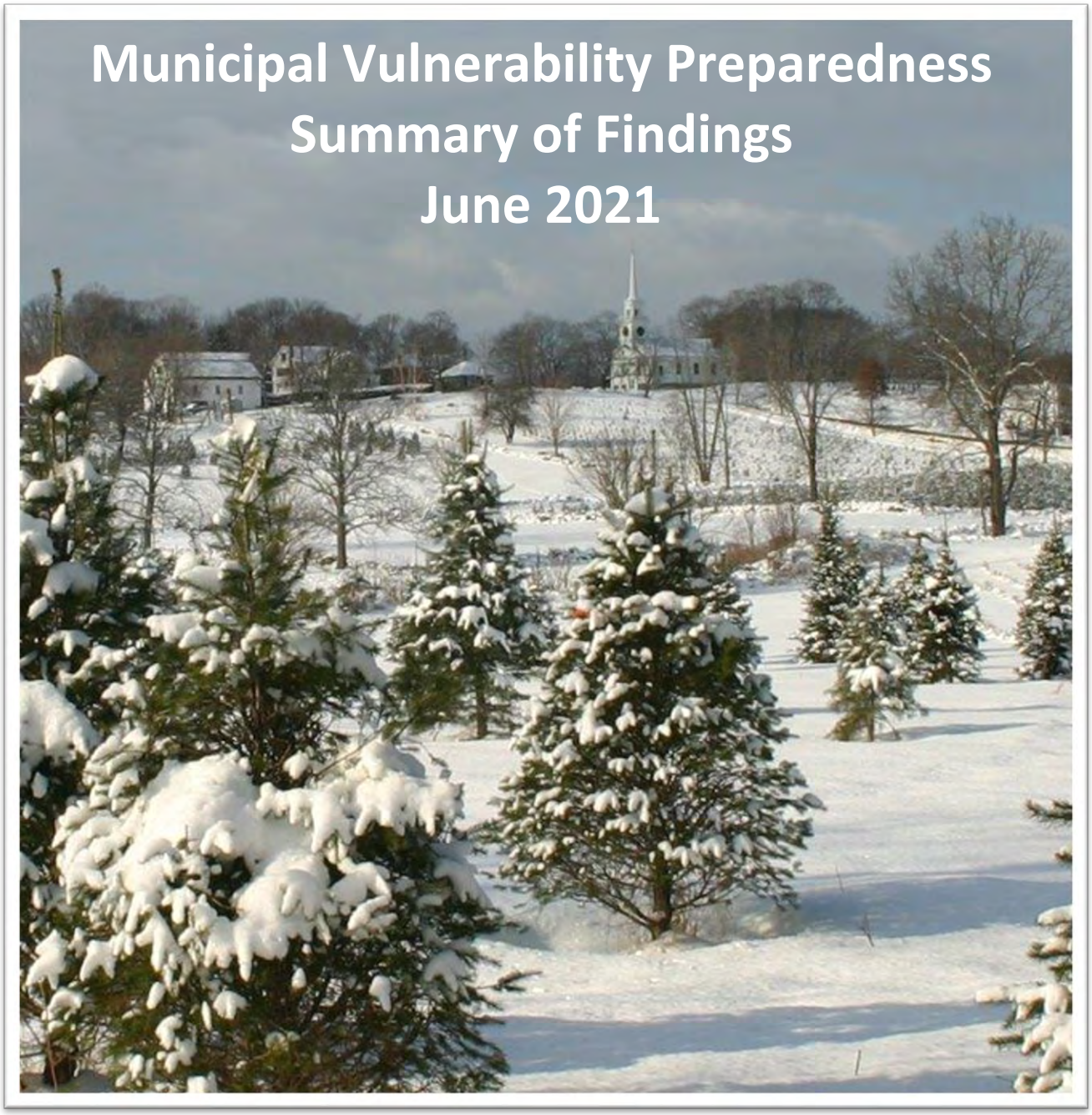
Town of New Braintree



CMRPC
Central Massachusetts Regional Planning Commission

Executive Office of Energy and Environmental Affairs

About the Authors

CMRPC Mission

The Central Massachusetts Regional Planning Commission is a regional partnership serving the planning and development interests of 40 member communities in southern Worcester County in Massachusetts. Our primary mission is to improve the quality of life for those who live and work in our region.

We do this by (1) addressing growth and development issues that extend beyond community boundaries; (2) maintaining the region's certification for federal transportation improvement funds; (3) providing technical knowledge and resources to assist local government in addressing specific land use, economic or environmental problems resulting from growth or decline, and (4) building strong working relationships with member communities, state and federal officials, as well as the range of area stakeholders.

Our History and Progress

Founded by the Massachusetts Legislature in 1963, the Central Massachusetts Regional Planning Commission (CMRPC) provides a variety of services to its constituencies and brings a regional perspective to planning and development. One of 13 regional planning agencies in Massachusetts, CMRPC serves the city of Worcester and 39 surrounding communities in the southern two-thirds of Worcester County. CMPRC's programs include Transportation, Regional Services, Geographic Information Systems (GIS), and Community Planning.

Federal Title VI/Nondiscrimination Protections

The Central Massachusetts Metropolitan Planning Organization (CMMPO) hereby states its policy to operate its programs, services and activities in full compliance with federal nondiscrimination laws including Title VI of the Civil Rights Act of 1964 (Title VI), the Civil Rights Restoration Act of 1987, and related federal and state statutes and regulations. Title VI prohibits discrimination in federally assisted programs and requires that no person in the United States of America shall, on the grounds of race, color, or national origin, including limited English proficiency, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving Federal assistance. Related federal nondiscrimination laws administered by the Federal Highway Administration, the Federal Transit Administration, or both prohibit discrimination on the basis of age, sex, and disability. These protected categories are contemplated within the CMMPO's Title VI Programs consistent with federal and state interpretation and administration. Additionally, the CMMPO provides meaningful access to its programs, services, and activities to individuals with limited English proficiency, in compliance with US Department of Transportation policy and guidance on federal Executive Order 13166.

State Nondiscrimination Protections

The CMMPO also complies with the Massachusetts Public Accommodation Law, M.G.L. c272§§ 92a, 98, 98a, prohibiting making any distinction, discrimination, or restriction in admission to or treatment in a place of public accommodation based on race, color, religious creed, national origin, sex, sexual orientation, disability or ancestry. Likewise, CMMPO complies with the Governor's Executive Order 526, section 4, requiring all programs, activities and services provided, performed, licensed, chartered, funded, regulated, or contracted for by the state shall be conducted without unlawful discrimination based on race, color, age, gender, ethnicity, sexual orientation, gender identity or expression, religion, creed, ancestry, national origin, disability, veteran's status (including Vietnam-era veterans), or background.

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Executive Order 569 and the Massachusetts Municipal Vulnerability Preparedness program

In September 2016, Massachusetts Governor Baker signed Executive Order 569, directing multiple state agencies to develop and implement a statewide comprehensive climate adaptation plan with the best climate-change data available. Recognizing that many adaptation solutions are local in nature, a key commitment of Executive Order 569 is to assist local governments in completing their own assessments and resiliency plans. The MVP Grant and Designation Program represents the first step in fulfilling this commitment.

The MVP program provides planning grants to municipalities to complete vulnerability assessments and develop action-oriented resiliency plans. Funding is used by cities and towns to hire an MVP-certified consultant who is trained to provide technical assistance and complete a community's vulnerability assessment and resiliency plan using the Community Resilience Building Framework. Towns and cities are free to choose the consultant of their choice from a list of certified MVP providers. The Town of New Braintree invited the Central Massachusetts Regional Planning Commission to lead them in this planning effort.

Communities that complete the MVP planning process become certified "MVP Communities" and are eligible for Action Grant funding and other opportunities through the Commonwealth.

https://www.mass.gov/news/governor-baker-signs-legislation-directing-24-billion-to-climate-change-adaptation

ACKNOWLEDGEMENTS

The Municipal Vulnerability Preparedness (MVP) program and Community Resiliency Building Workshop was funded by the Executive Office of Energy and Environmental Affairs. This Summary of Findings and CRB Workshop were prepared for the community of New Braintree by the Central Massachusetts Regional Planning Commission (CMRPC). Support from the New Braintree Board of Selectmen and the town officials was much appreciated, especially for allowing the workshop and listening session to take place in-person and virtually.

The CMRPC would like to acknowledge the Town of New Braintree's Core Team for their time and hard work in participating in this project. These include, but are not limited to:

Eric Vollheim, Emergency Management, Project Lead

Cynthia Henshaw, East Quabbin Land Trust, Core Team

Deb Morrison, Historical Commission, Core Team

The following individuals were directly and personally involved in planning and conducting the New Braintree Community Resilience Building Workshop:

Dani Marini, Assistant Environmental Planner, CMRPC

Andrew Loew, Project Manager, CMRPC

Mary Hannah Smith, Associate Resiliency and Environmental Planner, CMRPC

Kevin Finn, Intern, CMRPC

Matt Franz, GIS Analyst, CMRPC

Andrew Smith, Regional Coordinator, EEA

The Town of New Braintree and CMRPC would also like to thank Susie Mulliken for the use of her photographs on the cover page and on page 5 of this Summary of Findings Report.

New Braintree: A Profile

Native Americans, including the Nipmuck people, lived in the New Braintree area for more than 9,000 years.[1] In the late 17th century, the town of Braintree in Eastern Massachusetts voted to purchase 6,000 acres of land for farming that would be evenly divided amongst households interested in relocating.[2] Additional land was purchased in later years, and in 1751, this farmland was incorporated as New Braintree.[3]

Route MA-32 and Hardwick border New Braintree to the west, Barre and Oakham to the north, and North Brookfield and West Brookfield to the south. New Braintree's population has grown from 671 residents in 1980 to 999 residents in 2010.[4] As of 2019, the town's population was approximately 1,211 residents, and 98.8% of the population is White. The town's median age was about 48.8 years old, with 21% of the population under 18 years old and about 14% aged 65 years and over.[5] The median household income in 2019 was $91,125, which is somewhat higher than the $81,214 statewide median income.[6] Approximately 10.8% of the population lives below the poverty line.

Today, New Braintree consists of approximately 20.9 square miles of farmland, forest, and wetlands.[7] The town was historically known for its dairy farms, and local agriculture remains an important characteristic of New Braintree's identity.[8] Community members also value its rural character and open spaces, which provide habitat for protected bird species, rare insects, and native freshwater mussels.[9] Today, New Braintree is known for its rural scenery, slow pace of life, and for hosting the Massachusetts State Policy Academy, which is south of the town center.[10]

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[1] The Town of New Braintree, n.d.
[2] Ibid.
[3] Ibid.
[4] The Town of New Braintree Open Space Committee, 2020.
[5] United States Census Bureau, 2019, Table S0101.
[6] United States Census Bureau, 2019, Table S9101.
[7] Worcester Regional Chamber of Commerce, 2018.
[8] The Town of New Braintree, n.d.
[9] Massachusetts Division of Fisheries and Wildlife, 2012.

COMMUNITY RESILIENCE BUILDING WORKSHOP

The Town of New Braintree contracted with the Central Massachusetts Regional Planning Commission (CMRPC) on September 24, 2020, to serve as the MVP provider, including completing the Community Resiliency Building (CRB) workshop. Through the Community Resilience Building (CRB) process, stakeholders actively engaged in an ongoing discussion to determine the top hazards related to climate change that currently impact or have the potential to impact New Braintree. A small group of town officials and Board Members convened on December 3, 2020, to form the 'Core Team' that, together with CMRPC staff, organized and planned the CRB Workshop over three meetings.

To prepare for the workshop, CRMPC and the Core Team pre-recorded workshop presentations, including Core Team introduction videos, an MVP program overview presentation, a Climate Projections presentation, a Climate Hazards presentation, and a Matrix & Nature-Based solutions presentation. The Core Team and CMRPC also developed the workshop invitation. The invitation included links to each pre-recorded presentation, table maps, an excerpt from the New Braintree Hazard Mitigation Plan, a two-page MVP program overview, a CRB Workbook, a how-to-use-ZOOM information page, and an agenda with ZOOM log-in information for each of the two meetings. Participants were instructed to watch all presentations at their leisure before the workshop.

The Town of New Braintree's **CRB workshops were held on Tuesday, April 6th and Tuesday, 13th from 5:00 - 8:00 PM**. The Core Team and CMRPC staff pre-recorded all presentations, allowing participants to view them in preparation for the initial workshop. The workshop on April 6th was held in-person at the Town Hall to enable residents without reliable internet access to participate in the resilience-building process. After a brief introduction to the MVP program, participants divided into groups to complete the CRB process – identifying town features and their locations, ownership, and classification as a vulnerability or strength. The meeting on April 13th was held virtually and was reserved to complete the CRB matrix and develop a list of actionable items that could improve resiliency throughout the Town of New Braintree.

Core Team and Project Team

Name	Affiliation	Role
Eric Vollheim	Town of New Braintree	Project Lead
Deb Morrison	Town of New Braintree	Core Team
Cynthia Henshaw	Town of New Braintree	Core Team
Dani Marini	CMRPC	Staff Lead
Mary Hannah Smith	CMRPC	Staff Assistant

Workshop Invitees and Participants

Name	Affiliation	Attended	Table #
Andrew Smith	MVP Regional Coordinator, EEA	Y	1
Barbara Portal	West Brookfield MVP Core Team	Y	1
Deb Morrison	Historical Commission	Y	1
Dexter Newton	Farmer (Horses)	Y	1
Genevieve Stillman	Planning Board	Y	1
Jason Benoit	Farmer (Beef Cows, Blueberries, Hay)	Y	1
Julie A. Rousseau	Council on Aging	Y	1
Peggy Thompson	School Committee	Y	1
Senator Gobi	State Representative	Y	1
Bill Howland	Board of Selectmen	Y	1
Carl Hartwick	National Grid	Y	2
Cynthia Henshaw	East Quabbin Land Trust	Y	2
Glen Stillman	Farmer	Y	2
Jessica Bennett	Town Clerk	Y	2
Marjorie A. Wissiup	Library Trustee	Y	2
Matthew A Koziol	Farmer Matt	Y	2
Paul Thompson	Board of Health	Y	2
Sarah Bjorklund	Sunset Valley Farm	Y	2
Richard Ayer	Highway Department	Y	2
Sheila Muir	School Superintendent	Y	2
Chief Dennis Letendre	Fire Department, Chief	Y	3
David Brown	West Brookfield MVP Core Team	Y	3
Eric Vollheim	Emergency Management/CERT Team	Y	3
Herbert Pollard Jr	Ashland Farm	Y	3
Joanne Thompson	Conservation Commission	Y	3
Lukas Bjorklund	Sunset Valley Farm	Y	3
Officer Ryan Gentile	Police Department	Y	3
Susie Mulliken	Former Police Officer	Y	3
John Thompson	Thompson's Maple Farm	Y	3
Randy Walker	Board of Selectmen	Y	3
Lori Hoffman	Police Department	Y	3
Gregory Dwelly	State Police	Y	3
Andrew Loew	Project Manager, CMRPC	Y	1
Kevin Finn	Senior Intern, CMRPC	Y	1
Mary Hannah Smith	Associate Planner, CMRPC	Y	2
Julia Moore	Intern, CMRPC	Y	2
Dani Marini	Assistant Planner, CMRPC	Y	ALL
Matt Franz	Project Manager, IT Support, CMRPC	Y	ALL

The workshop's goal was to identify the four top natural hazards that impact New Braintree and develop strategies to enhance the town's resiliency related to climate change. Following the CRB work plan, the Core Team and CMRPC facilitators and planners pre-recorded four presentations:

- Overview of the MVP program
- Overview of the CRB process
- A summary of climate change projections, impacts, and mitigation strategies
- A detailed profile of natural hazards in the Town of New Braintree, including the top four hazards identified by the core team.

During the first workshop meeting date, the in-person group briefly discussed the top four hazards that affect New Braintree. There was an agreement between the Core Team and all participants that--in no particular order-- extreme heat/drought, extreme cold/winter storms, severe storms (wind), and flooding/extreme precipitation have the most significant effects and potential impacts on the town. After identifying these hazards, workshop attendees proceeded to work through the CRB matrix and mapping exercise in three small groups facilitated by CMRPC staff. Table facilitators guided stakeholders through examining the town's infrastructural, societal, and environmental features to identify stakeholders' concerns regarding natural and climate-related hazards.

The group then reconvened virtually seven days later to build upon the first day's work. The second session's goal was to list ideas for actions that could reduce or mitigate climate change's projected impacts. Once attendees had completed the matrix, a table reporter from each small group announced a summary of their group's findings. The final matrices are included in Appendix A of this report.

Upon completing the two workshop meetings, CMRPC compiled all information from the completed CRB matrices into a survey. The survey was then distributed to all workshop attendees from April 26, 2021, through May 3, 2021. The attendees took the survey to prioritize and vote for what they believed to be the top project in the infrastructure, society, and environmental categories. The survey results were used to prioritize action ideas and organize the Summary of Findings Report. The survey results are included in the Appendix.

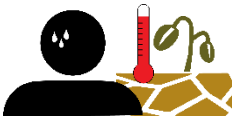
Thirty-one (31) stakeholders attended the CRB Workshop, including representatives from town government, emergency services, the MVP Core team, Board of Selectmen, Planning Board, Conservation Commission, Historical Commission, National Grid, East Quabbin Land Trust, Library, local farms, and concerned citizens of New Braintree.

A public listening session to discuss MVP results and recommendations for future actions was held in-person on May 24, 2021. The listening session was properly promoted across several avenues, with 11 people in attendance and two members of the core team. Feedback from the listening session is included at the end of this report. Thus, between the two meetings, a total of 42 people participated in the MVP process.

Top Hazards

Following the presentations at the beginning of the workshop, a full-group discussion was held for approximately fifteen minutes to determine the top four hazards for breakout groups to assess solutions further. Taking climate change projections, critical infrastructure, and other considerations into account, workshop participants chose to focus on the four following hazards. They are presented in no particular order: **extreme heat/drought, extreme cold/winter storms, severe storms (wind), and flooding/extreme precipitation**.

In 2016 and 2020, New Braintree experienced extreme droughts along with the majority of the state of Massachusetts. Severe storms, including high winds and intense rainfall, have been increasing in frequency and impact. Weather events have disrupted the town by causing localized flooding, power outages, and calling upon mutual aid agreements. With climate change, all of these natural hazards are expected to increase in severity and frequency.

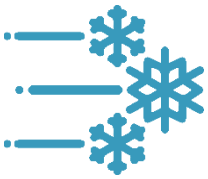


Extreme Temperatures

Projecting an increase of consecutive dry days, with the driest periods in the summer and fall. This leads to increased risk and stress on drinking water systems and wildfire potential.

Flooding

Expected increase in precipitation across all seasons. Heavy rainfall will become more frequent, increasing the risk for flash floods. Also increases non-point source pollution.



Extreme

Winter Storms

Annual days below freezing will decrease, winter precipitation falling as rain or freezing rain. This increases risk for ice storms and flash flooding when rain falls on frozen ground.

High Wind

Intensity of storm events is expected to increase due to the warmer atmosphere. This will lead to increased severe thunderstorm and hurricane activity with higher wind speeds.

Heat/Drought. Wildfires are expected to increase due to the impact of prolonged droughts and extreme heat. Drier forests and wooded areas will be more combustible in drought conditions. Drought will also lead to water shortages that will impact the entire town.

Extreme Cold/Winter Storms. Winter ice storms, a regional problem, are expected to be more intense and include more mixed precipitation, which is highly damaging to trees, power lines, and other infrastructure.

Severe Storms. Heavy wind events are a serious concern. The town and the surrounding area have experienced a recent uptick in storms with hurricane-level winds. While this phenomenon

can be linked to extreme temperatures and rising precipitation rates, workshop participants felt it was serious enough to be singled out as a hazard. Thus, the third hazard is focused primarily on the winds associated with these storms, leaving heavy rain events to be grouped under flooding.

Flooding/Extreme Precipitation. Extreme weather in recent years demonstrates how the various hazards impact the town. Over the years, there have been numerous minor flooding events, predominately along roads with poor drainage or where roads cross streams with undersized culverts. Specific town-owned buildings have also been prone to flooding, which adds financial risk to the town's already limited budget.

The workshop participants agreed that these hazards affect the town at different times of the year. Therefore, flexibility and year-round preparedness by town officials are needed to ensure citizens' safety across all the different hazard situations that climate change will exacerbate.

The hazards identified by New Braintree are based on data provided by the Massachusetts Climate Clearinghouse and watershed-specific data from the Northeast Climate Adaptation Science Center at the University of Massachusetts at Amherst. For the Chicopee River Basin, where New Braintree is located, projections show an expected increase in precipitation overall, with the most significant increase during winter. The number of days with more than 2" of rainfall, potentially leading to inland flooding, is also expected to increase. Consecutive dry days and days above 90 degrees Fahrenheit are expected to increase, leading to drought. Days at the wintery-mix level of cold are also expected to increase, leading to a greater likelihood of freezing rain in the winter. Higher wind in the summer and storm severity increases with warmer temperatures.

Current Concerns and Challenges Presented by Hazards and Climate Change

CMRPC, the MVP planning provider, had recently worked with the Town of New Braintree on their Hazard Mitigation Plan (HMP), which was adopted by the Town's Board of Selectmen and approved by FEMA in April 2019. The recent HMP process and pre-workshop MVP Core Team meetings helped identify past climate-related events that significantly impacted New Braintree. Disaster events of concern included: Frequent high-impact winter storms (as in 2013 and 2018); Ice storms (2008); Tropical storms (Irene, Sandy); Frequent minor flooding at isolated locations due to drainage problems; and Extended periods of drought (2016, 2020).

Future challenges linked to climate change, which were highlighted in the presentations and breakout groups, included:

- An increase in hot and warm days and a decrease in cold days could result in a greater need for cooling and less need for heating. New Braintree residents will need to adapt to these temperature changes and potentially invest in new equipment like air conditioning systems to cope with extreme heat. Increased need for heating and cooling could lead to greater energy usage and therefore higher carbon emissions.

- Increased temperatures may also impact the water cycle, leading to more intense rain events. Higher precipitation rates could lead to more frequent and severe flooding in areas outside of designated flood zones, defined using historical data.

- Intense storms with high winds and precipitation are already a problem for New Braintree. More frequent or more severe storms could cause tree damage leading to power outages and road closures, high peak river flows and potential flooding, and erosion of riverbanks.

- More frequent and severe droughts will challenge water supplies and increase risks from wildfire. This is especially concerning as New Braintree does not have a public water supply system.

- Ecological changes resulting from environmental shifts like rising temperatures can challenge native species and cause non-native or invasive plant and animal species to thrive. Increasing numbers of disease-carrying pests (e.g., ticks and mosquitoes) may result from these broader environmental changes, challenging public health. Other pests may damage native tree species and compound the impact of hazards like intense storms.

