Town of Hancock, Vermont

Local Hazard Mitigation Plan

Adopted July 7, 2015 ~ Approved August 4, 2015

Prepared by the Two Rivers-Ottauquechee Regional Commission and the Town of Hancock

CERTIFICATE OF ADOPTION <SPATESS July 7, 2015 TOWN OF Hancock, Vermont Selectboard A RESOLUTION ADOPTING THE Hancock, VT 2015 Local Hazard Mitigation Plan

WHEREAS, the Town of Hancock has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of the hazards profiled in the **Hancock**, **VT 2015 Local Hazard Mitigation Plan (Plan)**, which result in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Hancock has developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for its **Plan** under the requirements of 44 CFR 201.6; and

WHEREAS, the **Plan** specifically addresses hazard mitigation strategies, and Plan maintenance procedures for the Town of Hancock; and

WHEREAS, the **Plan** recommends several hazard mitigation actions (projects) that will provide mitigation for specific natural hazards that impact the Town of Hancock with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this **Plan** will make the Town of Hancock eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by Town of Hancock Selectboard:

1. The Hancock, VT 2015 Local Hazard Mitigation Plan is hereby adopted as an official plan of the Town of Hancock;

2. The respective officials identified in the mitigation action plan of the **Plan** are hereby directed to pursue implementation of the recommended actions assigned to them;

3. Future revisions and **Plan** maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as part of this resolution for a period of five (5) years from the date of this resolution; and

4. An annual report on the process of the implementation elements of the Plan will be presented to the Selectboard by the Emergency Management Director or Coordinator.

IN WITHNESS WHEREOF, the undersigned have affixed their signature and the corporate seal of the Town of Hancock this $_{7^{+6}}$ day of $_{10}$ (2015).





U.S. Department of Homeland Security FEMA Region I 99 High Street, Sixth Floor Boston, MA 02110-2132



SEP 2 5 2015

Jack Ross, Chairman Selectboard Town of Hancock 48 VT Route 125 P.O. Box 100 Hancock, VT 05748

Dear Mr. Ross:

Thank you for the opportunity to review the Town of Hancock, Vermont 2015 Local Hazard Mitigation Plan. The Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA) Region I has evaluated the plan for compliance with 44 C.F.R. Pt. 201. The plan satisfactorily meets all of the mandatory requirements set forth by the regulations.

With this plan approval, the Town of Hancock is eligible to apply to Vermont Division of Emergency Management & Homeland Security for mitigation grants administered by FEMA. Requests for mitigation funding will be evaluated individually according to the specific eligibility requirements identified for each of these programs. A specific mitigation activity or project identified in your community's plan may not meet the eligibility requirements for FEMA funding; even eligible mitigation activities or projects are not automatically approved.

Approved mitigation plans are eligible for points under the National Flood Insurance Program's Community Rating System (CRS). Complete information regarding the CRS can be found at **www.fema.gov/business/nfip/crs.shtm**, or through your local floodplain administrator.

The Town of Hartland, Vermont 2015 Local Hazard Mitigation Plan must be reviewed, revised as appropriate, and resubmitted to FEMA for approval within **five years of the plan approval date of August 4, 2015** in order to maintain eligibility for mitigation grant funding. We encourage the Town to continually update the plan's assessment of vulnerability, adhere to its maintenance schedule, and implement, when possible, the mitigation actions proposed in the plan.

Jack Ross Page 2

SEP 25 2015

Once again, thank you for your continued dedication to public service demonstrated by preparing and adopting a strategy for reducing future disaster losses. Should you have any questions, please do not hesitate to contact Marilyn Hilliard at (617) 956-7536.

Sincerely,

Paul F. Ford Acting Regional Administrator

PFF: mh

cc: Ray Doherty, Vermont State Hazard Mitigation Officer Rob Evans, Vermont State NFIP Coordinator Ben Rose, Recovery and Mitigation Section Chief, VT DEMHS Lauren Oates, Hazard Mitigation Planner, VT DEMHS Kevin Geiger, Planner, TRORC

Enclosure

Table of Contents

I. Introduction2
II. Purpose of the Plan2
III. Community Profile
IV. The Planning Process4
A. Plan Developers
B. Plan Development Process
C. Status Update on Mitigation Actions Identified in 20099
D. Existing Hazard Mitigation Programs, Projects & Activities12
E. Plan Maintenance14
V. Community Vulnerability by Hazard16
A. Hazard Identification
B. Hazard Profiles for "Top Hazards"19
1. Flash Flood/Flood/Fluvial Erosion19
2. Ice Jams
3. Landslides/Mudslides/Rockslides24
4. Structure Fire
5. Hazardous Materials Spill
VI. Mitigation
A. Mitigation Goal
B. Town Plan Goals & Objectives Supporting Local Hazard Mitigation
C. Hazard Mitigation Strategies: Programs, Projects & Activities
Appendices
Appendix A: Hazard Ranking Methodology
Appendix B: Critical Stream Crossings
Appendix C: Five Year Review and Maintenance Plan
Attachments
Attachment A: Map of the Town of Hancock

I. Introduction

Natural and human-caused hazards may affect a community at any time; they are not usually avoidable, however, their impact on human life and property can be reduced through community planning. Accordingly, this Plan seeks to provide an all-hazards mitigation strategy that will make the community of Hancock more disaster resistant.

"Mitigation" is defined as any sustained action that reduces or eliminates long-term risk to people and property from natural and human-caused hazards and their effects. Previous Federal Emergency Management Agency (FEMA), State and Regional Project Impact efforts have demonstrated that it is less expensive to anticipate disasters than to repeatedly ignore a threat until the damage has already been done. While hazards cannot be eliminated entirely, it is possible to identify prospective hazards, anticipate which might be the most severe, and recognize local actions that can be taken ahead-of-time to reduce the damage. These actions, also known as 'hazard mitigation strategies' can, (1) avert the hazard by redirecting its impact by means of a structure or land treatment, (2) adapt to the hazard by modifying structures or standards or, (3) avoid the hazard through improved public education, relocating/removing buildings in the flood zone, or ensuring development is disaster resistant.

II. Purpose of the Plan

The purpose of this Local Hazard Mitigation Plan is to assist Hancock in identifying all hazards facing the town, rank them and identify strategies to begin reducing risks from known priority hazards.

The Town of Hancock seeks to be in accordance with the strategies, goals, and objectives of the State Hazard Mitigation Plan.

The 2015 Hancock Local Hazard Mitigation Plan is the first stand-alone Local Hazard Mitigation Plan drafted for the Town. Previously, the Town had a town-specific 2009 Annex to the Regional Pre-Disaster Mitigation Plan. This new Plan has been reorganized and new sections have been added:

- Program eligibility subsequent to plan approval
- Authority for plan development
- Participating jurisdictions
- Funding for plan development
- Brief information about community

Old assumptions have been challenged throughout and new information has been added to make the plan stronger and more useful for those Hancock town officials and residents who will implement the hazard mitigation strategies in the future.

III. Community Profile

The Town of Hancock, consisting of approximately 24,696 acres, is situated on the eastern slopes of the Green Mountains. The village of Hancock is located at the junction of Routes 125 and 100. In 2010, the population of Hancock was 736, making it one of the smallest populations in the Two Rivers-Ottauquechee Region. Ninety-five percent of the land in Hancock is forested, a substantial portion of which is the Green Mountain National Forest (roughly 80%). Consequently, it is unlikely that Hancock will see a boom in population in the near future, as there is a finite amount of developable land.

According to the U.S. Census Reports, there were 161 year-round housing units and 47 seasonal housing units in Hancock in 2010, totaling 208. In 1990, there were 201 units. The overall increase during this period (1990 – 2010) was 3.5%. The overall increase for the Two Rivers-Ottauquechee Region during this period was 6%. Currently, twenty-seven percent of these buildings of residential buildings in Hancock were built prior to 1939. There is very little commercial development in the Town of Hancock, and most of the commercial development opportunities are more likely to be redevelopment or reuse of existing properties. For example, the Hancock Selectboard is considering ways that an industrial building can be repurposed and used for commercial opportunities. As mentioned above, the majority of the Town of Hancock is located in the Green Mountain National Forest, which places limitations on development within the Town, and development pressures for growth in areas outside of the Green Mountain National Forest have remained low and are anticipated to remain low.

Most of the Town lies within the service area of Green Mountain Power that supplies electrical power to those sections of town.

Fire protection services are provided by the Hancock Fire Department (HFD), an all-volunteer department, which provides twenty-four hour coverage for the Town and surrounding areas. Neighboring communities' fire departments are called on in large fires requiring outside resources. The Town participates in a mutual aid district with Ripton, Granville, Rochester, Warren, and Stockbridge, whereby assistance is provided in the event of a serious fire.

Construction of the new fire station, located in Taylor Meadow, began in 2009 and was finalized in 2010. It replaced the old four-bay fire station located further south of the village center on Route 100. There is an 1800 watt generator for back-up power and the building is equipped with sprinklers. The new building also has 1 restroom and a meeting space with an attached kitchen. This new station fixed many of the deficiencies presented by the old fire station.

The Town of Hancock does not have or need a full time police force and none is contemplated in the next five years. Vermont State Police patrol the town on a fairly regular basis. There is no set schedule for these patrols. The town does not have a paid constable, but a constable is elected for a one-year term to conduct administrative functions in service to the Selectboard. Residents may call the Vermont State Police for assistance.

Medical emergencies in the Town of Hancock are handled by White River Valley Ambulance, Inc. (WRVA). The WRVA has an EMT and ambulance station in Rochester, and serves the Route 100 valley and surrounding areas. The closest hospital is Gifford Medical Center, located in Randolph. Medivac services are available by the DHART helicopter.

