preparedness leader. Have him or her discuss what to do if a winter storm watch or warning is issued. Have another household member state what he or she would do if caught outside or in a vehicle during a winter storm. Everyone should know what to do in case all family members are not together. Discussing winter storms ahead of time helps reduce fear and lets everyone know how to respond during a winter storm.

HIGH WINDS

High Wind Hazard Mitigation Measures for Communities:

FEMA's National Mitigation Action Plan suggests that state and local mitigation plans include the following:

- Developing and enforcing all-hazards building codes,
- Adopting incentives to encourage mitigation
- Developing administrative structures to support the implementation of mitigation programs
- Mitigation should be incorporated into land use management plans.
- Developing and conducting public information campaigns on hazard mitigation should be a priority.

FEMA also suggests that communities further reduce their vulnerability to hurricanes through the adoption and enforcement of wind- and flood-resistant building codes. Sound land-use planning can also ensure that structures are not built in the highest hazard areas.

High Wind Hazard Mitigation Measures for Individuals:

- Make a list of items to bring inside in the event of a storm. A list will help you remember anything that can be broken or picked up by strong winds. High winds, often in excess of 40 miles per hour, can turn unanchored items into missiles, causing damage or injury when they hit.

- Keep trees and shrubbery trimmed. Make trees more wind resistant by removing diseased or damaged limbs, then strategically remove branches so that wind can blow through. High winds frequently break weak limbs and hurl them at great speed, causing damage when they hit property. Debris collection services may not be operating just before a storm, so it is best to do this well in advance of approaching storms.
- Remove any debris or loose items in your yard. High winds can pick up anything unsecured, creating damage to property when the debris hits.
- Install protection to the outside areas of sliding glass doors. Glass doors are as vulnerable as windows to breakage by wind-driven objects.
- If you live in a flood plain or are prone to flooding, also follow flood preparedness precautions. Nor'easters and severe thunderstorms can bring great amounts of rain and frequently cause floods.

EARTHQUAKE

Earthquake Hazard Mitigation Measures for Communities:

FEMA's National Mitigation Action Plan suggests that state and local mitigation plans include the following:

- Developing and enforcing all-hazards building codes,
- Adopting incentives to encourage mitigation
- Developing administrative structures to support the implementation of mitigation programs
- Mitigation should be incorporated into land use management plans.
- Developing and conducting public information campaigns on hazard mitigation should be a priority.

FEMA's Earthquake Program has four basic goals directly related to the mitigation of hazards caused by earthquakes. They are to:

- Promote Understanding of Earthquakes and Their Effects.
- Work to Better Identify Earthquake Risk.
- Improve Earthquake-Resistant Design and Construction Techniques.
- Encourage the use of Earthquake-Safe Policies and Planning Practices.

Earthquake Hazard Mitigation Measures for Individuals

How to Protect Your Property:

- Bolt bookcases, china cabinets, and other tall furniture to wall studs. Brace or anchor high or top-heavy objects. During an earthquake, these items can fall over, causing damage or injury.
- Secure items that might fall (televisions, books, computers, etc.). Falling items can cause damage or injury.
- Install strong latches or bolts on cabinets. The contents of cabinets can shift during the shaking of an earthquake. Latches will prevent cabinets from flying open and contents from falling out.

- Move large or heavy objects and fragile items (glass or china) to lower shelves. There will be less damage and less chance of injury if these items are on lower shelves.
- Store breakable items such as bottled foods, glass, and china in low, closed cabinets with latches. Latches will help keep contents of cabinets inside.
- Store weed killers, pesticides, and flammable products securely in closed cabinets with latches, on bottom shelves. Chemical products will be less likely to create hazardous situations from lower, confined locations.
- Hang heavy items, such as pictures and mirrors, away from beds, couches, and anywhere people sit. Earthquakes can knock things off walls, causing damage or injury.
- Brace overhead light fixtures. During earthquakes, overhead light fixtures are the most common items to fall, causing damage or injury.
- Strap the water heater to wall studs. The water heater may be your best source of drinkable water following an earthquake. Protect it from damage and leaks.
- Bolt down any gas appliances. After an earthquake, broken gas lines frequently create fire hazards.
- Install flexible pipe fittings to avoid gas or water leaks. Flexible fittings will be less likely to break.
- Repair any deep cracks in ceilings or foundations. Get expert advice if there are signs of structural defects. Earthquakes can turn cracks into ruptures and make smaller problems bigger.
- Check to see if your house is bolted to its foundation. Homes bolted to their foundations are less likely to be severely damaged during earthquakes. Homes that are not bolted have been known to slide off their foundations, and many have been destroyed because they are uninhabitable.
- Consider having your building evaluated by a professional structural design engineer. Ask about home repair and strengthening tips for exterior features, such as porches, front and back decks, sliding glass doors, canopies, carports, and garage doors. Learn about additional ways you can protect your home. A professional can give you advice on how to reduce potential damage.
- Follow local seismic building standards and safe land use codes that regulate land use along fault lines. Some municipalities, counties, and states have enacted codes and standards to protect property and occupants. Learn about your area's codes before construction.

How to Plan for an Earthquake:

- Pick "safe places" in each room of your home. A safe place could be under a sturdy table or desk or against an interior wall away from windows, bookcases, or tall furniture that could fall on you. The shorter the distance to move to safety, the less likely you will be injured. Injury statistics show that persons moving more than 10 feet during an earthquake's shaking are most likely to experience injury.
- Practice drop, cover, and hold-on in each safe place. Drop under a sturdy desk or table, hold on, and protect your eyes by pressing your face against your arm. Practicing will make these actions an automatic response. When an earthquake or other disaster occurs, many people hesitate, trying to remember what they are supposed to do. Responding quickly and automatically may help protect you from injury.

- Practice drop, cover, and hold-on at least twice a year. Frequent practice will help reinforce safe behavior.
- Talk with your insurance agent. Different areas have different requirements for earthquake protection. Study locations of active faults, and if you are at risk, consider purchasing earthquake insurance.
- Inform guests, babysitters, and caregivers of your plan. Everyone in your home should know what to do if an earthquake occurs. Assure yourself that others will respond properly even if you are not at home during the earthquake.
- Get training. Take a first aid class from your local Red Cross chapter. Get training on how to use a fire extinguisher from your local fire department. Keep your training current. Training will help you to keep calm and know what to do when an earthquake occurs.
- Discuss earthquakes with your family. Everyone should know what to do in case all family members are not together. Discussing earthquakes ahead of time helps reduce fear and anxiety and lets everyone know how to respond.

Annex B Potential Mitigation Project Funding Sources

Federal

FEMA

- **Pre-Disaster Mitigation Program.** As part of the Disaster Mitigation Act of 2000 (Section 322 of the Robert T. Stafford Disaster Relief and Emergency Act), FEMA's Pre-Disaster Mitigation Competitive (PDM-C) Grant Program provides funds to states, territories, and federally recognized tribes for pre-disaster mitigation activities. The grant program is administered by FEMA for pre-disaster mitigation planning and projects primarily addressing natural hazards. Funding these plans and projects reduces overall risks to the population and structures, while also reducing reliance on funding from actual disaster declarations. The intent of the PDM-C grant program is to provide a consistent source of funding for pre-disaster mitigation planning and projects.