VULNERABLE AREAS

The locations in New Braintree identified by workshop participants during the discussion as vulnerable to the hazards discussed include:

VULNERABLE AREAS

- Roadways
- Farmland
- Wheelwright Pond Dam
- Bridges
- State Police Academy

Roadways town-wide are susceptible to stormwater flooding due to undersized or poorly designed culverts. CRB workshop participants specifically mentioned culverts at Utley Road, McKay Road, Ravine Road, and Wine Road as needing imminent replacement. Of these locations, Wine Road may be most vulnerable to severe flooding and infrastructure collapse. The culverts at Wine Road and McKay Road were poorly repaired from damage in the 1950s. The Winimusset Brook culvert underneath Wine Road was "patched together" using well tiles and has collapsed within living memory. This culvert is also just downstream of a small dam with uncertain ownership. Another vulnerable location is the junction of West Road and Unitas Road, where the town removed the culvert but never replaced it. And the culvert underneath McEvoy Road is also a concern because, although it was recently replaced, the road surface is subsiding unevenly. Water on the roadways at any of these locations is a problem because it can degrade the road surface and create unsafe driving conditions.

Farmland across town is vulnerable to drought and heat. Agriculture is an important land use and economic driver for New Braintree, so drought or a hot summer could have widespread impacts. Farms may struggle to grow crops or feed and water livestock as the weather grows warmer and rainfall more unpredictable.

Workshop participants mentioned the **Wheelwright Pond Dam** on the border with Hardwick as potentially vulnerable to overflow or failure. This dam was identified as a significant hazard in the town's 2019 Hazard Mitigation Plan. In 2018, the EEA's Division of Ecological Restoration funded a study to explore options for removing the dam and restoring a section of the river. Workshop participants also identified the Barre Lower Falls dam as a future concern. This dam on the Ware River is located upstream of New Braintree in Barre. While the structure is relatively new and unlikely to fail in the foreseeable future, the Army Corps of Engineers has projected that a dam failure here would flood the Hardwick Road bridge between Hardwick and New Braintree for several hours.

Bridges around New Braintree were identified as potentially vulnerable because of their age and the possibility of higher water flow in the future due to climate change. The Ware River bridge on Unitas Road and the bridge crossing Meadow Brook on West Brookfield Road were highlighted as particularly vulnerable. However, any bridge on the Ware River was also identified as at-risk.

The State Police Academy covers 780 acres near the center of New Braintree. The state facility provides a few resiliency assets to the down, discussed in the strengths and assets section below. However, academy fields are vulnerable to precipitation-induced erosion and some residents are concerned about potential PFAS contamination from biosolids that have been used as field fertilizer. The academy is also the town's cell tower site, which was recently damaged by a severe storm that left New Braintree without cell coverage for days.

Specific Categories of Concerns and Challenges

Workshop attendees identified the following topics as concerns or challenges related to New Braintree's changing climate and natural hazards.

Infrastructure Concerns

Lack of funding for infrastructure limits New Braintree's ability to mitigate hazard risks. Workshop participants identified many culverts, dams or bridges that are currently causing problems for the town or could be vulnerable to increased precipitation. However, the small town has a correspondingly small capital budget and cannot fund infrastructure resiliency improvements without external grant funding.

INFRASTRUCTURE

- Lack of funding
- Stormwater drainage
- Water supply
- Water supply for fighting fire
- Town buildings
- Communication challenges
- Power outages
- No local hospital

While some roadways in New Braintree flood because of undersized culverts, others flood due to an **absence of stormwater drainage**. Lack of drainage is common along isolated country roads, where stormwater may pool in adjacent fields or drain off the side of the road directly into the surrounding environment. Unfiltered stormwater can be a form of non-point source pollution and negatively impact the local environment and water quality. Many roads in New Braintree are unpaved, so stormwater has an opportunity to erode the road surface and pick up sediment before draining into other water bodies. Road salting in the winter adds to the negative environmental impact of poor drainage along roadways. CRB workshop participants noted that the town's aging machinery makes it difficult for operators to control how much salt is used, so roads may be oversalted. As snow and ice along roadways melt, minerals from the salt leach into soil or drain into waterways. Workshop participants were concerned about the impact these minerals could have on nearby plant life and local groundwater.

New Braintree residents rely on private wells for their **water supply**, which may be vulnerable to contamination and drought. The town does not have a public water system, so maintaining water quantity and quality in many individual private wells is a vital resilience challenge for the town. Workshop participants observed that recent testing of some local wells had identified elevated sodium levels. Some participants were also concerned about the potential for PFAS contamination and want the town to ensure that water testing includes these chemicals. The

town's water supply may also be vulnerable to severe drought. Due to their significant water demand, local farmers will be especially challenged by future precipitation changes, higher average temperatures, and droughts induced by climate change. Farmers at the CRB workshop said that they might need to put in irrigation systems in the near term if rainfall becomes more irregular. Due to their high water use, farms may be unable to collect irrigation water on-site and will need to draw on the local aquifer's water supply. Ensuring a future water supply for farmers will be necessary for the town to preserve local agriculture in New Braintree.

Access to **water for fighting fires** was another climate-related challenge for New Braintree. Workshop participants identified many factors contributing to the town's wildfire risk, like declining tree health, rising temperatures, and poor forest management practices. However, residents were also concerned that there is an insufficient water supply to put out fires should any occur. In the absence of a town water system, New Braintree's volunteer firefighter department relies on individual fire ponds, which are accessed through dry hydrants. One workshop participant commented that dry hydrants, which are placed near roadsides to facilitate fire truck access, can be knocked out of place by highway department machinery and are expensive to replace. Another workshop table noted that fire ponds are often not maintained, and there are not enough of them across New Braintree. Furthermore, a severe drought could potentially diminish the water supply in fire ponds, limiting their utility. New Braintree has mutual aid agreements in place with neighboring communities that contribute to the town's wildfire resilience. Still, it is unclear whether this agreement enables access to drought-resilient water sources.

Several **town buildings** are vulnerable to climate-related hazards. The fire station and highway department need new facilities as their existing buildings are aging and are in low-lying areas that flood during rain. New Braintree has been granted land by the state to house a new facility, but the town needs to raise funds for construction costs. The town also needs to repair its salt shed's leaky roof to prevent salt loss and potential leaching of salt into groundwater and wetland areas. Lastly, the Town Hall and the New Braintree Grade School are flood-prone, despite these facilities being designated emergency shelters.

New Braintree faces several **communication challenges** that impact the town's ability to build resilience to natural hazards. First, high-speed internet access is unevenly distributed across town. Charter Communications is scheduled to bring broadband to the town sometime in the next year, but the new system's reliability is yet to be seen. While New Braintree has found ways to work around the lack of modern internet access, this is an additional hurdle that few other towns in Massachusetts face in planning or preparing for climate resiliency. Cell phones have provided an alternative way to access the internet, but cell access may also be unreliable in this hilly rural area. Also, the local cell phone tower was damaged in a recent storm, which resulted in a service outage that lasted several days. The town's emergency alert system is another imperfect communication system because 60% of the phone numbers initially registered in the system were not in service. New Braintree's Council on Aging is proactively contacting seniors to sign them up for the alert system, but other residents need to sign up independently. CRB workshop participants were also concerned with annual limitations on the

number of emergency alerts that can be sent through the system without the town facing additional charges. However, the Town's Emergency Management director said that this has not been a problem for the New Braintree to-date, as the Town usually has message budget left over (see Appendix C).

Like many towns in Massachusetts, New Braintree commonly experiences **power outages** during severe storms. Power lines in town are above ground and are vulnerable to falling trees and branches. National Grid and the New Braintree tree warden have been trying to mitigate this issue with proactive tree trimming. Unfortunately, National Grid only removes trimmed branches and trees in certain circumstances, creating a problem for property owners who sometimes must dispose of the wood themselves. Also, ecological changes like the local infestation of emerald ash borers, and climate changes like rising average temperatures and an increased chance of drought, negatively impact tree health and may make power outage prevention an even greater challenge for New Braintree in the future.

New Braintree has **no local hospital**. CRB workshop participants reported that the Mary Lane Emergency room in Ware closed in June 2021, so town residents must now drive around 20 miles to the closest hospitals in Palmer or Worcester. The town's lack of access to emergency medical care means that New Braintree must mitigate natural hazards as much as possible and can keep residents safe during and after future emergencies.

Societal Concerns

SOCIETAL

- Emergency preparedness
- Intragovernmental coordination
- Budget constraints
- Volunteer burnout
- Aging population

Some participants at the CRB workshop thought that **the town is unprepared for a major emergency**. However, other participants disagreed, noting that the town has many strengths and assets that have helped residents through past disasters. These community strengths will be discussed in the following section of the report. Among residents who were concerned about emergency preparedness, there were also differences of opinion. One workshop group thought that the town needed to establish a Community Emergency Response Team (CERT) to staff shelters. However, the town already has a CERT group, which covers both New Braintree and neighboring Hardwick. Another workshop group included a CERT member, who noted that the team has a big need for new volunteers, especially younger residents who are currently underrepresented on the team. There was also disagreement on whether the town needs to purchase more emergency supplies to support the shelter or if there is an additional cache in town storage. Additionally, workshop participants were concerned about the vulnerability of the town's elderly population to natural hazards. Residents over the age of 65 make up approximately 14% of the town's population. New Braintree does not have a formal emergency plan that addresses the senior population's specific needs, though the Council on Aging diligently maintains a list of residents

who may need evacuation support. Another especially vulnerable population in New Braintree may be migrant workers who provide seasonal farm labor. However, workshop participants did not consider this group to be more vulnerable to climate hazards than most residents and expected farmers to help these workers in potential hazard scenarios.

New Braintree workshop participants also identified the **lack of coordination within town governance** as another societal challenge. This issue centered around town boards not communicating or reconciling decisions with each other, which confuses residents and complicates planning efforts. The town may need to improve coordination between the various governing bodies to implement resilience-building projects or regulatory changes and avoid some parts of town governance making decisions that undermine progress made by other official town bodies. Workshop participants also thought that the town government should improve communication with the general population. They felt that emergency preparedness information, environmental regulations or practices, and encouragement to get involved in the community should be broadcast more extensively to residents.

The town's **budget constraints** also challenge New Braintree's ability to mitigate the impacts of future hazards. As a small rural town, New Braintree cannot fund many large projects or full-time staff salaries. Participants at the CRB workshop were unsure how the town could pay for the "action ideas" identified during the workshop, and some participants were opposed to town decisions that might raise the tax rate. They felt that taxes were already burdensome, especially for senior residents on fixed incomes. Given the expense of many hazard mitigation activities, New Braintree will rely on external grant funding to implement most projects to build local climate change resilience.

The town relies on local volunteers to run programs to reduce costs in the town budget, but workshop participants felt that the New Braintree needs to address the subsequent risk of **volunteer burnout**. Many of the town's most active volunteers participated in the CRB workshop. The general sentiment amongst these participants was that they were happy to help their community but wanted more residents to share their burden. They noted that the same group of people share board duties, volunteer for events, and join committees. Without more residents sharing the volunteer workload, individuals will burn out, and some town programs could cease to operate. The small pool of existing volunteers also limits the number of residents with knowledge of how various town activities work. However, one CRB workshop participant also commented that many residents might be unable to volunteer because they lack free time due to work or childcare obligations. Therefore, the pool of available volunteers could be limited to residents who can afford to donate their time and the volunteer burden may fall disproportionately on retirees.

Workshop participants thought that New Braintree's **aging population** is another challenge that could complicate the town's efforts to build community resilience to climate change and natural hazards. Workshop participants felt that young people raised in New Braintree often leave after they graduate high school and never move back to the town, which may be a shared problem affecting most towns in the rural Quabbin region. Specific reasons for the town's aging

population identified at the workshop included high local taxes, a lack of amenities for younger families (e.g., elementary school, town fair, internet access), and few remaining buildable lots. However, other participants at the workshop thought that New Braintree's small population and few children is historically typical for the town. This group felt that more young families would require more public services funded by tax increases. The discussion at the workshop of the town demographics exposed divergent views on the future of New Braintree. While some residents appreciate the town as it currently is, with few children or young adults, others would like to see a livelier community with more services and community events. While CRB workshop participants represented only a subset of the population, broad disagreement on a future vision for New Braintree could present the town with another hurdle to strategically planning for future resilience.

Environmental Concerns

New Braintree workshop participants were concerned about the **current and future health of the town's trees**. Much of the town was deforested during the 1800s to clear land for farming. However, the local dairy industry declined during the 20th century, and forests have regrown.[11] Town residents were concerned about the loss of big old trees for aesthetic and hazard mitigation reasons. As mentioned in the prior section on infrastructure concerns, power outages caused by downed trees are a major problem for the town. Residents also noted negative impacts of ecological changes like the emerald ash borer killing ash trees, and rising winter temperatures decreasing the sugar content of maple tree sap. One CRB workshop group also reported a lot of variation in forest management among local property owners. The lack of consistency is potentially problematic for the town, given the importance of forest management to mitigating risks of erosion and wildfire. Specific problems reported at the CRB workshop include clear-cutting and not informing abutters before cuttings take place.

ENVIRONMENTAL

- Tree health
- Invasive plants
- Issues on state property
- Loss of farmland
- Beavers

Like many communities in Massachusetts, New Braintree is challenged by the spread of **invasive plants**. Oriental bittersweet (*Celastrus orbiculatus*) has been observed in forested areas. Other invasive species, such as multiflora rose (*Rosa multiflora*) and burning bush (*Euonymus alatus*), have been spotted at forest edges, in bogs, and along roadways, where the habitat is disrupted, and plants have plentiful access to light. Residents were concerned that invasive species would outcompete native plants and alter the composition of local ecosystems. The spread of invasive species also has direct implications for local hazard resilience. Bittersweet, for example, can make trees more vulnerable to storm damage because affected trees are forced to support the additional weight of the climbing vines.[12] However, the desire to

[11] The Town of New Braintree Open Space Committee, 2020.
[12] Prince, 2018.

control invasive species must be balanced with the impacts of control efforts like herbicides, which could cause other forms of environmental damage.

The State Police and the Massachusetts Division of Fisheries and Wildlife own significant parcels of land in New Braintree. The town would like to improve coordination and communication with these state agencies about **environmental issues on state property**. Workshop participants explained that the town had previously enjoyed a positive relationship with the State Police, but in recent years local commanders have been less willing to cooperate with the town. Specific problems at the academy include light pollution, erosion, and the use of pelletized human waste on state fields. While the use of pelletized human waste is generally considered safe and is regulated by the Massachusetts Department of Environmental Protection (MassDEP),[13] MassDEP is actively working to establish safe standards for PFAS in biosolids.[14] Workshop participants were very concerned about the potential for contamination of local water sources and agricultural products and referenced the case a farmer in Maine whose dairy operations were suspended when high PFAS levels were found on his land after he applied biosolids.[15] Workshop participants reported that the neighboring town of Barre had recently banned biosolids on town land, and requested more guidance from MassDEP about the safety of biosolids and PFAS contamination in food systems. The perceived poor upkeep of the Wildlife Management Areas in town was also noted during the workshop.

The gradual **loss of farmland** was another concern for New Braintree. Town residents cherish the town's agricultural heritage and want to ensure farming will continue in the area in the future. Conversion of arable land to photovoltaic solar sites was one potential threat to farming in the town because of the permanent change in land use. Another fear was the loss of agricultural land to development, though the 3-acre minimum parcel requirement and lack of buildable lots will likely limit new growth. Workshop participants were also concerned about the negative impacts of climate change on farmers, like higher temperatures and drought, as well as a general lack of planning for the next generation of local farmers who will take over when the town's current farmers retire.

New Braintree is home to a robust **beaver population**, and workshop participants reported that the population is growing because few people are trapping beavers in town. While beaver dams may contribute an additional flood risk factor in low-lying areas of town, most workshop participants did not consider the animals to be a problem for New Braintree. Residents have a long familiarity with the species and are comfortable with various beaver management techniques.

[13] Massachusetts Department of Environmental Protection, n.d.
[14] Massachusetts Department of Environmental Protection, n.d.
[15] Schipani, 2021.

Current Strengths and Assets

New Braintree has taken some steps to address natural hazards and climate change over recent years. Workshop attendees identified the following topics as strengths or assets that will aid in New Braintree's climate resilience.

Infrastructure Strengths

Using the **town hall as the local shelter** has worked well for New Braintree in the past. It was last used as a shelter during the ice storm of 2008. The hall has adequate space in the large main room, a good generator, and a commercial kitchen. The only shelter facility that is lacking in the town hall is showers. However, the regional shelter at the Quabbin High School in neighboring Barre has showers if longer-term sheltering is needed.

INFRASTRUCTURE

- Town hall shelter
- Grid infrastructure
- Regional cooperation
- Police academy

National Grid has recently upgraded New Braintree's **grid infrastructure**. The National Grid representative who attended the New Braintree CRB workshop noted that the town is connected to modern substations located in neighboring Barre. National Grid has also been cooperating with the town on tree trimming programs. However, power outages are still very common during storms despite the utility's mitigation efforts to-date.

New Braintree and its neighbors have a history of **regional cooperation**. Despite the town's small population and remote location, New Braintree is not an isolated community. New Braintree students attend the regional school district, and New Braintree shares some town staff and services with neighboring towns. For example, New Braintree and Hardwick share a Police Department, an Emergency Management Department, as well as a CodeRED system. The Town also has mutual aid agreements for Fire Service with Hardwick and other surrounding town, organized in tiers to respond to expanding trouble. In addition, the Rutland Regional Emergency Communications Center serves the town and functions as a backup emergency communication strategy for the town. One workshop participant also noted that the Quabbin Region also used to have a shared economic development coordinator on the school district staff. New Braintree's successful experiences sharing services with its neighbors could facilitate future regional climate resilience initiatives.

The **State Police Academy** site has some resources that they can make available to New Braintree in emergency situations. The academy has two 450,000-gallon water tanks that the Town can use for fighting brush or wildfires. They also have showers that evacuees housed at the Town Hall have used in the aftermath of previous storms. New Braintree workshop participants thought that the Town could rely on the State Police for help should a major disaster occur. The Town is also served by the Dispatch Center at the State Police Academy, and the Academy supplies water to the local Grade School.

Societal Strengths

New Braintree CRB workshop participants appreciated the town's culture of community resilience and **neighborly aid**. They spoke of past storms when residents worked together to help clear trees, provide generators and fuel, and check in on the elderly. They also noted that the community has certain assets that could be useful during an emergency already on hand. For example, farmers own, and can operate, large machinery like tractors that could be used to clear storm debris. Also, the fire department has a few extra emergency generators that are loaned to residents during outages. The town also has a tight-knit community with many interconnected individual networks. Although this network is informal, it has proved to be an effective tool for community resilience in New Braintree.

SOCIETAL

- Neighborly aid
- Local farms
- Council on Aging
- Schools and town youth

As previously mentioned in this report**, local farms** are an important facet of New Braintree's identity. While farms can be vulnerable to impacts from climate change, CRB workshop participants also recognized their contributions to local resilience. Farms provide the town with a local food source, which could help the town if hazards impacted the wider food supply chain outside of New Braintree. As referenced in the paragraph above, farmers also have access to heavy equipment and know how to operate it. This practical skillset has helped New Braintree recover from past storm damage, and workshop participants expected to rely on farmers for this type of help in the future.

The New Braintree **Council on Aging** is an important component of Town governance that actively works to reduce the vulnerability of senior residents to natural hazards. The Council is very active in the community and has helped lead local outreach on Covid-19. Council leadership maintains a roster of local seniors, their contact information, and any exceptional health concerns, which helps public safety officials know who to check on after major storms. In 2021, they also conducted a door-to-door outreach campaign to sign-up senior residents for the CodeRed emergency communication service.

The **town youth and schools** in the Quabbin Regional School District are another asset for local climate resilience. In a direct sense, staff at the New Braintree Grade School are available to help the town during emergencies. New Braintree can also rely on older students at the High School for volunteer labor for any collective resilience building projects. Lastly, children in New Braintree are critical to maintaining the community of New Braintree. As previously mentioned, the Town's aging population was a major societal concern at the MVP workshop and participants lamented the fact that most children raised in New Braintree eventually leave the community. Given the town's small size and aging population, each child is a precious community asset.

Environmental Strengths

The majority of land in New Braintree is privately owned and most of it is forested. CRB workshop participants noted that most landowners do a good job maintaining private forest land and wildlife habitat. Responsible **forest maintenance** and fuel clearance helps the Town reduce its wildfire risk.

ENVIRONMENTAL

- Forest maintenance
- Water resources

CRB workshop participants also commented on the town's **water resources**. While drought is a concerning future risk for New Braintree, workshop participants commented on the Town's healthy aquifer and groundwater. They reported a plentiful water supply that is free of major contaminants. Residents also noted proximity to the Quabbin Reservoir as a potential local strength, especially if groundwater sources become less reliable in the future.

Recommendations to Improve Resilience

On Day 2 of the workshop, attendees took the next step in completing the CRB Matrix by suggesting actions that would address vulnerabilities, or further bolster strengths they identified. The following actions are summarized from the matrix, which can be found at the end of this document.

Infrastructure Actions

Preserving New Braintree's water supply will prepare the Town for future droughts, which could become more severe or frequent in the future due to climate change. CRB workshop participants recommended that the Town start by collecting data to predict the likely impact of drought on private wells in Town and could start with surveying residents about well depths. This data could then be incorporated into a long-term plan for residential and agricultural that would also be informed by future climate projections. The Town can also research educational materials and funding sources for private well maintenance that can be shared with residents. Importantly, New Braintree should involve local farmers in conversations about local water resilience given their high water needs and the importance of water to their operations. Local farmers, with the backing of Town leadership, could reach out to the Farm Service Agency to request technical assistance resources to help farmers navigate climate change impacts, including drought. Workshop participants also suggested that farmers could work together to identify cost-effective options for preserving on-site water supplies and coordinate a mutual aid system. Finally, New Braintree should also explore the relationship between environmental management and healthy groundwater sources. The Town could work with environmental groups like the East Quabbin Land Trust to educate residents about the importance of wetlands, beavers, and land conservation for maintaining a healthy groundwater supply.

INFRASTRUCTURE

- Preserve water supply
- Protect water supply
- Stormwater drainage improvements
- Culverts, dams, and bridges
- Communication resiliency
- Strengthen wildfire response

Protecting New Braintree's water supply will involve actions that limit or mitigate contaminants. CRB workshop participants reported that private wells are susceptible to excess sodium, and other participants expressed concern over potential PFAS contamination. An immediate action that New Braintree can take to prevent salt contamination is repairing or replacing the Town's salt shed. This fix would prevent future salt loss, which wastes Town resources and could be leaching into local groundwater. Also, proactive and periodic private well water testing could help the Town's Board of Health identify new problems, such as PFAS contamination, before they become widespread problems. Finally, CRB workshop participants thought that the Town should develop an official policy or system to improve road drainage and prevent run-off, which would help prevent groundwater contamination.

