

Bethel 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 Bethel.

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. Previous FEMA, State and Regional Project Impact efforts demonstrate the fact 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 **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, relocating/removing buildings in the flood zone, 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 Bethel in identifying all hazards facing the town and list strategies to begin reducing risks from known hazards.

Two Rivers-Ottawaquechee 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.

Bethel Town Plan (adopted 8/28/06) – Objectives/Goals that support Hazard Mitigation

- To provide for a healthful distribution of population and structures in the Town taking into consideration traffic congestion; fire, flooding, and other dangers; reduction of noise, air and water pollution; and protection of access to light and air (page 6);
- To establish land use goals that provide adequate space for needed types of land use, both public and private, in locations that minimize the adverse impact of one land use on another (page 6);
- To facilitate the adequate and economical provision of transportation, water, sewage disposal, schools, parks, and other public requirements in relation to growth and to encourage the appropriate and efficient expenditure of public funds and economy in the process of development (page 6);
- To prevent the creation of traffic hazards and congestion and aesthetically unpleasing development on Routes 107 and 12 in the Town (page 6).

Community Background

The Town of Bethel, consisting of approximately 24,960 acres, is situated on the eastern slopes of the Green Mountains. The main village is located at the confluence of the Third and Main Branches of the White River. Commercial and Public facilities are located along Route 12 with residences scattered more widely throughout the Town. In 2000, the population of Bethel was 1,968, making it one of the few towns in the TRORC region to

surpass the population boom of the 1800's. Because of it's proximity to Interstate 89, the town is likely to experience consistent growth into the future.

According to the U.S. Census Reports, there were 741 year-round housing units and 127 seasonal housing units in Bethel in 1990, totaling 888. In 1980, there were 823 units. The overall increase during this period (1980 – 1990) was 7.9%. The overall increase for the Two Rivers-Ottawaquechee Region during this period was 6%. Currently, there are 956 residential buildings in Bethel. Forty one percent of these buildings were built prior to 1939.

The Town lies within the service area of Central Vermont Public Service (CVPS) which supplies electrical power to all sections of town. At present, the Town receives its power from a substation located in Royalton. A new 12-kilovolt line has been constructed parallel to Route 12 north of the town center. Eventually, this will connect into the Pleasant Street Randolph substation. Two benefits will be derived from this. Line serviceability will be greatly enhanced and a second source of power will be available to the Town in times of power outages.

The Town is served by a single volunteer fire department that responds to fires and other emergencies in Bethel and neighboring towns. Neighboring communities' departments are called in on large fires requiring outside resources. The Bethel Fire Department is located in a new station house on Pleasant Street (VT 12) near the school. This space should be adequate for the foreseeable future.

Appointed constables provide limited police security and traffic control services when needed. All other police functions are performed by the Windsor County Sheriff or Vermont State Police, Troop "D" which is located off Route 107 immediately south of the Bethel/Royalton Town Line in Royalton.

Medical emergencies are handled well by the private, non-profit White River Valley Ambulance, Inc. located in Bethel. They have three ambulances and a rescue truck with extraction equipment that are fairly new. The closest hospital is Gifford Medical Center, located in Randolph. Medivac services are available by the DHART helicopter.

Community Hazards Inventory and Risk Assessment

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

Flood (Risk = Med-High/High)

Based on the results of overlaying the FIRM flood maps with the location of the E911 points, there are 23 residences and 7 commercial businesses in the town that are vulnerable to potential flooding. The estimated loss for damage to 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 \$5,082,406. This is about 3% of the grand list.

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), July 9-11, 2007 (DR 1715 VT) and July 21 through August 12, 2008 (DR 1790 VT). This list does not include flood events that were not federally declared.

No development projects are planned in Bethel in areas that would be vulnerable to flooding. There are no repetitive loss properties in Bethel on FEMA's NFIP list.

