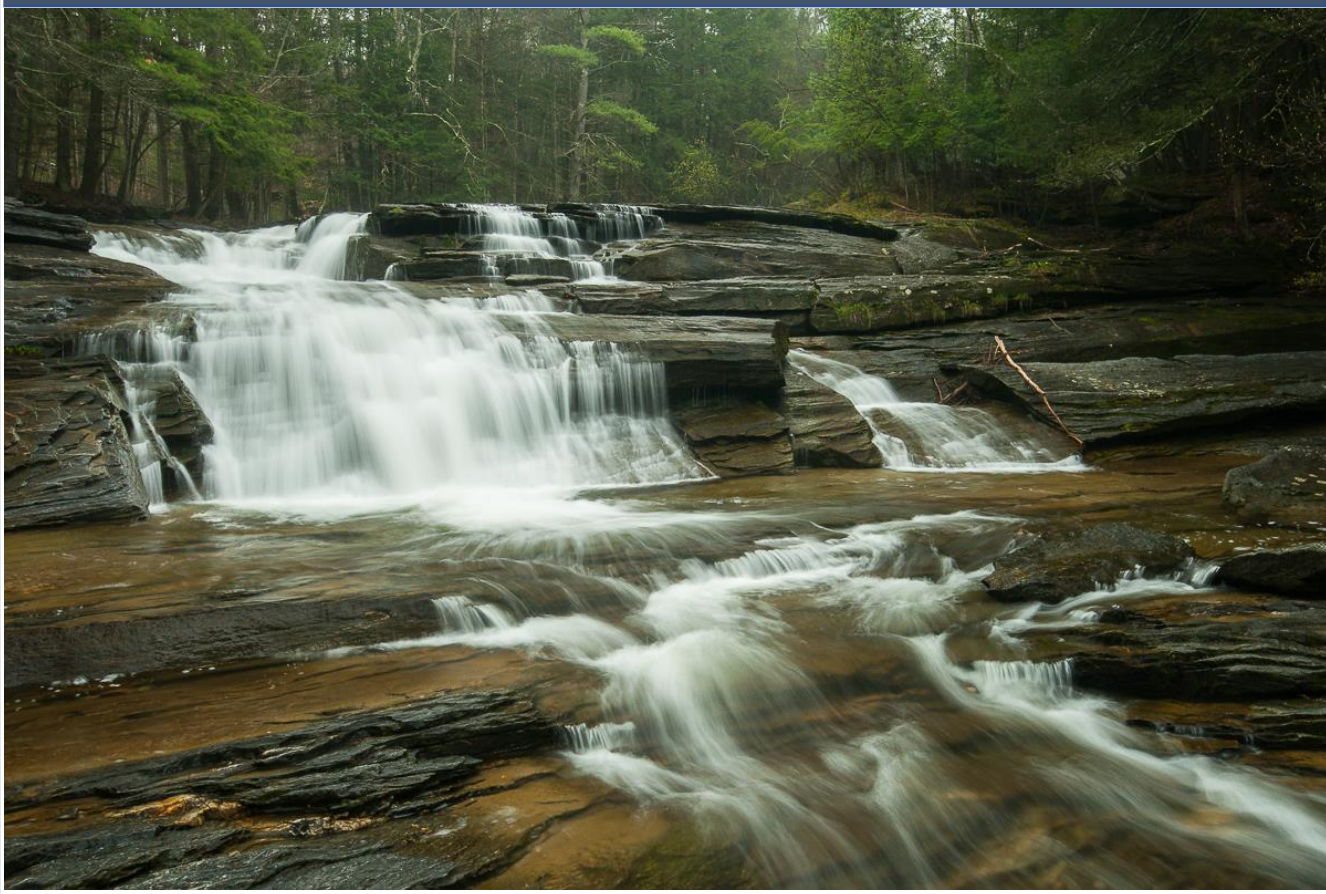
Town of New Marlborough

Community Resilience Building

Summary of Findings

October 2020



Umpachene Falls on the Umpachene River
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BSC GROUP

PREPARED AND PRESENTED BY

Jeffrey T. Malloy, BSC Group, Inc.

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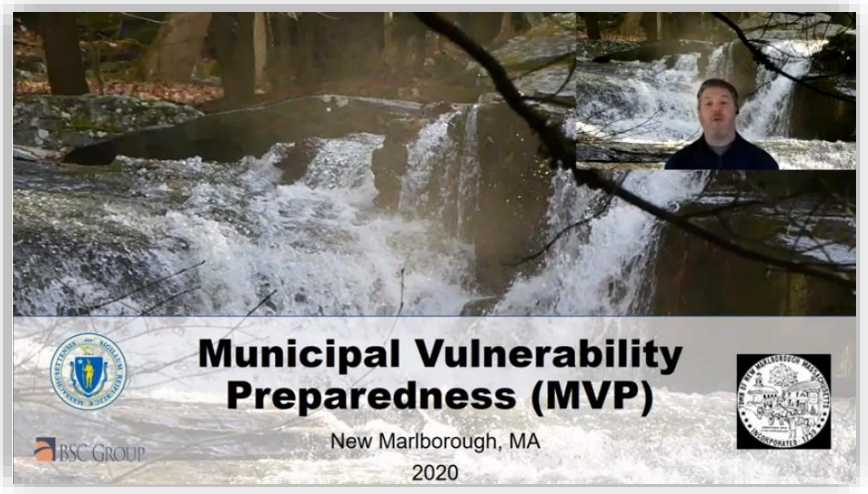
ATTACHMENTS

EXECUTIVE SUMMARY

In accordance with Executive Order 569, which seeks to build resilience and adapt to the impacts of climate change, the Town of New Marlborough, Massachusetts is pleased to submit this Summary of Findings Report. In 2019, the Town of New Marlborough applied for and received a Municipal Vulnerability Preparedness (MVP) Planning Grant from the Massachusetts Executive Office of Energy and Environmental Affairs (EEA) to complete a vulnerability assessment and action oriented resilience plan (Findings Report). This planning initiative followed the Community Resilience Building (CRB) framework developed by The Nature Conservancy to apply a community-driven workshop process to identify climate-related hazards, This planning initiative followed the Community Resilience Building (CRB) framework developed by The Nature Conservancy to apply a community-driven Workshop process to identify climate-related hazards, community strengths and vulnerabilities, and develop solutions to address these considerations. Completion of the CRB process enables the Town to achieve MVP community designation status from the EEA and receive preference for future state grants under the MVP program or other participating funding entities.

COMMUNITY RESILIENCE BUILDING PLANNING AND WORKSHOPS

The CRB process began with the establishment of a Core Team that included community stakeholders comprised of Town Staff. The Core Team held a strategic planning session on May 20, 2020. This Core Team meeting involved developing a broad understanding of the Hazards, Vulnerabilities, and Strengths that characterize the Town of New Marlborough, and to identify a list of Preliminary Resilience Actions that the community could consider at the CRB Workshop. The Core Team meeting was also used to identify the goals of the CRB Workshop within the context of community interests and needs. Due to the global COVID-19 pandemic and the Massachusetts Non-Essential Business Order and Stay-at-Home Advisory that went into effect on March 24, 2020, BSC Group, Inc., New Marlborough's MVP certified provider, hosted meetings, the CRB Workshop, and the Listening Session via the Zoom platform. To increase community engagement, a project website was developed and used to house project information in a central location. Resources made available on the website included project maps, an interactive GIS community data viewer, recorded video presentations, surveys, and links to useful climate data information provided on the Massachusetts Climate Change Clearinghouse Website, resilientma.org. Municipal stakeholders that were unable to attend the Core Team planning meeting were encouraged to provide information through the data collection tools provided on the project website.



The Community Resilience Building Workshop was held on June 23 and June 24, 2020. Given the use of Zoom to present the Workshop, each Workshop session lasted two hours and included an evening and morning option. Twenty-five (25) attendees participated in the Workshop, which included a diverse set of community stakeholders from municipal departments, local businesses, non-government entities, and local interest groups. A list of Workshop attendees is provided at the end of this report. The CRB Workshop involved a refinement of preliminary planning efforts held during Core Team meetings. This virtual Workshop involved presentations followed by a group discussion and population of the CRB Framework Matrix. Participants were encouraged to engage with the project website prior to, during, and following the Workshop. Information gathered during these various methods of engagement were compiled and integrated into a Master CRB Framework Matrix. Following the Workshop and the development of a Final CRB Framework Matrix, four key themes were derived from the information gathered. Additionally, top

Action Items were identified. Workshop participants were asked to vote on the top actions through an online survey provided on the project website. Top priority Action Items were integrated into the Findings Report.

A Public Listening Session was held on October 5, 2020. A recorded presentation and an online survey was provided on the project website and the Town of New Marlborough solicited information from the community through this survey for two weeks. Feedback collected through this Public Listening Session was integrated into the Findings Report.

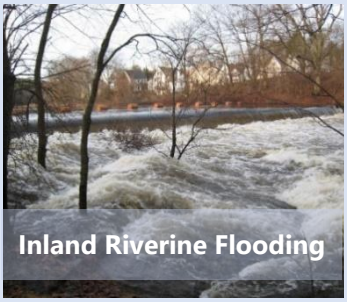
The success of climate resilience planning is contingent upon ongoing participation of community stakeholders. Workshop attendees and other interested stakeholders are encouraged to provide comments, corrections, updates, or additional information of findings transcribed in this report to Mari Enoch, Town Administrator at nmbos@newmarlboroughma.gov.

DEFINING HAZARDS

The Town of New Marlborough has several challenges related to establishing resilience to the effects of climate change. Climate change is expected to increase the occurrence and intensity of natural hazard related weather events. For example, the observed amount of precipitation falling in extreme events has increased by 71% in the Northeast from 1958-2012. In Berkshire County, of the 63 severe storm events that have resulted in property damage since 1955, 15% of them have occurred since 2014. Identifying and preparing for the hazards most prevalent within New Marlborough is the first step to prepare for the effects of climate change. Understanding that climate change challenges how community resources are managed and that the distribution of risk for decision-makers is gradually changing, it is essential to establish planning efforts that prioritize explicit needs of the community.

During the Core Team meetings and CRB Workshop, stakeholders identified the top natural hazards for the Town of New Marlborough. Inland riverine flooding from extreme precipitation events was identified as the top hazard among most participants. Extreme temperatures (heat, cold, freeze-thaw, drought), extreme precipitation (rain, snow, and ice), and high velocity wind/microbursts represented the other climate exposure hazards highlighted as significant concerns for the Town. Collectively, it was agreed upon by the group that the Town of New Marlborough's top hazards present ongoing and cumulative adverse impacts to the community's most important infrastructural, societal, and environmental resources.

TOP HAZARDS WITHIN NEW MARLBOROUGH



*There's a surprising amount of coldwater fisheries still in New Marlborough, thanks to excellent groundwater inputs. But because of the abundance of agricultural lands around these rivers, there are few if any **riparian buffers**, many areas of **high erosion and channel incision**, and little to no in-stream habitat.*

***Dirt roads and culverts** are particularly susceptible to significant erosion and rutting from storm events, thus creating **access issues** and **potential blockage of emergency vehicles**. The same is true just from fairly normal wet winter weather when temperatures are cold but above freezing, creating **severe mud conditions and rutting**.*

***Educate** and **communicate** with area residents.*

*Downed trees town-wide cause **power outages / communication loss***

*Our **significant open space areas** are a strength during storm water events.*

*Various parks (e.g. Umpachene Falls) and their open areas have been damaged by **riverbank erosion** during severe storm events.*

SURVEY SAYS...

As part of the Community Resilience Building engagement process, an online survey was conducted. New Marlborough residents commented on their concerns and priorities related to climate change in the Town of New Marlborough. The quotes on this page paraphrase the 11 responses received from the survey.

*Everything is affected by **climate change.***

*Legislate for a serious **reduction in our carbon footprint**.*

*Many of our residents, even though elderly, still do not wish to feel potentially dependent on others and deny concerns...Nonetheless, in severe storm events or other crises, there should be **a mechanism for checking on our oldest citizens.***

*Instead of trying to force everything to be the same as it always was, plan for how we can **help systems (infrastructural, social, natural) transition** to accommodate anticipated climate changes.*

*Our local **outdoor spaces**, like Umpachene Falls, are being overused as people look for outdoor places to cool off in the summer.*

***Build in redundancies for our natural resources.** They'll help buffer the worst of the predicted weather.*

*Our community is relatively small, but with **significant overlapping networks** of people. These networks are very supportive and quick to offer assistance or get involved to help.*

CHARACTERIZING A CLIMATE RESILIENT NEW MARLBOROUGH MUNICIPAL VULNERABILITIES AND STRENGTHS

The CRB process involves a robust stakeholder engagement effort and is used to characterize the vulnerabilities and strengths unique to a given community. The New Marlborough CRB process revealed important characteristics that broadly represent the identity and culture of the community. Collectively, these characteristics provide a snapshot of the community's vulnerabilities and strengths and is an important starting point to identify community features most at risk to the effects of climate change.

Municipal Infrastructure

All the public roadways in New Marlborough are locally owned and managed roadways. This creates management challenges relative to maintenance costs and a time-consuming commitment to repair damaged roadways, often repeatedly during and following extreme weather events. Approximately seven miles of roadway within New Marlborough are located within the 100-year floodplain. Approximately 2.3 miles of roadway within the floodplain are unpaved. Roadways within the floodplain are often subject to erosion and drainage issues.

Hotchkiss Road
Source: Town of New Marlborough

Emergency Management and Preparedness – Drawing Upon Established Processes as a Foundation for Climate Resilience

The Town of New Marlborough has an established emergency management plan that municipal stakeholders feel functions adequately in response to natural hazard events. The community acknowledges however that the increasing occurrence of hazardous weather events requires additional redundancy in its existing emergency communication systems. A need to increase the number of users, and to add new users, to existing emergency notification systems, notably the Reverse 911 system was identified as an important first step. Other management initiatives such as roadside tree clearing was also identified as an important immediate and ongoing emergency preparedness initiative.