CRB workshop participants also suggested a few other **stormwater drainage improvement** ideas. One idea was to invest in better equipment for Highway Department vehicles to give operators more control over the amount of salt applied on local roads. Another suggestion was to pave more of the roads in Town, which would help prevent sedimentation of waterways due to road run-off. CRB workshop participants also thought that the Town could increase the use of nature-based stormwater drainage techniques, such as bioswales or rain gardens, on Town roads. The Highway Department could invite local landowners to host and maintain this type of green infrastructure on private property. Meanwhile, Town leadership could educate citizens on the linkages between stormwater drainage and well water contamination to encourage property owners to support this community drainage improvement program.

To address the risk of flooding, CRB workshop participants identified some options for New Braintree to **improve the resilience of culverts, dams, and bridges**. However, infrastructure construction and maintenance can be prohibitively expensive, especially for a small community. New Braintree should aggressively pursue grant opportunities that could address flood mitigation. New Braintree should also consider conducting a town-wide culvert and transportation infrastructure assessment, to assess infrastructure vulnerability, identify priority projects, and select projects that could be eligible for potential grant funding. CRB workshop participants identified the Wine Road "dam" as an immediate risk to the Town and thought that the Town should engage the state as soon as possible to determine the dam's ownership and safety status.[16] New Braintree should also consider working with Hardwick to apply jointly for funding to repair and maintain the shared bridge over the Ware River.[17]

CRB workshop participants indicated that **improving local communication infrastructure** was one of the most important ways that the Town could increase resilience to climate change impacts. CRB participants thought that the Town could proactively reach out to Verizon to ensure measures are in place to prevent future storm damage to the cell phone tower. New Braintree should also proactively contact Charter to ask them to ensure that all residents will be able to afford high-speed internet access when it finally arrives. To improve emergency communications, the Town could ask the Quabbin School District whether their emergency alert system could be used by the Town to contact residents, though local parents may be the only people signed up for these alerts. Lastly, the Town could purchase a portable roadside sign to help communicate important messages to residents.

During the CRB workshop, wildfires were identified as a major risk to the town resulting from potential climate change impacts to precipitation, average temperatures, and local forest health. Reflecting the risk of future wildfires, and the impacts that they could have on a heavily forested community like New Braintree, workshop participants considered ideas to **strengthen wildfire response**. To preserve Town resources and ensure access to water, the Fire Department and Highway Department should coordinate better to prevent dry hydrants from

[16] A member of the Board of Selectmen commented at the Listening Session that the “dam” is owned by the State Police who have been unwilling to address the Town’s safety concerns. See Appendix C.
[17] A Hardwick-led project to repair the bridge may already be underway. See Appendix C.

being knocked over. A CRB workshop participant also suggested that installation costs for dry hydrants should come out of the Highway Department's budget to incentivize hydrant protection. The Fire Department should also work with private landowners to identify or create new fire ponds. The department should identify areas without sufficient water access and use that data to encourage landowners to construct new water sources. Workshop participants also thought that the Fire Department should check if a dry hydrant or fire pond could be installed near the Town Hall and Grade School or confirm that these Town buildings are protected by existing water sources. New Braintree could also formalize management of fire ponds to help property owners ensure that ponds are maintained appropriately for use by the Fire Department. Additionally, the Fire Department should consider identifying drought-resilient water sources since periods of high wildfire risk could coincide with local water shortages. Finally, CRB participants thought that a new Fire and Highway Department facility in a location that is not vulnerable to periodic flooding would strengthen the Town's overall resilience by protecting its equipment investments.

Societal Actions

A major societal concern for New Braintree was a lack of citizen volunteers, which hinders town governance and strains the minority of residents who are already involved in community boards and projects. CRB workshop participants identified several ideas to help the town **recruit and retain volunteers** including:

- Reiterating the importance of citizen volunteers to maintaining the community and providing local services with a small-Town budget.
- Encouraging residents to be kind to volunteers who staff committees and boards, even if they disagree with the board or committee's actions.
- Finding new ways to advertise for open town positions such as a mailer with the tax bill.
- Identifying ways to lower potential "barriers to entry". This could mean actions like extra outreach to new residents encouraging them to get involved in the community or providing small stipends for residents who would otherwise lack the financial freedom to volunteer their time.
- Exploring funding sources for emergency medical technician training at the regional high school.
- Engaging town youth in volunteer efforts as much as possible.

SOCIETAL

- Recruit and retain volunteers
- Hire a grant-writer
- Emergency planning
- Inventory of mutual aid assets
- Newcomer outreach
- Town planning
- Rebuild relationship with police academy

Workshop participants also identified a need for a **town grant-writer** to help New Braintree's staff, boards and committees apply for outside funding sources. New Braintree's municipal budget is unlikely to cover many of the priority action ideas identified in this report, but a grant-writer could help secure outside funding to fill these gaps. This position could be shared with neighboring communities and could also facilitate other resource sharing between towns.

CRB workshop participants would like to see the town complete several short-term tasks to **improve local emergency planning and preparedness**. First, CERT should complete their inventory of emergency supplies and pursue funding to purchase replacements for supplies that the Town is lacking and has the capacity to store. Second, New Braintree should ensure that all households are signed up for CodeRed (Reverse 911) and consider a door-to-door engagement approach to meet this target. Third, the Town should formalize the Council on Aging's "storm list" and build it into a more comprehensive evacuation plan. Finally, New Braintree should consider conducting a disaster preparedness education campaign to ensure that residents know what to do and where to go if a high-impact natural hazard occurs.

One of New Braintree's most important assets is its tight-knit community of neighbors that help one another when storms or other hazards occur. CRB workshop volunteers thought this informal network could be tied to the Town's formal hazard mitigation planning and efforts to build climate resilience. In addition to neighbors naturally assisting each other after storms, New Braintree could **create an inventory of resident-owned assets that owners are willing to put to community use before, during, or after a hazard occurs**. For example, the Town could identify surface water sources that could be used as water sources for firefighting or heavy equipment that could be used to help clear roads of downed trees. CRB participants reported that their neighbors freely donate their time and resources to help the community recover from storms. Still, formal documentation of community resources could help the Town accurately identify true gaps in emergency preparedness, response, and recovery.

New Braintree has many long-time residents, but new residents also join the community each year. CRB workshop participants thought that the Town should identify ideas for intentional **newcomer outreach** to help new residents integrate into the community. One idea identified at the workshop was a section of the Town's website that could consolidate important information that a new resident might need, such as volunteer opportunities, emergency preparedness information, environmental regulations, and the link to sign-up for Reverse 911. This particular section of the website might help new residents feel welcome in the community and teach them about important aspects of town life that they would otherwise have to figure out on their own.

Various **town planning** initiatives could help address some of the fears about Town change identified during the CRB workshop. Planning activities could include developing a shared community vision that identifies what residents want New Braintree to be in the future. CRB workshop residents also wanted to see the Town identify ways to keep active local farms in New Braintree, which could require targeted research, planning, and analysis focused on agriculture resilience. New Braintree could also consider developing a list of agricultural parcels and Chapter 61 parcels to prioritize for potential acquisition or permanent conservation and identify funding sources for purchasing important open spaces.

CRB workshop participants want New Braintree to **re-build a working relationship with the State Police Academy**. This effort might include redefining the academy's covenant with the Town, drafting a memorandum of understanding with the State Police, discussing mutual expectations, and proactively building relationships with new commanders. The Town should also reach out to the academy to discuss environmental issues like light pollution, erosion, and biosolids.[18]

[18] Additionally, the Town should discuss the safety of the Wind Road "dam", which was identified as under State Police ownership at the listening session. See Appendix C.

Environmental Actions

CRB workshop participants proposed that the Town develop a **climate-resilient community forest management plan** to protect tree health and animal habitat, mitigate fire risk, and limit the spread of invasive species. This plan would consider forest health across property boundaries and consider the potential impact of hazards like drought, ecological changes, and severe storms. The plan could also include an educational component to help private landowners understand the likely impact of climate change on their land and their responsibility to mitigate the resulting environmental damage. Workshop participants noted that this plan could be grant-funded. The Town should also consider encouraging private landowners to complete and update Forest Stewardship Plans. Lastly, CRB participants wanted New Braintree to invest more resources in proactive maintenance and replanting of street trees.

ENVIRONMENTAL

- Forest management plan
- Education on invasive species
- Tick and mosquito prevention
- Alternatives to beaver traps
- Prevent negative environmental impacts from solar development

CRB workshop participants recommended that New Braintree conduct **education and outreach about invasive species**, either as a component of the forest management plan or as a separate initiative. This education program would address the difficulty many people experience in identifying invasive plants or insects and could help residents spot and remove invasive species before they become too established. Workshop participants suggested posting fliers in frequently trafficked locations like the post office and Town Hall to help people identify common invasive species. These images could be accompanied by ways to remove invasives, where to report invasive insect sightings, and resources to check for more information.

The Town should also consider additional forms of **tick and mosquito prevention**. For example, a West Brookfield resident named Michelle Miller could be a resource for education and outreach around tick and Lyme disease prevention. New Braintree could also regularly remind residents of ways to reduce artificial mosquito habitats like stagnant pools of water in old tires or buckets. Lastly, New Braintree could reach out to local environmental organizations to learn how to support the local bat population. Bats are eager mosquito eaters, and initiatives like bat house construction could encourage the local bat population and indirectly keep insect populations in check.

Beavers have led to nuisance flooding in New Braintree, where beaver habitat overlaps with human-built structures like roadways. However, the beaver is a native New England species, and their dams provide important ecosystem services like wetland creation, natural freshwater filtration, and aquifer recharge.[19] New Braintree residents have historically relied on lethal traps

[19] Wasser, 2019.

to manage the local beaver population. Unfortunately, trapping kills the animals, eliminates the environmental benefits that beavers create, and may only be a temporary solution to flooding if new beavers decide to move in. CRB workshop participants would like the town to explore humane **alternatives to beaver traps** like beaver deceivers, which mitigate dam-induced flooding but do not harm the animals. New Braintree should also consider educating residents on the environmental benefits of keeping beavers in local ecosystems, even if they sometimes inconvenience the town's human population.

Though developing green energy sources is critical for mitigating climate change, New Braintree workshop participants were worried about **solar developments' immediate local environmental impacts**. New Braintree currently requires all non-residential solar installations to be approved by special permit. CRB workshop participants wanted the Town to consider updating its bylaws to minimize environmental impacts further and consider partnering with nearby communities with similar concerns about solar development. Workshop participants were also concerned about the conversion of farmland to solar installations. They wanted the Town to develop an outreach or education program to inform landowners of potential impacts from (and profitable alternatives to) conversion of farmland to solar.

Top Recommendations

Following the two-day workshop, CMRPC placed these actions in an online survey so that participants could prioritize their top recommendations. Some priority actions were grouped with similar ideas to streamline the survey process. A total of eight workshop participants answered survey questions on:

1) What hazards they were most concerned with;
2) Whether an action was high, medium, or low priority;
3) Whether an action was a short, long, or ongoing project; and
4) Which actions they would like to see New Braintree complete.

TOP RECOMMENDATIONS

- Ensure internet access for all
- Education and outreach campaigns for emergency preparedness and community engagement
- Disaster and evacuation planning
- Develop a town-wide forestry management program

Readers can find a copy of the survey questions and the survey results in the Appendix at the end of this document.

Respondents were relatively evenly divided on the hazard of most concern for New Braintree. In a weighted ranked choice system, participants ranked severe storms (wind) and extreme cold/winter storms as the town's top hazards, followed by flooding/extreme precipitation and extreme heat/drought. Participants elected that the following actions are the top four priority actions for New Braintree:

1. Establish a program to reduce the costs of internet access in order to make it more accessible for all income levels. Work with the internet company to establish this, and distribute information to residents on internet access, costs, and any other internet FAQs.

2. Establish a series of education and outreach campaigns that address the following issues: CodeRED/Reverse 911; volunteer opportunities and community involvement; emergency and disaster preparedness; youth engagement; and engagement with vulnerable or fringe populations.

3. Improve the Town's disaster preparedness by creating a comprehensive disaster and evacuation plan that addresses vulnerable persons in Town. Utilize the Council on Aging to assist in disaster and sheltering plans. Create an inventory of disaster and emergency supplies available to the Town. Establish alternative shelter plans.

4. Develop a Forestry Management plan to address issues of drought, invasive species, and wildfire in forests throughout Town.

At the end of the two-day workshop, Dani Marini thanked attendees for giving their time and attention, and commended the town for their willingness and flexibility to utilize an in-person and virtual platform giving the current public health conditions. The top recommendations on the following page were compiled based on those actions reported out voted on by participants. Actions are organized by priority and project type. The key below describes the Category and Hazard types found in the top priority action table.

Category	Key
Infrastructural	
Societal	
Environmental	

Hazard	Key
Severe Storms/Flooding	
Winter Storms	
Wind	
Drought	
Wildfires	

PROJECT TYPE	CATEGORY	ISSUE	RECOMMENDED ACTIONS	HAZARDS
HIGH PRIORITY ACTIONS				
Disaster Preparedness		Education	Establish a series of education and outreach campaigns that address the following issues: CodeRED/Reverse 911; volunteer opportunities and community involvement; emergency and disaster preparedness; youth engagement; and engagement with vulnerable or fringe populations.	
		Storms	Improve the Town's disaster preparedness by creating a comprehensive disaster and evacuation plan that addresses vulnerable persons in Town. Utilize the Council on Aging to assist in disaster and sheltering plans. Create an inventory of disaster and emergency supplies available to the Town. Establish alternative shelter plans.	
Resource Protection		Forest Management	Develop a Forestry Management plan to address issues of drought, invasive species, and wildfire in forests throughout Town.	
Access and Outreach		Internet	Establish a program to reduce the costs of internet access in order to make it more accessible for all income levels. Work with the internet company to establish this, and distribute information to residents on internet access, costs, and any other internet FAQs.	
MEDIUM PRIORITY ACTIONS				
Infrastructure Improvement		Growth	Establish a plan for the long-term growth of the community and assess future infrastructure needs.	
		Bridges	Perform a Town-wide bridge assessment, and research funding opportunities to replace or repair bridges in Town.	
Resource Protection		Street Trees	Establish a Tree Removal and Replacement program to address the health of street trees. The program should utilize understory trees that are drought and pest resistant.	
		Runoff	Inform landowners about the impacts of converting farms to solar sites in an educational campaign.	
			Replace or repair salt shed on West Brookfield Rd.	
		Beavers	Identify alternative beaver removal methods including beaver deceivers. Develop a list of professionals who can work with landowners to remove beavers within the scope of existing regulations. And establish an education campaign on living with beavers.	
		Farmland	Develop a prioiritized list of agricultural and Chapter 61 lands for acquisition or conservation. Identify grant opportunities or pursue other resources to implement this strategy.	
Water Management		Stormwater	Perform a Town-wide culvert assessment.	
		Water Access	Perform a water supply feasibility study to identify potential alternatives to water access.	
			Improve the Town's access to water by constructing new fireponds or dry hydrants around Town. Establish a firepond maintenance strategy to ensure that the fireponds remain functioning. Engage volunteers and partnerships to help with maintenance of the fireponds/dry hydrants.	
		Drought	Perform Town-wide well water testing to identify pollution or drought vulnerabilities.	
			Establish a public outreach and education campaign regarding well water, addressing depth and drought issues.	
Disaster Preparedness		Training	Establish a CERT Team with 6-10 individuals to assist in staffing the shelter and educate the public on disaster preparedness.	
		CodeRED	Continue the door-to-door campaign to sign residents up for CodeRED/Reverse 911.	
Access and Outreach		Partners	Re-establish relationship with the State Police Academy and engage their partnership on a variety of resiliency issues.	
		Funding	Research different grant opportunities and apply for funding.	
		Communication	Install an electric sign or portable message boards around Town to expand communication.	
			Improve the Town's website to make information more accessible. Add a section to the website dedicated to new residents.	
LOW PRIORITY ACTIONS				
Infrastructure Improvement		Stormwater	Develop a policy or system to address and maintain stormwater drainage around Town.	
		Streets	Identify why the existing grant to repave Revene Road has not been used yet. Make any necessary adjustments in order to utilize that grant for the repaving.	
Disaster Preparedness		Training	Work with the schools to establich Home Economics and EMT Training courses in the curriculum.	
Access and Outreach		Communication	Establish a relationship with Verizon ensure proper maintenance of the celltower.	
		New Residents	Create and distribute a New Resident education brochure highlighting important information about the Town.	
		Shared Resources	Create an inventory of shareable assets, resources, and services of residents. Coordinate mutual aid for farmers around Town.	
Resource Protection		Invasive Species	Utilize regional and State invasive species removal programs. Develop an outreach campaign to educate residents on identifying invasive species and proper techniques to remove them. Print photos of invasive species and place them around Town to display what they look like.	
		Green Infrastructure	Develop an outreach campaign to educate residents on bioswales, rain gardens, and storm drainage. Distribute resources that highlight plant species native to this region.	
		Insect-Borne Disease	Develop an outreach campaign to educate residents on tick and mosquito awareness. Install bat boxes around Town to control mosquito populations.	

Public Comments

During the May 24, 2021 Public Listening Session, and during the June 16th – June 23rd Public Comment Period, the below comments were received:

- One attendee agreed that communication is a challenge and asked if there was a way to utilize the Reverse 911 system more. Eric Vollheim responded that the Reverse 911 system is called CodeRED, and the Town is working on collecting contact information from residents who are not signed up. He said that they always have extra minutes that they have not spent, however, the Town is only supposed to broadcast emergency notifications over CodeRED.
- Another attendee stated that there are too many trees coming down and no replanting of those trees. She said that trees help keep us cooler and provide habitat for wildlife. She would like to see the Town implement a tree planting program, encourage landowners to plant trees after they are removed, or possibly set up an agreement where the Town can plant trees on resident's land with permission.
- A member of the Board of Selectmen stated that the State Police own the Wine Road Dam. He said the Town has tried to work with the State Police to address this issue, but the State Police have been unwilling to do anything.
- That same Selectman said that the Town's relationship with the State Police has been worsening. It was not always bad, but it has gotten worse and worse with each change of leadership at the State Police Academy.
- It was also mentioned that there is a project in the works to repair the Ware River bridge. It was noted that Hardwick is leading that project. However, someone commented that the bridge will not be large enough for a fire truck to cross.

Next Steps

This planning process and list of prioritized recommendations is only the first step in building a more resilient community. The intent of the Summary of Finds Report is to identify the strengths and vulnerabilities of a Town, and to brainstorm potential actions that could help the Town build climate resilience. Once the State accepts the Summary of Findings report and deems the Town of Hopedale an MVP Designated Community, the Town should begin identifying projects that they would like to complete from the list of Recommended Actions. Based on Town interests and capabilities, should begin developing action plans to pursue these projects, and should utilize MVP Action Grants, Town resources, or other grant programs and funding opportunities to explore these ideas further.

CITATION

Town of New Braintree (2021) Community Resilience Building Workshop Summary of Findings. Central Massachusetts Regional Planning Commission. New Braintree, Massachusetts.

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APPENDIX

I. Agendas and Sign-In Sheets
II. Workshop Meeting Materials
    a. Invitation
    b. Maps
    c. Table Matrix
    d. Survey
    e. Hazard Mitigation Plan Excerpt
III. Workshop Presentation
IV. Listening Session

1 Mercantile Street – Suite 520
Worcester, MA 01608
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508.792.6818 F
www.cmrpc.org

New Braintree Municipal Vulnerability Preparedness (MVP)
Meeting #1

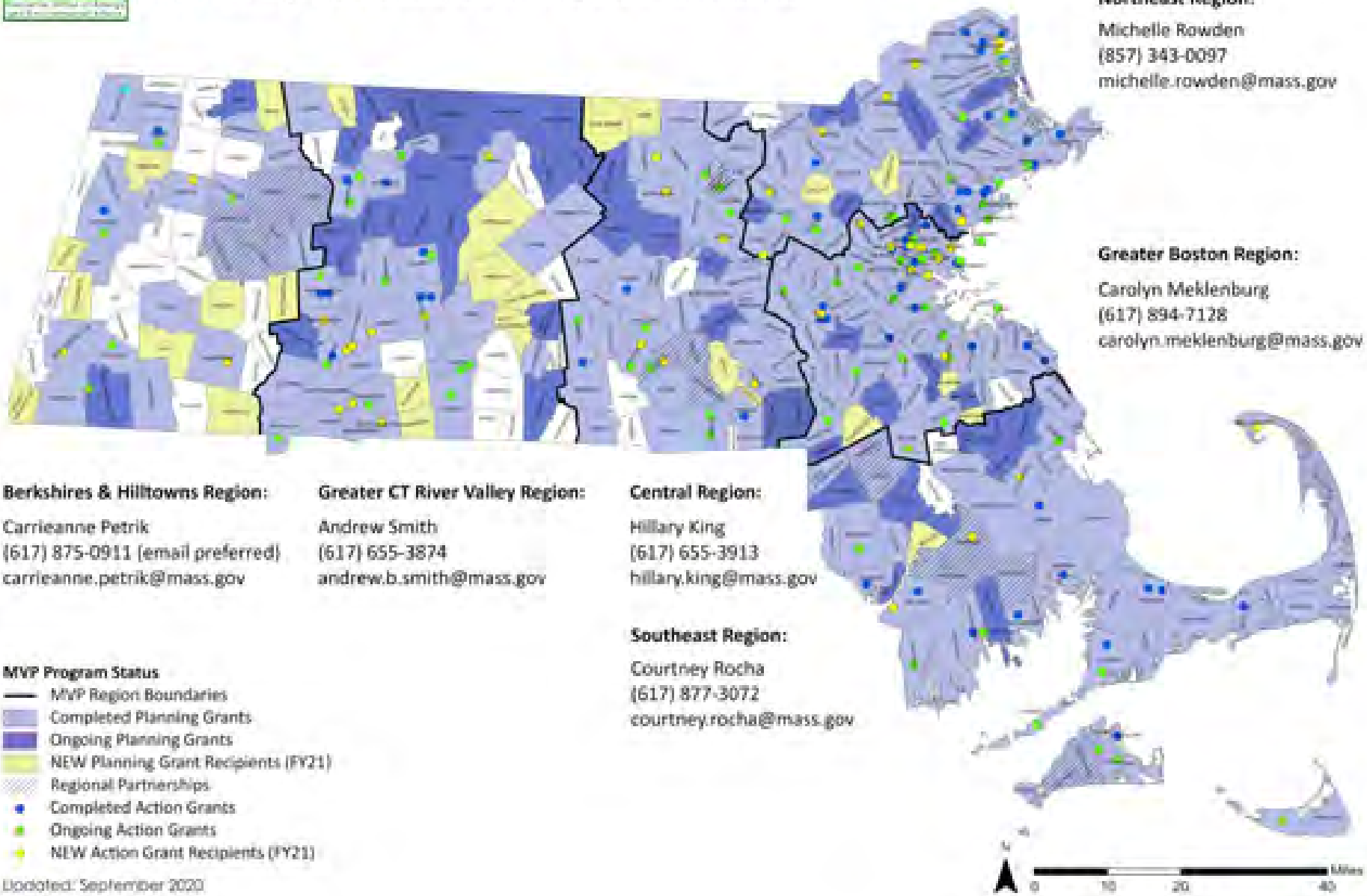
Date/Time: **Thursday, December 3, 2020 11AM**
Location: **ZOOM**
https://us02web.zoom.us/j/87531990664?pwd=eVBGaWFzNXhrN2FxMmk2NVBaMFJHQT09
Meeting ID: 875 3199 0664 **Passcode:** 597332 **Dial in** number 1-646-558-8656

