

Town of Westfield, Vermont
All-Hazards Mitigation Plan



Town of Westfield
Selectboard
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April 22, 2005

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Prerequisites

Certificate of Local Adoption

Town of Westfield

A Resolution Adopting the All-Hazards Mitigation Plan

WHEREAS, the Town of Westfield has worked with the Northeastern Vermont Development Association to identify hazards, analyze past and potential future losses due to natural and human-caused disasters, and identify strategies for mitigating future losses; and

WHEREAS, the Westfield All-Hazards Mitigation Plan contains recommendations, potential actions and future projects to mitigate damage from disasters in the Town of Westfield; and

WHEREAS, a meeting was held by the Westfield Selectboard to formally approve and adopt the Westfield All-Hazards Mitigation Plan as an annex to the Northeastern Vermont Development Association's (NVDA) All-Hazards Mitigation Plan.

NOW, THEREFORE BE IT RESOLVED that the Westfield Selectboard adopts The Westfield All- Hazards Mitigation Plan Annex as well as the associated NVDA All-Hazards Mitigation Plan.

Date

Selectboard Chair

Selectboard Member

Selectboard Member

Selectboard Member

Selectboard Member

Attested to by Town Clerk

Section One - Planning Process

1.1 Introduction and Purpose

This Annex, when used with the appropriate sections of the basic NVDA All-Hazards Plan, is an All-Hazards Mitigation Plan for the Town of Westfield. The purpose of this plan is to assist the Town of Westfield to identify all hazards facing the community and identify strategies to begin reducing risks from identified hazards. A Pre-Disaster Mitigation Planning Grant to the Northeastern Vermont Development Association (NVDA) assisted the Town of Westfield in preparing this plan.

The impact of expected, but unpredictable natural and human-caused events can be reduced through community planning. The goal of this plan is to provide all-hazards local mitigation strategies that make the communities in northeastern Vermont more disaster resistant.

Hazard Mitigation is any sustained action that reduces or eliminates long-term risk to people and property from natural and human-caused hazards and their effects. Based on the results of previous efforts, FEMA and state agencies have come to recognize that it is less expensive to prevent disasters than to get caught in a repetitive repair cycle after disasters have struck. This plan recognizes that communities have opportunities to identify mitigation strategies and measures during all of the other phases of Emergency Management – Preparedness, Response, and Recovery. Hazards cannot be eliminated, but it is possible to determine what they are, where they might be most severe and identify local actions that can be taken to reduce the severity of the hazards.

Hazard mitigation strategies and measures alter the hazard by eliminating or reducing the frequency of occurrence, avert the hazard by redirecting the impact by means of a structure or land treatment, adapt the hazard by modifying structures or standards or avoid the hazard by stopping or limiting development and could include projects such as:

- 1 Flood proofing structures
- 2 Tying down propane/fuel tanks in flood prone areas
- 3 Elevating structures
- 4 Identifying high accident locations
- 5 Monitor and protect drinking water supplies
- 6 Enlarge or upgrade culverts and road standards
- 7 Proactive local planning
- 8 Ensuring that critical facilities are safely located
- 9 Providing public information

1.2 About Westfield

Meeting Date: 5/13/04

Meeting Attendees: Jacques Couture, Yves Daigle, Selectboard Chair, Hilda Daigle, Romeo Myott, Local Emergency Management Coordinator, Larry Kennison, Road Commissioner.

Population: 519

Median Housing Value: \$73,066

Orleans County

Chartered: May 15, 1780 (Vermont Charter)

Area: 25,608 Acres / 40.01 Square Miles

Coordinates (Geographic Center): 72°26'W 44°53'N

Altitude ASL: 825 feet

Population Density (persons per square mile): 12.6

Tax Rate: \$2.057 ('03)

Equalized Value: \$33,578,119 ('03)

1.3 Community History and Background

Westfield is a small rural community in north central Vermont. Route 100 is the main State Highway through the community, with Route 105 heading further north into the neighboring ski town of Jay. The rocky ledges of Hazen's Notch, vast tracts of forest, and the Missisquoi River as it meanders through the town, provide the physical setting for life in Westfield. These scenic resources contribute to our quality of life and our economy.

The biggest changes Westfield residents noted over the last 10 years were the loss of farms and an influx of new residents. Most residents don't want to change a thing about Westfield. They want the town to remain peaceful and rural with well-kept homes and a solid core of prosperous dairy farms.

Both Westfield officials and residents recognize the importance of respecting private property rights. In order to maintain the sense of community they have, they all need to work together to balance public and private interests.

