Town Of Calais, VT

Local Hazard Mitigation Plan Update

Adopted June 22, 2015

Prepared by the Town of Calais and CVPRC

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1. Introduction

The impact of expected, but unpredictable natural and human-caused events can be reduced through community planning. The goal of this Plan is to provide an all-hazards local mitigation strategy that makes the communities of Central 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 Project Impact efforts, FEMA and State agencies have come to recognize that it is less expensive to prevent disasters than to repeatedly repair damage after a disaster has struck. This Plan recognizes that communities have opportunities to identify mitigation strategies 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 the hazards are, where the hazards are most severe and identify local actions that can be taken to reduce the severity of the hazard.

Hazard 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 to the hazard by modifying structures or standards, or avoid the hazard by stopping or limiting development.

2. Purpose

The purpose of this Local Hazard Mitigation Plan is to assist Calais in recognizing hazards facing the region and their community and identify strategies to begin reducing risks from acknowledged hazards.

Calais strives to be in accordance the strategies, goals and objectives of the State Hazard Mitigation Plan, including an emphasis on proactive pre-disaster flood mitigation for public infrastructure, good floodplain and river management practices, and fluvial erosion risk assessment initiatives.

The 2015 Calais Local Hazard Mitigation Plan is an update of the 2005 plan. The plan has been reorganized and new sections have been added regarding:

- Plan Update Process
- Plan Maintenance
- Updates of worst and moderate threat hazards
- Updates of Local Areas of Concern Map
- Status update of 2005 mitigation strategies
- Identification of new mitigation strategies

3. Community Profile

The Town of Calais is located in northern-central Washington County and is bounded by the towns of Marshfield to the east, East Montpelier to the south, Worcester to the west, and Woodbury to the north. The Town's landscape is largely defined by a blend of forested hills, meadows, small villages, farmland, lakes and ponds and streams. According to the 2015 Town Plan, Calais remains over 90% undeveloped and over 70% forested. Historically, Calais' population has largely been found in the villages and hamlets of North Calais, East Calais, Kents Corner, Adamant, and Maple Corner.

One of Calais' major features is its water bodies. Lakes, ponds and streams abound, including fifteen ponds of five or more acres. The largest are Bliss Pond, Curtis Pond, Number 10 Pond, Nelson Pond, and North Montpelier Pond. The most significant stream is the Kingsbury Branch, which traverses the Town from north to south and is paralleled by Vermont Route 14. Other principal rivers are Pekin, Dugar, and Still Brook.

According to the 2010 US Census, Calais has a total population of 1,607 people living in 675 housing units. Calais has seen its population remain steady from the 2000 Census, while its number of occupied housing units has increased by 9.5%. Population projections devised by the Central Vermont Regional Planning Commission assert that by 2020 the combined population in Calais and the adjacent Town of Woodbury will increase (17%) while the combined number of housing units will increase more dramatically (26%). Approximately 82.2% of Calais's workforce is employed outside of the community, while the remaining 17.8% are employed within the Town.

Development within the Town has historically been focused in the villages and hamlets situated in the lowland areas amidst Calais' streams and lakes. However, the 2015 Town Plan characterizes current development in the following manner:

> Settlement patterns are now expanding into higher areas in the watershed, particularly along the upper County Road, Bayne Comolli Road, Jack Hill, Max Gray and Lightening Ridge Roads. With the exception of the four villages, residential development is scattered throughout the Town, with growth extending linearly along all roads. Such growth may not be in the best interest of Calais' rural nature but is likely to continue if there are no incentives to alter the pattern (p28).

Scattered residential development in higher areas in the watershed may have implications for increased stormwater accumulation and erosion hazards. The Town is taking steps to prioritize roadside ditching and culvert/bridge replacement schedule with regard to existing conditions which have been determined to be inadequate to handle expected runoff and erosion in a flood event. The Town is also pursuing options for adopting a River Corridor overlay that will prevent upland development from occurring in areas adjacent to upland streams and prone to erosion

hazards.

The Washington Electric Cooperative provides electricity to the majority of the Town. Green Mountain Power serves the Route 14 corridor from East Montpelier to East Calais village, while the Hardwick Electric Department serves a narrow area on either side of Route 14 from the Woodbury town line to just north of East Calais village.

Natural springs, dug wells, and drilled wells provide water to most sections of Town; however, East Calais Village is served by a public water system owned and operated by the East Calais Fire District #1. The elementary school system is also a public water system. Wastewater treatment within the town is treated by individual subsurface disposal facilities.

Calais used to have a sewage ordinance administered locally. As of July 1, 2007, the Legislature created "universal jurisdiction" over wastewater and potable water supplies, closing the former "10-acre loophole" and requiring permits by the Vermont DEC Wastewater Management Division. Except where a municipality requests and is given delegation by DEC, municipalities may no longer adopt or administer local regulations on wastewater and potable water supplies. However, municipalities may prohibit construction under a zoning permit unless and until a wastewater and potable water supply permit is issued by the State. The innovative systems allowed under the new technical standards may allow historically "un-developable" land to be developed.

East Montpelier Volunteer Fire Department currently provides primary coverage for fire and ambulance to the towns of East Montpelier and Calais with Woodbury Volunteer Fire Department providing additional coverage in Calais. According to the 2013 Calais Town Report, the East Montpelier Volunteer Fire Department responded to 679 calls in 2013 (108 from Calais) pertaining to fires, medical assistance, burn permits, transports, etc.

Law enforcement services are provided, in part, by a Town Constable, a part-time deputy to enforce traffic from the Washington County Sheriff's Department, and full-time law enforcement through the Vermont State Police stationed at the Middlesex Barracks.

The Town of Calais has an approved Local Emergency Operations Plan that was adopted in 2014 and a 2004 Emergency Action Plan for the Curtis Pond dam. The Calais Elementary School serves as the Town's primary emergency shelter and the town office is the Emergency Operations Center. The Town also adopted Road and Bridge Standards in 2014 with the purpose of increasing the likelihood that town roads and bridges will hold up during flooding and heavy rain events. These standards that exceed those put forth by the Vermont Agency of Transportation.

The Draft 2015 Town Plan scheduled for adoption includes a discussion and goals in regards to natural resources, land use, floodplain management, water quality protection, fire protection, and municipal services. The 2014 Land Use & Development Regulations include a Resource

Recreation District, Shoreland District, Upland Overlay District, Flood Hazard Area Overlay District and standards in regards to steep slopes and surface waters.

4. Planning Process and Maintenance

4.1 Planning Process

The Central Vermont Regional Planning Commission (CVRPC) coordinated the Calais Local Hazard Mitigation Plan process. CVRPC contacted the Selectboard Chair, Denise Wheeler, and sent Town-Specific hazard mitigation material for review. The upcoming Hazard Mitigation Planning process was publicly warned and announced at the May 13, 2013 Selectboard meeting, where participation from municipal boards and interested citizens was solicited. After assessing the material, Selectboard members, the Road Commissioner and CVRPC staff held a meeting on June 13, 2013 at the Municipal Offices.

Preparation for the meeting included a review of the Calais Town Plan, Calais Rapid Response Plan, 2012 Town Report, and the Kingsbury Branch and Pekin Brook Corridor Plans. Information from these documents is incorporated into various sections of this plan. The Calais Hazard Mitigation Meeting focused on assessing past mitigation projects and compiling information on its current and future hazard mitigation programs, projects and activities.

Attendees included:
- Denise Wheeler, Chair of Selectboard
- Toby Talbot, Emergency Management Coordinator and Selectboard member
- Alfred Larabee, Road Commissioner
- Kim McKee, CVRPC

CVRPC staff facilitated the discussion that focused on assessing past mitigation projects, identifying any new or reduced hazards and community vulnerabilities, and identifying hazard mitigation strategies. Members of the Selectboard provided verbal input regarding recent hazard events not reflected in gathered data, new community vulnerabilities and progress regarding previously identified mitigation projects. The Road Commissioner provided verbal input regarding priority culvert and bridge replacements or upgrades, landslide hazards and a recent Road Erosion study completed. The meeting indicated that the Town is most vulnerable to dam failure and flood/flash flood/fluvial erosion. Moderate threat hazards include water supply contamination and landslide. Previously identified hazards include flood/flash flood/fluvial erosion, dam failures, and winter storms/ice storms. Calais is now focusing on flooding hazards as these events are the most common and most destructive.

Stakeholders given an opportunity to be involved during plan development and/or in response to FEMA-recommended revisions included:

- Members of the Calais Selectboard, Planning Commission and Road Commission via in-person meetings and email
- Central Vermont Regional Planning Commission staff
- EMDs in the Towns of Worcester, Marshfield, Woodbury and East Montpelier (via email request for input)
- Volunteer Fire Depts. in Marshfield and East Montpelier (via email request for input to EMDs that are also members)
- CVRPC Commissioners and broader distribution list via notification of plan development in July 2013 and Nov. 2014 staff reports
- CVRPC web audience via blog post

Announcement of the Calais Hazard Mitigation planning effort was circulated in the July 2013 CVRPC staff reports (which are distributed via mail to Commissioners from all 23 communities, and emailed to all Commissioners, municipal planning staff, selectboard members, planning commission members and development review board members) and posted on the CVRPC web site prior to the July 9, 2013 Commission meeting (see full CVRPC Commission meeting packet distribution lists in Attachments). CVRPC staff facilitated a discussion at a second Selectboard meeting on Nov. 10, 2014 to receive input from Planning Commission members and the general public and discuss revisions to the previous draft. At this meeting, Planning Commission members provided input on recent development patterns within the Town. Selectboard members contributed additional existing programs and policies in place that contribute to hazard mitigation and input on additional mitigation strategies to include.

The draft update was also circulated via email to the Planning Commission, posted on the municipal web site and made available at the Calais Municipal offices and by request from CVRPC for public review and comments from Jan. 26, 2015 to Feb. 9, 2015. No comments were received by CVRPC or Calais Staff. Opportunity and means for a broader public and regional stakeholders to be involved was also provided via notice for public comments of the draft placed on the CVRPC blog (see blog screenshot in Attachments). Notice of the ongoing LHMP update was again placed in Nov. 2014 CVRCP staff reports (see previously referenced distribution list). Opportunity and means to be involved was provided to Emergency Management Directors in neighboring municipalities (Towns of East Montpelier, Worcester, Woodbury and Marshfield) via an email including a request to review, provide comments and circulate to other interested parties in their Towns (see example email to neighboring EMD in Attachments). The EMDs notified in the Towns of East Montpelier and Marshfield are also members of their respective Volunteer Fire Departments, the former of which provides fire coverage in Calais.

In subsequent plan update processes, the draft plan will be made available during Town Meeting Day and local meetings with State and local officials to allow for more public comment and review. Public comments submitted will be reviewed by the Town Clerk (and CVRPC Staff dependent on funding) and attached as an appendix. After Approval Pending Adoption, the plan will go before the Selectboard for adoption.

4.2 Plan Update Process

The Calais Local Hazard Mitigation Plan was originally adopted by the Town as an Annex to the Central Vermont Regional Local Hazard Mitigation Plan in 2005 and received FEMA final approval in January 2006. The 2015 update is intended to be submitted as a single-jurisdiction Local Hazard Mitigation Plan.

The current plan is an overhaul of the 2005 plan. Below is a list of the revisions that have been made from the past plan and the appropriate sections for reference. New hazards identified include water supply contamination and landslide.

General Updates

- General reorganization/restructuring of the plan according to future FEMA/VEM checklist
    - New sections added – 4.2 Plan Update Process, 4.3 Plan Maintenance, 5.2 Worst Threat Hazards, 5.3 Moderate Threat Hazards
- Update of all data and statistics using 2012 Town Report and US Census Data (Section 3)
- Revaluation, identification and analysis of all significant hazards (Section 5)
- Acknowledgment of implemented mitigation strategies since 2005 – see matrix below (section 4.2)
- Identification of on-going mitigation projects and strategies – see Existing Mitigation Programs, Projects and Activities section (section 4.2)

Hazard Analysis Updates (Sections 5 and 6)

- New hazards added – water supply contamination and landslide
- Added location/vulnerability/extent/impact/likelihood table for each hazard to summarize hazard description (Section 5.1-5.3 – after each hazard)
- Review of Vermont Hazard Mitigation Plan (Section 5 – hazard analysis table)

Maps

- Review of 2005 Areas of Concern map and Local Hazards Analysis map – added additional fluvial erosion hazard zones and vulnerable sites

The following chart provides an overview of Calais's proposed 2005 hazard mitigation actions along with their current status.

