

Cabot Hazard Mitigation Plan

Actions to Reduce Risks from Natural and Manmade Hazards



2/27/2018

Adopted by Select board:

Formally Approved by FEMA: 3/16/2018

CERTIFICATE OF ADOPTION

2/27/2018

TOWN OF Cabot, Vermont Selectboard

A RESOLUTION ADOPTING THE Cabot, Vermont 2017 Local Hazard Mitigation Plan

WHEREAS, the Town of Cabot has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of the hazards profiled in the **2017 Cabot, Vermont Local Hazard Mitigation Plan**, which result in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Cabot has developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for its **2017 Cabot, Vermont Local Hazard Mitigation Plan (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 Cabot; and

WHEREAS, the **Plan** recommends several hazard mitigation actions (projects) that will provide mitigation for specific natural hazards that impact the Town of Cabot 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 Cabot eligible for funding to alleviate the impacts of future hazards; now therefore be it RESOLVED by Town of Cabot Selectboard:

1. The **2017 Cabot, Vermont Local Hazard Mitigation Plan** is hereby adopted as an official plan of the Town of Cabot;
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 FEMA approval; 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 WITNESS WHEREOF, the undersigned have affixed their signature and the corporate seal of the Town of Cabot this 27 day of Feb 2018.

ATTEST

Betsy Rutter

Town Clerk

Jac. "Josh" Bond
Selectboard Chair *Acting*

Bernard Sperry
Selectboard Member

Sub. [Signature]
Selectboard Member

Selectboard Member

Selectboard Member

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Cabot Hazard Mitigation Plan

1. Introduction

Hazard mitigation planning identifies actions that a community can take to reduce or eliminate long term risk to people and property from natural and manmade hazards. The Federal Emergency Management Agency (FEMA) further describes it as a process state and local governments can use to identify risks and vulnerabilities associated with natural disasters, in order to develop long-term strategies to protect people and property from future hazard events. (44 CFR Part 201)

Purpose. The purpose of this hazard mitigation plan is to identify and plan for hazards facing Cabot, including the development of strategies intended to reduce long-term risks from known hazards. Hazards cannot be eliminated, but it is possible through planning to determine what hazards are most frequent, where they may be most severe, and what actions can be taken to reduce their impact on the community. Benefits of hazard mitigation planning include:

- 1) Increased public awareness and understanding of natural and manmade hazards,
- 2) Associated risks and community vulnerabilities,
- 3) Reduced physical, financial and emotional losses caused by disasters,
- 4) Improved understanding of potential risks and possible risk reduction measures associated with future development,
- 5) Increased community and voter support for specific actions the town may take to reduce future losses,
- 6) Strengthened partnerships and lines of communication among diverse interests, including opportunities to leverage and share resources,
- 7) Community eligibility for federal hazard mitigation grants and aid prior to and following federally-declared disasters.

Process. The previous Cabot Hazard Mitigation Plan was adopted September 2012 and this plan is an update within a 5-year cycle. Vermont's ongoing recovery efforts and the Federal Emergency Management Agency's (FEMA) new mitigation framework both focus on strengthening community "resilience"- to not only understand and reduce risks of future events, but to also empower communities to recover quickly and effectively when disasters occur. Of particular note- the state recently adopted new Emergency Relief and Assistance Fund (ERAF) rules, effective October 2014, that provide additional matching funds for federal disaster relief under FEMA's Public Assistance Program for municipalities that have adopted updated bridge and culvert standards, flood and fluvial erosion hazard area regulations, local emergency operation plans, a local hazard mitigation plan approved by FEMA, and river corridor protection standards. Cabot has a ERAF rating of 17.5%, the maximum under the program. Under changes to state planning law (24 V.S.A Chapter 117), as of July 2014, all Municipal Plans must include a "flood resilience" element that may reference a locally adopted and FEMA- approved local hazard mitigation plan.

This Plan represents the revision of the previous Cabot Local Hazard Mitigation Plan. It is a standalone, single jurisdiction hazard mitigation plan that updates and builds upon previous mitigation plans, and augments the adopted Cabot Town Plan. The process of developing the Plan

has been as important as the plan itself, by drawing the community together to identify, prioritize, and agree on actions to be taken to reduce and mitigate hazards. The five parts of the plan update process included:

Planning Process (Public Involvement) - to receive and consider community-wide input from diverse stakeholders. To document how decisions were reached and who was involved in the planning process.

Hazard Identification and Risk Assessment- integrate current hazard data and studies to identify and plan for the most probable hazards, estimate the potential frequency and magnitude of hazard events and their potential impacts on both the built environment and the local community.

Mitigation Strategy- to reaffirm and develop goals, objectives and strategies aimed at mitigating future disaster losses that are cost-effective, technically feasible, and environmentally sound- and time to allow for strategic investment of scarce resources. To identify which actions will be taken by whom and by when. This Plan reflects local priorities for hazard mitigation, as determined from the community planning process, and currently available federal, state and local information. Action items are included to monitor the success or effectiveness of implementation and results, and to inform the next update of the Plan.

Plan Review, Evaluation, and Implementation- to review and revise prior plan to address changes in development, progress in local mitigation efforts, and changes in priorities with a 5-year cycle to reflect current conditions and maintain eligibility for FEMA funding.

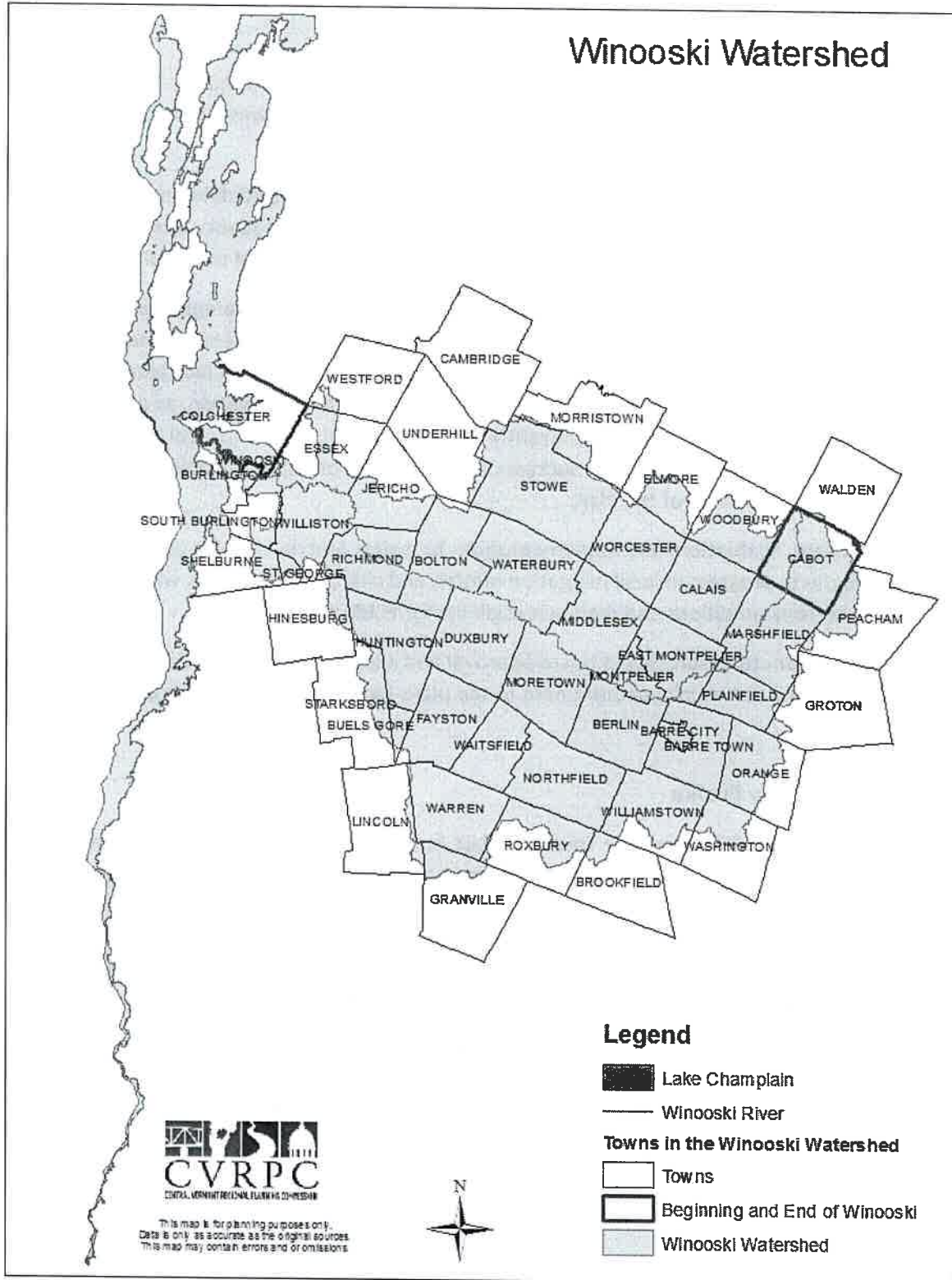
Plan Adoption- to ensure Select board approval and adoption of the local hazard mitigation plan demonstrating community commitment to the plans hazard mitigation goals and actions

2. Community Profile

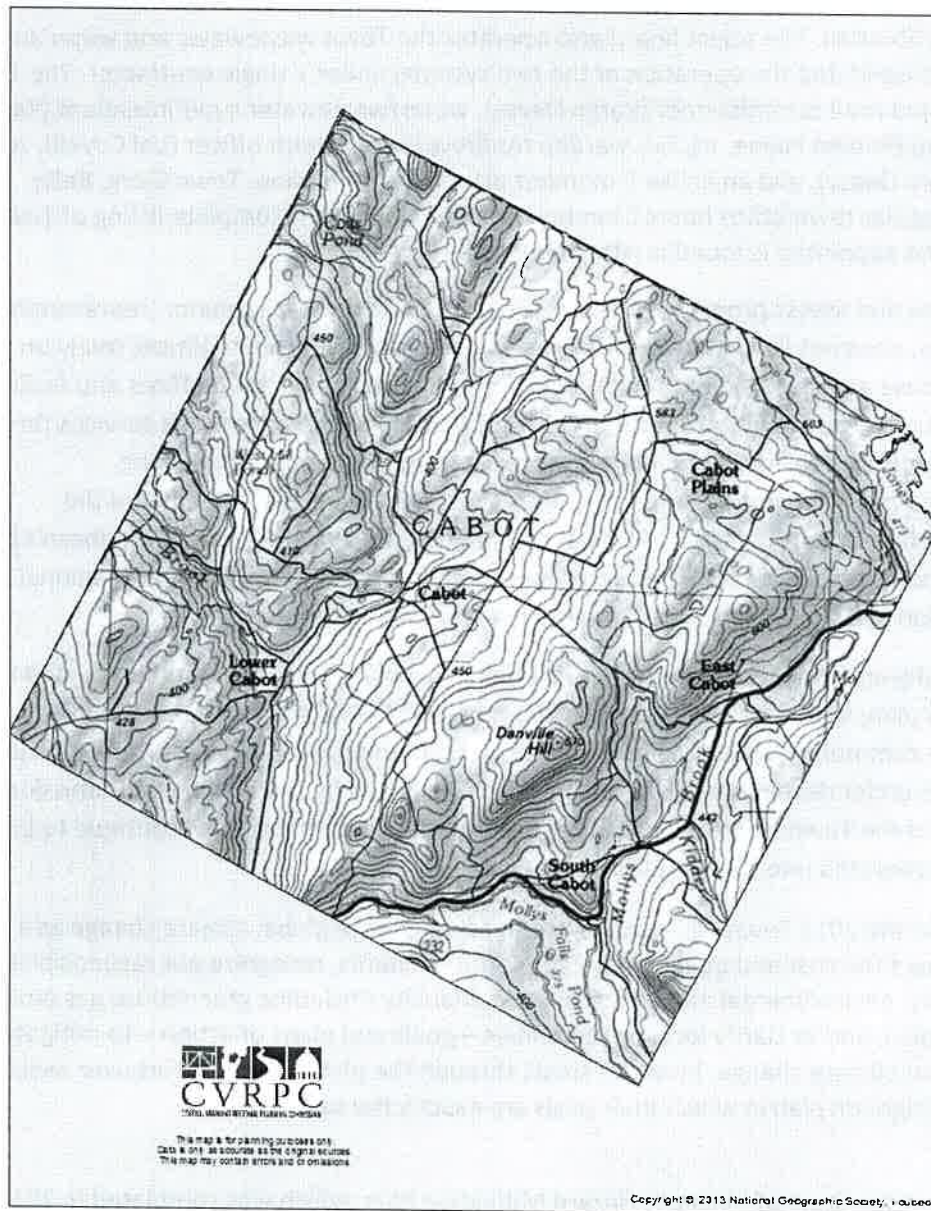
Topography and Drainage. The Town of Cabot, consisting of approximately 38 square miles or 23,866 acres per the US 2010 Census, is situated on the Winooski River in Washington County, Vermont. Neighboring towns include, Marshfield, Calais, Woodbury, Hardwick, Walden, Danville, and Peacham. The Town's highest peak, at 2,201 feet, is Danville Hill running from the village to the east of Town, followed by Joe's Hill (2,198 feet), Burbank Hill (1,980 feet) and Thistle Hill (1,909 feet). The lowest part of Town is 880 feet at the point where the Winooski River exits the Town at the Marshfield border.

The Winooski River begins in the Town of Cabot, and Coits Pond is considered to be the headwaters. It flows 90 miles to Lake Champlain in Colchester. The Town's major thoroughfare is VT Route 215

which traverses 6.7 miles through Main Street.



Development Pattern. Cabot is located in the northeastern corner of Washington County, and approximately 20 miles from the Cities of Barre and Montpelier. According to the 2010 US Census, Cabot has a total population of 1,433 people living in 570 housing units. The population has increased by 18% from the 2000 Census, while the number of occupied housing units has increased by 26%. Approximately 31% of Cabot's workforce is employed within the Town with the remaining 69% working outside of the community. Housing within the Town is widely dispersed both within rural locations and the Village, culminating in a total of 85% of the dwellings identified as owner occupied.



Local Economy. The Town's limited commercial development is focused in the Village, which is representative of current zoning regulations. Residential growth continues to be scattered through the Town. Local businesses include but are not limited to Cabot Creamery, Zutano (A baby clothing company) and Rhapsody Natural Foods.

Town Government. Much of the work of town government is accomplished by local volunteers. Cabot is governed by an elected, five-member select board. The select board is responsible for the general supervision of Town affairs. Among its duties are the enactment of local ordinances, the preparation of an annual budget, the maintenance of Town roads, real estate and equipment; the appointment of all non-elected positions, and the hiring of all Town employees except the assistant town clerk and the librarian. The select board also operates the Town wastewater and water supply systems and has consolidated the operation of the two systems under a single contractor. The Town also has an appointed road commissioner (Karen Deasy), water/wastewater superintendent (Karen Deasy), tree warden (Roland Payne, Jr), fire warden (Andrew Luce), health officer (Val Covell), zoning administrator (Karen Deasy), and an active 5 member planning commission. Town Clerk, Betty Ritter, maintains regular town office hours Monday through Thursday. A complete listing of Town officials (elected and appointed is found in Attachment 8).