AGENDA

- Introductions
- MVP Program Background
- Roles & Responsibilities
  - Town
    - Assemble Core Team (participates in prep meetings, workshop and listening session)
    - Identify stakeholders to invite to workshop and lead invitation/RSVP process
    - Lead outreach for public listening session
    - Provide feedback on summary of findings report
    - Grant reporting and documentation of in-kind match
  - CMRPC
    - Organize and lead Core Team meetings
    - Organize and lead workshop, including preparation of presentations and other materials (maps, handouts, etc.)
    - Organize and lead public listening session; assist with outreach
    - Prepare and submit summary of findings report
- Core Team Timeline
  - Core Team Meetings (three total)
  - Pre-Workshop meeting/Call
  - CRB Workshop
  - Listening Session (Must be held before May 31st)
- Workshop Agenda/Structure
  - Welcome speaker(s) (Town)
  - Content speakers (CMRPC)
  - Table facilitators (generally Town or other local stakeholders; CMRPC will assist)
  - Table reporters (Town or other local stakeholders)
  - Scribes (generally students/seniors)
  - Food (can be funded through grant)
- In-Kind Match/Other/next meeting

Municipal Vulnerability Preparedness (MVP) Program

Program Manager: Kara Runsten, (617) 312-1594, kara.runsten@mass.gov



Northeast Region:

Michelle Rowden
(857) 343-0097
michelle.rowden@mass.gov

Greater Boston Region:

Carolyn Meklenburg
(617) 894-7128
carolyn.meklenburg@mass.gov

Berkshires & Hilltowns Region:

Carrieanne Petrik
(617) 875-0911 (email preferred)
carrieanne.petrik@mass.gov

Greater CT River Valley Region:

Andrew Smith
(617) 655-3874
andrew.b.smith@mass.gov

Central Region:

Hillary King
(617) 655-3913
hillary.king@mass.gov

Southeast Region:

Courtney Rocha
(617) 877-3072
courtney.rocha@mass.gov

MVP Program Status

- MVP Region Boundaries
- Completed Planning Grants
- Ongoing Planning Grants
- NEW Planning Grant Recipients (FY21)
- Regional Partnerships
- Completed Action Grants
- Ongoing Action Grants
- NEW Action Grant Recipients (FY21)

Updated: September 2020

MUNICIPAL STAFF COMMITMENT

The municipality must provide sufficient staff time (estimated at 120-200 hours) to assure completion of this planning exercise and community engagement:

- Paperwork; selecting and contracting vendor
- Help establish a core team within the town or region to steer the project
- Help identify and complete outreach to critical stakeholders, partners and town officials for workshop(s) and public listening session(s)
- Help coordinate, schedule, send invitations and attend planning meetings and workshop(s) and listening session(s)
- Find sufficient volunteers to serve as scribes during the workshop(s)
- Help coordinate staff interviews with key experts to collect information prior to the workshop(s)
- Provide MVP provider access to relevant planning documents, budget information, and other information on as needed useful to conducting the planning exercise, including access to;
- With MVP Provider, complete and send 3 progress reports to EEA with information on progress and spending to date, and submit final deliverables and invoice
- With consultant support as budget allows, complete at least one public listening session to engage the broader public in a discussion of the workshop results and completed report
- Continue municipal outreach and engagement, using the completed report to inform existing planning and project activities

MVP PROVIDER COMMITMENT

The MVP state certified provider must provide sufficient time (estimated at 120-240 hours) to complete the following tasks:

- Meet with Municipal Project Manager to set out project scope, timeline, and compile list of data needs; help with stakeholder mapping; and, set schedule for workshop(s)
- Meet with Community Core team 2-3x to help plan for workshop(s) and collect information
- Conduct several interviews with key municipal staff
- Prepare materials for workshop including:
  - Basemaps of town with critical layers
  - Climate change data relevant to the town and summary of potential impacts
  - Relevant planning documents and other existing town information about current hazards
  - Risk matrix
- Serve as the lead facilitator during workshop(s) and bring 4-5 facilitators (or as many breakout groups planned) to assist as table facilitators.
- Designate town leads or skilled volunteers to be scribes at each table
- Document all workshop outcomes and prepare final risk matrix and summary reports
- Work with town to submit all materials to Commonwealth

Common Pitfalls to Avoid

- Be prepared to know what's already been done in the municipality
  - Read any Master Plans, Hazard Mitigation Plans, etc. to know the top hazards and be ready to address these.
- Provide reminders that the goal is to identify action items and to prioritize them to assist the community in taking first steps towards resilience
  - Encourage groups to move actions from conceptual to shovel-ready or implantation ready
- Make sure facilitators take time to fully explain any mapping resources provided at the workshop tables
  - E.g., Hurricane SLOSH maps, geospatial climate projections, nature-based solution, etc.
- Who shows up to the workshop hugely shapes the outcome
  - Assure a broad cross-section of the community stakeholders are represented at the workshops
  - Facilitators should ensure all voices are heard
- The CRB framework is facilitation heavy
  - Please ensure that the workshop is appropriately staffed with enough table facilitators and pre-appointed scribes for each table

MR/ MS	First Name	Last Name	Department	Street Address	RSVP Y/N	Attended
			Highway Dept.			
			Admin. Secretary			
			Adult Day care facility			
			Agricultural Committee			
			Animal Shelter			
			Army Corp. Engineering			
			Board of Health Member			
			Board of Selectmen Member			
			Boys and Girls Club			
			Building Inspector			
			CERT Teams			
			Chamber of Commerce			
			Conservation Commission			
			Council on Aging			
			Cultural Council			
			DCR			
			Department of Dam Safety			
			Diversity Group			
			Economic Development			
			Emergency Management Director			
			EOEEA- MVP Regional Coordinators			
			Fire Chief			
			Golf Course			
			Housing Authority			
			Lake/River Association			
			Land Trust Members			
			Library			
			Local business			
			Local Construction Co.			
			Local Engineering Firms			
			Local Farmers			
			Local Non-Profits			
			Local Realtors Associations			
			MA Fish & Wildlife			
			Mass Audubon			
			Mass Dot			
			MBTA/WRTA			
			Natural Gas Provider			
			Neighboring Town MVP Core Team Member			
			Neighboring Town MVP Core Team Member			
			Neighboring Town MVP Core Team Member			
			Neighboring Town MVP Core Team Member			
			Neighboring Town MVP Core Team Member			
			Other Muni. Employees			
			Planning Board Member			
			Police Chief			
			Power Company			
			Rail Road			
			Rail Trail			
			Recreation Committee			
			School Superintendent			
			Senior Center			
			Sewer Department			
			State Rep.			
			Storm Water Committee			
			Sudbury Valley Trusties			
			Sustainable Group			
			Town Manager			
			Utility Company			
			Veterans Rep.			
			Waste Transfer Provider			
			Water Dept.			
			Youth Commission			

Community Resilience Building Risk Matrix

www.CommunityResilienceBuilding.org

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

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

Features	Location	Ownership	V or S					Priority H - M - L	Time Short Long Ongoing
Infrastructural									
Societal									
Environmental									

FY21 Awarded MVP Action Grants

The following communities were awarded Action Grants:

Applicant	Project Title	Grant Award
Agawam	Agawam Stormwater Master Plan	$216,750
Arlington & Resilient Mystic Collaborative	Wicked Hot Mystic	$186,200
Athol & North Quabbin Community Coalition	Lord Pond Plaza Improvement Project	$117,760
Auburn	Leesville Pond Water Quality Protection and Community-Wide Resiliency Improvements	$209,895
Belchertown	Enhancing Water Supply Reliability: Resilient Water Storage and Water Conservation – Design & Implementation	$698,356
Blandford	Resilient Community-Driven Master Plan + Resilient Regulatory Work	$102,824
Bolton, Harvard, & Devens	Apple Country Ecological Climate Resiliency and Carbon Planning Assessment	$250,000
Boston	City of Boston Heat Resilience Planning Study	$280,070
Braintree	Monatiquot River Restoration – Construction	$750,000
Cambridge & Metro Mayors	Building Resilience to Climate Driven Heat in Metro Boston	$268,820
Chelsea	Urban Heat Island Mitigation Project	$262,996
East Longmeadow	Comprehensive Master Plan	$84,833
Easthampton	Green Infrastructure Planning and Resiliency Design for Cherry Street	$175,957
Fall River, Dighton, Somerset, & Swansea	Regional Emergency Water System Interconnectivity Analysis	$100,650
Fitchburg	John Fitch Highway – A Resilient Road Corridor	$271,787
Granby	Resilient Regulatory Work and Refocusing on Climate Resilience Pathway in Master Plan	$34,272
Great Barrington	Climate Action, Resilience, and Equity Great Barrington (CARE GB)	$70,400
Haverhill	Little River Dam Removal Feasibility Study	$129,693
Holyoke	Holyoke Urban Forest Equity Plan	$135,032
Lakeville, Middleborough, Freetown, Rochester, Taunton, & New Bedford	Assawompset Ponds Complex Watershed Management and Climate Action Plan	$93,236
Lawrence	Flood Study and DPW Yard Adaptation Plan	$213,418
Leominster	Monoosnoc Brook Bank Stabilization Project	$200,661
Lexington & Resilient Mystic Collaborative	Upper Mystic River Watershed Regional Stormwater Wetlands	$670,000
Littleton	Watershed Protection for Climate Resiliency- Brown's Woods Acquisition	$763,050
Lowell	Claypit Brook Climate Resilience Stormwater Management Capital Improvement Plan	$138,000
Lynn	Strawberry Brook Green Infrastructure Implementation	$199,090

Malden	Malden River Works	$150,015
Medford	Conceptualization and Community Building for Equitable, Community-Driven Resilience Hubs in Medford	$202,485
Milford	Green Stormwater Infrastructure in Milford Town Park	$419,123
Millbury	Armory Village Green Infrastructure Project - Phase II	$125,600
Natick & Charles River Watershed	Building Resilience Across the Charles River Watershed	$264,171
Newburyport	Resilient Critical Infrastructure: Adapting a Wastewater Treatment Facility, Underground Electric Lines, and Public Rail Trail to Future Sea Level Rise and Storm Surge	$1,000,000
Plympton	Building a Municipal Resilience Portfolio: Assessment of Critical Land in the Winnetuxet River Corridor	$41,929
Provincetown	Permit Level Design of the Ryder Street Outfall Relocation and Drainage Improvements	$70,465
Revere	Coastal Resilience Feasibility Study for the Point of Pines and Riverside Area	$210,689
Salisbury	Resilient Rings Island: Preventing a Neighborhood from Being Stranded by Flooding	$250,000
South Hadley	Climate Resilient South Hadley	$105,000
Springfield	People-Focused Resilient Redesign and Retrofits for Community/Civic Infrastructure and Critical Facilities	$210,422
Stow & Hudson	Assessing the Health of Lake Boon – A Key to Climate Resiliency in Stow & Hudson, MA – and Beyond	$154,000
Williamstown & Mohawk Trail Woodlands Partnership	Mohawk Trail Woodland Partnership Forest Stewardship, Resilience, and Climate Adaptation	$164,575
Windsor	River Road Site 1 Culvert	$460,000
Total (41)		**$10,452,224**

Meeting Name: MVP Meeting 1 **Community: New Braintree** **Location: ZOOM**

Date: December 3, 2020 **Meeting Time: 11AM**

Participant Name	Organization	Title	E-Mail
Eric Vollheim	CERT/Emergency Management		stonedance@comcast.net
Deb Morrison	Historical Commission/Open Space Committee		morrisonptg@hotmail.com
Cynthia Henshaw	East Quabbin Land Trust		chenshaw@eqlt.org

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New Braintree Municipal Vulnerability Preparedness (MVP)
Meeting #2

Date/Time: **Thursday, January 28, 2021 9:30 AM**
ZOOM: https://us02web.zoom.us/j/85902824450?pwd=OFBoSXJlMU5rUWFkNE5MUFNUQzJZQT09

Meeting ID: 859 0282 4450 **Passcode:** 134590 **Dial in** number 1-646-558-8656

AGENDA

- **Introductions**
- **Core Team Timeline**
  - Core Team Meetings (3-4)
  - Pre-Workshop meeting/Call
  - CRB Workshop
  - Listening Session (Must be held before May 31st)
- **Roles & Responsibilities**
  - Town
    - Core Team (participates in prep meetings, workshop and listening session)
    - Identify stakeholders to invite to workshop and lead invitation/RSVP process
    - Lead outreach for public listening session
    - Provide feedback on summary of findings report
    - Grant reporting and documentation of in-kind match
  - CMRPC
    - Organize and lead Core Team meetings
    - Organize and lead workshop, including preparation of presentations and other materials (maps, handouts, etc.)
    - Organize and lead public listening session; assist with outreach
    - Prepare and submit summary of findings report
- **Workshop Agenda/Structure**
  - Welcome speaker(s) (Town)
  - Content speakers (CMRPC)
  - Table facilitators (generally Town or other local stakeholders; CMRPC will assist)
  - Table reporters (Town or other local stakeholders)
  - Scribes (generally students/seniors)
  - Food (can be funded through grant)
- **Next Steps**
  - Selection of Workshop structure/Dates
  - Identify Stakeholders
  - Invite Stakeholders
- **In-Kind Match/Other/Next Meeting**

Meeting Name: MVP Meeting 2 **Community: New Braintree** **Location: ZOOM**

Date: January 28, 2021 **Meeting Time: 9:30 AM**

Participant Name	Organization	Title	E-Mail
Eric Vollheim	CERT/Emergency Management		stonedance@comcast.net
Deb Morrison	Historical Commission/Open Space Committee		morrisonptg@hotmail.com
Cynthia Henshaw	East Quabbin Land Trust		chenshaw@eqlt.org

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New Braintree Municipal Vulnerability Preparedness (MVP)

Date/Time: **Thursday, February 18, 2021 9:30 AM**
ZOOM: https://us02web.zoom.us/j/88337201916?pwd=UXNCRnFMU3o5QkZZYWRKbDJwYUVUQT09

Meeting ID: 883 3720 1916 **Passcode:** 229121 **Dial in** number 1-646-558-8656

AGENDA

- **Roll Call**
- **Core Team Timeline**
  - Core Team Meetings
  - Pre-Workshop meeting/Call
  - CRB Workshop
  - Listening Session (Must be held before May 31st)
- **Workshop Planning**
  - Identification of Stakeholders
  - Workshop Date(s)/Time(s)
  - Invite Stakeholders – *3 weeks prior to workshop*
  - Follow-up Communication – *1-2 times/week leading up to workshop*
  - Food during workshop
- **Pre-Workshop Materials**
  - CMRPC
    - Climate, Hazard, and MVP Program presentations
    - Workshop Base Maps
  - Town
    - Introduction
  - *Sent out 1 week before workshop*
- **Workshop Structure**
  - Welcome speaker(s) (Town)
  - Content speakers (CMRPC)
  - Table facilitators (generally Town or other local stakeholders; CMRPC will assist)
  - Scribes (generally students/seniors)
  - Food (can be funded through grant)
- **Town To-Do List**
  - Continue populating invite list
  - Identify Town Scribes
  - Review workshop maps
  - Continue tracking in-kind match
- **Next Meeting/Other**

Meeting Name: MVP Meeting 3 **Community: New Braintree** **Location: ZOOM**

Date: February 18, 2021 **Meeting Time: 9:30 AM**

Participant Name	Organization	Title	E-Mail
Eric Vollheim	CERT/Emergency Management		stonedance@comcast.net
Deb Morrison	Historical Commission/Open Space Committee		morrisonptg@hotmail.com
Cynthia Henshaw	East Quabbin Land Trust		chenshaw@eqlt.org

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New Braintree Municipal Vulnerability Preparedness (MVP)

Date/Time: **Friday, March 5, 2021 9:30 AM**
ZOOM: https://us02web.zoom.us/j/84548145365?pwd=RnluN3F3MlRpK2RLQ3QxQXZqNTBPdz09

Meeting ID: 845 4814 5365 **Passcode:** 361900 **Dial in** number 1-646-558-8656

AGENDA

- **Core Team Timeline**
  - Core Team Meetings
  - Pre-Workshop meeting/Call
  - CRB Workshop
  - Listening Session (Must be held before May 31st)
- **Workshop Planning**
  - Identification of Stakeholders
  - Invite Stakeholders – *3 weeks prior to workshop*
  - Follow-up Communication – *1-2 times/week leading up to workshop*
  - Food during workshop
- **Pre-Workshop Materials**
  - CMRPC
    - Climate, Hazard, and MVP Program presentations
    - Workshop Base Maps
  - Town
    - Introduction
  - *Sent out 1 week before workshop*
- **Workshop Structure**
  - Welcome speaker(s) (Town)
  - Content speakers (CMRPC)
  - Table facilitators (generally Town or other local stakeholders; CMRPC will assist)
  - Scribes (generally students/seniors)
  - Food (can be funded through grant)
- **Town To-Do List**
  - Continue populating invite list
  - Identify Town Scribes
  - Review workshop maps
  - Continue tracking in-kind match
- **Next Meeting/Other**

Meeting Name: MVP Meeting 4 **Community: New Braintree** **Location: ZOOM**

Date: March 5, 2021 **Meeting Time: 9:30 AM**

Participant Name	Organization	Title	E-Mail
Eric Vollheim	CERT/Emergency Management		stonedance@comcast.net
Deb Morrison	Historical Commission/Open Space Committee		morrisonptg@hotmail.com
Cynthia Henshaw	East Quabbin Land Trust		chenshaw@eqlt.org

Community Resiliency Building Workshop

Town of New Braintree
Municipal Vulnerability Preparedness
Day 1- Tuesday, April 6, 2021
5:00 – 8:00 pm; Check-in at 4:40 pm

Meeting Location: Town Hall, 20 Memorial Drive, New Braintree, MA 01531

Workshop Materials: https://www.dropbox.com/sh/uux8j8ccfd6fd1i/AAD0aLjXGyOsa4Pjn2iN7c_da?dl=0

Refreshments will be provided. We will take a Dinner Break from 6:30 – 6:50 pm to eat.
Masks are required at all times except when eating

Workshop Agenda

4:40 – 5:00 *pm:*
- Check-in

5:00 – 5:30 pm:
- Welcome
- Overview Presentation
- Questions & Answers

5:30 pm – 6:30 pm:
- Breakout Groups
  - Identify Hazards & Local Features
  - Discuss Strengths & Vulnerabilities

6:30 – 6:50 pm:
- Dinner Break

6:50 – 7:50 pm:
- Breakout Groups
  - Identify Hazards & Local Features
  - Discuss Strengths & Vulnerabilities
  - Identify Actions to Build Resilience *(as time allows)*

7:50 pm – 8:00 pm:
- Reconvene as Large Group
  - Quick Table Summary
  - Closing Remarks & Wrap Up

Day 1: Workshop Objectives

- Define extreme weather and climate related hazards
- Identify current and future vulnerabilities and strengths

Homework

- Review hazards, vulnerabilities, and strengths in matrix
- Brainstorm actions to address vulnerabilities

Thank you for participating in New Braintree's Community Resilience Building Workshop!

Community Resiliency Building Workshop

Town of New Braintree
Municipal Vulnerability Preparedness
Day 2- Tuesday, April 13, 2021
5:00 pm – 8:00 pm; Check-in at 4:50 pm

Meeting Link (Click to Join): https://us02web.zoom.us/j/84533531422?pwd=K1JBekgyaG5sUDlzeUxUUkkwN3ZFZz09

Meeting ID: 845 3353 1422

Passcode: 771955

Call in Number (if unable to join online): 1-646-558-8656

Workshop Materials: https://www.dropbox.com/sh/uux8j8ccfd6fd1i/AAD0aLjXGyOsa4Pjn2iN7c_da?dl=0

Workshop Agenda

4:50 – 5:00 pm:
- Login & Familiarize with Zoom

5:00 – 5:20 pm:
- Welcome & Recap from Day 1
- Questions & Answers

5:20 – 7:30 pm:
- Breakout Groups
  - Identify Actions to Reduce Risks and Build Resilience
  - Prioritize Actions by Urgency and Timing

7:30 – 8:00 pm:
- Reconvene as Large Group
- Table Reports
- Closing Remarks & Wrap Up

Day 2: Workshop Objectives

- Review vulnerabilities and strengths identified on Day 1
- Develop and prioritize actions;
- Identify opportunities for the Town to advance actions and reduce risks to build resilience

Homework

- Review actions to reduce risks and build resilience
- Vote for top priority actions via survey (link to be emailed)
- Attend Listening Session

Thank you for participating in New Braintree's Community Resilience Building Workshop!