- **Hazard Mitigation Grant Program.** The Hazard Mitigation Grant Program (Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act) is activated during Presidential Disaster Declarations to assist in identifying mitigation projects, and funding these projects on a 75% Federal/25% non-Federal cost share basis. Mitigation program funding is based on 20% of the federal funds expended for the Infrastructure and Individual Assistance Programs. The HMGP supports other program activities, i.e. participation the NFIP is required for recipients of HMGP funds.

- **Section 406 Hazard Mitigation.** Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act provides funding to mitigate certain projects as they are being repaired as part of overall disaster assistance to a community. Under Section 406, if it can be shown to be cost effective to mitigate a Public Assistance eligible project as part of the repair, FEMA may fund the mitigation as part of the overall project cost.

- **Disaster Preparedness Improvement Grants.** Under the Disaster Preparedness Improvement Grants (Section 201 of the Stafford Act), FEMA provides up to 50% matching funds to states annually to improve or update their disaster assistance plans and capabilities. States can use these funds to: implement measures in a Hazard Mitigation Plan; develop pre-disaster Hazard Mitigation Plans; expand an existing Hazard Mitigation Plan; develop hazard specific annexes; or develop administrative plans for the implementation of the Hazard Mitigation Grant Program.

- **Hazard Mitigation Technical Assistance Program Contract.** HMTAP was established to provide FEMA with response capability for various post-disaster mitigation opportunities. The contractor has the capability to: (1) evaluate construction science techniques and practices, including build codes; (2) prepare environmental assessments or impact statements and historic preservation reviews and assessments; (3) conduct biological assessments and surveys, (4) conduct surveys, assessments, and reviews of other areas of impact such as water quality and wetland delineation; (5) conduct benefit/cost, social science, and public administration assessments; (6) conduct post-event assessments to identify mitigation

opportunities; (7) Provide post-disaster land surveying, mapping services and cost estimates using GIS, GPS, and remote sensing; (8) Perform floodplain analyses; (9) conduct hazard identification and risk assessment to confirm accuracy and specific actions or methodologies needed for disaster areas; (10) document estimated flood elevations to guide reconstruction and to compute flood frequency; and (11) provide training for benefit/cost analysis, retrofit options, the Hazard Mitigation Grant Program, and National Environmental Policy Act.

- **National Flood Insurance Program (NFIP).** The National Flood Insurance Program (NFIP) makes federally subsidized flood insurance available to property owners in locations agreeing to participate in the NFIP. If communities enter the NFIP, they are required to adopt floodplain ordinances meeting criteria established by FEMA. These criteria include: requiring permits for development within designated floodplains; review development plans and subdivision proposals to determine whether proposed sites will be reasonably safe from flooding; require protection of water supply and sewage systems to minimize infiltration of floodwater; obtain, review, and utilize all base flood elevation data; and assure the maintenance of flood carrying capacities within all watercourses.
- **The Community Rating System.** An element of the NFIP, is designed to promote the availability of flood insurance, reduce future flood damages, and ensure the accurate rating of flood insurance policies. Participating communities may receive credit for proven mitigation measures, thus reducing the cost of flood insurance within their jurisdictions.
- **The Individual Assistance Loss Prevention Program.** Available to provide eligible owner-occupants, who sustained damage and received Disaster Housing Minimal Repair Funds, the opportunity to participate in a voluntary program where additional 100% federal funds are made available to break the damage-rebuild-damage cycle and help homeowners reduce or eliminate losses from future weather-related damage.
- **The Individual and Family Grant (IFG) Minimization Program.** Available to provide IFG-eligible owner-occupants the opportunity to participate in a voluntary program where additional state and federal funds are made available to break the damage-rebuild-damage cycle, and help reduce or eliminate losses from future weather-related damage. In addition, FEMA's 800 series provides funding for low cost mitigation measures.
- **The Infrastructure Program (Section 406 of the Stafford Act).** Authorizes funding for the repair, restoration, or replacement of damaged facilities belonging to public and private non-profit entities, and for other associated expenses, including emergency protective measures and debris removal. The Infrastructure Program also authorizes funding for appropriate cost-effective hazard mitigation related to damaged public facilities.
- **The National Inventory of Dams (US Army Corps of Engineers project).** Identifies high-hazard dams and encourages the development of warning systems and emergency plans for many of these facilities.
- **Hazardous Materials Program.** FEMA's mission under this program is to provide technical and financial assistance to States and local jurisdictions and to coordinate with public and private sector entities to develop, implement, and evaluate HAZMAT emergency preparedness programs. FEMA supports State and local agencies in the design,

implementation, and evaluation of HAZMAT- related training and planning exercises, and cooperates with the U.S. Department of Transportation in the maintenance of electronic bulletin boards to provide the latest information on HAZMAT planning, training, exercises, and conferences.

- **US Fire Administration (USFA).** Through the USFA, FEMA administers a nationwide program to enhance fire prevention and control activities and to reduce significantly the loss of life and property caused by fires. Programs are carried out by: National Fire Academy; Office of Fire Prevention and Arson Control; Office of Firefighter Health and Safety; Office of Fire Data and Analysis; Office of Federal Fire Policy and Coordination; Office of National Emergency Training Center Operations and Support, and Office of Educational Technology.

The Emergency Planning and Community Right-to-Know Act of 1986 imposed upon state and local governments planning and preparedness requirements for emergencies involving the release of hazardous materials. The role of the federal government in response to an emergency involving the release of hazardous materials is to support local and state emergency operations. Activation of the federal Regional Response Team (RRT) provides access to federal resources not available at the state and local levels. An on scene coordinator is designated to manage federal resources and support. The national warning and communications center for emergencies involving the release of hazardous materials is manned 24 hours a day, and is located at the U.S. Coast Guard headquarters in Washington, D.C.

The National Weather Service provides meteorological and hydrologic services that include weather and hydrologic warnings, forecasts, and related information. The primary mission of the NWS is to save lives and reduce property damage through timely issuances of tornado and flood warnings and river stage forecasts. To cope with dangerous weather, the NWS interacts with emergency services personnel throughout the state by: issuance of tornado and flash flood watches or warnings for those areas in which a threat is posed; issuance of flood watches and warnings for major streams and rivers within the state. Addison County is within the coverage area of the NWS office in Burlington but also may receive information from the Albany, NY office.

The U.S. Army Corps of Engineers undertake a broad range of civil works projects to develop, manage, and conserve the nation's water resources. No work may be undertaken without authorization and funding from Congress, either from specific legislation or continuing authorities. Projects **are** planned to serve as many purposes as are feasible and to protect or improve the environment as much as possible. The Corps is involved in developing and implementing plans for flood control, navigation, hydropower, recreation, and water supply. The Corps has authority for emergency operations, bank protection, permit administration, and technical assistance. Corps of Engineers assistance includes:

- Studies and Projects
- Discretionary Authority to implement certain types of water resources projects without specific Congressional approval. These projects are typically limited in cost and duration, and include:
 - Section 14 - Emergency Stream bank Protection of Public Facilities, limitation of \$500,000 per project.