Elected Lister's track and assess property values in Town. The Town's State senator, representing Washington County, does not live in Town. Cabot, as all Vermont towns, relies almost solely on the local property tax base and state aid to fund town government- including town offices and facilities, schools and local roads. The Town's property tax also supports local fire and rescue services through annual appropriations. Due to limited full time staff covering multiple rolls (The Zoning Administrator is also the Town Road Foreman, Water/ Wastewater Superintendent and the Emergency Management Coordinator) and lack of budget increase available, the Town doesn't have the ability to expand its resources. Cabot is an active member of the Central Vermont Regional Planning Commission and the 23-town Local Emergency Planning Committee #5.

The Town is currently updating their comprehensive municipal plan (Town Plan) to be adopted in 2017. The previous plan, which was adopted in 2012, helped CVPRC staff with background information on the community, as well as more detail on their emergency services, while this hazard mitigation plan was under development. This Plan will be reviewed by the Planning Commission during the update of the Town Plan this year to ensure that the goals and actions continue to be in alignment and incorporated into the updated Town Plan.

Among the goals for the 2012 Town Plan update are to acknowledge global climate change as a factor that will impact the cost and quality of life for Cabot residents, recognize our responsibility to consider community, environmental and economic sustainability (including greenhouse gas emission reductions) in the plan, and to clarify local opportunities – goals and plans of action – to mitigate the causes and effects of climate change, however small, through the plan. Which carries over well for the 2016 hazard mitigation plan in which their goals are exactly the same.

CVRPC also looked at the State of Vermont Hazard Mitigation Plan, which was completed in 2013 for guidance in writing this Plan and for looking up top hazards for the State of Vermont.

The Town relies on Act 250 and other State regulations to regulate larger development and subdivisions in Town, including commercial development on more than one acre of land. The jurisdictional threshold for a “subdivision” remains “10 or more lots within a radius of five miles of any point on any lot, or within the jurisdictional area of the same district commission, with any continuous period of five years.” (Natural Resource Board, Act 250, 1 and 10 acre town list)

Of the 570 households counted in the 2010 census, only 170 were families with children; another 131 were single-person households. The average household size in 2010 was 2.51 persons, down from 3 in 2000.

Housing. Residential development is the dominant form of development in Town- residential properties comprise 90% of listed properties on the Town’s grand list. According to the US Census counts, the number of dwelling units in Cabot increased by more than 18% in the 2000’s which is one of the highest in Washington County. Of the 570 dwellings identified in 2010, 127 were for seasonal, recreational or occasional use, and none of the new dwellings were in the flood plain. The Town’s vulnerability has not increased in Cabot due to development. Cabot is clearly an attractive community for seasonal residents who both add to the local population and to community life.

Single family dwellings make up an estimated 84% of the Town’s current housing stock- 16% are rental properties. The Town’s 2014 grand list identifies 85 mobile homes, 8 multifamily dwellings and one senior housing facility. There are no mobile home parks. The majority of the Town’s housing stock was constructed prior to 1980- before many State and Federal codes and local flood regulations went into effect. Many homes are historic; 57% were built prior to 1960 and are listed, or may be eligible for listing, as historic structures. 3% of town structures is in the Special Flood Hazard Area. As of 2015 there were only 4 commercial buildings listed in the Special Flood Hazard Area.

Cabot Community. Cabot is an extremely well-networked community that supports a number of very active local committees and organizations. For a small community, Cabot has a remarkable amount of social capital. Information about town affairs is distributed through the Town website, Facebook, the “Cabot Chronicle” newspaper, VTAlert, and Front Porch Forum. Cabot School utilizes an auto dial phone bank which the Town also uses to get information to its residents.

Community Facilities. Community facilities include the Cabot Town Office (also known as the Willey Memorial Hall) which houses the Cabot Public Library and a large auditorium- which is an historic, well preserved building that is important to the community. It is located outside of the mapped flood hazard area. There is one school in Town located in the village; Cabot School which serves grades pre-kindergarten -12 – and also serves as the Town’s designated emergency shelter. The school is also out of the mapped flood hazard area.

The Town garage is located on South Walden Road and was built in 2015. The previous Town garage was located in the flood hazard area. The existing structure on the old site has been removed and the area will be converted into a stormwater filtration area. The Town’s recreation field is also located on South Walden Road, just outside of the village along the Winooski River.

Cabot Village is served by a public water supply system and a wastewater treatment system. All other parts of Town use private wells and private septic systems.

Road Network. The Town maintains approximately 58 miles of road. Vermont Agency of Transportation (VTrans) maintains 0.36 miles of State highway, and 6.22 miles of US highway within the Town.

The adequacy of existing highway bridge crossings and culverts in relation to stream conditions is evaluated every three to five years by Central Vermont Regional Planning Commission with assistance from the Town, and was last completed in 2013. A geomorphic assessment of the Winooski River and some of its tributaries was completed in 2006, by Bear Creek Environmental. The Town has been implementing the recommendations of the study as time and funding allows.

Public Safety. Cabot is served by the Cabot Fire Department, a locally supported volunteer nonprofit organization. The Fire Department responds to fires, auto accidents, downed power lines, floods, hazardous material incidents, and other emergencies in Cabot. Cabot has automatic response agreements with the surrounding Towns of Marshfield, Plainfield and Walden.

Volunteer training is provided through the Fire Department and the Vermont Fire Training Council. The Fire Department has an active and dedicated core group of volunteer firefighters- an average of fifteen members respond per call- but it is getting harder to recruit volunteers given the time commitments required for training and emergency response. The fact that many local residents work out of town has also affected volunteer numbers and daytime coverage.

The Cabot Fire Department building is located at the intersection of Main Street and the corner of Elm Street.

Medical emergencies are handled currently by the Cabot Emergency Ambulance Service, Inc. The Ambulance Service covers the Towns of Cabot and Marshfield, and on occasion Walden and Plainfield. There are about fifteen active members. It is one of the oldest volunteer emergency ambulance services in Vermont. The local hospitals are Northeastern Vermont Regional Hospital located in Saint Johnsbury VT and Central Vermont Medical Center in Berlin VT. Medevac services are provided by the AeroCare Medical Transport System, Inc. to Central Vermont Medical Center.

The Washington County Sheriff's Department based in Montpelier is contracted to provide security and traffic control.

Utilities. Cabot is located within the service area of the Green Mountain Power Corporation (GMP) which supplies power to residents who are situated along U.S. Route 2 and Vermont Route 215. GMP maintains hydroelectric generating facilities at the Marshfield Reservoir (located in Marshfield and Cabot), and Joe's Pond (located in Cabot and Danville). Washington Electric Co-op (WEC) supplies electrical power to residents in the rural areas of town; living outside of the village and main highways, in the hills and along the back roads.

3. PLANNING PROCESS

PUBLIC PROCESS

On December 10, 2015, the Central Vermont Regional Planning Commission sent a letter to Cabot Select board Chair, Jack Daniels, announcing the opportunity for Central Vermont Regional Planning Commission to provide assistance in updating their local hazard mitigation plan with funding provided by the Hazard Mitigation Grant Program. The letter noted the current plan expiration date of 10/25/2017. Copies of the letter were also sent by email to Karen Deasy, Emergency Management Director, Zoning Administrator and Road Commissioner, and Richard Payne, local representative on the Central Vermont Regional Planning Commission Board. Karen Deasy reached out to the Central Vermont Regional Planning Commission and was put in contact with Ashley Andrews, Central Vermont Regional Planning Commission GIS Planner, who was assigned to work with Cabot on their plan update. Ashley Andrews and Dan Currier, representatives from Central Vermont Regional Planning Commission met with Karen Deasy, and Jack on January 13, 2016, to initiate the planning process and develop a contact list for the establishment of the planning team. (Please see attachment #1) A “kick off” meeting was planned to gain public participation.

Information about all the public meetings was put in the Cabot Chronicle, Front Porch Forum, and also distributed by email. A flyer was distributed during town meeting day telling the purpose of the local hazard mitigation plan. (Attachment #2) The first public meeting was held on February 11, 2016 at Willey Memorial Hall. There were eleven people that attended the meeting. (See attached attendance sheet Attachment #3) Central Vermont Regional Planning Commission used the time to discuss why the Town’s local hazard mitigation plan was being updated, why it was beneficial to the Town, and asked who the attendants thought should be part of the planning team, and what those in attendance felt were the local hazards. The planning team consisted of Karen Deasy (Cabot Zoning Administrator and Road Commissioner), Sjon Welters, (Cabot resident and owner of Rhapsody Natural Foods) and Daniel Copp (Assistant Plant Operator, Utility Partners). A second public meeting was held on March 10, 2016 with three people in attendance. Hazard identification and mitigation actions were discussed. To further public involvement, a survey was created and distributed on March 29, 2016 using Front Porch Forum and email to get as much feedback as possible. (Please see attachment #5) Central Vermont Regional Planning Commission gathering the results and summarized them for use in drafting the plan update. One resident unable to participate in the warned meetings expressed concern over an opportunity of public comment and was provided with the survey to complete so her voice would be heard. The resident was further encouraged to contact Karen Deasy for continued input in the planning process.

This first draft was prepared and distributed by email on 9/6/2016 to the area municipalities of Danville (Wendy Somers, Town Clerk), Marshfield (Bobbie Brimblecombe, Town Clerk), Woodbury (Diana Peduzzi, Town Clerk), Walden (Lina Smith Town Clerk), Calais (Donna Fitch, Town Clerk) and Peacham (Thomas Galinat, Town Clerk) for comment. The Plan was also distributed to VTTrans District 7 Technician Shauna Clifford and VT ANR Regional Floodplain Manager Sacha Pealer, Local area businesses, representatives from the local utility companies. Comments on the plan were taken on 9/16/2016 and sent to Karen Deasy at email ZACabot@fairpoint.net or Ashley Andrews at email andrews@cvregion.com. Comments received consisted of spelling errors and were quickly fixed.

A Public Meeting was warned on 10/4/16, to get public comment and feedback from the Selectboard on the draft plan before sending to DEMHS.

DATA AND INFORMATION

Federal (NOAA, US Census data) and State (Vermont Hazard Mitigation Plan) hazards information referenced in this Plan was augmented locally through surveys along with GIS mapping assistance and technical support from Central Vermont Regional Planning Commission. All data was compiled and drawn up by CVRPC.

4. HAZARD IDENTIFICATION and RISK ASSESSMENT

COUNTY-LEVEL DATA

Central Vermont Regional Planning Commission created a spreadsheet that they distributed at the second public meeting asking the town to check the hazards that they felt most concerned about. (Attachment #4).

The team identified avalanche, dust storms, earthquakes, expansive soils, extreme heat, landslide/debris flow, nuclear power plant failures, rock cuts, terrorism, tornados, and wildfires, ice jams, and hurricanes as a low probability of occurrence and low impact. Accordingly, and due to a lack of resources and capacity at the town, these hazards will not be discussed in detail in this plan. Hazards not identified as a “worst threat” may still occur. Greater explanations and mitigation strategies of moderate threat hazards can be found in the State of Vermont’s Hazard Mitigation Plan. In determining the likelihood of a hazard happening in Cabot the following method was used:

- Highly Likely—nearly 100% probability of happening in the next year
- Likely—will happen at least once in the next 10 years
- Low—will happen at least once in the next 100 years

Much of the Federal information regarding past hazard events is reported and available only at the county level. Information specific to Washington County was included in this analysis. The following table identifies the federally declared disasters occurring in Vermont over the period of 2011- 2017.

FEMA. Most hazards affecting the Central Vermont region are natural hazards associated with severe weather events. There were twelve federally-declared disasters for Vermont from 2011-2015, those occurring in Washington County are in bold.

Declared Disaster Number	Date of Disaster/ Incident	Nature of Incident	DAMAGE	County
DR 4001	May 26 - 27, 2011	Severe Storms& Flooding	50 knot winds. 1" hail. Power outages, trees down, flash flooding, & severe thunderstorms. CABOT received \$342,375.98 Federal share of obligated funds for 25 projects.	Washington , Caledonia, Essex, Orange
DR 1995	April 23, 2011 through May 9, 2011	Severe Storms & Flooding	Damage to roads and bridges	Washington
DR 4043	May 20, 2011	Severe Storms & Flooding	Damage to roads and bridges	Washington , Windham, Franklin
DR 4022	Aug 27- Sept 2, 2011	Severe Storms & Flooding TROPICAL STORM IRENE	roads, bridges, homes, businesses, utilities \$500 million damages statewide.	statewide
DR 4066	May 29, 2012	Severe Storms, Flooding, Tornado	Damage to Roads and bridges	Addison, Lamoille, Orleans
DR 4120	May 22 - 26, 2013	Severe Storm & Flooding	Damage to Roads and bridges	Chittenden, Essex, Lamoille
DR 4140	June 25- July 11, 2013	Severe Storms & Flooding	primary impact damage to roads and bridges	Orange, Washington , Caledonia, Chittenden, Orleans, Rutland, Windsor
DR4163	December 20- 27, 2013	Severe Winter Storm; Ice Storm	Damage to Utilities, power outages, tree damage, vehicular accidents.	Caledonia, Chittenden, Essex, Lamoille, Franklin, Grand Isle, Orleans

DR 4178	April 15-18, 2014	Severe Storms and Flooding	Damage to Roads and bridges. Heavy rain and melting snow pack led to flooding damage.	Statewide; Washington , Orange
DR 4207	December 9 - 13, 2014	Severe Winter Storm	Damage to Utilities. Heavy wet snow, >175,000 power outages in the region. This was the second most power outages due to weather in the State of VT at the time. Numerous vehicle accidents as well.	Washington , Orange
DR 4232	June 9, 2015	Severe Storm and Flooding	public roads, bridges, homes	Chittenden, Addison
UNDECLA RED	February , 2015	Severe Cold temperatures	Public and private water and sewer utilities and infrastructure – frozen and broken pipes and lines. CABOT School reported broken waterlines from frost penetration cost estimate of \$2,752 for repairs at 14 hours of labor.	Statewide - Cabot
UNDECLA RED	July 19 - 20, 2015	Severe Storm & Flooding	public roads, bridges, homes	Washington County- especially Barre City, Barre Town, Plainfield, Orange, Duxbury
DR 4330	June 29, 2017 – July 1, 2017	Severe Storm	Heavy rain and flash flooding caused road washout and road damages.	7 counties including Washington

NOAA. The National Oceanic and Atmospheric Administration (NOAA) also maintains storm event databases, dating from 2000 to the present. These cover "regional" events for Washington County area (based on National Weather Service forecast zones) for periods of extreme temperature and drought, flooding, winter weather and storms, as well as more "local" (county and town level) events, including flash floods, high winds, hail and lightning. The majority of recorded regional events relate to winter storms and winter weather while the majority of local events are associated with thunderstorms and hail.

Flooding is by far responsible for most reported damage from hazard events, locally and statewide. The majority of flood damage that occurs in Vermont results not from floodplain inundation, but from flash flooding and fluvial (riverbank) erosion.

A local history of hazard events was compiled from interviews with Town officials and interested townsfolk, along with community forum participants. These generally confirmed the county-level information culled from national databases.