Mitigation Action	2015 Status
Radio Communication between Municipal Office, town trucks, and Emergency Management Director	• Base radio installed at Town Office and at Road Commissioner's home. • Radios updated to narrow band in all trucks and locations.

	• EMC is member of Fire Dept. and has portable radio in vehicle and hand-held. • All radios programmed to Town and fire frequencies. • Calais Elementary School also has a radio and is able to communicate directly with the Town Office and Road Crew.
Dam Replacement Cost-Benefit Analysis	• Engineering started on Curtis Pond Dam for retrofit to stabilize. • Curtis Pond Dam Emergency Action Plan needs updating. • Funding needed from bond or grants for dam work. • Adamant beaver dam caused flood – beaver baffles have been installed and are being monitored. • Discussions initiated with neighbors regarding pond level behind dam.
Participate in a Stream Geomorphic Assessment	• Kingsbury Branch (2008) and Pekin Brook (2010) Corridor Plans completed by Bear Creek Environmental, LLC, Friends of Winooski River and CVRPC. • Streams near roads are greatest flood hazard. • Culvert inventory shows a high number of fair, poor and critical culverts (305 out of 610 in total). • Bridges inventory shows one in poor and two in fair condition.

Existing Programs, Projects & Activities

The 2015 Town Plan was reviewed for recent changes in development patterns, for proposed future land use districts and goals related to hazard mitigation. The 2013 Town Report was reviewed for updates related to emergency services and fire/police reports. The 2014 Land Use regulations were reviewed for various district standards (setbacks, disturbance limits, etc.) or use limitations that prevent or restrict development in potentially hazardous areas or serve to preserve natural vegetation. CVRPC's past Regional Mitigation Plan (2005) was reviewed for previously identified worst and moderate threat hazards, community vulnerabilities, and mitigation strategies.

Calais' Local Emergency Operations Plan (2014) was reviewed to identify potential high risk populations and vulnerable sites. Past newspaper articles were reviewed for pertinent information related to past flooding and dam failures. Information from these sources is incorporated into appropriate sections of the plan. The ongoing or recently completed programs, projects and activities are listed by mitigation strategy and were reviewed for the development of the plan. The Town also adopted Road and Bridge Standards in 2014 with the purpose of increasing the likelihood that town roads and bridges will hold up during flooding

and heavy rain events. These standards that exceed those put forth by the Vermont Agency of Transportation.

Community Preparedness Activities

- Local Emergency Operations Plan – 2014
- Curtis Pond Dam Emergency Action Plan – 2004

Hazard Control & Protective Works

- Maintenance Programs (Culvert Survey & Replacement)
- Participant in the Capital Mutual Aid System
- Road Erosion Assessment – 2012
- Adopted Road and Bridge Standards - 2014
- Established Roads Advisory Committee - 2013

Insurance Programs

- Participation in the National Flood Insurance Program (NFIP) since 1975. Floodplain permitting is administered, monitored and enforced by the Zoning Administrator and Conditional Use review is conducted by the seven-member Development Review Board. Development review applications also require submittal of a FEMA Elevation Certificate and a Vermont Agency of Natural Resources Project Review Sheet. Flood Insurance Rate Maps and related assistance are made available both upon request at the municipal offices and via an online map viewer that includes an unofficial web-based Special Flood Hazard Area layer.

Land Use Planning/Management: District and General Use Standards

- Resource Recreation District (RR2)
    - Table 2.3 – Limits construction in undeveloped lands that are necessary to protect ground water and aquifers, among other important resources. Requires a 50 foot buffer from wetlands, 50/20 foot buffer from streams, and a buffer of 50 feet from lakes and ponds.
- Shoreland District (SHR)
    - Table 2.4 – Consists of all land within 800 feet of shoreland of all water surfaces of 20 acres or more. Requires a 50 foot buffer from wetlands, 50/20 foot buffer from streams, and a buffer of 50 feet from lakes and ponds.
- Upland Overlay District (UPL)
    - Table 2.5 – Above 1,500 feet, all structures require a Conditional Use Permit except for those related to agriculture, forestry, home child care, home occupation, or small scale telecommunications. Minimum lot sizes are 25 acres.

- Flood Hazard Area Overlay District (FHO)
    - Table 2.7 - Limits construction of structures in floodplain areas designated within the Flood Insurance Rate Map for Calais.
- Steep Slope Standards
    - Section 3.12 – Development on slopes in excess of 15% are subject to conditional use review by the DRB.
    - Timber Management & Wildlife District
    - Section 2 – Between 1,500 feet and 2,500 feet only low impact, nonstructural development is a Permitted Use and minimum lot sizes are 25 acres. Low impact structures are a Conditional Use.
- Surface Water Protection
    - Section 3.13 - Requires a 50 foot buffer from wetlands, 50/20 foot buffer from streams, and a buffer of 50 feet from lakes and ponds.

Protection/Retrofit of Infrastructure and Critical Facilities

- Dry Fire Hydrants – 4
- Back-up generators at the Town's emergency shelter and Emergency Operations Center – 2004

Public Awareness, Training & Education

- Fire Prevention Week

4.3 Plan Maintenance

The Calais Local Hazard Mitigation Plan will be updated and evaluated annually at a July Selectboard meeting along with the review of the Local Emergency Operations Plan. Updates and evaluation by the Selectboard will also occur within three months after every federal disaster declaration and as updates to town plan/zoning and river corridor plans come into effect. The plan will be reviewed by the Selectboard, Town Clerk and public at the above mentioned July Selectboard meeting. CVRPC will help with updates or if no funding is available, the Town Clerk and Selectboard will update the 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, Front Porch Forum, and CVRPC newsletter and blog inviting the public to the scheduled Selectboard (or specially scheduled) meeting. Additional stakeholders invited to the meeting will be Village area residents, and representatives from the Roads Committee and Planning Commission. Also invited in the future will be the VT Agency of Natural Resources (VT ANR), as they are able to provide assistance with NFIP outreach activities, 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.

Monitoring of plan progress, implementation, and the 5 year update process will be undertaken by the Town Clerk and Planning Commission. Monitoring updates may include changes in community mitigation strategies; new town bylaws, zoning and planning strategies; progress of implementation of initiatives and projects; effectiveness of implemented projects or initiatives; and evaluation of challenges and opportunities. The plan is to be a "living document" to allow for new actions to be identified in the five year interim period and amended without formal re-adoption during regularly scheduled Selectboard meetings. Prior to the end of the five year period, the plan will be undergoing a formal update and submitted to FEMA for approval following the process outlined the schematic found in the Attachments section.

Calais shall also incorporate mitigation planning into their long term land use and development planning documents. It is recommended the Town review and incorporate elements of the Local Hazard Mitigation Plan when updating the municipal plan, zoning regulations, and flood hazard/FEH bylaws. The incorporation of the Local Hazard Mitigation Plan into the municipal plan, zoning regulations and flood hazard/FEH bylaws will also be considered after declared or local disasters. The Town shall also consider reviewing future Upper Winooski Corridor planning documents for ideas on future mitigation projects and hazard areas.

5. Community Vulnerability by Hazard

5.1 Hazard Identification

The following natural hazards were discussed and the worst threat hazards were identified based upon the likelihood of the event and the community's vulnerability to the event. Hazards not identified as a worst or moderate threat may still occur. Upon full review of the below mentioned hazards, hazards not identified as worst or moderate threats are not analyzed in the plan due to low frequency of occurrence, limited (if any) past damages and low cost benefit of possible mitigation measures. Greater explanations and mitigation strategies of low threat hazards can be found in the State of Vermont's Hazard Mitigation Plan.

Hazard	Likelihood [1]	Community Vulnerability[2]	Worst or Moderate Threat
Landslide	Low	Y	Moderate
Dam Failures	High	Y	Worst
Drought	Low	N	
Earthquake	Low	N	
Extreme Cold/Winter	High	N	Moderate

[1] High likelihood of happening: Near 100% probability in the next year.
Medium likelihood of happening: 10% to 100% probability in the next year or at least once in the next 10 years.
Medium likelihood of happening: 10% to 100% probability in the next year or at least once in the next 10 years.
Low likelihood of happening: 1% to 10% probability in the next year or at least once in the next 100 years.
[2] Does the hazard present the threat of disaster (Yes)? Or is it just a routine emergency (No)?

Storm/Ice Storm			
Flash Flood/Flood/Fluvial Erosion	High	Y	Worst
High Wind	Low	N	
Ice Jam	Low	N	
Hurricane/Severe Storms	Low	N	
Structure Fire	Low	N	
Tornado	Low	N	
Water Supply Contamination	Low	Y	Moderate
Wildfire/Forest Fire	Low	N	

The Town of Calais identified the following hazards as presenting the worst threat to the community:

- Dam Failure
- Flooding/Flash Flooding/Fluvial Erosion

The Town is interested in focusing a majority of mitigation efforts into reducing impacts from flooding, as the events occur most frequently, severely and cause the most damage to public and private infrastructure.

Moderate threat hazards include:

- Water Supply Contamination
- Landslide
- Extreme Cold/Winter Storm/Ice Storm

A discussion of each worst and moderate hazard is included in the proceeding subsections and a map identifying the location of each hazard is attached (See map titled *Areas of Local Concern.*) Each subsection includes a list of past occurrences based upon County-wide FEMA Disaster Declarations (DR-#) plus information from local records, a narrative description of the hazard and a hazard matrix containing the following overview information:

Hazard	Location	Vulnerability	Extent	Impact	Probability
Type of hazard	General areas within municipality which are vulnerable to the identified	Types of structures impacted	Magnitude of hazard – scale dependant on hazard	Dollar value or percentage of damages.	High: 10% to 100% probability within the next year or at least once in the next 10 years. Medium: less than 10% to 100% probability within the within the next

	hazard.				year or less than once in the next 10 years.

5.2 Worst Threat Hazards

Flood/Flash Flood/Fluvial Erosion
History of Occurrences (from NCDC website and FEMA DR list) within Central Vermont – Town-specific data not available.

Date	Event	Location	Extent
11/08/2011	Flood/Severe Storms	County Wide	DR 4043
8/28/2011	Flash Flood (TS Irene)	County Wide	Winooski River crested at 19.05 feet in Montpelier– flood stage is at 15'; 5-7" of rain -DR 4022
5/26/2011	Flash Flood	County Wide	4" of rain; Montpelier gauge at 17.59' – DR4001
4/23-5/9/2011	Flash Flood	County Wide	DR 1995
8/2/2008	Flash Flood	County Wide	Not a historical crest; data gap
7/11/2007	Flash Flood	Northeast Washington County	3-6" of rain in 2 hrs – DR 1715, not a historical crest
6/26/2006	Flood	County Wide	3-4" of rain, not a historical crest
9/16/1999	Tropical Storm Floyd	County Wide	Montpelier flood gauge at 9.30 feet, 5-7" rain county wide DR 1307
6/27/1998	Flash Flood	County Wide	3-6" of rain over 2 day period - DR 1228, not a historical crest
6/6-6/8/1984	Flood/Severe Storms	Calais, County Wide	DR-712, Town Hall flooded
8/5/1976	Flood	County Wide	Montpelier flood gauge at 12.31 feet – DR 518
6/30/1973	Flood	County Wide	Montpelier gauge at 17.55 ft DR 397
9/22/1938	Flood/Hurricane	County Wide	Montpelier flood gauge at 14.11 feet
11/03/1927	Flood	County Wide	Montpelier flood gauge at 27.10 feet

Given Calais' traditional settlement patterns with homes situated nearest to bodies of water, and the sheer number of lakes, ponds and streams, Calais is quite susceptible to flooding.