- Section 107 - Small Navigation Projects, usually for port facilities and navigation channels. Work on channels usually improves stream flow and aids flood control efforts.
- Section 205 - Small Flood Control Projects, not to exceed \$5 million. Funds may be used for projects such as upgrading flood protection structures and channelization of streams.
- Floodplain Technical Assistance, to include:
 - Conducting floodplain mapping surveys to provide either first-time mapping of an area or to correct older floodplain maps;
 - Conducting flood studies in cooperation with FEMA to determine actual flood levels for settlement of flood insurance claims;
 - Providing technical advice regarding proposed floodplain ordinances and building codes.
- Emergency operations to respond to flood emergencies, to include flood fighting, constructing advance temporary measures in anticipation of imminent flood, and the repair of damaged flood control works after the flood event.
- Permit authority, the Corps has the authority to issue Permits to cover construction excavation and other related work in or over navigable waterways; and Permits covering the discharge of fill material in all waters of the United States and adjacent wetlands.

Department of Housing and Urban Development

- Community Development Block Grant Program. Funds are provided as grants to units of local government. Local governments can use the funds to: construct flood and drainage facilities; finance rehabilitation projects that include flood proofing, elevation, purchase of flood insurance, etc.; finance acquisition and relocation of homes to remove them from the floodplains.
- Rental Rehabilitation Program. Funds to rehabilitate rental properties can be used for flood proofing and repair to flood damage.
- Section 312 Loan Program. Provides funds to rehabilitate both residential and non-residential properties, including flood repair and flood proofing.

Department of Agriculture Natural Resource Conservation Service (NRCS) can provide technical assistance in the conservation, development, and productive use of water resources. In addition, the NRCS monitors use of prime farmland.

- Watershed Protection and Flood Prevention. Technical and financial assistance to local entities to plan and install works of improvement for watershed protection, flood prevention, agricultural water management, and other approved purposes.
- Resource Conservation and Development. Technical and financial assistance to local entities to plan and install works of improvement for watershed protection, flood prevention, agricultural water management, and other approved purposes.
- Emergency Watershed Protection. Provides assistance to reduce hazards to life and property in watersheds damaged by severe natural events. NRCS can provide 100% of the cost of exigency situations, and 80% of the cost for non-exigency situations, if funds are available.
- Conservation Technical Assistance. Provided to land users to control erosion, sediment, and to reduce upstream flooding.

- River Basin Surveys and Investigations. Includes Conservation River Basin Studies to assist in solving existing problems or meeting existing or projected needs, and Floodplain Management Studies to provide information and assistance for reducing future flood damages. Financial assistance is provided by sponsors.

U.S. Geological Survey (USGS) provides certain hazard studies and recommendations. A portion of the mission of the USGS is to collect and analyze data on the quantity of surface water through a network of gauging stations. The data is used in preparing flood frequency reports to evaluate the severity of floods. This data is useful in flood hazard mitigation studies, establishing flood prone areas, and potential flood heights near hydraulic structures.

Economic Development Administration was established to generate new jobs, to help protect existing jobs, and to stimulate commercial and industrial growth in economically distressed areas of the United States.

Small Business Administration (SBA) Disaster Assistance Programs provide loans to businesses and individuals affected by presidential and SBA disaster declarations. The program provides direct loans to businesses to repair or replace uninsured disaster damage to property owned by the business, including real estate, machinery, and equipment, inventory and supplies. Businesses of any size are eligible. Non-profit organizations are also eligible. Assistance to individuals comes in the form of low-interest loans for repair or replacing damaged real and personal property. The SBA administers the Disaster Assistance Programs.

- Pre-Disaster Mitigation Loans. This new loan program began in January 2000 and is funded for five years. This program makes funds for mitigation available to businesses in Project Impact communities.

State

VTrans

- Town Highway Grants Program. State aid grants for highways are made annually to the governing body based on the number of Class 1,2 or 3 miles in the Municipality. The General Assembly appropriates a lump sum annually for this purpose (19 V.S.A. Section 306(a)). Distribution is made quarterly, with no application required. There is no requirement that State funds be matched with local funds, other than a requirement that municipalities expend no less than \$300 per mile of local tax revenues of their highways (19 V.S.A. Section 307).
- Town Highway Bridge Program. State assistance for major rehabilitation or reconstruction of bridges with a span of six feet or more on class 1, 2 or 3 town highways is made available by the Secretary of Transportation from annual appropriations for that purpose (19 V.S.A. Section 306(b)). State assistance amounts are not limited for any one project. The State assistance requires 10 percent participation or match of total project cost with town funds for replacement projects and 5% for rehabilitation projects. The local match is capped at the amount raised by a municipal tax rate of \$0.50 on the Grand List (19 V.S.A. Section 309(a)).

- Town Highway Structures Program. State grants for bridges, culverts and retaining walls that are part of the municipalities highway (Class 1, 2 or 3) infrastructure are made by the Secretary of Transportation from annual appropriations for the purpose. State grant amounts are limited to \$150,000 for any one project. State funds are required to be matched, as follows:
 - By at least 20% of the total project cost, or
 - By at least 10% of the total project cost providing that town has adopted Town Highway codes and standards and the town has conducted a highway infrastructure study (not less than three years old), which identifies all town culverts, bridges and identified road problems.

- Town Highway Class 2 Roadway Program. State grants to provide for the preservation of any Class 2 highways by providing grants for resurfacing or reconstruction are made by the Secretary of Transportation or his/her designee from annual appropriations for that purpose. State grants are limited to \$150,000 for any one project and there are match requirements for the town similar to the Town Highway Structures Program.

- Town Road & Bridge Standards, Infrastructure Study. As a result of legislative action relating to the Town Aid programs an incentive program was created providing additional funding to towns meeting two requirements:
 - Adopted codes and standards.
 - Conducted a network infrastructure study.

Agency of Natural Resources

- Ecosystem Restoration Grant Program. As part of a governor's initiative to improve water quality in Lake Champlain, Funds have been allocated to assist in clean-up. Funds from this source have paid for a large portion of recent geomorphic studies in the Addison region as well as supporting the development of Fluvial Erosion Hazard Zones. Additionally, funds have been allocated to purchase development rights in hazardous locations.

Department of Public Safety, Division of Emergency Management

- Hazard Mitigation Grant Program. Previously described under Federal Programs.

- Pre-Disaster Mitigation Program. Previously described under Federal Programs.

- Local Emergency Management Director Program. A continuing program of training for local emergency management directors to provide a consistent base of knowledge to understand their roles and responsibilities in Emergency Management.

- Generator Grant Program. VEM allocates funds from FEMA EMPG to allow towns to purchase back-up power sources for emergency shelters for continued use in the event of a power failure.

Regional

The Addison County Regional Planning Commission (ACRPC) provides assistance to local governments concerning planning for future land use, business, transportation, emergency management and population.

In addition to the specific programs mentioned below, ACRPC has identified Municipal Development Plans and Capital Improvement Plans as appropriate local planning mechanisms suitable for incorporating many of the provisions of this plan. These plans, by statute, need to be updated on a 5 year rotation. In Addison County, each municipality adopts these new or updated plans according to their own timetable and therefore, each is at a different place in the planning and adoption process. At the time of each rewrite, ACRPC generally assists local planning commissioners and will encourage inclusion of appropriate provisions of this plan into any new document.

