

TOWN OF IRASBURG

All-Hazards Mitigation Plan



**Town of Irasburg
Selectboard
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July 15, 2005

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This Plan is not eligible for FEMA approval unless Irasburg becomes a member of the National Flood Insurance Program.

Certificate of Local Adoption

Town of Irasburg

A Resolution Adopting the All-Hazards Mitigation Plan

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

WHEREAS, a meeting was held by the Irasburg Selectboard to formally approve and adopt the Irasburg 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 Irasburg Selectboard adopts The Irasburg 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 Irasburg. The purpose of this plan is to assist the Town of Irasburg 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 Irasburg 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 disaster has 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:

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

1.2 About Irasburg

Population: 1,096
Median Housing Value: \$63,433
Orleans County
Chartered: February 23, 1781 (Vermont Charter)
Area: 26,095 Acres / 40.77 Square Miles
Coordinates (Geographic Center): 72°17'W 44°48'N
Altitude ASL: 814 feet
Population Density (persons per square mile): 26.4
Tax Rate: \$2.057 ('03)
Equalized Value: \$53,778,338 ('03)

1.3 Community Background and History

Irasburg is located in the north-central part of Vermont, less than 20 miles from the Canadian border. Irasburg's village area is located at the intersection of Vermont Routes 14 and 58 at the high point in the community. All water drains from the village area into Black Creek. There is some erosion along Route 58 between Irasburg and Orleans. At the center of the town is an attractive common that is used for special events during the summer months. Interstate 91 heading north-south goes through the most eastern section of town for approximately one mile.

The Town Clerk's Office, K-8 school, library, and fire station are all within walking distance to the village common. Students in grades 9-12 attend the Lake Region High School in the Town of Barton, the next community to the east. Most of the larger parcels of land are used for farming.

The village area with the highest concentration of homes and businesses is served by municipal water. All other properties use well water. There is no wastewater treatment facility in Irasburg. All properties use on-site septic systems. The Portland Pipeline travels through Irasburg within 35-40 feet of water sources.

Vermont Electric Cooperative is the main power supplier for the town and power failures are not normally an issue. There are no known Lifeline residents in town. There are three identified day care centers in town that the fire chief is aware of for potential special need evacuations. Health care options include Copley Hospital in Morrisville, the North Country Hospital in Newport City or the Northeastern Regional Area Hospital in St. Johnsbury.

Irasburg has an active volunteer fire department that is well trained. There are six dry hydrants in town and the fire department receives about 35 calls per year, 8-10 of which are house fires. The fire department performs chimney cleaning for local residents annually.

The K-8 school is the identified shelter for the community and they do have a generator. The Town Hall and fire department are back up shelters and the fire department does have a mass casualty tent for emergency situations.

Children Day Care
Children Day Care
Children Day Care

Corinne M Royer
Shirley A McCormick
Chasity L Farnsworth

Section Two - Risk Assessment

2.1 Identify Hazards

Meeting Date: 9/27/04

Meeting Attendees: Roger Gagnon, Charles Jaquish, David Turner, Randall Wells, Betsy Inkel

Local officials have identified several hazards that are addressed in this Annex. These were identified through interviewing the Selectboard members, Town Clerk and the Fire Chief. 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	Low	Low	Structures
Flood	Low	Low	Low	Infrastructure.
Flash Flood	Low	Low	Low	Infrastructure
Hazardous Materials	Low	Low	Low	Roads, water supply
Radiological Incident	Low	Low	Low	Residents
Structure Fire	Low/Med	Low	Low	Downtown, residences
Power Failure	Low	Low	Low	Residences, businesses
Winter Storm/Ice	Low/Med	Low	Low	Residences, businesses
High Wind	Low	Low	Low	Trees down, loss of power
Aircrash	Low	Low	Low	Site specific
Water Supply Contamination	Low * See notes	Low	Low	Public water supply, rivers. Portland Pipeline*
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, sugarbushes, residences
Landslide	Low	Low	Low	Site specific
School Safety Issues	Low	Low	Low	Students, teachers, hostage issues
Terrorism	Low	Low	Low	Residents, businesses, local officials

There has been no Medium to High risks identified in Irasburg.

2.2 Profiling Hazards

While local officials did not identify any MEDIUM or HIGH vulnerabilities in Irasburg, those that are possibilities in Vermont are profiled below. While those from the HIRA that are not being profiled are still important, they are considered a lower threat to the community where impact would be minimal.

2.2.1 Flood History

Floods are the most probable natural cause of emergencies or disasters in Irasburg. Flooding, especially flash flooding, can impact areas in town that are located above the designated floodplains. The valley areas are susceptible to flooding from runoff from the higher elevations. The frequency of extreme weather events fluctuates from year to year. The town has had to address some ditching and erosion with flash floods. Washouts not typically a problem and there are no particular areas that are affected ice jams. There have been no FEMA disaster declarations in Irasburg between 1989 through 2004.

2.2.2 Hazardous Materials

Hazardous materials lead the list of potential hazards that could impact the Town of Irasburg. Fuels are the most widespread materials likely to cause problems and most would be likely on Routes 5, 14, 58 and Interstate 91. Listed below are areas identified with hazardous materials and underground storage tanks. The Portland Pipeline travels through Irasburg and the nearest office is in Sutton, Vermont. A helicopter checks pipeline frequently. The Portland Pipeline is within 35-40 feet of water sources but is not considered a potential threat. There are many Casella Waste trucks traveling through town to the large landfill to the Town of Coventry to the north.