New Braintree MVP Workshop Sign-in Sheet					
Name	**Email Address**	**Role**	**Attended 4/6?**	**Attended 4/12?**	**Table #**
Andrew Smith	andrew.b.smith@mass.gov	Participant	x		1
Barbara Portal	bjlportal@gmail.com	Participant	x	x	1
Deb Morrison	morrisonptg@hotmail.com	Core Team	x	x	1
Dexter Newton	dexter.newton@outlook.com	Participant	x	x	1
Genevieve Stillman	stillmans@verizon.net	Participant	x	x	1
Jason Benoit	jben5star@gmail.com	Participant			1
Julie A Rousseau	jrousseau1825@gmail.com	Participant	x		1
Peggy Thompson	Pthompsonnb@gmail.com	Participant	x		1
Senator Gobi	Anne.Gobi@masenate.gov	Participant		x	1
Bill Howland		Participant	x	x	1
Carl Hartwick	Carl.hartwick@nationalgrid.com	Participant	x	x	2
Cynthia Henshaw	chenshaw@EQLT.org	Core Team	x		2
Glen Stillman	stillmans@verizon.net	Participant	x	x	2
Jessica Bennett	jessica.bennett1962@gmail.com	Participant	x		2
Marjorie A. Wissiup	labwish@aol.com	Participant	x	x	2
Matthew A Koziol	farmermattwb@gmail.com	Participant	x		2
Paul Thompson	thomps222@aol.com	Participant	x		2
Sarah Bjorklund	Sunsetvalleyfarmnb@gmail.com	Participant	x		2
Richard Ayer	nbhighway1@gmail.com	Participant	x		2
Sheila Muir	smuir@qrsd.org	Participant	x		2
Chief Dennis Letendre		Participant	x		3
David Brown	dwb01720@aol.com	Participant	x	x	3
Eric Vollheim	stonedance@comcast.net	Core Team	x	x	3
Herbert Pollard jr	hlpollard2003@aol.com	Participant	x	x	3
Joanne Thompson	thomps222@aol.com	Participant	x		3
Lukas Bjorklund	Lukas.bjorklund@yahoo.com	Participant	x		3
Officer Ryan Gentile	RGentile@Townofhardwick.com	Participant	x	x	3
Susie Mulliken	skmblue@rcn.com	Participant	x	x	3
John Thompson		Participant		x	3
Randy Walker	rwmc101@aol.com	Participant	x		3
Lori Hoffman	police@TownofHardwick.com	Participant	x	x	3
Gregory Dwelly	Gregory.Dwelly@pol.state.ma.us	Participant	x		3

CMRPC
Central Massachusetts Regional Planning Commission

Meeting Name: MVP Workshop | Community: New Braintree | Location: Town Hall

Date: April 6, 2021 | Meeting Time: 5:00: PM

Participant Name	Organization	Title	E-Mail
Dani Marini	CMRPC	Assistant Planner	dmarini@cmrpc.org
Andrew Loew	"	Project Mgr.	aloew@cmrpc.org
Bill Houlne		Selectman.	
ERIC VOLLHEIM	NB EMD	DIRECTOR	STONEDANCE@COMCAST.NET
Kevin Finn	CMRPC	Intern	kfinn@cmrpc.org
Mary Hannah Smith	CMRPC	Associate Planner	mhsmith@cmrpc.org
Carl E Hartwick	National Grid	Community MGR	Carl.Hartwick@nationalgrid.com
Sarah Bjerklund	Sunset valley farm Cert	Owner/member	Sunsetvalleyfarmnb@gmail.com
Ryan Gentile	NBPD	Officer	rgentile@townofhardwick.com
Peggy Thompson	OPSC		pthompsonnb@gmail.com
Cynthia Henshaw	EQLT		chenshaw@EQLT.org
Barbara Portal	West Brookfield	MVP co-lead	bjlportal@gmail.com

CMRPC
Central Massachusetts Regional Planning Commission

Meeting Name: MVP Workshop | Community: New Braintree | Location: Town Hall

Date: April 6, 2021 | Meeting Time: 5:00: PM

Participant Name	Organization	Title	E-Mail
David Brown	West Brookfield LWPA		dub4720@aol.com
Susie Mulliken	New Braintree		SKMBLUE@RCN.com
Marjorie Wisemp	COA		labwish@aol.com
Greg Dwelly	MSP		GREGORY.Dwelly@POL.STATE.MA.US
Julie Rousseau	C.O.A.		jrousseau1825@gmail.com
Deb Morrison	Open Space		jmorrisonptg@hotmail.com ~~dmorrison@ey~~
Paul Thompson	Board of Health		Thomps222@Aol.com
Joanne "	Conservation + Council on Aging		"
Kori Hoffman	Hardwick/New Braintree Police		Police@TownofHardwick.com
Jessica Bennett	Town Clerk New Braintree		~~NEW~~ townclerk@newbraintree.org
Randy Wallace	Selectman		RWMC101@AOL.com
Dennis Letendre	Fire Chief		

CMRPC
Central Massachusetts Regional Planning Commission

Meeting Name: MVP Workshop | Community: New Braintree | Location: Town Hall

Date: April 6, 2021 | Meeting Time: 5:00: PM

Participant Name	Organization	Title	E-Mail
Dexter Newton	farmer	→	dexter.newton@outlook.com
Matt Kozik	Farmer Matt	—	Farmermattwb@gmail.com
Richard Ayer	Highway Dept.	Super	Nbhighway1@gmail.com
Sheila Muir	QRSD		smuir@qrsd.org
Genevieve Stillman	Planning Board		stillmans@verizon.net
Thomas L. Pond Jr.	Farmer		Ashland FAIM

Participate in New Braintree's Municipal
Vulnerability Preparedness (MVP) Program

Given events like the Springfield tornado in 2011, the snowstorms of 2015, the extreme drought of 2016 and recent Hurricanes Harvey and Irma, we find ourselves in a new era of more unpredictable and severe weather that can potentially cause damage to our community.

To be as proactive as possible, I would like to personally invite you to participate in a, two-part, Community Resilience Building Workshops focused on preparing and protecting the Town of New Braintree.

The MA Executive Office of Energy and Environmental Affairs' (EEA)

Municipal Vulnerability Preparedness (MVP) Program Workshops

Tuesday, April 6th, 5:00 – 8:00 pm
20 Memorial Dr, New Braintree, MA 01531
Refreshments provided
&
Tuesday, April 13th, 5:00 – 8:00 pm
Virtually on ZOOM

The Town of New Braintree is collaborating with EEA and CMRPC to offer this timely workshop which will bring together community members to comprehensively identify and prioritize steps to reduce risk and improve resilience across New Braintree. This workshop will help develop and advance comprehensive community resilience planning, hazard mitigation, and adaptation efforts.

The workshops objectives are to:

- Define extreme weather and climate related hazards;
- Identify current and future vulnerabilities and strengths;
- Develop and prioritize actions; and
- Identify opportunities for the Town to advance actions and reduce risks to build resilience

To learn more about the general program information, please visit the following websites:

- Community Resilience Building: https://www.communityresiliencebuilding.com/crbworkshopguide
- Municipal Vulnerability Program: https://www.mass.gov/municipal-vulnerability-preparedness-mvp-program
- Resilient MA, Climate Change Clearinghouse for the Commonwealth: https://www.resilientma.org/

Log-in information and meeting materials for New Braintree's MVP workshop will be sent out on March 30th to those who RSVP. We would appreciate your participation in this timely workshop.
To RSVP to New Braintree's WVP workshop, please complete this survey:
https://forms.gle/58aJpMQouG4hXxT1A

Please RSVP by March 30, 2021

If you have any questions about the program, please contact Eric Vollheim, New Braintree Emergency Management Director, at stonedance@comcast.net or Dani Marini, CMRPC Environmental Planner, at dmarini@cmrpc.org.

We look forward to seeing you or a designee at our workshop. Thank you for your assistance with this important project!

Sincerely,
Kristen Thacker, Town Administrator

Thank You for Your Participation in New Braintree's Municipal Vulnerability Preparedness (MVP) Program!

The Town of New Braintree is collaborating with EEA and CMRPC to offer a two-day workshop on ***April 6th and April 13th*** which will bring together community members to comprehensively identify and prioritize steps to reduce risk and improve resilience across New Braintree. Follow the instructions below in order to help make your community more climate resilient! If you have any questions about the program, please contact Dani Marini, CMRPC Environmental Planner, at dmarini@cmrpc.org. We look forward to seeing you at our workshop!

Step 1. Discover New Braintree's MVP Dropbox

The resources included in this invitation will help you learn more about the MVP program and prepare you for the upcoming workshop. All of these resources and more can be found in the following Dropbox link.

Workshop Dropbox: https://www.dropbox.com/sh/uux8j8ccfd6fd1i/AAD0aLjXGyOsa4Pjn2iN7c_da?dl=0

Step 2. Review the Program Overview and Workshop Guide

The following two documents will give you an overview of the MVP program and will describe a typical Community Resiliency Building (CRB) workshop.

MVP Program Overview: https://www.dropbox.com/s/3mkn60pdbuncjgv/MVP Program Info_Updated 2019.pdf?dl=0
CRB Workbook: https://www.dropbox.com/s/e9jf17uf7gcttna/CRB Workshop Guide.pdf?dl=0

Step 3. Watch the MVP Presentations Prior to Workshop

The following link contains pre-recorded presentations that will help you be better prepared for the MVP workshop. The presentations include an overview of the program and the MVP process, climate projections and hazards that New Braintree may face in the future, and nature-based solutions examples. Please take some time to **review each of these presentations before April 6th.**

Presentations: https://www.dropbox.com/sh/gvwhp7xs3fv0pq2/AAC9wl02-j7k8IwEZJ9SKk4xa?dl=0

Step 4. Familiarize Yourself with the Matrix and Mapping Tools

During the workshop, we will divide up into breakout groups to discuss strengths, vulnerabilities, and possible actions that the town can take. During this process, we will be filling out a matrix and marking up a map with our ideas. The following two links will show you an example of a completed matrix and will give you a set of pre-made maps that already display various features, hazards, and resources in New Braintree.

Complete Matrix Example: https://www.dropbox.com/s/vb6anpt3o9csebi/Completed Matrix Example.pdf?dl=0
Maps: https://www.dropbox.com/sh/fadnonccavocrl7/AACzKu9GD8NCrI-ZFIbdGfNPa?dl=0

Step 5. Attend the Workshop!

The 2-day workshop will be held **in-person on April 6th** and **virtually on April 13th**. The agenda for each day as well as the meeting location and Zoom meeting link are listed below. Please review the agenda for each day.

Day 1: April 6th, 5:00 – 8:00 pm (In-Person)
Agenda Day 1: https://www.dropbox.com/s/v887n3i1re959y3/Day 1 Agenda %28In-Person%29.pdf?dl=0
Meeting Location: Town Hall, 20 Memorial Drive, New Braintree, MA 01531

Day 2: April 13th, 5:00 – 8:00 pm (Virtual)
Agenda Day 2: https://www.dropbox.com/s/wmmgvent8pehmmc/Day 2 Agenda %28Virtual%29.pdf?dl=0
Zoom Link Day 2: https://us02web.zoom.us/j/84533531422?pwd=K1JBekgyaG5sUDlzeUxUUkkwN3ZFZz09

Dial-in Phone Number: **1-646-558-8656**
Meeting ID: **845 3353 1422**
Passcode: **771955**

Learn How to Zoom

New to Zoom? The following document contains a series of instructional videos to help guide you through Zoom from downloading the app to joining a meeting for the first time.

Zoom Instructions: https://www.dropbox.com/s/z7sks13hjk0rz84/How To Zoom.pdf?dl=0

Highway Dept.	Richard Ayer	nbhighway1@gmail.com	(W) 508-867-2451 (C) 508-847-2628
Admin. Secretary	Kristen Thacker	selectboard@newbraintree.org	508-867-2071
Agricultural Committee	???? (Kristen)		
Animal Shelter/Control	?????(Kristen)		
Board of Health Member	Scott Metcalf	scottcmetcalf@yahoo.com	
Bd of Selectmen Member	Randy Walker	rwmc101@aol.com	508-344-0724
Camp Putnam	Todd Stewart		
Building Inspector	Bill Cantell	buidinginspector@newbraintree.org	413-237-5803
CERT Team	Eric Volheim		
Cons. Com. Member	Theresa Goulet	goulet.t1@gmail.com	
Council on Aging Member	Julie Rousseau		508-867-9910
Cultural Council Member	???? (Kristen)		
Dept. Cons. & Rec.	?????		
Dept. Dam Safety	Richard Ayer		
Emergency Management	Eric Volheim		

MVP Coordinator	Danielle Marini	
Fire Chief	Dennis Letendre	newbraintreefirechief@gmail.com
Lakes/River Assn.	Brooks Pond Assn.	
Land Trust Members	Judith Jones, Jody Kablack	
Library Trustee	Marjie Wissiup	labwish@aol.com
Local Business	See attached list	
Local Construction	See attached list	
Local Engineering	????	
Local Farmers	See attached list	
Local Non-Profits	See attached list	
Local Realtors Assn.	??? Joe Chenevert	
MA Fish & Wildlife	Eric will call	
MA DOT	Ask Richard Ayer	
Neighboring Town MVP	Ask Dani	
Planning Board Member	Jason Ayer	jayayer100@gmail.com

Police Chief	Jim Ayotte	chiefayotte@townofhardwick.com	
Power Company	National Grid		
Rail Trail	Cynthia Henshaw	East Quabbin Land Trust	
Recreation Comm.	????? (Kristen)		
School Superintendent	Sheila Muir	smuir@qrsd.org	
State Rep.	Donnie Berthiaume	donna.farmer@mahouse.gov	
Veterans Rep.	Bill Kleinedler	william.kleinedler@verizon	508-365-9310
Waste Transfer	Dumpster Services	dumpsterservices.com	508-885-2428
State Police	Rory Fitzgerald		774-241-6007
Solar Field	Les Miller	leslieamiller1@verizon.net	508-867-4785

New Braintree Farmers

Jason Benoit	Blueberries	1200 Hardwick Road
Jane Cronin	Hay & Cows	153 Barr Road
Roland Gaumond	Cows & Hay	70 Sibley Road
Stanley Grigas	Cows & Hay	87A Sibley Road
Ashley Howard	Vegetables	PO Box 212
Jeff Howe	Vegetables & Plant Sales	501 Old Wine Road
David Howe	Deer, Goats	55 Thompson Road
Bill Howland	Hay, Cows	685 Utley Road
Hunter Farm	Hay	PO Box 286, Moultonboro, NH 03254
Peter & Natalie Imbier	Cows, Hay, Corn	1510 West Road
Wayne Ketola	Hay	PO Box 136
Mike Klem	Hay	122 Igoe Road
Matt Koziol	Hay, Cows	860 West Brookfield Road
Gary Lefevre	Cows, Hay	1115 Gilbertville Road
Denny Long	Hay, Goats	PO Box 21
MELAS, Inc. (Salem)	Hay	PO Box 553, W. Brookfield 01585
Glen Merkel	Berries	PO Box 151
Roland Morin	Hay	531 Webb Road
Eric Nelson	Trees, shrubs	PO BOx 52
Dexter Newton	Horse	PO Box 192
Kevin Nimtz	Fruit	170 Utley Road
Lee Pollard	Vegetables	531 Oakham Road
Paul Schur	Hay & Maple Syrup	775 Moor Road
Glenn Stillman	Vegetables	1205 Barre Road
Steve Taylor	Hay	790 West Brookfield Road
Thistle Rock Farm	Hay, Cows ??	224 Adams Road

Kathy Trum-Seearah	Cattle, Horses	305 Ravine Road
Souneva Vitrac	Hay	140 Skivira Lane
Randy Walker	Cattle, Hay	1290 West Brookfield Road
Doug Waugh	Christmas Tree Farm, Cattle	PO Box 125
Ray Waugh	Hay	PO Box 177
Marty & John Wisnewski	Hay	1365 Oakham Road

Local Business:

Mark Borelli	Borelli Machine	1940 Barre Road
Dean Daigneault	Small Engine Repair	212 Ravine Road
Rich Glidden	Glidden Landscaping	637 Cutler Road, Barre, MA 01005
June Glidden	June's Bake Shop	
Bobby Glidden	Driveway/Heavy Equip.	135 Pierce Road
Brenda Howland	1st String	111 Harrington Road
Dave Jones	Stonemason	1330 Gilbertville Road
Missy McDonald	Hair Salon	1236 Oakham Road
Deb & Lee McLaughlin	Plant sales	55 Sibley Road
Spencer Rice	Logger	PO Box 126
Paul Thompson	Syrup/ Ice Cream	377 Dennis Whitney Road

Non Profits

Camp Putnam	Fresh Air Camp	Rutherford Road
New Braintree Historical Society		Utley Road
New Braintree Congregational Church		Hardwick Road

Municipal Vulnerability Preparedness (MVP) Workshop: New Braintree

Reference Map: Table Map

Legend

- Town Boundary
- Town Halls
- EOC
- Local Police
- State Police
- County Sheriff
- Fire Station
- Schools (Pre-K through High School)

Dams

- High Hazard
- Significant Hazard
- Low Hazard
- N/A
- Major Road
- Local Road
- Active Service Railroads
- Water Bodies
- Streams
- MassDEP Wetlands
- High Slope (15% and above)

FEMA National Flood Hazard Layer (DFIRM)

- 100-year Flood Area

CIH (Points)

- Vulnerable Critical Infrastructure
- Non-vulnerable Critical Infrastructure
- Hazard
- Vulnerable Critical Infrastructure
- Non-vulnerable Critical Infrastructure
- Hazard
- Vulnerable Critical Infrastructure
- Non-vulnerable Critical Infrastructure
- Hazard

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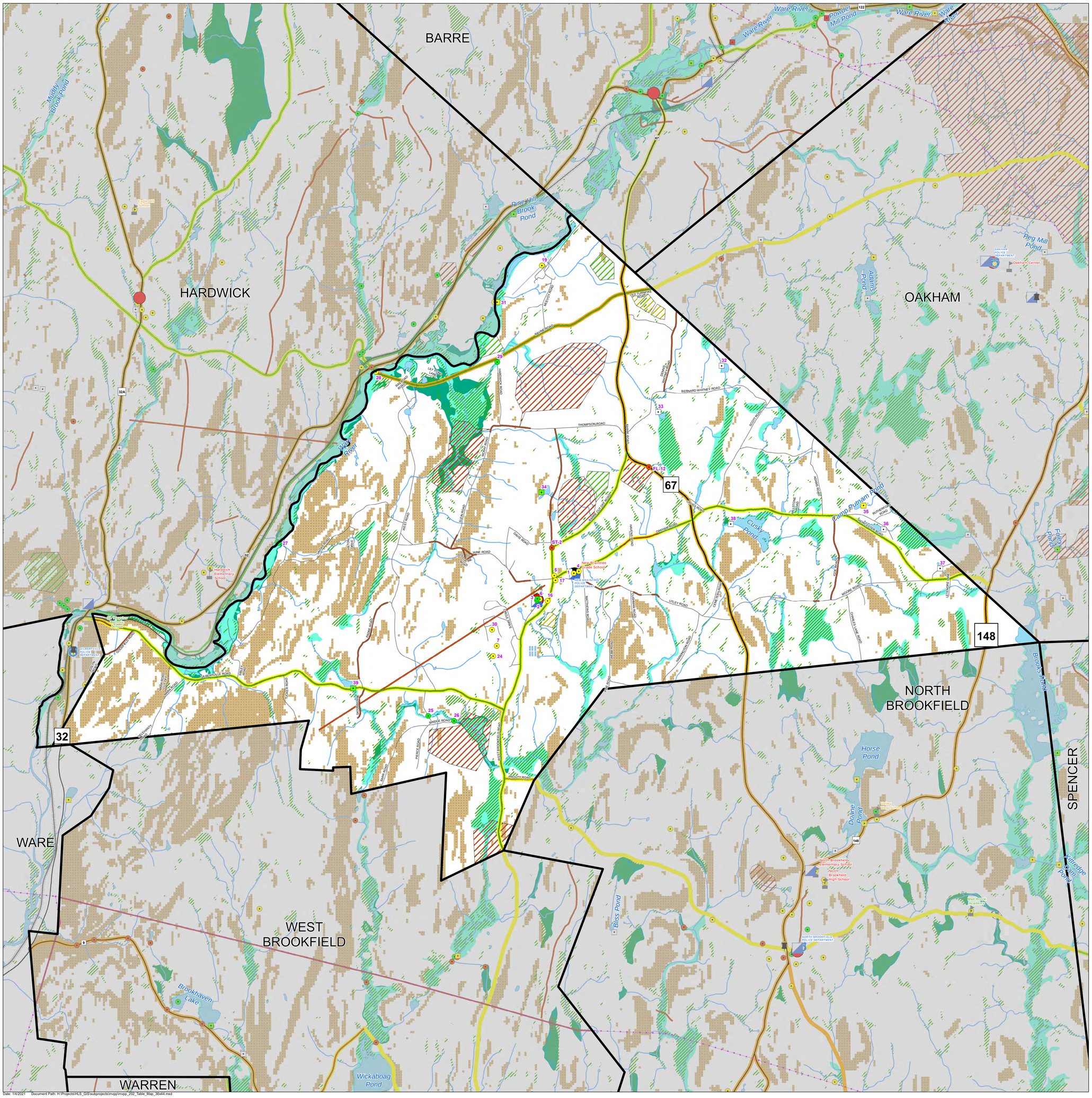
Central Massachusetts Regional Planning Commission

0 0.14 0.28 0.56 0.84 1.12 Miles

N E S W

Flooding data source: FEMA's Digital Flood Insurance Rate maps(DFIRM). Other data sources include: MassGIS, MassDOT, and CMRPC Information depicted on this map is for planning purposes only. This information is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analysis. Use caution intrepreting positional accuracy.

Produced by the Central Massachusetts Regional Planning Commission.
1 Mercantile Street, Suite 520, Worcester, MA 01608



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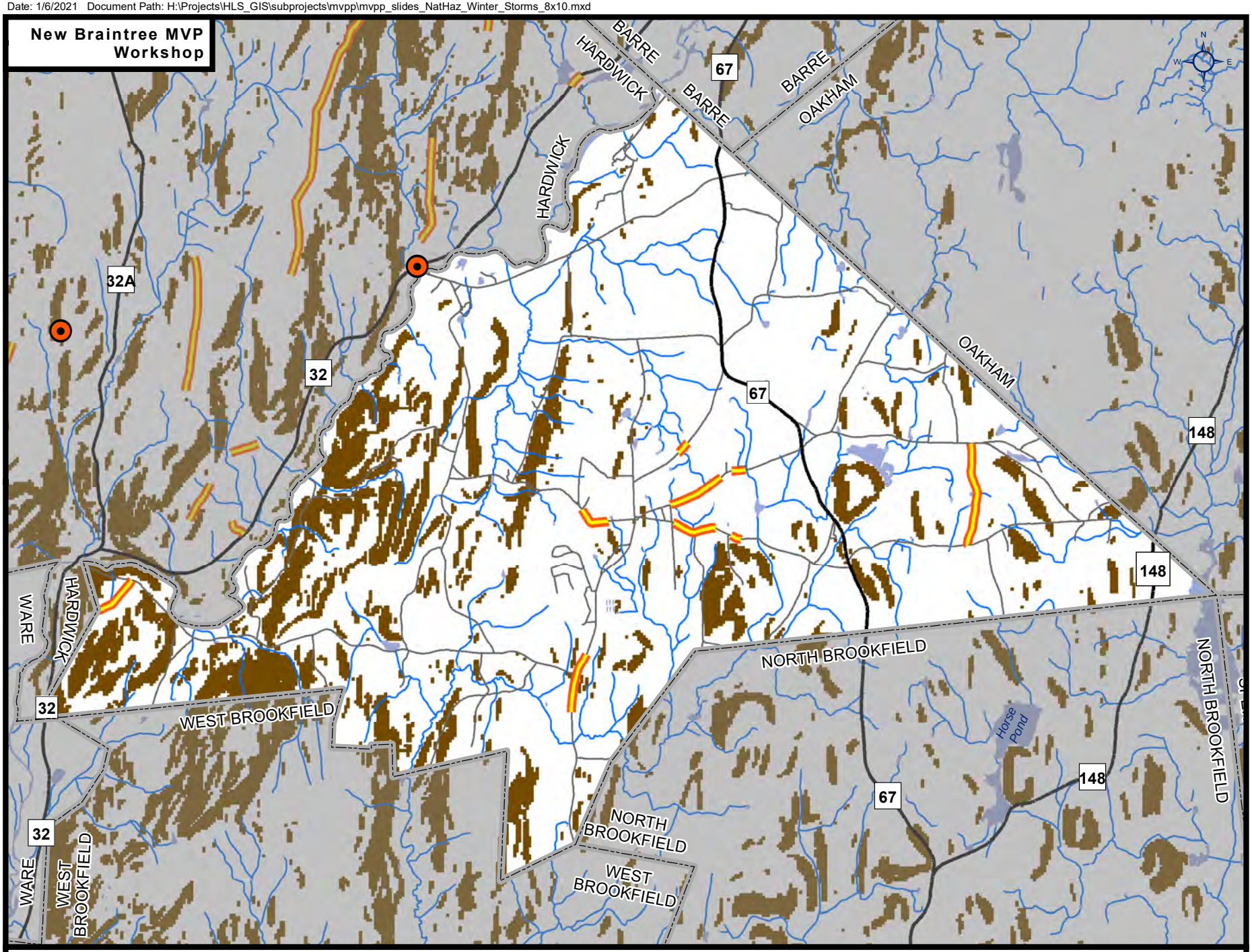
Date: 1/6/2021 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_slides_NatHaz_Winter_Storms_8x10.mxd



Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS. Information depicted on this map is for planning purposes only.