Calais joined the National Flood Insurance Program (NFIP) in 1975 and the Town's NFIP designated 100-year floodplain is located throughout the town, but out of reach of most of the Town's built environment. However, based on the results of overlaying the FIRM flood maps with the location of the E911 points, there exist 37 buildings in the Town which are vulnerable to potential flooding. A similar overlay exercise with the Fluvial Erosion Hazard Areas shows that 6 residential buildings are vulnerable to fluvial erosion hazards. The Town is considering adoption of Fluvial Erosion Hazard Area regulations to maximize channel stability and minimize fluvial erosion hazards by preventing future development in these areas adjacent to the Kingsbury Branch and Pekin Brook.

The estimated loss for a severe flooding event for all properties located within the Town's 100-year floodplain is approximately $76,690,500. This flood loss potential represents 45.41% of the total value of properties within Calais. Currently there are 10 flood insurance policies in Calais covering $2,038,400 in property value. Only four of these are identified as being in a flood hazard area (Zone A). As such only 11 percent of the structures at risk are carrying flood insurance. There are no repetitive loss properties located in Calais.

As previous events have made clear, even areas beyond the NFIP designated 100-year floodplain may be vulnerable to flood related hazards. Channel adjustments with devastating consequences have frequently been documented wherein such adjustments are linked to historical channel management activities, floodplain encroachments, adjacent land use practices and/or changes in watershed hydrology associated with conversion of land cover and drainage activities, within and beyond the NFIP floodplain. The attached Hazard Analysis Map identifies the Town Offices, an identified Emergency Operations Center, as well as other buildings, to be outside the designated floodplain, but nearest major waterways.

Bridges and roads are particularly susceptible to damage in the event of a flood related event. The Areas of Local Concern Map (attached) identifies Kent Hill road at Kent's Corners as prone to flooding. The vulnerability of this particular road is important as it serves as a primary access between Maple Corners and Vermont Route 14 and provides access to Calais' Emergency Operations Center (Town Offices). Pekin Brook Bridge (TH16) has experienced moderate flooding in recent events and is reported as significantly undersized with alignment issues in the Pekin Brook Corridor Plan.

Hazard	Location	Vulnerability	Extent	Impact	Probability
Flood/Flash Flood/Fluvial Erosion	*Along Pekin Brook and Kingsbury Branch; Pekin Branch Bridge, select roads and culverts*	*Culverts, bridges, roads,*	*1984 flood: 5" of rain; flooding 3' above lowest floor of Town Hall; 30ft of North Calais Rd washed out*	*Replacements of small culverts in critical, closed or urgent condition could range from $1,200-$1,500 each*	*High*

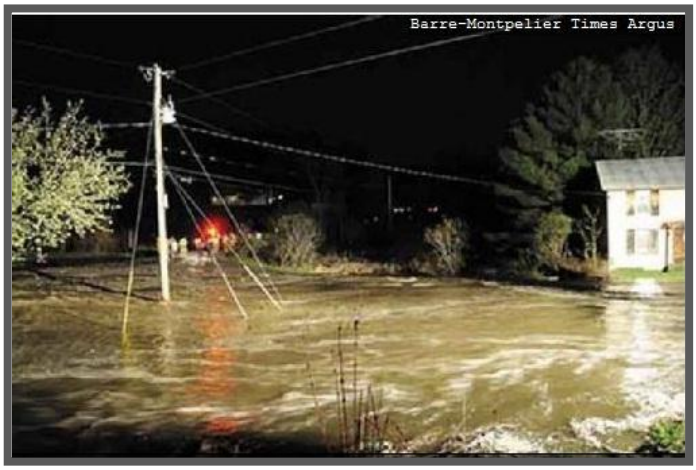
Dam Failure

In addition to flooding events, five dams exist in the Town of Calais: Curtis Pond Dam, E. Calais Dam, Adamant Pond Dam, Robinson Pond Dam and No. 10 Pond Dam. All of the dams are privately owned and, according to the town LHMP meeting, are all in excess of 100-years old. In addition they have all been identified as "Dams of Concern" (see Hazard Analysis Map). A "Dam of Concern" is identified by the Agency of Natural Resources Vermont Dam Inventory (VDI) as a dam where failure or mis-operation will result in a high probability of a loss of human life and/or can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns. The Calais Selectboard created a Dam Committee in 2002 to investigate the specifics of the dam situation. The Committee identified risk factors, status, and possible engineering solutions for each site. They also produced an Emergency Action Plan for the Curtis Pond Dam (2004), which is situated above the village of Maple Corner.

Curtis Pond Dam – To date there has been no breaches of the Curtis Pond Dam; however, the Curtis Pond Dam is stated to be in "poor" condition by the State's Engineer and is classified as a Class 2, "Significant Hazard" Dam according to the 2013 state inspection report. The Town of Calais Selectboard developed a Curtis Pond Dam task force to determine replacement strategies. On Election Day, Tuesday, November 7, 2006 Calais voters were asked to give their opinion to the Selectboard about various options for the possible repair and maintenance of the Curtis Pond Dam. Voter turnout was excellent and so the Selectboard believes the results were a fair representation of the opinions of the majority of voters.

Engineering studies have not determined the actual problem with the dam, but do indicate that there is a slow leak with gradual erosion of the dam. Replacement options estimates range from $175,000 - $230,000 range. As of summer 2013, engineering studies by firm Dubois and King had been completed for construction of a new dam in front of the existing dam, with the existing dam being maintained as a façade. The Town is currently in the process of securing financing for the project.

A Washington Electric Coop (WEC) substation is located within the potential inundation area should a dam failure event occur. According to WEC and based on information in the engineering study, the expected water level would reach approximately 2 to 2.5 ft high in the substation for a relatively short period of time, in which case the equipment in the substation would not be harmed. In this event, the water would flow in a manner that would not create significant erosion thus limiting damage to the access road(s). If the water rose to a level of 4ft and higher,



however, significant components of the substation would be damaged. The cost of repair to critical components would be $250,000 to $400,000.

Adamant Pond Dam – A beaver dam found some fifty feet above the Adamant Pond Dam failed on May 3, 2010. According a WCAX news article, over 2 million gallons of water flowed from the dam and caused flood waters more than 4 feet deep at times. The flood waters washed out a section of the main road in Adamant Village and caused seven homes to be evacuated. At right is a picture of the flooding in downtown Adamant. Since the flooding event, beaver baffles - contraptions of black piping and fencing - have been installed and are being continuously monitored.

Hazard	Location	Vulnerability	Extent	Impact	Probability
Dam Failure	*Area downstream from Curtis Pond Dam and Robinson Dam*	*Private property, roads, culverts, electrical substation, Town Hall and the Kent Museum*	*Flood waters 4 ft deep; 7 homes evacuated in Adamant Village*	*Substation repairs in event of >4ft flow estimated at $250,000-$400,000; repairs to three significantly affected roads estimated to range from $400,000-500,000*	*High*

5.3 Moderate Threat Hazards

Water Supply Contamination

Calais relies almost entirely on groundwater for potable water and the most common threats to groundwater are from failed septic systems, agricultural runoff, leaking residential and commercial underground storage tanks, and the improper disposal of hazardous materials. East Calais Village is served by a public water system owned and operated by the East Calais Fire District #1. The water system currently serves approximately 52 connections. Because East Calais Village is served entirely by on-site septic systems, many of which are on small lots, the public water system serving the village is critical. The protection of the system's source springs from any contamination is, therefore, very important.

The municipal water system's source consists of a series of two springs located in an upland groundwater discharge area northeast of the Village. The springs are piped to a two cell, poured in-place concrete reservoir. The State has designated a wellhead protection area (WHPA) in town regulated by Vermont's groundwater protection law (10 V.S.A. Chapter 48), which sets forth general policies for WHPAs. The ANR's Water Supply Division has published recommended land use guidelines for WHPA's. Though it is the policy of the Town that such policies and guidelines be followed, concern has been expressed regarding the proximity of an excavating operation on a property adjacent to that of the concrete reservoir. No issues have arisen to date, but the Town should potentially conduct an engineering study regarding needs and options for eliminating or reducing this vulnerability to the Town's water supply.

This Plan recognizes that there is a distinction between a hazard itself and a community's vulnerability to hazards, though Water Supply Contamination was discussed as a moderate threat hazard at the Calais Local Hazard Mitigation meeting. In future Local Hazard Mitigation Plan updates, Water Supply Contamination will be discussed via a lens of vulnerability and a potential for loss as it relates to a particular hazard or multiple hazards.

Hazard	Location	Vulnerability	Extent	Impact	Probability
Water Supply Contamination	Wellhead Protection Area, adjacent excavating operation, East Calais Village	Residential buildings	Water district serves 52 connections .	Costs associated with clean-up or development of alternative water supplies	Low

Landslide

A landslide is the sliding of a large mass of rock material, soil, etc., down the side of a mountain or cliff. Landslides can be caused by rainstorms, fires, alternate freezing or thawing and/or by the steepening of slopes by erosion or human modification.

In 2005, it was reported to the Selectboard by the Road Commissioner that the road and guardrails were sinking to roughly 18" lower than usual on Moscow Woods Road. Due to the potentially unstable conditions, in May 2006 the hillside on Moscow Woods Road was secured with 110 large concrete blocks to form a retaining wall and a 10,000 pound weight restriction was put in place for vehicle travel. No further issues have been reported to date.

Hazard	Location	Vulnerability	Extent	Impact	Probability
Landslide	Moscow Woods Rd	Road infrastructure	Roughly 0.8 acre area of potential subsidence affecting ~ 100 ft of road	Road relocation or rebuilding estimated to cost $500,000	Low

Extreme Cold/Winter Storm/Ice Storm

History of Occurrences (county wide)
Snow and/or ice events occur on a regular basis. Recent significant events have included:

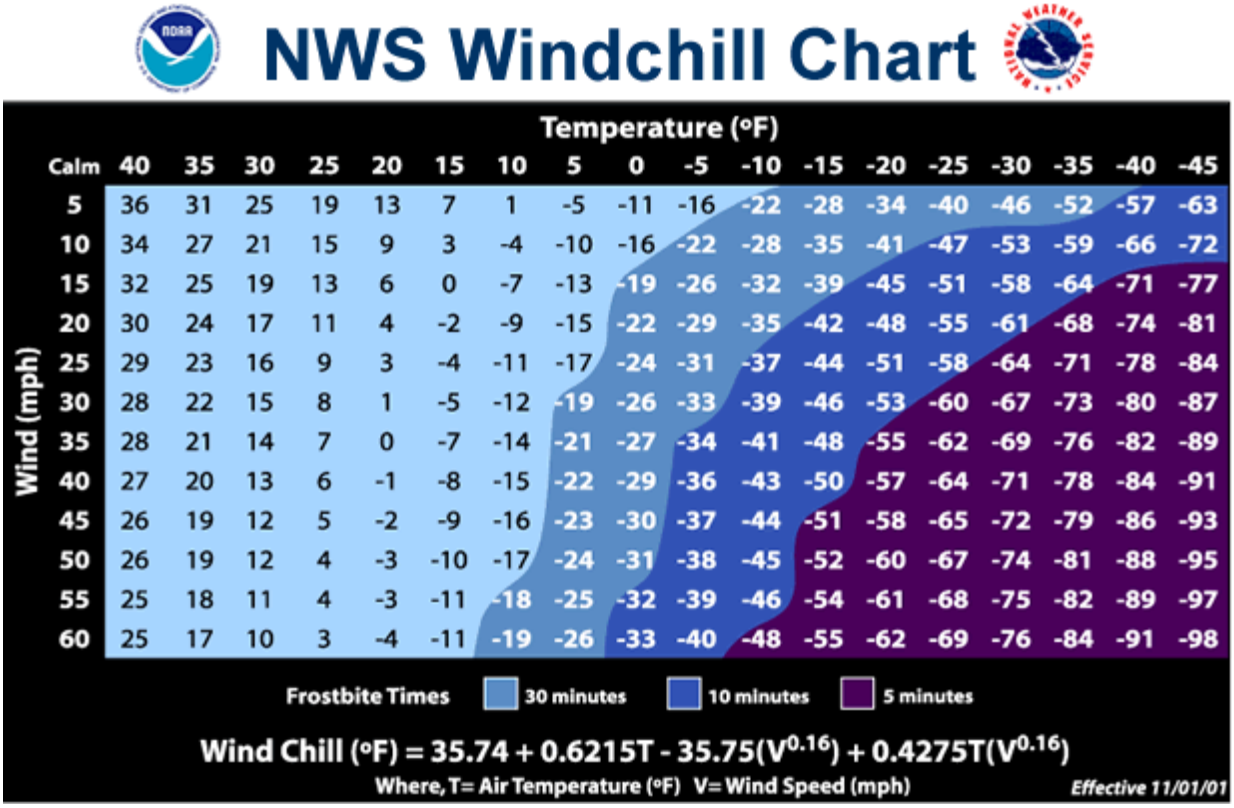
Date	Event	Location	Extent
12/14-12/15/2014	Winter Storm	Calais, County wide	8-12" of snow, 120,000 customers without power statewide
3/12/2014	Winter Storm	Calais, County wide	12-20" of snow; 35-40 mph wind gusts;
3/19/2013	Winter Storm	Calais, County wide	6-14" of snow
12/26/2012	Winter Storm	Calais, County wide	9-18" of snow
3/6/2011	Winter storm	Calais, County wide	12-18" of snow, 10,000 customers lost power statewide
2/23/2010	Winter Storm	Calais, County wide	20" of snow and 50,000 customers lost power statewide
2/22/2009	Winter Storm	Calais, County wide	16" of snow, 30 mph wind gusts
2/1/2008	Winter storm	Calais, County wide	3-7" of snow and ice ¼-1/2"thick, 50 mph wind gusts
2/14/2007	Winter storm	Calais, County wide	22" of snow
2/14/2006	Winter storm	Calais, County wide	30" of snow
1/4/2003	Winter storm	Calais, County wide	19" of snow
3/5/2001	Winter storm	Calais, County wide	15-30" of snow
12/31/2000	Winter storm	County wide	10" of snow
1/15/1998	Winter storm	Calais, County wide	10-12" snow (not a DR in Washington County)
12/29/1997	Winter storm	Calais, County wide	21" of snow
12/7/1996	Winter Storm	Calais, County wide	12" of snow
3/21/1994	Winter storm	Calais, County wide	5-11" of snow
11/1/1993	Winter storm	Calais, County wide	15" of snow
1/3/1993	Freezing Rain	Calais, County wide	¼-1/2" freezing rain

A winter storm is defined as a storm that generates sufficient quantities of snow, ice or sleet to result in hazardous conditions and/or property damage. Ice storms are sometimes incorrectly referred to as sleet storms. Sleet is similar to hail only smaller and can be easily identified as frozen rain drops (ice pellets) that bounce when hitting the ground or other objects. Sleet does not stick to wires or trees, but in sufficient depth, can cause hazardous driving conditions. Ice storms are the result of cold rain that freezes on contact with the surfaces coating the ground, trees, buildings, overhead wires and other exposed objects with ice, sometimes causing extensive damage. Periods of extreme cold tend to occur with these events.

The physical impacts of winter storms are town wide due to the expansive nature of winter storms. For the next plan update, Calais will more closely monitor winter storms to determine the worst impacts possible on the Town. Based on past occurrences, the worst anticipated winter weather Calais could experience would be 2-3' in 24 hrs of snow with more at higher elevations and several days of power outages. The worst recent storm was in December 2014 when 8-12 inches of snow fell over Washington County. During the course of the storm, 112,000 electric customers statewide lost power because of the heavy, wet snow that toppled trees, branches and power lines. From a standpoint of purely utility-related damage, this snowstorm proved worse than Tropical Storm Irene.[3] . Scales to measure the extent of winter storms are:

Heavy snowfall – Calais is significantly affected when they experience an accumulation of 7 inches or more of snow in a 12-hour period or 13 inches or more in a 24-hour period.
Blizzard – Calais is significantly affected when they experience sustained wind speeds in excess of 40 mph accompanied by heavy snowfall or large amounts of blowing or drifting snow.
Ice storm – Calais is significantly affected when they experience ice accumulations of ¼" or greater.

Wind Chill Extent Scale



NWS Windchill Chart

Wind (mph) \ Temperature (°F)	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes, 10 minutes, 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01

[3] Utilities: Snowstorm damage tops Irene, '98 ice storm. Burlington Free Press. (http://www.burlingtonfreepress.com/story/news/local/vermont/2014/12/12/vermont-electric-customers-still-dark/20301749/)

One of the major impacts associated with ice storms is the loss of electrical power. Major electric utility companies have active, ongoing programs to improve system reliability and protect facilities from damage by ice, severe winds and other hazards. Typically, these programs focus on trimming trees to prevent encroachment of overhead lines, strengthening vulnerable system components, protecting equipment from lightning strikes and placing new distribution lines underground.

Additionally, sensitive populations such as the elderly or handicapped may be susceptible to extreme cold when power is lost and heating systems are run on electricity (versus gas or natural fuels). If power is lost, some populations may need to be relocated to areas with power so that medical equipment can function. Additionally limited mobility of some persons may make it difficult to relocate in general or in times of emergencies.

Given that 95 percent of the roads in Calais are unpaved, maintenance of these roads during a heavy winter storm may become an issue for special populations that need evacuation from their homes, especially those that live on Class 4 roads. The Town encourages neighbors to check on those neighbors who they may believe to be at risk during times of emergency. In the future, the Town can map the location of sensitive populations and trouble spots on roads that reach those populations in order to identify additional routes. Also, the Town can continue to provide outreach and education of the impacts of winter storms to these populations.

Other major impacts include closed roads, restricted transportation and large buildings collapsing under the weight of heavy snows.

By observing winter storm watches and warnings, adequate preparations can usually be made to lessen the impact of snow, ice and sleet, and below freezing temperature conditions on the Town of Calais. Providing for the mass care and sheltering of residents left without heat or electricity for an extended time and mobilizing sufficient resources to clear broken tree limbs from roads, are the primary challenges facing community officials. Calais should plan and prepare for these emergencies. That planning and preparedness effort should include the identification of mass care facilities and necessary resources such as cots, blankets, food supplies and generators, as well as debris removal equipment and services. Sheltering areas in Calais include Calais Elementary School. The Town encourages residents who are in remote locations to be equipped with generators and backup fuel supplies in the event of prolonged power outages and travel restrictions.

Hazard	Location	Vulnerability	Extent	Impact	Probability
Extreme Cold/Winter Storm/Ice Storm	Town Wide	Elderly & handicapped populations, remote structures, old/under	18+" snow in March 2011 storm in 24 hrs, Blizzard of 1888	Additional sheltering/ plowing/ emergency services costs for town -	High

		insulated structures, utilities, trees		$15,000	

6. Mitigation

6.1 Town Plan (2015) Goals that Support Local Hazard Mitigation

- Minimize scattered development patterns and protect open space, agricultural soils and other natural resources outside of village districts.
- Mitigate dam failure hazards.
- Mitigate risks in flood hazard areas.
- Provide ready access to flood hazard related information.
- To protect ground water sources [recharge areas] so that drinking water is safe for all residents.
- To provide education about a Green Infrastructure Plan for surface water and storm water management.
- Renovate the Town Hall in a way to meet historic preservation and safety requirements, and become energy efficient.

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Calais' town plan will be updated in 2020. The Town is interested expanding on goals which relate to mitigation planning goals.

The goal of this hazard mitigation plan is to:

- To take actions to reduce or eliminate the long-term risk to human life and property from:
    - Dam failure
    - Flooding/Flash Flooding/Fluvial Erosion
    - Water Supply Contamination
    - Landslide
    - Extreme Cold/Winter Storms/Ice Storms.

Specific hazard mitigation strategies related to goals of the Plan include:

- Ensure existing and future drainage systems are adequate and functioning properly.
- Preserve and prevent development in areas where natural hazard potential is high.
- Ensure that all residents and business owners are aware of the hazards that exist within Calais and ways they can protect themselves and insure their property.
- Ensure that emergency response services and critical facilities functions are not interrupted by natural hazards.

6.2 Identified Hazard Mitigation Programs, Projects & Activities

Hazard mitigation programs, projects and activities that were identified for implementation at the Town Local Hazard Mitigation meeting are:

Hazard Mitigated	Mitigation Action	Local Leadership[4]	Prioritization (High, Med)	Possible Resources[5]	Time Frame
Flood/Flash Flood/Fluvial Erosion	Upgrade and replace culverts identified in attachments	Road Foreman, SB	High	HMGP, VTrans, Town Funds	2-3 years
Flood/Flash Flood/Fluvial Erosion	Replace Pekin Branch Bridge; Max Gray Road	Road Foreman, SB	High	HMGP, VTrans, Town Funds	3-4 years
Flood/Flash Flood/Fluvial Erosion/Landslide	Implement Fluvial Erosion Hazard/River Corridor regulations	PC, Residents	High	VLCT, ANR, MPG	2 years
Flood/Flash Flood/Fluvial Erosion	Treat select Road Erosion Sites identified in attachments	Road Foreman, SB	Med	Better Back Roads, Town Funds	2-3 years
Flood/Flash Flood/Fluvial Erosion	Flood-proof historic Town Hall structure	SB, SHPO, Hist. Society	Med	HMGP, Town Funds	1-2 years
Flood/Flash Flood/Fluvial Erosion	Review options with regard to FEMA's Community Rating System	SB, PC	Med	Town Funds	1-2 years
Flood/Flash Flood/Fluvial Erosion	Review Zoning Regulation language with regard to septic and water systems in flood areas	PC	Med	Town Funds	1 year
Dam Failure	Reestablish an effective Emergency Action Plan for Curtis Pond Dam	Road Foreman, SB, PC	High	HMGP, Town Funds	1-2 years

[4] SB – Select Board, PC - Planning Commission, ANR – Agency of Natural Resources
[5] HMGP – Hazard Mitigation Grant Program, EMGP – Emergency Management Grant Program, PSIC/NTIA – National Telecommunications and Information Administration, USDA – United States Dept. of Agriculture

Dam Failure	Revisit Curtis Pond Dam replacement process: i) get up-to-date cost estimates, ii) set up a replacement schedule/timeline, iii) establish dam replacement fund	Road Foreman, SB	High	HMGP, ANR, Town Funds	2-3 years
Dam Failure	Establish beaver dam reporting and monitoring mechanism to track large impoundments of water which have recognized destructive potential	SB	Med	HMGP, ANR, Town Funds	1-2 years
Landslide	Evaluate drainage pattern in the hillside to prevent future saturation	Road Foreman, SB	Med	Better Back Roads, VTrans	1-2 years
Extreme Cold/Winter Storm/Ice Storm	Provide training to residents on how to insulate homes (pipes, attics) for extreme cold spells	SB, PC, Fire Dept	Med	EMPG	2 years
Extreme Cold/Winter Storm/Ice Storm	Upgrade electrical systems in municipal buildings and shelters to prevent surge/equipment damage from fluctuating current during ice and wind storms	Fire Dept, SB	Med	General Funds, EMPG	3-4 years
NFIP Compliance	Work with elected officials, the State and FEMA to correct existing compliance issues and prevent any future NFIP compliance issues through continuous communications, training and education	PC, ZA, ANR	Med	Town Funds	1-2 years
NFIP Compliance	Inventory and document all known 37 existing structures that are within the Flood Hazard Overlay District	PC, Listers	Med	Town Funds	1 year

VEM also emphasizes a collaborative approach to achieving mitigation on the local level, by partnering with ANR, VTrans, ACCD, Regional Planning Commissions, FEMA Region 1 and other agencies, all working together to provide assistance and resources to towns interested in pursuing mitigation projects and planning initiatives.

