

Hazard(s) Mitigated	Mitigation / Preparedness Actions	Local Leadership	Prioritization	Possible Resources*	Time Frame	Local plans and regulations	Structures and infrastructure projects	Natural systems protection	Education and awareness programs
Severe Weather (2 or more of the following: Thunderstorm, Lightning, High winds, Hail, and Flooding)									
Hazardous Material Spill	Ensure that all emergency response and management personnel continue to receive HAZMAT Awareness training at a minimum. (Preparedness)	Bridge-water Volunteer Fire Dept.	High	Local/FD resources; Vermont State HAZMAT Team	Year 1 of planning period				
	Continuously stock gear to help contain small spills when they occur (booms, absorbent materials, etc.). (Preparedness)	Bridgewater Volunteer Fire Dept.	High	Local/FD resources; polluting party	Annually				
Structural Fire	Ensure that fire department personnel maintain their Firefighter certifications. (Preparedness)	Bridgewater Volunteer Fire Dept.	High	Local/FD resources; Vermont Fire Academy	Annually				
	Update and maintain town culvert inventory. (Mitigation)	Selectboard / Road Foreman		Local resources; TRORC; VTrans					
	Regularly inspect and maintain bridges and culverts. Complete repairs or upgrades as needed. (Mitigation)	Selectboard / Road Foreman		VTrans Structures grant; Local resources					

<p>As part of Town Plan updates, review the Town's Flood Hazard Area Regulations to ensure that they are compliant and consistent with state and federal guidelines and statutes. (Mitigation)</p>	<p>Planning Commission; Selectboard</p>	<p>Low</p>	<p>Local resources; TRORC; Municipal Planning Grants; NFIP</p>	<p>Year 5 of Planning Period</p>
<p>Upgrade/improve culverts and ditches on Gold Coast Road to improve the resilience of the entire road to flood damage. (Mitigation)</p>	<p>Selectboard / Road Foreman</p>		<p>VTrans Structures grant; Local resources</p>	
<p>Upgrade culvert on Dailey Hollow Road to improve the flow of floodwaters and increase flood resilience. (Mitigation)</p>	<p>Selectboard / Road Foreman</p>		<p>VTrans Structures grant; Local resources</p>	
<p>Continue upgrading/improving culverts on Cox District Road to improve the resilience of the road to flood damage. (Mitigation)</p>	<p>Selectboard / Road Foreman</p>		<p>VTrans Structures grant; Local resources</p>	
<p>Upgrade 5'x7' box culvert on Bridgewater Hill Road to a 10' arch (multi-plate) culvert. (Mitigation)</p>	<p>Selectboard / Road Foreman</p>		<p>VTrans Structures grant; Local resources</p>	

**Flash Flood /
Flood / Fluvial
Erosion**

	<p>Support town or conservation organization assistance to landowner(s) of property(ies) in Bridgewater on the NFIP's repetitive and severe repetitive loss list to reduce flood damages, through elevation, floodproofing, acquisition or relocation, or an infrastructure project if one is found to address the source of flooding. (Mitigation)</p>	<p>Selectboard (as needed)</p>	<p>Low</p>	<p>Local resources; NFIP</p>	<p>Year 5 of Planning Period</p>
<p>Wildfire / Brushfire</p>	<p>Develop a public education program to educate residents about wildfire/brushfire risks and how to minimize the occurrence of wildfire/brushfire. (Mitigation)</p>	<p>Bridgewater Volunteer Fire Department</p>	<p>Low</p>	<p>Local/FD resources</p>	<p>Year 5 of Planning Period</p>
<p>All Hazards</p>	<p>Ensure that Bridgewater's Local Emergency Management Plan (LEMP) is kept up-to-date, identifies vulnerable areas, and references this Plan. (Preparedness)</p>	<p>Selectboard</p>	<p>High</p>	<p>Local resources; TRORC; Vermont Emergency Management</p>	<p>Year 1 of planning period</p>

C. Status Update on Mitigation Actions Identified in 2015

The following table outlines the mitigation and preparedness actions that were proposed in Bridgewater's 2015 Local Hazard Mitigation Plan (adopted on July 14, 2015). Participants in the new Plan update process reviewed these actions and reported on the status of each. Actions related to long-term mitigation of natural hazards are so noted.