AOT District Highway Garage	AOT District 9 Highway Garage, Irasburg
Hazardous Materials	VELCO Irasburg Substation
Hazardous Materials	VELCO Irasburg Substation
Hazardous Materials	B & B Trucking Inc
Pipeline	Portland Pipeline
Railway	Washington County Railroad Company, CT River Subdivision
Underground Tank (UST)	VTRANS Irasburg Garage
Underground Tank (UST)	B & B Trucking Inc
Underground Tank (UST)	Bob's Quick Stop
Underground Tank (UST)	Croteau Auto Parts

2.2.3 Structure Fire

Structure fires in Irasburg are not common averaging one to two per year. While the fire department received 8-10 calls in 2004, some were chimney fire calls.

2.2.4 Power Outages (High Winds, Severe Weather)

While Irasburg sits high on a hill, high winds do not have an effect on the community. The power source is reliable and service is good.

Electric Utility	Vermont Electric Coop (VEC)
Electric Utility	Village of Barton Electric
Electric Utility	Village of Orleans Electric

2.2.5 Water Supply Contamination

Irasburg has a municipal water system that serves the village common area only. The source is secured and checked daily for possible contamination. There are two wells 800+ feet deep that are treated in locked well house.

Water Supply	Irasburg Water Dept Coop
Water Supply	River of Life Inc
Water Supply	Kingdoms Playground

2.2.6 School Safety Issues

The school has prepared an emergency plan for a variety of potential incidents ranging from bomb scares to drugs to guns. A generator is at the school for backup power.

2.2.7 Terrorism

Irasburg is not a high threat target area for terrorists, but an incident is always a possibility. Should an incident occur, it would be devastating to the community.

2.3 Vulnerability: Overview

In terms of vulnerability, Irasburg did not identify any threats or potential vulnerabilities. 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 10 structures in or near the flood areas depicted on the NFIP maps.

2.5 Estimating Potential Losses

Future potential 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 Irasburg in 2003 was \$63,433. The Equalized Value for all properties in Irasburg in 2003 was \$53,778,338. If one percent (1%) of all properties in Irasburg were damaged, the value would be assessed at \$53,778.

2.6 Analyzing Development Trends

The growth rate of Irasburg is 1.8% or a total population increase of 19 persons between 2000 and 2003. The Town of Irasburg has not adopted a local plan and zoning regulations to guard against future development in inappropriate locations such as floodprone areas. Irasburg is not a member of the National Flood Insurance Program (NFIP). Irasburg is not a rapidly developing community and is not expected to have a rapid influx of new development in the near future.

Population Increase 2000 to 2003

Town	Estimated Pop 2003	Census Pop 2000	Increase
Irasburg	1096	1077	1.8%

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:

- **Town Plan** - this document contains goals and objectives for community growth, health, safety and welfare for public and private interests.
- **Zoning Status** – This is a snapshot of the current zoning tools in effect. Note the progress listed above for some communities.
- **NFIP** – National Flood Hazard Insurance Program.
- **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.
- **VTRC** – Irasburg 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.
- **Emergency Operation Plan (EOP)** – Irasburg 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.
- **Rapid Response Plan (RRP)** – Irasburg has updated its RRP as of March 14, 2005.

- **Emergency Training** - Fire and rescue personnel 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	Culvert Inv.	Vt Red Cross	Maps FIRM
Irasburg	NO	NO	NO	NO	YES	NO	NO	YES

3.1 Regional Hazard Mitigation Goals

- 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 and maintenance and the effects from disasters.
- 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.
- Encourage all-hazard mitigation planning as a part of the municipal planning process.

3.2 Community Preparedness Goals

Overall, Irasburg 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.

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

3.3 Existing Hazard Mitigation Programs

Irasburg has been proactive in planning its future as well as protecting its citizens from potential disasters. The fire department is well trained although there is a declining volunteer population. The shelter has not been certified by the Vermont Red Cross. Irasburg is located in such an area that is rural and not overly susceptible to severe hazards that could impact the community.

3.3.1 Emergency Management Planning

Irasburg has recently updated their Rapid Response Plan. The fire department has actively sought funds for upgrading their response equipment through recent Homeland Security grants.

3.3.2 Codes and Standards

Irasburg 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.

3.3.3 Local Planning and Zoning, NFIP

Irasburg has not adopted a Town Plan and Zoning. They are not a member of the National Flood Insurance Program. All development in or near the identified flood areas must conform to zoning standards.

3.3.4 Protection of Town Records

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

3.3.5 School Drills

The K-8 Irasburg School practices regular evacuation drills.

3.4 Preparedness Tools

Public Awareness, Training, Education

- Conduct Emergency Drills involving all elements of the community to practice procedures associated with a simulated varies incidents.
- 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.
- Emergency response and management staff attend professional training sessions.

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.

- Irasburg 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.

3.5 Analysis of Mitigation Actions

Priority Actions:

Local officials in Irasburg have not identified several 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 Irasburg 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.

3.6 Implementation of Mitigation Actions

Flooding and the potential for hazardous material incidents are the highest threats to Irasburg. 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 evaluating of the STAPLEE criteria is takes into consideration the best available information, any engineering evaluations, and best judgment. The action listed in Table 3-B is important to community, cost effective 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
Consider becoming a member if the National Flood Insurance Program (NFIP)	Will provide insurance protection for residents and businesses.	The Selectboard	2005/6 – No funds needed	Contact NVDA for assistance to begin the flood hazard planning process. 802-748-5181.
GIS mapping of NFIP areas	Identify flood areas with vulnerable structures consistent with Vermont GIS mapping effort.	Northeastern Vermont Development Association	2006/7 – FEMA FMA funds, HMGP or EMPG funds	Coordinated statewide NFIP mapping effort for all towns

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 Irasburg 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 Irasburg 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 5 - Maps

- A. Essential Facilities Map and Areas of Local Concern