IV. The Planning Process

A. Plan Developers

Samantha Holcomb and Ellie Ray, Land Use Planners at the Two Rivers-Ottauquechee Regional

Commission (TRORC), assisted the Town of Hancock with updating its Local Hazard Mitigation Plan.

This section of the Plan satisfies 44 CFR 201.6(b)(1) and 201.6(c)(1) (or, A3.a and A3.b of FEMA's Local Mitigation Plan Review Guide, 2011).

The core planning team was comprised of Hancock's emergency
services, a member of the Selectboard and other stakeholders in
the community. Committee members who assisted with the
revisions include:

Name	Role/Organization	How Participation Was Solicited		
Jack Ross	Selectboard Chair	On 9/23/2013, TRORC staff sent an introductory letter and e- mail to Selectboard members (Jack Ross, Judy Olsen, and		
Shelley Twitchell	Selectboard member	Shelley Twitchell). In this letter, TRORC's staff requested name		
Monica Collins	Selectboard member, former Planning Commission Chair	revise Hancock's LHMP. The former Emergency Director, Jill Jesso-White, communicated with TRORC staff to arrange back- to-back meetings to discuss the function of the LHMP, its structure and use, and hazard focus areas with a number of town officials. TRORC then held more meetings in which		
James Leno	Road Commissioner			
Jacques Veilleux	Fire Chief	participants revised and drafted the new LHMP (see "Activities" section below for specific details of each meeting).		

Additional Participants in the Process:

• Jill Jesso-White, former Emergency Management Coordinator

B. Plan Development Process

The 2009 Hancock Annex was originally part of the 2008 multijurisdictional Regional Hazard Mitigation

Plan by Two Rivers-Ottauquechee Regional Commission, and approved by FEMA on September 30, 2008 with its first local annex. The Hancock Annex received subsequent FEMA approval, but since it was part of a larger plan, FEMA treats its start date as September 30, 2008, and so, the Hancock Annex expired on September 30, 2013.

This section of the Plan satisfies the Element A: Planning Process requirements set out in 44 CFR 201.6.

This Plan has been reconstructed as a single jurisdiction, standalone Hancock Local Hazard Mitigation Plan that will be submitted for individual approval to FEMA. As such, several sections have been added or updated to include all necessary information.

The changes to this Plan include:

- General
 - New sections: Plan Development Process, 2009 Mitigation Strategies Status Update chart, Existing Hazard Mitigation Programs, Projects & Activities, Plan Maintenance;
 - \circ $\;$ Data updates: New hazard incidents, emergency declarations, census data;
 - Hazards have been reevaluated with the hazard ranking system used by the Vermont Division of Emergency Management and Homeland Security.
- Hazards Analysis
 - Flash Flood/Flood/Fluvial Erosion, Structure Fire and Hazardous Material Spill remain on the list of "top hazards," which reflect the local officials' belief that the Town is still vulnerable to these hazards;
 - Ice Jams and Landslides/Mudslides/Rockslides are now on the list of "top hazards," which reflects the intention/priorities of local officials to expand their analysis of hazards that the Town is or may vulnerable to in the next five years;
 - Hazards are assessed using a new ranking methodology, which is similar to the methodology used in the State Hazard Mitigation Plan.
 - For each hazard, a location/vulnerability/extent/impact/likelihood table has been added to summarize the hazard description.
- Maps
 - A map of the Town of Hancock depicting critical facilities, town infrastructure, and the NFIP designated floodway and 100 year floodplain has been added.

The following represent the avenues taken to draft the Hancock Local Hazard Mitigation Plan:

- Activities
 - 09/23/2013: An introductory letter and email were sent to Selectboard members (Jack Ross, Judy Olsen, and Shelley Twitchell) indicating that the town's LHMP would soon expire and explaining the process for revising and readopting. Requested names and contact information for potential committee members to revise the LHMP.

- 10/24/2013: Met with the Hancock town representatives (planning commissioner, select board member, fire chief, road commissioner) and described the Hazard Mitigation Program and process of updating their local hazard mitigation plan. Reviewed the status of the hazard mitigation strategies identified in the 2009 Hancock Annex. The group also reviewed the existing hazard mitigation programs, projects and activities and received input from group members. Finally, the group used the hazard ranking methodology to determine which hazards Hancock was most vulnerable to. Once all the hazards were ranked, the group discussed the hazard rankings to be sure the ones ranked highest were the hazards the Town of Hancock should focus on.
- 02/19/2014: The update committee reviewed and discussed the first draft. Their input was recorded and incorporated into this document.
- 11/05/2014: With the help of TRORC staff, the update committee discussed and identified the mitigation actions/projects/programs to be included in the 2015 Local Hazard Mitigation Plan.

• Public participation and involvement (44 CFR 201.6(b)(1))

**Note: The meetings listed below were Selectboard meetings, which are always public sessions. Therefore, they are open to the public, standard public notice must be provided, and the public has the means to provide input during the open comment period at the meetings. Following standard public notice requirements, the Selectboard agenda is posted in three locations in Town prior to each meeting. Also, Selectboard meetings follow a regular schedule, and Town residents are aware of this schedule.

- 10/08/2013: Hancock's Emergency Director made a general announcement of the upcoming 10/24/2013 meeting at a public Red Cross Shelter training.
- October 2013: A notice was placed in the Two Rivers-Ottauquechee Regional Planning Commission Newsletter alerting recipients that Hancock was going to begin to engage in hazard mitigation planning and update their Local Hazard Mitigation Plan. Contact information was provided in the notice to allow those interested in Hancock's efforts to receive more information and how to find out about upcoming meetings. No comments were received.
- Prior to the 10/24/2013 meeting, a notice was placed in the Randolph Herald and the Town's newsletter, the Whistle Pig, to alert the public of the first Hancock Local Hazard Mitigation Plan meeting.
- Posted a notice in four local papers alerting the public to the hazard mitigation planning process that was taking place. Contact information was provided in the notice to allow those interested in Hancock's efforts to receive more information and how to find out about upcoming meetings. No comments were received.
 - Valley News—ran 10/23/2013
 - The Herald of Randolph— ran 10/23/2013
 - Journal Opinion— ran 10/23/2013
 - Vermont Standard—ran 10/23/2013
- 10/24/2013: Met with the Hancock town representatives (Planning Commission Chair, Selectboard member, Fire Chief, Road Foreman) and described the Hazard Mitigation

Program and process of updating their hazard mitigation plan. Reviewed the status of the hazard mitigation strategies identified in the 2009 Hancock Annex. The group also reviewed the existing hazard mitigation programs, projects and activities and received input from group members. Finally, the group used the hazard ranking methodology to determine which hazards Hancock was most vulnerable to. Once all the hazards were ranked, the group discussed the hazard rankings to be sure the ones ranked highest were the hazards Hancock should focus on. No public comments were received.

- 02/19/2014: The update committee reviewed and discussed the first draft. Their input was recorded and incorporated into this document. No public comments were received.
- Posted a notice in four local papers alerting the public to the hazard mitigation planning process that was taking place. Contact information was provided in the notice to allow those interested in Hancock's efforts to receive more information and how to find out about upcoming meetings. No comments were received.
 - Valley News—ran 03/20/2014
 - The Herald of Randolph—ran 03/20/2014
 - Journal Opinion—ran 03/20/2014
 - Vermont Standard—ran 03/20/2014
- 11/05/2014: With the help of TRORC staff, the update committee discussed and identified the mitigation actions/projects/programs to be included in the 2015 Local Hazard Mitigation Plan. No public comments were received.
- 01/06/2015: The Selectboard discussed the contents of the Town's Local Hazard Mitigation Plan and asked for any public comments on the document at a Selectboard meeting. No comments were received. The Selectboard agenda was posted properly, in accordance with Vermont state meeting laws. No comments were received.
- Governmental participation and involvement (44 CFR 201.6(b)(2))
 - Sent revised draft to Vermont Department of Emergency Management and Homeland Security—1/12/2015
 - Sent revised draft to the Green Mountain National Forest and provided contact information for receiving comments via email —12/10/2014
 - No comments were received.
 - Note: Town officials were given the opportunity to review, provide feedback and approve the changes that were made through the initial Plan drafting process, and during Plan revision and FEMA review process, if applicable.
- Neighboring community participation and involvement (44 CFR 201.6(b)(2))
 - October 2013: A notice was placed in the Two Rivers-Ottauquechee Regional Planning Commission Newsletter alerting recipients that Hancock was engaging in hazard mitigation planning and updating their Local Hazard Mitigation Plan. Contact information was provided in the notice to allow those interested in Hancock's efforts to receive more information and how to find out about upcoming meetings. No comments were received.

- Prior to the 10/24/2013 meeting, a notice was placed in the Randolph Herald and the Town's newsletter, the Whistle Pig, to alert the public of the first Hancock Local Hazard Mitigation Plan meeting.
- Posted a notice in four local papers alerting the public to the hazard mitigation planning process that was taking place. Contact information was provided in the notice to allow those interested in Hancock's efforts to receive more information and how to find out about upcoming meetings. No comments were received.
 - Valley News—ran October 23, 2013
 - The Herald of Randolph—ran October 24, 2013
 - Journal Opinion—ran October 23, 2013
 - Vermont Standard—ran October 24, 2013
- Posted a notice in four local papers alerting the public to the hazard mitigation planning process that was taking place. Contact information was provided in the notice to allow those interested in Hancock's efforts to receive more information and how to find out about upcoming meetings. No comments were received.
 - Valley News—ran 03/20/2014
 - The Herald of Randolph—ran 03/20/2014
 - Journal Opinion—ran 03/20/2014
 - Vermont Standard—ran 03/20/2014
- \circ Sent revised draft to neighboring Selectboards for comment and provided contact information for receiving comments via hard copy -12/10/2014
 - Towns of: Granville, Ripton, Goshen, and Rochester.
 - No comments were received.
- Review of existing plans, studies, reports, and technical information (44 CFR 201.6(b)(3))
 - State of Vermont Hazard Mitigation Plan, 2013
 - Hancock Hazard Mitigation Plan (Adopted 1/20/2009)
 - The Hazard Mitigation Plan was referenced extensively during the plan development process, especially in regard to the worst threats and mitigation action strategies identified in 2009.