Westfield contracts with the Town of Troy for fire services. The Missisquoi Ambulance Service covers all Westfield and surrounding towns. There are no Lifeline residents in Westfield. There is no municipal sewer, but the town has a new municipal water system with 40 hookups which owned by the Fire District. A dry hydrant is near the well. The water quality is tested regularly by three people on the district. Emergency shelters are located at the Community Center, the Congregational Church and the Library and town garage. None of these shelters are in the flood plain. There are no generators at the shelters.

Children attend school in the Town of Jay with a K-6 program. Grades 7-12 attend school in Newport City which is about 15 miles away, or other high schools of their choice. Vermont

Electric Coop provides electrical service to the community and power is very reliable.

Section Two - Risk Assessment

2.1 Identify Hazards

Westfield local officials have identified several hazards that are addressed in this Annex. These were identified through interviewing the Selectboard, Road Commissioner and Local Emergency Management Coordinator. These individuals have a thorough knowledge of the community through many years of direct involvement in local issues.

Table 2-A Hazard Inventory and Risk Assessment

Possible Hazard	Likelihood	Impact	Community Vulnerability	Most Vulnerable
Tornado	Low	Medium	Low	Structures. Depends on location
Flood	High	Medium/ High	Medium/ High	Infrastructure. Lots of mitigation
Flash Flood	Med/High	Medium	Medium	Infrastructure. 3 brooks. Watershed to Missisquoi could drain into streams and rivers
Hazardous Materials	Low	Medium	Medium	Roads, depends on location
Radiological Incident	Low	Low	Low	Residents
Structure Fire	Low	Low	Low	Downtown, residences
Power Failure	Low/Med	Low	Low	Residences
Winter Storm/Ice	Low	Low	Low	Residences, good roads
High Wind	Low	Low	Low	Trees down, loss of power
Air crash	Low	Low	Low	Site specific
Water Supply Contamination	Low	Low	Low	Public water supply, rivers
Hurricane	Low	Low	Low	Power lines, residences
Earthquake	Low	Low	Low	Site specific
Dam Failures	Low	Low	Low	Residences, businesses, infrastructure
Drought	Low	Low	Low	Water supply
Chemical or Biological Incident	Low	Low	Low	Site specific
Highway Incidents	Low	Low	Low	Site specific
Wildfire/Forest Fire	Low	Low	Low	Farms, sugar bushes, residences
Landslide	Low	Low	Low	Site specific
School Safety Issues	N/A in Jay (H.S. is North Country or choice)			Students, teachers, hostage issues
Terrorism	Low	Medium	High	Residents, businesses, local officials

The highest risks to Westfield are: flooding, hazardous materials, and the potential for a terrorist event.

2.2 Profiling Hazards

Only those hazards that are considered the highest vulnerability in Westfield will be profiled below. While those not being profiled are still important, they are considered a low-to-medium threat to the community where damage would be minimal.

2.2.1 Flood History

The Town of Westfield has a history of flooding, with three significant flood events in a five-year time span, and one snow emergency in 2001. The summer of 1997 saw severe road and bridge on many of the town roads. The town has adopted Highway Codes and Standards for local roads and bridges, and has upgraded most all roads through mitigation. There have been no repetitively flooded public or private properties, except for the roads, bridges and culverts. There are no dams in Westfield, although there are a number of beaver dams in the higher elevations that could breach and cause a problem downstream.

FEMA Declarations and Funding

Town	NFIP	1184 Jul-97	1228 Aug-98	1428 Jul-02	3167 Mar-01	Totals by Town
Westfield	YES	\$ 257,069	\$ 55,089	\$ 22,604	\$ 1,653	\$ 336,415

2.2.2 Hazardous Materials

There are very few hazardous material sites in Westfield. The concern is over a potential incident that could occur on Route 100 or Route 102 were relatively high truck volumes are present. Many tourists also use these roads for access to the neighboring community of Jay. There is a high accident location on Buck Hill and the town is planning to make the road a dead end with guardrails.

2.2.3 Fires

There are structure fires that affect homes and barns at least one per year. The Troy Fire Department is very good with coverage to Westfield. Forest fires are not a large threat to the community.

2.2.4 Terrorism

There is not a direct threat to Westfield as far as terrorism is concerned but with the proximity to the Canadian border about 10 miles away, there is always the possibility that an indirect or unintentional impact could happen. If it does, this would cause a devastating impact on the community.

2.3 Vulnerability: Overview

In terms of vulnerability, Westfield rated these potential hazards below as medium or high: flooding, hazardous materials, terrorism issues. Mitigation strategies are identified for the highest risks in Section Three. Only those hazards that were identified as a high risk to the town were profiled. While other types of hazards may cause smaller problems for the community, they are a lower risk.