Type of Disaster and Declaration Number	date of Declaration	Area
Flooding DR875	7/25/1990	Washington County
Ice Jams; Flooding DR938	3/18/1992	Washington County
Heavy Rains; Flooding DR1063	8/16/1995	Washington County
Major Storms; Flooding DR1101	2/13/1996	Washington County
Excessive Rainfall; High Winds; Flooding DR1184	7/25/1997	Washington County
Severe Storms DR1228	6/30/1998 -7/1/1998	Washington County
Tropical Storm Floyd DR1307	11/10/1999-11/12/1999	Washington County
Severe storms, flooding DR1715	8/3/2007	Washington County
Severe storms and flooding DR1790	9/12/2008-9/15/2008	Washington County
Severe Storms and Flooding DR1995	6/15/2011	Washington County
Severe Storms and Flooding DR4001	7/8/2011	Washington County
Tropical Storm Irene 9 DR4022	9/1/2011	Washington County
Severe Storms and Flooding DR4043	11/08/2011	Washington County

The most common hazards identified for Cabot are:

Fluvial Erosion and Flooding. Fluvial Erosion is a term used in geography and geology to refer to the processes associated with rivers and streams and the deposits and landforms created by them. Flooding is covering or submerging (an area or place) with water. (Washing out of bridges (bridge #B7 washed out during the 2016 May flood) culverts and road ways). Some further examples include the flood of 1927 “The flood occurred on November 2, 3, and 4 of 1927. Rainfall averages over this period of time range from four to nine inches total. Had this been an isolated event of extreme rain the effects would not have been so severe. The month of October, 1927 saw one hundred-fifty percent more rain than normal. In Northern and Central Vermont there was nearly three hundred percent more; this completely saturated the ground. A cold front moved into the area from the West, and the rain started the evening of November 2. The convergence of the cold front, with a low pressure system that was moving up the Northeast coast caused a strong southeast air current forcing the storm into Vermont. When it reached the Green Mountains moist air was forced to rise, causing torrential downpours on November 3. The rain was most intense in Central Vermont, east of the mountains.”- The Vermont Historical Society

May 26th 2011 flash flooding occurred when Vermont received 4 inches of rain with the Montpelier gauge at 17.59 feet.

August 28th 2011 Tropical Storm Irene caused massive flash flooding with the Winooski River cresting at 19.05 feet in Montpelier with the flood stage at 15 feet

The extent data for fluvial erosion is unavailable.

Extreme Cold. Extreme Cold in this instance refers to dangerous and potentially life- threatening extreme cold temperatures that are expected for a prolonged period of time. Due to the size of pipes, exposure to prolonged extreme cold could cause complete water system failure. Cabot is also concerned about its residents being able to cope with the extreme temperature for long periods of time. (Access to heat, food, water, power) On January 7th 2015 an arctic cold front pushed across Vermont with plummeting temperatures and brisk strong winds causing dangerously cold wind chills of 26 below

zero recorded in Cabot. The second coldest cold stretch on record for the Montpelier area. February 1 to 28 2015 a persistent deep cold trough settled across the northeast US from late January through early March. This led to the coldest February on record for much of New England. It was the second coldest month on record for Cabot. This cold snap led to damage to infrastructure, frozen water mains, etc. On 2/13/2015, in response to the VEM request for town situation reports, the Cabot school reported broken waterlines from deep frost penetration that cost an estimated \$2,752 to repair and 14 man hours of labor.

Severe Wind/ Thunderstorms. Severe Wind is defined as an event with sustained wind speeds of 40 mph or greater lasting for 1 hour or longer or an event with winds of 58 mph for any duration. Thunderstorms can generate high winds and down hundreds of large trees within a few minutes. The Town has had a string of thunderstorms with severe wind events that went through multiple times in 2007 and 2014 with branches falling on power lines and knocking out power. Some other examples include, January 2011 "The winds last month blew trees down over Cabot. A tree that fell on the electric wires on Churchill Road caused a light show in the sky and some ground fires. Washington Electric Coop customers lost their power on West Hill for about a day." –The Cabot Chronicle

May 29th 2012 a warm front moved across Vermont during the morning hours of May 29th, which lead to numerous thunderstorms with heavy rain, damaging lightning and some isolated large hail and strong winds. Some of these thunderstorms deposited up to 2 inches of rainfall in north-central Vermont. Three house fires caused by lightning strikes in Barre, East Montpelier and Cabot.

July 8th 2014 a surface cold front and very strong mid-level disturbance moved across a highly unstable air mass across New York during the late afternoon and evening of July 8th before traversing Vermont during the evening hours. The low level jet stream was unusually strong and got entrained into the thunderstorms, thus producing scattered to widespread wind damage across portions of Vermont.

February 29th 2016 Estimated and measured wind gusts of 35 to 45 mph impacted the region with an isolated report of 59 mph.

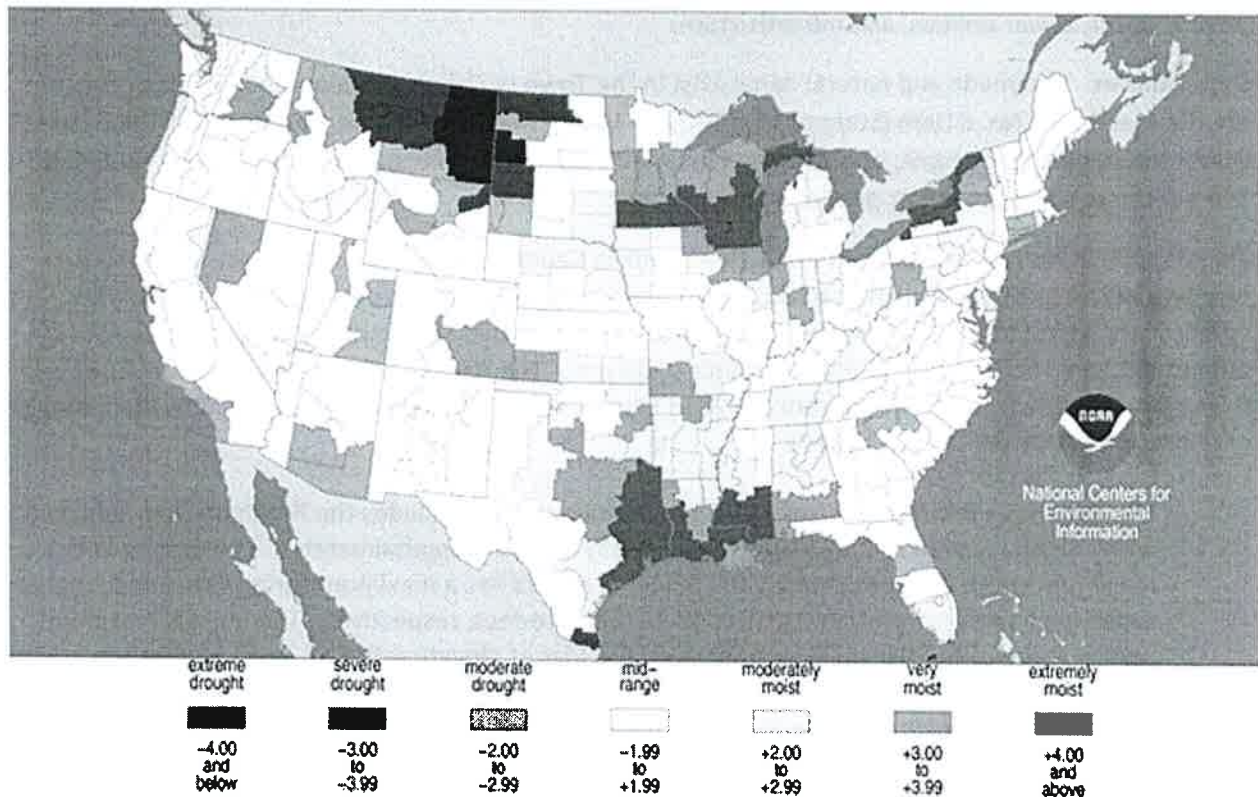
Severe Winter Weather. Severe Winter Weather in this case refers to a storm that generates sufficient quantities of snow, ice, or sleet to result in hazardous conditions and/ or property damage. Ice storms are sometimes incorrectly referred to as sleet storms. Sleet is similar to hail only smaller and 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 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 Town is well-equipped to handle common hazards associated with Vermont's winter weather, though heavy snowfall and occasional power outages can create hardships for some of the residents. On March 6th 2011 Cabot received 27 inches of snow due to a cold front. December 2014 Heavy wet snow caused massive damage to trees and power lines, in Cabot leaving over 100,000 without power, some for as long as six days. Washington Electric Coop called it the worst storm in ten years.

February 2nd 2015 Snowfall across Washington County was 6 to 12 inches with this event, with 7 inches in Cabot with numerous vehicle accidents. The extent data for inches of ice accumulation is unavailable.

Drought. A prolonged period of abnormally low rainfall; a shortage of water resulting from this. As noted in the State Hazard Mitigation Plan, “droughts are a complex phenomenon that are difficult to monitor and assess because they develop slowly and cover large areas.” The State Plan further states, “...even though the state usually has adequate rainfall, droughts occasionally occur...moderate and mild droughts are much more common...In general, severe droughts are not frequent occurrences in Vermont.” Droughts can cause localized deficiencies in water, leaving wells dry, causing crop damage, and causing restriction on water usage. Cabot receives significant rainfall through the year and has no recorded history of a drought. Based on the Palmer Drought Severity Index over the last ten years Vermont experienced moderate drought conditions in 2012. The remaining period of time, data shows Vermont in a moderately to very moist index. Cabot relies on ground water for their public and private water supply. In the event of a drought these water supplies would be vulnerable. Because of this, the Town has identified drought as a low priority hazard. Although we can’t predict the future, the Town is concerned with climate change and the potential it can have on creating drought conditions, which can have a potential impact on the water supply. A review of the Vermont State Hazard Mitigation Plan provides a greater explanation of this hazard and possible mitigation strategies to address drought.

Palmer Drought Severity Index

August, 2017



Infrastructure Failures. Infrastructure is a term architects, engineers, and urban planners use to describe essential facilities, services, and organizational structures for cities and communities. Infra- means below, and sometimes these elements are literally underground, like water and natural gas supply systems. In modern environments, infrastructure is thought to be any facility we expect but don't think about because it works for us in the background, below our radar. Infrastructure can include: roads and bridges, mass-transit systems (e.g., trains and rails), air control towers, telephone lines and cellphone towers, dams and reservoirs, levees and pumping stations, waterways, canals, ports, electrical power lines and connections (i.e., the national power grid), fire stations and equipment, hospitals, clinics, and emergency response systems, schools, law enforcement and prisons, sanitation and waste removal facilities - solid waste, wastewater, and hazardous waste. In this case Cabot's infrastructure failures are a result of severe weather (dam breeches, maintaining water systems backup power systems on the water system and maintaining the water quality for the Town's "main wells". On January 2011 "The winds last month blew trees down over Cabot. A tree that fell on the electric wires on Churchill Road caused a light show in the sky and some ground fires. Washington Coop customers lost their power on West Hill for about a day.

On December 2014 Heavy wet snow caused massive damage to trees and power lines, in Cabot leaving over 100,000 without power, some for as long as six days. Washington Electric Coop called it the worst storm in ten years.

On January 7th 2015 an arctic cold front pushed across Vermont with plummeting temperatures and brisk strong winds causing dangerously cold wind chills of 26 below zero recorded in Cabot. The second coldest cold stretch on record for the Montpelier area. This caused major concern for damage to public, private water, sewer utilities, and infrastructure.

Dam Failures. Manmade and natural dams exist in the Town of Cabot. The manmade dams of concern are the Marshfield No. 6 Dam (State of VT/FERC ID# 39.02), the Sawmill Dam, and West Hill Pond dam. Green Mountain Power owns, operates, and maintains the hydro dam known as Marshfield No.6 dam. The other two dams are under private landownership.

The Marshfield No.6 dam is located on Molly's Brook in Cabot, a rural area of the town. The earthen dam was built in 1927 using fill material borrowed locally. The earthfill dam has a chute-type spillway structure at the left abutment, a control structure that serves as an emergency spillway, and an intake structure with 6-foot diameter penstock. The latest Emergency Action Plan (EAP) was last updated in 2013. Information from the 2013 Emergency Action Plan (EAP) prepared by Kleinschmidt of Maine, describes the dam as follows:

The dam has a drainage area of 23.76 square miles, which includes the Peacham Dam subbasin with a drainage area of 5.77 square miles. Molly's Pond is approximately 2.3 miles long with a maximum width of approximately 0.3 miles. The pond has a maximum surface area and storage capacity of approximately 400 acres and 12,000 acre-feet, respectively. The normal maximum pool is at the top of the spillway stanchion stop logs at elevation 536.55 feet Local Datum (1,228.2 feet NGVD29). The crest of the dam is at elevation 547.5 Local Datum (1,239.15 feet NGVD29). The pool is normally up during the months of June through November with drawdown from December through March before the spring runoff period. The pool is normally drawn down over the winter to about elevation 523.35 feet Local Datum (1,215 feet NGVD29)

by March of each year. Note that, unless indicated otherwise, elevations herein pertaining to the dam, impoundment, and vicinity reference the Local Datum that is in use by GMP.

According to the EAP, Green Mountain Power employs an operator that typically visits the dam on Monday-Friday sometime between 7:00 a.m. - 3:30 p.m. Otherwise, the facility is not staffed and operated remotely from the continuously manned Control Center in Colchester, VT. The EAP provides information on the potential impacted area and the people, businesses, and public infrastructure at risk of flooding if the dam should fail. Inundation maps are included in the EAP. Three different scenarios are discussed and individuals are referred to the EAP for further detail. In the event of failure, the immediate downstream communities of Marshfield, Plainfield, East Montpelier, and Montpelier would be impacted the most, followed by other downstream communities located along the Winooski River.

The Agency of Natural Resources (ANR) Dam Safety Program identifies Marshfield No. 6 dam as a “high hazard dam”. It is important to note, the town of Cabot along with the towns of Marshfield and Plainfield are in communications with the state Dam Safety Program and the dam owner, Green Mountain Power to address concerns with the dam’s infrastructure and the process of notification in the event of a dam breach. It is not well documented; however, high water levels during severe storms, such as in 2011, have raised concern with the ability of the dam gates to function properly and communication to happen at the local level. All parties are collaborating to improve functions at the Marshfield No.6 dam and power generation site.

The ranking as a “high hazard” dam is based on Vermont Emergency Management classification, “according to the dam’s potential for causing loss of life and property damage in the area downstream of the dam if it were to fail” and uses a Downstream Hazard Classification system like that used by the U.S. Army Corps of Engineers as found in Table 4-24 in the Vermont State Hazard Mitigation Plan, November 2013 on page 4-95 and as shown below. The ANR Dam Safety Program inventory has 1240 dams of which 61 are high hazard dams. Of the 61 high hazard dams, ANR has jurisdiction for 40 of them. According to the State Hazard Mitigation Plan, none of the ANR regulated dams are in imminent danger of failure.

Table 4-24
Downstream Hazard Classification of Dams

Class	Hazard Category	Potential Loss of Life	Potential Economic Loss
3	Low	None expected (No permanent structures for human habitation)	Minimal (Undeveloped to occasional structure or agriculture)
2	Significant	Few (No urban developments and no more than a small number of inhabitable structures)	Appreciable (Notable agriculture, industry, or structures)
1	High	More than few	Excessive (Extensive community, industry, agriculture)

Since the adoption of the 2012 Town of Cabot Hazard Mitigation Plan, the ANR Dam Safety Program has updated and performed studies on the various dams throughout the state and has made available the EAP and inundation area maps to the communities and posted them on their website. Josh Cox, Critical Infrastructure Planner at VEM and Steven Hanna, Dam Safety Engineer with ANR DEC provided the

Marshfield No.6 dam EAP and inundation area maps to CVRPC as part of this Plan update process. The full EAP is available in the Cabot Town Offices for review or can be obtained electronically from CVRPC.

There currently exists no history of dam failure in regards to the manmade or beaver dams in Cabot, but the potential exists.