This section of the Plan satisfies 44 CFR 201.6(b)(3) (or, A4.a and A4.b of FEMA's Local Mitigation Plan Review Guide, 2011).

- Hancock Town Plan (Adopted 11/19/2013)
 - The Town Plan provided TRORC's staff with background information on the community, as well as more detail on their emergency services.
- Hancock Inundation Hazard Area Regulations (Adopted 04/21/2009)
 - These regulations were referenced while drafting the Flash Flood/Flood/Fluvial Erosion section of this Plan.
- Upper White River Corridor Plan (07/02/2007)
 - The Upper White River Corridor Plan provided information about an important tributary to the Third Branch of the White River. The upper reaches of the White River are located in the Town of Hancock. This information was also incorporated into the mapping/GIS components of this Plan; specifically in

determining the number of structures that are vulnerable to fluvial erosion hazards.

- Flood Insurance Study: Town of Hancock, Vermont, Addison County (08/19/1991)
 - This resource provided specific information on the watercourses within the Town of Hancock, notably the White River and the Hancock Branch.
 - This information was incorporated into the mapping/GIS components of this Plan; specifically in determining the number of structures that are vulnerable to SFHA, and into the Flash Flood/Flood/Fluvial Erosion section of this Plan.

C. Status Update on Mitigation Actions Identified in 2009

The following table outlines the mitigation actions that were proposed in Hancock's 2009 All-Hazard Pre-

Disaster Mitigation Plan for the Town of Hancock (adopted on April 27, 2009 as an appendix to the Two Rivers-Ottauquechee Regional Commission's multi-jurisdictional Pre-Disaster Mitigation Plan). Participants in the Plan update process reviewed those actions and reported on the status of each (in priority order): This section of the Plan satisfies the requirements of 44 CFR 201.6(d)(3).

2009 Mitigation Action (Leadership)		When (Timeframe)	How (Funding/ Support)	2015 – Status of Mitigation Actions
ALL HAZARDS 1. Ensure that the Rapid Response Plan (RRP) is current. Selectboard		Yearly	With TRORC assistance	☑ Complete. The newest iteration of the RRP is the Local Emergency Operations Plan (LEOP). Hancock updates this document annually. This document was last updated and adopted by the Hancock Selectboard on 10/07/2014.
<u>FLOOD</u> 2. Continue the planned road maintenance program and update existing culvert inventory. Upgrade culverts and ditching. (Mitigation)	Highway Department	Ongoing	Local resources	Ongoing. Culvert inventory completed with TRORC assistance in the summer of 2012. Upgrades made to culverts annually, and all culverts have been upgraded from steel to plastic in the past 2 years.
3. Revise flood hazard regulations.(Mitigation)	Selectboard	2009	Local resources, TRORC assistance	This has not been completed and is carried over into 2015 plan.
4. Upsize culvert on Taylor Brook road (TH #2). (Mitigation)	Highway Department	2010	PDM-c or HMGP funding	☑ Completed in 2010.

2009 Mitigation Action (Leadership)		When (Timeframe)	How (Funding/ Support)	2015 – Status of Mitigation Actions
FIRE 5. Continue checking fire extinguishers in Town buildings.	Fire Department	Annually	Local resources	Ongoing. Completed for 2013 in September.
6. Obtain training and equipment appropriate that will allow the fire Fire Departmen department to fight wildfires safely.		2009	Funded by Fire Service Training Academy	Town has acquired trucks to better deal with fires. However, if fire should happen in the Green Mtn. National Forest, it is the National Forest Service's (NFS) responsibility. The Town has assisted the NFS on occasion.
7. Develop additional dry hydrant sites in rural locations.		Ongoing	Local resources	Hancock does not have dry hydrants. The Town has wet hydrants on private property. There has been no inventory thus far for additional sites.
8. Consider installing smoke detectors in the town office.	Fire Department	2008	Local resources	This has not been completed.
<u>HAZMAT</u> 9. Pursue HAZMAT training for the Fire Department.	Fire Department	2009	Funded by Fire Service Training Academy	The Fire Department is due for additional training.

Approximately 85% of the land located within the boundaries of the Town of Hancock is located within the Green Mountain National Forest, which limits the amount of new development that can occur within the Town. No new home construction or other new development is occurring. The Town's only general store was sold and closed in the middle part of 2014, and local officials are unsure what the new owners intend to do with the building.

Much of the activity occurring in the Town of Hancock involves reuse or improvement of existing infrastructure. For example, rehabilitation work is currently being done to the old Hancock village school building with funding from a USDA grant.

The Town Clerk's office and library will be relocated to this building. The old school building is located outside of the Special Flood Hazard Area, and is in a much safer location than the current Town Clerk's office and library. The current Town Clerk's office sits very close to the Hancock Branch of the White River and is vulnerable to flood damage. In addition, rumble stripes on Vermont Route 125 have recently been installed to improve safety on the road, and a road safety audit will be completed in the late part of 2014/early part of 2015 to address concerns at the intersection of Vermont Routes 100 and

125, which is the main, and only, intersection in the village of Hancock. The Hancock Selectboard intends to apply for a CDBG Accessibility Modification grant for the old Hancock village school building. Finally, the Hancock Selectboard is discussing ways the old Vermont Verde building can be repurposed for commercial use. Part of this building is located in an area vulnerable to flood damage.

D. Existing Hazard Mitigation Programs, Projects & Activities

The Town of Hancock is currently engaged in the following hazard mitigation programs, projects and activities:

This section of the Plan satisfies the requirements of 44 CFR 201.6(c)(3).

	Type of Existing Authority /	Resources: Staffing & Funding	Ability to Expand/Improve on
	Policy / Program / Action		
Community Preparedness Activities	Program—Annual update of Hancock's Local Emergency Operations Plan (LEOP). Current copy was updated and formally adopted on 10/07/2014. Program—Attendance at Local Emergency Planning Commission (LEPC #12) meetings	Volunteer time from the Emergency Management Director/Coordinator/Selectboard; assistance from TRORC. Funding from Vermont DEMHS. Volunteer time from local official; TRORC convenes meetings. Funding from Vermont DEMHS.	Current program works well, no need to expand or improve on. No need to expand or improve on attendance, as it is satisfactory.
	Completed Action— Designated Red Cross Shelter at the Town Hall	Volunteer time from the Selectboard, Emergency Management Director/ Coordinator. Funding from American Red Cross.	This is a one-time action.
Insurance Programs	Authority/ Program— participation in National Flood Insurance Program (NFIP) [Note: This section of the Plan satisfies the requirements of 44 CFR 201.6(c)(3)(ii).]	A hired individual serves as the Town's NFIP Administrator. Assistance from TRORC and Vermont ANR. Funding from local resources—annual budget.	Hancock's initial Flood Hazard Boundary Map was identified on 9/20/74 and their initial Flood Insurance Rate Map (FIRM) was dated 9/27/85. The Town's FIRM has not been updated in recent years—the current effect map date is 8/19/91. The Town continues its participation in the NFIP by administering and enforcing its flood hazard area regulations. This bylaw regulates new construction in the Special Flood Hazard Area. The Town's NFIP Administrator is a Certified Floodplain Manager.
Land Use	Policy/Program— Hancock Town Plan. Adopted 11/19/2013	Volunteer time from Planning Commission, and assistance from TRORC and other state agencies on specific subject matter. Funding from Municipal Planning Grants.	The Town Plan is updated every five years, as required by statute. The Planning Commission may expand or improve on any section it deems necessary, or that is required by changes in state statue.
Planning	Completed Authority— Hancock Inundation Hazard Area Regulations Adopted 04/21/2009	Volunteer time from the Planning Commission, and assistance from TRORC. Funding from Municipal Planning Grants.	During the Town Plan review/update period, these Regulations are also reviewed and updated if needed. The Hancock Selectboard would like to update and improve the Town's Inundation Hazard Area Regulations.

	Type of Existing Authority / Policy / Program / Action	Resources: Staffing & Funding	Ability to Expand/Improve on
	Policy/Program—Hancock Hazard Mitigation Plan (Adopted 01/20/2009)	Volunteer time from Town officials; assistance from TRORC and Vermont DEMHS. Funding from FEMA; Vermont DEMHS; TRORC.	The 2015 Hancock Local Hazard Mitigation Plan will replace the 2009 Plan. The 2015 LHMP has evolved from the 2009 Plan and has greatly expanded and improved upon it. Future iterations of the Town's LHMP will be updated by the Town at least every five years.
Hazard Control & Protection of Critical Infrastructure & Facilities	Program— Culvert inventory in fall of 2014 This culvert inventory includes georeferenced locations for all Hancock culverts and recommendations for culvert upgrades to reduce vulnerabilities to flooding.	Personnel time from Town Road Commissioner/Foreman; assistance from TRORC. Funding from Better Backroads grant; local personnel time and funding.	The Town is currently using the culvert inventory to further its culvert improvement program, and keeps the culvert inventory up-to-date in-house.
	Completed Action— Upgraded multiple culverts since Tropical Storm Irene (Fassett Hill, Tucker Brook, Churchville Road)	Personnel time from Town Road Commissioner and Town Clerk. Volunteer time from Selectboard. Funding from FEMA (federal resources); VTrans (state resources); and local funding sources (road budget).	The action of upgrading the specific culverts listed here is complete, but the Town is continuously upgrading culverts.
Education/ Public Outreach	Completed Action— Public training related to Red Cross Shelter designation. Completed 10/08/2013.	Volunteer time from the Selectboard, Emergency Management Director/ Coordinator. Funding from American Red Cross.	This is a one-time action.

