TOWN OF STANNARD

All-Hazards Mitigation Plan

Town of Stannard
Selectboard
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July 6, 2005

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Prerequisites

Certificate of Local Adoption

Town of Stannard

A Resolution Adopting the All-Hazards Mitigation Plan

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

WHEREAS, a meeting was held by the Stannard Selectboard to formally approve and adopt the Stannard 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 Stannard Selectboard adopts The Stannard 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 Stannard. The purpose of this plan is to assist the Town of Stannard 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 Stannard in preparing this plan.

The impact of expected, but unpredictable natural and human-causes 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 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:

- 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 Stannard

Population: 192 (2003 estimate)
Median Housing Value: $54,920
Caledonia County
Chartered: August 19, 1867 (Vermont Charter)
Area: 8,129 Acres / 12.7 Square Miles

Coordinates (Geographic Center): 72°13'W 44°33'N
Altitude ASL: 1,700 feet
Population Density (persons per square mile): 14.6
Tax Rate: $2.057 ('03)
Equalized Value: $9,379,276 ('03)

1.3 Community Background and History

Stannard is a small rural community situated at a high elevation in northeastern Vermont. Access to Stannard is from the Stannard Mountain Road coming from either Greensboro or Wheelock. Stannard has 4.43 miles of Class 2 town roads and 11.72 miles of Class 3 town roads. There are no paved roads in Stannard and the town owns one truck, one grader, and one new backhoe. There is a high accident location (HAL) on Stannard Mountain Road in a narrow area on an incline with the stream, on one side of the road. Vehicles seem to loose control in this section of road.

The Town Clerk's office has just been renovated and is the identified shelter for the community. The Selectboard would like to have a generator for this building as there are none in the town.

There is no fire department or rescue squad in town. Services are supplied by the Greensboro Fire Department and the Hardwick Rescue Squad. There are two dry hydrants in the community.

There is no school and all students are tuitioned out. There are 26 students in grades K-6 that attend the Lakeview School in Greensboro and another 17 students in grades 7-12 that attend a variety of area schools.

There are no municipal water or sewer services in Stannard.

Power is supplied by the Washington Electric Cooperative for most of the town with Hardwick Electric coming in from the Greensboro Bend area to the west. Communications during power failures often include downed phone lines and can cause problems. Cell service in this area is not good. The school board has a CB licensed radio to talk with school buses in the event they are held up due to weather or road conditions.

☒ 1. EMC	Hardwick Rescue Squad
☒ 2. Fire Chief	Greensboro Fire Dept.
☒ 3. Select Board Chair	Miles Sherts
☒ 4. Roads Foreman	Lucien Loura
☒ 5. Law Enforcement	VSP & Steven Rich, Constable
☒ 6. Town Clerk	Connie Withers
☒ 7. School Board Director	Evelyn Rich

☒ **Shelter # 1:** Town Clerk's Office	Stannard Town Hall
☒ **Shelter # 2:** Lakeview Elem. School	Lauredon Ave., Greensboro

Section Two - Risk Assessment

2.1 Identifying Hazards

Meeting Date: 9/13/04
Meeting Attendees: Miles Sherts, Toni Hartrich, Drex Wright, Connie Withers, Regina Troiaro

Stannard local officials identified several hazards that are addressed in this annex. These were identified through interviewing the Selectboard and Town Clerk. These individuals have a thorough knowledge of the community. Reviewing past disasters was helpful in determining the greatest risks to the community.

Table 2-A Hazard Inventory and Risk Assessment

Possible Hazard	Likelihood	Impact	Community Vulnerability	Most Vulnerable
Tornado	Low	Low	Low	Structures
Flood	Medium	Low	Low	Roads, culverts
Flash Flood	Medium	Medium	Medium	Roads, culverts
Hazardous Materials	Low	Low	Low	Roads, water supply
Radiological Incident	Low	Low	Low	Residents
Structure Fire	Medium	Low	Low	Residences. 1/year. Lots of wood heat
Power Failure	Med/High	Medium	Medium	Residences.
Winter Storm/Ice	High	Med/High	Med/High	Residences. Drifting. One road driver
High Wind	High	Low	Low	Trees down, loss of power
Aircrash	Low	Low	Low	Site specific
Water Supply Contamination	Low	Low	Low	Water supply, rivers. No municipal.
Hurricane	Low	Low	Low	Power lines, residences. Wind.
Earthquake	Low	Low	Low	Site specific
Dam Failures. None	Low	Low	Low	Residences, businesses, infrastructure.
Drought	Low	Low	Low	Water supply. Private water
Chemical or Biological Incident. Impact on water.	Low	Low	Low	Site specific. Tree farm pesticides/ herbicides/fertilizer
Highway Incidents	Low/Medium	Low	Low	Site specific. Stannard Mt. Rd.
Wildfire/Forest Fire	Low	Low	Low	Farms, sugarbushes, residences
Landslide	Low	Low	Low	Site specific. Some erosion.
School Safety Issues	Low			Students, teachers, hostage issues
Terrorism	Low	Low	Low	Residents, businesses, local officials