The following provides an overview of the hazard: The general areas in the community that may be vulnerable to the hazard are depicted in the mapped Inundation Area found in the EAP. The area includes US Route 2, Porter Road Bridge, Porter Road, Winooski River, and residences, the public and private infrastructure, roads, businesses, natural features, and historic structures within the vicinity mapped Inundation Area. In addition, the downstream communities of Marshfield, Plainfield, East Montpelier, and Montpelier would be susceptible to damage and loss from a dam failure. To date, no known events of dam failure or breaching have occurred. There are news reports of close calls most recently in 2011 during the tropical storm Irene event where the dam was in danger of breaching. The potential if failure occurs is severe with loss of life and property probable. The likelihood of a hazard occurring based on past events is considered to be low, 1-10% probability of occurrence per year, or at least one chance in next 100 years.

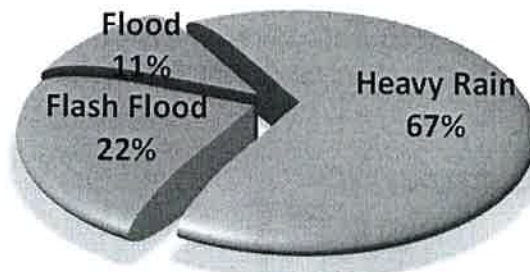
Status of Town Priorities: The priorities of from the 2012 plan have changed due to the shift in weather events. The Town chose to remove structure fires as one of its most common hazards and replace it with infrastructure failures. All of the rest of the 2012 priorities remain the same.

The following chart shows the priority hazards for Cabot and the likelihood of occurrence. Highly Likely—nearly 100% probability of happening in the next year; Likely—will happen at least once in the next 10 years; and Low—will happen at least once in the next 100 years.

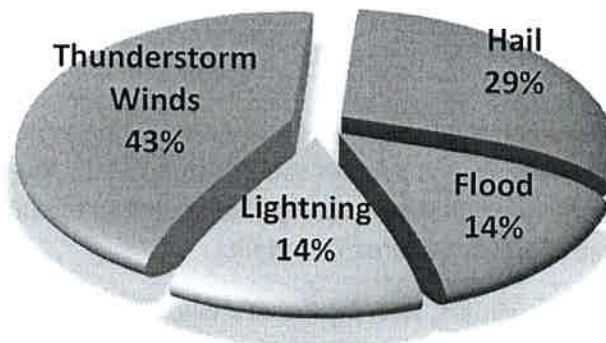
Priority Hazards ^[SSA1]				
Hazard Type	Extent	Probability	Impact	Significance
Natural Hazards				
Flood or Stream Bank Erosion	Local	Highly Likely	Major	High
Extreme Cold	Regional	Highly Likely	Moderate	High
Severe Thunderstorms	Local	Highly Likely	Moderate	High
Severe Wind	Local	Highly Likely	Moderate	High
Severe Winter Weather	Regional	Highly Likely	Major	High
Drought	Regional	Likely	Moderate	High
Hurricane/ Tropical Storm	Regional	Likely	Major	High
Manmade Hazards				
Infrastructure Failure	Local	Likely	Major	High
Long Term Power Outage	Local	Likely	Major	High
Transportation Spills	Local	Likely	Moderate	High
Dam Failure	Local	Low	Major	High

The following charts show NOAA reported storm events by county and town 2000 to present.

**NOAA Storm Events
Washington County, 2000-Present**
(Total = 10)



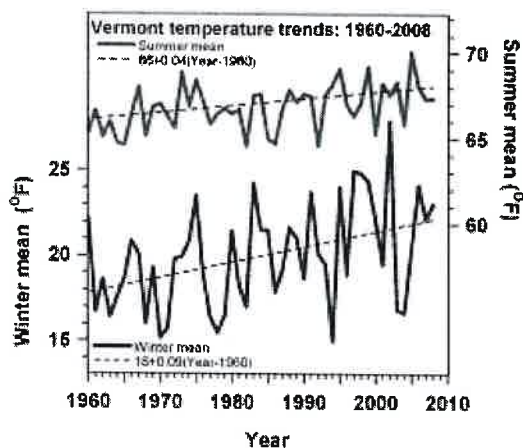
**NOAA Storm Events
Cabot VT, 2000-Present**
(Total = 7)



Climate Change and Emerging Hazards

“The time for debate over the realities of global climate change is over. Global climate change is occurring, and every Vermonter will experience its impacts on the quality of life for which Vermont is justifiably famous.” 2007 Governor’s Commission on Climate Change

Over the past few decades an increase in average annual temperatures- especially during winter months- extended growing seasons, and more severe storm events are all indicators that Vermont’s climate is changing. The accompanying graph from Alan Betts, an independent atmospheric scientist and researcher living in Pittsford, Vermont, depicts that slow rise of temperature in both winter and summer seasons over the past 60 years. Since 1970 the annual average temperature in the Northeast has increased by 2 degrees Fahrenheit, with winter temperatures rising nearly twice this much.



Carol Adair, Assistant Professor of Climate Change and Adaptation at the University of Vermont, has estimated that Vermont will warm 3-8 degrees Fahrenheit by 2050. The Vermont Agency of Natural Resources, as part of its “Climate Change Initiative” has identified the following effects of warming on Vermont’s climate- some of which are already evident:

- Shorter, warmer winters, with more wet snow, freezing rain, and icing, and less snowpack.
- Earlier spring snowmelt, ice breakups and peak river flows.
- Hotter summers- including more heat waves and droughts.
- A longer growing season (with more pests).
- Stronger storms, including heavier rain events and higher stream flows.
- More invasive species, including pests and disease vectors.
- Increased hazards associated with flooding, landslides, severe storms, and threats to health, safety, and infrastructure.

Vermont Emergency Management has identified climate change as one of the hazards that the state, and local governments, should address in long-term hazard mitigation planning. As with other, related hazards, this highlights the need for the Town to adapt to changing conditions and strengthen community resiliency to be able to better respond to emerging hazards and threats. Cabot anticipates expanding on this hazard under the next plan update.

Vulnerability & Risk Assessment

IMPACT AND EXTENT OF LIKELY HAZARDS

Vermont Emergency Management and the Central Vermont Regional Planning Commission have identified and ranked hazards that are likely to affect Vermont counties and towns. (State of Vermont Hazard Mitigation Plan, November 2013, Section 4) These were considered, along with available Federal, State and local information- including local responses summarized on the hazards checklist gathered during the public participation process. Attachment #7 includes those hazards identified as the highest priorities for local hazard mitigation, as confirmed through public meetings and surveys.

Cabot Hazard Analysis Map 2016

Legend

■ GRIP Structure Material Flood Resilience Improvements

• Structures in the Special Flood Hazard Area

• Wetland Protection Areas

Cabot Bridges

Percent Bank Full

• Less than 50% of Bank Full - 2 Locations

• Greater than 50% of Bank Full - 5 Locations

Cabot Culverts

Percent Bank Full

• Less than 50% of Bank Full - 45 Locations

• Greater than 50% of Bank Full - 60 Locations

Bridge and Culvert Locations by AOP Course Screen and Geomorphic Compatibility

■ Ashland 1000

■ Green, Light Green

■ Green, Yellow

■ Green, Orange

■ Grey, Green

■ Grey, Light Green

■ Grey, Yellow

■ Grey, Orange

■ Grey, Red

■ Orange, Light Green

■ Orange, Yellow

■ Red, Green

■ Red, Light Green

■ Red, Yellow

■ GRIP Stream Ponds

Setback 2016

SITETYPE

• Commercial

• Cultural

• Fire Station

• Government

• House of Worship

• Industrial

• Public Gathering Place

• Recreational

• School

• Utility

■ GRIP Erosion Lines

■ Dams

■ River Corridor

■ River's Lakes and Ponds

■ Streams

Roads

■ Class 1-4

■ Legal Road

■ Private Roads

■ V1 State Highway

■ US Highway

■ High Traffic Road of Concern

■ Floodplain

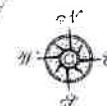
■ Town Forest

■ Wetland

■ Wetland Land Trust Conserved Lands

Cabot Hazard Analysis Map 2016	
Created by:	2016, 2017
Updated by:	2016, 2017
Reviewed by:	2016, 2017
Approved by:	2016, 2017
Published by:	2016, 2017

0 0.5 1 2 Miles



COMMUNITY ASSETS AND VULNERABILITIES

Critical Facilities and Infrastructure

The Town's critical facilities, especially for emergency management, include the Town garage, the Town office (Willey building), the fire station, wastewater plant, the two Town well locations, Molly's Falls Pond and Joe's Pond.

Road washouts associated with flooding and fluvial erosion are a major concern. The Town has identified as several high hazard and/or vulnerable sites including several bridges and culverts (Porter Rd, Danville Hill Rd and Thistle Hill/ West Shore Rd) and a couple of dams (Molly's Falls Pond, Saw Mill Road Dam, and West Hill Pond Dam), and the old town garage storm basin.

Local Residents and Businesses.

Community vulnerability and resiliency traditionally have been addressed in relation to buildings and infrastructure, but people are a community's most valuable asset. Local residents, households and businesses differ in their abilities to prepare for, respond to and recover from hazard events, and especially, larger regional disasters. Assessing community vulnerability also entails identifying and accommodating the community's most vulnerable residents, including those who may need additional assistance during and after both major and minor events.

Some exposure and vulnerability to natural hazards is inherent to and an accepted part of life in a rural community. Outside of its Village, Cabot's population is scattered among the hills. Many local residents live in isolated areas, along back country roads that can be cut off and difficult to reach in emergency situations. As a result, most local households and businesses are prepared for short bouts of bad weather, storms and power outages, but larger events may put everyone at risk. Even the smallest events can have serious consequences for the Town's most vulnerable residents, including seniors, children, and residents with disabilities or limited means.

Information from the 2010 US Census and more recent 5- year estimates from the American Community Survey, also conducted by the Census Bureau, offers some limited insight into the town's more vulnerable groups. In 2010:

15% of the Town's population was over the age of 65. This segment of the population is expected to grow as the local population continues to age increasing the demand for services, including local emergency response services.

23% of local residents lived alone, including 9% of whom are 65 years or older. 13% of households were single parents with children. 14% of local residents lived in rented housing. Of homeowners, 86% owned their homes outright. More recent estimates released by the US Census Bureau (for 2010-2014), suggest that:

Most Cabot residents rely heavily on the local road network to get to work; 63% drive alone to work and the average commute time is 34 minutes. Only 17% work from home. Local residents must also drive to neighboring communities for many goods and services, including medical services. Only 1% of Cabot households don't have a vehicle; an estimated 43% have two or more. A low percentage of households rely solely on electric heat which makes them especially vulnerable during a power outage. Most depend on fuel oil (37%), wood (33%), or propane (25%) for heat.

While this type of information offers a broad view of the Town's potentially vulnerable groups, it is not a substitute for the local knowledge needed for emergency response planning and community networks that are to vital in disaster response and recovery. To this end, Cabot completed and adopted their 2017 Local Emergency Operations Plan that was accepted by the Division of Emergency Management and Homeland Security (now Vermont Emergency Management effective July 1, 2017) on April 18, 2017. The 2017 LEOP includes a Planning Section addressing vulnerable populations and critical facilities.

Flood Risk Assessment-

Since flood risk is the only risk that is spatially predictive from available information, the number and value of properties within the mapped floodplain were determined using the most recent

E911 building data, Town parcels, and the FEMA Flood Plain Data. Listed value and Flood Hazard costs were calculated based on the median 2014 grand list real estate and land values. Cabot does not have any repetitive loss properties. Cabot's Zoning Administrator administers the Cabot adopted floodplain ordinance that is compliant with NFIP standards. Cabot had no interest during the plan update to do the NFIP CRS Check List, since they lack the capacity and don't have time or money at this moment to pursue it.

Table Flood Risk Assessment				
	Number of Buildings/Parcels			
	Total(town)	In Flood Hazard Area (#)	In Flood Hazard Area (%)	Listed Value in Flood Hazard Area (\$)
Building	847	30	4%	\$4,102,000
Parcels	1194	273	23 %	\$13,731,900
Total	2041	303	27%	\$17,833,900

5. MITIGATION STRATEGIES

GOALS AND POLICIES

1. To reduce injury and losses from the natural hazard of fluvial erosion.
2. To reduce injury and losses from the natural hazard of extreme cold.
3. To reduce injury and losses from the natural hazard of severe wind.
4. To reduce injury and losses from the natural hazard of severe winter weather.
5. To reduce injury and losses from the natural hazard relating to infrastructure failure.

The 2012 Cabot Plan includes several goals, supported by municipal and regional plan policies, with remain relevant to the 2016 Hazard Mitigation plan.

These are:

Reduce damage from future flooding and prevent changes to the landscape which could increase hazardous flooding conditions. Maintain high groundwater quality, efficiently operate the wastewater system in accordance with State and local regulations, regulate future development within the wastewater service area; and improve compliance with the sewage ordinance.

6. MITIGATION PROGRAM: THE PLAN FOR THE NEXT FIVE YEARS

An implementation schedule that identifies mitigation actions, responsible parties, and a recommended timeframe has been included. See attachment #7. In summary, Table one is a status update of the mitigation actions/strategies identified in the 2012 Cabot Hazard Mitigation Plan. Table two is a current list of proposed mitigation actions over the next 5 year period as identified in this Plan.

7. PLAN UPDATE, EVALUATION, AND IMPLEMENTATION

The Town of Cabot will continue to work with the Central Vermont Regional Planning Commission to monitor, evaluate, and update the plan throughout the next 5 year cycle. A review of the plan will take place each year by the Town's emergency planning committee to update the plan after any FEMA disaster declaration as well as any funding received from FEMA, to record any hazard related events, or to determine if the town is interested in applying for grant funding. Annual review of the plan will take active involvement on the part of the Cabot Selectboard in consultation with Cabot's Road Foreman, Fire Chief, and Emergency Management Director working with CVRPC staff to identify and plan for ongoing hazard mitigation work and coordination among stakeholders to identify structures and engineering projects that can help mitigate future hazardous events: e.g. bridge and culvert replacements, road replacements and grading. The Local Emergency Operations Plan will be reviewed at the same time, to complete both annual updates. CVRPC will help with updates or if no funding is available, the Town Clerk, Town's Emergency Planning Committee, and Select Board 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, Cabot School, Front Porch Forum, and CVRPC newsletter inviting the public to the scheduled Selectboard (or specially scheduled) meeting. These efforts will be coordinated by the Town Clerk and Selectboard.

Input will include:

-Scheduling and advertising a planning meeting each year, soon after Town Meeting and before May 1st.

-Seeking participation from key players in addition to general public interest:

- -Selectboard
- -Planning Commission
- Public Works
- School
- Fire and Rescue
- Emergency Mgt/911 Coordinator
- Town Clerk
- Zoning Administrator
- GMP
- State Regional Floodplain Manager and Regional River Scientist

-Announce at Town Meeting and advertise locally

It will be the responsibility of the Planning Commission, in association with the Select board, road foreman and fire chief, to monitor, evaluate, and report annually on the progress of local implementation efforts. The Town's Emergency Planning Committee will update the status of the actions and assess whether plan implementation is meeting the intended plan goals. They will hold at least one cross-board public meeting each year, in the evening when more people can attend, with public notice to encourage public input. The Local Emergency Operations Plan will be reviewed at the same time, to complete both annual updates. This annual review should take place after Town Meeting

day and before May 1st. If new actions are identified in the five year interim period, the plan can be amended without formal re-adoption during regularly scheduled Selectboard meetings. After a five-year period, the plan will be submitted for re-adoption following the process outlined in the schematic found in the Attachments section of this Plan.