Social Vulnerability

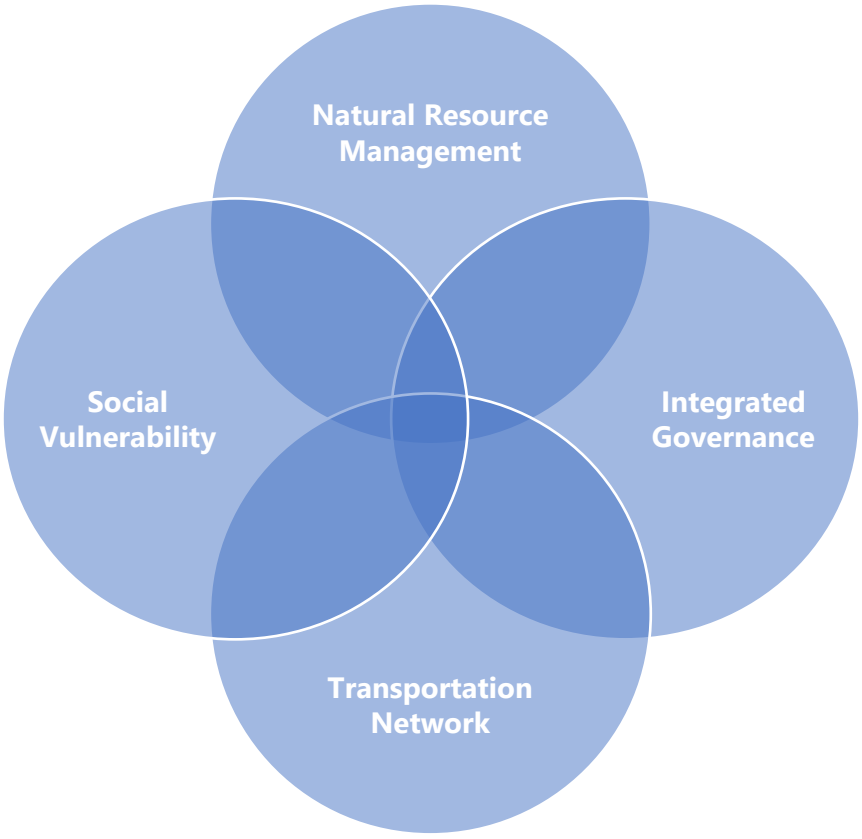
The Town of New Marlborough is characterized by a rich diversity of residents that includes, but is not limited to, members from the following socially vulnerable groups: elderly; individuals with disabilities and medical needs; low-income; transient community; children; undocumented immigrants; racial, sexual, cultural and socioeconomic minorities; seasonal/part time residents and workers; short-term rentals; and new residents. New Marlborough is a community that embraces its social diversity while also understanding that members from these groups are vulnerable to the effects of climate change in ways that aren't necessarily distributed equally across the population. The small business community in New Marlborough is particularly vulnerable to the effects of climate change. New Marlborough has many active farms for example where livestock is vulnerable during flooding events, and they may become trapped or isolated during extreme weather events. Small business owners also face unique vulnerability when the power goes out or the local roadway system is damaged or becomes impassible during storm events. Similarly, New Marlborough has already experienced impacts to tourism from an increased prevalence of nuisance species such as mosquitos or ticks, a condition that may become exacerbated under changing climate conditions.

Opportunities for Co-Benefits – Building Upon Community Cohesion

The Town of New Marlborough places an emphasis on developing solutions that present co-benefits for the municipality. Co-benefits within the context of climate change can be defined as a set solutions that address multiple challenges within the community. New Marlborough emphasized the importance of establishing a collaborative integrated governance system that draws upon municipal departments, local organizations, residents, business owners, and other interested stakeholders to develop comprehensive planning approaches to addressing the community's vulnerability to climate change. The Town emphasized identifying funding sources to repair damaged municipal infrastructure such as roadways, bridges, and culverts. Additional funding could also be used to make municipal buildings, which also serve as shelters, more resilient to the effects of climate change. Social networks across the community were also identified as an important means to disseminate information to residents throughout town.

CATEGORIZING CONCERNS AND CHALLENGES

Workshop participants used the CRB process to collaboratively identify action-oriented solutions to address the climate vulnerabilities faced by the Town of New Marlborough. These actions are organized into four categories based on a combination of community characteristics (i.e. strengths and vulnerabilities) and solutions identified by Workshop participants. During the Workshops, an emphasis was placed on the interdependence of these categories to allow for the development of climate resilient solutions that span infrastructural, societal, and environmental features. Through this lens, overlapping solutions that provide co-benefits were identified and prioritized.



Integrated Governance

An existing governance structure exists in New Marlborough characterized by coordinated and collaborative efforts among municipal departments, committees, commissions/boards, and local organizations. Workshop participants emphasized the importance of building upon these social structures as an important mechanism to increase the resilience of the community to the effects of climate change. Regional approaches to encourage collaboration amongst locally organized advocacy groups were an important area of focus for stakeholders, and an emphasis on these partnerships should be used to identify sources of funding to implement climate resilient measures in the community.

Integrated Governance

Social Networks

Draw Upon Schools and Youth in the Community to Educate the Public

Volunteer Networks

Coordination among Advocacy Groups for Comprehensive Planning

Grant and other Funding opportunities

Transportation Network

A key planning feature identified by Workshop participants is the interdependent sources of vulnerability that exist relative to the transportation infrastructure in New Marlborough. The transportation system infrastructure is generally characterized by roads (paved/dirt), bridges, and culverts. Many bridge crossings are narrow and easily washed out. Multiple bridges are closed or reduced to one lane. The transportation infrastructure system was acknowledged by Workshop participants as a significant burden on municipal financial and time resources. Workshop participants prioritized an inventory/assessment of roadways that are uniquely vulnerable to the effects of climate change as an important first step. Identifying sources of vulnerability and opportunities for nature-based solutions or green infrastructure where feasible were also noted as important considerations in this assessment. Finally, an assessment of culverts, small bridges, and inadequate roadside drainage areas were explicitly identified as important factors to consider in the context of a changing climate.

Transportation Network

Roads – Paved and Unpaved

Culverts

Bridges

Roadway Drainage System

Emergency Access

Umpachene Falls Road Bridge
Source: MassDOT

Social Vulnerability

The role and importance of developing climate resilient solutions that simultaneously address the needs of socially vulnerable groups was explicit during planning efforts. Notably, the relationship of social vulnerability to key themes and actions identified by Workshop participants was apparent. Among the most prominent areas of focus relative to social vulnerability aligned with the goal of collaborative governance approaches to decision-making and implementation. Similarly, improvements to municipal infrastructure such as roadways, bridges, and culverts improves emergency preparedness and response for groups such as low-income or isolated individuals. Enhancing the ecological resilience of New Marlborough was also identified as an important aspect of social resilience. Tourism, second home residents, and vacationers are an important economic driver in the community, and maintaining the ecological character of the region was identified as a key action in this planning effort. Workshop participants also recognized the importance of understanding that climate change and related impacts, including increased tourism, may further burden open space and natural resources in New Marlborough, such as Umpachene Falls.

Social Vulnerability

Emergency Communication and Response

Elderly Populations

Second Homeowners

Tourism, Business and Economic Impacts

Transient Communities

Children

Short Term Rentals/Transient Communities

Low Income

Natural Resource Management

Workshop participants placed a significant emphasis on the importance of New Marlborough's natural resources to maintain and increase its resilience to the effects of climate change. Open space and natural resources are an important source of tourism and a driver of the local economy. Similarly, the role of ecological resources such as floodplain and agricultural land present an important source of climate resilience in an uncertain climate future. Changing climatic conditions have increased the prevalence of nuisance insect and plant species such as mosquitos, ticks, and giant hogweed. Workshop participants placed an emphasis on the management of nuisance species through collaborative governance approaches and forest management. Municipal stakeholders also discussed the importance of implementing nature-based solutions and green infrastructure along paved and dirt roadway infrastructure to improve drainage conditions and reduce erosion. Workshop participants spoke of the importance of addressing erosion at Umpachene Falls Park, an important recreational, cultural, and tourism resource for the community.

Natural Resource Management

Floodplain Management/Wetlands/ Waterways

Agriculture

Forests Management

Open Space / Recreation / Tourism

Vector Borne Disease/Nuisance Species

Umpachene Falls Park

Climate Resilience Actions to address these concerns were prioritized through workshop activities and coordination with Core Team leadership. These Climate Resilience Actions are organized by High Priority, Medium Priority, and Low Priority Actions.

High Priority Actions

Category	Action
Integrated Governance	Leverage opportunities for partnerships among municipal departments, committees, commissions/boards, and local organizations such as Housatonic Valley Association (HVA), Greenagers, Trout Unlimited, and schools. Trout Unlimited did a study to improve bank stability in Hartsville. Consider partnering with Trout Unlimited in culvert assessment project for a few culverts. Students can be educated about climate impacts, resiliency, opportunities and existing assessments to develop additional ideas/assessment opportunities to help in the future.
	MEMA/FEMA funding made available after Hurricane Irene was only for in-kind replacement. Consider making amendments to local bylaws - zoning, conservation, and regulations - to address future planning efforts. Establish relationship with MEMA/FEMA, with the assistance of the Berkshire Regional Planning Commission, to ensure appropriate future use of grants/funding.
	Approximately 60 households, including Town buildings and businesses, get their water from two private companies. Private wells throughout town are subject to flooding and many private wells are shallow and dry up during drought. Coordinate the establishment of an emergency dispensing center in the event of an emergency. Partner with state departments such as MassDEP or Department of Energy Resources to develop water conservation management/engagement programs within the community.
	Develop a community outreach initiative to educate the public on the risks of nuisance species. Partner with state and regional agencies to provide education and outreach to community members.
	Develop community outreach programs for the community to better understand the importance and risks associated with floodplains in a changing climate. Improve flood mapping within the community to account for future climate risks, and how green infrastructure or nature-based solutions may improve floodplain capacity.
	Identify municipal or regional needs for forest firefighting equipment and forest management needs (consider road accessibility, steep slopes, etc.).
	Regional coordination and private partnership efforts (e.g., Trout Unlimited) should occur with New Marlborough and Monterey and other abutting municipalities to improve wetlands, waterways and banks. Build upon existing organizations such as the Housatonic Valley Association, Trout Unlimited, and schools. Engage Trout Unlimited to study ways to improve bank stability in Hartsville. Incorporate students in assessment, implementation, and outreach efforts.

Transportation Network	All roadways are municipal roads; there are no state roads in New Marlborough. Flooding during extreme precipitation events results in road damage and lack of access. Dirt roads are also affected by freeze/thaw cycles. Approximately 7 miles of roadway are located within the 100-year floodplain and approximately 2.3 miles of dirt roadway are in the 100-year floodplain. All dirt roads are subject to flooding and washout during extreme precipitation events. Conduct an inventory/assessment of roadways that may be located in larger flood events. Prioritize dirt roadways and roadways that provide important emergency access/response. Identify locations where green infrastructure or nature-based solutions may be feasible. Identify locations where trees may be subject to wind/ice/storm damage. Identify drainage issues and consider replacing culverts.
	All bridges are vulnerable to by extreme climate events given their age and being undersized. The Town has 5 bridges that cross water bodies that are considered "structurally deficient" according to MassDOT. Undersized bridges or culverts may constrict stream or river flow and cause flooding during extreme storm events. Coordinate closely with MVP Rural Dirt Road Vulnerability Assessment to identify related vulnerabilities to New Marlborough bridges. Replace/expand the size of the culverts including those located on Brewer Hill Road, Mill River Gt. Barrington Road, Canaan Southfield Road, and Hartsville New Marlborough Road to mitigate flooding.
	Engage community in adopting bylaws to help enforce stream crossing standards.
	Five bridges currently slated to be replaced in the next two to three years. Consider that future bridge replacement projects evaluate the effects of hazardous weather conditions and vulnerability to climate change impacts. Consider working with MassDOT to exceed current bridge requirements.
	Siltation issues at the confluence of Lake Garfield and Lake Buel outlets at Hartsville-Mill River Road should be assessed for possible mitigation measures to alleviate localized flooding in New Marlborough and Monterey. Coordinate with the Lake Buel District as owners of the roads in this location subject to frequent flooding.
	Assess impacts on town roads and private driveways where moderate to steep slopes exist. Evaluate steep slopes, notably undeveloped forested steep slopes, for subsurface/geologic conditions that are susceptible to landslides. Coordinate closely with town roadway assessments and bridge and culvert assessments. Assess these areas for changes in plant species community changes or evidence of invasive species (plant or insect) that may increase the vulnerability of steep slopes to landslides. Consider the use of regulatory mechanisms (ridgeline protection bylaw) or incentives (BMPs) or engineered solutions to address this issue where steep slopes and driveways cause washouts.