The highest risks to the community of Stannard are: flash floods, power failure, winter storm/ice, and high winds.

2.2 Profiling Hazards

Only those hazards that are considered the greatest vulnerability in Stannard will be profiled below. While those not being profiled are still important, they are considered a lower threat to the community where damage would be minimal and unlikely.

Floods

Stannard experiences frequent flash flooding during high rain events. Because Stannard is at a higher elevation, the smaller streams are collectors for the larger ones downstream. The town experienced severe flooding at the lower elevations in 1972. There are not many homes in flood areas. There have not been any ice jams now that the bridge on the Stannard Mountain Road has been fixed. Failed beaver dams could cause flooding problems downstream in Wheelock.

Past FEMA Declarations and Funding

Town	NFIP	1063 Aug-95
Stannard	YES	$ 7,129

Power Failure

The power is somewhat reliable, but being at the end of the line is an issue with frequent and prolonged outages. Most of the residents are self-sufficient and look out for their neighbors**.** There are no municipally-owned generators for backup power. The Washington Electric Cooperative serves most of town and Hardwick Electric serves the area from Greensboro Bend. Due to the higher elevation, high winds cause the trees to topple over and down the power lines.

Winter Storm/Ice

Stannard experienced no damage from the ice storm of 1998. The higher elevation brings higher snow totals and more extreme weather that most other parts of the region. There is only one driver for the snowplow and sometimes the truck breaks down. This can cause isolation for residents in the community. Residents that work out of town have to plan accordingly when the weather forecast predicts harsh storms.

2.3 Vulnerability: Overview

In terms of vulnerability, Stannard rated these potential hazards below as the greatest threats: Floods, Power Failures and Winter Storm/Ice. Fire, hazardous material incidents, and highway incidents, were considered lesser threats to Stannard. Mitigation strategies are identified for the highest priority projects 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 pose 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 five structures in or near the flood areas depicted on the NFIP maps.

2.5 Estimating Potential Losses

Stannard has had one FEMA Disaster Declaration from 1989 through 2004 totaling over $7,129. 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 Stannard in 2003 was $54,627. The Equalized Value for all properties in Stannard in 2003 was $9,379,276. If one percent (1%) of all properties in Stannard were damaged, the value would be assessed at $93,797.

2.6 Analyzing Development Trends

Stannard is not considered a rapidly growing community. The town has zoning regulations in place to guard against future development in inappropriate locations such as flood prone areas. Stannard is in the process of developing a new town plan that will guide the future growth of the community.

Population Increase 2000 to 2003

Town	Estimated Pop 2003	Census Pop 2000	Increase
Stannard	192	185	3.7%

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** – Stannard 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)** – Stannard 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 August 2005 and will include this Plan as its risk assessment to all-hazards.

- **Rapid Response Plan (RRP**) – Stannard has updated its RRP as of October 14, 2004.

Table 3-A Development Tools

Town	Town Plan	Zoning	NFIP	Flood Regs	Codes &Standards	Culvert Inv.	VT Red Cross Shelter	Maps FIRM
Stannard	NO	YES	YES	YES	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, Stannard is working to decrease its risk to flooding and severe weather 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.
- Coordinate emergency services with Hardwick and Greensboro.

3.3 Existing Hazard Mitigation Programs

Stannard 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. Stannard 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

Stannard 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

Stannard 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

Stannard has adopted Zoning. They are 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.

3.4 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.

- Stannard has local zoning. They are in the process of developing a new town plan. 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 Stannard have identified 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 Stannard 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 isolation due to storms or power outages are the two main threats to Stannard. 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 to the community. Readiness and timeliness of project was also important.

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
Need generator and hookup for the shelter/Town Hall	Provide a safe location for residents when power is out and town is isolated due to flooding or snow storms.	The Selectboard	2005/6 HMGP, PDM-C, FMA, Bridge and Culvert Program	Seek appropriate grant source, obtain cost estimate and apply for funding.
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 Stannard 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 Stannard 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.