One effective ongoing program is a local culvert survey and upgrade program, which is sponsored by the ACRPC. This program provides funding to communities for survey and location of installed culverts to determine condition and effectiveness. Those identified as needing repair and replacement are eligible for hazard mitigation funding.

Past regional mitigation projects and initiatives include:

Project Impact. FEMA and Vermont Emergency Management designated Addison County as a “Project Impact” community in 1999. The goal of “Project Impact” is to bring communities together to take actions that prepare for and protect themselves against disasters in a collaborative effort. “Project Impact” encourages communities to do these things:

- Identify Hazards and Community Vulnerability
- Prioritize Hazard Risk Reduction Efforts
- Build Community Partnerships for Risk Reduction Projects and Activities
- Communicate Successes and Establish Public Education

The list of projects that have all or a portion of the project cost supported by Project Impact include:

- Red Cross Schools Program
- Culvert Replacement/Stone Lined Ditch in Goshen
- Demonstration House in Cornwall
- Middlebury River Assessment
- Ripton Fire Station Move
- Weather Radio Purchases
- Shoreline Stabilization Handbooks for the Lakeside Towns
- Flood Warning Rain Gauges – Mountain Towns
- Monkton Evacuation Center
- Back-up Power Project

The Lewis Creek Study. Vermont Department of Environmental Conservation (VTDEC) River Management Program, in collaboration with academic, agency and watershed association partners, completed a pilot project in the Lewis Creek watershed. The project was intended to help develop remote

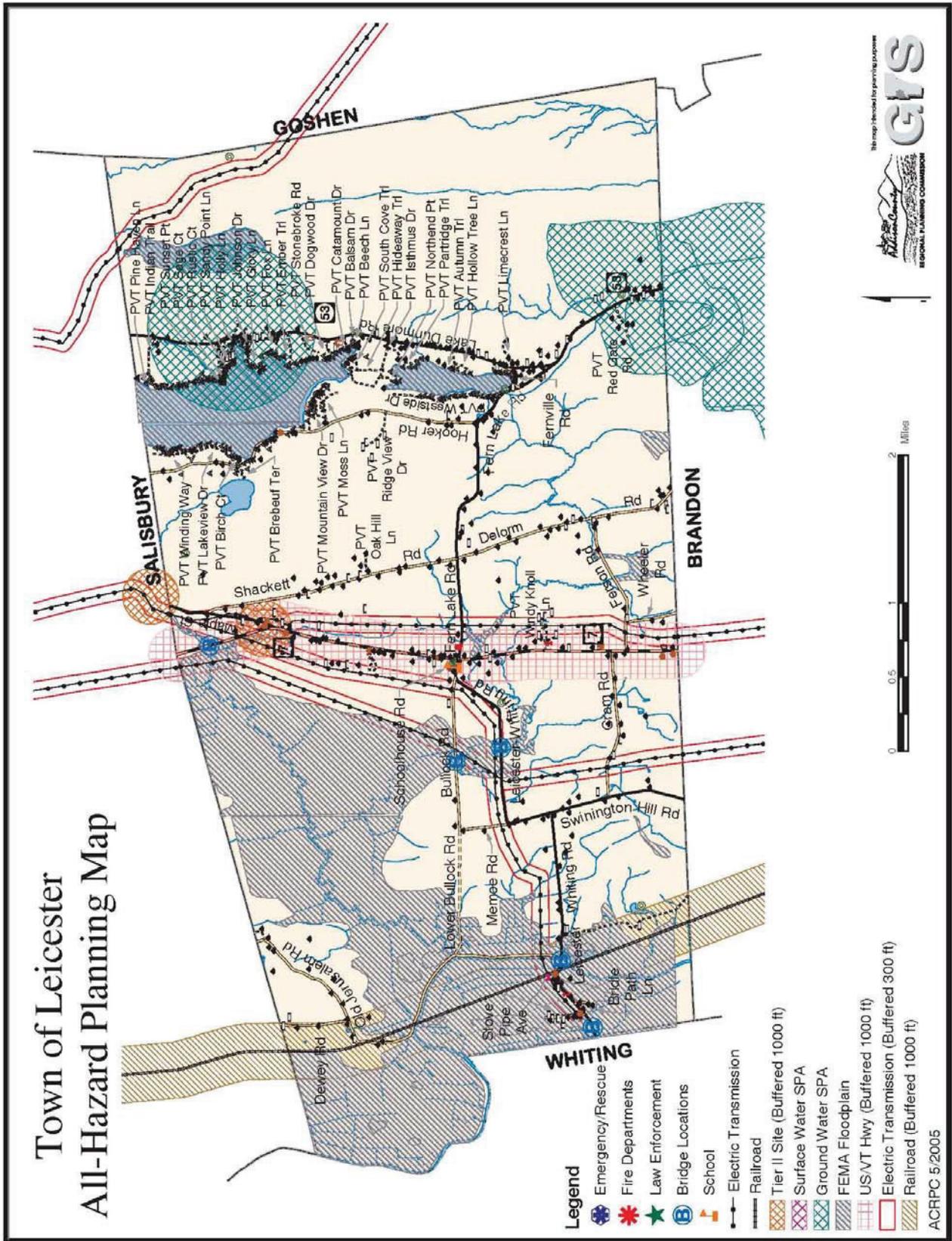
sensing and rapid stream geomorphic assessment methodologies that would help to problem solve at the watershed level, gain a broader constituency for river management and to have a consistent statewide protocol.

PDM-C Planning Grants. Development and continued updating of this and other mitigation planning activities are supported through funding from FEMA's PDM-C, FMA, and EMPG grants.

Hazard Mitigation Grant Program. Funding for hazard mitigation planning in the Addison Region following Tropical Storm Irene was requested via HMGP. The State hazard mitigation grant committee supported this effort and several communities have signed on to develop plans with ACRPC.