E. Plan Maintenance

This Plan (the Hancock Local Hazard Mitigation Plan) will be updated and evaluated annually, by discussing its effectiveness and making note to incorporate any necessary revisions in the update

process, at an April Selectboard meeting along with the review of their Local Emergency Operations Plan (LEOP). At this meeting, the Selectboard will monitor the implementation of the hazard mitigation strategies outlined in this Plan, by noting those that have been completed, are in the process of completion, or any

This section of the Plan satisfies 44 CFR and 201.6(c)(4)(i), 201.6(c)(4)(ii), and 201.6(c)(4)(iii).

issues with initiating the activity. Any comment s from local officials and the public will be incorporated when relevant. This meeting will constitute an opportunity for the public and other town officials to hear about the town's progress in implementing mitigation strategies and to give input on future activities and Plan revisions. The public will be given the opportunity to comment at this meeting, and the comments will be incorporated when relevant.

Updates and evaluation of this Plan by the Selectboard and the local Emergency Coordinator/Director will also occur within three months after every federal disaster declaration directly impacting the Town of Hancock. The Town will monitor, evaluate and update this Local Hazard Mitigation Plan at an April Selectboard meeting and after every federally declared disaster directly impacting the Town according to the graphic on page 40. The Town shall reference the Local Hazard Mitigation Plan when working on Town Plan amendments or changes to the Town's bylaws.

At least one year before the Plan expires, the update process will begin (through annual updates, monitoring of progress and evaluation that will occur at the April Selectboard meeting). For this next Plan update, the Two Rivers-Ottauquechee Regional Commission (TRORC) will help with Plan updates if assistance is requested by the Town of Hancock and funding is available. If TRORC is unable to assist the Town, then Hancock's Town Clerk, Administrative Assistant, or Selectboard will update the Plan, or the Selectboard may appoint a committee of interested citizens (including the current local Emergency Coordinator/Director) to draft changes. Ultimately, it will be the Town's responsibility to update their Local Hazard Mitigation Plan.

The process of evaluating and updating the plan will include continued public participation through public notices posted on the municipal website, notice in the municipal building, The Herald of Randolph and TRORC newsletter and blog inviting the public to the scheduled Selectboard (or specially scheduled) meeting. The public will be given the opportunity to comment during this process. Additional stakeholders shall be invited to the meeting; these include: White River Valley Ambulance, Inc., the White River Partnership, a representative from the Army Corps. of Engineers and the Vermont Agency of Natural Resources (VT ANR). VT ANR will be invited because they can provide assistance with NFIP outreach activities in the community, models for stricter floodplain zoning regulations, delineation of fluvial erosion hazard areas, and other applicable initiatives. These efforts will be coordinated by the Town Clerk. Updates may include changes in community mitigation strategies; new town bylaws, zoning and planning strategies; progress on the implementation of initiatives and projects; effectiveness of implemented projects or initiatives; and evaluation of challenges and opportunities including overall effectiveness of plan goals and actions in reducing vulnerabilities. If new actions are identified in the interim period, the plan can be amended without formal re-adoption during regularly scheduled Selectboard meetings.

Hancock shall also incorporate mitigation planning into their long-term land use and development planning documents. The 2013 Vermont Legislature passed a law requiring all towns to incorporate flood resiliency elements into their town plans as of July 2014. To do so, flood hazard and fluvial erosion hazards will be identified, and strategies and recommendations will be provided to mitigate risks to public safety, critical infrastructure, historic structures and public investments. This Local Hazard Mitigation Plan will help the town to comply with the new community flood resiliency requirement for town plans adopted after July 2014.

It is also recommended that the process work both way and the Town review and incorporate elements of the Local Hazard Mitigation Plan when updating the municipal plan, zoning regulations, if ever enacted, and flood hazard/FEH bylaws. The incorporation of the goals and strategies listed in the Local Hazard Mitigation Plan into the municipal plan, zoning regulations, if ever enacted, and flood hazard/FEH bylaws will also be considered after declared or local disasters. The Town shall also consider reviewing any future TRORC planning documents for ideas on future mitigation projects and hazard areas.

V. Community Vulnerability by Hazard

A. Hazard Identification

Mitigation efforts must be grounded in the rational evaluation of hazards to the area and the risks these hazards pose. This is done through a process, which in essence asks and answers three basic questions:

- What bad things can happen?
- How likely are they to occur?
- How bad could they be?

This process, which is laid out in the table (below), is an attempt to inventory the known hazards, establish the likelihood of them occurring in the future, and then assess the community's potential vulnerability to each. By performing this analysis, we are then able to prioritize actions that are designed to mitigate the effects of each of these disaster types and ultimately make Hancock a safer place.

It is important that we learn from the past in order to avoid the same disasters and their outcomes. Disasters that have occurred within the Town of Hancock, the larger region, and the State of Vermont can give us good information about what types of disasters we can expect in the future and what kinds of damage they might cause. However, while this historical data can inform our perspective of what might happen in the future, it is by no means a prophecy. While Hancock might not have been impacted by a specific hazard in the past, this does not necessarily mean it will never be affected in the future. Indeed, the advance of climate change means that old weather patterns may not hold. For instance, in recent years, Vermonters have seen an increase in the number and severity of storms, especially rainfall events. Armed with historical data and a healthy respect for climate change and the unknown, we have tried our best to identify hazards and prepare for the future.

The following table reflects the hazards that we believe can be expected, or are at least possible, in the central Vermont area. We have considered factors such as frequency of occurrence, warning time and potential community impact to rank each and determine which hazards pose the greatest threats to life and property in Hancock.¹ The top threats (bolded in the table, below) are then followed-up with discussion and mitigation strategies throughout the rest of this Plan.² It should be noted that hazards assigned with the same "Hazard Score" are not in order and their placement in the table should not be assumed to reflect their potential to create hazards for the town.

Hancock Local Hazard Mitigation Plan, Adopted 7/4/15, Approved 8/4/15

¹ The ranking methodology used in this Plan (see Appendix A) is closely modeled on that which is used by the Vermont Division of Emergency Management & Homeland Security (VDEMHS). The only changes made were intended to reflect the more limited geographical scope of this analysis, which is focused on a small, rural town rather than the entire State of Vermont (which is the focus of VDEMHS).

² It's important to note that those hazards which were not found to pose the greatest threats may still occur in Hancock's future; however, they are not the focus of this Plan.

	Frequency of		Potential	Hazard
Hazard	Occurrence	Warning Time	Impact	Score
Flash Flood/Flood/Fluvial Erosion	Highly likely	None-Minimal	Moderate	11
Dam Failure	Highly likely	None-Minimal	Moderate	11
Ice Jams	Highly likely	None-Minimal	Moderate	11
Landslides/Mudslides/Rockslides	Likely	3-6 hrs.	Moderate	9
Structure Fire	Occasionally	None-Minimal	Minor	8
Hazardous Material Spill	Occasionally	None-Minimal	Minor	8
Severe Weather				
(Thunderstorm, Lightning, High Winds, Hail, and Flooding)	Likely	6-12 hrs.	Minor	7
Water Supply Contamination	Occasionally None-Minimal		Negligible	7
Hail Storm	Highly likely	12+ hrs. Negligibl		6
Hurricanes/Tropical Storms	Occasionally	12+ hrs.	Moderate	6
Wildfire	Unlikely	None-Minimal	Negligible	6
Extreme Cold/Snow/Ice Storm	Highly likely	12+ hrs.	Negligible	6
Earthquake	Unlikely	None-Minimal	Negligible	6
Invasive Species/Infestation	Highly Likely	12+ hrs.	Negligible	6
Tornado	Occasionally	12+ hrs.	Negligible	4
Drought	Occasionally	12+ hrs.	Negligible	4
Extreme Heat	Occasionally	12+ hrs.	Negligible	4
Tsunami (Vermont is landlocked.)	Not applicable (N/A)	N/A	N/A	N/A
Volcano (Vermont has no active volcanoes.)	N/A	N/A	N/A	N/A

After discussing the results of the hazard ranking activity, the Hancock LHMP committee decided to focus on the natural hazards that had a *Likely* or *Highly Likely* frequency of occurrence and had a *Moderate* potential impact. This includes "Flash Flood/Flood/Flovial Erosion," "Ice Jams", and "Landslide/Mudslides/Rockslides." Although "Dam Failure" scored a '*Hazard Score*' of 11, the Hancock

LHMP Committee decided to remove this hazard from further analysis in this Plan. After the hazard ranking activity, it was determined that "Dam Failure" was considered to be a man-made or technological hazard that could impact dams with large impoundments, and there are no such dams located in the Town of Hancock. The LHMP Committee's major concern with dams in Hancock was the breach of a beaver dam at a higher elevation. The breach of a beaver dam would create flood conditions; flooding will be assessed in the "Flash Flood/Flood/Flovial Erosion" section of this Plan.