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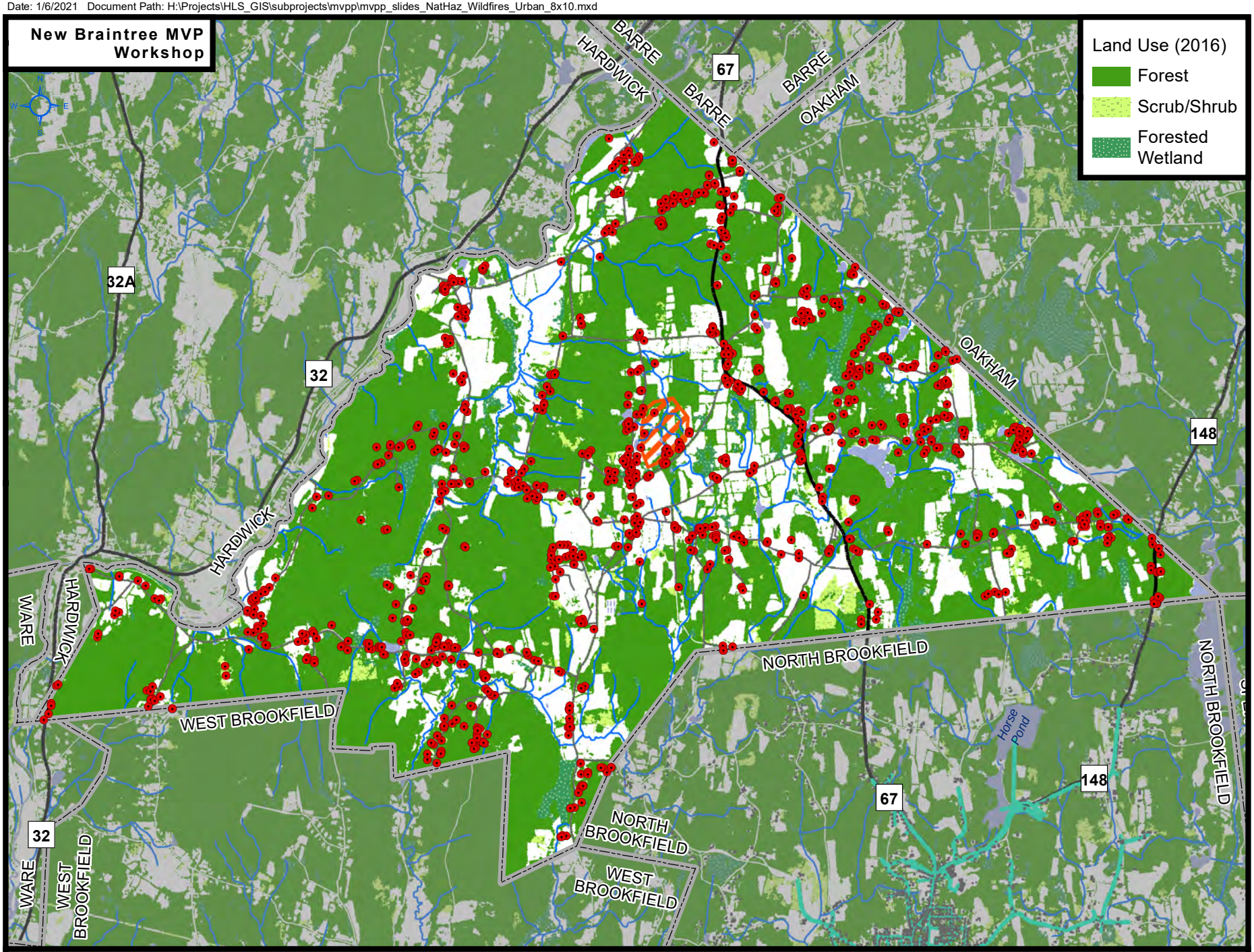

Source: Data provided by the Town of New Braintree, CMRPC, Mass Audubon, massDOT, MassGIS. Information depicted on this map is for planning purposes only.

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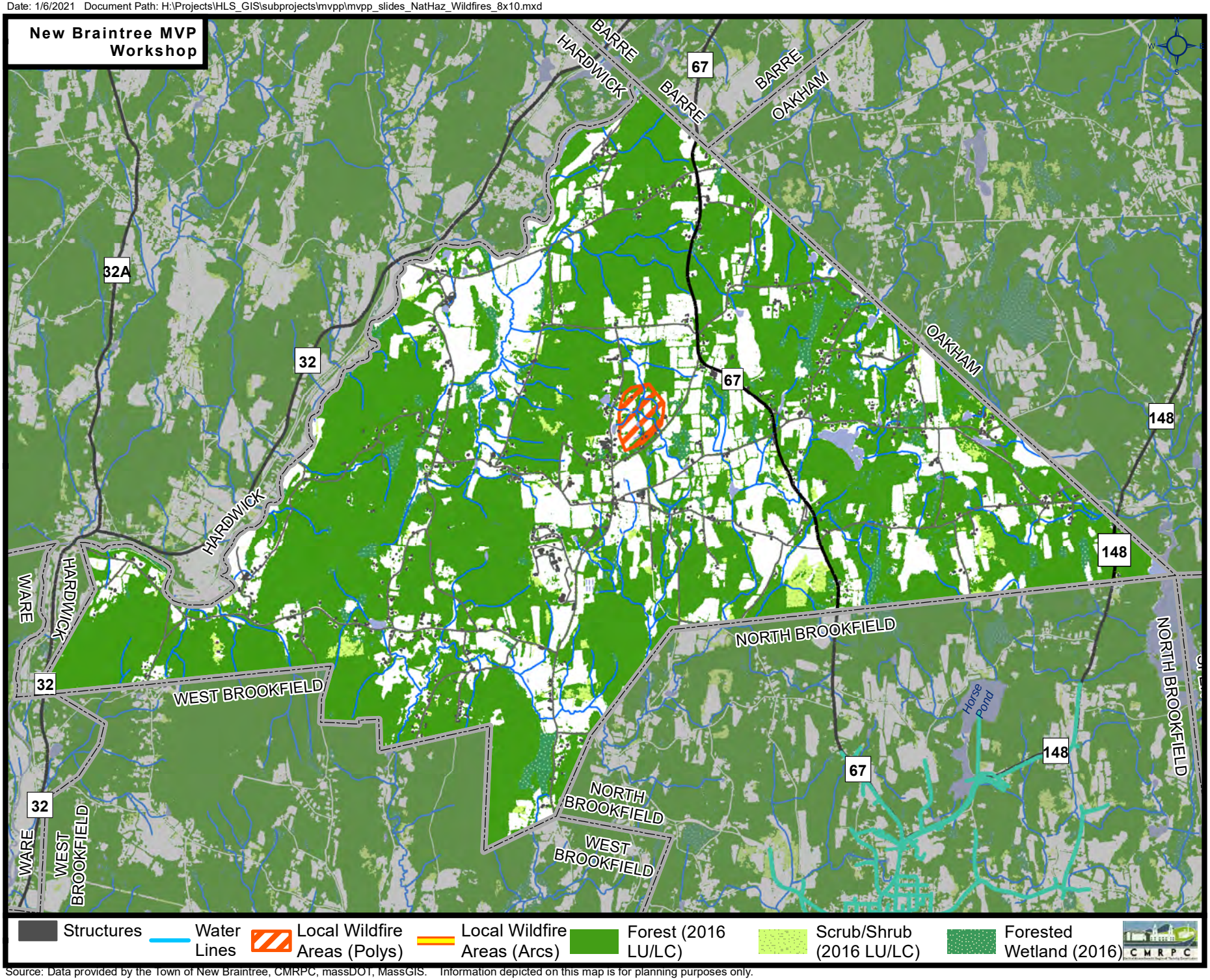

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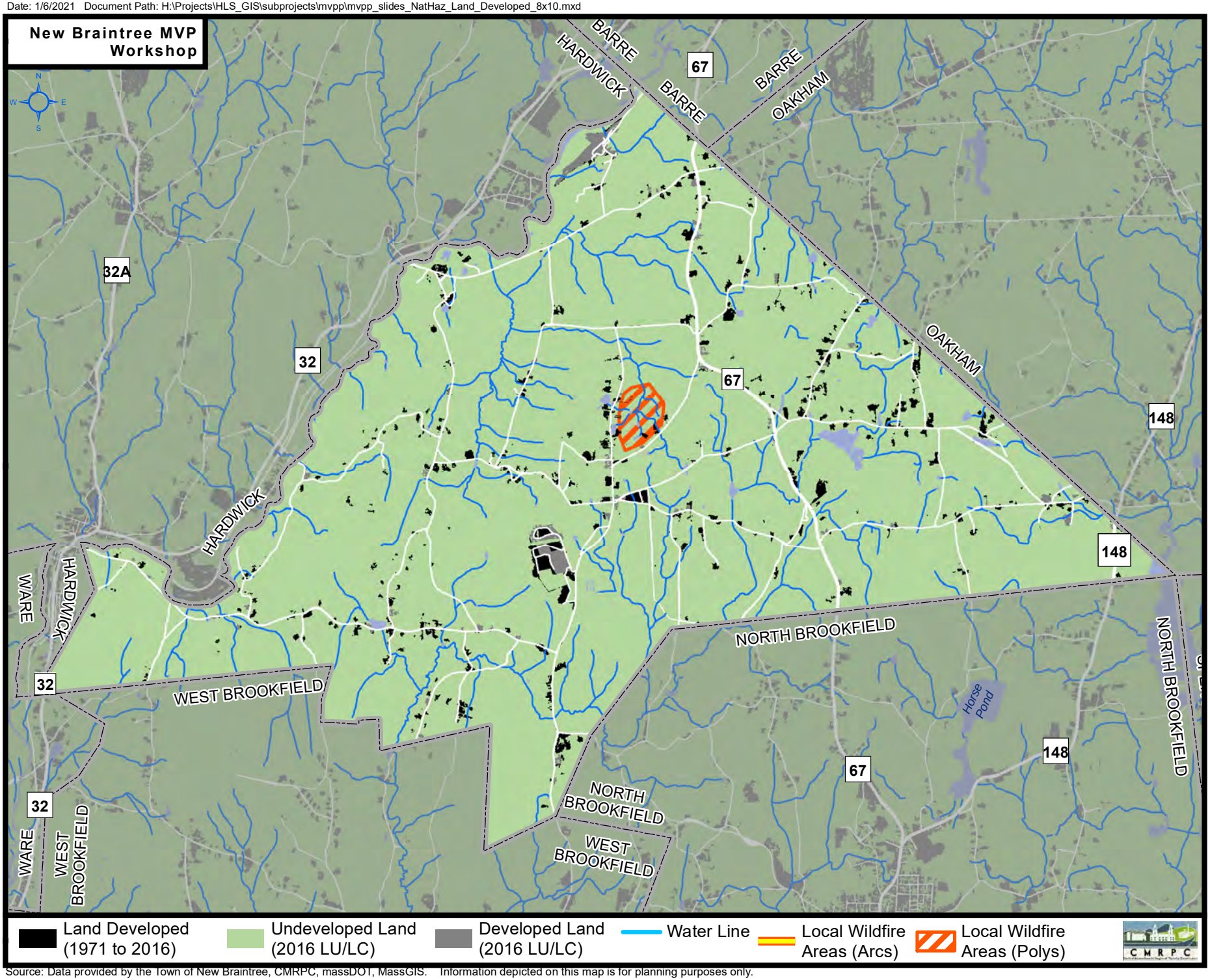

Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS. Information depicted on this map is for planning purposes only.

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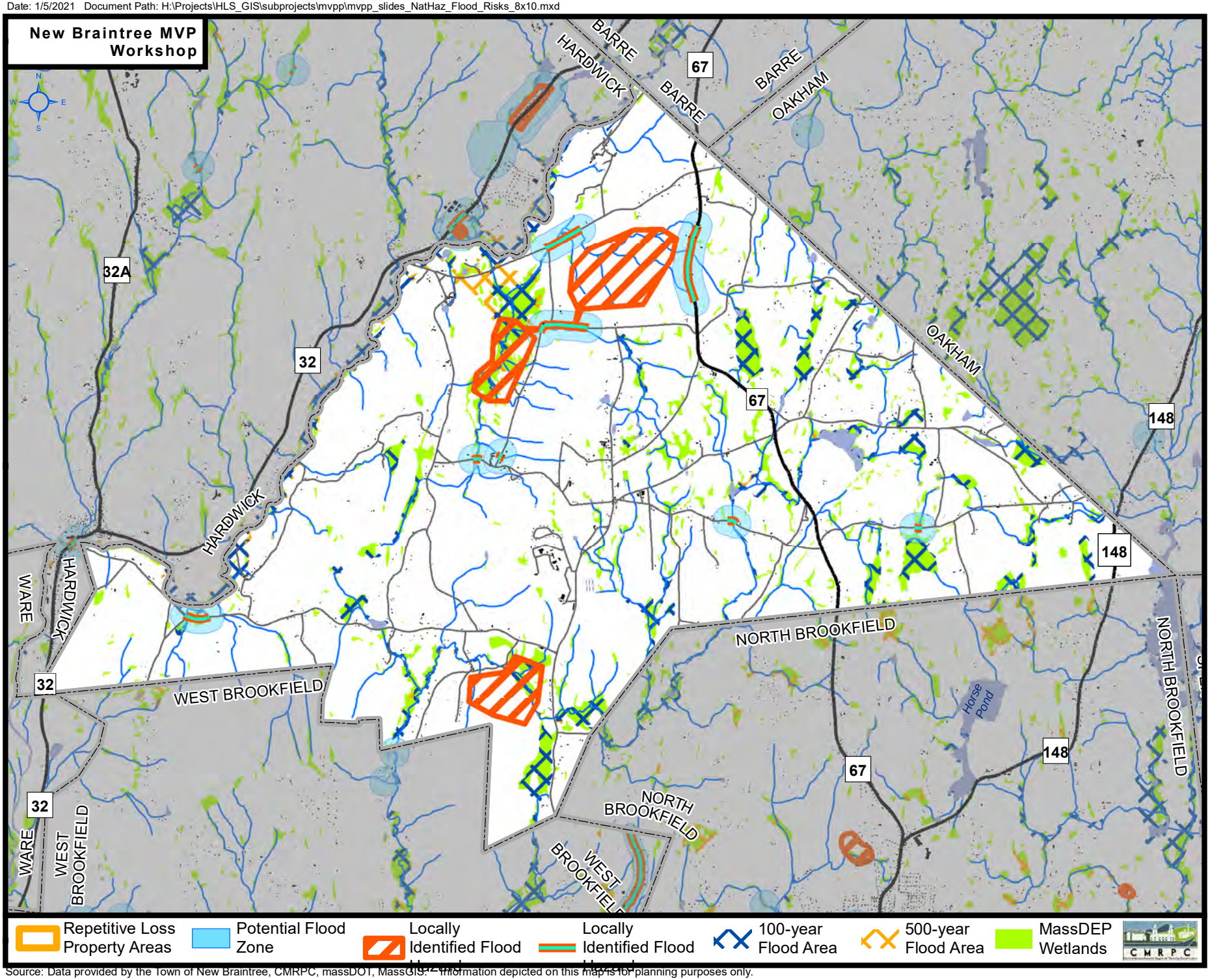

Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS. Information depicted on this map is for planning purposes only.

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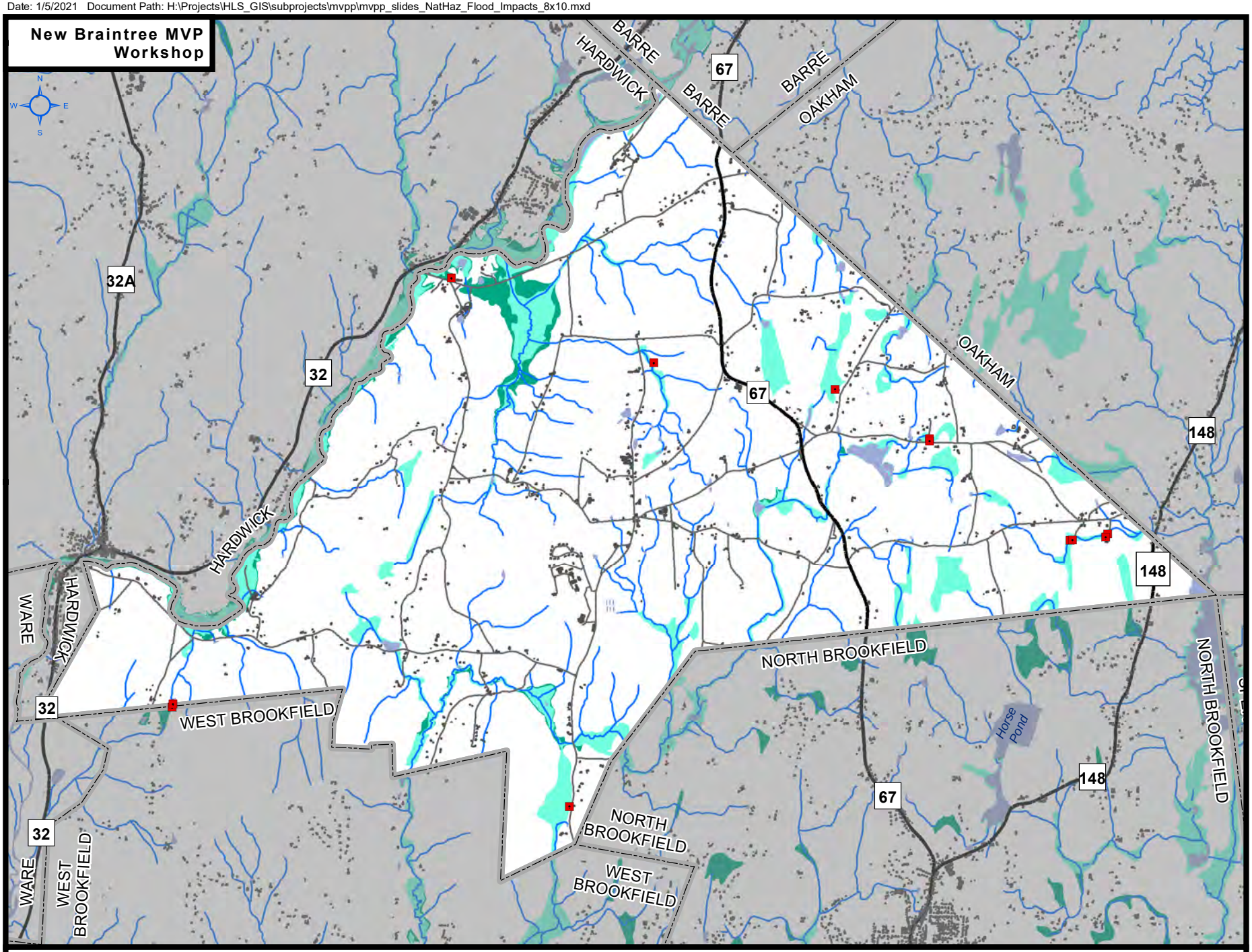
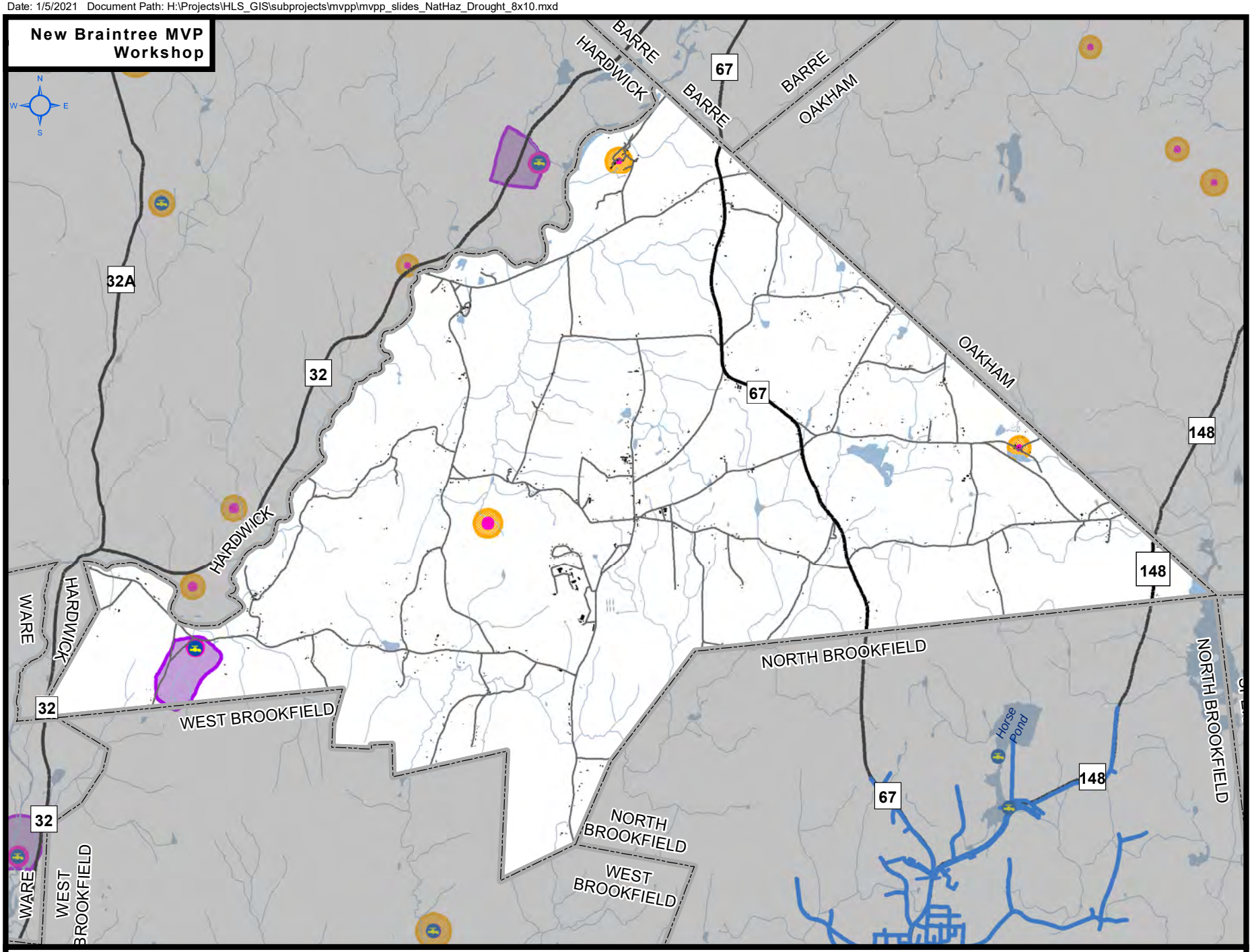


Structures within 100/500yr Flood Zone | Structures | Repetitive Loss Property Areas | 100-year Flood Area | 500-year Flood Area

CMRPC

Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS. Information depicted on this map is for planning purposes only.