The Hazard Mitigation Activities Matrix (Attached) lists mitigation activities in regards to local leadership, possible resources, implementation tools, and prioritization. Prioritization was based upon the economic impact of the action, the Community's need to address the issue, the action's cost, and the availability of potential funding. The action's cost was evaluated in relation to its benefit as outlined in the STAPLEE[6] guidelines.

Calais understands that in order to apply for FEMA funding for mitigation projects, a project must meet FEMA benefit cost criteria. In addition, the Town must also have a FEMA approved Hazard Mitigation Plan.

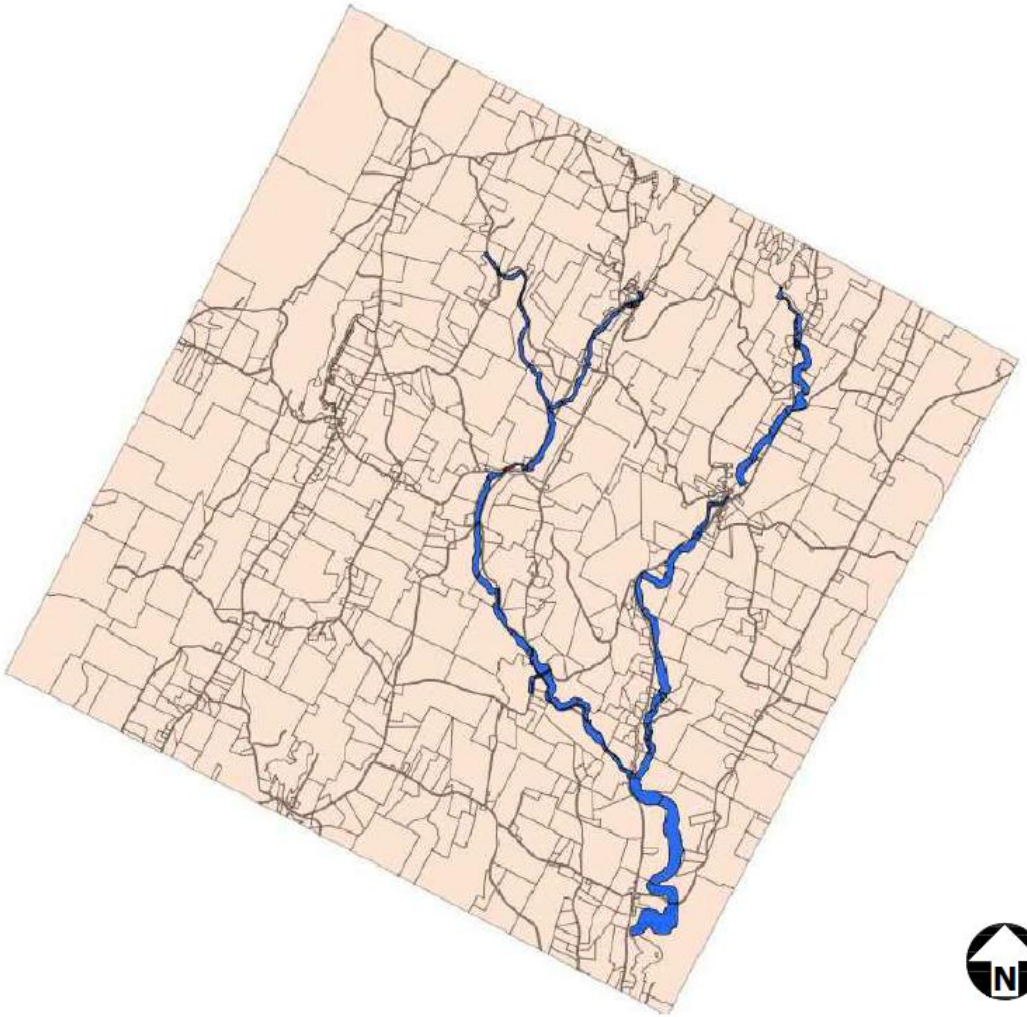
A High prioritization denotes that the action is either critical or potential funding is readily available and should have a timeframe of implementation of less than two years. A Medium prioritization is warranted where the action is less critical or the potential funding is not readily available and 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.

Attachments

- Fluvial Erosion Hazard Areas Map
- Municipal Facilities Map
- Flood Hazard Overlay Map
- High Priority Culvert Inventory and Road Erosion Sites
- Apr. 8, 2013 Selectboard Agenda announcing LHMP discussion at future meeting
- Apr. 22, 2013 Selectboard Agenda announcing LHMP discussion at future meeting
- May 13, 2013 Selectboard Agenda discussing LHMP (overview and recruit participants)
- May 13, 2013 Selectboard meeting minutes
- July 2013 Central Vermont Regional Planning Commission staff report announcing Calais LHMP update process
- CVRPC Commission meeting packet distribution lists
- Nov. 10, 2014 Selectboard Agenda discussing LHMP
- Nov. 2014 Central Vermont Regional Planning Commission staff report reminder of Calais LHMP update process

[6] A method of evaluating mitigation actions based on **S**ocial, **T**echnical, **A**dministrative, **P**olitical, **E**conomic, **E**nvironmental criteria

- Example email to EMD in adjacent municipality
- CVRPC Blog post screenshot
- Municipal web site announcement soliciting comments on LHMP
- 5 year review and maintenance process
- Town Resolution Adopting the Plan



TOWN of CALAIS

Natural Resource & Emergency Management

Fluvial Erosiuon Hazard areas (blue)

Originator: Vt ANR

As defined by the **Watershed Management Division** of ANR, "Fluvial erosion is erosion caused by rivers and streams, and can range from gradual bank erosion to catastrophic changes in river channel location and dimension during flood events." To safeguard property from the catastrophic impact of fluvial erosion, a "river corridor" has to be defined and understood to be an area within which there is a strong possibility for a change in a river channel location. The state of Vermont Department of Environmental Conservation has prepared Fluvial Erosion Hazard (FEH) area maps for use by the town. Currently, Calais has riparian buffer setbacks around its water bodies and wetlands ***Land Use & Development Regulations for the Town of Calais***, adopted by the Calais Selectboard January 3,2005, last amended March 4, 2014, Section 3.13. Named streams are also protected by a fifty foot deep riparian buffer measured from the edge of the bank. River Corridors add these fifty foot buffers to Fluvial Erosion Hazard areas. The exact width of a river corridor is determined by the configuration of the stream meander or river course.

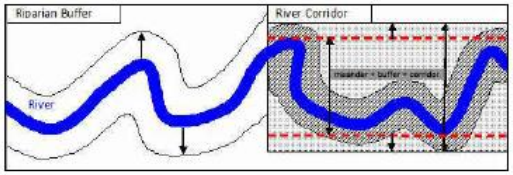


Fig. 2 Riparian Buffer and River Corridors

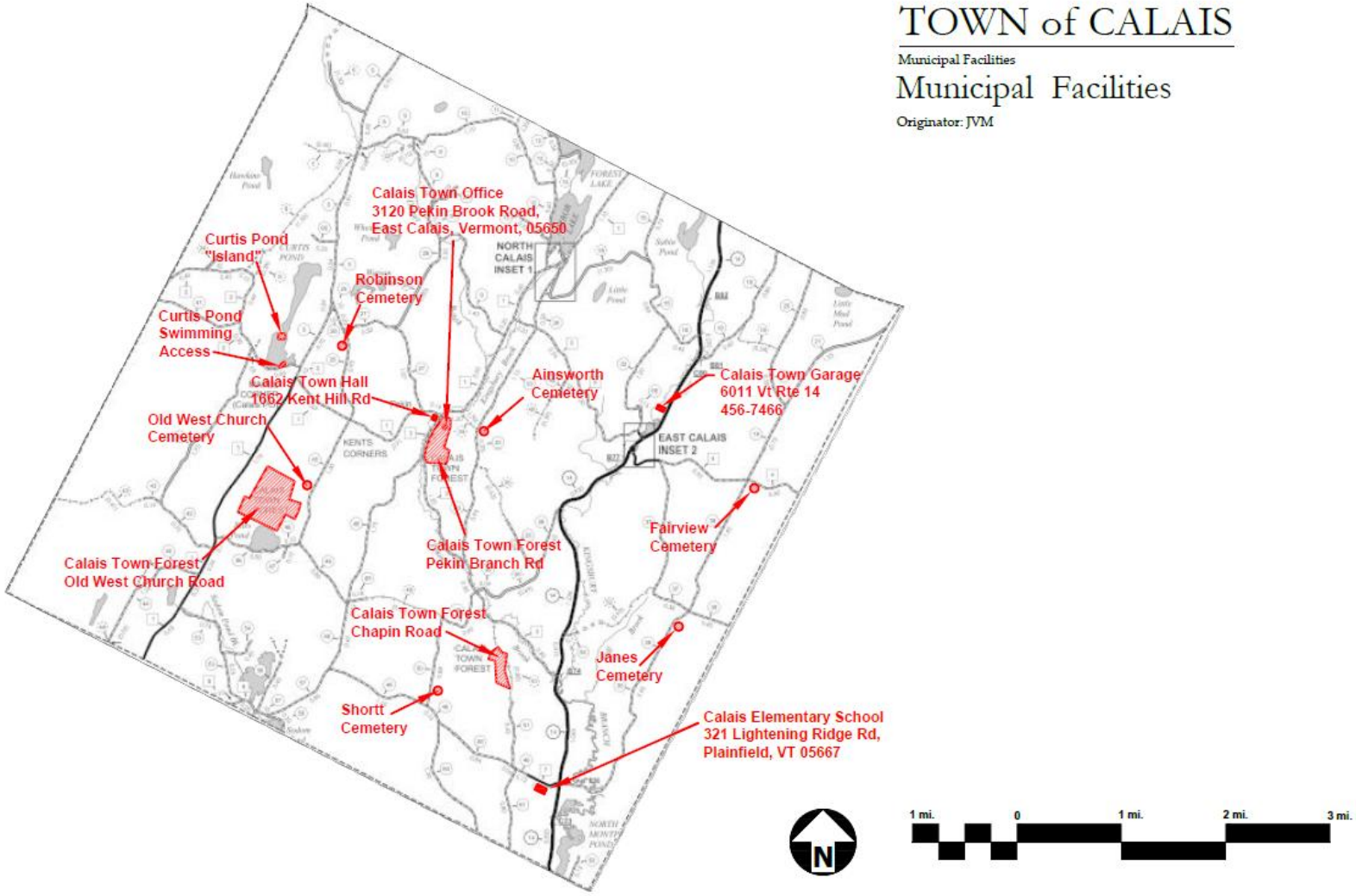
Figure 2 shows the difference between Riparian Buffers and River Corridors. The River Corridor width is determined, in this example, by the general width of the meander along a length of the river's course plus the protective Riparian Buffer. River Corridor widths are variable, depending on the meander pattern. The Kingsbury Branch and the Pekin Brook are both meandering streams. And both have been identified as **Fluvial Erosion Hazard** (FEH) areas in our LHMP.