Social Vulnerability	Clearly display home and business address numbers where clearly visible to emergency responders.
	Community engagement effort to add new users to system, most notably cell phone users and second-home residents. Conduct an engagement effort with local businesses to participate in Reverse 911 and improve existing system through testing. Conduct a community outreach effort to better understand the emergency preparedness, notification, and communication needs of the community.
	Increase emergency communication redundancy, i.e., multiple ways of communication since phone lines may go down, then power, etc. Trees are also constantly falling and taking down communication systems. When electricity is out, land line phones rely on short-term battery and then fail. Conduct an assessment of trees and make a tree cutting plan. Advocate for improvements in telecommunication - broadband, cell service, etc.
	Update hazard mitigation plan to incorporate future climate hazards and MVP actions.
Natural Resource Management	Critical facilities should be given special consideration when formulating regulatory alternatives and floodplain management plans. Facilities should be located outside of the floodplain and along accessible routes to the maximum extent possible. Assess the location of existing facilities with respect to FEMA floodplain and historic information and consider mitigative measures to alleviate the risk of flood damage or public health and safety emergencies for critical facilities; as a last resort, consider relocating facilities with impaired access during flooding events. Ensure any future critical facilities are located outside of areas that historically flood as well as areas mapped as floodplain. Encourage the use of nature-based solutions to increase facility resilience.
	Housatonic Valley Association (HVA) completed an aquatic (wildlife/habitat) connectivity assessment of many culverts and bridges and is now assessing flood capacity using the CT tool (assessing resiliency to flood). Currently working in five towns in MA and looking to work with additional towns through MVP grant. HVA is willing to share an example of the assessment -- consider collaborating with HVA to assess flood capacity of New Marlborough's culverts and bridges.
	Coordinate with local, regional, and state partners to evaluate the effects of climate change on public health. Establish a community outreach program to raise awareness of public health risks related to a changing climate and vector borne disease. Consider becoming a member of the Berkshire County Mosquito Control District.
	Identify locations where nuisance species are prevalent or will likely increase the vulnerability of the community with respect to public health and safety, the local economy (tourism), or natural resources. Map these areas and develop a planning approach that may include conservation or nature-based solutions to address nuisance species.
	Approximately 7% of the town is located within the 100-year floodplain. Approximately 2.5% of the town's floodplain is developed. The town should consider the development of a floodplain bylaw that incorporates the effects of changing precipitation and flooding conditions due to future climate risks. Continue to promote

Natural Resource Management	regulatory/conservation protections to important floodplain resources within the community. Identify locations for future acquisition for conservation land to be used for flood storage. Apply nature-based solutions where appropriate. Coordinate closely with local boards, commissions, and interest groups to increase the capacity of these efforts.
	Town is surrounded by waterways and wetlands which provide benefits for the town in terms of sustainability, tourism and overall quality of life. However, banks are becoming destabilized due in part to people's needs to view and access the waterways. Public outreach and education should focus on proper ways of formalizing river access as well measures to protect banks (encourage re-vegetation, minimizing tree removal, etc.).
	Consider wetland bylaws to protect waterways, wetlands, buffer zones and floodplains beyond the protections afforded by the Wetlands Protection Act.
	The beaver population within New Marlborough has grown to a point where this species is increasing flood prevalence within the community. Flooding has been observed on North Road, Norfolk Road, Caulkins Cross Road, and Hotchkiss Roads due to large beaver dams. Explore and implement options for beaver management.
	Assess and identify areas most susceptible to forest fires (near campgrounds, day use areas, roads, commercial facilities, etc.).
	Conduct tree health assessments and develop a forest management plan prioritizing areas near critical emergency management resources (e.g., cell towers, roads, wires, etc.).
	Think regionally and work collaboratively with neighboring municipalities and states – encourage a regional approach to open space and natural resources protection.

Medium Priority Actions

Category	Action
Integrated Governance	Consider developing a platform for volunteer opportunities for residents to assist each other in the community - potentially an extension of the Council of the Aging. Based on COVID-19 experience, individuals have not been asking for assistance because neighbors have been helping each other or people are prepared.
	Implement grassroots door to door outreach and incorporate students.
	Explore implementing door to door outreach to reach senior population and those who are typically disconnected from the rest of the community (second home owners). Formalize informational partnerships

Integrated Governance	with abutting towns (Monterey, Sandisfield, and Sheffield) to complete the door to door outreach after emergencies that cut off access to sections of town.
	Establish a comprehensive plans and formal list of services available (neighbor to neighbor, emergency preparedness). E.g., during COVID-19, groups have established volunteer services for food delivery. Council of Aging has been checking on the senior population.
	Improve coordination and collaboration among departments, committees, and local organizations working towards the town's climate resiliency goals in light of existing strengths and vulnerabilities, community needs and future climate impacts. Engage in comprehensive planning.
	Continue to support and encourage collaboration amongst locally organized advocacy groups dedicated to improving the town's climate resiliency. Advocacy groups include, but are not limited to, Greenagers, Trout Unlimited, NRCS, the Trustees, volunteers via Maggie's List, the Council on Aging, DCR, MDAR, Regional Planning Commission, and the local land trust.
	Develop a housing/economic plan to retain youth in the community. Get youth involved in Town duties to foster civic engagement.
Transportation Network	Assess alternative modes of transportation - currently no public transportation between each of the towns and villages.
Social Vulnerability	Assess and inventory the needs of emergency shelters and emergency response operations in light of future climate change projections.
	New Marlborough has approximately 350 seasonal housing units which serve as second home or rental units. This accounts for approximately 35% of the total housing stock in the community. Put together a document or website that provides information about emergency preparedness for second home owners and renters. Assess ways to reach out to these individuals.
	Expand resources on Maggie's List (listserv) and Town website distribution.
	Create and distribute materials such as a one-page flyer that can be posted to refrigerators that includes emergency information.
	Leverage opportunity of broadband communication coming to the town in 2021 to engage with the community.
	Inventory shelter needs. Assess the possibility of adding shelter locations in each of the five villages and/or establish outreach campaign about how to properly shelter in place.
	Continue to inventory community needs (e.g. medical needs) and access to resources to meet such needs.
	Establish an emergency access fund to assist community members in the event of emergencies.

Natural Resource Management	New Marlborough has many active farms that make up the small business community. Livestock is subject to vulnerability during flooding events where they may become trapped or isolated, during extreme heat conditions, or during extreme snow and ice events where unprotected livestock may become isolated or lost. Develop a livestock management plan to account for the effects of a changing climate.
	Coordinate with local, regional, and state partners to evaluate the effects of climate change on agricultural pests and diseases. Establish a community outreach program to raise farmer awareness.
	Approximately 56.2 acres (3%) of the developed portions of the community are within the floodplain. This includes residential, commercial and industrial buildings. Consider developing a floodplain bylaw to regulate future floodplain development within the community.
	Conduct a community engagement initiative to promote the importance of recreational/open space as public health and environmental co-benefits. Consider the use of educational signage to facilitate community engagement/education to promote the relationship between climate resilience, open space, recreation, and public health. Coordinate closely with community assessments focused on nuisance pests/invasive species, vector borne diseases, and natural resource management. Place an emphasis on locations associated with the Housatonic River floodplain.
	Explore ways to address erosion at open space resources, including Umpachene Falls.

Low Priority Actions

Category	Action
Integrated Governance	There are ten (10) dams located in New Marlborough. While none of these dams are considered significant hazard dams according to DCR, two (2) of the dams are in poor condition but are both considered low hazard. Conduct dam assessments and develop best management practices.
Transportation Network	No Low Priority Action Items identified.
Social Vulnerability	No Low Priority Action Items identified.
Natural Resource Management	Tourism within New Marlborough is affected by extreme climate events and incrementally changing climate conditions such as the introduction of nuisance species. Assess the effects of changing climate conditions on tourism and economic development within the community.
	Conduct a survey of historic resources within the community subject to flooding and more specifically the effects of a climate change related flooding. Share this information with the community by incorporating the findings into the town's Open Space and Recreation Plan.

Natural Resource Management	Draw upon local capacity (e.g. New Marlborough Agricultural Commission) to establish practices for sustainable and climate resilient agriculture in New Marlborough. Apply nature-based solutions to diminish the effects of flooding, drought, or extreme weather events to New Marlborough's agricultural land. Coordinate closely with the Conservation Commission to apply conservation and landscape appropriate resilient solutions within floodplain areas. Consider the use of nature-based solutions to address climate resilience.

Workshop Participant List

Bryan, Martha - New Marlborough Land Trust

Carson, Mark - Planning Board

Conklin, Will - Greenagers

Dixon, Alison - Housatonic Valley Association

Enoch, Mari - Town Administrator

Fields, Kenzie - Housing Committee

Frank, Graham - Police Chief

Friedman, Freddy - Conservation Commission

Hagen, Peter - Lake Buel District

Hoy, Sari - Sheffield Resident, Sheffield Planning Board

Long, Richard - Board of Selectmen

Loring, Chuck - Fire Chief/Highway Superintendent

Marchione, Barbara - Resident

Petrik, Carrieanne - MVP Regional Coordinator/Resident

Rodgers, Erin - Trout Unlimited

Rosenberg, Elisabeth - Housing Committee

Ryan, Tom - MA Department of Conservation and Recreation

Schreiber, John - Conservation Commission

Smith, David - Fire Department

Stalker, Tom - Commission on Disabilities/Farmer's Market

Westrick, Brian - Trustees of Reservation

White, Tara - Board of Selectmen

Wright, Stephanie - Multicultural Bridge

Yohalem, Nat - Board of Selectmen

Citation

New Marlborough (2020) Community Resilience Building Workshop Summary of Findings, BSC Group, Inc. and Town of New Marlborough. New Marlborough, Massachusetts

MVP Core Team Working Group

Mari Enoch, Town Administrator (designated municipal liaison for the program)
Mark Carson, Planning Board
Robert Dvorchik, Assistant Fire Chief
Graham Frank, Police Chief
Freddy Friedman, Conservation Commission
Edward Harvey, Emergency Management Director
Richard Long, Board of Selectmen
Charles Loring III, Highway superintendent and Fire Chief

Workshop Facilitators

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Acknowledgements

This project was made possible through funding from the Massachusetts Executive Office of Energy and Environmental Affairs' Municipal Vulnerability Preparedness (MVP) Grant Program. Thank you for providing the leadership and funds to support this process. The Town of New Marlborough values your partnership.

Thank you to the community leaders within New Marlborough who attended the New Marlborough CRB Workshops. The institutional knowledge provided by Workshop participants was essential to the success of this process.

Thank you to Carrieanne Petrik, EEA Regional MVP Coordinator for continued procedural guidance through this planning process.

CLIMATE CHANGE INFOGRAPHIC

CLIMATE CHANGE

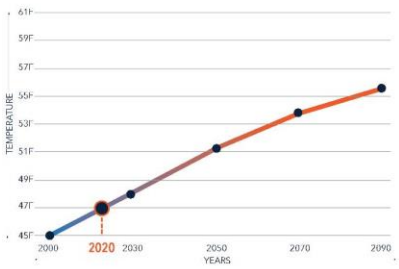
New Marlborough, Massachusetts
Housatonic Watershed Basin

Alford, Becket, Cheshire, Dalton, Egremont, Great Barrington, Hancock, Hinsdale, Lanesborough, Lee, Lenox, Monterey, Mount Washington, New Ashford, New Marlborough, Otis, Peru, Pittsfield, Richmond, Sandisfield, Sheffield, Stockbridge, Tyringham, Washington, West Stockbridge, and Windsor

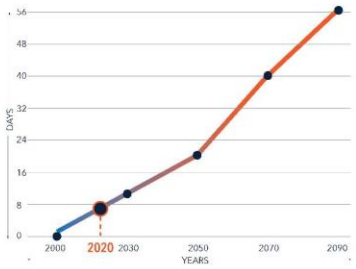
Global warming is caused by the accumulation of greenhouse gases within the atmosphere. Gases that contribute to the greenhouse effect include water vapor, carbon dioxide, methane, and nitrous oxide. On earth, human activities such as burning fossil fuels and land deforestation have altered the delicate balance of atmospheric conditions that regulate our climate. The effect of these changes cause global climate change that are likely to be significant and to increase over time.

EXTREME TEMPERATURES

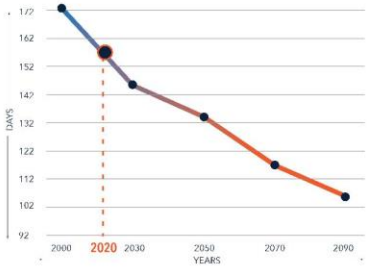
Average Temperatures



Days with Maximum Temperature over 90°F



Fewer Days Below Freezing

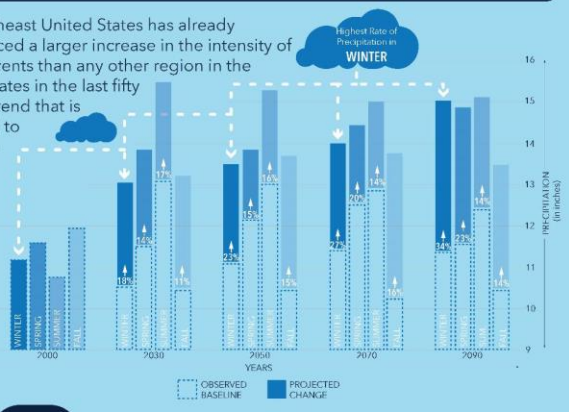


What can NEW MARLBOROUGH expect as CLIMATE CHANGES?

Climate change has already had observable effects on the environment. Rising temperatures, changes in precipitation patterns, droughts and heat waves, sea-level rise, and extreme storm events have **altered the distribution of risk and how resources are managed.**

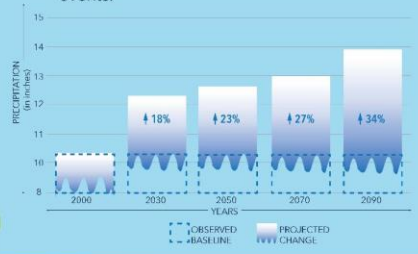
More Annual Precipitation and Inland Flooding

The Northeast United States has already experienced a larger increase in the intensity of rainfall events than any other region in the United States in the last fifty years, a trend that is expected to continue.



Extreme Snow And Ice Events

Total Annual Precipitation is expected to increase within the Housatonic Basin over the remainder of the century. Most of this increase is expected to occur during winter months where precipitation will fall as either rainfall or extreme snow or ice events.