Date: 1/5/2021 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_slides_NatHaz_Drought_8x10.mxd



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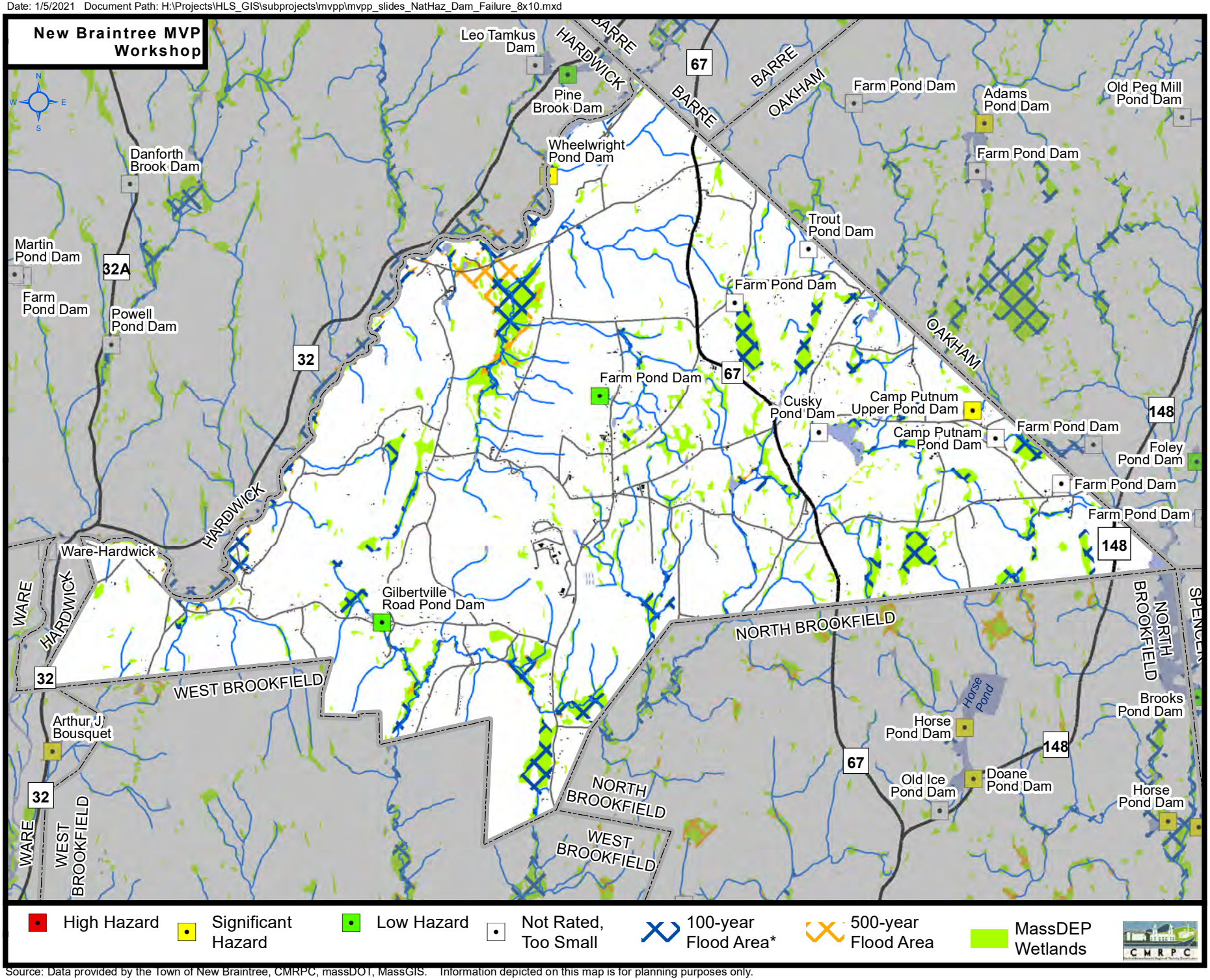
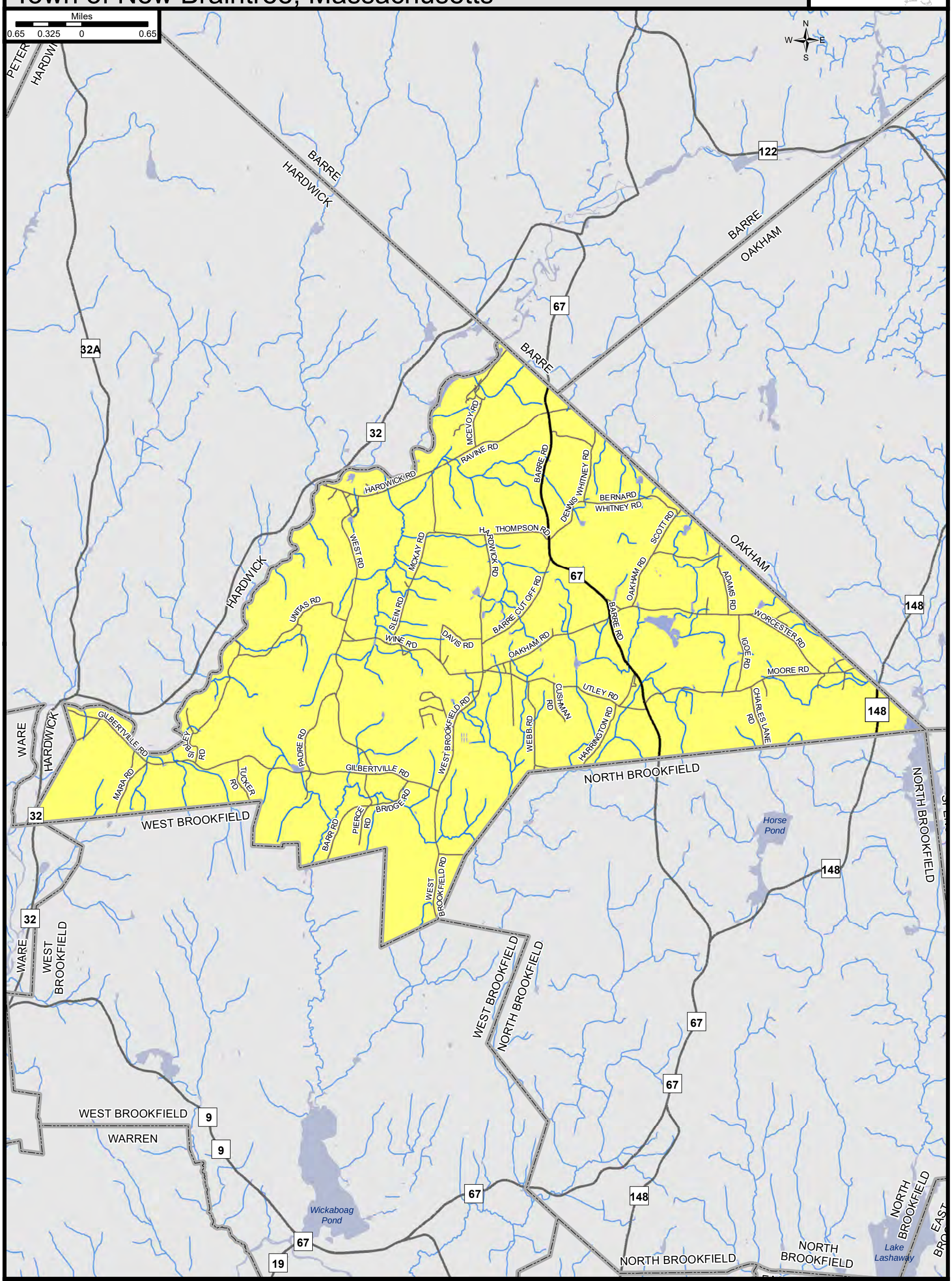


Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS. Information depicted on this map is for planning purposes only.

Reference Map: Zoning

Town of New Braintree, Massachusetts



Zoning Districts

ARR

Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS.

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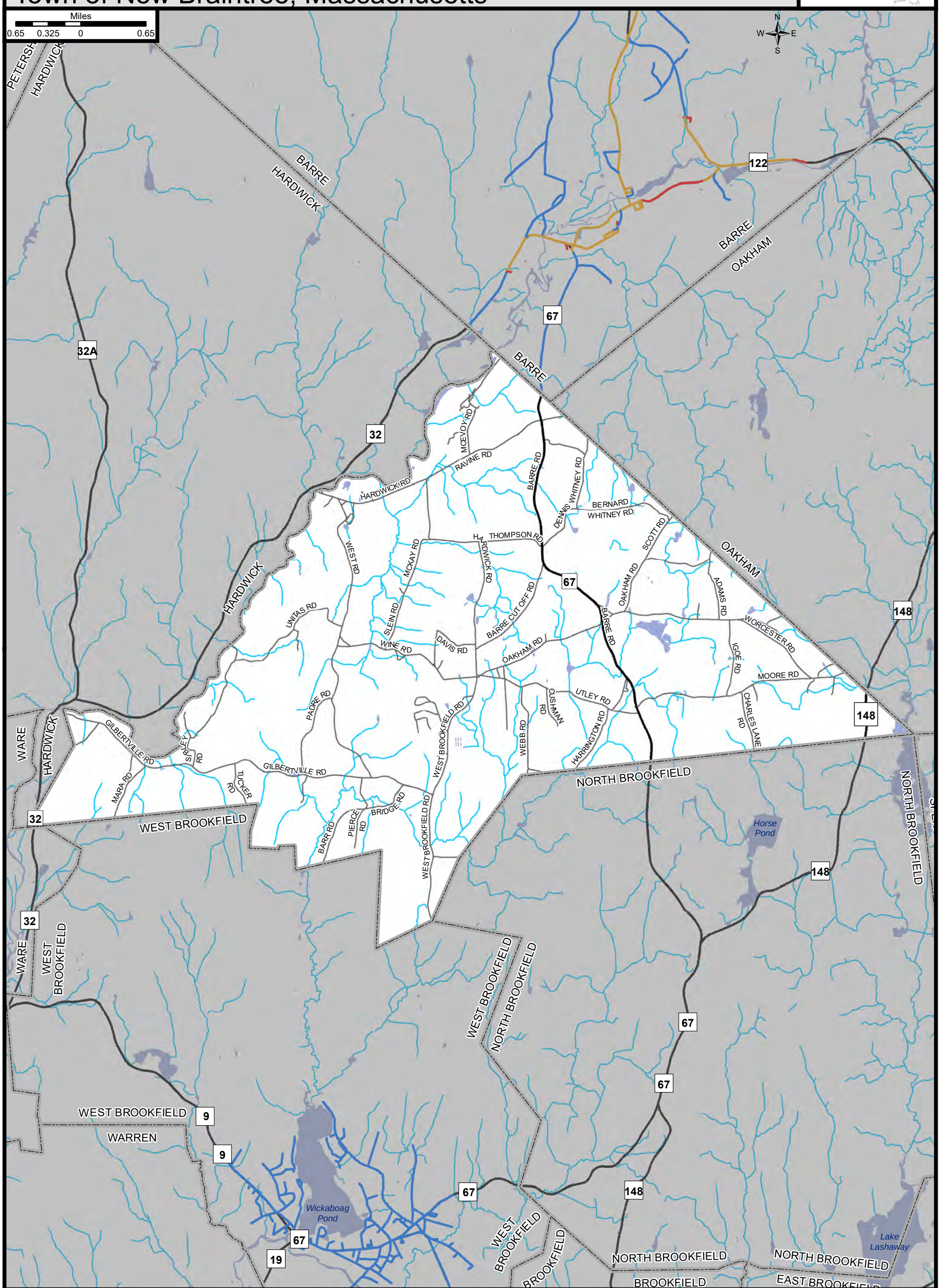
One Mercantile Street, Suite 520 - Worcester, MA 01608

Municipal Vulnerability Preparedness (MVP) Workshop

Date: 1/5/2021 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_ref_Zoning_11x17.mxd

Reference Map: Utility Infrastructure

Town of New Braintree, Massachusetts



Town Boundary
Water Bodies
Major Road
Local Road
Water Line

Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS.

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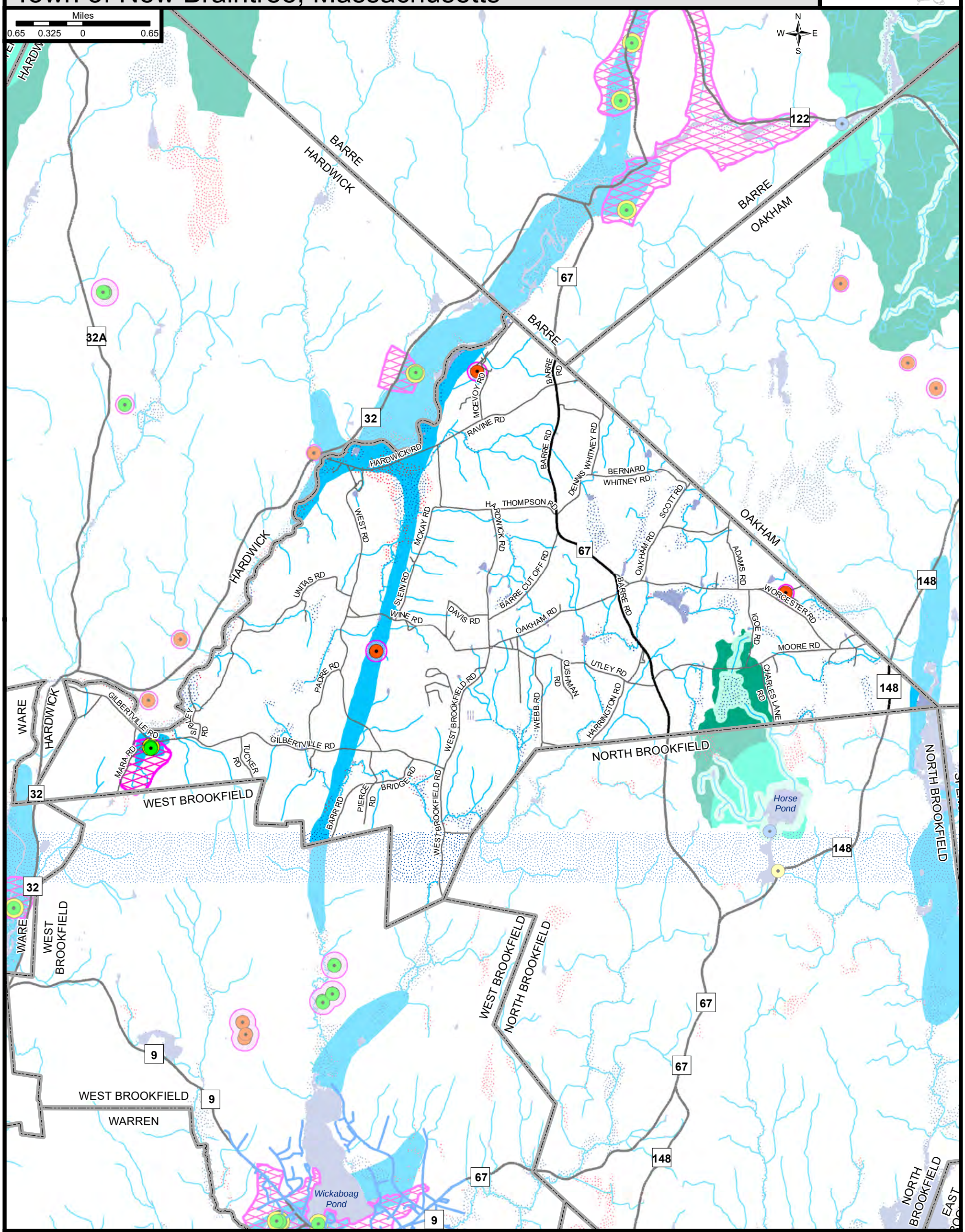
Central Massachusetts Regional Planning Commission
One Mercantile Street, Suite 520 - Worcester, MA 01608

Municipal Vulnerability Preparedness (MVP) Workshop

Date: 1/5/2021 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_ref_Water_Sewer_11x17.mxd

Reference Map: Water Resources

Town of New Braintree, Massachusetts



massDEP Public Water Supplies

- Community Groundwater Source
- Non-Community Groundwater Source
- Surface Water Intake
- Emergency Surface Water

Note > Public Water Supply, IWPA, Zone I and Zone II data current as of 12/2020.

- DEP Approved Zone I
- Approved Wellhead Protection Areas (Zone II)
- Interim Wellhead Protection Areas
- Aquifer

FEMA National Flood Hazard Layer (DFIRM Data) or FEMA Q3 Flood Zones (Pre-DFIRM)

- 100-year Flood Area
- 500-year Flood Area

Surface Water Supply Protection Area

- Zone A
- Zone B
- Zone C

- Water data m323

Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS.

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CMRPC
One Mercantile Street, Suite 520 - Worcester, MA 01608

Municipal Vulnerability Preparedness (MVP) Workshop

Reference Map: Orthophoto (2019)

Town of New Braintree, Massachusetts

Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS, Imagery from MassGIS.

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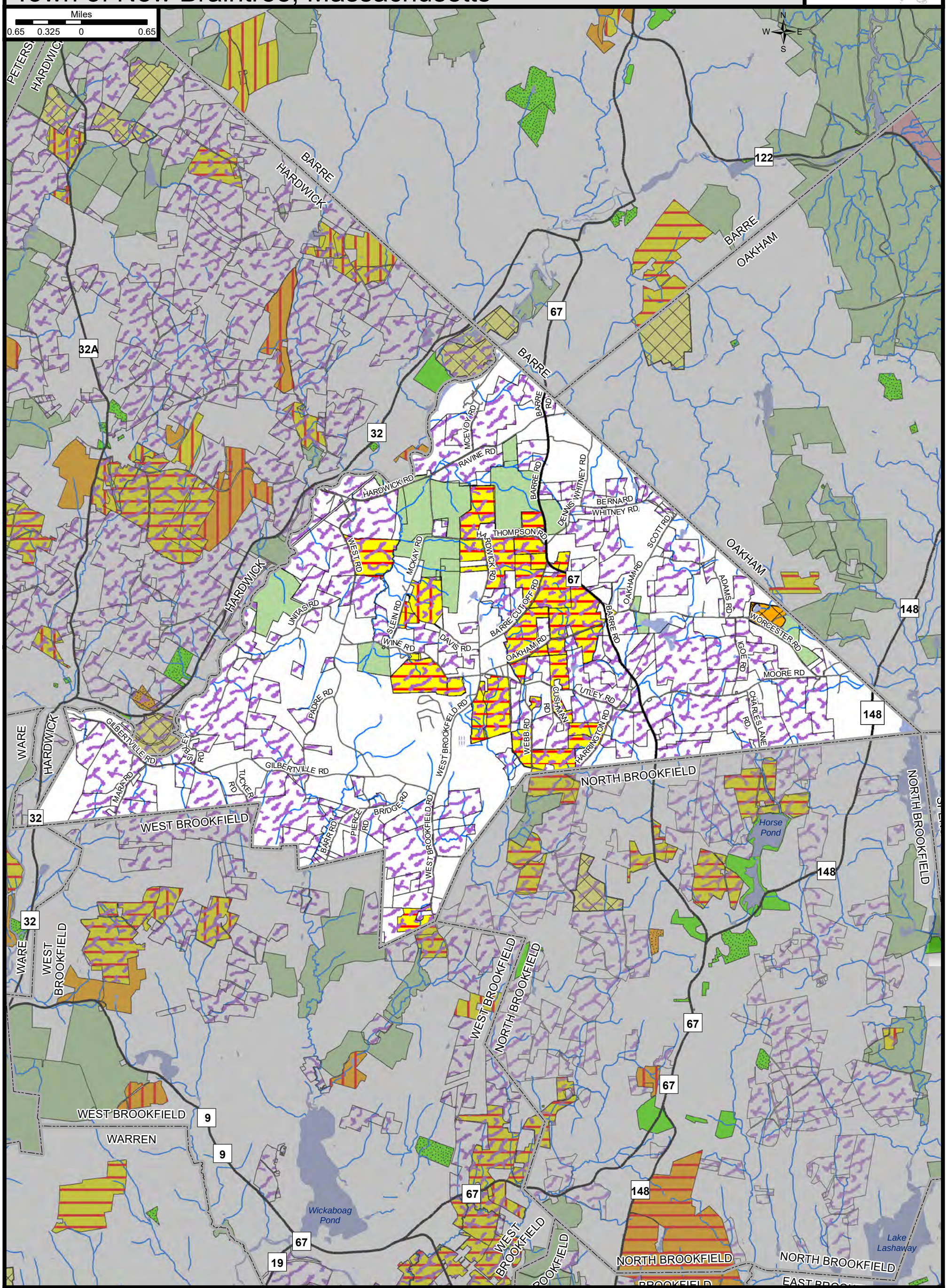
Municipal Vulnerability Preparedness (MVP) Workshop

Date: 1/4/2021 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_ref_Ortho_11x17.mxd

Reference Map: Open Space

Town of New Braintree, Massachusetts

Open Space data provided by MassGIS. Current as of 12/2020. Chapter Land data provided by Town.