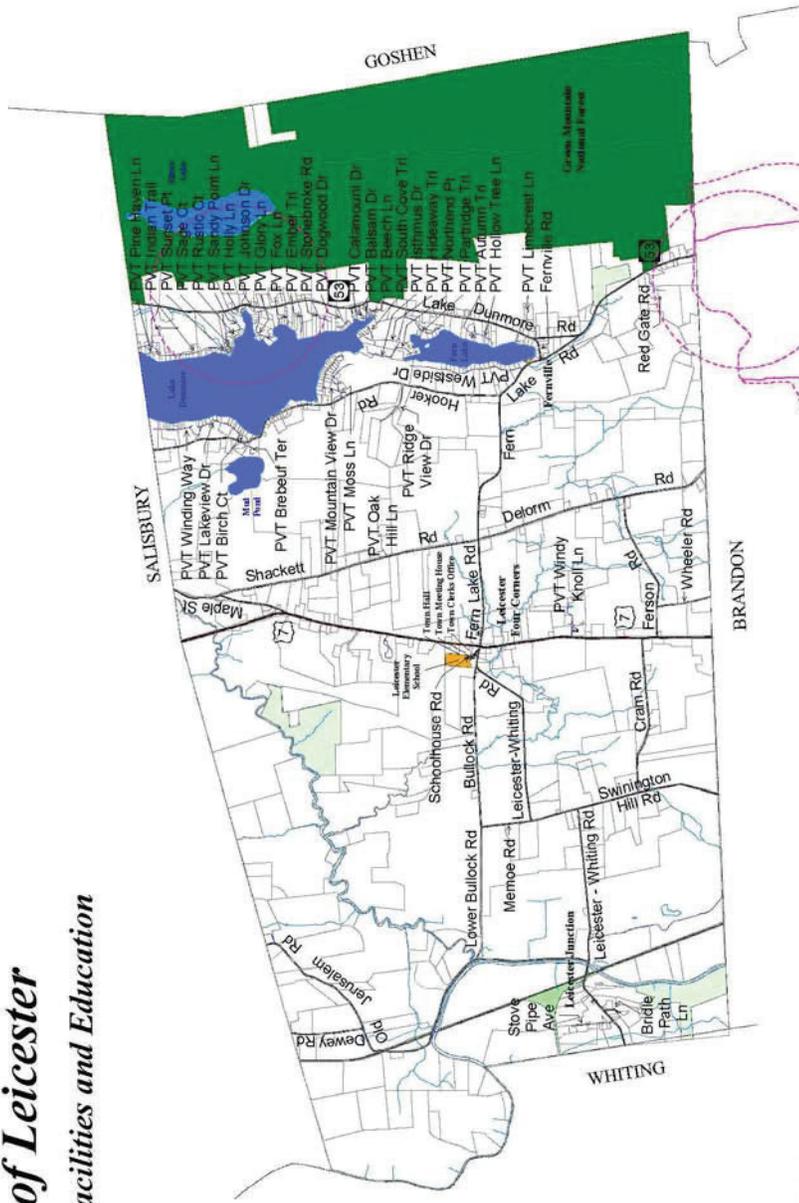
Geomorphic Assessments. State of Vermont Agency of Natural Resources and PDM-C funding supported ongoing geomorphic assessments on the major flash flood prone streams and rivers in the Addison Region including the Middlebury River, Cornwall River, Neshobe River, Cornwall River, Lemon Fair, and Otter Creek. These studies have benefitted both mitigation of disasters and mitigation of ongoing surface water pollution.

Annex C
Local Maps



Town of Leicester

Utilities, Facilities and Education



Scale: 0 0.5 1 Mile

North Arrow

GIS
This map is intended for planning purposes.
Middlesex Planning Commission

- Legend
- Tax Parcels
 - Vermont Fishery
 - Public Land
 - State Land
 - Municipal Land
 - Town Rd Class 1 or State Rd
 - Town Rd Class 2
 - Town Rd Class 3
 - Town Rd Class 4
 - Private Rd

Sources:

Tax Parcels: Current as of 2002, office to the Town Clerk for current information. (TCLMAB)

Water Supply: Source Inspection Areas: VI Dept of Env. Conservation, 1995 (LCUMAB)

Topography: Digitized from 1965 7.5 minute maps.

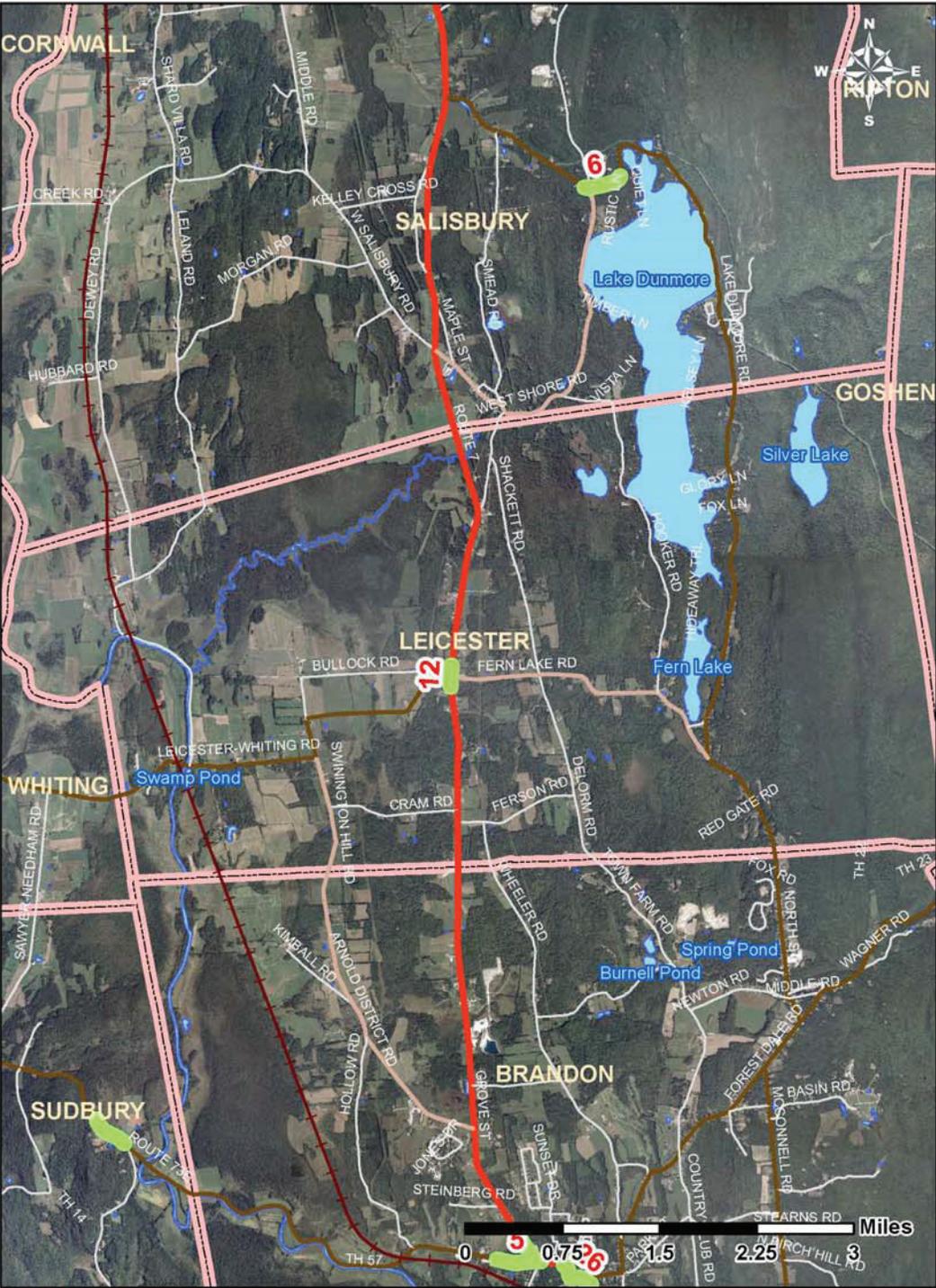
State Land: Vermont Department of Lands and Forests (1998)

State Water: 1911 Contracts for Forest (1998)