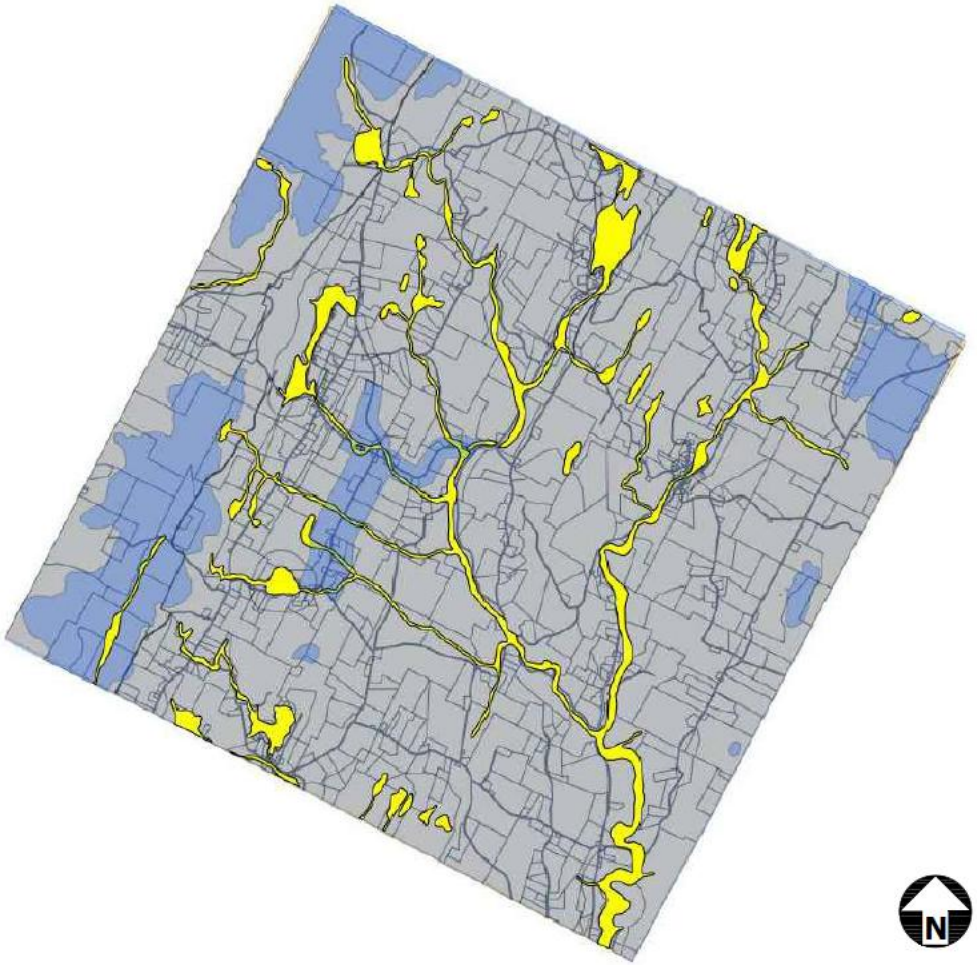
TOWN of CALAIS

Municipal Facilities

Municipal Facilities

Originator: JVM





TOWN of CALAIS

Zoning Districts and Overlay Districts

Flood Hazard Overlay District (yellow highlight)

Originator: Town of Calais

Purpose The purpose of the flood hazard area overlay district is to prevent or minimize the loss of life and property, disruption of commerce, impairment of the tax base and extraordinary public expenditure from the results of flooding; to further insure that design and construction of development would eliminate or minimize the potential for flood damage; and to ensure that the flood-prone lands are managed in accordance with state and federal regulations and thereby ensure that property owners are eligible for flood insurance through the National Flood Insurance Program (NFIP).

High Priority Culvert Inventory – Town of Calais
(Culverts in Critical, Urgent or Closed Condition)

Condition	Road	#
Critical/Urgent	Apple Hill Road	1
	East Hill Road	1
	Fowler Road	1
	Kent Hill Road	1
	Pekin Brook Road	1
Closed	Adamant	1
	Balentine	4
	Batten	2
	Bayne Com	2
	Blachly	3
	Bliss Pond	1
	Collar Hill	1
	County Road	3
	Foster Hill	1
	Fowler	2
	Gray	1
	Haggett	1
	Jack Hill	1
	Lightening	3
	Long Meadow	1

	Luce	2
	Marshfield	2
	Max Gray	1
	N. Calais	3
	Number 10	1
	Pekin	2
	Singleton	1
	W. County	2
	Wheeler	1
	Worcester	3

High Priority Road Erosion Sites – Town of Calais

Erosion Site 1 – Location – 500 feet of road shoulder erosion along Long Meadow Rd 0.44 miles west of County Rd; Site Slope Calculation – 12%; Suggested Erosion Treatment:

- Add 2-3 new cross culverts below existing culvert
- Add stone aprons at outlets of new culverts and existing culvert
- Install headers and footers on all new culverts and existing culvert
- Armor shoulder above existing culvert
- Improve ditch and stone line for length of erosion about 500 ft
- Replace existing culvert if undersized for location.

Erosion Site 2 – Location – 820 feet of road shoulder erosion along Mirror Lake Rd 0.16 miles west of Number 10 Pond Rd.; Site Slope Calculation – 12%; Suggested Erosion Treatment:

- Add 1-2 new cross culverts above existing culverts
- Realign existing cross culverts
- Add stone aprons at outlets of new culverts and existing culverts
- Install headers and footers on all new culverts and existing culverts
- Improve ditch and stone line for length of erosion about 820 ft
- Replace existing culvert if undersized for location

Erosion Site 3 – Location – 320 feet of road shoulder erosion along Dugar Brook Rd 220 feet east of West County Rd; Site Slope Calculation – 13%; Suggested Erosion Treatment:

- Add 1-2 new cross culverts above existing culvert
- Add stone aprons at outlets of new culverts and existing culvert
- Install headers and footers on all new culverts and existing culverts
- Improve ditch and stone line for length of erosion about 320 ft
- Replace existing culvert if undersized for location

Erosion Site 4 – Location – 320 feet of road shoulder erosion along Apple Hill 350 feet south of Dugar Brook Rd; Site Slope Calculation – 13%; Suggested Erosion Treatment:

- Improve ditch and stone line for length of erosion about 320 ft
- Improve turnout above bridge
- Stone line apron at turnout
- Install settling pond below turnout

Erosion Site 3 – Location – 700 feet of road shoulder erosion along Jack Hill Rd 0.37 miles north of Pekin Brook Rd; Site Slope Calculation – 7%; Suggested Erosion Treatment:

- Add 1-2 new cross culverts above existing culvert
- Add stone aprons at outlets of new culverts and existing culvert
- Install headers and footers on all new culverts and existing culverts
- Improve ditch by moving it closer to road
- Improve ditch by stone line for length of erosion about 700 ft

- Cut down soil berm along both sides of road
- Replace existing culvert if undersized for location

Monday, April 08, 2013 at 7:00 PM
to Monday, April 08, 2013 at 9:00 PM

Calais Selectboard Agenda
LOCATION: CALAIS TOWN OFFICE
MONDAY, APRIL 8, 2013 @ 7 P.M.

PLEASE NOTE: Except for the start time, all agenda times are guidelines only and subject to change without notice.

7:00 • Administrative Work and Changes or Additions to the Agenda

• Approval of Minutes

• Sign Town Invoices and Road Commissioner Orders

• Budget Update

• Road Commissioner Update (review CalaisMileage Certificate TH-44 Follow-Up)

• Public Comment on Non-Agenda Items

Items for Selectboard Discussion and/or Action

7:30 • Town Meeting Recap with Gus Seelig, Town Moderator

7:50 • WEC Permit – Max Gray Rd.

• Update on Highway, Culvert and CVSWMD Grant Applications

• Consideration of Adamant Residents Concerns re 2013 Town Road and Bridge Standards (Conrad Smith)

• Conservation Commission (Steve Cusick)

• Consideration of Proposed Road & Bridge Standards

• Annual Financial Plan for Town Highways

• Review Calais Appointed Officials List – make reappointments

• Draft dog ordinance – set fines

Reports/Updates (as needed or as time permits)

• Pick date to meet with Chair's of various Boards and Commissions to get updates

• Financial Policy update

• Update/Review Conflict of Interest Policy

Other/New/Old Business that may come before the Board

As needed: Zoning Enforcement Issue and/or Legal/litigation updates

Adjourn

Future Meetings

- Review Charge of the Roads Advisory Committee (4/22 meeting)
- Highway employee's draft evaluation form
- All Boards and Commissions schedule Fluvial GeomorphologyDemonstration w/ ANR
- VLCT Act Relating to Constables
- Ancient Roads – spring 2013
- Set date for Emergency Preparedness drill
- Request to meet by Kim McKee, Assistant Planner, Central Vermont Regional Planning Commission, Re: Local Hazard

Mitigation Planning Info. (4/22 or 5/6 meeting)

Monday, April 29, 2013 at 7:00 PM
to Monday, April 29, 2013 at 9:00 PM

Continued Meeting from April 22, 2013
Executive Session
• Conservation Commission (Steve Cusick)
only item on agenda

Calais Selectboard Agenda
LOCATION: CALAIS TOWN OFFICE
MONDAY, APRIL 22, 2013 @ 7 P.M.

PLEASE NOTE: Except for the start time, all agenda times are guidelines only and subject to change without notice.

7:00 • Moment of Silence
• Administrative Work and Changes or Additions to the Agenda
• Approval of Minutes
• Sign Town Invoices and Road Commissioner Orders
• Budget Update
• Road Commissioner Update
• Public Comment on Non-Agenda Items

Items for Selectboard Discussion and/or Action
7:30 • WEC Permit – County Rd. (Cy Lamberton)
• CVRPC consolidation update and direction to delegate (Rolf Mueller)
• Reduce number of PC members from 9 to 7
• Conservation Commission (Steve Cusick)
• Poor Fen reclassification letter
• Evaluation process for road crew
• Highway equipment purchases and recent passage of Articles 19, 20 and 21 at town meeting
• Annual Financial Plan for town highways
    • Send letter to Tom Anderson at Vtrans prioritizing structure grant applications
    • Confirm sick and vacation leave accrual for road crew and update personnel policy
• Proposed Road & Bridge Standards
• Review Charge of the Roads Advisory Committee
• Calais Appointed Officials – make additional reappointments
• EMFD Interlocal Agreement
• Draft dog ordinance – set fines and discuss service coordination w/ E. Mont.
Animal Control Officer

Reports/Updates (as needed or as time permits)
• Pick date to meet with Chair's of various Boards and Commissions to get updates
• Financial Policy update
• Update/Review Conflict of Interest Policy

Other/New/Old Business that may come before the Board
As needed: Zoning Enforcement Issue(s) and/or Legal/litigation updates

Adjourn (beginning Monday, May 13, 2013 Selectboard Meeting's will be at the Town Hall)

Future Meetings
• Meet w/ PC (5/13)
• All Boards and Commissions schedule Fluvial GeomorphologyDemonstration w/ ANR
• VLCT Act Relating to Constables
• Ancient Roads – 5/13/2013 discuss next steps
• Set date for Emergency Preparedness drill
• Meet w/ Kim McKee, Asst. Plnr., CVRPC, Re: Local Hazard Mitigation Planning Info. (5/13 meeting)

Monday, May 13, 2013 at 7:00 PM
to Monday, May 13, 2013 at 9:00 PM

Calais Selectboard Agenda
LOCATION: CALAIS TOWN HALL
MONDAY, May 13, 2013 @ 7 P.M.

PLEASE NOTE: Except for the start time, all agenda times are guidelines only and subject to change without notice.

7:00 • Administrative Work and Changes or Additions to the Agenda
• Approval of Minutes
• Sign Town Invoices and Road Commissioner Orders
• Budget Update
• Renew Dental Insurance
• Road Commissioner Update
• Public Comment on Non-Agenda Items

Items for Selectboard Discussion and/or Action
7:30 • Adamant Road
• Local Hazard Mitigation Plan, Kim McKee, Assistant Planner, CVRPC
• CVRPC consolidation update and direction to delegate (Rolf Mueller)
• Conservation Commission (Steve Cusick)
• Evaluation process for road crew
• AOT Briefing for Calais VT 14, Bridge 77 over Kingsbury Branch(Scott)
• Review Charge of the Roads Advisory Committee
• Calais Appointed Officials – make additional reappointments
• Draft dog ordinance – set fines and discuss service coordination w/ E. Mont. Animal Control Officer

Reports/Updates (as needed or as time permits)
• Pick date to meet with Chair's of various Boards and Commissions to get updates
• Financial Policy update
• Update/Review Conflict of Interest Policy

Other/New/Old Business that may come before the Board
As needed: Zoning Enforcement Issue(s) and/or Legal/litigation updates

Adjourn
Future Meetings
• E. Calais intersection (5/20)
• Meet w/ PC
• ATV's (Woodbury's ordinance w/ possible increased traffic in Calais)
• All Boards and Commissions schedule Fluvial GeomorphologyDemonstration w/ ANR
• VLCT Act Relating to Constables
• Ancient Roads – 5/13/2013 discuss next steps
• Set date for Emergency Preparedness drill

Denise said that the draft could be posted on the town web site and on Front Porch Forum for feedback. The board is trying to address the concerns they have heard over the years, but they only meet twice a month and have a lot of things on their plate. Scott said the Selectboard heard from a lot of people who didn't like the way this project was going and the board needs to get back to residents with more specific plans. Toby Talbot said he thought Alfred is tuned into having discussions with people along the road. What may or may not be problem trees were identified and it did what it was intended to; it got people to pay attention, he said.

