

Hartford Annex

Introduction

This appendix, when used with the Regional (multi-jurisdictional) PDM Plan, is an All-Hazard Pre-Disaster Mitigation Plan for the Town of Hartford.

Mitigation is any sustained action that reduces or eliminates long-term risk to people and property from natural and human-caused hazards and their effects. Based on the results of previous Project Impact efforts, FEMA and state agencies have come to recognize that it is less expensive to prevent disasters than to repeatedly repair damage after a disaster has struck. This plan recognizes that communities have opportunities to identify mitigation strategies. Hazards cannot be eliminated, but it is possible to determine what the hazards are, where the hazards are most severe and identify local actions that can be taken to reduce the severity of the hazard.

Hazard Mitigations strategies and measures **alter** the hazard by eliminating or reducing the frequency of its occurrence, **avert** the hazard by redirecting its impact by means of a structure or land treatment, **adapt** to the hazard by modifying structures or standards or **avoid** the hazard through improved public education or ensuring development is disaster resistant. Measures and strategies could include projects such as:

- Flood-proofing structures
- Tying down propane/fuel tanks in flood-prone areas
- Elevating furnaces and water heaters
- Identifying & modifying high traffic accident locations and routes
- Ensuring adequate water supply
- Identifying & upgrading undersized culverts
- Proactive land use planning for floodplains and other flood-prone areas
- Proper road maintenance and construction
- Ensuring critical facilities are safely located
- Buyout & relocation of structures in harms way
- Establish & enforce appropriate building codes
- Public information and education

Purpose

The purpose of this Pre-disaster Mitigation Plan is to assist Hartford in identifying all hazards facing the town and list strategies to begin reducing the greatest risks from known hazards.

Two Rivers-Ottauquechee Regional Hazard Mitigation Goals

- Reduce the loss of life and injury resulting from all hazards.
- To lessen financial losses and property damage incurred by municipalities, businesses and private citizens due to disasters.

These overarching goals can be further refined as follows:

- The impacts of hazards should be first avoided, then reduced where they cannot be reasonably avoided. For flooding and riverine erosion, this can best be achieved by precluding development from hazard areas, and where development exists through property buyouts or flood protection sympathetic to the natural and human resources of the area.
- The connections between land use, development siting, drainage systems, building standards, and road design and maintenance and the effects of disasters on the Region should be recognized and incorporated into policy so that there is no adverse impact (increased hazard) from development.
- Mitigation actions should be part of larger, systematic efforts at disaster reduction based on the highest threats. Flooding should be addressed on a watershed scale. Structural fire and technological hazards should be lessened through statewide safety education and code compliance.

Hartford Town Plan (adopted 6/5/07) – Objectives/Goals that support Hazard Mitigation

- Develop new bridge and culvert regulations to meet the standards set forth in this Town Plan and accommodate the more recent transportation and flood requirements (page 215).
- Develop and enforce shoreline protection regulations in order to protect riparian areas (page 251).
- Continue to encourage urban infill in established settlement areas and discourage development in outlying areas (page 253).

Community Background

The town of Hartford, Vermont is located on the border of Vermont and New Hampshire at the confluence of the White and Connecticut Rivers, as well as the intersection of Interstates 91 and 89, US Route 4 and 5, and Vermont Route 14. Hartford is comprised of five villages: White River Junction; Wilder; Hartford Village; Quechee; and West Hartford. Hartford currently has zoned 81% of its lands as Rural Lands, 10% as Residential, five percent as Industrial-Commercial, and three percent as mixed-use districts. Over one-third of the land in Hartford is on slopes greater than fifteen percent, and is therefore not readily available. The majority of land in the town of Hartford is forested.

Situated in the eastern border of the state along the Connecticut River valley, Hartford has a gentler climate than many of the higher elevation or more northerly areas of Vermont that experience colder temperatures and greater snowfall. The closest weather station to Hartford is the Lebanon Municipal Airport (LMA), located less than a mile from the town line at an elevation of 562 feet. Based on data collected at the LMA from 1960-2000, the average annual temperature was 44.3 degrees F. Average annual precipitation is 35.57 inches. Average annual snowfall is 76.3 inches.

Elevations in town range from approximately 340' along the Connecticut River at the Hartland town line to approximately 1,575' along the Pomfret town line west of Old Town Farm Road in Quechee.