A year before this Plan expires, the Planning Commission will host a public meeting to begin the plan update process (or appoint members of a plan update committee). The planning team will review and update the previous plan, with input from the public, and submit to FEMA for approval. For the next Plan update, CVRPC will assist and support the Town of Cabot at their request provided there is funding and staffing available for CVRPC to do so. If CVRPC is unable to assist the Town of Cabot, then the Town will update the plan using the Planning Commission as the lead or the Selectboard will update the plan or the Selectboard may appoint a committee of interested citizens and key stakeholders with the Emergency Management Director and Planning Commission Chair serving on this committee to draft changes. The Town of Cabot is responsible for the update and maintenance of this Plan.

Cabot will incorporate the goals and objectives of the hazard mitigation plan into their long term land use and development planning documents and the Municipal Plan. It is recommended the Town review and incorporate elements of the Local Hazard Mitigation Plan when updating the municipal plan, road plan, and inundation hazard and river corridor regulations. The Town may consider reviewing any future CVRPC planning documents and studies for ideas on future mitigation projects and hazard areas.

In 2013, the Vermont Legislature passed a law requiring all towns to incorporate a flood resiliency element into their Municipal Plan as of July 2014. As part of meeting this requirement, Cabot will identify flood hazard and fluvial erosion hazards, strategies, and recommendations to mitigate risks to public safety, critical infrastructure, historic structures, and public investments. This Plan will help Cabot comply with the new community flood resilience requirements for municipal plans adopted after July 2014 and will assist the Planning Commission in their work as they update the existing and due to expire Cabot Town Plan.

Vermont Emergency Management emphasizes a collaborative approach to achieving mitigation on the local level. As such, the town will continue to partner with state agencies (Vermont Emergency Management, Vermont Agency of Natural Resources, Vermont Agency of Transportations, Agency of Commerce and Community Development), Central Vermont Regional Planning Commission, our Local Emergency Planning Committee (#5), FEMA Region 1 and other agencies to obtain needed assistance and resources to pursue identified mitigation projects and planning initiatives. It is understood that, in order to apply for FEMA funding for mitigation projects, the Town must have a FEMA-approved hazard mitigation plan, and a project must meet FEMA benefit cost criteria.

Attachment 1. Cabot Contact List for Local Hazard Mitigation Plan Update 2016

Name	Title	Email
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Karen Deasy	Zoning Administrator/ EMD	zacabot@fairpoint.net
Jack Daniels	Selectboard Chair	jackdaniels007vt@gmail.com
Skip Bothfeld	Fire Chief	warmboth@juno.com
Andy Luce	Ambulance	lucehayseed@charter.net
Skip Bothfeld	Disaster Management Coordinator	warmboth@juno.com
Marcel Gravel	Cabot Creamery	mgravel@cabotcheese.com
Rejean Pion	Cabot Creamery	rpion@cabotcheese.com
Gary Gulka	Conservation Commission	gulka@fairpoint.net
Jason Lisai	Green Mountain Power Company	Jason.Lisai@greenmountainpower.com
Elaine Gonier	Washington Electric	elaine.gonier@wec.coop
Susan Bulmer	Forest and Parks	susan.bulmer@vermont.gov
Michael Belinky	Zutano	zutano@zutano.com
Sjon Welters	Rhapsody	swelters@gmail.com
Aldo Nunn	Road Foreman	HWcabot@fairpoint.net
Jim Brimblecome	Utility Partners	jbrimblecome@utilitypartnersllc.com
Shauna Clifford	VTrans	Shauna.Clifford@vermont.gov
Sacha Pealer	ANR	Sacha.Pealer@vermont.gov
Patrick Ross	ANR	Patrick.Ross@vermont.gov
Stephanie Smith	Agency of Agriculture	stephanie.smith@vermont.gov
Donna Fitch	Calais Town Clerk	calais.townclerk@gmail.com
Diana Peduzzi	Woodbury Town Clerk	woodburyclerk@comcast.net
Bobbie Brimblecome	Marshfield Town Clerk	clerk@town.marshfield.vt.us
Jon Jewett	Hardwick Town Manager	jon.jewett@hardwickvt.org
	Walden Town Clerk	waldentc@pivot.net
Wendy Somers	Danville Town Clerk	wsomers@danvillevermont.org
	Peacham Town Clerk	townclerk@peacham.net
George Springston	Geologist	gsprings@norwich.edu
Matthew Nally	State Police	Matthew.Nally@vermont.gov
Richard Payne	Regional Planning Committee Representative	ipp20021@hotmail.com
Ann Smith	Friends of the Winooski	ann@winooskiriver.org
Peter Ackermann	Cabot School	packermann@cabotschool.org
Dave Schilling	Cabot School	dschilling@cabotschool.org
Bonnie Danneberg	Cabot Historical Society	cabohistorical@gmail.com
Nancy Thomas	Washington Northeast Superintendent	nthomas@washnesu.org
	Survey Participant	Tah_1964@yahoo.com
Amy Hornblas	Survey Participant	amyhornblas@gmail.com

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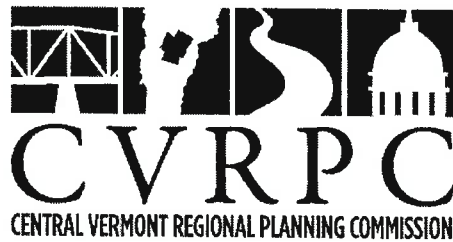
Attachment 2. Flyer for Town Meeting

LOCAL HAZARD MITIGATION PLAN

Hazard Mitigation Planning identifies actions that a community can take to reduce or eliminate long term risk to people and property from natural and manmade hazards. The Town of Cabot will be working to develop long-term strategies to protect people and property from future hazard events.

The Town, in conjunction with the Central Vermont Regional Planning Commission, is undertaking the update of the Local Hazard Mitigation Plan for 2017. The Town will be holding public meetings for anyone interested. Please contact Karen Deasy at zacabot@fairpoint.net or Ashley Andrews at andrews@cvregion.com for more information.

We would like your input as to what you think is the biggest natural or manmade hazard in your town. (Please put comments below)



Attachment #3. Volunteer Form

VOLUNTEER FORM TO DOCUMENT IN-KIND SERVICES - MATCH INFORMATION

PROGRAM:
 DATE OF MEETING: 1/13/16
 MEETING LOCATION: Cabot Town Office
 TOPIC: LHMP
 MEETING TIME: 1pm

VOLUNTEER ATTENDEES - CLAIMED						
No.	NAME	AFFILIATION	MILEAGE ROUND TRIP	MEETING HOURS	TOTAL MILEAGE	TOTAL TIME
1	<u>Anna Kuehn</u>	<u>Cabot</u>		<u>1</u>	0.565	\$20.00
2	<u>John C. Tucker Daniels</u>	<u>Cabot</u>			-	-
3					-	-
4					-	-
5					-	-
6					-	-
7					-	-
8					-	-
9					-	-
10					-	-
11					-	-
12					-	-
13					-	-
14					-	-
15					-	-
16					-	-
17					-	-
18					-	-
19					-	-
20					-	-
21					-	-
22					-	-
23					-	-
24					-	-
25					-	-
26					-	-
27					-	-
28					-	-
29					-	-
30					-	-
31					-	-
32					-	-
33					-	-
34					-	-
35					-	-
Sub Total			0.00	0.00	\$0.00	\$0.00

FEDERALLY SUPPORTED PERSONNEL - CAN NOT CLAIM						
No.	NAME	AFFILIATION	MILEAGE ROUND TRIP	MEETING HOURS	TOTAL MILEAGE	TOTAL TIME
1	<u>Ashley Andrews</u>	<u>CLRPC</u>		<u>3</u>	0.565	\$20.00
2	<u>Daniel Currier</u>	<u>CLRPC</u>		<u>3</u>	-	-
3					-	-
4					-	-
5					-	-
6					-	-
7					-	-
8					-	-
9					-	-
10					-	-
Sub Total			0.00	0.00	\$0.00	\$0.00

TOTAL MATCH \$0.00

TOTAL Non-Volunteer Match -

TOTAL VOLUNTEER MATCH \$0.00

6/28/05 One Meeting Form

VOLUNTEER FORM TO DOCUMENT IN-KIND SERVICES - MATCH INFORMATION

PROGRAM:

DATE OF MEETING:

MEETING LOCATION:

TOPIC:

MEETING TIME:

2/11/16
Cabot Town Office
LHMP
4-6 pm

VOLUNTEER ATTENDEES - CLAIMED						
No.	NAME	AFFILIATION	MILEAGE ROUND TRIP	MEETING HOURS	TOTAL MILEAGE	TOTAL TIME
1.	Sue Murray	Cabot Creamery			0.54	\$20.00
2.	Ed Healey	Cabot Creamery			-	-
3.	Daniel Cogan	Drilling Partners			-	-
4.	Cashin O'Donnell	Cabot Creamery			-	-
5.					-	-
6.	Sara Walters	Cabot Agricult. Network			-	-
7.	Marcia LaGrange	Rhapsody Natural Foods			-	-
8.	Jackie Kariotis	Cabot Creamery			-	-
9.	Gary Guller	Cabot Creamery			-	-
10.	Kevin Dwyer	Cabot Planning Commission			-	-
11.	Jason	Cabot Zoning Planning			-	-
12.					-	-
13.					-	-
14.					-	-
15.					-	-
16.					-	-
17.					-	-
18.					-	-
19.					-	-
20.					-	-
21.					-	-
22.					-	-
23.					-	-
24.					-	-
25.					-	-
26.					-	-
27.					-	-
28.					-	-
29.					-	-
30.					-	-
31.					-	-
32.					-	-
33.					-	-
34.					-	-
35.					-	-
Sub Total			0.00	0.00	\$0.00	\$0.00

FEDERALLY SUPPORTED PERSONNEL - CAN NOT CLAIM						
No.	NAME	AFFILIATION	MILEAGE ROUND TRIP	MEETING HOURS	TOTAL MILEAGE	TOTAL TIME
1.					0.565	\$20.00
2.					-	-
3.					-	-
4.					-	-
5.					-	-
6.					-	-
7.					-	-
8.					-	-
9.					-	-
10.					-	-
Sub Total			0.00	0.00	\$0.00	\$0.00

TOTAL MATCH \$0.00

TOTAL Non-Volunteer Match -

TOTAL VOLUNTEER MATCH \$0.00

6/28/05 One Meeting Form

VOLUNTEER FORM TO DOCUMENT IN-KIND SERVICES - MATCH INFORMATION

PROGRAM: HMGP Local Hazard Mitigation Plan Development for 9 Towns
 DATE OF MEETING: September 20th 2014
 MEETING LOCATION:
 TOPIC:
 MEETING TIME:

VOLUNTEER ATTENDEES - CLAIMED						
No.	NAME	AFFILIATION	MILEAGE ROUND TRIP	MEETING HOURS	TOTAL MILEAGE	TOTAL TIME
1	Karen Drury	Town of Cabot			0.575	\$20.00
2	Ten Denny	Town of Cabot			-	-
3	Erica Dwyer	Town of Cabot			-	-
4	John Laloue	Resident			-	-
5	Michael Hogue	SB Town of Cabot			-	-
6	Amy Hornbliss	Cabot			-	-
7	Don Robbier	Cabot			-	-
8					-	-
9					-	-
10					-	-
11					-	-
12					-	-
13					-	-
14					-	-
15					-	-
16					-	-
17					-	-
18					-	-
19					-	-
20					-	-
21					-	-
22					-	-
23					-	-
24					-	-
25					-	-
26					-	-
27					-	-
28					-	-
29					-	-
30					-	-
31					-	-
32					-	-
33					-	-
34					-	-
35					-	-
Sub Total			0.00	0.00	\$0.00	\$0.00

FEDERALLY SUPPORTED PERSONNEL - CAN NOT CLAIM						
No.	NAME	AFFILIATION	MILEAGE ROUND TRIP	MEETING HOURS	TOTAL MILEAGE	TOTAL TIME
1	Ashley Andrews	Central VT Regional Planning Commission			0.575	\$20.00
2					-	-
3					-	-
4					-	-
5					-	-
6					-	-
7					-	-
8					-	-
9					-	-
10					-	-
Sub Total			0.00	0.00	\$0.00	\$0.00

TOTAL MATCH \$0.00

TOTAL Non-Volunteer Match

TOTAL VOLUNTEER MATCH \$0.00

6/28/05 One Meeting Form

VOLUNTEER FORM TO DOCUMENT IN-KIND SERVICES - MATCH INFORMATION

PROGRAM: Cabot LHMP
 DATE OF MEETING: October 4th 2016
 MEETING LOCATION: _____
 TOPIC: _____
 MEETING TIME: _____

VOLUNTEER ATTENDEES - CLAIMED						
No.	NAME	AFFILIATION	MILEAGE ROUND TRIP	MEETING HOURS	TOTAL MILEAGE	TOTAL TIME
1	Karen Dancy	Town of Cabot			0.54	\$20.00
2	Michael Shattuck	Town of Cabot			-	-
3	Michael Ladd	Town of Cabot			-	-
4	David Pike	Town of Cabot			-	-
5	Don Mitchell	Town of Cabot			-	-
6	JAVIS MORSE	CABOT			-	-
7	Lynda Melt	Cabot			-	-
8	Lynda Melt	Cabot			-	-
9	Mike Hogan	Cabot			-	-
10	Bobby Rotten	Cabot			-	-
11	Fred Ducharme	Cabot			-	-
12	TED Dancy	Cabot SB			-	-
13					-	-
14					-	-
15					-	-
16					-	-
17					-	-
18					-	-
19					-	-
20					-	-
21					-	-
22					-	-
23					-	-
24					-	-
25					-	-
26					-	-
27					-	-
28					-	-
29					-	-
30					-	-
31					-	-
32					-	-
33					-	-
34					-	-

6/28/05 One Meeting Form

35						
		Sub Total	0.00	0.00	\$0.00	\$0.00

FEDERALLY SUPPORTED PERSONNEL - CAN NOT CLAIM						
No.	NAME	AFFILIATION	MILEAGE ROUND TRIP	MEETING HOURS	TOTAL MILEAGE	TOTAL TIME
1	ASHLEY ANDREWS	CURPC			0.565	\$20.00
2	Dan Cutner	CURPC			-	-
3					-	-
4					-	-
5					-	-
6					-	-
7					-	-
8					-	-
9					-	-
10					-	-
		Sub Total	0.00	0.00	\$0.00	\$0.00

TOTAL MATCH \$0.00

TOTAL Non-Volunteer Match -

TOTAL VOLUNTEER MATCH	\$0.00
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6/28/05 One Meeting Form

Attachment #4 Meeting Agendas

SELECTBOARD MEETING AGENDA

Tuesday, October 4, 2016 at 7:00 PM

1. The meeting was called to order at 7:00 p.m. Those attending were Fred Ducharme, Ted Domey, Bernie Shatney, Mike Hogan, Michelle Leclerc, David Pike, Don Mitchell, Dan Currier, Ashely Andrews, Lori Augustyniak, Amy Homblas, Bob Burke, Judy Pransky, Robyn Hall, Eileen Pelliter, Jessica Miller and Betty Ritter.
2. Approve agenda – Mike 1st and Ted 2nd. Motion passed.
3. Approve minutes from September 20, 2016 – Ted 1st and Mike 2nd. Motion passed
4. Public Comment – Jessica Miller asked about the Mitigation Plan page 22 question is on the 2012 plan not on the plan that is being worked on.
5. Commons/Downstreet Housing/UDAG/CCIF – Judy Pransky and Eileen Pelliter regarding the \$50,000 loan for Cabot Commons. Eileen has payment schedule which she will give to Betty. Betty will have the loan reviewed with Bob Burke and Eileen after the town attorney has the loan paperwork correct.
6. Municipal Planning Grant/Lori Augustyniak – Lori with the CCA met with the economic review committee in how to help the local businesses with the local economy. Municipal Planning Grant to work on a revitalization plan. Grant application is due October 31, 2016. Lori is asking the Selectboard support to apply for the grant. There will be no money required from the town. The Selectboard will review it for two weeks and will vote on it on the next Selectboard meeting.
7. Listers' Errors and Omissions – Robyn Hall discussed and reviewed four parcels that need adjustments. Northland Telephone of VT is not supposed to be billed personal property per the VT District Attorney. Morse/Olson voted to deny change on tax bill. The Churchill property – the lister's assessed the entire new barn as dairy milking parlor. With conversations with their district advisor it should be listed as free stall and only a portion of the structure as a milking parlor. Davis complained that they had more acreage. The Lister's researched the deeds and they do have more acreage. These will all received corrected Tax Bills. A motion was made by Mike, and seconded by Bernie. Motion passed.
8. Town Clerk's Report
 - a. Signing of Orders – Passed around and done.
 - b. To Do List – nothing new.
 - c. Betty read to the Selectboard a letter from Deborah Peterson regarding her dog and there seems to be a solution to this problem.
 - d. Recycle center – John Cookson has requested lighting many times and hasn't been done yet and he has requested that since July. Karen said that it will be done tomorrow. The cement patch that was requested hasn't been done. Karen or Bernie will look into that. Someone is dropping tires at the recycle center. John has to pay for these tires. Change the locks to prevent that happening. John is very concerned about someone going in and dropping off recycling when no one is there.
9. Road Commissioner's Report
 - a. Project Schedule:

The last of the documents for the old garage easements have been approved. Then the bid documents will be ready and hopefully be starting at the end of the month.