Blizzards, Nor'Easters and Hurricanes

Storm events fueled by higher temperatures, increased evaporation, and atmospheric moisture leads to stormy weather of increased duration and intensity.

Wind / Microbursts

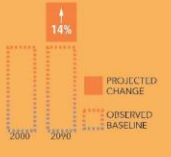
Hazardous wind conditions most commonly accompany extreme storm events. High winds and microburst conditions present unique hazards to infrastructure, public safety and important natural resources.

Heatwaves

Extreme heat events are expected to become more frequent and intense. Socially vulnerable populations are particularly vulnerable to the dangers related to extreme temperature conditions.

Drought Conditions

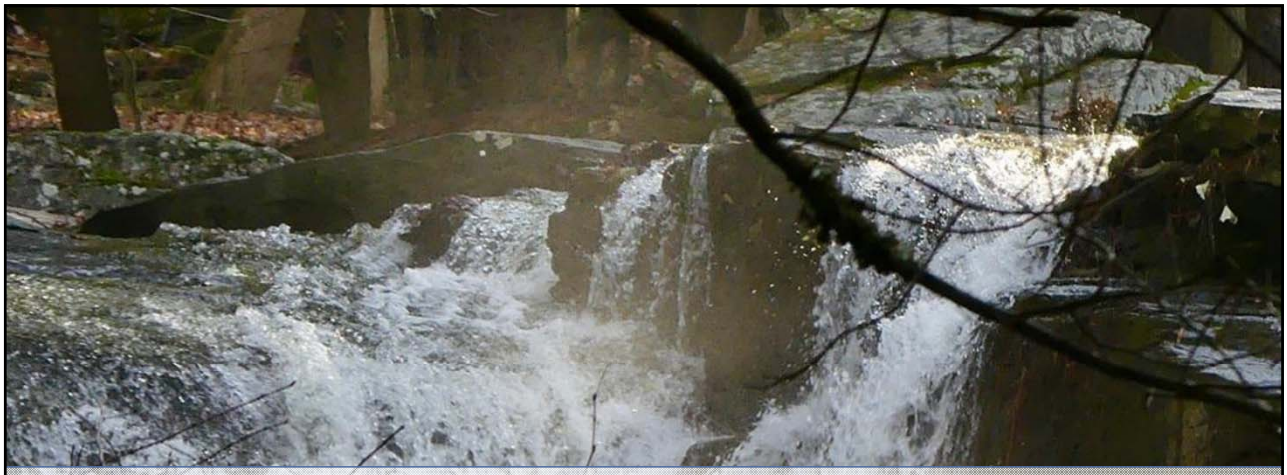
Due to the combined effects of higher temperatures, reduced groundwater recharge from extreme precipitation events, earlier snowmelt, summer and fall droughts may become more frequent.



Sources: Massachusetts Executive Office of Energy and Environmental Affairs; ResilientMA.org

BSC GROUP

PRESENTATION SLIDES



Municipal Vulnerability Preparedness (MVP)

New Marlborough, MA

2020

BSC GROUP

MVP in your community

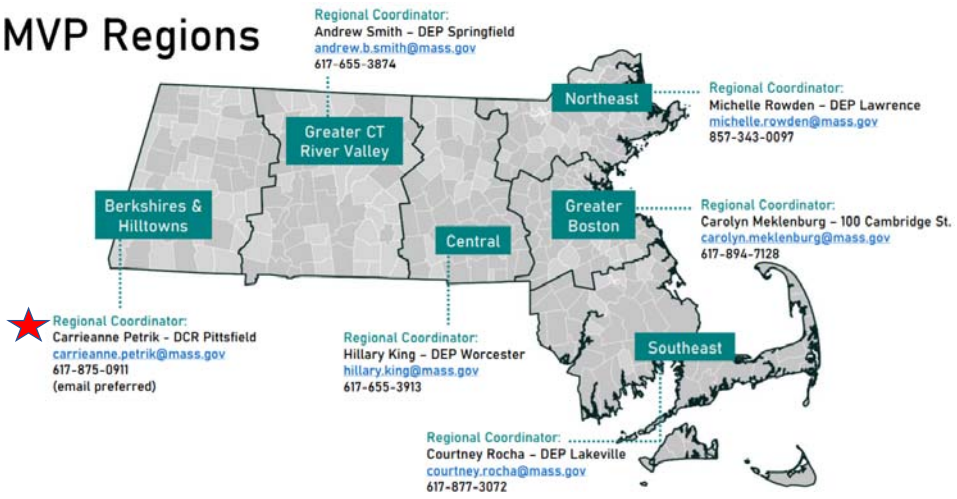
- New Marlborough awarded $20,000 from Executive Office of Energy and Environmental Affairs (EEA)
- Funds have been put towards achieving MVP Climate Community Designation
- Establishes eligibility and competitiveness for future grants that can be used to enhance the *resilience* of the community to climate change.

"climate resilience is the ability of a community to address the needs of its built, social, and natural environment to anticipate, cope with, and rebound stronger from events and trends related to climate change hazards"
-Massachusetts MVP Program

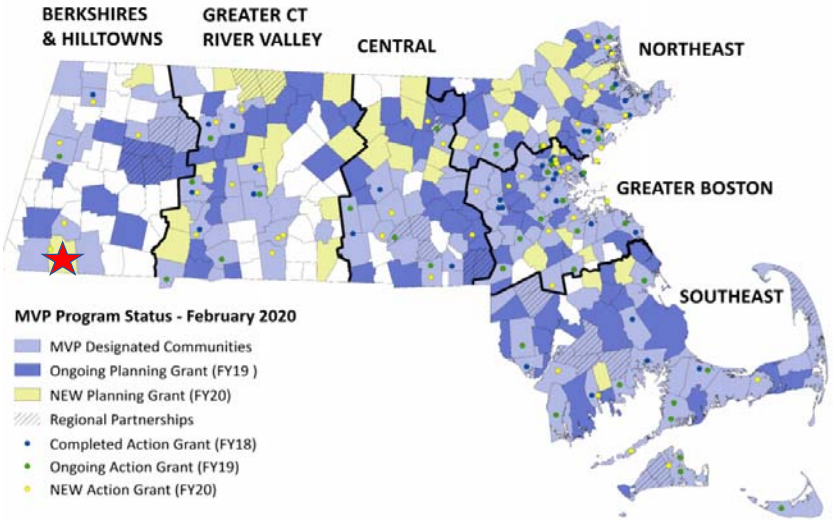
OUTCOMES of this process

- MVP Climate Community Designation
- Grant eligibility and competitiveness
- Public education and awareness
- Baseline planning report (Findings Report)
- Climate Resilience

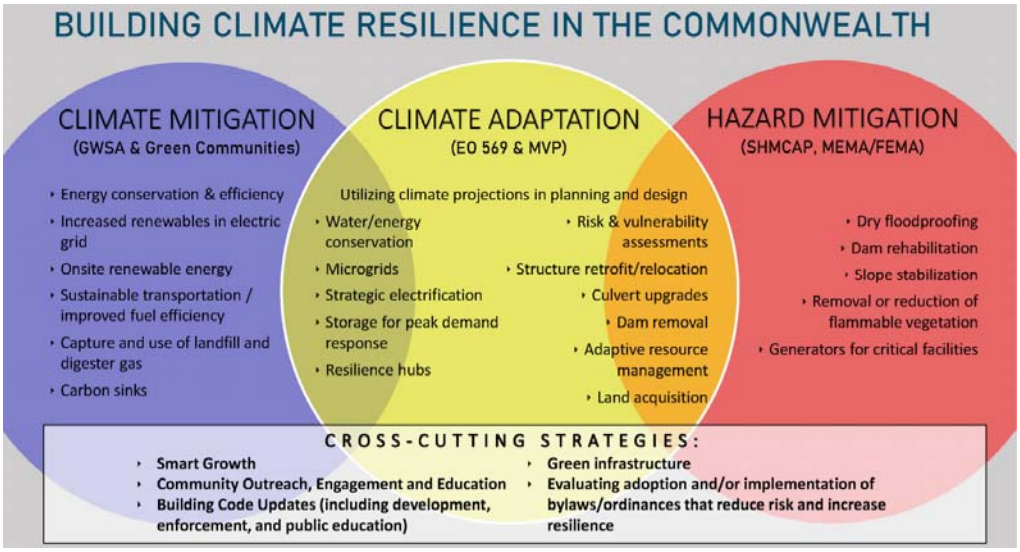
MVP Program



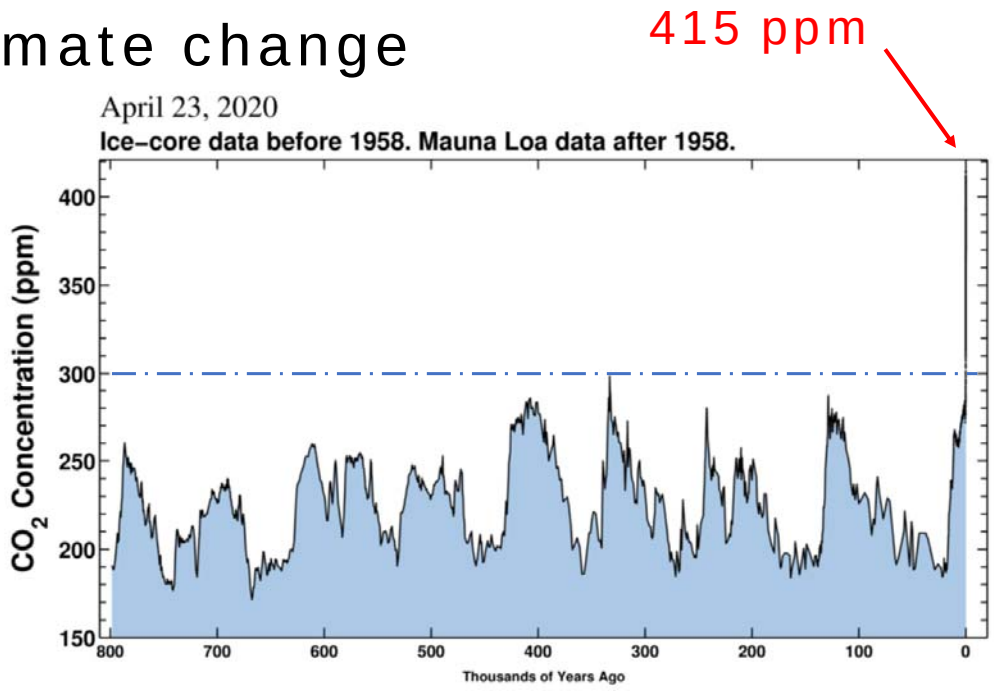
MVP Program



MVP Program



Climate change



Climate change

(end of century)

RISING TEMPERATURES

- 10.8°F increase in avg annual temp.
- Up to 64 fewer days/year with min. temperatures < 32° F
- Up to 64 more > 90°F days/year

CHANGES IN PRECIPITATION

- 18% increase in consecutive dry days
- 57% increase in days with > 1 in. rainfall
- 7.3 inches additional annual rainfall

SEA-LEVEL RISE

- 4- to 10.5-feet along the MA coast

EXTREME WEATHER

- Increase in frequency and magnitude

Why is this important for your community?

- Climate change gradually changes the distribution of risk
- Climate change challenges the ways that community resources are managed

Community Resilience Building (CRB) Navigating this process.....virtually

- Core Team Planning
- Community Resilience Building Workshop
- Public Listening Session

Project website will house all project information for the duration of this planning effort: https://newmarlboroughmamvp.wordpress.com/

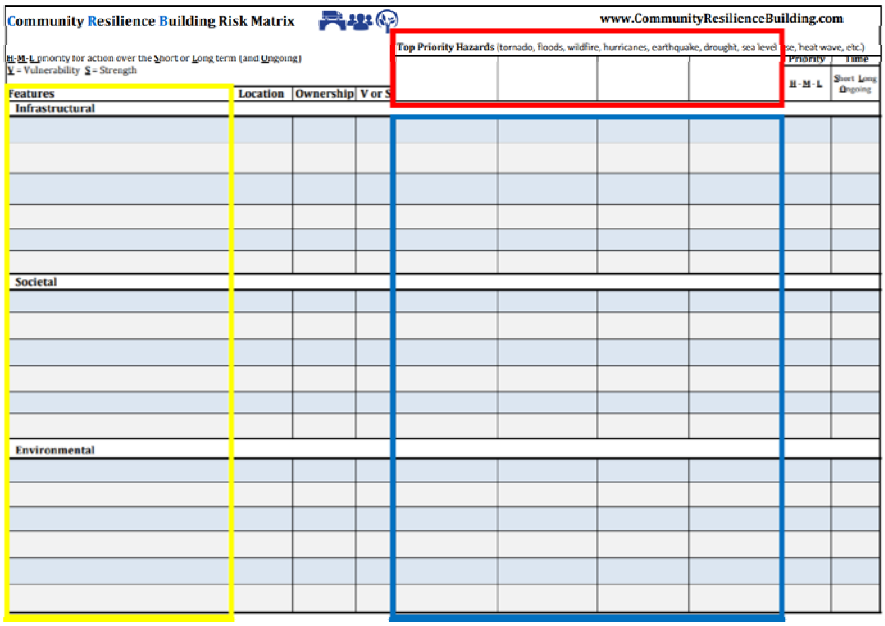
Project Deadline:

TBD - EEA Extension

Community Resilience Building employs a unique community-driven process, rich with information, experience, and dialogue, where participants identify top hazards, current challenges, strengths and priority actions to improve their community's resilience to all natural and climate-related hazards, today and into the future