The 2000 Census report indicates a population of 10,367, an increase of 10.2 percent above the 1990 population. Since 1960, Hartford has experienced a 63.1 percent increase in population. This is slightly higher than the 56.2 percent growth rate for the State and considerably higher than the 35.2 percent growth rate for Windsor County during the same period. Most of the growth in Hartford during the 1980s and 1990s was outside the villages of White River Junction and Wilder. This indicates that growth is occurring outside the two traditional population centers of the town and directed to Quechee and the rural areas outside the five villages.

The VA Hospital, located outside of White River Junction, works cooperatively with Hartford Emergency Management officials to plan and prepare for emergencies at its facility.

Community Hazards Inventory and Risk Assessment

Interviews and hazards analysis indicate that the following hazards are listed as probable (frequent to unusual) – Flash Flood, HAZMAT (Transportation Accidents), Landslides, and Winter/Ice/Wind Storms. In terms of the potential severity of damage, the following hazards are rated as having the potential to produce serious to locally catastrophic damage – Flood, HAZMAT, Landslides, Winter/Ice Storms, and Earthquakes. Hazards to which the town is vulnerable (probable and damaging) include Flash Flood/Flood, HAZMAT, Landslides, and Winter Storms/Ice Storms. Therefore, the mitigation measures in this Plan focus on these four hazards.

Flash Flood/Flood (Risk = Med-High/High)

Based on the results of overlaying the FIRM flood maps with the location of the E911 points, there are 47 residences and 17 commercial businesses in the town that are vulnerable to potential flooding. The estimated loss for direct damage to all of these properties from the 100 year flood, assuming average residential and commercial values (derived from 2008 Annual Report by the Vermont Department of Taxes, Division of Property Valuation and Review) would be \$20,778,167. This is about 1% of the grand list. However, there would certainly be additional costs from evacuation, lost business, road closures, and temporary relocation of the town office. Also, this cost is only for

mapped flood areas and does not reflect the likely damage that would result along smaller streams in flash flood/flood situations.

Recent flooding that had led to federal disaster declarations for Windsor County occurred from June 17, 1998 to July 13, 1998 (DR 1228 VT), Sept. 16 through Sept. 21, 1999 (DR 1307 VT), July 14, 2000 through July 18, 2000 (DR 1336 VT), July 21, 2003, through August 18, 2003 (DR 1488 VT), April 15-21, 2007 (DR 1698 VT), and July 9-11, 2007 (DR 1715 VT). These disaster declarations do not include flooding that occurred in August, 2008 and flood events that were not federally declared.

Facilities that could heighten risks in a flood hazard situation due to the possible release of fuel include the New England Central Rail Yard. Critical facilities inside the 100-year floodplain include:

- White River Junction Sewer Plant, Latham Works Lane
- Hartford Municipal Building, Bridge Street
- New England Central Rail Yard
- US 4, US 5 and VT 14

There are no repetitive loss properties in Hartford on FEMA's NFIP list.

Hazardous Materials (HAZMAT) - Transportation Accidents (Risk = Med-High/High)

Based on available VT Tier II data, there are 52 sites in town that have sufficient types and/or quantities of hazardous materials to require reporting. In addition, Hartford is home to two major rail lines, the New England Central Railroad and VTTrans Berlin Branch. At any given time, there can be hazardous materials aboard a train, and train derailments have occurred in the Hartford rail yard. Hartford is located at the junction of Vermont Route 14, US Routes 4 and 5, and Interstates 89 and 91. All of these roads see a large amount of truck traffic. Within 1,000 feet of the railroad tracks, Routes 4 and 5, and Interstates 89 and 91 there are 2,442 residences and 357 commercial & industrial buildings, including these critical facilities:

- VA Hospital
- Three schools
- Police/Fire Station

In the event that 5% of these structures were involved in a HAZMAT incident, the estimated damage would be \$40,875,279.

It should also be noted that the State of Vermont currently has one fully trained HAZMAT response team, with vehicles located in Essex Junction, Brandon, and Windsor. The State HAZMAT crew chief is available within minutes of a call for the team, but on-scene response would be a matter of hours. Hartford is well-prepared in that a HAZMAT decontamination trailer is kept at the Hartford Emergency Services building and Hartford has full-time Fire/Rescue service trained to Operations Level that would be able to size up the situation quickly and can do some decontamination.. In the event of a

serious accident in town, however, there would be little time for evacuation and response would be difficult.