SPECIAL SELECTBOARD MEETING AGENDA
Tuesday, October 4, 2016 at 7:00 PM

1. The meeting was called to order at 7:00 p.m. Those attending were Fred Ducharme, Ted Domey, Bernie Shatney, Mike Hogan, Michelle Leclerc, Todd Houston, Tavis Morse, Amy Hombias, Don Mitchell, Jessica Miller, Ashley Andrews, Dan Currier, and Betty Ritter.
2. Approve agenda – Mike 1st and Bernie 2nd. Motion passed
3. Review of Hazard Mitigation Plan – review and discuss the plan. Amy asked about the dates the plan has been reviewed. Karen will review those dates and get it to Amy. Now in step 2 we give to the state to review. After review they will give Cabot their comments. Then the Selectboard will do another public meeting.
4. Other Business – No other business.
5. Adjourn – Bernie 1st and Ted 2nd. Meeting adjourned.

Attachment #5. Example of Hazard Rating Worksheet

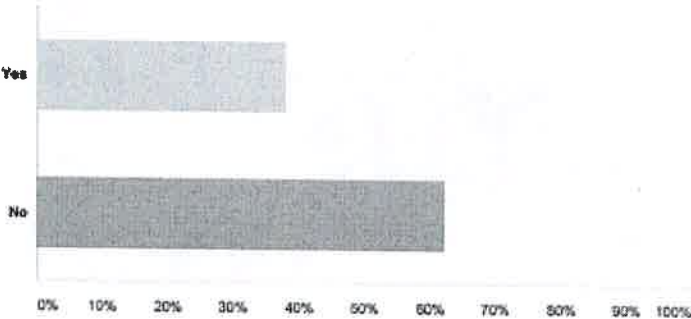
Cabot 2016 Hazard Rating Worksheet

Natural Disaster	Very Concerned	Somewhat Concerned	Neutral	Not Very Concerned	Not Concerned	Worst Threat (please pick 5)
Avalanche						
Bird Flu						
Dam Failure						
Drought						
Dust Storm						
Earthquake						
Erosion						
Expansive Soils						
Extreme Cold						
Extreme Heat						
Flood						
Fluvial Erosion						
Hail						
Hurricane/Tropical Storm						
Ice Jam						
Invasive Species (Emerald Ash Borer)						
Landslide/Debris Flow						
Lightning						
Severe Thunderstorms						
Severe Wind						
Severe Winter Weather						
Subsidence						
Tornado						
Wildfire						
Manmade Disaster						
Hazardous Materials						
Infectious Diseases Outbreak						
Infrastructure Failures						
Long Term Power Outage						
Structural Fire						
Transportation Spills						
Terrorism						
Water Supply Contamination						

Cabot Hazard Mitigation Plan -- Community Survey

Q1 Have you ever been impacted, physically or financially, by a natural disaster in Cabot?

Answered: 21 Skipped: 0

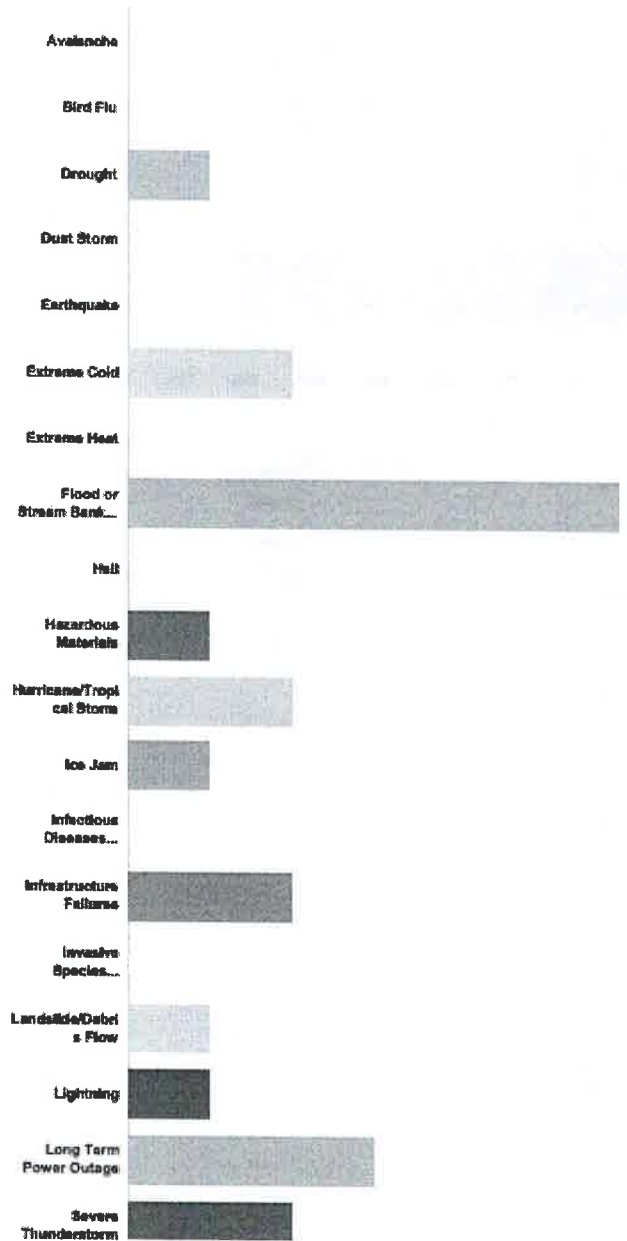


Answer Choices	Responses
Yes	38.10%8
No	61.90%13
Total	21

Cabot Hazard Mitigation Plan -- Community Survey

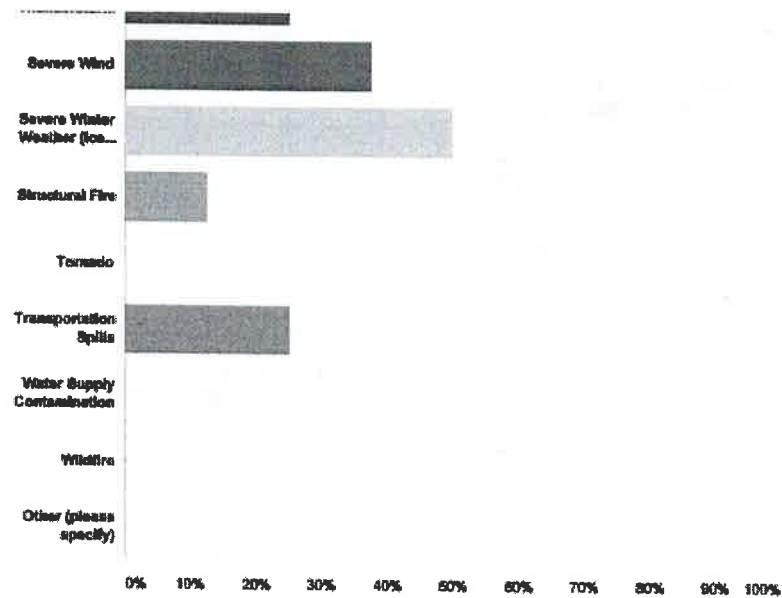
Q2 Which hazard was the cause of the disaster you experienced in Cabot? (check all that apply)

Answered: 8 Stopped: 13



1 / 3

Cabot Hazard Mitigation Plan -- Community Survey



Answer Choices	Responses
Avalanche	0.00% 0
Bird Flu	0.00% 0
Drought	12.50% 1
Dust Storm	0.00% 0
Earthquake	0.00% 0
Extreme Cold	25.00% 2
Extreme Heat	0.00% 0
Flood or Stream Bank Erosion	75.00% 6
Hail	0.00% 0
Hazardous Materials	12.50% 1
Hurricane/Tropical Storm	25.00% 2
Ice Jam	12.50% 1
Infectious Diseases Outbreak	0.00% 0
Infrastructure Failures	25.00% 2
Invasive Species (Emerald Ash Borer)	0.00% 0
Landslide/Debris Flow	12.50% 1
Lightning	12.50% 1
Long Term Power Outage	37.50% 3

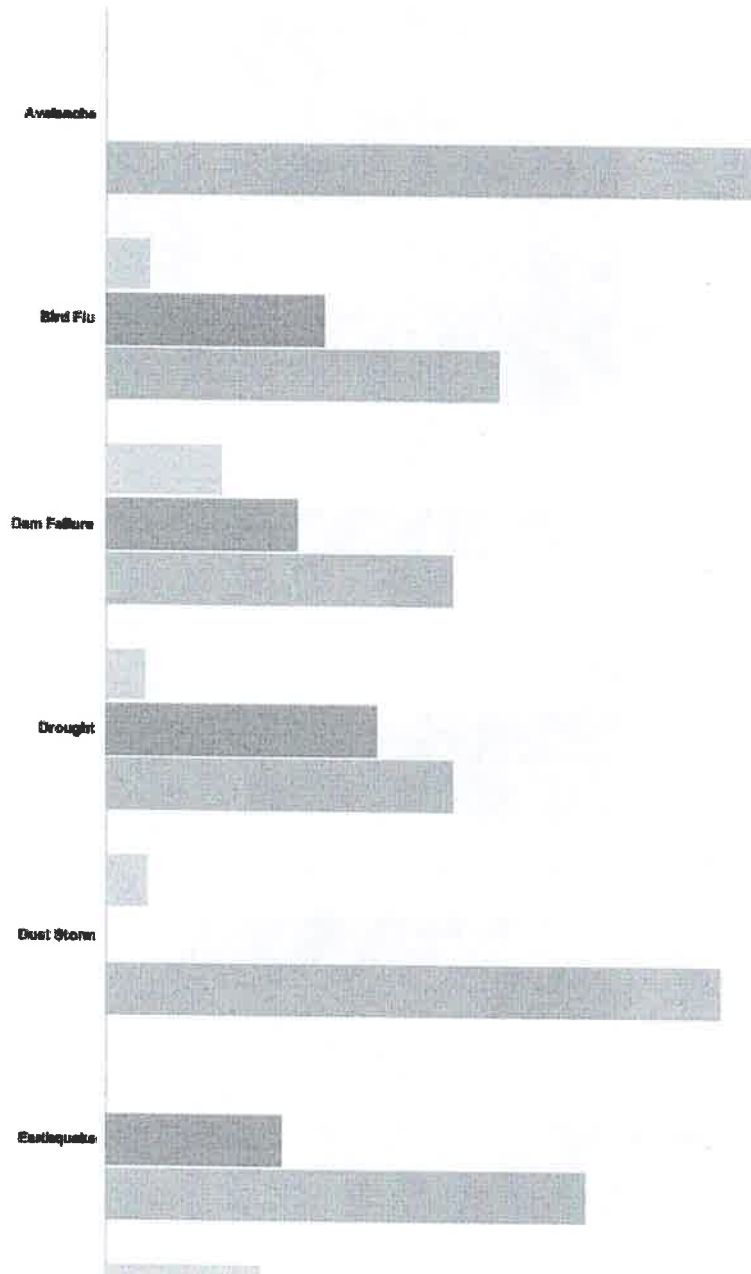
Cabot Hazard Mitigation Plan -- Community Survey

Severe Thunderstorm	25.00%	2
Severe Wind	37.50%	3
Severe Winter Weather (ice storms/snowstorms)	50.00%	4
Structural Fire	12.50%	1
Tornado	0.00%	0
Transportation Spills	25.00%	2
Water Supply Contamination	0.00%	0
Wildfire	0.00%	0
Other (please specify)	0.00%	0
Total Respondents: 8		

Cabot Hazard Mitigation Plan -- Community Survey

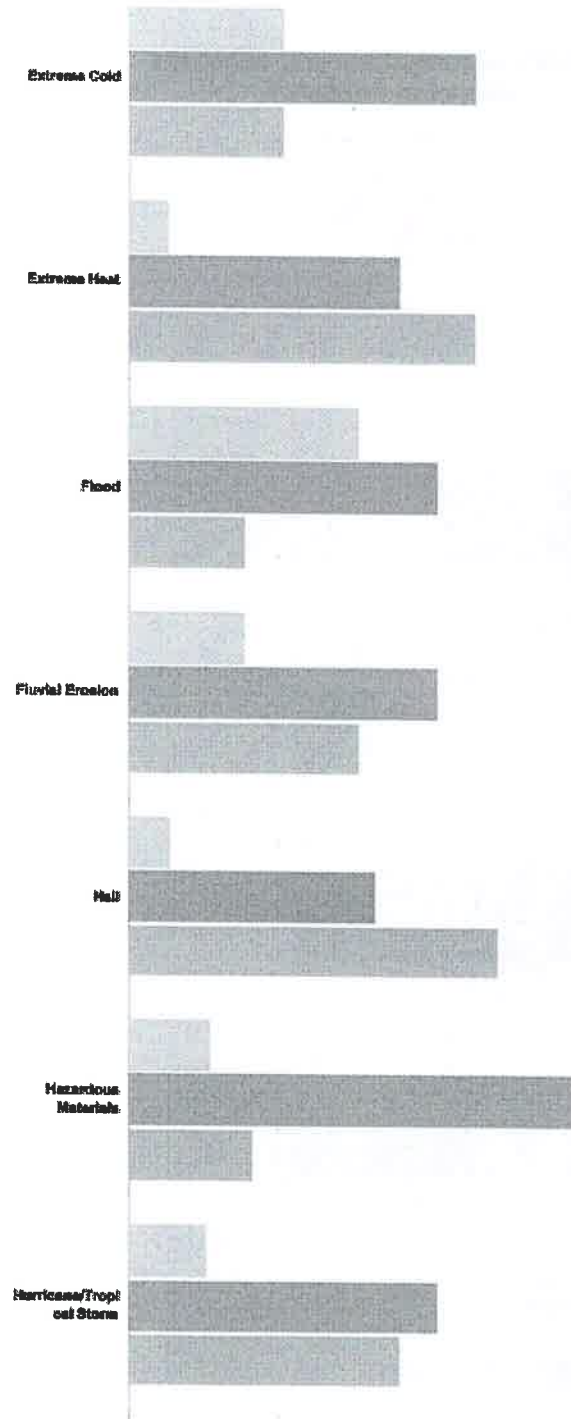
Q3 How concerned are you about the following hazards?

