

Barnard 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 Barnard.

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 Barnard in identifying all hazards facing the town and list strategies to begin reducing risks from known hazards.

Two Rivers-Ottawquechee Regional Hazard Mitigation Goals

- To 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.

Barnard Town Plan (adopted 9/29/04) – Objectives/Goals that support Hazard Mitigation

- To encourage 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 5).
- 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 5).

Community Background

The Town of Barnard, consisting of approximately 49 square miles, is nestled around Silver Lake along Vermont Route 12. Barnard is quite rural, with several brooks and streams, but no major rivers. The Chateauguay No Town area comprises approximately 55,000 acres of largely uninhabited forestland in the towns of Barnard, Stockbridge, Killington and Bridgewater. This land is located in the southwest corner of Barnard, though no town roads serve the area.

According to the 2000 Census, the population of Barnard was 958. There were a total of 629 houses or manufactured homes; 246 units were vacation residences and 383 units were year-round dwellings. The overall market price for homes is high in Barnard and

the trend will continue to change the socio-economic mix in the Town. Over the decade of the 1990s there was an average of 2.2 dwellings built per year. Two-family permanent dwellings are prohibited.

The Town lies within the service area of Central Vermont Public Service (CVPS), which supplies electrical power to all sections of town.

The Town is served the Barnard Volunteer Fire Department and the Broad Brook Fire Department that respond to fires and other emergencies in Barnard and neighboring towns. Neighboring communities' departments are called in on large fires requiring outside resources.

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 at the Bethel Station in Royalton.

Essential services are adequately available except for emergency medical services. Ambulance services are available in Barnard through the Woodstock and White River Ambulance Services as well as through DART. In the past there have been medical doctors practicing in Barnard; although this is no longer the case.

Community Hazards Inventory and Risk Assessment

In Barnard, the interviews and hazards analysis indicate that the following hazards are listed as probable (frequent to unusual) – Flash 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 – Flash Flood, HAZMAT, Hurricane/Tropical Storm, Winter Storm, Drought, Wildfire/Forest Fire and Structural fire. Hazards to which the town is vulnerable (probable and damaging) include Flash Flood, HAZMAT, Fire, and Winter Storm. Therefore, the mitigation measures in this Plan focus on these four hazards.

Flash Flood (Risk = Med-High/High)

Based on the results of overlaying the FIRM flood maps with the location of the E911 points, there are 35 residences and 0 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 \$10,786,768. 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 Barnard in areas that would be vulnerable to flooding. There are no repetitive loss properties in Barnard on FEMA's NFIP list.

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

Based on available VT Tier II data, there is 1 site in town that has sufficient types and/or quantities of hazardous materials to require reporting. Barnard's village is located along Route 12. There are 163 residential and 7 commercial buildings within 1,000 feet of a potential HAZMAT spill on Route 12. If only 5% of these structures were involved in an incident, the estimated damage would be \$2,668,883. 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.

Fire (Risk = Med-High/High)

Poor access to fires, limited water supply for firefighting outside the Village area, and distances of homes from the Fire Station are a few of the challenges that leave Barnard vulnerable to the impacts of structure fires. Wildfires are possible during late spring, late summer, and early fall. The forests contain potential fuel for a serious conflagration with many wooded acres and difficult terrain. Some recreational and retirement homes with single access roads and no fire-fighting water supply are in jeopardy.

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. administration of flood hazard regulations and driveway access ordinance
3. ongoing tree trimming program funded by \$5,000 municipal budget
4. use of ATV with trailer equipped for forest fires and inaccessible places
5. participation in wildfire training

National Flood Insurance Program

Barnard's initial Flood Hazard Boundary Map was identified on 9/6/74. The Town's initial Flood Insurance Rate Map (FIRM) was dated 9/18/85. The Town's FIRM has been updated, and the current effective map date is 9/28/07. No elevation is determined on this FIRM.

The Barnard Zoning Administrator serves as the NFIP Administrator. Barnard 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 Barnard. 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.

Areas of Local Concern

1. The elevation in Barnard is such that ice storms can be a regular event.
2. There is creek instability on both Stony Brook and Locust Creek that could threaten roads (including Route 12, Old Route 12, Chateauguay Road, and Masterson Road) and homes.

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	Selectboard	Yearly	With TRORC assistance	
2. Set up office space for town emergency operations center with backup power.	Emergency Planning Coordinator	2008	Local resources	
3. Rewrite the Town Emergency Operations Plan and establish better communications among emergency responders.	Emergency Planning Coordinator	2009	With TRORC assistance	
<u>FLOOD</u> 4. Continue to analyze and mitigate the flooding damage that occurs during flooding in town.	Emergency Planning Coordinator	Ongoing	Local resources	
5. Continue the planned road maintenance program and update undersized culverts and ditching.	Highway Department	Ongoing	Local resources	
6. Work with FEMA to improve town flood regulations	Selectboard	2010	Local resources	
<u>HAZMAT</u> 7. Pursue operations-level HAZMAT training for Fire Department	Fire Department	2009	Funded by Fire Service Training Academy	
<u>FIRE</u> 8. Review the ability of the Town to mobilize emergency services due to the rural nature of the town during a severe winter storm or forest fire/wildfire.	Emergency Planning Coordinator	2009	Local resources	
9. Continue training to allow the fire department to fight wildfires safely.	Fire Department	ongoing	Funded by Fire Service Training Academy	
<u>WINTER STORM</u> 10. Encourage utilities to continue regular tree trimming along power lines and continue town program	Emergency Planning Coordinator	Yearly	Local resources	