2.4 Identifying Structures

It is difficult to estimate the total number of structures in the 100-year limit of the FIRM identified floodplain as those maps do not accurately match up to the E911 maps that are based on the structures' geographical location (latitude and longitude). However, it can be estimated that there are approximately 20 structures in or near the flood areas depicted on the NFIP maps.

The historic village area of Westfield, with its school, community buildings and store are near the intersection of Routes 100 and 105. This is not a flood plain area.

2.5 Estimating Potential Losses

Future losses should be lessened through mitigation of the repetitively flooded properties, most of which are roads, bridges and culverts. The FIRM maps are not compatible with the GIS maps containing contour, rivers, roads and structures and it is not possible to estimate the amount of potential loss at this time. It is recommended that the NFIP maps be redone using the Vermont Geographic Information System standards based on orthophoto mapping.

The Median Housing Value (MHV) for Westfield in 2003 was \$73,066. The Equalized Value for all properties in Westfield in 2003 was \$33,578,119. If one percent (1%) of all properties in Westfield were damaged, the value would be assessed at \$35,578.

2.6 Analyzing Development Trends

The growth rate of Westfield is 3.1% or a total population increase of 16 persons between 2000 and 2003. The Town of Westfield has adopted a local plan and zoning regulations to guard against future development in inappropriate locations such as flood prone areas. Westfield is a member of the National Flood Insurance Program (NFIP). Westfield is not a rapidly developing community and is not expected to have a rapid influx of new development in the near future. All development strategies are carefully reviewed by the Zoning Board of Adjustment. All buildings being improved in or near frequently flooded areas are required to elevate or provide additional mitigation measures.

Section Three - Mitigation Strategy

Hazard Mitigation Strategies and Measures **avoid** the hazard by stopping or limiting new exposures in known hazard areas, **alter** the hazard by eliminating or reducing the frequency of occurrence, **avert** the hazard by redirecting the impact by means of a structure or land treatment, **adapt** to the hazard by modifying structures or standards and could include tools or projects such as:

- 1 **Town Plan** - this document contains goals and objectives for community growth, health, safety and welfare for public and private interests.

- 2 **Zoning Status** – This is a snapshot of the current zoning tools in effect. Note the progress listed above for some communities.
- 3 **NFIP** – National Flood Hazard Insurance Program – These are the communities that are members of the NFIP program.
- 4 **Flood Regulations** – Some communities have adopted Flood Regulations but may not be a member of the NFIP program.
- 5 **C & S = Highway Codes and Standards** – Most all Vermont communities have adopted the Vermont Transportation Agencies recommended Highway Codes and Standards. This is perhaps the one most beneficial mitigation program in Vermont and the NVDA region. By adopting these codes, all maintenance and new construction on roads, highways, bridges and culverts must be enhanced to meet the new standards to withstand large flood events.
- 6 **VTRC** – Westfield does not have a Vermont Red Cross Shelter Pre-Agreement. When a Pre-Agreement is in effect, local representatives are trained to open a shelter if needed. This will allow for a more efficient use of the VT Red Cross if and when needed. Westfield is interested in developing a shelter pre-agreement.
- 7 **Emergency Operation Plan (EOP)** – Westfield is in the process of having its EOP updated to include all-hazards through a Homeland Security Grant to the NVDA. This plan will be substantially completed by July 2005 and will include this Plan as its risk assessment to all-hazards.
- 8 **Rapid Response Plan (RRP)** – Westfield has updated its RRP as of August 12, 2004.
- 9 **Emergency Training** - Fire and rescue personnel that serve Westfield continue to participate in training offered for its volunteers, particularly with the equipment upgrades through the Dept. of Homeland Security.

Table 3-A Development Tools

Town	Town Plan	Zoning	NFIP	Flood Regs	Codes&Standards	VT Red Cross Shelter
Westfield	YES	YES	YES	YES	YES	N

3.1 Regional Hazard Mitigation Goals

- 1 Reduce the loss of life and injury resulting from all hazards.
- 2 Mitigate financial losses incurred by municipal, residential, industrial, agricultural and commercial establishments due to disasters.
- 3 Reduce the damage to public infrastructure resulting from all hazards.
- 4 Recognize the connections between land use, storm-water road design and maintenance and the effects from disasters.
- 5 Ensure that mitigation measures are compatible with the natural features of community rivers, streams and other surface waters; historic resources; character of neighborhoods;

and the capacity of the community to implement them.

- 6 Encourage all-hazard mitigation planning as a part of the municipal planning process.