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

2015 MITIGATION OR PREPAREDNESS ACTION	LOCAL LEADERSHIP	PRIORITIZATION (MITIGATION PLAN STATUS)	POSSIBLE RESOURCES	TIME FRAME	STATUS UPDATE—2020
ALL HAZARDS					
<i>Ensure that Bridgewater's Local Emergency Operations Plan (LEOP) is kept up-to-date and identifies vulnerable areas and references this Plan. (Preparedness)</i>	Select-board	High	Local resources; TRORC; Vermont Emergency Management	1 Year from Date of Plan Approval	<input checked="" type="checkbox"/> Completed. <u>The newest iteration of the LEOP is the Local Emergency Management Plan (LEMP). The Bridgewater LEMP is renewed annually; it was last updated and approved on 04/21/2020.</u>
<i>Develop a town methodology for consistently documenting infrastructure damage after weather events. (Mitigation)</i>	Town Office	High	Local resources; Vermont Emergency Management/ Vermont Agency of Natural Resources	1 Year from Date of Plan Approval / As needed	<input checked="" type="checkbox"/> Completed. <u>The Town Clerk documents infrastructure damage by working with the Highway Department. Damage is reported to the Selectboard and to TRORC.</u>
<i>Encourage residents to sign up for VTAlert, a weather-related and emergency notification system that will alert residents to risks and threats that</i>	Select-board	Medium	Local resources; Vermont Emergency Management; VT Alert	2-3 Years from Date of Plan Approval	<input checked="" type="checkbox"/> Completed. <u>The Fire Department did outreach to the community via their Facebook page in 2018. The Town will use the Town website and the Fire Department Facebook page to notify residents about VTAlert when significant</u>

<i>they may face. (Preparedness)</i>					<u>hazard events are anticipated.</u>
STRUCTURE FIRE					
<i>Ensure that fire department personnel maintain their Firefighter certifications. (Preparedness)</i>	Bridge-water Volunteer Fire Dept.	High	Local/FD resources; Vermont Fire Academy	Annually	<u>☑ Completed. Certifications are maintained every year. The Fire Department meets weekly for training and attends state trainings as well.</u>
STRUCTURE FIRE/ WILDFIRE/BRUSHFIRE					
<i>Complete a comprehensive survey of potential dry hydrant sites to determine the need for additional sites and potential location, and install dry hydrants. (Mitigation)</i>	Bridge-water Volunteer Fire Dept.	Medium (new)	Local/FD resources	2-3 Years from Date of Plan Approval	<u>☑ Completed. The Town installed 2 dry hydrants. A few more potential sites were identified but determined to be infeasible. The Town has an inventory of existing dry hydrants. All dry hydrants are flushed and tested annually in accordance with the grant requirements specified by the state's Rural Fire Protection Program.</u>
<i>Develop a plan to build a new fire station. (Mitigation/ Preparedness)</i>	Bridge-water Volunteer Fire Dept.	Low	Local/FD resources	5 Years from Date of Plan Approval	<u>☑ Completed. The Town approved a bond to fund the project. Construction is expected to start in spring of 2021.</u>
HAZARDOUS MATERIAL SPILL					
<i>Ensure that all emergency response and management personnel continue to receive HAZMAT Awareness training at a minimum. (Preparedness)</i>	Bridge-water Volunteer Fire Dept.	High	Local/FD resources; Vermont State HAZMAT Team	1 Year from Date of Plan Approval	<u>☑ Completed. This is done annually.</u>

<i>Continuously stock gear to help contain small spills when they occur (booms, absorbent materials, etc.). (Preparedness)</i>	Bridge-water Volunteer Fire Dept.	High	Local/FD resources; polluting party	As needed	<input checked="" type="checkbox"/> <u>Completed. The Fire Department maintains a stock of gear. When a spill occurs, gear replacement costs are paid by the insurance company of the responsible party.</u>
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WILDFIRE / BRUSHFIRE