After engaging in discussions using their best available knowledge, the Town of Hancock identified the following "top hazards" which they believe their community is most vulnerable to:

- Flash Flood/Flood/Fluvial Erosion
- Ice Jams
- Landslides/Mudslides/Rockslides
- Structure Fire
- Hazardous Material Spill

Each of these "top hazards" will be discussed in the following sections. Within each section, previous occurrences of each hazard will be listed, including the County-wide FEMA Disaster Declarations (DR-#) when applicable. Hazards information was gathered from local sources (ex. town history book), the National Climatic Data Center's (NCDC's) Storm Events Database (1950-2014), the Spatial Hazard Events and Losses Database for the United States (SHELDUS) 1960-2014, and Special Reports produced by the National Weather Service in Burlington, Vermont. This section also includes a description for each "top hazard" and a hazard matrix that will also include the following information (please see each hazard profile for a hazard-specific matrix):

Hazard	Location	Vulnerability	Extent	Anticipated/	Likelihood/ Probability
				Observed Impact	
Type of hazard.	General areas in	Community structures	Magnitude or strength. and	Dollar value or percentage of	<u>Occasionally</u> : 1–10% probability of occurrence per year, or at
	community that may be vulnerable to the hazard.	affected by hazard.	general details of the most notable event(s).	damages.	least one chance in next 100 years <u>Likely</u> : >10% but <100% probability per year, at least 1
					chance in next 10 years <u>Highly Likely</u> : 100% probable in a year

B. Hazard Profiles for "Top Hazards"

1. Flash Flood/Flood/Fluvial Erosion

Flooding is one of the worst threats to Hancock's residents and infrastructure. Past instances of flooding in Hancock have included rain and/or snowmelt events that cause flooding in the major rivers'

floodplains and intense rainstorms over a small area that cause localized flash flooding. Both kinds of events can be worsened by the build-up of ice or debris which can contribute to the failure of important infrastructure (such as culverts, bridges, and dams).

This section of the Plan satisfies the requirements of 44 CFR 201.6(c)(2)(i), 201.6(c)(2)(ii), and 201.6(c)(2)(iii) for Flash Flood/Flood/Fluvial Erosion.

Perhaps the worst flood disaster to hit the Town of Hancock, as well as the overarching region and the State of Vermont, occurred on November 3, 1927. This event was caused by nearly 10 inches of heavy rain from the remnants of a tropical storm that fell on frozen ground. 84 Vermonters, including the Lieutenant Governor were killed. The flooding in the White River valley was particularly violent, with the river flowing at an estimated 900,000 gallons per second on the morning of the 4th (Vermont Weatherbook). Like many towns in the region, the Town of Hancock received heavy precipitation;

A more recent flood that devastated the region and the state was the result of Tropical Storm Irene, which occurred on August 28, 2011. Record flooding was reported across the state and was responsible for several deaths, and millions of dollars of home, road and infrastructure damage. Due to the strong winds, 50,000 Vermont residents were initially without power, and many did not have electricity restored to their homes and businesses for over one week. The flooding caused by Tropical Storm Irene is considered to be the second greatest natural disaster in 20th and 21st century Vermont; second only to the Flood of 1927.

The Town of Hancock suffered major damage to property and infrastructure during Tropical Storm Irene, although no lives were lost. It is estimated that Tropical Storm Irene dropped a locally reported 6-7 inches of rain in a very short span of time, and well over 7 inches in other towns across the county. Many of Hancock's roads and culverts were damaged by the storm, including parts of: Vermont Routes 100 and 125, Churchville Road, Tunnel Brook Road, Bettis Road, Killooleet Road, and Fassett Hill Road. Rainfall and already saturated soils attributed to widespread flooding in as little as forty-five minutes in some areas of the town. The Town was one of many in the state to be isolated in the wake of the storm. The county-wide damage totaled approximately \$3.32 million, and damage in the Town of Hancock was over \$1.57 million according to FEMA's Public Assistance Database. Following the flood damage, the state of Vermont and FEMA has been coordinating on the home buy-out process across the state; there is one property buyout in Hancock, the Bettis Autoland property which is being managed by the Vermont River Conservancy.

Unfortunately, flooding is very common across the region, with many events impacting the Town of Hancock specifically. The following list indicates the history of occurrence with regard to this hazard in Addison County and given the relatively small population of Hancock, town-specific data is somewhat limited. Federal disaster numbers are listed when appropriate.

Hancock Local Hazard Mitigation Plan, Adopted 7/4/15, Approved 8/4/15

History of Occurrences:

Date	Event	Location	Extent	
07/10/2013*	Flash flood	Hancock, County- wide	Heavy rains/thunderstorms led to rainfall rates as high as two to three inches per hour. Rains forced the closure of Rt. 100 near Hancock. Caused an estimated \$10k in property damage.	
05/29/2012 (DR-4066 VT)	Flooding	County- wide	Severe storms, a tornado and flooding hit Addison and other counties throughout Vermont.	
08/28/2011* (DR-4022 VT for period of 8/26/2011 – 9/2/2011)	Severe Flash Flooding	Hancock, County/reg ion wide	Upwards of 7" of rain across region, significant damage to state and local roads/culverts/bridges. VT Routes 100 and 125 were severely damaged, and as a result, isolated the Town of Hancock for days.	
04/23/2011- 05/09/2011 (DR-1995 VT)	Flooding	County- wide	Severe storms over the period caused flooding throughout the county and surrounding areas.	
07/21/2008- 08/12/2008* (DR-1790 VT)	Flooding	Hancock, County- wide	Severe storms over the period caused flooding throughout the county and surrounding areas. Storms led to failure of the Killooleet Dam in the heart of Hancock on 8/6/2008.	
06/14/2008- 06/17/2008 (DR-1778 VT)	Flooding	County- wide	Severe storms over the period caused flooding throughout the county and surrounding areas.	
5/19/2006	Flooding	County- wide	2-4" of rainfall throughout the area caused flooding in Addison and nearby counties. Total damage estimated at \$25k in county.	
08/12/2004- 09/12/2004 (DR-1559 VT)	Flooding	County- wide	Severe storms over the period caused flooding throughout the county and surrounding areas.	
04/13/2002	Flooding	County- wide	1-3" of rainfall in the area combined with snowmelt caused widespread flooding in the region. Caused an estimated \$20k in property damage in Addison Co.	
07/14/2000- 07/18/2000 (DR-1136 VT)	Flooding	County- wide	Severe storms over the period caused flooding throughout the county and surrounding areas.	
06/17/1998*	Flash flooding	Hancock, County- wide	Thunderstorms prompted torrential downpours. Roads were flooded in Hancock as a result. Caused an estimated \$10k in property damage.	
6/28/1973 - 6/30/1973 (DR-397 VT)	Flooding	Hancock, county- wide	Severe flooding occurred throughout the region. 8.53" reported in the neighboring town of Rochester.	
11/2/1927 – 11/4/1927* ("The 1927 Flood")	Flash flooding	Hancock, county- wide	4-9" of rain across the region. Approximately 7" in Hancock.	

The Town of Hancock Inundation Hazard Area Regulations places limitations on growth with the Special Flood Hazard Area and the Floodway by prohibiting new structures to be built and only allowing a limited number of improvements or growth on property. It sets development standards that shall apply to the Special Flood Hazard Area and Floodway to help minimize risks to existing structures, utilities, etc. While the Town of Hancock lacks zoning regulations, the Town Plan does recognize that it is in the public interest to plan in a manner that mitigates flood damages, and works to implement land use strategies

Hancock Local Hazard Mitigation Plan, Adopted 7/4/15, Approved 8/4/15

that will protect these areas and minimize the risks to public health, safety, and property. Additionally, the Plan states that preferred uses for flood hazard areas shall be for open space, greenbelts, and non-commercial recreational or agricultural uses.

There are 20 residential (four mobile homes, fifteen single-family dwellings and one camp) and 11 commercial structures (including two lodging sites) in the 100 year floodplain, which equal \$11,939,240 if all properties were damaged/destroyed in a severe flooding event. The flooding that occurred as a result of Tropical Storm Irene is considered to be greater than a 100-year flood. In order to be more forward-looking in the future, the Town may wish to expand its Inundation Hazard Area Regulations.

Due to the development restrictions mountainous terrain places on an area, "at-risk populations," such as children or the elderly, low-income housing and critical infrastructure may be located in flood hazard areas. Across Vermont, most child and elder care facilities are not registered with the State. Much of the child day care is likely private and in-home in Hancock, and there are no licensed facilities within the Town. There are two elder care (nursing home/long-term care) facilities in the Town of Hancock. Finally, low-income housing is not registered with the State, but there are no mobile home parks in Hancock.

Recent studies have shown that the majority of flood damage in Vermont is occurring along upland streams, as well as along road drainage systems that fail to convey the amount of water they are receiving. These areas are often not recognized as being flood prone and property owners in these areas are not typically required to have flood insurance (DHCA, 1998). It should be noted that although small, mountainous streams may not be mapped by FEMA in NFIP FIRMs (Flood Insurance Rate Map), flooding along these streams is possible, and should be expected and planned for. Flash flooding in these reaches can be very erosive, causing damage to road infrastructure and to topographic features including stream beds and the sides of hills and mountains. The presence of undersized or blocked culverts can lead to further erosion and stream bank/mountain side undercutting. Furthermore, precipitation trend analysis suggests that intense, local storms are occurring more frequently. In the Town of Hancock, there eleven structures located in the mapped fluvial erosion hazard area.

A number of culverts have been replaced or upgraded since Hancock's 2009 Annex was adopted. In an attempt to improve the flow of floodwater through the Town, Hancock upgraded culverts on the following roads: Taylor Brook Road, Fassett Hill, Tucker Brook and Churchville Road. Many of Hancock's major roads run alongside the Hancock Branch of the White River and its tributaries, such as Routes 100 and 125, Churchville Road, Bettis Road, Fiske Road and Buttles Road, and are especially vulnerable to erosion and washouts. As a result, it is important to restore floodplain, improve areas and/or increase the number of areas for retention of floodwaters to reduce the risk to structures and road infrastructure wherever possible.