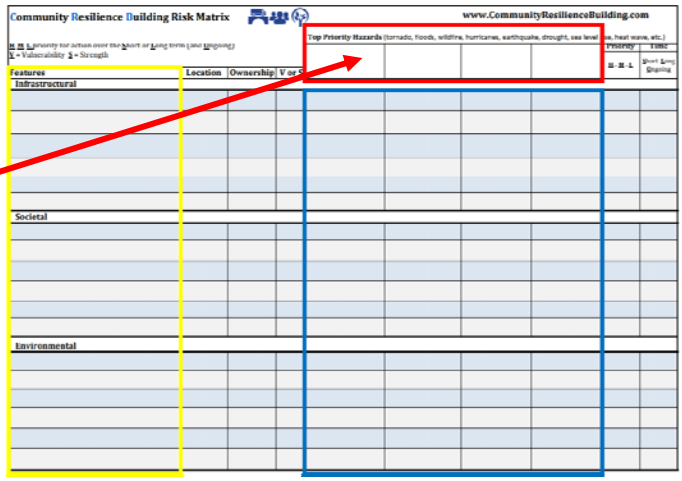
-CommunityResilienceBuilding.org

CRB Framework



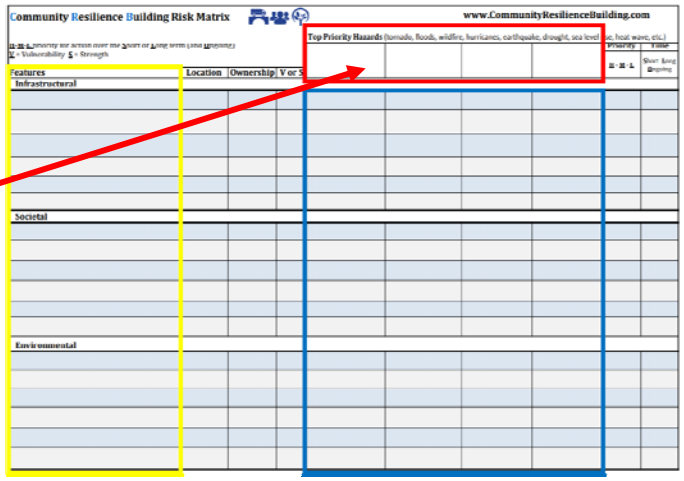
Climate Hazards

- Flooding
- Extreme Heat
- Extreme Cold
- Extreme Wind/Microbursts
- Extreme Precipitation
- Extreme Snow and Ice
- Hurricanes/Nor'easters
- Extreme Storms
- Extreme Temperatures
- Seasonal Variability (e.g. freeze/thaw)



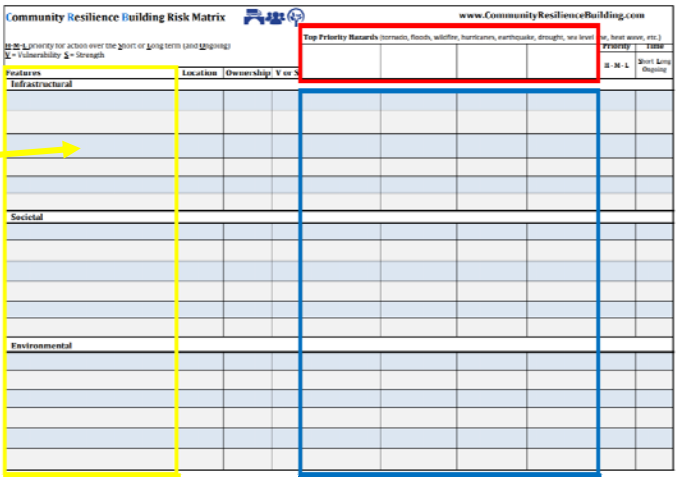
Climate Hazards: Core team planning

- Flooding
- Wind/Microbursts
- Extreme Temps (hot cold, freeze-thaw)
- Extreme Precipitation (rain, snow, ice)



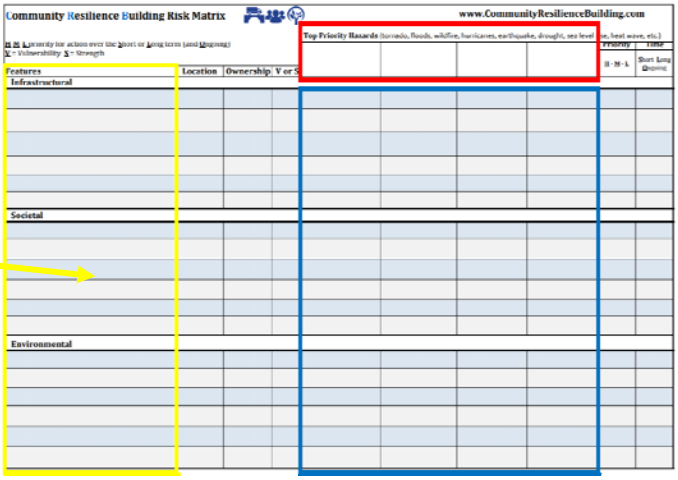
Community Features - Infrastructure

- Town Roads/State Roads
- Bridges
- Culverts
- Municipal Buildings
- Shelters/Assembly Areas
- Schools/Library
- Emergency Communication Systems
- Dams
- Dirt Roads



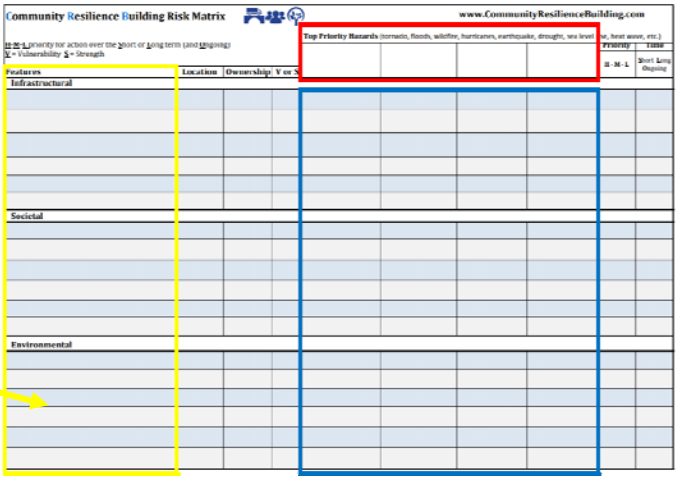
Community Features - Societal

- Shelters/Assembly Areas
- Emergency Communication Systems
- Vector Borne Disease
- Tourism
- Economic (Ag. Land)
- Emergency Preparedness
- Historical/Cultural Resources
- Socially Vulnerable Populations



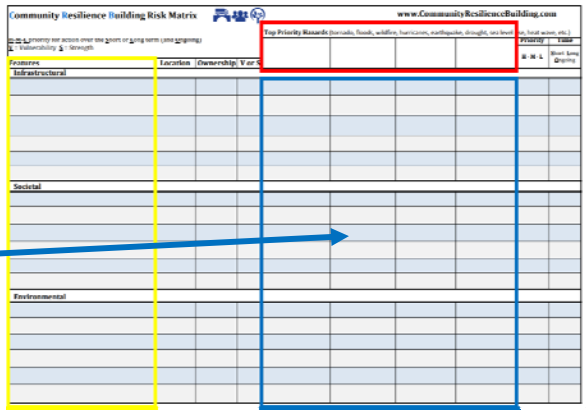
Community Features - Environmental

- Open Space
- Conservation Land
- Vector Borne Disease
- Floodplains
- Agricultural Land
- Steep Slopes (>15%)
- River Management
- Beaver/Flood Management
- Invasive Species
- Rivers (Konkapot, Ironwork, Umpachene, Brewer, Whiting)
- Lakes (Thousand Acre Swamp Reservoir, Windmere Lake Reservoir, Haymeadow Pond, Buel)



Actions – Common Themes

- Transportation System Planning (bridges, culverts, paved/dirt roads)
- Floodplain Management
- Emergency Preparedness and Response (e.g. communication systems and operations)
- Public Outreach and Education
- Social Vulnerability
- Water Management (i.e. drainage)
- Regional Coordination
- Second Home Residents



Next steps:
New Marlborough MVP Findings Report

- Compile data from core team planning
- Compile data from Community Resilience Building workshop
- Finalize CRB Matrix
- BSC to prepare Draft Findings Report
- Public Listening Session
- Finalize Findings Report
- MVP Designation

- Tell a friend about this process!!!

COMMUNITY RESILIENCE BUILDING MATRIX

Community Resilience Building Risk Matrix

www.CommunityResilienceBuilding.org

Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)

H-**M**-**L** priority for action over the **S**hort or **L**ong term (and **O**ngoing)
V = Vulnerability **S** = Strength

Features	Location	Ownership	V or S	Inland Flooding	Wind/ Microbursts	Extreme Temperatures (heat, cold, freeze-thaw, drought)	Extreme Precipitiation (rain, snow, ice)	Priority **H** - **M** - **L**	Time **S**hort **L**ong **O**ngoing
Infrastructural									
Town Roadways • Paved Roads: Canaan Southfield Rd, Adsit Crosby Rd, Hartsville New Marlborough Rd, Hartsville Mill River Rd, Hatchery Rd, Mill River Gt Barrington Rd. • Dirt Roads: North Rd, Hotchkiss Rd, East Hill Rd, Keyes Rd, Leffingwell Rd, Cagney Hill Rd, Canaan Valley Rd, Campbell Falls, Cross to Canaan Valley, Rhoades and Bailey, Umpachene Falls Rd	town-wide	public	V	All roadways are municipal roads; there are no state roads in New Marlborough. Flooding during extreme precipitation events results in road damage and lack of access. Dirt roads are also affected by freeze/thaw cycles. Approximately 7 miles of roadway are located within the 100-year floodplain and approximately 2.3 miles of dirt roadway are in the 100-year floodplain. All dirt roads are subject to flooding and washout during extreme precipitation events. The following actions are identified: • Conduct an inventory/assessment of roadways that may be located in larger flood events. • Prioritize dirt roadways and roadways that provide important emergency access/response. • Identify locations where green infrastructure or nature-based solutions may be feasible. • Identify locations where trees may be subject to wind/ice/storm damage. • Identify drainage issues and replace culverts.		High	Ongoing
Critical Facilities • Town Hall • Police Department/Rescue • Fire Station/Emergency Operations Center (also emergency shelter) • Library • Transfer Station • Public Works •New Marlborough Central Elementary School (also emergency shelter) •Umpachene Falls Park	town-wide	public	V	Critical facilities should be given special consideration when formulating regulatory alternatives and floodplain management plans. Facilities should be located outside of the floodplain and along accessible routes to the maximum extent possible. Assess the location of existing facilities with respect to FEMA floodplain and historic information and consider mitigative measures to alleviate the risk of flood damage or public health and safety emergencies for critical facilities; as a last resort, consider relocating facilities with impaired access during flooding events. Ensure any future critical facilities are located outside of areas that historically flood as well as areas mapped as floodplain. Encourage the use of nature-based solutions to increase facility resilience. Assess and inventory the needs of emergency shelters and emergency response operations in light of future climate change projections. Update hazard mitigation plan to incorporate future climate hazards and MVP actions.		High to Low	Ongoing hazardous mitigation by end of year
Dams • Gleason Pond Dam • Trout Pond Dam • Thousand Acre Swamp Dam • Cookson Pond Dam	specific location	public/private	V	There are ten (10) dams located in New Marlborough. While none of these dams are considered significant hazard dams according to DCR, two (2) of the dams are in poor condition but are both considered low hazard. Conduct dam assessments and develop best management practices.				Low	Ongoing

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Infrastructural									
Water Management Infrastructure Town Bridges and Culverts: • Norfolk Road Bridge • Mill River Gt Barrington Rd culvert •Brewer Hill Culvert • Keyes Hill Road Bridge •Lumbert Cross Road Bridge • Campbells Fall Road Bridges (2) • Canaan Southfield Road Bridge and culverts (2) •Adsit Crosby Road Bridge (pinch point Lake Buel floodplain- resulting in Hartsville flooding) •Hatchery Road Culvert	specific location	public	V	All bridges are vulnerable to by extreme climate events given their age and being undersized. The Town has 5 bridges that cross water bodies that are considered "structurally deficient" according to MassDOT. Undersized bridges or culverts may constrict stream or river flow and cause flooding during extreme storm events. Coordinate closely with MVP Rural Dirt Road Vulnerability Assessment to identify related vulnerabilities to New Marlborough bridges. Replace/expand the size of the culverts including those located on Brewer Hill Road, Mill River Gt. Barrington Road, Canaan Southfield Road, and Hartsville New Marlborough Road to mitigate flooding. Engage community in adopting bylaws to help enforce stream crossing standards. Five bridges currently slated to be replaced in the next two to three years. Consider that future bridge replacement projects evaluate the effects of hazardous weather conditions and vulnerability to climate change impacts. Consider working with MassDOT to exceed current bridge requirements. Housatonic Valley Association (HVA) completed an aquatic (wildlife/habitat) connectivity assessment of many culverts and bridges and is now assessing flood capacity using the CT tool (assessing resiliency to flood). Currently working in five towns in MA and looking to work with additional towns through MVP grant. HVA is willing to share an example of the assessment -- consider collaborating with HVA to assess flood capacity of New Marlborough's culverts and bridges. Opportunities for partnerships: Housatonic Valley Association (HVA), Greenagers, Trout Unlimited, and schools. Trout Unlimited did a study to improve bank stability in Hartsville. Consider partnering with Trout Unlimited in culvert assessment project for a few culverts. Students can be educated about climate impacts, resiliency, opportunities and existing assessments to develop additional ideas/assessment opportunities to help in the future. MEMA/FEMA funding made available after Hurricane Irene for only in-kind replacement. Consider making amendments to local bylaws - zoning, conservation, regulations - to address future planning efforts. Establish relationship with MEMA/FEMA, with the assistance of the Berkshire Regional Planning Commission, to ensure appropriate future use of grants/funding.	High	Ongoing
Potable Water • Mill River Water Takers and Southfield Water Company • Majority of town on private wells subject to drought / flooding	Mill River and Southfield	private	V/S	Approximately 60 households, including Town buildings and businesses, get their water from two private companies. Private wells throughout town are subject to flooding and many private wells are shallow and dry up during drought. Coordinate the establishment of an emergency dispensing center in the event of an emergency. Partner with state departments such as MassDEP or Department of Energy Resources to develop water conservation management/engagement programs within the community.	High	Ongoing