Craig Line said he didn't want Alfred to feel beat up, that he is concerned about process. It's not Alfred; it's the road commissioner position. I've complained about all of them, he said. Denise said the Selectboard would do a better job of notifying people of what's going on. There will be meetings on the Adamant Road project as well as other projects. The resurfacing of Adamant Road is on hold. Alfred reminded the group that this is construction season so there is a need to move forward.

Executive Session

John made a motion to go into executive session in accordance with 1 V.S.A. § 313 (a) (1) for the purpose of discussing a legal matter with Steve Cusick, Chair, Conservation Commission. The motion was seconded, voted and carried 4-0. The board returned from the executive session at 8:50 p.m. with nothing to publicly report.

Hazard Mitigation Plan

Kim McFee, assistant planner, Central VT Regional Planning Commission (CVRPC), will assist the town in updating its local hazard mitigation plan, last done in 2005. The plan expires after five years. The plan's purpose is to improve the town's ability to reduce the financial, social, and environmental impacts after a storm. A FEMA-approved plan makes the town eligible for FEMA money after a disaster. Without a plan, the town is still eligible for FEMA funds in an emergency, but the plan helps in receiving grant money for mitigation. CVRPC will write the plan and arrange meetings with the Planning Commission, road commissioner, Selectboard and others with knowledge of the town's infrastructure to identify/prioritize potential problems and look at mitigation. There will be two one-hour meetings. CVRP brings worksheets to collect the data; the plan goes to FEMA; FEMA conditionally approves; the Selectboard adopts it; it goes back to FEMA for final approval. This process can take a few months but the deadline for submission of the plan is in July 2013. Jack Russell, chair, Planning Commission, said the Planning Commission had looked at it and the mitigation planning has a lot to do with roads. He said the town is okay with flood plains, have met with the State and FEMA. The Planning Commission will be involved as necessary. Toby noted that the last time the hazard mitigation plan was put together it was a meeting of the town's emergency management coordinator (Toby), the road commissioner and CVRPC. Denise said she would like to be notified of when that meeting is scheduled. She wants the Conservation Commission to approve the plan. Kim said there's a public process requirement also.

CVRPC and CVEDC Consolidation

Rolf Mueller, zoning administrator and town representative to the CVRPC said there will be a discussion of the merger of CVRPC and Central VT Economic Development Council at CVRPC's May 14th meeting, but there will not be a vote. There are currently four commission members against the merger. He has emailed their letters to the Selectboard. All meetings are videotaped and are on-line. Denise stated the board is not in favor of the consolidation. At the next CVRPC meeting, Rolf will ask how the town will benefit from the consolidation.

Route 14 Bridge Construction

Scott Bassage showed a presentation prepared by Chris Williams, Structures Division – Agency of Transportation, which Chris presented at a previous meeting at the town office. There are plans to replace portions of 3 bridges on Route 14 in Calais. The first bridge to be reconstructed is bridge #82, located

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Workshops: CVRPC hosted an E911 coordinators workshop, Census data training, and zoning administrators roundtable. Staff is planning fall workshops, as well. If you have particular training needs, please let us know.

Transportation Planning Initiative: Staff is participating on a committee that is developing updated culvert standards. Staff encourages the use of the metadata instructional video for information on editing data for the Vermont Online Bridge and Culvert Inventory Tool (VOBCIT). Staff is assisting the Towns of Fayston, Waitsfield, Warren, Moretown, Waterbury, and Middlesex with their byway work. Staff continues to work on the Central Vermont Regional Path with Berlin, Barre City, Barre Town, and Montpelier. Staff worked with Moretown and Fayston in the Safe Routes to School program. Staff did traffic counts in Barre Town and Waitsfield and met with the Woodbury Road Foreman to gather data for a Better Back Roads grant application. Staff is assisting Plainfield with their Village pedestrian, bridge, and sidewalk study. Staff also developed maps for Northfield showing their rights of way. Staff did bike/ped counts in Warren, worked on the Plainfield and Cabot culvert inventories, and developed maps for gravel roads in Northfield.

Transportation Technical Assistance: Staff continues to provide technical assistance on transportation related issues. Contact Steve Gladczuk at CVRPC for assistance with special transportation studies and technical assistance that may be needed in your community and are within the scope of work of the transportation contract with the Agency of Transportation. Municipal officials that would like to have volume, speed, or vehicle classification studies done for their towns can contact CVRPC staff for assistance.

GIS/FEH: Staff assisted with, developed or updated a number of maps including: Forest Stewardship grant maps, road erosion training, Northfield, Waterbury, Barre Town, and Plainfield with GIS data and questions, data collection for the Great Brook, Plainfield geomorphic study, VT Yankee drill, Northfield storm water study, Forest Stewardship grant (through which stakeholders will identify and assess forest resources and produce strategies that will help keep forests in forestry), and flood plain restoration work for a HMGP application. Staff continues to update the CVRPC web site, www.centralvtplanning.org, where you can read the latest planning news on our blog, and maintain the IT network. You can also Find us on Facebook!

VEM/Emergency Planning/Hazard Mitigation Funding: Paul Luciano, our Regional Emergency Management Planner, is continuing to work with local officials and offering assistance in updating the Basic Emergency Operation Plans (aka "BEOP's"), as well as flood issues and how to access relevant resources. The BEOP plans provide contact information and response plans for emergencies, such as floods or ice storms. Paul is also available to assist with HMGP (hazard mitigation grant program) grant applications. Paul can be contacted at 802/881-1654 or contact us at CVRPC and we'll pass along your message. Staff participated in the Vermont Yankee drill at the State Emergency Operations Center.

Local Hazard Mitigation Plans (LHMP): Fourteen towns have received final FEMA approval of their local hazard mitigation plans (LHMP) with 5 towns awaiting final approval. Having a LHMP (which is good for 5 years after final approval) makes towns eligible for FEMA grants such as the Hazard Mitigation Grant Program (next round of applications is July 12 in connection with Tropical Storm Irene) flood mitigation assistance, and the pre-disaster mitigation competitive grant program. If your community is interested in technical assistance from CVRPC, please contact Kim McKee at Mckee@cvregion.com. Paul Luciano can assist with these grant applications and can be contacted at 802/881-1654 or pluciano@ccrpcvt.org. Staff is assisting Calais and Marshfield with LHMP updates.

Flood Hazard Area Regulations (FHAR): Staff continues to assist affected municipalities and the State with various issues surrounding the bylaw adoption process, as well as the impacts from flooding.

Wrightsville Beach Recreation District: Staff provides administrative, fiscal, and technical assistance to the District. The beach facilities include hiking trails, a ball field, Frisbee disk golf, grills, picnic tables, as well as a picnic shelter that can be rented, and of course, swimming, canoeing, and kayaking. The beach is now open daily from 9 a.m. to dusk!! to rent the picnic shelter, contact Laurie Emery at 229-0389 or emery@cvregion.com.

Enhanced Consultation: ***If your community is in the process of revising its town plan or is planning to do so in the near future, now is the time to have us conduct an enhanced consultation.*** Staff will provide local

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Mary Just Skinner, Middlesex	mskinner@sover.net
Matt Dwire, Middlesex	jodyannmatyboy@msn.com
Montpelier Andrew Hooper (ahooper@cabotcheese.com)	ahooper@cabotcheese.com
Peter Hood, Middlesex	phood@nwjinsurance.com
Randy Graves, Warren	rgraves@gmvs.org
Richard Quelch, Calais	richq@norwich.edu
Rob Bridges, Plainfield	rob.bridges@us.army.mil
Rob LaClair, Barre Town	robsplow@comcast.net
Rob Young, Berlin	rob.young@state.vt.us
Robert Cranse, Montpelier	rcc59@comcast.net
Robert Manley, Berlin	manley@voyager.net
Roberta Haskin, Berlin	rhaskin@gmavt.net
Roger Strobridge, Worcester	stromon@myfairpoint.net
Ronald Tallman, Orange	1stvtcav@gmail.com
Russ Bennett	russbenn@wcvt.com
Scott Blanchard, Washington	scott.blanchard@goddard.edu
Scott Smith, Berlin	scott.smith@state.vt.us
scott.bassage@gmail.com	scott.bassage@gmail.com
Steve Shea	sshea@paigeandcampbell.com
Steven Jeffrey, Northfield	sjeffrey@trans-video.net
Susan Finnefrock, Waterbury	suzyfrock@gmail.com

SELECTBOARD AGENDA

LOCATION: TOWN OFFICE

MONDAY, NOVEMBER 10, 2014 @ 7:00 P.M.

PLEASE NOTE: Except for the start time, all agenda times are guidelines only and are subject to change without notice.

7:00 pm
- Administrative work and changes or additions to the agenda
- Public Comment on Non-Agenda Items
- Review & Sign Town Invoices, Highway Orders and Budget Update
- Appointed Officials (make appointments or reappointments as needed)
- Approve Minutes
- Road Commissioner update
  - Update on temporary bridge in N. Calais
- Operations Manager update

7:30 pm
- Mountain Tamers Snowmobile Club 2014-2015 season request (Steve Gray)
- Twin Valley Sr. Center (Rita Copeland)
- Delinquent Tax Collector request to hire attorney for tax sale (Nedene Martin)
- Ancient Roads – review site visit schedule
- Town Report budget line items #6500 through #6515
- Review *draft* dog ordinance and discuss fines (Wilson Hughes)

8:15 pm
- Local Hazard Mitigation Plan (Kim McKee, CVRP)
- Review d*raft* Purchasing Policy (time permitting)
- Proposed agenda items for 11/24/14 meeting

Reports/Updates (as needed or as time permits)
Other/New/Old Business that may come before the Board
As needed: Zoning enforcement issue(s) and/or legal/litigation updates

Adjourn/continue meeting

Future Meeting(s)
- VLCT Act Relating to Constables
- Internet Usage Policy
- Memorial Hall (11/24/14)
- GAR Rd.
- Curtis Pond Island Ordinance
- Central Vermont New Directions Coalition (Ann Gilbert 223-4949/272-0456 – 11/24/14)
- Joint meeting w/ E. Mont. SB re EMFD budget (12/8/14 Calais Town Office)

grant application for a culver replacement, and began the grant application for State Ecosystem funds to collect geomorphic data along the Mad River and its tributaries in Moretown in order to develop a river corridor plan. Staff continues to update the CVRPC web site, www.centralvtplanning.org, where you can read the latest planning news on our blog, and maintains the IT network. You can Find us on Facebook! and Find us on Twitter!

Regional Plan Update: *Plan Central Vermont* will take up a variety of issues between now and 2016 to build a more sustainable and engaged Region. The Commission continued to discuss the draft Strong and Diverse Economy element at their meeting on October 14, and staff continued to revise the element to address the Commission's comments on the proposed goals, policies and strategies. The draft will be taken up by the Draft Review Committee again at their meeting on Nov. 4 and by the Commission at the Nov. 11 meeting.

The fourth meeting of the Environment and Natural Resources working group was held on Oct. 22 where the draft Natural Resources profile was discussed and the draft Key Challenges and Trends document was reviewed. The next meeting will be held on Nov. 17 to continue discussing the draft Key Challenges & Trends and to begin discussing a draft of the Goals, Policies and Trends. A Health and Community working group will begin meeting in November to discuss the Healthy Communities and Community Resources elements. Contact Emily Nosse-Leirer at nosse-leirer@cvregion.com to sign up. Upcoming meeting information and meeting summaries can be found here: http://plancentralvermont.org/news-events/.