The last official culvert inventory completed for the Town of Hancock was in 2012. Hancock routinely updates their culvert inventory with newly created and repaired culvert listings. The process of upgrading culverts is ongoing, and all culverts have been upgraded from steel to plastic over the past two years to improve stability and drainage in the Town.

No development projects are planned in Hancock in areas that would be vulnerable to flooding. There is one commercial property with two repetitive loss claims in Hancock on FEMA's NFIP list.

Hazard	Location	Vulnerability	Extent	Observed Impact	Likelihood/
					Probability
Flash	Areas surrounding Hancock	Culverts, bridges,	Worst recorded	From TS Irene:	Highly likely
Flood/	Village. Roads that regularly	road	event was 1927	\$1,571,657.43 for	
Flood/	flood include: Routes 100	infrastructure,	flood. Most	Hancock from	
Fluvial	and 125, Churchville Road,	public and private	recent severe	FEMA's Public	
Erosion	Bettis Road, Fiske Road, and	property. 20	event was TS	Assistance database	
	Buttles Road. Many other	residences and 11	Irene, which	(captures at least	
	roads are subject to	commercial	caused 6-7" of	70% of the overall	
	erosional flooding.	structures within	rainfall in	total).	
		the 500 year	Hancock.		
		floodplain.			

2. Ice Jams

Ice jam events are a serious concern throughout the State of Vermont, owing to the vast number of waterways within the state's footprint. Such events can occur with little to no warning, increasing the impact of such events when they happen.

Ice jams are most prone to occur when heavy rains and rising temperatures cause rapid snow melt. Rivers, as a consequence, swell and ice layers begin to break, which then flow downstream and create obstructions around natural This section of the Plan satisfies the requirements of 44 CFR 201.6(c)(2)(i), 201.6(c)(2)(ii), and 201.6(c)(2)(iii) for **Ice Jams**.

and man-made barriers. The majority of ice jams happen between the months of January and March, and the lead time for an ice jam or flow can range anywhere form a few hours to only one hour. The flows can cause water to rise by multiple feet per hour or even multiple feet within minutes. This can mean that there is insufficient time to prepare for rising water and ice levels.

While flooding from ice jams is not often major, it has the possibility to be catastrophic, particularly in places that have an historic pattern of growth along waterways. Ice jams can have a disastrous impact on waterways and surrounding structures and infrastructure, and they can cause severe erosional issues along with endangering local fish and wildlife populations. There are no state buildings or facilities in Hancock that may be immediately endangered by ice jams; however, basic infrastructure and private property are at high risk.

Date	Event	Location	Extent
Feb-Mar, 2009	Ice Jam	Hancock	Ice jam was created due to a build-up of logs and debris along Rt. 125, which required
			unblocking the affected culvert in the spring.
03/11/1992	Ice Jam	Granville	White River ice jam in Granville resulting from ice break-up along the waterway.
			Occurred near a bend, resulting in agricultural and commercial flooding.
02/01/1976	Ice Jams	Rochester	White River ice jam in neighboring Rochester. Annual jams form at 3 locations. Jam
			was said to be 5,000 feet long, and caused water to flow over fields.

History of Occurrences:

Please note; although no data records were found to support or flesh out their claims, according to local officials, there have been additional instances of ice jams occurring in the Town of Hancock. Overall, these ice jams were relatively small in scale and caused minor damage.

In order to prepare for the possibility of ice jams, Town officials monitor the weather conditions that contribute to ice jams. However, no concrete plan exists for responding to an ice jam in the Town of Hancock. Routes 100 and 125 are owned by the State, and the State takes responsibility for ensuring that those roads are not vulnerable to the threat of ice jams. By ensuring that development is safe from flood risk, and road infrastructure is properly sized, the risk of damage from ice jams will also be reduced.

Hazard	Location	Vulnerability	Extent	Anticipated Impact	Likelihood/ Probability
lce Jams	Along the branch(es) of the White River	All property and infrastructure alongside waterways.	Ice jam in 2009 blocked/damaged culvert on Route 125.	Dollar value or percentage of damages not known due to a lack of data. Minor damage is anticipated.	Highly likely

3. Landslides/Mudslides/Rockslides

The movement of a mass of rock, debris or earth down a slope by force of gravity is considered a landslide. A landslide occurs when the slope or soil stability changes from stable to unstable due to an outside force, such as an earthquake, a severe storm, erosion, fire or a human-

This section of the Plan satisfies the requirements of 44 CFR 201.6(c)(2)(i), 201.6(c)(2)(ii), and 201.6(c)(2)(iii) for Landslides/Mudslides/Rockslides.

induced activity. Slopes greater than 10 degrees and slopes where the height from the top of the slope to its toe is greater than 40 feet are more likely to slide. A lack of vegetative cover and/or soils with high water content contributes to the slope's vulnerability to fail.

In simple terms, the two factors needed to trigger a landslide are gravity and precipitation. Therefore, because much of Vermont is mountainous and receives relatively high levels of precipitation, the land areas in Vermont have certain predisposition towards landslides. Heavy winter snows combined with spring snow melt and heavy rains in the spring, summer and fall all contribute to high water content in the soil. The majority of landslides within Vermont involve a small quantity of rock and soil materials, but they frequently occur without any warning. Over 200 years ago (1783), landslides in Vermont were made famous in newspaper accounts that chronicled devastating spring flooding events. It is important to highlight the connection between precipitation, flooding and landslides in Vermont.

The following data was retrieved from various sources, including the NCDC Database, publications issued by the State of Vermont and from local knowledge.

Date	Event	Location	Extent
08/28/2011	Severe flash	Hancock;	Substantial landslide on Upper Churchville Road.
(Tropical Storm Irene—DR-4022	flooding,	county/region-	Approximately .5 miles impacted and resembled a
VT)	landslides	wide	ravine after the slide occurred. It took 3-4 months to
			rebuild the road, and cost approximately \$1,000,000.
08/28/2011	Severe flash	County/Region-	Landslides reported in the Town of Granville, just north
(Tropical Storm Irene—DR-4022	flooding,	wide	of Hancock.
VT)	landslides		
07/06/1973	Flooding,	County/Region-	
(DR-397 VT)	landslides	wide	
11/3/1927—11/7/1927	Severe flooding,	Region-wide	7" of rain in less than 18 hours.
"The Great Flood of 1927"	landslides		

History of Occurrences:

Landslides within the Town of Hancock are likely to be associated with heavy precipitation, flooding, erosion and/or snow melt. With the anticipated increase in precipitation events, this particular hazard may become more prevalent in the future. Because much of the Town of Hancock is mountainous, there are areas that are currently vulnerable to landslides. These areas include: Fassett Hill, Butz Road, the northern bank of the Hancock Branch (below Texas Falls on Rt. 125), and Churchville Road. Repetitive storm events (notably flooding in 2008 and Tropical Storm Irene in 2011) have heavily eroded these areas over time, scouring the slopes and increasing the threat of future damage to both the landscape and property. A landslide on Upper Churchville Road following Tropical Storm Irene impacted approximately a half-mile of the road, and took crews 3-4 months to repair. In addition to the slide that occurred after Tropical Storm Irene, the Churchville Road area is also concerning as there is a settlement that would be directly and severely impacted if a landslide/rockslide/rockslide did occur in that particular area.

Hazard	Location	Vulnerability	Extent	Observed Impact	Likelihood/
					Probability
Landslides/ Mudslides/ Rockslides	Areas along the Hancock Branch of the White River. Fassett Hill, Butz Road, the northern bank of the Hancock Branch (below Texas Falls on Rt. 125), and Churchville Road.	Road infrastructure, public and private property.	Tropical Storm Irene cause landslide on Upper Churchville Road that impacted .5 miles of the road.	For the slide that occurred on Upper Churchville Road—3-4 months to repair and cost the Town approximately \$1,000,000.	Highly likely

4. Structure Fire

Vermont has one of the highest per capita death rates from fire in the nation. This is in fact the deadliest

form of disaster throughout the state. In 2010, there were 1,956 reported structural fires in the state, which included 5 fatalities and over \$18 million dollars in damage. Although there have been requirements for smoke detectors in rental housing for over 20 years, and

This section of the Plan satisfies the requirements of 44 CFR 201.6(c)(2)(i), 201.6(c)(2)(ii), and 201.6(c)(2)(iii) for **Structure Fire**.

requirements for smoke detectors in single-family dwellings since 1994, there was only one building involved in the fatal fires in 2000 that had evidence of working smoke alarms.

Structure fires may occur at any point, and are typically initiated within a single fuel object. Smoke produced by the burning object forms a smoke plume and rises, creating a layer of smoke while also transporting heat to the smoke layer. Fire then spreads quickly by radiation from the flames, or from the smoke layer. Once other objects are engulfed, more smoke plumes are formed and heat radiates to other objects. Fire burns and moves across different materials depending on the material's composition, orientation, surface to mass ratio and air supply in the structure/room.

The majority of the Town of Hancock's growth is centered in the village area that extends out from Route 100 along Route 125, cutting westward through the heart of the Green Mountain National Forest. The Town is typified by a number of old wooden town buildings, residences, and a few commercial spaces. A review of the fires listed in the "History of Occurrences" chart below demonstrates the potential for structures located in the rural Town of Hancock to be completely or severely destroyed by fire.

The following occurrences were reported by the Committee or obtained from local sources. It is reasonable to assume that more structural fires have occurred in the period of time between the entries listed below.