Community Resilience Building Risk Matrix

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Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)

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Infrastructural									
Emergency Notification Systems (Reverse 911, Blackboard Connect)	town-wide	public	V/S	Community engagement effort to add new users to system, most notably cell phone users and second-home residents. Conduct an engagement effort with local businesses to participate in Reverse 911 and improve existing system through testing. Conduct a community outreach effort to better understand the emergency preparedness, notification, and communication needs of the community. Increase emergency communication redundancy - multiple ways of communication since phone lines may go down, then power, etc. Also, trees are constantly falling and taking down communication systems. When electricity is out, land line phones rely on short-term battery and then fail. - Conduct an assessment of trees and make a tree cutting plan - Advocate for improvements in telecommunication - broadband, cell service, etc.				High	Ongoing

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Features	Location	Ownership	V or S	Inland Flooding	Wind/ Microbursts	Extreme Temperatures (heat, cold, freeze-thaw, drought)	Extreme Precipitation (rain, snow, ice)	Priority H - M - L	Time S Short L Long O Ongoing
Societal									
Vector Borne Disease • Mosquitos: West Nile Virus (WNV) and EEE positive tests in nearby municipalities (Pittsfield - EEE/WNV, 2019; Sheffield, Clarksburg and Pittsfield - WNV, 2018) • Ticks: high incident rates of Babesiosis, Lyme Disease and Human Granulocytic Anaplasmosis (HGA) reports in New Marlborough *(https://www.mass.gov/service-details/tick-borne-disease-information-for-health-care-providers)*	town-wide (regional)	N/A	V	Coordinate with local, regional, and state partners to evaluate the effects of climate change on public health. Establish a community outreach program to raise awareness of public health risks related to a changing climate and vector borne disease. Consider becoming a member of the Berkshire County Mosquito Control District.				High	Ongoing
Tourism • Impact from Nuisance Species (Mosquitos, Ticks, Beavers) • Impact of increased tourism/second home ownership/recreation from other places	specific location	private	V	Tourism within New Marlborough is affected by extreme climate events and incrementally changing climate conditions such as the introduction of nuisance species. Assess the effects of changing climate conditions on tourism and economic development within the community.				Low	Ongoing
Agricultural Land •Trapped Livestock •Agricultural pests/diseases	town-wide	private	V	New Marlborough has many active farms that make up the small business community. Livestock is subject to vulnerability during flooding events where they may become trapped or isolated, during extreme heat conditions, or during extreme snow and ice events where unprotected livestock may become isolated or lost. Develop a livestock management plan to account for the effects of a changing climate. Coordinate with local, regional, and state partners to evaluate the effects of climate change on agricultural pests and diseases. Establish a community outreach program to raise farmer awareness.				Medium	Ongoing

Community Resilience Building Risk Matrix www.CommunityResilienceBuilding.org

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Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)

Features	Location	Ownership	V or S	Inland Flooding	Wind/ Microbursts	Extreme Temperatures (heat, cold, freeze-thaw, drought)	Extreme Precipitation (rain, snow, ice)	Priority H - M - L	Time Short Long Ongoing
Societal									
Vulnerable Populations • Seniors • Individuals with disabilities and medical needs • Transient community members • Children • Undocumented immigrants • Racial/sexual/cultural and socioeconomic minorities • Seasonal/part-time residents and workers • Short-term rentals • New residents	town-wide	private	V	New Marlborough has approximately 350 seasonal housing units which serve as second home or rental units. This accounts for approximately 35% of the total housing stock in the community. Put together a document or website that provides information about emergency preparedness for second home owners and renters. Assess ways to reach out to these individuals. Expand resources on Maggie's List (listserv) and Town website distribution. Create and distribute materials such as a one-page flyer that can be posted to refrigerators that includes emergency information. Develop a platform for volunteer opportunities for residents to assist each other in the community - potentially an extension of the Council of the Aging. Based on COVID-19 experience, individuals have not been asking for assistance because neighbors have been helping each other or people are prepared. Leverage opportunity of broadband communication coming to the town in 2021 to engage with the community. Implement grassroots door to door outreach and incorporate students.		Medium	Ongoing
Historic/Cultural Resources	town-wide	public/private	V	Conduct a survey of historic resources within the community subject to flooding and more specifically the effects of a climate change related flooding. Share this information with the community by incorporating the findings into the town's Open Space and Recreation Plan.				Low	Ongoing
Emergency Preparedness - Home and Business Address Visibility	town-wide	public	V	Clearly display home and business address numbers where clearly visible to emergency responders.				High	Short-Term

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Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)

Features	Location	Ownership	V or S	Inland Flooding	Wind/ Microbursts	Extreme Temperatures (heat, cold, freeze-thaw, drought)	Extreme Precipitation (rain, snow, ice)	Priority **H** - **M** - **L**	Time **S**hort **L**ong **O**ngoing
Societal									
Emergency Preparedness • Shelters • Shelter-in-Place • Communication	town-wide	private	V/S	Inventory shelter needs. Assess the possibility of adding shelter locations in each of the five villages and/or establish outreach campaign about how to properly shelter in place. Continue to inventory community needs (e.g. medical needs) and access to resources to meet such needs. Establish a comprehensive plans and formal list of services available (neighbor to neighbor, emergency preparedness). E.g., during COVID-19, groups have established volunteer services for food delivery. Council of Aging has been checking on the senior population. Assess alternative modes of transportation - currently no public transportation between each of the towns and villages. Explore implementing door to door outreach to reach senior population and those who are typically disconnected from the rest of the community (second home owners). Formalize informational partnerships with abutting towns (Monterey, Sandisfield, and Sheffield) to complete the door to door outreach after emergencies that cut off access to sections of town. Establish an emergency access fund to assist community members in the event of emergencies.				Medium	Ongoing
Floodplain Management	town-wide	public	V	Approximately 56.2 acres (3%) of the developed portions of the community are within the floodplain. This includes residential, commercial and industrial buildings. Consider developing a floodplain bylaw to regulate future floodplain development within the community.				Medium	Ongoing
Collaborative/Integrated Governance	town-wide (regional)	public/private	V/S	Improve coordination and collaboration among departments, committees, and local organizations working towards the town's climate resiliency goals in light of existing strengths and vulnerabilities, community needs and future climate impacts. Engage in comprehensive planning. Continue to support and encourage collaboration amongst locally organized advocacy groups dedicated to improving the town's climate resiliency. Advocacy groups include, but are not limited to, Greenagers, Trout Unlimited, NRCS, the Trustees, volunteers via Maggie's List, the Council on Aging, DCR, MDAR, Regional Planning Commission, and the local land trust. Think regionally and work collaboratively with neighboring municipalities and states – encourage a regional approach to open space and natural resources protection. Develop a housing/economic plan to retain youth in the community. Get youth involved in Town duties to foster civic engagement.				Medium	Ongoing

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Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)

H-**M**-**L** priority for action over the **S**hort or **L**ong term (and **O**ngoing)

V = Vulnerability **S** = Strength

Features	Location	Ownership	V or S	Inland Flooding	Wind/ Microbursts	Extreme Temperatures (heat, cold, freeze-thaw, drought)	Extreme Precipitiation (rain, snow, ice)	Priority (H - M - L)	Time (Short Long Ongoing)
Environmental									
Nuisance Pests/Invasive Plant Species •Mosquitos •Ticks •Giant Hogweed •Forest Pests •Agricultural pests	town-wide	N/A	V	Identify locations where nuisance species are prevalent or will likely increase the vulnerability of the community with respect to public health and safety, the local economy (tourism), or natural resources. Map these areas and develop a planning approach that may include conservation or nature-based solutions to address nuisance species. Develop a community outreach initiative to educate the public on the risks of nuisance species. Partner with state and regional agencies to provide education and outreach to community members.				High	Ongoing
Open Space	location-specific	state	S	Conduct a community engagement initiative to promote the importance of recreational/open space as public health and environmental co-benefits. Consider the use of educational signage to facilitate community engagement/education to promote the relationship between climate resilience, open space, recreation, and public health. Coordinate closely with community assessments focused on nuisance pests/invasive species, vector borne diseases, and natural resource management. Place an emphasis on locations associated with the Housatonic River floodplain. Explore ways to address erosion at open space resources, including Umpachene Falls.				Medium	Ongoing
Floodplains • Confluence of Lake Garfield and Lake Buel outlets at Hartsville-Mill River Road • Hatchery Road • Konkapot River - Lake Buel to CT State Line	town-wide	public	S	Approximately 7% of the town is located within the 100-year floodplain. Approximately 2.5% of the town's floodplain is developed. The town should consider the development of a floodplain bylaw that incorporates the effects of changing precipitation and flooding conditions due to future climate risks. Continue to promote regulatory/conservation protections to important floodplain resources within the community. Identify locations for future acquisition for conservation land to be used for flood storage. Apply nature-based solutions where appropriate. Coordinate closely with local boards, commissions, and interest groups to increase the capacity of these efforts. Develop community outreach programs for the community to better understand the importance and risks associated with floodplains in a changing climate. Improve flood mapping within the community to account for future climate risks, how green infrastructure or nature-based solutions may improve floodplain capacity. Siltation issues at the confluence of Lake Garfield and Lake Buel outlets at Hartsville-Mill River Road should be assessed for possible mitigation measures to alleviate localized flooding in New Marlborough and Monterey. Coordinate with the Lake Buel District as owners of the roads in this location subject to frequent flooding.				High	Ongoing

Community Resilience Building Risk Matrix www.CommunityResilienceBuilding.org

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Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)

Features	Location	Ownership	V or S	Inland Flooding	Wind/ Microbursts	Extreme Temperatures (heat, cold, freeze-thaw, drought)	Extreme Precipitiation (rain, snow, ice)	Priority H - M - L	Time Short Long Ongoing
Environmental									
Waterways, Wetlands, Banks, Habitat, and Water Quality •Lake Buel •Lake Garfield •Konkapot River	Town wide	public and private	S/V	Town is sorrounded by waterways and wetlands which provide benefits for the town in terms of sustainability, tourism and overall quality of life. However, banks are becoming destabilized due in part to people's needs to view and access the waterways. Public outreach and education should focus on proper ways of formalizing river access as well measures to protect banks (encourage re-vegetation, minimizing tree removal, etc.). Consider wetland bylaws to protect waterways, wetlands, buffer zones and floodplains beyond the protections afforded by the Wetlands Protection Act. Regional coordination and private partnership efforts (e.g., Trout Unlimited) should occur with New Marlborough and Monterey and other abutting municipalities to improve wetlands, waterways and banks. Build upon existing organizations such as the Housatonic Valley Association, Trout Unlimited, and schools. Engage Trout Unlimited to study ways to improve bank stability in Hartsville. Incorporate students in the assessment, implementation and outreach efforts.				High	Ongoing
Steep Slopes >15% (Umpachene Falls Rd, Leffingwell Rd, Cagney Hill Rd, Canaan Valley Rd, East Hill Rd, and throughout Town)	town-wide	public/private	V	Assess impacts on town roads and private driveways where moderate to steep slopes exist. Evaluate steep slopes, notably undeveloped forested steep slopes, for subsurface/geologic conditions that are susceptible to landslides. Coordinate closely with town roadway assessments and bridge and culvert assessments. Assess these areas for changes in plant species community changes or evidence of invasive species (plant or insect) that may increase the vulnerability of steep slopes to landslides. Consider the use of regulatory mechanisms (ridgeline protection bylaw) or incentives (BMPs) or engineered solutions to address this issue where steep slopes and driveways cause washouts.				High	Ongoing
Sustainable and Resilient Agriculture	town-wide	public/private	V/S	Draw upon local capacity (e.g. New Marlborough Agricultural Commission) to establish practices for sustainable and climate resilient agriculture in New Marlborough. Apply nature-based solutions to diminish the effects of flooding, drought, or extreme weather events to New Marlborough's agricultural land. Coordinate closely with the Conservation Commission to apply conservation and landscape appropriate resilient solutions within floodplain areas. Consider the use of nature-based solutions to address climate resilience.				Low	Ongoing
Beaver/Flood Management	town-wide	public/private	V	The beaver population within New Marlborough has grown to a point where this species is increasing flood prevalence within the community. Flooding has been observed on North Road, Norfolk Road, Caulkins Cross Road, and Hotchkiss Roads due to large beaver dams. Explore and implement options for beaver management.				High	Ongoing

Community Resilience Building Risk Matrix www.CommunityResilienceBuilding.org

Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)

H-**M**-**L** priority for action over the **S**hort or **L**ong term (and **O**ngoing)