3.2 Community Preparedness Goals

Overall, Westfield is working to decrease its risk to flooding, water supply contamination and hazardous material incidents through proactive planning, policies and mitigation actions. Other lesser risks are being addresses through the same procedures and policies.

- 1 Review this plan with essential town government.
- 2 Review and study the need for additional capacity and capability in the Fire Department to minimize the impact of a HAZMAT incident.
- 3 Ensure that all emergency response and management personnel receive HAZMAT Awareness training as a minimum.

3.3 Existing Hazard Mitigation Programs

Westfield has been proactive in planning its future as well as protecting its citizens from potential disasters.

3.3.1 Emergency Management Planning

Westfield has recently updated their Rapid Response Plan. The fire department in Troy that serves Westfield has upgraded its equipment through Homeland Security funds, including communication equipment.

3.3.2 Codes and Standards

Westfield has adopted the recommended Highway Codes and Standards that require regular upgrades on bridges, highways, ditching and culverts to avoid flood damage. A number of culverts have already been upgraded. The local highway department has done a lot of mitigation on their roads, including raising some roads and using large stone.

3.3.3 Local Planning and Zoning, NFIP

Westfield has adopted a Town Plan and Zoning. They are a member of the National Flood Insurance Program. All new development must be reviewed by the Zoning Board of Adjustment. Permit requests range from 20 to 60 in any given year. Most are for subdivisions, renovations and existing building modifications. All development in or near the identified flood areas must conform to zoning standards.

3.3.4 Protection of Municipal Water System

Westfield checks its water system daily as required by State regulations. They system is locked to protect against vandalism or unwanted substances.

3.3.5 Protection of Town Records

The Town office has a vault to protect public records from damage or theft/vandalism.

3.4 Preparedness Tools

Public Awareness, Training, Education

- 1 Conduct Emergency Drills involving all elements of the community to practice procedures associated with a simulated varies incidents.
- 2 Use this plan for Hazard Identification and Mapping.

Public Protection

- Designate shelters.
- Emergency communications and information systems (NOAA weather receivers, Emergency Alert System (EAS)) are at the Command Center.
- Update Hazard Vulnerability Assessments as needed.
- Review and modify evacuation and sheltering plans based on the results of drills and exercises or procedures implemented in an actual incident.
- American Red Cross chapter may be contacted to assist with community education programs.
- Maintain current Rapid Response Plans and the Emergency Management Operations Plans.
- Regularly scheduled maintenance programs are ongoing (culvert survey & replacement, ditching along roadways, cutting vegetation to allow visibility at intersections).
- The town is proactive in preparing for potential disasters.

Financial and Tax Incentives.

- Use State and Federal funding for mitigation projects and activities.

Hazard Control and Protective Works.

- Utilize regular maintenance programs (culvert survey & replacement, ditching along roadways, cutting vegetation to allow visibility at intersections).

Insurance Programs.

- Participate in NFIP.

Land Use Planning/Management: Flood.

- Westfield has a municipal plan and local zoning. They have established Flood Hazard Areas through the NFIP.

Protection/Retrofit of Infrastructure and Critical Facilities.

- A map of Critical Facilities is attached.
- Auxiliary power for the shelter is needed.

3.5 Analysis of Mitigation Actions

Priority Actions:

Local officials in Westfield have two mitigation actions to be included in the Hazard Mitigation Plan. Table 3-B, Implementation Strategy contains these actions, along with the responsible agency, the funding source, and implementation timeframe.

The Westfield local officials have prioritized the actions using the STAPLE+E criteria, a planning tool used to evaluate alternative actions. The following table explains the STAPLE+E criteria.

S – Social	Mitigation actions are acceptable to the community if they do not adversely affect a particular segment of the population, do not cause relocation of lower income people, and if they are compatible with the community’s social and cultural views.
T – Technical	Mitigation actions are technically most effective if they provide long-term reduction of losses and have minimal secondary adverse impacts.
A – Administrative	Mitigation actions are easier to implement if the jurisdiction has the necessary staffing and funding.
P – Political	Mitigation actions can truly be successful if all stakeholders have been offered an opportunity to participate in the planning process and if there is public support for the action.
L – Legal	It is critical that the jurisdiction or implementing agency have the legal authority to implement and enforce a mitigation action.

E – Economic	Budget constraints can significantly deter the implementation of mitigation actions. Hence, it is important to evaluate whether an action is cost-effective, as determined by a cost benefit review, and possible to fund.
E – Environmental	Sustainable mitigation actions that do not have an adverse effect on the environment, that comply with Federal, State, and local environmental regulations, and that are consistent with the community’s environmental goals, have mitigation benefits while being environmentally sound.