Date	Event	Location	Extent
10/13/2014	Structure Fire	Route 125	Fire at a four-unit low-income apartment house. The fire started as a grease fire in the kitchen of one of the two units at the back of the building, and then spread and became a structure fire. Fire damage was contained to the unit where the fire started, and there was smoke damage in the adjacent apartment. No injuries were sustained.
03/02/2013	Structure fire	Route 100	Fire engulfed home on Rt. 100, leading to a total loss. Towns of Stockbridge, Rochester, Hancock, Granville and Warren had FD's battle the blaze. No reported injuries.

History of Occurrences:

As noted, recognized fire protection problems for the community include the following: development in areas distant from the village center of the Town, development on class 3 and 4 roads, distance from water sources (rivers, hydrants and/or fire ponds), and inadequate snow removal (for building access). Hancock has yet to install any new dry hydrants within town limits, and currently has none in the Town's center. However, Fassett Hill and Churchville have dry hydrants. There are areas that could potentially be utilized to this end, and a comprehensive survey may prove an effective means of determining this.

Hazard	Location	Vulnerability	Extent	Observed Impact	Likelihood/ Probability
Structure Fire	Town- wide	All housing, municipal buildings, retail/commercial sites.	Depends on the location and extent of the fire.	Varies depending on the location and extent of the fire.	Occasionally

5. Hazardous Materials Spill

Based on available VT Tier II data, there are two sites in town that have sufficient types and/or

quantities of hazardous materials to require reporting. Hancock's village is located along Route 125 west of Routes 100 and along the Hancock Branch of the White River. No major, functioning interstate highways or railways run through or near the Town. There are 17 total Tier II Critical

This section of the Plan satisfies the requirements of 44 CFR 201.6(c)(2)(i), 201.6(c)(2)(ii), and 201.6(c)(2)(iii) for **Hazardous Materials Spill**.

Facilities in the Town, including two hazardous material storage facilities. There are 155 residential and 37 commercial, industrial or public buildings within 1,000 feet of a potential HAZMAT spill on major roads, such as Routes 100 and 125. This includes the Town Clerk's Office, the Hancock Library, the new fire department, and the Town Hall. In the event that 5% of these structures were involved in a HAZMAT incident, the estimated damage would be \$3,076,854. 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.

The following data was retrieved from the Vermont Department of Environmental Conservation's Spill List and by searching the archives of local newspapers. The table above is used to illustrate the ease with which trucks, trains and the day-to-day activities in the Town have the potential to create a hazardous material spill and dangerous conditions for emergency responders and town residents.

Date	Event	Location	Extent
09/25/2013	Vehicle fluid spill	Route 125	Cement truck crash on Rt. 125. 20 gallons of vehicle fluids (anti-freeze, diesel, motor oil) spilled during a fatal vehicle accident. Hancock FD responded and contained scene.
09/23/2009	Unspecified potential spill	Route 125	25 gallons in abandoned containers found 3 miles from Middlebury Snow Bowl Turnout filled with clear liquid with red sludge.
12/06/2005	Gasoline spill	Private Residence, Rt. 125	200 gallons of gasoline potentially spilled. Tank was filled on 11/25, and was found empty as of 12/6. Fuel appeared to have traveled straight into the soil.
02/05/2000	Diesel spill	Route 125	Diesel spill at a private residence along Tucker Brook. 150/5 gallons of diesel spilled following a car/truck accident. Prompted water supply well being tested.
03/09/1998	Oil spill	Long Residence on Recreation Dr.	150 gallons of oil spilled. Oil tank had just been filled, and spilled through window into basement. Drinking water well on property is a 20' well in the basement.
06/07/1988	Formaldehyde spill	Route 100	30 gallons of urea formaldehyde resin spilled on Rt. 100.

History of Occurrences:

Although no major spills consisting of hundreds of gallons of hazardous material have occurred in the Town of Hancock, the potential for a major spill exists. One of the major risk-areas in the Town of Hancock is along Rt. 125. This corridor poses a constant threat to the Town of Hancock. Route 125 serves as the main thoroughfare for trucks and other motor vehicles transporting a wide-range of goods, including a wide range of hazardous materials, within the confines of Hancock. A truck accident and a

Hancock Local Hazard Mitigation Plan, Adopted 7/4/15, Approved 8/4/15

resulting hazardous material spill could be exceedingly disastrous for the Town and its residents. The majority of Route 125 in the Town of Hancock is built very close to the river, which could create additional water contamination problems if a hazardous material spill occurred on Route 125. Route 100 also runs through a portion of Hancock, roughly parallel to the river in places. The same concerns that are present along the Route 125 corridor apply to the portion of Rt. 100 passing through Hancock.

None of the members of the Hancock Volunteer Fire Department have received formal HAZMAT training. Should a hazardous material spill occur, the members of the Fire Department contact the State of Vermont HAZMAT Team to provide assistance.

Hazard	Location	Vulnerability	Extent	Anticipated Impact	Likelihood/ Probability
Hazardous Materials Spill	Routes 100 and 125 running along the White River.	Road and rail infrastructure, nearby structures (ex. Town Garage if fuel tank struck), White River.	Initially, local impacts only; but depending on material spilled, extent of damage may spread (ex. into groundwater).	Within 1,000 feet of Route 125, Route 100, and other Class 2 roads, there are 155 residences and 37 commercial, industrial or public buildings. In the event that 5% of these structures were involved in a HAZMAT incident, the estimated damage would be \$3,076,854.	Occasionally

VI. Mitigation

A. Mitigation Goal

- To reduce injury and losses, including loss of life and to infrastructure, structures and businesses, from the natural hazard of flash flooding, flooding and fluvial erosion.
- To reduce injury and losses, including loss of life and to infrastructure, structures and businesses, from the natural hazard of ice jams.
- To reduce injury and losses, including loss of life and to infrastructure, structures and businesses, from the natural hazard of landslides, mudslides and rockslides.
- To reduce injury and losses, including loss of life and to infrastructure, structures and businesses, from the hazard of structure fire.
- To reduce injury and losses, including loss of life and to infrastructure, structures and businesses, from the hazard of hazardous material spill(s).

B. Town Plan Goals & Objectives Supporting Local Hazard Mitigation

- To plan for, finance, and provide an efficient system of emergency facilities and services to meet the future needs of the citizens of Hancock (p. 24).
- To maintain a transportation system that is safe, efficient and complements the other goals and policies of this Plan (p. 31).
- To provide pedestrians with safe areas to travel within the Hancock village (p. 31).
- It is a goal of the town to provide pedestrians with safe access to village services (p. 35).
- It is the goal of the town to encourage "clean" businesses to locate within Hancock, provided that they do not adversely affect community health, quality of life or the rural character of the town (p. 37).
- To ensure no net loss of flood storage capacity in order to minimize the loss of life and property, disruption of commerce, and demand for extraordinary public services and expenditures which result from flood damage (p. 44-45).
- To recognize that upland areas adjacent to unstable rivers and to steep streams may be at risk of erosion during floods (p. 45).
- To consider surface water and groundwater impacts and effects related to proposed or existing uses of land (p. 46).
- To protect the citizens, property and economy of Hancock and the quality of their rivers as natural and recreational resources by using sound planning practices within designated Flood Hazard Areas and beyond (p. 67).

The Hancock Town Plan was adopted on November 19, 2013. It has a 5 year lifespan.

C. Hazard Mitigation Strategies: Programs, Projects & Activities

Vermont Division of Emergency Management & Homeland Security encourages a collaborative approach to achieving mitigation at the local level through partnerships with Vermont Agency of Natural Resources, VTrans, Vermont Agency of Commerce and Community Development, Regional Planning Commissions, FEMA Region 1 and others. That said, these agencies and organizations can work together

to provide assistance and resources to towns interested in pursuing hazard mitigation projects.

With each mitigation strategy, general details about the following are provided: local leadership, possible resources, implementation tools, and prioritization. The

This section of the Plan satisfies the requirements of 44 CFR 201.6(c)(3)(ii), 201.6(c)(3)(iii) and 201.6(c)(3)(iv).

prioritization category is based upon the economic impact of the action, Hancock's need to address the issue, the cost of implementing the strategy, and the availability of potential funding. The cost of the strategy was evaluated in relation to its benefit as outlined in the STAPLEE guidelines (includes economic, political, environmental, technical, social, administrative, and legal criteria). A range of mitigation strategies was vetted by the committee, and those that were determined to be feasible are included in the table below.

Strategies given a "High" prioritization indicate that they are either critical or potential funding is readily available, and should have a timeframe of implementation of less than two years. A "Medium" prioritization indicates that a strategy is less critical or the potential funding is not readily available, and has a timeframe for implementation of more than two years but less than four. A "Low" prioritization indicates that the timeframe for implementation of the action, given the action's cost, availability of funding, and the community's need to address the issue, is more than four years.

The Town of Hancock understands that in order to apply for FEMA funding for mitigation projects that a project must meet more formal FEMA benefit cost criteria, and a project seeking FEMA funds would undergo a full benefit-cost assessment in the FEMA-approved format. The Town must have a FEMA approved Local Hazard Mitigation Plan as well.

The following strategies will be incorporated into the Town of Hancock's long-term land use and development planning documents. In addition, the Town will review and incorporate elements of this Local Hazard Mitigation Plan into updates for the municipal plan, zoning regulations, if ever enacted, and flood hazard/ fluvial erosion hazards (FEH) bylaws. The incorporation of the goals and strategies listed in the Local Hazard Mitigation Plan into the municipal plan, zoning regulations, if ever enacted, and flood hazard/FEH bylaws will also be considered after declared or local disasters. The Town shall also consider reviewing any future TRORC planning documents for ideas on future mitigation projects and hazard areas.