Specific flood concerns:

- Parts of the Third Branch of the White River are unstable and prone to erosion and mudslides.
- The steep bank behind White River Valley Ambulance (WRVA) on Vermont Route 12 north of Bethel Village is unstable due to riverine erosion.
- Gilead Brook Road is subject to washouts during severe rain events.
- Vermont Route 12 Bridge over Gilead Brook is being undermined.

Fire (Risk = Med-High/High)

Poor access to fires, limited water supply for firefighting, and distances of homes from the Fire Station are a few of the challenges that leave Bethel vulnerable to the impacts of structure fires. Bethel has a traditional "downtown" block of adjacent commercial buildings. These buildings do not contain an extended fire suppression system. In the event of a major fire in one building, it is likely that the whole block would be threatened.

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

There are seven sites in town that has sufficient types and/or quantities of hazardous materials to require reporting. The New England Central Railroad also runs through the village of Bethel. At any given time, there can be hazardous materials aboard the train. Additionally, Bethel's village is located at the junction of Vermont Routes 107 and 12, both of which see a fair amount of truck traffic by Vermont standards.

Within 1,000 feet of the railroad tracks and Routes 107 and 12 there are 406 residences and 59 commercial & industrial buildings. In the event that 5% of these structures were involved in a HAZMAT incident, the estimated damage would be \$3,800,388. 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 HAZMAT crew chief is available within minutes of a call for the team but on-scene response would be a matter of hours. In the event of a serious accident in town, there would be little time for evacuation and response would be difficult.

Winter Storm (Risk = Med-High/High)

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. yearly update of culvert survey
3. administration of flood hazard regulations

National Flood Insurance Program

Bethel's initial Flood Hazard Boundary Map was identified on 2/8/74. The Town's initial Flood Insurance Rate Map (FIRM) was dated 8/5/91. The Town's FIRM has been updated, and the current effective map date is 9/28/07.

The Bethel Zoning Administrator serves as the NFIP Administrator. Bethel is located in Windsor County and completed an update of its flood hazard regulations in 2007. Aside from the Town's NFIP program, there are no additional erosion control or flood management regulations that apply in Bethel. There are no plans to enroll the community in the CRS program.

Based on the regional and local hazard assessment and analysis, this Annex identifies actions related to continued compliance with the NFIP. These actions are prioritized, along with the other actions developed in this Annex, using the method described on Page 21 of the Regional PDM Plan. The actions are included in the Implementation Schedule for Prioritized Mitigation Projects, which follows.

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</u> 1. Ensure that RRP is current	Town Manager	Yearly	With TRORC assistance	
<u>FLOOD</u> 2. Develop an inspection and road improvement planning program that addresses culvert survey and upgrade and ditching.	Road Foreman and Town Manager	2009 and ongoing	Local resources	
3. Improve flood and fluvial erosion Hazard Identification and Mapping.	Town Manager	2010	With TRORC and state assistance	
4. Identify frequently flooded roads and bridges	Road Foreman	2009	Local resources	
5. Replace state bridge (#38) over Gilead Brook on VT Route 12	VTrans	2010	HMGP or PDM-C and state resources	
6. Stabilize Gilead Brook riverbank behind WRVA	WRVA	2010	HMGP or PDM-C , state and private resources	
7. Replace Camp Brook Road bridge (#34) on VT Route 12 to address aggradation and structure inadequacy	VTrans	2009	HMGP or PDM-C and state resources	
<u>FIRE</u> 8. Develop additional dry hydrant sites in rural locations.	Fire Department	Ongoing	Local resources, George Aiken RC&D	
9. Replace existing water main on Main St. and provide adequate sizing and location of distribution mains for future installation of fire sprinkler systems in the closely spaced historic downtown structures.	Public Works Department with Town Manager	2010, Town Hall sprinkler	Local resources	
<u>HAZMAT</u> 10. Identify and create emergency access points to the railroad corridor in locations where access is presently difficult in the event of a derailment.	Emergency Management Coordinator	2010	With state transportation agency assistance	
<u>WINTER STORM</u> 11. Educate citizens on preparedness for winter travel and extended power outages.	Emergency Management Coordinator	Ongoing	Local resources	