<i>Develop a public education program to educate residents about wildfire/brushfire risks and how to minimize the occurrence of wildfire/brushfire. (Mitigation)</i>	Bridge-water Volunteer Fire Department	Low (new)	Local/FD resources	5 Years from Date of Plan Approval	<u>Not completed. The Fire Department does post safety messages on its Facebook page during high-risk periods (spring and fall). The Fire Department used to do educational programs at the Elementary School, but the school has closed.</u>
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FLASH FLOOD / FLOOD / FLUVIAL EROSION

<i>Maintain and update town bridge and culvert inventories. Regularly inspect and maintain town bridges and culverts; and develop a schedule to replace undersized culverts. (Mitigation)</i>	Select-board / Road Foreman	High (2 nd priority of 5 natural hazard mitigation projects in 2009 Plan)**	Local resources; VTrans	1-2 Years from Date of Plan Approval	<u>Partially completed. The Town recently inspected its bridges and found them all to be in good condition. Culverts have not been inventoried since 2010, and a replacement schedule hasn't been developed. Individual culverts have been upgraded as they have failed. Culvert upgrades may entail upsizing or simply replacing metal pipes with plastic ones that move water faster.</u>
<i>Work with State staff to plan removal of fallen trees in areas with remote, steep streams.</i>	Road Foreman	Medium (3 rd priority of 5 natural hazard mitigation projects in	Local resources; Vermont Agency of Natural Resources	2-4 years from Date of Plan Approval	<u>Not completed. The Town works with the state on streambank erosion concerns, but regulations prevent interference with trees that fall in</u>

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(Mitigation)		2009 Plan)**			streambeds.
As part of Town Plan updates, review the Town's Flood Hazard Area Regulations to ensure that they are compliant and consistent with state and federal guidelines and statutes. (Mitigation)	Planning Commission; Select-board	Low (new)	Local resources; TRORC; Municipal Planning Grants; NFIP	5 Years from Date of Plan Approval	☑ Completed. The Flood Hazard Area Regulations were reviewed during the 2018 Municipal Plan update, and they were found to be compliant with state and federal requirements.
Support town or conservation organization assistance to landowner(s) of property(ies) in Bridgewater on the NFIP's repetitive and severe repetitive loss list to reduce flood damages, through elevation, floodproofing, acquisition or relocation, or an infrastructure project if one is found to address the source of flooding. (Mitigation)	Select-board (as needed)	Low (new)	Local resources; NFIP	5 Years from Date of Plan Approval	☑ Completed. The Town continues to work with landowners to reduce flood damages. A potential buyout is currently being considered.
Support projects to protect or restore strategic areas of floodplain to provide areas for flood storage, which will help alleviate peak flood flows. (Mitigation)	Select-board / Road Foreman	Medium (new)	Local resources	2-3 Years from Date of Plan Approval	☑ Completed. The Town continues to prevent reduction in flood storage through its Flood Hazard Area Regulations. Acquired properties have been preserved as open space.

Develop a plan for the reuse of Bridgewater's Tropical Storm Irene buyout properties as river access or green space, and maintain the undeveloped character of the land to allow for future flooding. (Mitigation)	Select-board / Town Officer	Medium (new)	Local resources; HMGP; third party consultants	3-4 Years from Date of Plan Approval	<u>☑ Completed. Buyout properties have been maintained as open space.</u>
Develop a program to upgrade undersized culverts and upgrade/improve ditches on Gold Coast Road to improve the resilience of the entire road to flood damage. (Mitigation)	Select-board / Road Foreman	High (new)	Local resources/ Local road budget	1 Year from Date of Plan Approval	<u>Partially completed. No culverts have been replaced on Gold Coast Road in the past 5 years because none failed. Culverts and ditches are regularly maintained. The ditches in front of the cemetery have been stone-lined.</u>
Develop a program to upgrade undersized culverts and upgrade/improve ditches on Cox District Road to improve the resilience of the entire road to flood damage. (Mitigation)	Select-board / Road Foreman	High (new)	Local resources/ Local road budget	1 Year from Date of Plan Approval	<u>Partially completed. The Town is currently working to upgrade 1 major culvert, and 1 more may be upgraded in future. Cox District Road ditches (including steep ditches) were stone-lined in 2018.</u>
Upgrade culvert on Dailey Hollow Road to improve the flow of floodwaters and increase flood resilience.	Select-board / Road Foreman	Low (new)	VTrans Structures grant; Local resources	5 Years from Date of Plan Approval	<u>Not completed.</u>