Hazard(s) Mitigated	Mitigation Action	Local Leadership	Prioritization (Mitigation Project Status)	Possible Resources*	Time Frame
All Hazards (Preparedness)	Ensure that Hancock's Local Emergency Operations Plan (LEOP) is kept up-to-date and identifies vulnerable areas and references this Plan.	Selectboard	High	Local resources, TRORC, DEMHS	1 year after Plan Approval
(Mitigation and Preparedness)	Develop a town methodology for consistently documenting infrastructure damage after weather events.	Road Commissioner/ Selectboard	High (new)	Local resources, TRORC	1 year after Plan Approval
(Preparedness)	Set up a VT Alert booth at Town Meeting and encourage residents to sign- up.	Selectboard	High	Local resources, DEMHS	1 year after Plan Approval
Flash Flood/ Flood/ Fluvial Erosion (Mitigation)	Maintain and update town bridge and culvert inventories. Regularly inspect and maintain town bridges and culverts; and develop a schedule to replace undersized culverts.	Selectboard/ Road Commissioner	High (1 st of 3 nat. haz. Mit. Projects in 2009 Plan)**	Local resources, VTrans Local Roads program	1 year after Plan Approval
(Mitigation)	As part of Town Plan updates, revise and strengthen the Town's Inundation Hazard Area Regulations.	Selectboard/ Planning Commission	Medium (2 nd of 3 nat. haz. Mit. Projects in 2009 Plan)**	Local resources, TRORC, Municipal Planning Grants, Vermont ANR	2-4 years after Plan Approval
(Mitigation)	Adopt fluvial erosion hazard (FEH)/river corridor regulations which will incorporate VT ANR's river corridor maps.	Selectboard	Low (new)	Local resources, Municipal Planning Grants, Vermont ANR, TRORC	5 years after Plan Approval
(Mitigation)	Work with Vermont ANR's River's Program to identify potential riverbank and floodplain stabilization projects in vulnerable areas and to improve flood storage. Seek grant funding for recommended projects.	Selectboard	Medium (new)	Local resources, Vermont ANR, White River Partnership	2-4 years after Plan Approval

Hazard(s) Mitigated	Mitigation Action	Local Leadership	Prioritization (Mitigation Project Status)	Possible Resources*	Time Frame
(Mitigation)	Buy-out Bettis Autoland property and restore floodplain.	Selectboard	Low (new)	Vermont River Conservancy (VRC), FEMA- HMGP	As needed to support VRC in process
Flash Flood/ Flood/ Fluvial Erosion (Mitigation)	Complete work on and implement a river corridor easement on the Carlson property to improve flood storage. This easement will also involve planting a 50- foot buffer along the length of the property.	Selectboard as a local contact	Medium (new)	White River Partnership	2-4 years after Plan Approval
(Mitigation)	Support town or conservation organization assistance to landowner(s) of property(ies) in Hancock on the NFIP's repetitive and severe repetitive loss list to reduce flood damages, through elevation, floodproofing, acquisition or relocation, or an infrastructure project if one is found to address the source of flooding.	Selectboard (as needed)	Low (new)	Local resources, FEMA HMGP, NFIP	5 Years from Date of Plan Approval
Flash Flood/ Flood/ Fluvial Erosion//Ice Jams (Mitigation)	Upgrade bridge at Texas Falls to improve the flow of floodwaters and prevent wash-outs/road damage.	Selectboard	Medium-High (new)	Local resources, VTrans Structures grants	1-4 years after Plan Approval
(Mitigation)	Upgrade box culvert on Vermont Route 125 spanning Piper Brook to improve the flow of floodwaters and prevent wash-outs/road damage.	Selectboard	High (new)	VTrans	1 year after Plan Approval (2015)
Ice Jams (Preparedness)	Monitor river ice conditions during periods of high ice jam threat.	Road Commissioner/ Selectboard	High during the winter	Local resources, VTrans	Seasonally
(Preparedness)	Develop a plan for responding to ice jams on the Upper White River.	Road Commissioner/ Selectboard	Low	Local resources	3-5 years after Plan Approval

Hazard(s) Mitigated	Mitigation Action	Local Leadership	Prioritization (Mitigation Project Status)	Possible Resources*	Time Frame
(Preparedness)	Develop an education program about ice jams and the dangers associated with them, and include information in the Annual Report and on the Town website.	Selectboard	Medium	Local resources, Cold Regions Research and Engineering Laboratory	2-4 years after Plan Approval
Landslides/ Mudslides/ Rockslides (Mitigation)	Map areas vulnerable to landslides/ mudslides/rockslides.	Selectboard/ Road Commissioner	Medium-Low (new)	Local resources, TRORC, Vermont State Geologist	3-5 years after Plan Approval
Landslides/ Mudslides/ Rockslides (Preparedness)	Develop a contingency plan for decommissioning part of Churchville Road most vulnerable to landslides.	Selectboard	Low	Local resources, Better Backroads grants, VTrans Local Roads program	5 years after Plan Approval
Structure Fire (Preparedness)	Ensure that fire department personnel maintain their Firefighter certifications.	Hancock Volunteer Fire Department	High	Vermont Fire Academy	1 year after Plan Approval
Structure Fire (Preparedness)	Complete a comprehensive survey of potential dry hydrant sites to determine the need for additional sites and potential location, and install dry hydrants. Specially, the Fire Department would like dry hydrants in the following locations: intersection of Vermont Routes 100 and 125, and Churchville Road and a wet hydrant at Fassett Hill.	Hancock Volunteer Fire Department	Low	Local resources/ Fire Department resources, Vermont Rural Fire Protection Task Force	4-5 years after Plan Approval
(Preparedness)	Fix and update the Fire Department's Jaw of Life.	Hancock Volunteer Fire Department	Medium	Fire Department resources	3 years after Plan Approval
Hazardous Material Spill (Preparedness)	Ensure that all emergency response and management personnel continue to receive HAZMAT Awareness training at a minimum.	Hancock Volunteer Fire Department	Medium	Vermont Fire Academy	1 year after Plan Approval

Hazard(s) Mitigated	Mitigation Action	Local Leadership	Prioritization (Mitigation Project Status)	Possible Resources*	Time Frame
(Preparedness)	Continuously stock gear to help contain small spills when they occur (booms, absorbent materials, etc.).	Hancock Volunteer Fire Department	High	Fire Department resources	1-2 years after Plan Approval
(Preparedness/ Mitigation)	Identify hazardous material storage tanks in flood hazard areas, and raise awareness on risk factors during floods.	Hancock Volunteer Fire Department	High	Fire Department resources	1-2 years after Plan Approval

*Depending on the mitigation action, local resources may include the following: town personnel/staff time; town volunteer time; town budget line items, donations, cash from capital campaigns, among others.

** Taylor Brook Culvert upgrade was the third mitigation project in 2009 Plan; it has been completed.

Appendices

Appendix A: Hazard Ranking Methodology

Frequency of Occurrence	Warning Time	Potential Impact
Probability	Amount of time generally given to	Severity and extent of damage and disruption
	alert people to hazard	
1 = Unlikely	1 = More than 12 hours	1 = Negligible
<1% probability of	2 = 6–12 hours	Isolated occurrences of minor
occurrence in the	3 = 3–6 hours	property damage, minor disruption of
next 100 years	4 = None–Minimal	critical facilities and infrastructure,
2 = Occasionally		and potential for minor injuries
1–10% probability		2 = Minor
of occurrence per		Isolated occurrences of moderate to
year, or at least		severe property damage, brief
one chance in next		disruption of critical facilities and
100 years		infrastructure, and potential for
3 = Likely		injuries
>10% but <100%		3 = Moderate
probability per		Severe property damage on a
year, at least 1		neighborhood scale, temporary
chance in next 10		shutdown of critical facilities, and/or
years		injuries or fatalities
4 = Highly Likely		4 = Major
100% probable in a		Severe property damage on a
year		metropolitan or regional scale,
		shutdown of critical facilities, and/or
		multiple injuries or fatalities

Appendix B: Critical Stream Crossings

This critical crossings table includes stream crossing structures on town highways that cross third order streams or larger. Headwater streams generally include first through third order. Third order was included as these headwater streams will have larger drainage areas and may have larger structures that are more difficult to replace and have a larger impact on the road network. Most of these are bridges.

RDFLNAME	STRUCT_NUM	OWNER_FIPS	CATEGORY	STRC_LBL	X_COORD	Y_COORD
CHURCHVILLE RD	100108001001081	1040	В		-72.8398	43.9184
TEXAS FALLS RD		1040	В	B8	-72.904	43.9371
TEXAS FALLS RD		1040	В	B7	-72.8989	43.9294

Appendix C: Five Year Review and Maintenance Plan

Implement Adopt **Evaluate** Revise Brief local leadership on Confirm/clarify •Effectiveness of planning •Review factors affecting responsibilities community's context plan approval process Formally adopt plan Integrate mitigation •Effectiveness of actions Analyze findings; actions determine whether to Publicize plan approval Document success & revise planning process and adoption Monitor & document challenges of actions or strategy implementation of •Celebrate success Update and involve projects and actions Incorporate findings into community the plan Establish indicators of •Celebrate successes effectiveness or success After Plan Adoption—Annually Implement & Evaluate Monitor and Evaluate Plan (preferably at an April Selectboard meeting along with the Local Make Annual Invite Public Emergency Operations Plan) Progress Report Comment/Input Publically Available Adjust Mitigation Discuss Effectiveness of Strategy as Necessary Plan and Implementation of Mitigation Strategies Fifth Year, and After a Major or Federally Declared Disaster Directly Impacting the Town Evaluate & Revise



Five-Year Local Hazard Mitigation Plan Review/Maintenance

Attachments

Attachment A: Map of the Town of Hancock