Wrightsville Beach Recreation District: Staff provides administrative, fiscal, and technical assistance to the District. The beach and park facilities include hiking trails, a ball field, disc golf, grills, picnic tables, as well as two picnic shelters that can be rented, and of course, swimming, canoeing, and kayaking. If you want to rent one of the picnic shelters for your birthday, reunion or other event, it is best to do so early (Yes, even now for next season!); contact Laurie Emery at 229-0389 or emery@cvregion.com. The website for Wrightsville Beach has photos of the shelters and amenities; take a look at www.wrightsvillebeachvt.com.

Enhanced Consultation: If your community is in the process of revising its town plan or is planning to do so in the near future, now is the time to have us assist._ Staff will provide local officials with recommendations on how their plan is or is not consistent with the State planning goals and how the town can make "substantial progress" toward meeting those goals as outlined in 24 VSA Chapter 117. For more information, please contact Kim McKee at Mckee@cvregion.com.

DEMHS/Emergency Planning/Hazard Mitigation Funding: If your community has not yet submitted a Local Emergency Operation Plan (LEOP), please do so immediately or request assistance from CVRPC as the new ERAF rule went into effect on Oct. 23. Staff has continued ongoing outreach and has been working with the Towns of Worcester and Roxbury to complete their LEOP's and have them approved by DEMHS (Division of Emergency Management/Homeland Security). Staff attended a Local Emergency Planning Committee (LEPC 5) meeting in Waterbury and assisted DEMHS with information gathering for the HUD National Disaster Resilience Competition.

Local Hazard Mitigation Plans (LHMP): Twenty towns have received final FEMA approval of their local hazard mitigation plans (LHMP). The Town of Washington's LHMP is the most recent to receive final approval. Staff has been assisting Calais with final submittal of an LHMP to FEMA. If your community is interested in technical assistance from CVRPC, please contact Kim McKee at mckee@cvregion.com.

Flood Resilience/Flood Hazard Area Regulations: Staff continues to assist affected municipalities and the State with various issues surrounding the Flood Hazard Area and Fluvial Erosion Hazard bylaw adoption processes, as well as impacts from flooding and planning for flood resilience. Staff also continues to assist the Town of East Montpelier in finalizing proposed Fluvial Erosion Hazard/River Corridor regulations and attended a Floodplain Working Group meeting in Waterbury. For assistance with developing your town's flood resilience element, please

Example email to EMD in adjacent municipality

Kim McKee

From: Kim McKee
Sent: Thursday, January 29, 2015 7:59 AM
To: 'marshfire@fairpoint.net'
Subject: Notice regarding draft Hazard Mitigation Plan for the Town of Calais
Attachments: Calais Mitigation Plan revised Draft - Jan. 2015.pdf

Hello Tim –

The Town of Calais and Central Vermont Regional Planning Commission have drafted a Local Hazard Mitigation Plan to submit to the Federal Emergency Management Agency for approval. We are forwarding to you as Emergency Management Director in Marshfield, an adjacent community, for review and circulation to other interested parties. If you have any comments, please send by Monday, February 9.

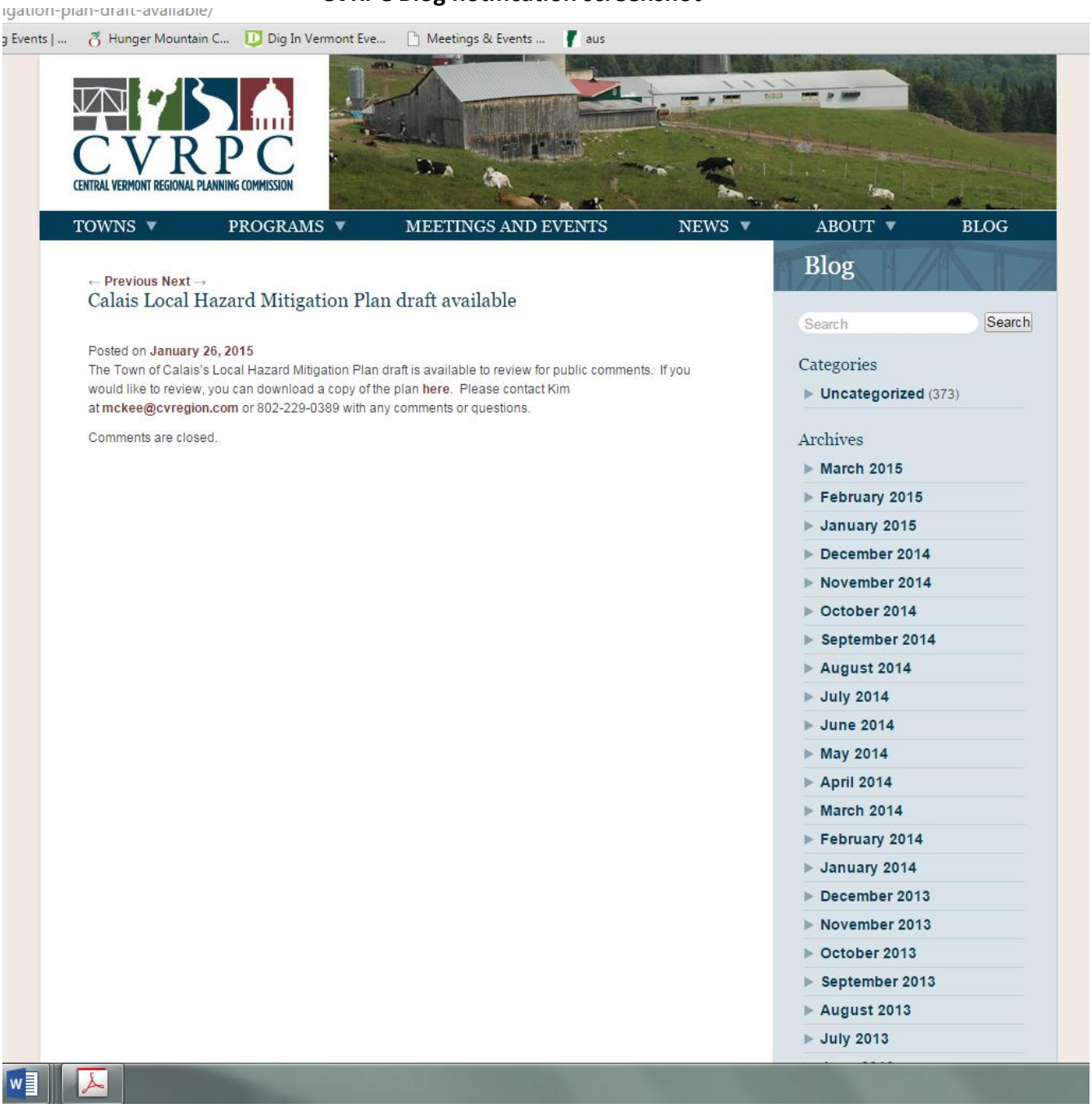
The purpose of the plan is to assist the Town of Calais in recognizing hazards facing the region and the community and identify strategies to begin reducing risks from acknowledged hazards. The long term and overall goal of this plan is to protect life and property from harm/damages caused by natural and man-made disasters.

Feel free to get in touch with any questions.

Regards,

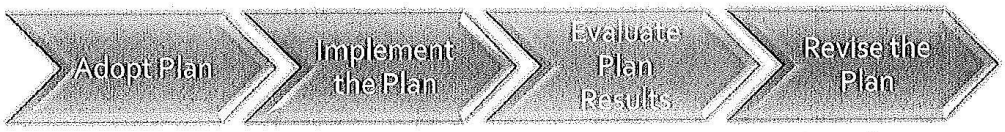
Kim McKee, CFM | Regional Planner
Central Vermont Regional Planning Commission
29 Main Street, Suite 4|Montpelier, VT 05602
802.229.0389|mckee@cvregion.com
www.centralvtplanning.org
Find us on Facebook!

CVRPC Blog notification screenshot



Municipal web site solicitation of public comment

5-Year Plan Review/Maintenance



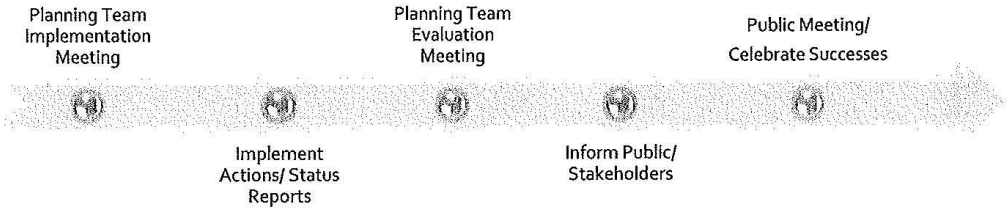
- Brief local leadership on plan approval
- Formally adopt plan
- Publicize plan approval and adoption
- Celebrate success

- Confirm/clarify responsibilities
- Integrate mitigaction actions
- Monitor and document implentation of projects and actions
- Establish indicators of effectiveness or success

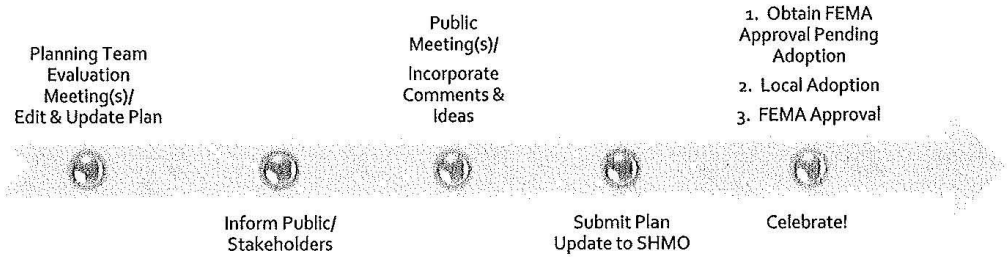
- Effectiveness of planning process
- Effectiveness of actions
- Document success & challenges of actions
- Update and involve community
- Celebrate successes

- Review factors affecting community's context
- Analyze findings; determine whether to revise process or strategy
- Incorporate findings into the plan

After Plan Adoption-Annually
Implement and Evaluate



Fifth Year, and After Major Disaster
Evaluate and Revise



Certificate of Adoption

The Town of Calais
Selectboard
A Resolution Adopting the Local Hazard Mitigation Plan Update
June ~~8~~ 22, 2015

WHEREAS, the Town of Calais has worked with the Central Vermont Regional Planning Commission to identify hazards, analyze past and potential future losses due to natural and manmade disasters, and identify strategies for mitigating future losses; and

WHEREAS, the Local Hazard Mitigation Plan Update contains several potential projects to mitigate damage from disasters that could occur in the Town of Calais; and

WHEREAS, a duly-noticed public meeting was held by the Town of Calais Selectboard on June 22 ___, 2015 to formally adopt the Local Hazard Mitigation Plan Update;

NOW, THEREFORE BE IT RESOLVED that the Calais Selectboard adopts the Local Hazard Mitigation Plan Update.

Denise Wheeler
Chair of Selectboard

Member of Selectboard

Member of Selectboard

Member of Selectboard

Member of Selectboard

ATTEST

Donna Fitch
Town Clerk

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

FEMA

AUG 20 2015

Denise Wheeler, Chair
Selectboard
Calais Town Office
3120 Pekin Brook Road
East Calais, VT 05650

Dear Ms. Wheeler:

Thank you for the opportunity to review the Town of Calais, VT Local Hazard Mitigation Plan Update. 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 Calais 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 Calais, VT Local Hazard Mitigation Plan Update must be reviewed, revised as appropriate, and resubmitted to FEMA for approval within **five years of the plan approval date of July 22, 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.

AUG 20 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
Gail Aloisio, Assistant Planner, CVRPC

Enclosure