Answered: 18 Skipped: 3



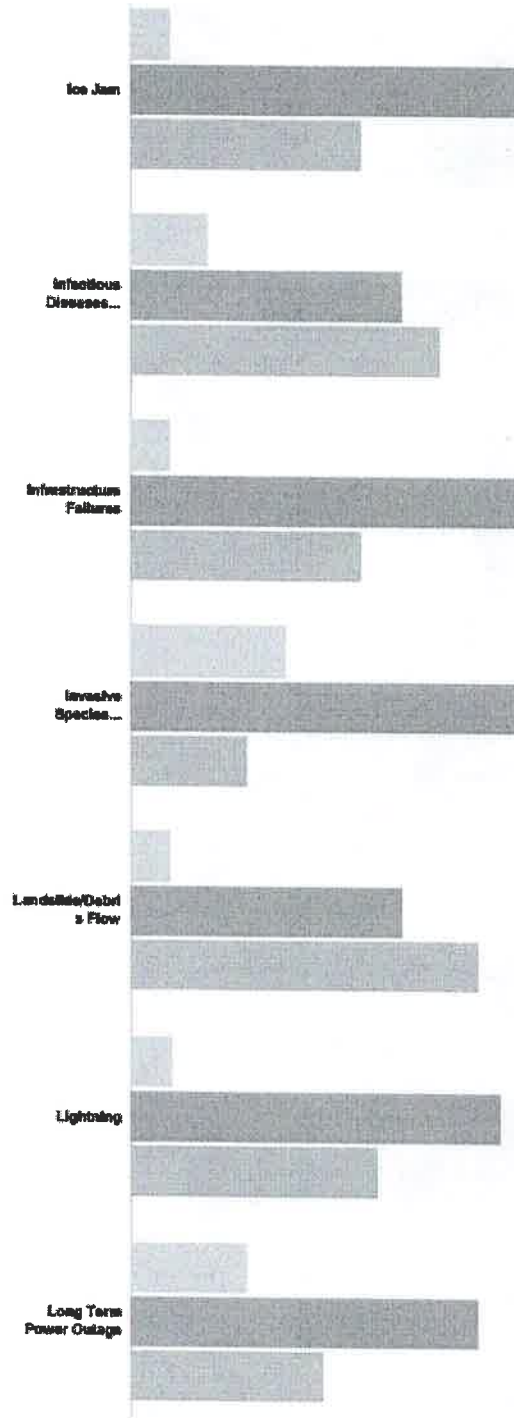
1 / 6

Cabot Hazard Mitigation Plan -- Community Survey



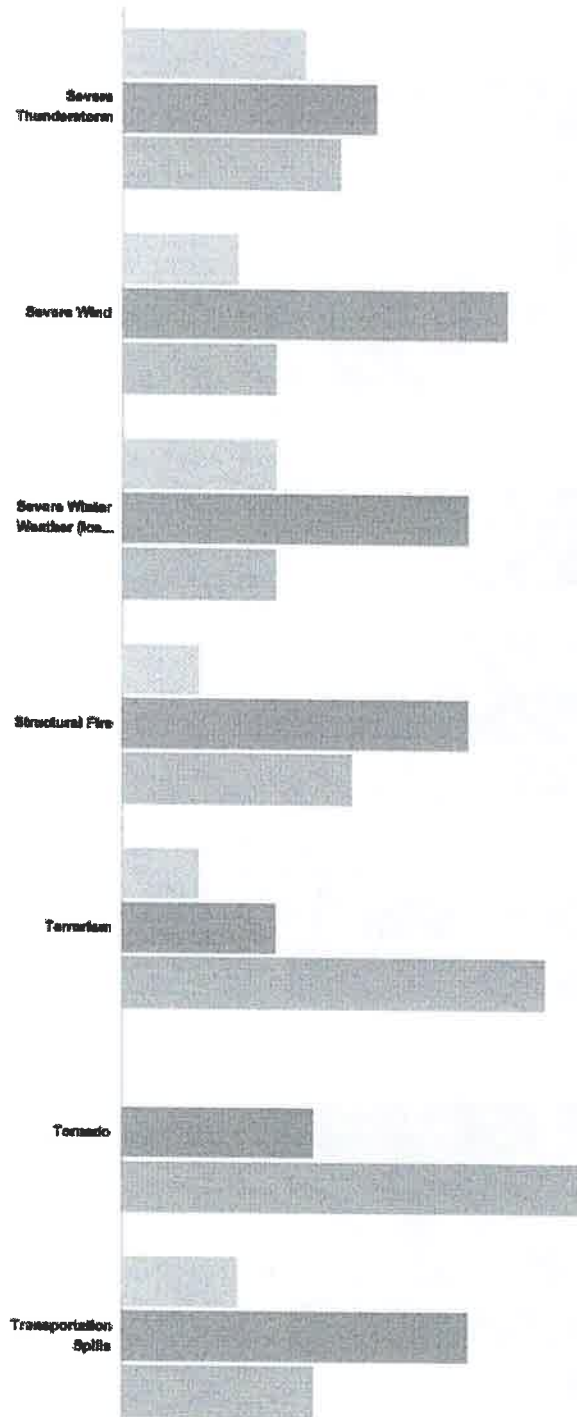
2/6

Cabot Hazard Mitigation Plan -- Community Survey



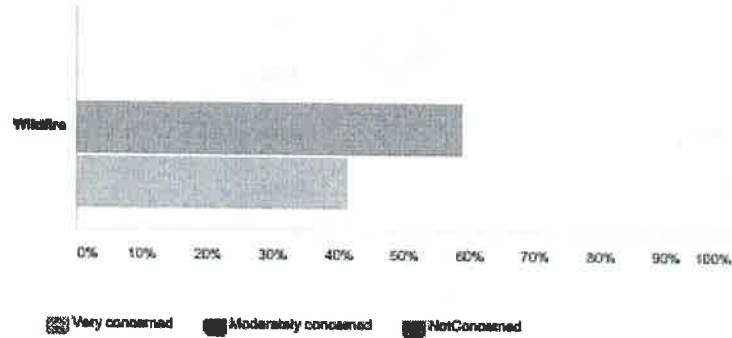
3 / 6

Cabot Hazard Mitigation Plan -- Community Survey



4 / 6

Cabot Hazard Mitigation Plan -- Community Survey



	Very concerned	Moderately concerned	NotConcerned	Total
Avalanche	0.00% 0	0.00% 0	100.00% 18	18
Bird Flu	6.67% 1	33.33% 6	60.00% 9	16
Dam Failure	17.65% 3	29.41% 5	52.94% 9	17
Drought	5.88% 1	41.18% 7	52.94% 9	17
Dust Storm	6.25% 1	0.00% 0	93.75% 16	16
Earthquake	0.00% 0	26.67% 4	73.33% 11	15
Extreme Cold	23.53% 4	62.04% 9	23.53% 4	17
Extreme Heat	5.88% 1	41.18% 7	52.94% 9	17
Flood	35.29% 6	47.06% 8	17.65% 3	17
Fluvial Erosion	17.65% 3	47.06% 8	35.29% 6	17
Hail	6.25% 1	37.50% 6	56.25% 9	16
Hazardous Materials	12.50% 2	68.75% 11	18.75% 3	16
Hurricane/Tropical Storm	11.76% 2	47.06% 8	41.18% 7	17
Ice Jam	5.88% 1	58.82% 10	35.29% 6	17
Infectious Disease Outbreak	11.76% 2	41.18% 7	47.06% 8	17
Infrastructure Failures	5.88% 1	58.82% 10	35.29% 6	17
Invasive Species (Emerald Ash Borer)	23.53% 4	58.82% 10	17.65% 3	17

Cabot Hazard Mitigation Plan -- Community Survey

Landslide/Debris Flow	5.88% 1	41.18% 7	52.94% 9	17
Lightning	8.25% 1	58.25% 9	37.50% 6	15
Long Term Power Outage	17.86% 3	52.94% 9	29.41% 5	17
Severe Thunderstorm	27.78% 5	38.89% 7	33.33% 6	18
Severe Wind	17.86% 3	58.82% 10	23.53% 4	17
Severe Winter Weather (ice storms, snowstorms)	23.53% 4	52.94% 9	23.53% 4	17
Structural Fire	11.76% 2	52.94% 9	35.29% 6	17
Terrorism	11.76% 2	23.53% 4	64.71% 11	17
Tornado	8.89% 0	29.41% 5	70.59% 12	17
Transportation Spills	17.86% 3	52.94% 9	29.41% 5	17
Wildfire	8.89% 0	58.82% 10	41.18% 7	17

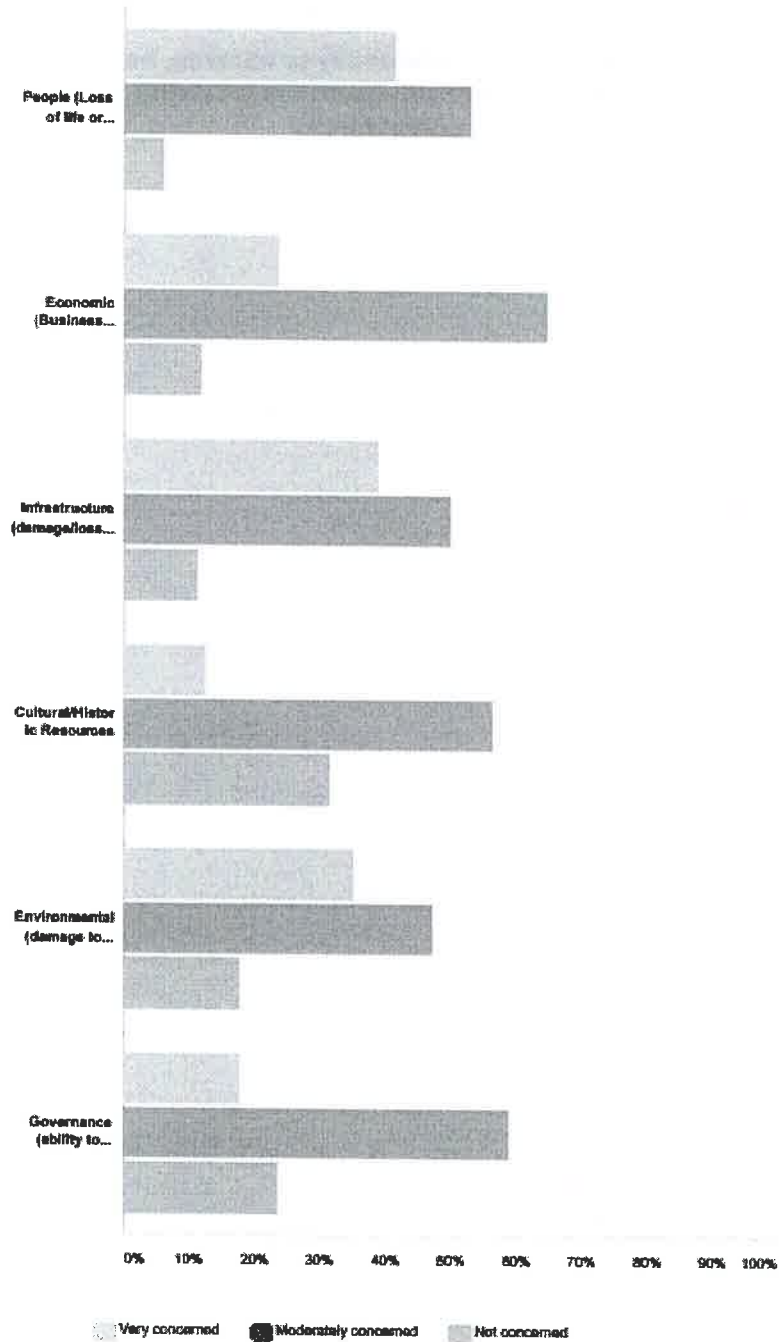
Cabot Hazard Mitigation Plan -- Community Survey

Q4 In terms of vulnerability to hazards, how concerned are you about the following categories?

Answered: 18 Skipped: 3

1 / 3

Cabot Hazard Mitigation Plan -- Community Survey



Cabot Hazard Mitigation Plan -- Community Survey

	Very concerned	Moderately concerned	Not concerned	Total
People (Loss of life or injury)	41.18% 7	52.94% 9	5.88% 1	17
Economic (Business interruptions, crop damage, equipment damage)	23.53% 4	64.71% 11	11.76% 2	17
Infrastructure (damageloss of roads, bridges, utilities, schools)	38.89% 7	50.00% 9	11.11% 2	18
Cultural/Historic Resources	12.50% 2	56.25% 9	31.25% 5	16
Environmental (damage to trees, contamination of surface waters)	35.29% 6	47.06% 8	17.65% 3	17
Governance (ability to provide municipal services)	17.65% 3	58.82% 10	23.53% 4	17

Cabot Hazard Mitigation Plan -- Community Survey

Q5 What community assets are important to you? (for example, school, church, historic buildings, recreational resources)

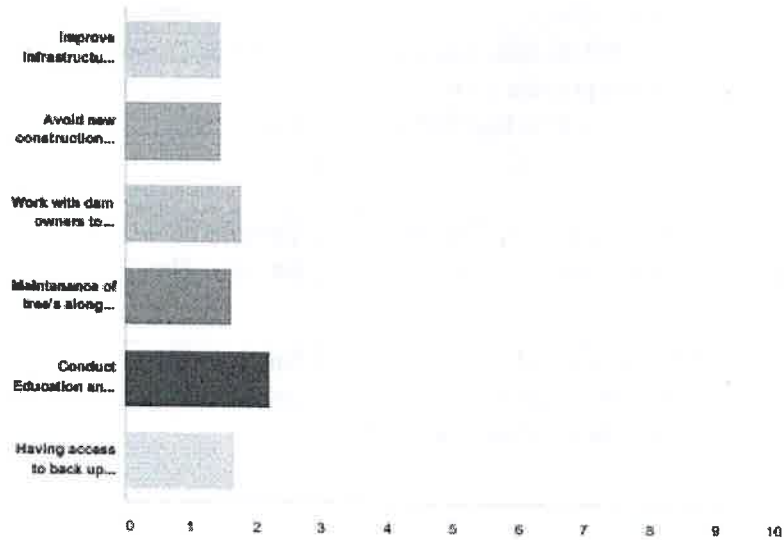
Answered: 12 Skipped: 9

#	Responses	Date
1	historic buildings, church, village store, Library, Harry's Hardware,	4/7/2016 7:33 AM
2	historic places (the dam at West Hill Pond & The old Headwater lumber sawmill & dam)	4/4/2016 5:38 PM
3	School, Town Hall, Church, Farms	4/4/2016 12:22 PM
4	School, Recreation, Library. Things that draw people to our community.....move on from things that will NEVER draw someone to our community like the town garage.	3/29/2016 10:01 AM
5	Wiley building	3/28/2016 8:24 PM
6	Schools storefront churches	3/28/2016 6:59 PM
7	All	3/28/2016 11:55 AM
8	Road network, water and wastewater infrastructure, community facilities, village, agriculture	3/25/2016 10:28 AM
9	All buildings that provide a service to people to live in town	3/25/2016 5:45 AM
10	water and wastewater infrastructure	3/25/2016 7:33 AM
11	School, roads	3/24/2016 9:31 PM
12	School, grocery store, hardware store, town hall, town garage	3/24/2016 5:09 PM

Cabot Hazard Mitigation Plan -- Community Survey

Q6 In your opinion, how effective would the following actions be to reduce or eliminate the risk of future damage from hazards?