2.6 Implementation of Mitigation Actions

Flooding and the potential for hazardous material incidents are the two main threats to Westfield. Local officials are proactive in preparing for the hazards for which they are most vulnerable. Their highest priority concern is the health safety and welfare of the local citizens and businesses. The mitigation action determined to have the highest priority was the most cost effective alternative for maintaining a shelter if needed. Readiness and timeliness of project was also important.

Potential hazardous material incidents are caused mainly by highway features combined with areas that typically flood. These areas are Vermont State highways, which are the responsibility of the Vermont Agency of Transportation and are being evaluated by their engineers in conjunction with local officials.

The evaluating of these criteria is largely based on best available information and best judgment, as many of the projects are not fully scoped out at this time. The actions are listed in the Table 3-B in order of importance, cost effectiveness and feasibility to the community.

Table 3-B Mitigation Projects by Priority

Project/Priority	Mitigation Action	Who is Responsible	Time Frame and Potential Funding	Initial Implementation Steps
Road and culvert upgrades High	Continue to upgrade potential flood areas in town towns.	Road Commissioner	2005/6 FEMA, Bridge and Culvert Program	Seek cost effective solutions and then review grant sources for appropriate funding.
Generator for emergency shelter	A proper shelter with backup power is needed due to frequent flooding.	Selectboard/Local Emergency Management Coordinator	2005/6 FEMA, HMGP, homeland Security	Seek appropriate funding sources and apply
Pre-Agreement with the Vermont Red Cross	This will expedite opening a shelter during the next hazard.	Selectboard/Local Emergency Management Coordinator	2005/6 No Cost	Contact VT. Red Cross and set appointment

Section Four - Plan Maintenance Process

4.1 Initial Approval Process

In addition to public involvement in the initial development of the plan, opportunities for public comment will include a warned adoption to review the plan prior to final adoption. The fire chief has been instrumental in participating in the review of the document with the local officials.

After local review and comment, the draft local annex is presented to the State Hazard Mitigation Committee through the State Hazard Mitigation Officer (SHMO) for review and comment. The SHMO will issue a recommendation for forwarding the plan to the FEMA Region I. After receipt of comments from FEMA Region I staff, final changes will be made and the resulting document adopted by the Westfield Selectboard. The final plan will be returned to FEMA Region I for formal approval.

4.2 Routine Plan Maintenance

The Hazard Mitigation Plan is dynamic and changing. To ensure that the plan remains current it is important that it be updated periodically. The plan shall be updated every five years, pending ongoing financial resources, in accordance with the following procedure:

- 4.2.1 The Westfield Selectboard will either act as the review committee or appoint a review committee.
- 4.2.2 The committee will discuss the process to determine if the evaluation criteria is still appropriate or modifications or additions are needed to the mitigation strategies based on changing conditions since the last update

- occurred. Data needs will be reviewed, data sources identified and responsibility for collecting information will be assigned to members.
- 4.2.3 A draft report will be prepared based on the evaluation criteria and in conformance with the FEMA Region I Local Hazard Mitigation Plan Crosswalk document.
 - 4.2.4 The Selectboard will have the opportunity to review the draft report. Consensus will be reached on changes to the draft.
 - 4.2.5 Changes will be incorporated into the document.
 - 4.2.6 The plan will be reviewed by Vermont Emergency Management (SHMO) staff and then FEMA Region I staff.
 - 4.2.7 VEM and FEMA comments will be incorporated into the plan.
 - 4.2.8 The Selectboard will warn the plan for approval at its regular meeting.
 - 4.2.9 The Selectboard will incorporate any community comments into the plan.
 - 4.2.10 The Selectboard will finalize and adopt the plan and distribute to interested persons.

4.3 Programs, Initiatives and Project Review

Although the plan will be reviewed, pending ongoing financial resources, in its entirety every five years the town may review and update its programs, initiatives and projects more often based on the above procedure as changing needs and priorities arise.

4.4 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 Modification Plans effectively addressed the hazard.
3. A draft report After Action Report of the assessment will be distributed to the Review/ Update Committee.
4. A meeting of the committee will be convened by the Selectboard to make a determination whether the plan needs to be amended. If the committee determines that NO modification of the plan is needed. Then the report is distributed to interested parties.
5. If the committee determines that modification of the plan IS needed, then the committee drafts an amended plan based on the recommendations and forwards it to the Selectboard for public input.
6. The Selectboard adopts the amended plan.

Section Five - Maps

Tab a - Critical Facilities and Local Areas of Concern Map