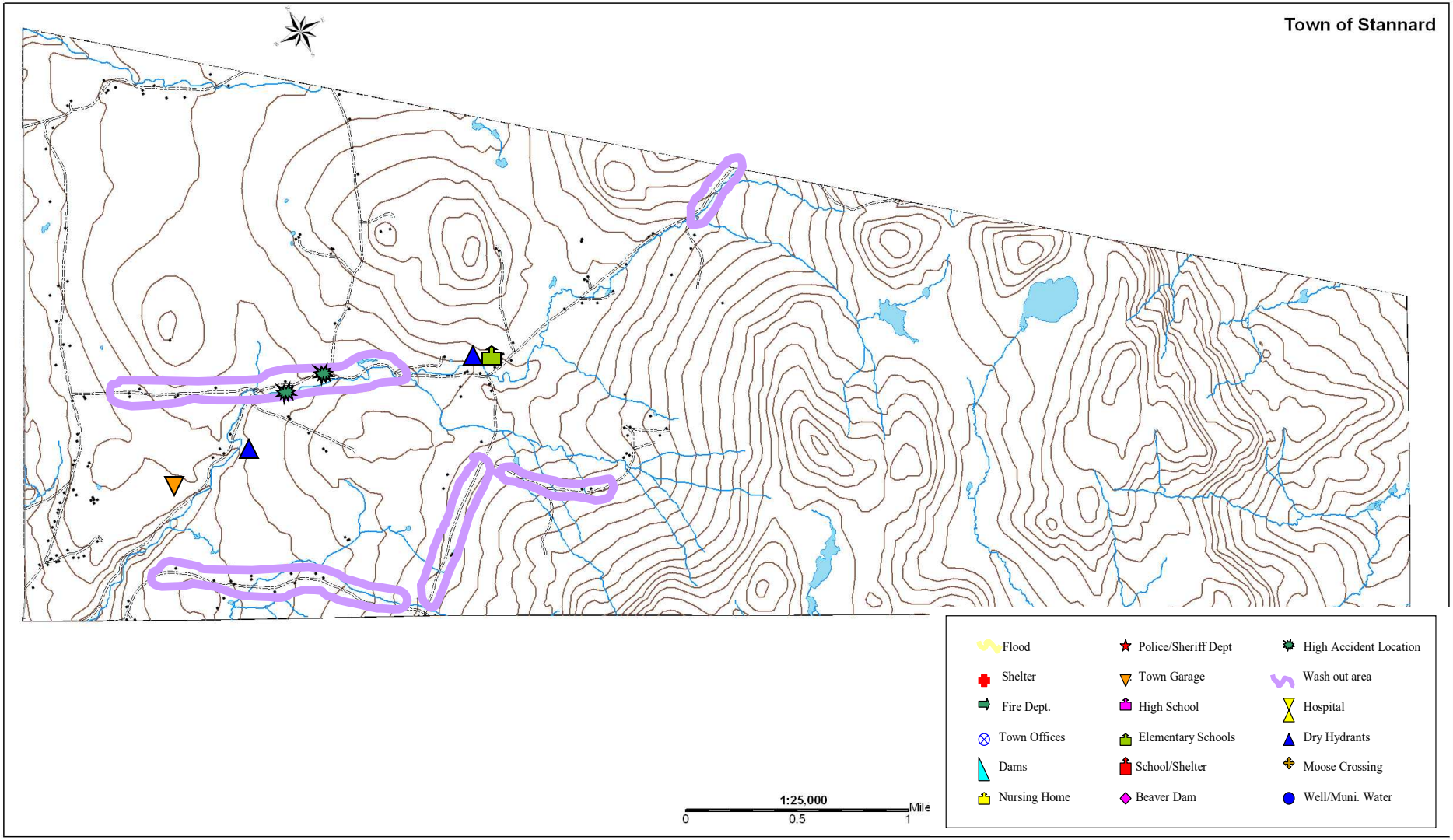
4.4 Post-Disaster Review Procedures

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

Map A - Local Areas of Concern Map and Essential Facilities Map


Town of Stannard
Flood
Police/Sheriff Dept
High Accident Location
Shelter
Town Garage
Wash out area
Fire Dept.
High School
Hospital
Town Offices
Elementary Schools
Dry Hydrants
Dams
School/Shelter
Moose Crossing
Nursing Home
Beaver Dam
Well/Muni. Water
1:25,000
0
0.5
1
Mile