Answers: 18 Skipped: 3



	Very Important	Moderately Important	Not Important	Total	Weighted Average
Improve Infrastructure (e.g., upgrades to roads and bridges)	58.82% 10	35.29% 6	5.88% 1	17	1.47
Avoid new construction in areas subject to flooding and erosion	52.94% 9	47.06% 8	0.00% 0	17	1.47
Work with dam owners to understand hazards	43.75% 7	37.50% 6	18.75% 3	16	1.75
Maintenance of trees along utility and road rights of way	44.44% 8	50.00% 9	5.56% 1	18	1.61
Conduct Education and Awareness Programs	25.00% 4	31.25% 5	43.75% 7	16	2.19
Having access to back up power (e.g., water supply, emergency shelter)	47.06% 8	41.18% 7	11.76% 2	17	1.55

The following Table provides an overview of Cabot's proposed 2012 local hazard mitigation actions along with the current status of each. The Planning Team reviewed these actions and reported on the status of each.

Attachment # 7. Cabot Hazard Mitigation Actions

Table # 1 2012 Status of 2012 Mitigation Actions to date

Hazard	2012 Mitigation Action	Current Status
Erosion	Prohibit development on slopes greater than 25% and regulate development on slopes over 15%	Planning Committee reviewed and will not take action at this time.
Flood/Erosion	Participate in a Stream Geomorphic Assessment	Completed – Upper Winooski Corridor Plan (2006)
Storm/Winter Weather Power Outage	Install standby electric power for the Cabot School gymnasium (Town shelter).	Has transfer switch, but not a permanent generator
Storm/Winter Weather Power Outage	Construct or retrofit the Cabot School gymnasium (Town shelter) to withstand the impacts of severe winter weather	Still interested – lack of funding
	Develop procedures to ensure safe operations/shutdown of hazardous materials located within the Cabot Creamery facilities near the Village during severe winter storms	Cabot Creamery has an emergency response plan that it developed
Fire	Purchase and install a sprinkler system for the Cabot School	Town is still interested but there is currently a lack of funding
Storm/Winter Weather Power Outage	Equip the wastewater infrastructure serving Cabot with redundant service and/or permanently installed standby generators	Completed and inspected yearly

Storm/Winter Weather Power Outage	Develop and implement grant/loan program for Town residents or property owners for permanent installation of generators or for pre-wiring of structure for temporary installation of portable generators	Town is no longer interested
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.	This task is completed and in compliance. Cabot has new Flood Hazard regulations and adopted maps. No further action is necessary.

Table #2 Mitigation Actions for 2016-2021

The Hazard Mitigation Activities Schedule below (Table #2) lists mitigation activities in regards to local leadership, partners, possible funding resources, timeframe for completion, and prioritization for the next five years. The projects were selected and prioritized by considering them according to the particular hazard addressed, its overall risk to the community, the likely benefit of the proposed project for mitigating that risk, and the cost of the project. Other factors such as financial resources available, community support, and available staff capacity for project implementation were also weighed by the local hazard mitigation team. Factors were considered qualitatively, except when specific cost, financial or other measurement information was available. Final prioritization also had to be weighed against overall staff capacity, including outside technical and consulting assistance, to bear the work load scheduled at any point through the five year implementation cycle.

The team considered how these various factors balanced each other, in a spectrum from highly important projects, to projects that should be pursued after the others. Highest priority projects had a very high risk to the community and a mitigation solution that was likely to mitigate most of the problem. The costs of the high priority projects were attainable by the municipality, or funding

assistance was readily available. Highest priority projects also enjoyed strong community support and staff capacity was available to carry them out. Lowest priority projects were of lower risk to the community, had solutions that did not mitigate very much of the problem, or were extremely expensive or with no financial assistance available. Projects for which there was little community support or available staff capacity would also be low priority.

In some cases the factors were mixed. For example, a project might be very expensive, and unpopular, but the risk to the community is so great that officials must use their judgment to act in the best interest of the community. In this case, if the project cost or funding assistance can be spread out over several years, the team would prioritize this project as medium or high. Other various combinations of factors required the Mitigation Team to balance factors against each other to decide on the most appropriate prioritization. Numerical quantities were not assigned to balance the factors, however the Team considered each prioritization in the scope of the other projects, LHMP priorities and overall community priorities.

The Town of Cabot understands that, in order to apply for FEMA funding for mitigation projects, a project must meet more formal FEMA benefit cost criteria. 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.

Hazard	Mitigation Action	Local Leadership	Priority (High, Medium, or Low)	Time Frame starting in 2016 (Years)	Possible Funding Source
Flooding, Severe Storms, Hurricane	The Town will select and review strategies outlined in the Upper Winooski Corridor Plan. However some projects have been completed.	Planning Commission, Selectboard	High	2018-2020 (2-4 Years)	Local Funds
High Wind, Severe Storms	Remove damaged tree and implement best management practices	Road Crew and Selectboard	High	Annually	Town Funds
Drought	Explore the development of alternative water source	Selectboard	High	2016-2017 (1 year)	Drinking Water State Revolving Fund (DWSRF)

Flood	Adopt River Corridor into flood hazard bylaws.	Selectboard, Planning Commission, CVRPC, VTANR, Regional Floodplain Manager, VLCT	High	2016-2017 (1 year)	Town Funds
Flooding, Flash Flood	Replace Bridge in lower Cabot (#B7) which was washed out by flooding	Selectboard, Public Works Director, CVPRC	High	2018-2019 (2-3 years)	Federal Transportation Dollars, Vtrans
Dam Failure	Preparedness Action: The Town will work with Green Mountain Power and VTANR to support the Marshfield Dam	Selectboard, Planning Commission, GMP, VTANR	Med	Annually	Green Mountain Power (Dam Owner Responsibilities)
Dam Failure	Work with landowners and VTANR to decide fate of Sawmill Dam. The study has been completed and an application has been sent to FEMA for removal	Selectboard, Planning Commission, VTANR, FEMA-region 1	High	2018-2019 (2-3 years)	FEMA

Severe Storms	Emergency Preparedness. Develop community networking system to encourage neighbors to check on neighbors before and after hazard events. The town is using Front Porch Forum and VTAlert at present.	Fire Department, Selectboard, VEM	High	2016-2018 (2 years)	Local Funds
Severe Storms, High Winds	Preparedness Action: Preform tree maintenance and removal in trees in the road right of way	Road Crew and Selectboard	High	Annually	Town Funds
Severe Storms, Winter Weather	Preparedness Actions: Selectboard formed a committee to help resolve ongoing situation with lack of volunteers for Emergency Services	Selectboard Committee	High	Annually	Local Funds
Winter storms, severe storms	Purchase and Install generator for Cabot School (Emergency Shelter)	Selectboard, School Board	Med	2016-2019 (3 years)	FEMA, HMGP, PDM
Extreme Cold	Upgrade and improve municipal waterlines in village	Selectboard, Town Clerk, Public Works Director	Med	2018-2019 (2-3 years)	Vermont Agency of Commerce & Community Development Municipal

					Planning Grants, VTANR weather grants
Severe Storms, Winter Storms,	Preparedness Action: Encourage the owners of local businesses to Install generator for backup power	Business Owners	Med	2018-2019 (2-3 years)	FEMA, HMGP, Biomass Funds
Winter Storms	Preparedness Action: Provide training to residents on how to insulate homes (pipes, attics) for extreme cold spells and heat	Selectboard, Planning Commission, Fire Department, Capstone Community Action	Med	2016-2018 (2 years)	Local Funds, Non-Profits, Community Action Groups
Winter storms/ extreme cold/ice storms, high winds	Upgrade electrical systems in municipal buildings and shelters to prevent surge/equipment damage from fluctuating current during ice and wind storms	Fire Department, Selectboard	Med	2019-2020 (3-4 years)	FEMA, Local Funds, Town Bonds
Dam Failure	Work with landowners on dam study to determine hazard/removal/ownership and maintenance of West Hill Pond Dam	Selectboard, Planning Commission, ANR	Med	2016-2018 (1-2 years)	FEMA, VTANR

Structure Fire	Work with landowners to develop additional dry hydrants in remote areas of Cabot. At this point the fire department has added more than 14 new hydrants.	Selectboard, Fire Department, CVRPC, VACD	Med	2019-2020 (3-4 years)	Vermont Rural Fire Protection Task Force
Structure Fire	Preparedness Action: Develop fire education materials for homeowners regarding heating homes safely during winter months and proper chimney/furnace maintenance	Selectboard, Fire Department, School Board, Principal	Med	2016-2018 (2 years)	Local Funds
Bridge/ Pedestrian Hazard	A Town bridge north of the village is undersized and needs to be enlarged to allow safe pedestrian crossing. There is a transportation study in progress.	Selectboard, Planning Commission	Med	2019-2021 (3-5 years)	Federal Transportation Dollars
Extreme Cold, Water Supply	Upgrade main 3 inch water supply line on Danville Hill	Selectboard, Public Works Director	Med	2017-2018 (2-3 years)	Drinking Water State Revolving Fund (DWSRF)
Severe Storms, Extreme cold, water storms	Remove damaged and overgrown trees in right of way to prevent power outage	Selectboard, Washington County Electric, Public Works Director	Med	2017-2018 (2-3 years)	Pre-Disaster Mitigation Funding, WEC, Local Funds

Flood, Severe Storms	Preparedness action: Explore future grant application to address stormwater system upgrades	Selectboard, Public Works Director	Med	Annually	Vermont Agency of Commerce & Community Development Municipal Planning Grants, Local Funds
Flooding, Severe storms/ Hurricanes, Landslide	Upgrade and expand culverts on Danville Hill, (which is currently in process) Mac Mountain Road, (completed) White Road, West Shore Road, (Completed) Bolton Road.	Road Foreman, Selectboard	Med	2017- 2018 (2- 3 years)	Federal Transportation Dollars
Severe Storm, Flood	Preparedness Action: Educate adjoining landowners to water supply reservoir at 215 N about nutrient management to limit nitrogen rich field runoff from entering the reservoir. Encourage Agricultural best management practices	Selectboard	Low	2019- 2020 (3- 5 Years)	Drinking Water State Revolving Fund (DWSRF)

Flooding, Severe Storms/ Hurricanes, Landslide	Upgrade and adopt new regulations for land use development on slopes greater than 25% and regulate development on slopes over 15%. The Cabot Planning Commission is changing the regulations to say NO development on slopes.	Planning Commission, Zoning Administrator, Selectboard	Low	2019-2020 (3-5 years)	Local Funds, VCDP, MPG
Flooding	Relocate Recreation Field out of floodplain (Larry and Sons Rec Field)	Selectboard, Recreation Committee	Low	2017-2018 (2-3 years)	Local Funds, Volunteers, Donations
Drought	Review and upgrade town policy on water supply access for farms from the town wells.	Selectboard	Low	2017-2018 (1-2 years)	Local Funds
Drought	Upgrade water supply system to increase capacity in a drought situation	Selectboard	Low	2020-2021 (3-5 years)	Drinking Water State Revolving Fund (DWSRF)

TOWN OF CABOT

Town Officers		Term Expires
Moderator	Edward C Smith	2018
Town Clerk	Betty Ritter	2020
Assistant Town Clerk & Treasurer	Michelle Leclerc	
Town Treasurer	Betty Ritter	2020
Selectpersons	Jack Daniels, Clerk	2019
	Fred Ducharme	2020
	Bernard Shatney	2019
	Ted Domey, Chair	2018
	Michael Hogan, Vice Chair	2018
Listers	Shirley Ducharme	2018
	Jeanne Johnson	2019
	Jacqueline Lumbra	2020
Auditors	Cecilia Gulka	2019
	Jeannie McCallum	2018
	Lynn Jones	2020
Delinquent Tax Collector	Susan Carpenter	2018
Grand Juror	Dave Pike	2018
Law Agent	Vacant	2018
Cemetery Commissioners	Deb Bothfeld	2022
	Ruth Goodrich	2020
	Angela Ward	2022
	Melvin Churchill, Chair	2018
	Frederick Pike	2019
School Directors	Chris Tormey, Chair	2019
	Randilee Raynor	2018
	Sharon O'Connor	2018
	Lisa Olson	2020
	Jackie Folsom	2018
Library Trustees	Beth Wade	2020
	Stephanie Burt	2018
	Susan Dineen	2020

	Linda Gabrielson	2019
	Jeanne McCallum	2019
Recreation Committee	Lynn Lehoe, chair	Non-term
	Tamara Feldman	Non-term
	Sonia Bailey	Non-term
	Laura Martin	Non-term
	Chuck Talbert, Little League	Non-term
UDAG Committee	Robert Burke, Chair (Appointed by Selectboard)	
	Jackie Folsom (Appointed by School Board)	
	Chuck Talbert (Appointed by Selectboard)	
	(Appointed by Selectboard - Village)	
	Roman Kokodyniak	2018
	Frank Kampf	2018
Wiley Building Committee	Fred Ducharme	2018
	Brad Alexander	2018
	Niels Larson	2018
	Bill Wheeler (Appointed by Selectboard)	
	(Appointed by Library)	

Information may become out of date. Please contact the Town Clerk's Office if you believe there are errors.

Cabot Town Clerk's Office
PO Box 36, 3084 Main Street
Cabot, Vermont 05647

Phone: 802-563-2279
Fax: 802-563-2423
Hours: Mon - Thurs from 9-5

Appointed by Selectboard

Water / Wastewater Superintendent	Karen Deasy
Pound Keeper	Cheryl McQueeney
Animal/Dog Control Officer	William Ameden
Fence Viewers	Rusty Churchill
Inspector - Coal, Wood, Lumber, Shingles	Anson Tebbetts
Tree Warden	Roland Payne, Jr
Fire Warden	Andrew Luce
Health Officer	Val Covell
Town Energy Coordinator	Michael Socks

Town Service Officer	Bill Cobb
Zoning Administrator	Karen Deasy
Planning Commission (5 members)	Chuck Marian(Chair) Jon Raynor Kate Chatot Richard Aronson Karen Deasy, Secretary Dawn Andrews
Development review board (7 members - 3 year term)	Brad Alexander (Chair) Larry Gochey Amy Hornblas Oliver Welters Susan Socks, Alt Michael Socks Richard McClain (Chair) Chuck Marian
Conservation Committee	Gary Gulka Cedric Alexander Chris Duff Ken Denton Charles Marian
Master of Colors	William Walters
Road Commissioner	Karen Deasy
Town Attorney	Tarrant, Gillies, Merriman & Richardson
District Representative	Representative Kitty Toll
Regional Planning Committee Representative	Richard Payne
Emergency Management Coordinator	Karen Deasy
Newspaper	Cabot Chronicle Hardwick Gazette
NEKSWMD Representative	Ben Davis
NEKSWMD Rep. Alt.	R.D. Eno