State Parks: Digitized from VI Mapping Program Observations, 1998, 1999

ADPFC 3/2002

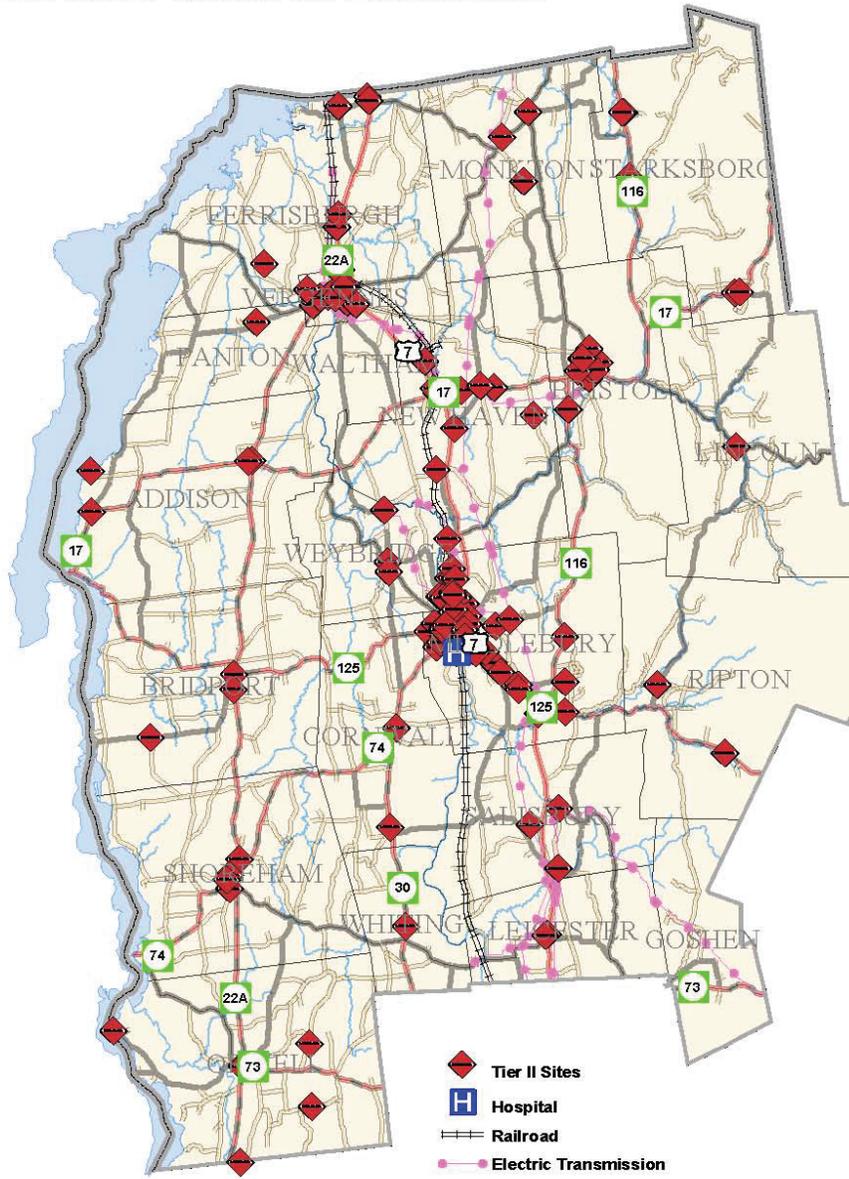
Leicester ~ High Crash Locations: 2006-2010



* Labels ~ indicate "Total Number of Crashes" within the 5-year period

**Annex D
Regional Maps**

**Addison Region
Hazardous Material Locations**



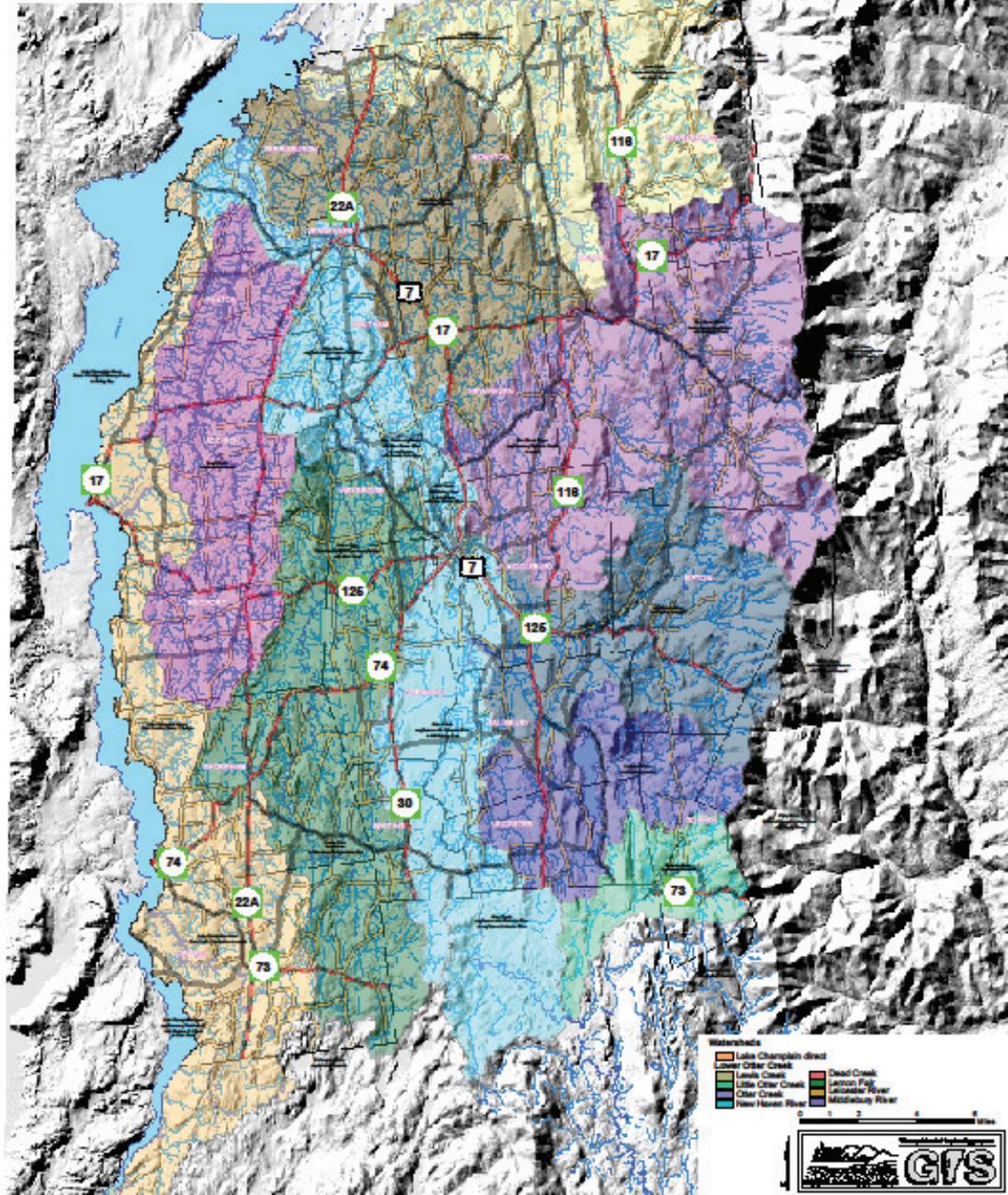
-  Tier II Sites
-  Hospital
-  Railroad
-  Electric Transmission
- Road System**
-  US Highway
-  State Route or Class 1
-  Town Class 2
-  Town Class 3



Source:
EPCRA Tier II Reports, 2008.