Landslides (Risk = Med-High/High)

Landslides can be caused by seismic events, manmade or natural changes to groundwater flow that cause liquefaction, removal of vegetation and manmade or natural undercutting of steep banks. There is no quality mapping available for slide potential at this time, but slides along Pomfret Road near the town line exist, one of which has blocked a lane, and there is new slide forming along Jericho Road/Country Lane threatening structures.

Winter Storm (Risk = Med-High/High))

Hartford has adequate forces to respond to usual winter storms, but severe blizzards would shut down roadways and severe icing or wet snow could cause large power outages and create danger to persons from freezing. These hazards have no specific damage estimate as their effect could occur anywhere in town.

Existing Hazard Mitigation Measures in the Community

Ongoing efforts to mitigate hazards in the community include:

1. ditch and culvert maintenance.
2. administration of flood hazard regulations
3. administration of municipal shoreline regulations to enforce riparian buffer setbacks for streams

The Town participates in the NFIP and has already completed an update of its flood hazard regulations. The Town also adopted shoreline regulations to establish riparian buffer setbacks for streams. The Town of Hartford plans to enroll the community in the CRS program.

Areas of Local Concern

1. Main Street, Quechee: Ice jam annually on the Ottauquechee River; road closures
2. River Road, Quechee: Flooding twice a year on the Ottauquechee River; section of roadway washes out
3. Rt. 14, Clifford Park: Annual flooding; park facilities get washed out; road sections closed
4. Watson Park: Riverbank erosion sites
5. Landslides: Pomfret Road slide and Jericho Road/Country Lane slide
6. Town Office building and municipal files and equipment, during a flood
7. New England Central Rail Yard, during a flood

Implementation Schedule for Prioritized Mitigation Projects

Tasks currently under way or under consideration – in order of priority:

MITIGATION ACTION	WHO (LEADERSHIP)	WHEN (TIMEFRAME)	HOW (FUNDING/SUPPORT)	IMPLEMENTATION THROUGH EXISTING PROGRAMS
<u>ALL HAZARDS/EOP</u> 1. Ensure that RRP is current	Selectboard	Yearly	With TRORC assistance	
2. Ensure that the EOP is current with annexes for top hazards	Hartford Fire Dept.	Biennially	With TRORC assistance	
<u>FLASH FLOOD/FLOOD</u> 3. Continue an inspection and road improvement planning program that addresses culvert survey and upgrade and ditching.	Public Works Director and Selectboard	2009 and ongoing	Local resources	Road and culvert inspections
4. Inventory wetlands and update town wetland regulations	Conservation Commission, Planning Commission, Selectboard	2010	State grant funding, local resources	
5. Notify property owners in flood hazard areas about insurance.	Emergency Management Coordinator	2010	Local resources	
6. Improve flood and fluvial erosion Hazard Identification and Mapping by using PDM	Selectboard	2010	With TRORC and state assistance	
7. Join the Community Rating System to reduce resident insurance premiums.	Selectboard	2010	State and TRORC assistance	
8. Review town ordinances to require owners of propane tanks in flood hazard area to tie them down.	Planning Commission	2010	Local resources	
9. Work with propane vendors to tie down tanks in flood hazard area	Emergency Management Coordinator	2010	Local resources	
<u>HAZMAT</u> 10. Exercise emergency response to a derailment.	Fire Department	2010	With railroads and state transportation agency assistance	State exercise program
<u>LANDSLIDE</u> 11. Stabilize potential landslides on entire length of Pomfret Road.	Public Works Director and Selectboard	2009	HMGP or PDM-C, state, and local resources	HMGP or PDM-C
12. Stabilize potential landslides and possible residential buyouts on entire length of Jericho Road and Country Lane.	Public Works Director and Selectboard	2009	HMGP or PDM-C, state, and local resources	HMGP or PDM-C
<u>WINTER STORM</u> 13. Work with power companies to trim hazard trees.	Tree Warden and Selectboard	Ongoing	Local resources	
14. Work with VEM and Red Cross to establish emergency shelters with generators.	Selectboard	2009	EMPG and local resources	EMPG

MITIGATION ACTION	WHO (LEADERSHIP)	WHEN (TIMEFRAME)	HOW (FUNDING/ SUPPORT)	IMPLEMENTATION THROUGH EXISTING PROGRAMS
15. Educate citizens on preparedness for winter travel and extended power outages.	Emergency Management Coordinator	Ongoing	Local resources	