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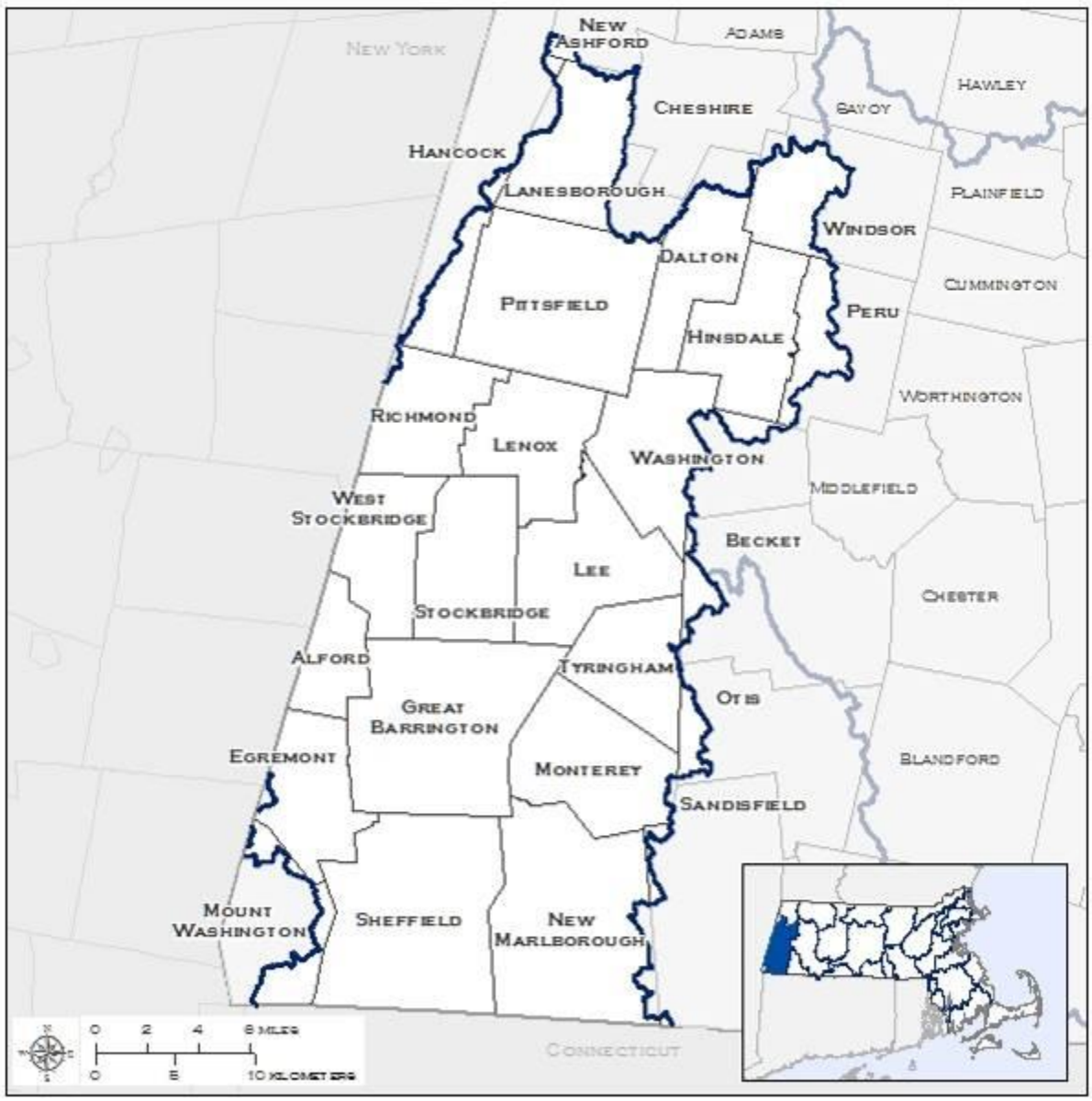
Features	Location	Ownership	V or S	Inland Flooding	Wind/ Microbursts	Extreme Temperatures (heat, cold, freeze-thaw, drought)	Extreme Precipitiation (rain, snow, ice)	Priority H - M - L	Time Short Long Ongoing
Environmental									
Forest Management, Forest Pests and Forest Fires • Increased fuel for forest fires resulting from diseased trees (resulting from warming temperatures and forest pests), heat, lighting, an increase in the use of outdoor spaces, and an increased use in energy/electricity/gas	town-wide	public/private	V	Assess and identify areas most susceptible to forest fires (near campgrounds, day use areas, roads, commercial facilities, etc.). Conduct tree health assessments and develop a forest management plan prioritizing areas near critical emergency management resources (e.g., cell towers, roads, wires, etc.). Identify municipal or regional needs for forest firefighting equipment and forest management (consider road accessibility, steep slopes, etc.).				High	Ongoing

HOUSATONIC BASIN CLIMATE PROJECTIONS

HOUSATONIC BASIN

MUNICIPALITIES WITHIN HOUSATONIC BASIN:

Alford, Becket, Cheshire, Dalton, Egremont, Great Barrington, Hancock, Hinsdale, Lanesborough, Lee, Lenox, Monterey, Mount Washington, New Ashford, New Marlborough, Otis, Peru, Pittsfield, Richmond, Sandisfield, Sheffield, Stockbridge, Tyringham, Washington, West Stockbridge, and Windsor



Many municipalities fall within more than one basin, so it is advised to use the climate projections for the basin that contains the majority of the land area of the municipality.

HOUSATONIC BASIN

Housatonic Basin		Observed Baseline 1971-2000 (°F)	Projected Change in 2030s (°F)	Mid-Century Projected Change in 2050s (°F)	Projected Change in 2070s (°F)	End of Century Projected Change in 2090s (°F)
Average Temperature	Annual	44.32	+2.24 to +4.61	+3.09 to +6.72	+3.69 to +9.29	+4.28 to +11.30
	Winter	22.46	+2.56 to +5.86	+3.29 to +8.82	+4.39 to +10.49	+4.74 to +11.97
	Spring	42.73	+1.77 to +3.42	+2.43 to +5.55	+2.98 to +7.69	+3.54 to +9.50
	Summer	65.08	+2.33 to +4.44	+3.03 to +6.93	+3.53 to +10.02	+4.14 to +12.27
	Fall	46.64	+2.35 to +5.29	+3.81 to +6.94	+3.84 to +9.75	+4.12 to +12.02
Maximum Temperature	Annual	55.41	+2.01 to +4.42	+2.74 to +6.89	+3.27 to +9.52	+3.87 to +11.42
	Winter	32.29	+2.08 to +5.13	+2.82 to +7.86	+3.61 to +9.41	+3.94 to +10.88
	Spring	54.24	+1.53 to +3.43	+2.27 to +5.56	+2.82 to +7.98	+3.47 to +9.59
	Summer	77.04	+2.13 to +4.58	+2.67 to +7.27	+3.37 to +10.49	+3.95 to +12.78
	Fall	57.67	+2.53 to +5.19	+3.51 to +7.38	+3.64 to +10.13	+4.20 to +12.39
Minimum Temperature	Annual	33.23	+2.41 to +4.91	+3.50 to +6.93	+4.15 to +9.13	+4.53 to +11.28
	Winter	12.62	+2.82 to +6.62	+3.87 to +9.59	+5.22 to +11.53	+5.47 to +13.11
	Spring	31.21	+1.91 to +3.71	+2.54 to +6.00	+3.25 to +7.54	+3.70 to +9.22
	Summer	53.11	+2.45 to +4.64	+3.30 to +7.08	+3.75 to +9.69	+4.15 to +11.83
	Fall	35.62	+2.10 to +5.28	+3.58 to +6.77	+3.87 to +9.38	+4.04 to +11.59

- The Housatonic basin is expected to experience increased average temperatures throughout the 21st century. Maximum and minimum temperatures are also expected to increase throughout the end of the century. These increased temperature trends are expected for annual and seasonal projections.
- Seasonally, maximum summer and fall temperatures are expected to see the highest projected increase throughout the 21st century.
    - Summer mid-century increase of 2.7 °F to 7.3 °F (3-9% increase); end of century increase of 4 °F to 12.8 °F (5-17% increase).
    - Fall mid-century increase of 3.5 °F to 7.4°F (6-13% increase); end of century increase by and 4.2 °F to 12.4 °F (7-21% increase).
- Seasonally, minimum winter and fall temperatures are expected to see increases throughout the 21st century.
    - Winter mid-century increase of 3.9 °F to 9.6 °F (31-76% increase); end of century increase by 5.5 °F to 13.1 °F (43-104% increase).
    - Fall mid-century of 3.6 °F to 6.8 °F (10-19% increase); end of century increase of 4.0°F to 11.6 °F (11-33% increase).

HOUSATONIC BASIN

Housatonic Basin		Observed Baseline 1971-2000 (Days)	Projected Change in 2030s (Days)	Mid-Century Projected Change in 2050s (Days)	Projected Change in 2070s (Days)	End of Century Projected Change in 2090s (Days)
Days with Maximum Temperature Over 90°F	Annual	1.33	+2.89 to +10.27	+4.43 to +20.21	+5.59 to +38.75	+7.19 to +56.83
	Winter	0.00	+0.00 to +0.00	+0.00 to +0.00	+0.00 to +0.00	+0.00 to +0.00
	Spring	0.04	+0.07 to +0.42	+0.11 to +0.83	+0.19 to +1.82	+0.14 to +3.21
	Summer	1.27	+2.74 to +9.06	+3.83 to +18.05	+4.81 to +32.71	+6.55 to +46.77
	Fall	0.02	+0.16 to +0.91	+0.21 to +1.86	+0.22 to +4.73	+0.24 to +6.84
Days with Maximum Temperature Over 95°F	Annual	0.07	+0.29 to +2.77	+0.49 to +6.45	+0.74 to +14.71	+1.06 to +27.38
	Winter	0.00	+0.00 to +0.00	+0.00 to +0.00	+0.00 to +0.00	+0.00 to +0.00
	Spring	0.00	+0.00 to +0.04	+0.00 to +0.06	+0.00 to +0.34	+0.00 to +0.94
	Summer	0.07	+0.26 to +2.60	+0.45 to +6.16	+0.71 to +13.51	+0.96 to +24.96
	Fall	0.00	+0.00 to +0.23	+0.02 to +0.48	+0.03 to +0.95	+0.00 to +1.62
Days with Maximum Temperature Over 100°F	Annual	0.00	+0.00 to +0.26	+0.01 to +1.03	+0.03 to +3.11	+0.02 to +7.35
	Winter	0.00	+0.00 to +0.00	+0.00 to +0.00	+0.00 to +0.00	+0.00 to +0.00
	Spring	0.00	+0.00 to +0.00	+0.00 to +0.00	+0.00 to +0.04	+0.00 to +0.08
	Summer	0.00	+0.00 to +0.23	+0.01 to +1.01	+0.03 to +2.92	+0.02 to +7.10
	Fall	0.00	+0.00 to +0.01	+0.00 to +0.06	+0.00 to +0.19	+0.00 to +0.36

- Due to projected increases in average and maximum temperatures throughout the end of the century, the Housatonic basin is also expected to experience an increase in days with daily maximum temperatures over 90 °F, 95 °F, and 100 °F.
    - Annually, the Housatonic basin is expected to see days with daily maximum temperatures over 90 °F increase by 4 to 20 more days by mid-century, and 7 to 57 more days by the end of the century.
    - Seasonally, summer is expected to see an increase of 4 to 18 more days with daily maximums over 90 °F by mid-century.
    - By end of century, the Housatonic basin is expected to have 7 to 47 more days.

HOUSATONIC BASIN

Housatonic Basin		Observed Baseline 1971-2000 (Days)	Projected Change in 2030s (Days)	Mid-Century Projected Change in 2050s (Days)	Projected Change in 2070s (Days)	End of Century Projected Change in 2090s (Days)
Days with Minimum Temperature Below 0°F	Annual	15.92	-5.49 to -10.12	-7.21 to -11.96	-8.19 to -12.68	-8.52 to -13.56
	Winter	15.01	-5.17 to -9.62	-6.83 to -11.36	-7.67 to -11.98	-7.91 to -12.71
	Spring	0.93	-0.23 to -0.79	-0.27 to -0.78	-0.35 to -0.87	-0.38 to -0.90
	Summer	0.00	-0.00 to -0.00	-0.00 to -0.00	-0.00 to -0.00	-0.00 to -0.00
	Fall	0.00	-0.04 to -0.00	-0.04 to -0.00	-0.04 to -0.00	-0.04 to -0.00
Days with Minimum Temperature Below 32°F	Annual	172.97	-10.88 to -28.16	-19.40 to -38.83	-22.42 to -53.75	-23.77 to -63.13
	Winter	86.9	-0.80 to -6.06	-1.84 to -8.83	-2.92 to -16.06	-3.53 to -19.72
	Spring	48.58	-4.49 to -9.51	-6.03 to -14.89	-7.46 to -19.46	-9.46 to -21.18
	Summer	0.13	-0.02 to -0.21	-0.02 to -0.35	-0.02 to -0.31	-0.02 to -0.31
	Fall	37.34	-4.68 to -13.01	-9.26 to -16.13	-9.18 to -21.42	-9.42 to -24.72

- Due to projected increases in average and minimum temperatures throughout the end of the century, the Housatonic basin is expected to experience a decrease in days with daily minimum temperatures below 32 °F and 0 °F.
- Seasonally, winter, spring and fall are expected to see the largest decreases in days with daily minimum temperatures below 32 °F.
    - Winter is expected to have 2 to 9 fewer days by mid-century, and 4 to 20 fewer days by end of century.
    - Spring is expected to have 6 to 15 fewer days by mid-century, and 9 to 21 fewer days by end of century.
    - Fall is expected to have 9 to 16 fewer days by mid-century, and 9 to 25 fewer days by end of century.