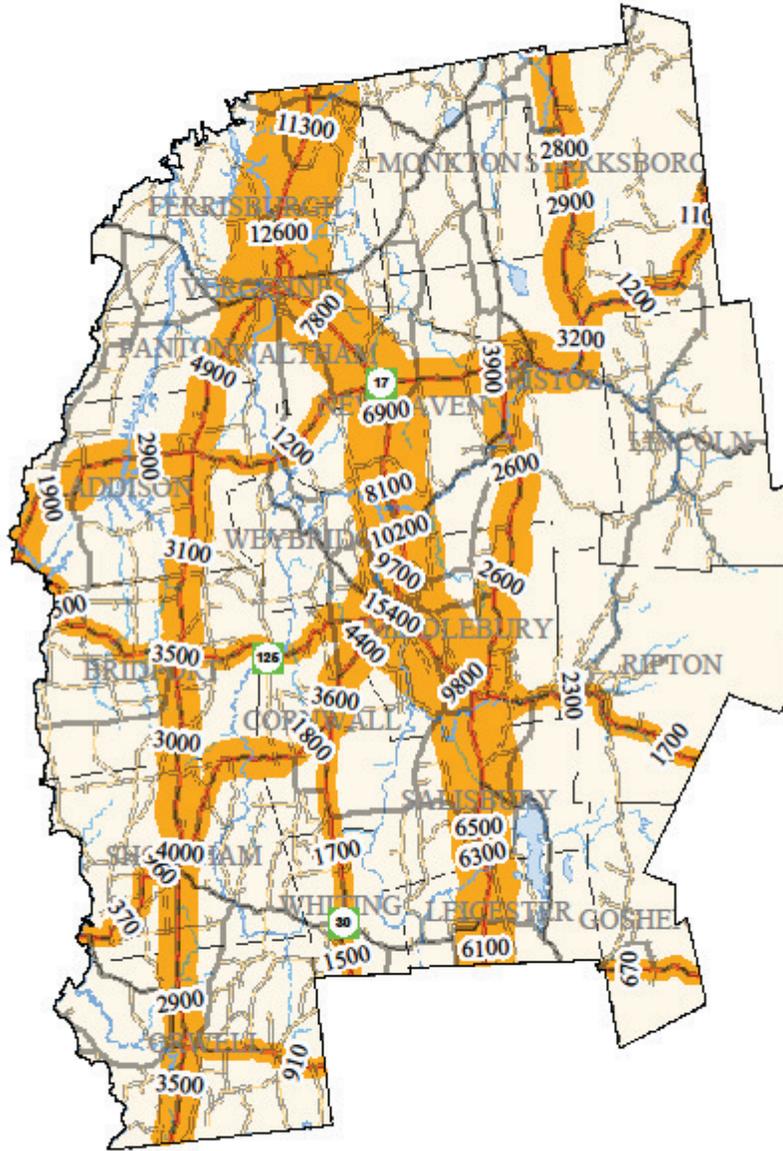
ACRPC 708

Addison Region Watersheds
Lower Otter Creek Basin Sub-Watersheds
with
Lower Lake Champlain Direct Drainage



Addison Region

Average Annual Daily Traffic 2002

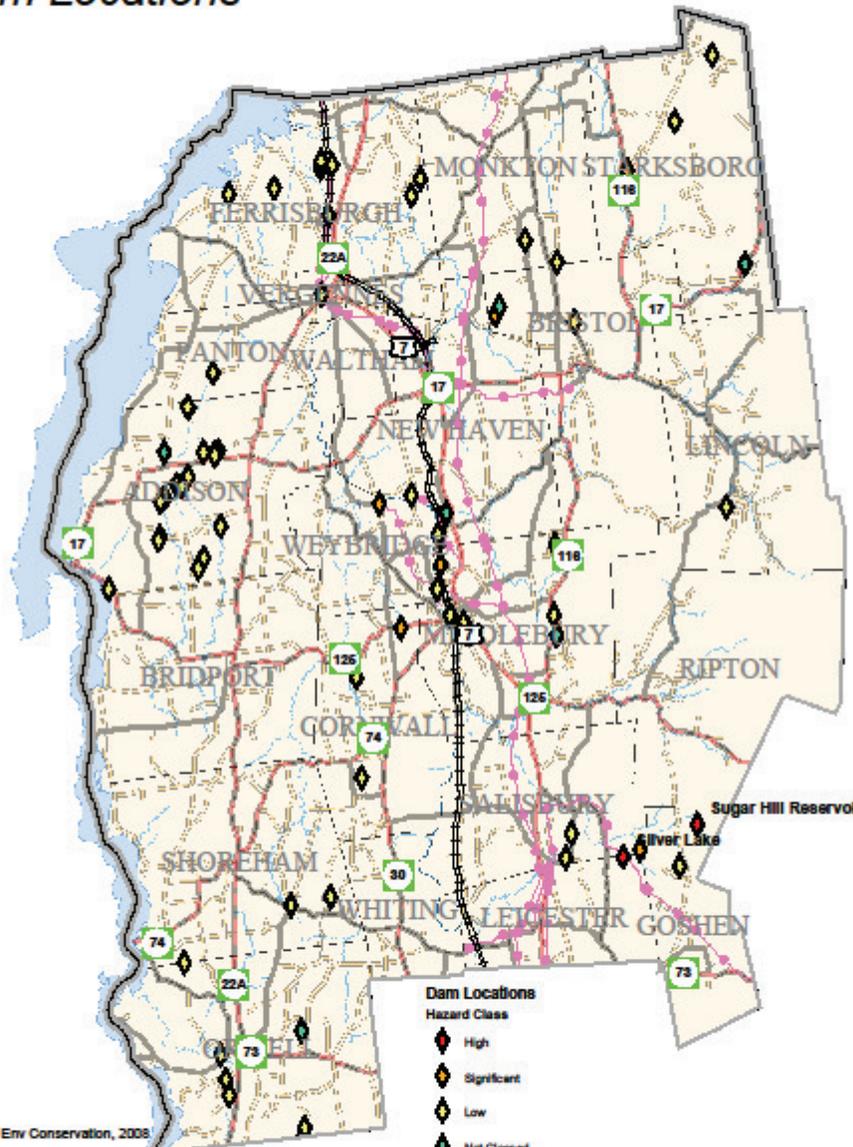


Source:
Vermont Agency of Transportation, 2007.