(Mitigation)					
Upgrade 5'x7' box culvert on Bridgewater Hill Road to a 10' arch (multi-plate) culvert. (Mitigation)	Select-board / Road Foreman	Medium (new)	VTrans Structures grant; Local resources	2-3 Years from Date of Plan Approval	<u>Not completed. The culvert was repaired but not upgraded to an arch culvert.</u>

FEMA Requirements for Mitigation Strategies

- ❖ Mitigation strategies/actions/projects reduce the risk posed by hazards over the long term. They are distinct from preparedness activities, which need regular attention, maintenance, or practice and often focus on how a community will respond to a hazard event while it's happening. Preparedness activities can be included in the plan but will not be counted toward meeting FEMA's requirements for plan approval.
- ❖ The Town should develop at least 1 mitigation strategy/action/project for each top hazard identified. If it's not possible to agree on any mitigation strategies for a particular top hazard, the plan must describe one or more strategies that were considered but ultimately rejected by the Town in the planning process, and explain the reasons it was rejected.
- ❖ The Plan should include at least 1 of each of the following types of mitigation strategies:
 - **local plans and regulations** - government authorities, policies, or codes that influence the way land and buildings are developed and built.
 - **structures and infrastructure projects** - construct manmade structures to reduce the impact of hazards, or modify existing structures and infrastructure to protect them from a hazard or remove them from a hazard area.
 - **natural systems protection** - actions that minimize damage and losses and also preserve or restore the functions of natural systems.
 - **education and awareness programs** - actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them

If it's not possible to agree on any mitigation strategies for a particular category, the plan must describe one or more strategies that were considered but ultimately rejected by the Town during the planning process, and explain the reasons it was rejected.
- ❖ Implementation timeframes should be specific:
 - Annual
 - Year(s) 1/2/3/4/5 of planning period

Guidelines for Prioritizing Mitigation Strategies

Prioritization Categories:

High – a strategy is either critical or potential funding is readily available. Should have an implementation timeframe of less than 2 years.

Medium - a strategy is less critical or the potential funding is not readily available. Should have an implementation timeframe of more than 2 years but less than 4.

Low - The timeframe for implementation of the action, given the action's cost, availability of funding, and the community's need to address the issue, is more than 4 years.

Factors to Consider in Prioritization:

(with sample questions for consideration/discussion)

Social:

- Is the mitigation action socially acceptable?
- Will the action adversely affect any one segment of the population? What impacts might it have on marginalized community members?
- What effects will the action have on the social, historic, and cultural environment of the community?

Technical:

- Is the proposed action technically feasible and does it provide the appropriate level of protection?
- What types of technical/professional expertise will be required to plan and implement the project?
- Will the action create more problems than it solves?
- How long will it take to complete the project? Is this a reasonable timeframe?

Administrative

- Does the community have the capability (staff, expertise, time, funding) to implement the action?
- Can the community provide the necessary maintenance of the project?

Political

- What political ramifications might this action have?
- Will the community support or oppose this project?

Legal

- Does the community have the authority to implement the proposed action?
- Will the action comply with local, State, and Federal environmental regulations?
- Do homeowner association bylaws apply to the project site?
- Is the action likely to be challenged by stakeholders whose interests may be adversely affected?

Economic

- Do the costs of the action seem reasonable for the size of the problem and the likely benefits?
- What burden will be placed on the local economy to implement and maintain the action?
- Will the action generate additional jobs locally?

Environmental

- Is the proposed action in a floodplain or wetland or will it indirectly impact the natural and beneficial functions of a floodplain or wetland?
- How will the action affect the natural environment?
- How will the action affect utility and transportation systems?