HOUSATONIC BASIN

Housatonic Basin		Observed Baseline 1971-2000 (Degree-Days)	Projected Change in 2030s (Degree-Days)	Mid-Century Projected Change in 2050s (Degree-Days)	Projected Change in 2070s (Degree-Days)	End of Century Projected Change in 2090s (Degree-Days)
Heating Degree-Days (Base 65°F)	Annual	7822.03	-670.10 to -1372.30	-900.56 to -1924.44	-1057.85 to -2516.06	-1213.52 to -2905.02
	Winter	3849.68	-214.60 to -542.71	-290.64 to -807.49	-388.93 to -951.53	-436.61 to -1099.08
	Spring	2059.3	-149.28 to -297.95	-209.42 to -480.77	-257.38 to -639.14	-309.62 to -765.07
	Summer	223.89	-75.13 to -127.09	-99.65 to -163.79	-120.06 to -192.72	-129.86 to -202.21
	Fall	1689.59	-193.19 to -432.12	-311.38 to -537.87	-309.15 to -743.70	-325.05 to -863.11
Cooling Degree-Days (Base 65°F)	Annual	261.29	+160.30 to +347.99	+222.51 to +603.30	+263.27 to +940.20	+310.17 to +1262.07
	Winter	nan	nan to nan	+0.86 to +4.31	+1.57 to +1.57	+2.35 to +10.65
	Spring	12.03	+6.43 to +18.90	+11.04 to +36.74	+13.95 to +62.62	+12.37 to +97.39
	Summer	231.11	+126.85 to +280.97	+169.14 to +472.65	+199.51 to +730.12	+239.39 to +931.12
	Fall	18.38	+18.32 to +60.49	+28.08 to +98.50	+35.42 to +176.56	+41.87 to +235.21
Growing Degree-Days (Base 50°F)	Annual	1899.77	+386.61 to +743.64	+528.03 to +1186.76	+626.85 to +1776.20	+713.76 to +2238.16
	Winter	3.09	+0.02 to +7.78	+0.88 to +8.08	+0.19 to +14.19	+2.04 to +19.93
	Spring	207.26	+51.95 to +117.64	+83.17 to +202.54	+103.91 to +307.63	+109.22 to +407.29
	Summer	1389.48	+212.76 to +406.04	+276.17 to +635.70	+321.76 to +919.82	+376.08 to +1126.63
	Fall	293.17	+100.86 to +258.98	+154.03 to +362.52	+158.26 to +550.34	+201.11 to +688.38

- Due to projected increases in average, maximum, and minimum temperatures throughout the end of the century, the Housatonic basin is expected to experience a decrease in heating degree-days, and increases in both cooling degree-days and growing degree-days.
- Seasonally, winter historically exhibits the highest number of heating degree-days and is expected to see the largest decrease of any season, but spring and fall are also expected to see significant change.
    - The winter season is expected to see a decrease of 8-21% (291-807 degree-days) by mid-century, and a decrease of 11-29% (437 -1099 degree-days) by the end of century.
    - The spring season is expected to decrease in heating degree-days by 10-23% (209-481 degree-days) by mid-century, and by 15-37% (310 -765 degree-days) by the end of century.
    - The fall season is expected to decreases in heating degree-days by 18-32% (311 -538 degree-days) by mid-century, and by 19-51% (325 -863 degree-days) by the end of century.
- Conversely, due to projected increasing temperatures, summer cooling degree-days are expected to increase by 73-205% (169 -473 degree-days) by mid-century, and by 104-403% (239-931 degree-days) by end of century.
- Seasonally, summer historically exhibits the highest number of growing degree-days and is expected to see the largest decrease of any season, but the shoulder seasons of spring and fall are also expected to see an increase in growing degree-days.

- The summer season is projected to increase by 20-46% (276 -636 degree-days) by mid-century, and by 27-81% (376 -1127 degree-days) by end of century.
- Spring is expected to see an increase by 40-98% (83-203 degree-days) by mid-century and 53-197% (109-407 degree-days) by end of century.
- Fall is expected to see an increase by 53-124% (154-362 degree-days) by mid-century and 69-235% (201-688 degree-days) by end of century.

HOUSATONIC BASIN

Housatonic Basin		Observed Baseline 1971-2000 (Days)	Projected Change in 2030s (Days)	Mid-Century Projected Change in 2050s (Days)	Projected Change in 2070s (Days)	End of Century Projected Change in 2090s (Days)
Days with Precipitation Over 1"	Annual	6.02	-0.24 to +2.10	+0.37 to +2.84	+0.58 to +2.84	+0.35 to +3.97
	Winter	0.92	-0.04 to +0.53	+0.01 to +0.87	+0.02 to +1.05	+0.11 to +1.19
	Spring	1.35	-0.08 to +0.45	-0.05 to +0.57	-0.02 to +0.93	+0.06 to +1.38
	Summer	2.1	-0.19 to +0.68	-0.20 to +0.93	-0.33 to +0.85	-0.24 to +0.76
	Fall	1.62	-0.36 to +0.78	-0.34 to +0.85	-0.25 to +1.07	-0.26 to +1.22
Days with Precipitation Over 2"	Annual	0.57	-0.16 to +0.37	-0.12 to +0.42	+0.01 to +0.57	+0.04 to +0.73
	Winter	0.02	-0.03 to +0.03	-0.03 to +0.07	-0.02 to +0.08	-0.02 to +0.09
	Spring	0.1	+0.00 to +0.08	-0.01 to +0.11	+0.00 to +0.21	+0.00 to +0.26
	Summer	0.35	-0.10 to +0.19	-0.06 to +0.19	-0.10 to +0.19	-0.11 to +0.23
	Fall	0.1	-0.11 to +0.17	-0.04 to +0.19	-0.03 to +0.20	-0.05 to +0.19
Days with Precipitation Over 4"	Annual	0.01	-0.02 to +0.06	-0.01 to +0.06	-0.01 to +0.09	-0.02 to +0.12
	Winter	0.00	+0.00 to +0.00	+0.00 to +0.00	+0.00 to +0.00	+0.00 to +0.00
	Spring	0.00	+0.00 to +0.00	+0.00 to +0.00	+0.00 to +0.00	+0.00 to +0.01
	Summer	0.00	-0.02 to +0.04	-0.02 to +0.03	-0.01 to +0.04	-0.02 to +0.05
	Fall	0.00	-0.02 to +0.05	-0.02 to +0.05	-0.02 to +0.05	-0.02 to +0.05

- The projections for expected number of days receiving precipitation over one inch are variable for the Housatonic basin, fluctuating between loss and gain of days.
    - Seasonally, the winter season is generally expected to see the highest projected increase.
    - The winter season is expected to see an increase in days with precipitation over one inch of 0-1 days by mid-century, and of 0-1 days by the end of century.
    - The spring season is expected to see an increase in days with precipitation over one inch of 0-1 days by mid-century, and an increase of 0-1 days by the end of century.

HOUSATONIC BASIN

Housatonic Basin		Observed Baseline 1971-2000 (Inches)	Projected Change in 2030s (Inches)	Mid-Century Projected Change in 2050s (Inches)	Projected Change in 2070s (Inches)	End of Century Projected Change in 2090s (Inches)
Total Precipitation	Annual	47.43	+0.21 to +4.41	+1.09 to +6.42	+1.57 to +6.85	+1.56 to +7.66
	Winter	10.22	-0.50 to +1.81	+0.09 to +2.35	+0.21 to +2.77	+0.81 to +3.51
	Spring	12.07	-0.05 to +1.74	+0.20 to +1.78	+0.38 to +2.41	+0.48 to +2.77
	Summer	13.23	-0.15 to +2.20	-0.13 to +2.15	-0.35 to +1.85	-0.79 to +1.91
	Fall	11.86	-1.35 to +1.40	-1.32 to +1.83	-1.41 to +1.84	-1.69 to +1.67

- Similar to projections for number of days receiving precipitation over a specified threshold, seasonal projections for total precipitation are also variable for the Housatonic basin.
    - The winter season is expected to experience the greatest change with an increase of 1-23% by mid-century, and of 8-34% by end of century.
    - Projections for the summer and fall seasons are more variable, and could see either a drop or increase in total precipitation throughout the 21st century.
        - The summer season projections for the Housatonic or basin could see a decrease of 0.1 to an increase of 2.2 inches by mid-century (decrease of 1% to increase of 16%), and a decrease of 0.8 to an increase of 1.9 inches by the end of the century (decrease of 6% to increase of 14%).
        - The fall season projections for the Housatonic basin could see a decrease of 1.3 to an increase of 1.8 inches by mid-century (decrease of 11% to increase of 15% and a decrease of 1.7 to an increase of 1.7 inches by the end of the century (decrease of 14% to increase of 14%).

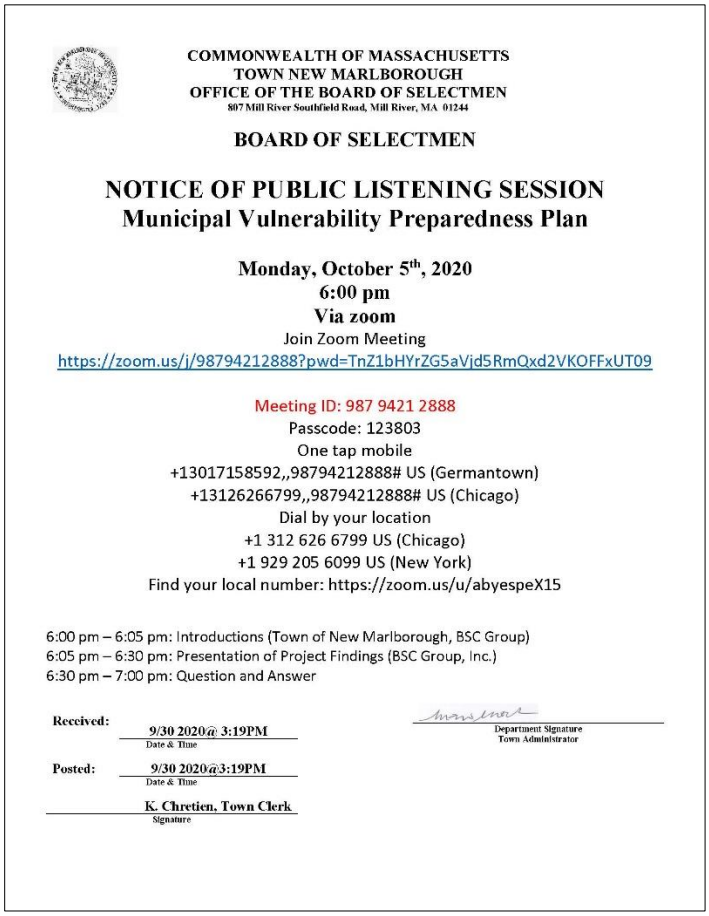
Housatonic Basin		Observed Baseline 1971-2000 (Days)	Projected Change in 2030s (Days)	Mid-Century Projected Change in 2050s (Days)	Projected Change in 2070s (Days)	End of Century Projected Change in 2090s (Days)
Consecutive Dry Days	Annual	15.98	-0.07 to +1.00	-0.06 to +1.94	-0.19 to +1.89	-0.08 to +2.26
	Winter	11.32	-1.03 to +0.67	-0.53 to +0.83	-0.95 to +0.95	-1.23 to +1.25
	Spring	10.84	-1.18 to +0.92	-1.13 to +1.31	-1.42 to +0.94	-1.49 to +0.95
	Summer	10.64	-0.83 to +1.19	-0.46 to +1.04	-0.73 to +1.51	-0.86 to +2.42
	Fall	11.27	-0.07 to +1.78	+0.14 to +2.80	+0.06 to +3.04	+0.19 to +2.79

- Annual and seasonal projections for consecutive dry days, or for a given period, the largest number of consecutive days with precipitation less than 1 mm (~0.04 inches), are variable throughout the 21st century.
    - For all the temporal parameters, the Housatonic basin is expected to see a slight decrease to an increase in consecutive dry days throughout this century.
    - Seasonally, the fall and summer seasons are expected to continue to experience the highest number of consecutive dry days.
        - The fall season is expected to experience an increase of 0-3 days in consecutive dry days by the end of the century.

PUBLIC LISTENING SESSION FEEDBACK

New Marlborough Public Listening Session

The Town of New Marlborough hosted a virtual Public Listening Session at 6:00 PM on October 5, 2020, to share information and to gather additional feedback from the community. The presentation was recorded and made available on the project website. Attendees demonstrated an interest in the Municipal Vulnerability Preparedness (MVP) process, both procedurally as well as how the municipality can maintain its standing in the program. Questions and feedback centered on the opportunity to pursue Action Grants, with attendees expressing interest in local infrastructure projects, notably dirt roads and drainage infrastructure in the context of a changing climate. Overall, Public Listening Session attendees were excited about the opportunity to participate in the MVP program and look forward to continued involvement.



COMMONWEALTH OF MASSACHUSETTS
TOWN NEW MARLBOROUGH
OFFICE OF THE BOARD OF SELECTMEN
807 Mill River Southfield Road, Mill River, MA 01244

BOARD OF SELECTMEN

NOTICE OF PUBLIC LISTENING SESSION
Municipal Vulnerability Preparedness Plan

Monday, October 5th, 2020
6:00 pm
Via zoom
Join Zoom Meeting
https://zoom.us/j/98794212888?pwd=TnZ1bHYrZG5aVjd5RmQxd2VKOFFxUT09

Meeting ID: 987 9421 2888
Passcode: 123803
One tap mobile
+13017158592,,98794212888# US (Germantown)
+13126266799,,98794212888# US (Chicago)
Dial by your location
+1 312 626 6799 US (Chicago)
+1 929 205 6099 US (New York)
Find your local number: https://zoom.us/u/abyespeX15

6:00 pm – 6:05 pm: Introductions (Town of New Marlborough, BSC Group)
6:05 pm – 6:30 pm: Presentation of Project Findings (BSC Group, Inc.)
6:30 pm – 7:00 pm: Question and Answer

Received: 9/30 2020@ 3:19PM (Date & Time)
Posted: 9/30 2020@3:19PM (Date & Time)
K. Chretien, Town Clerk (Signature)

Department Signature
Town Administrator