ACRPG 708



Addison Region Dam Locations



Source:
Vermont Dept Env Conservation, 2008

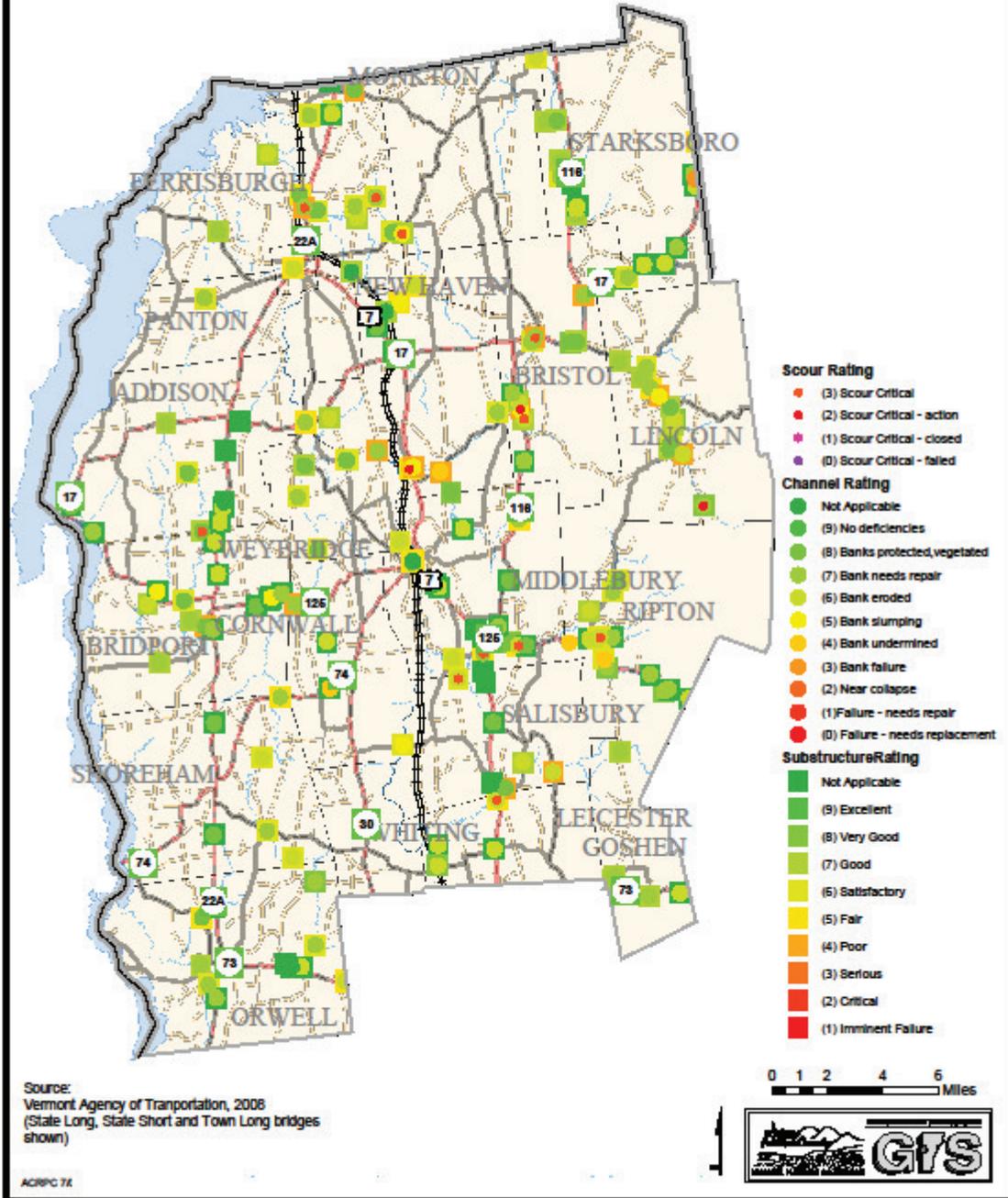
- High** - A dam where failure or mis-operation will probably cause loss of human life.
- Significant** - A dam where failure or mis-operation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities.
- Low** - A dam where failure or mis-operation results in no probable loss of human life and low economic and/or environmental loss. Losses are principally limited to the owner's property.

- Dam Locations**
- High
 - Significant
 - Low
 - Not Closed
- Railroad**
- Electric Transmission
- Road System**
- US Highway
 - State Route or Class 1
 - Town Class 2
 - Town Class 3



Addison Region

Bridge Locations with fluvial associated ratings



Annex E

Hazard ID & Risk Estimation Matrix, Town of Cornwall

| Risk Characteristic | | Score | Drought | Power Failure | Flooding | High Winds | Landslide | Lightning | HazMat Spill | Structure Fire | Wildfire | Winter Storm | Earthquake | Dam Failure |
|------------------------------------|---|-------|---------|---------------|----------|------------|-----------|-----------|--------------|----------------|----------|--------------|------------|-------------|
| Area Impacted | No developed area | 0 | | | | | | | | | | | | |
| | Less than 25% of developed area | 1 | | | | | | | | | | | | |
| | Less than 50% of developed area | 2 | | | | | | | | | | | | |
| | Less than 75% of developed area | 3 | | | | | | | | | | | | |
| | Over 75% of developed area | 4 | | | | | | | | | | | | |
| Health & Safety Impacts | No health and safety impact | 0 | | | | | | | | | | | | |
| | Few injuries or illnesses | 1 | | | | | | | | | | | | |
| | Few fatalities, many injuries/illnesses | 2 | | | | | | | | | | | | |
| | Numerous fatalities | 3 | | | | | | | | | | | | |
| Property Damage | None | 0 | | | | | | | | | | | | |
| | Few destroyed or damaged | 1 | | | | | | | | | | | | |
| | Few destroyed, many damaged | 2 | | | | | | | | | | | | |
| | Few damaged, many destroyed | 2 | | | | | | | | | | | | |
| | Many destroyed and damaged | 3 | | | | | | | | | | | | |
| Env. Damage | Little or no environmental damage | 0 | | | | | | | | | | | | |
| | Damages-short-term recovery | 1 | | | | | | | | | | | | |
| | Damages-long-term recovery | 2 | | | | | | | | | | | | |
| | Resources destroyed, no recovery | 3 | | | | | | | | | | | | |
| Economic Disruption | No economic impact | 0 | | | | | | | | | | | | |
| | Low direct and/or indirect costs | 1 | | | | | | | | | | | | |
| | High direct and low indirect costs | 2 | | | | | | | | | | | | |
| | Low direct and high indirect costs | 2 | | | | | | | | | | | | |
| | High direct and high indirect costs | 3 | | | | | | | | | | | | |
| TOTAL SCORE | | | | | | | | | | | | | | |
| Prob. of Occurrence | Known but rare occurrence | 1 | | | | | | | | | | | | |
| | Rare but anticipate an occurrence | 2 | | | | | | | | | | | | |
| | 100 years or less occurrence | 3 | | | | | | | | | | | | |
| | 25 years or less occurrence | 4 | | | | | | | | | | | | |
| | Once a year or more occurrence | 5 | | | | | | | | | | | | |
| TOTAL RISK RATING | | | | | | | | | | | | | | |

Annex F

Annex G
Adoption by Local Governing Body

RESOLUTION

Selectperson, offers the following resolution and moves its adoption. Seconded by Selectperson.

RESOLVE: That in order to provide for sustained actions to reduce or eliminate long-term risk to people and property from hazards and their effects in the Town of Cornwall, VT, the Town Selectboard deems it advisable and in the best interests of the community to adopt the attached Hazard Mitigation Plan.

PASSED AND ADOPTED THIS 20th DAY OF DECEMBER, 2011.

, Chairperson

Town of Cornwall, VT

ATTEST:

Town/City/Village Clerk