Town Boundary
Water Bodies
Major Road
Local Road

Open Space Ownership
Federal
State
Municipal
Private
Non-Profit

Level of Protection
Perpetuity*
Limited
None

Chapter Land (61, 61A, 61B)
Conservation Restriction
Agricultural Preservation Restriction

Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS.
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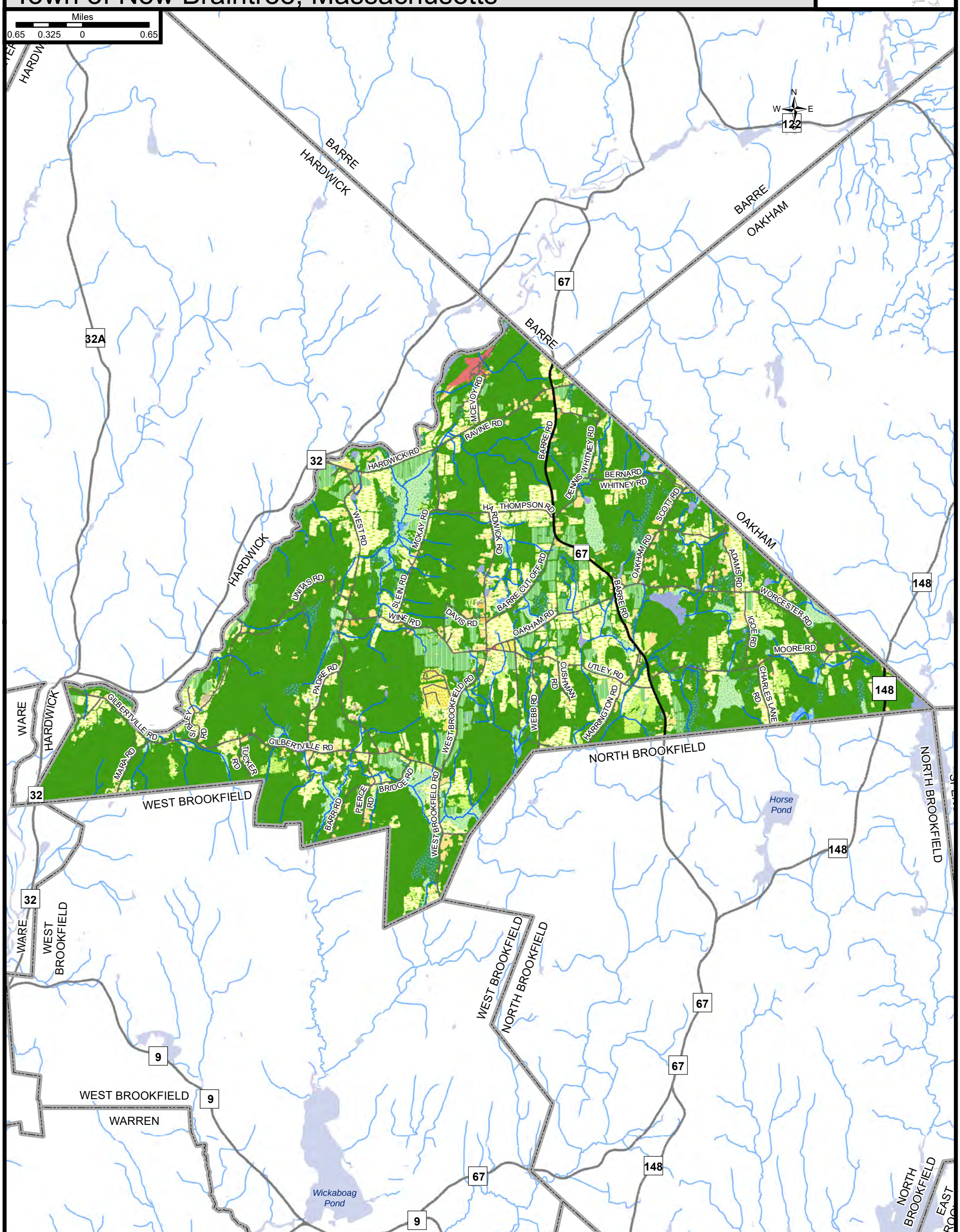
Date: 1/4/2021 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_ref_Open_Space_11x17.mxd

Reference Map: Land Use (2016)

Town of New Braintree, Massachusetts



Residential
Residential - Multi-Family
Commercial
Industrial
Mixed Use - Other
Urban Public/Instit...
Pasture/Hay
Cultivated
Forest
Scrub/Shrub
Bare Land
Forested Wetland
Non-forested Wetland
Saltwater Wetland
Water
Unconsolida... Shore
Aquatic Bed
Other Impervious
Developed Open Space
Right-of-way
Cranberry bog
Orchard
Nursery
Misc

Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS.

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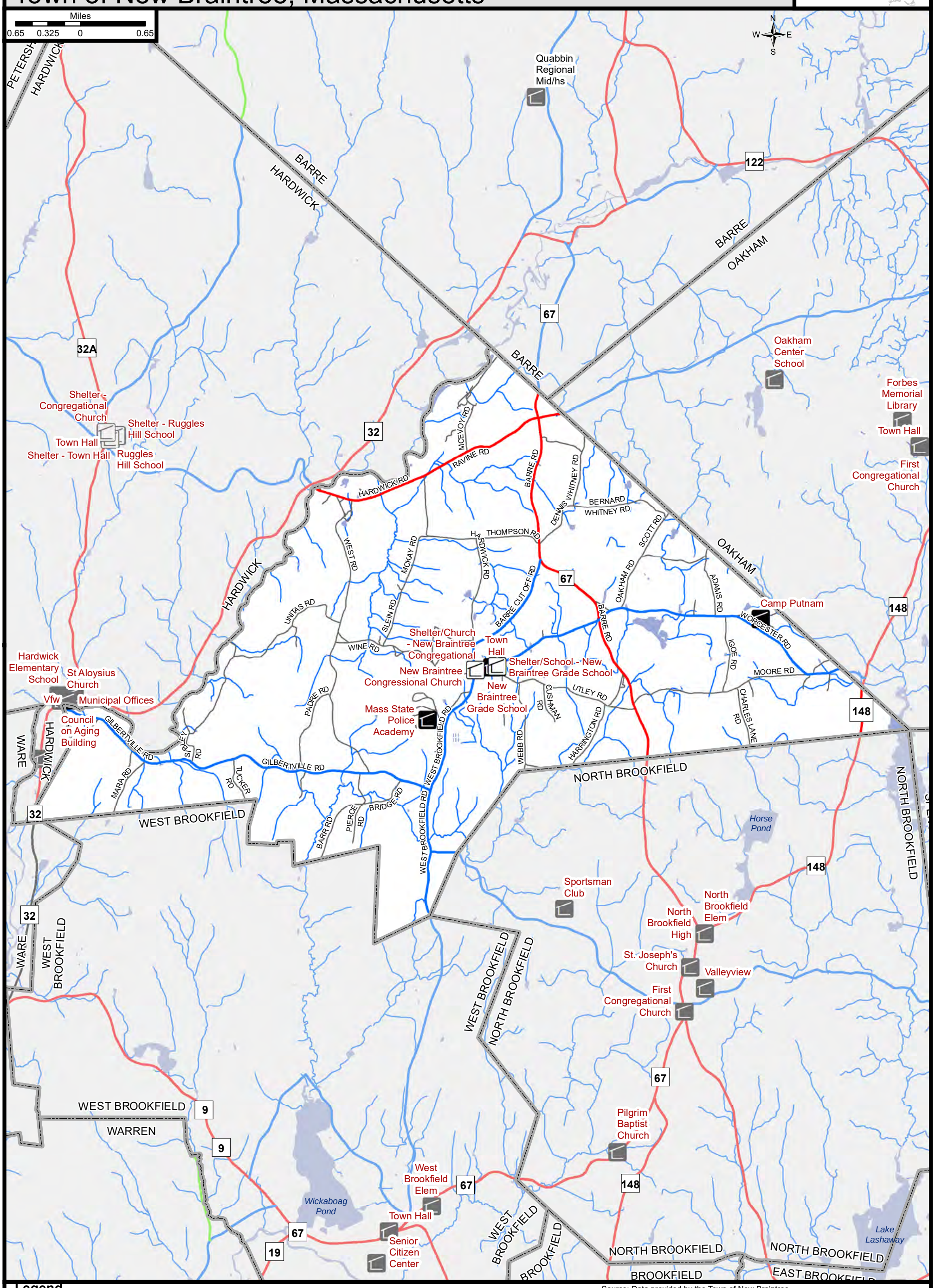
Date: 1/4/2021 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_ref_Landuse_2016_11x17.mxd

Reference Map: Evacuation Routes & Shelters

Town of New Braintree, Massachusetts



Legend

- Town Boundary
- Water Bodies
- Major Road
- Local Road
- Shelter
- Locally Identified Shelter

Evacuation Routes

- Highway
- Secondary
- Primary
- Tertiary

Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS.

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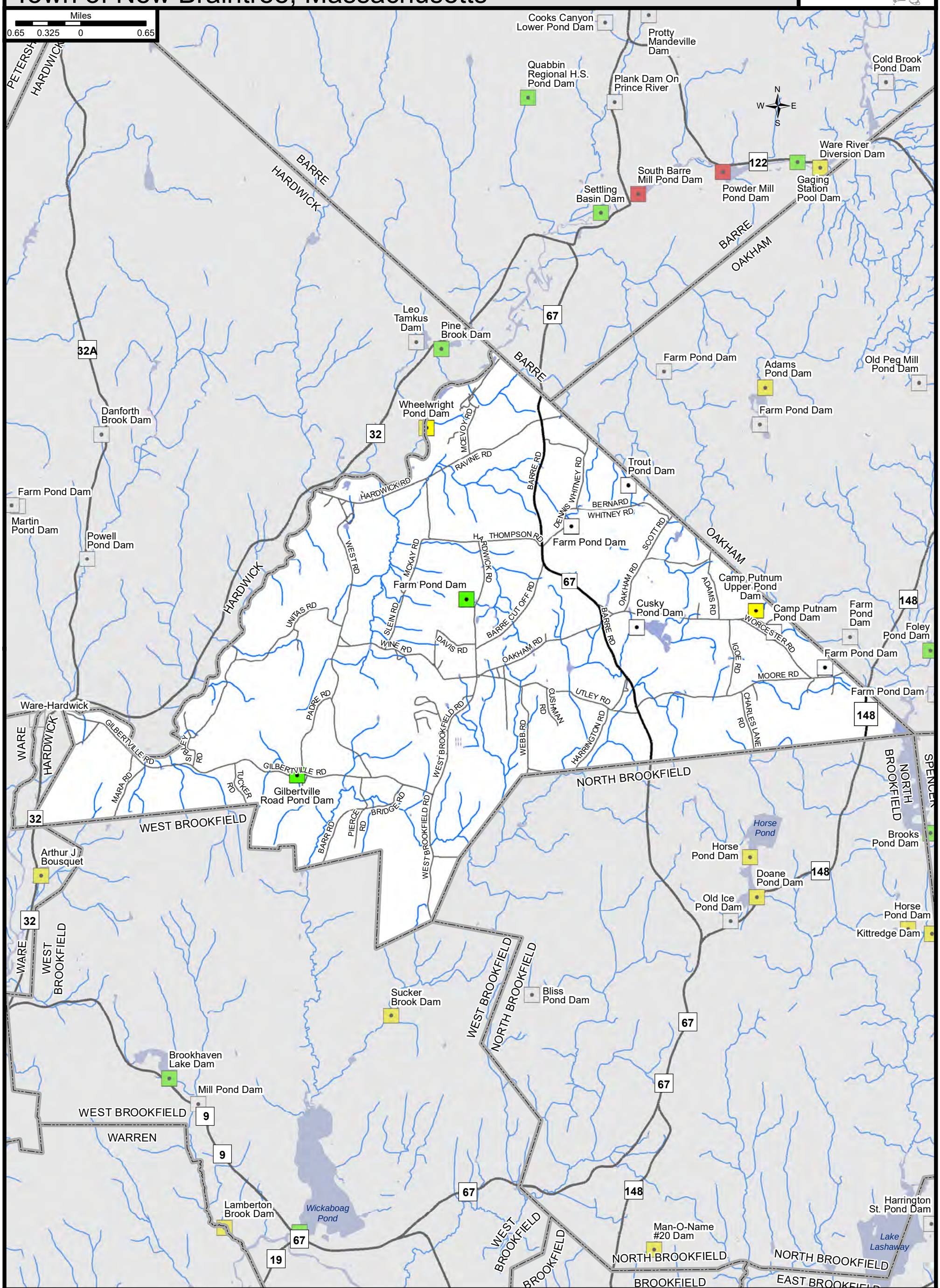
Date: 1/4/2021 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_ref_Evac_Routes_11x17.mxd

Reference Map: Dams (2012)

Town of New Braintree, Massachusetts



Legend

- Town Boundary
- Water Bodies
- Major Road
- Local Road

Dams

- High Hazard
- Significant Hazard
- Low Hazard
- Not Rated, Too Small

Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS.

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Municipal Vulnerability Preparedness (MVP) Workshop

Date: 12/18/2020 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_ref_Dams_11x17.mxd

Municipal Vulnerability Preparedness (MVP) Workshop: New Braintree

Reference Map: Table Map

Legend

- Town Boundary
- Town Halls
- EOC
- Local Police
- State Police
- County Sheriff
- Fire Station
- Schools (Pre-K through High School)

Dams

- High Hazard
- Significant Hazard
- Low Hazard
- N/A

- Major Road
- Local Road
- Active Service Railroads
- Water Bodies
- Streams
- MassDEP Wetlands
- High Slope (15% and above)

FEMA National Flood Hazard Layer (DFIRM)

- 100-year Flood Area

CIH (Points)

- Vulnerable Critical Infrastructure
- Non-vulnerable Critical Infrastructure
- Hazard

- Vulnerable Critical Infrastructure
- Non-vulnerable Critical Infrastructure
- Hazard

- Vulnerable Critical Infrastructure
- Non-vulnerable Critical Infrastructure
- Hazard

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0.28 0.56 0.84 1.12 Miles

N W E S

data source: FEMA's Digital Flood Insurance Rate maps(DFIRM).
s sources include MassGIS, MassDOT, and CMRPC
n depicted on this map is for planning purposes only. This
n is not adequate for legal boundary definition, regulatory
on, or parcel-level analysis. Use caution
positional accuracy.

the Central Massachusetts Regional Planning Commission
Suite 520 Worcester, MA 01608

Municipal Vulnerability Preparedness (MVP) Workshop: New Braintree

Reference Map: Table Map

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8 0.56 0.84 1.12 Miles

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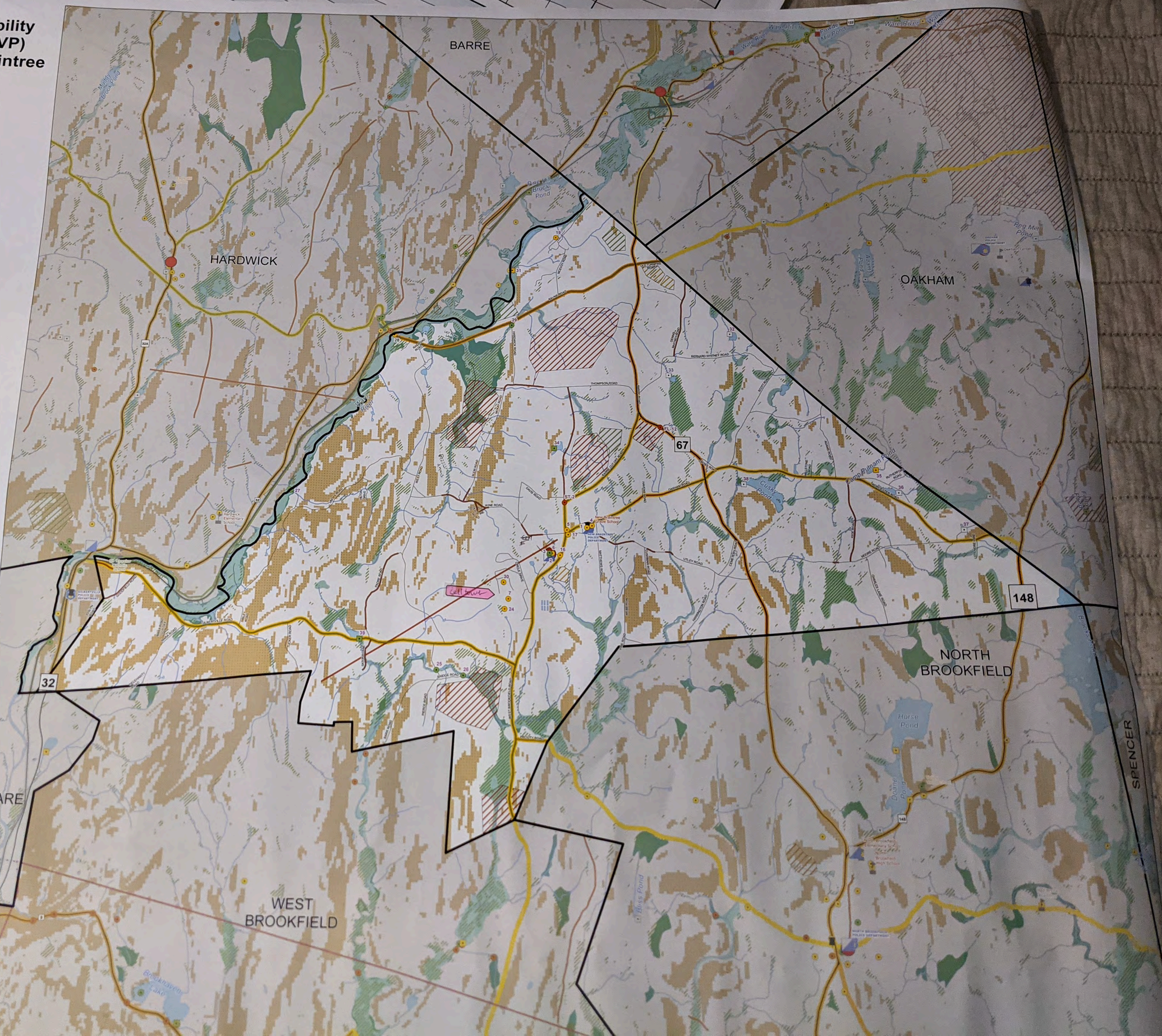


Community Resilience Building Risk Matrix

TABLE 1

www.CommunityResilienceBuilding.org

New Braintree Table 1

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

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

Features	Location	Ownership	V or S	Description	Extreme Heat/Drought	Extreme Cold/Winter Storms	Severe Storms (Wind)	Flooding/Exreme Precipitation	Priority H - M - L	Time Short Long Ongoing
Infrastructural										
Private wells	Townwide	Private	V	drinking water, vulnerable to salt and drought	explore well water testing programs that are townwide to get baseline data and figure out if there is an issue that needs to be further explored, through DEP?; survey residents regarding well depth/drought impacts; possible well maintenance programs; plan for long-term growth of community and assess future infraastructure needs				H for sampling	S/O
Broadband	Townwide	?	V	internet, impact to communication during storms						
Firepond	Townwide, Sibley Road	Private	V	not maintained and not sure who maintains them; not enough fireponds; there is a need to have more fireponds to increase firefighting ability	increase the amount of fireponds in the appropriate places (drought); formalize who maintains the fireponds and explore volunteers to help maintain (drought); exploring altneratives for water such as a water tank (drought); create/formalize a plan for mutual aid among pond owners (drought); check/engage with the police academy regarding use of water tower, check if a dry hydrant can be installed near town hall/school (drought)				H/M	L
Flood control	Wine Road, McCay Road culvert	State	V	dam on Wine Rd, culverts, post 55 flood, Barre Lower Falls Dam	Engage the "State" (police academy?) to determine the status of the "dam" on Wine Rd (flooding);				H	S
Trees near powerlines	Town right of ways	Private, Charter (National Grid), and Town	V	ash trees vulnerable	Explore the town's capacity to trim trees (wind); town forestry management plan (wind)				H	O
Salt shed	West Brookfield Road	Town	V	leaky	pursue resources to either replace or repair salt shed (winter); perform testing if needed				H	S
Dirt and paved roads salting		Town (Highway Department)	V/S	grooved stones	increase the amount of bioswales, rain gardens, and drainage on private property to improve drainage of roads (winter/flooding); pave more roads in town (winter); increase the level of tech on highway dept vehicles to help control amount of salt applied (winter)					
Lack of water supply for agriculture			V	during drought, water tank	See Firepond (row 11); coordinate system of mutual aid for farmers; create partnership to develop fireponds/agriculture water ponds, develop a simple program, explore other grant opprotunities (Farm Service Agency); explore additional tanks				H	S/O
Country drainage	Ravine Rd		V	stormwater, pollution, drainage ponds, culverts; Ravine Rd	see private wells (row 9); test for pollution; explore nature based solutions (flooding); develop a policy or a system to maintain the drainage (flooding)				M	O
Police Academy			S/V		reengage to establish communication/relationship					
School and Town Hall		Town	V/S	as shelters, both have generators, floodprone	Create a CERT team to assist in the staffing of the shelter (6-10 people), community outreach; education on disaster prep					
Societal										
Communication			S	Reverse 911 and CodeRED, website	perform engagement to get more residents signed up				H	S/O
Community			S	internal networks, help during storm, fundraising	Build of the strength of the community to formalize some of those internal networks; perform some community engagement and education; engage those on the fringe; create an inventory of shareable assests of residents; explore funding for home ec and EMT training within schools				M	O
Forest maintenance (private land)		Private	S	limits fires, good habitat	develop a forestry management plan, that also engages private citizens through education				L	
Regional aid			S	Hardwick						
Community groups			S/V	same people doing everything	outreach to build involvement					
Public departments			S	police, fire, highway, BOS						
Town resources			V/S	budget, need more, people make up for it						

Elderly			V/S	1/3 of town over 60; COA and BOH	Create a comprehensive disaster/evac plan to address issue of vulnerable persons within town and to address overall		
Farms			S/V	food, cold storage, no informal assets plan or inventory	See 'community' above re asset inventory (farms can share water, ponds, equipment, etc.)		
Council on Aging			S	have evacuation list of vulnerable population, not formal	Formalize as part of larger evac/shelter plan		
External workforce			V?	migrant, seasonal, regional, mostly day workers			
Environmental							
Street trees			V	ash	forest management plan (see above)		
Forest health			V	ash, clear cuts, fires	forest management plan (see above)		
Forests			V	wildfires, no trains, private clearcutting	forest management plan (see above)		
Invasives	forest edges		V	forests, bogs	explore programs for private citizens for invasive removal; eductation on said programs	M	O
Beavers	any low spot of water, Moore		V	flooding	explore alternative methods of dealing with beavers that is not removal; possible explore training for locals to remove beavers; expand education regarding beavers around the board (private and	M	
Aquifer			S/V	protection; well testing for PFAS; education	see private wells (row 9); test for pollution?		
light pollution			V	from police academy	reopen communication with police academy; redefine covenant, memorandum of understanding, mutual expectations, for unboarding commanders	H	S/O
Wetlands			S/V	strong conservation but can dry up during drought			
Land transfer		Private	V	is there a plan when people age out; conservation. Farm landscapes key part of town identity. Ag land will be rarer in future due to climate/developent.	Develop a prioritized list of agricultural properties/Chapter 61 lands for acquisition or conservation as part of Open Space and Recreation Plan and other planning. Pursue resources to implement.		
Solar PV sites on farmland		Private	V	Farms being converted to solar generation	Develop outreach/education program to inform landowners of impacts from (and alternatives to) conversion of farms to solar sites; Consider partnering with nearby communities with similar problems		
State owned property			V	poor communication, poor upkeep			

Community Resilience Building Risk Matrix

TABLE 2

www.CommunityResilienceBuilding.org

New Braintree Table 2

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

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

Features	Location	Ownership	V or S	Description	Extreme Heat/Drought	Extreme Cold/Winter Storms	Severe Storms (Wind)	Flooding/Exreme Precipitation	Priority H - M - L	Time Short Long Ongoing
Infrastructural										
Barre sub-stations, 604W3 & W2	N. Brookfield Rd, Barre	National Grid	S							
Utility lines	Townwide	National Grid	V	Tree damage	Must continue tree maintainence- making sure to keep up trimming and scheduling maintainence of trees. Need someone to have the official responsibility to lead this- There is a tree warden- Need continued efforts with Nat. grid, tree warden, and town of New Braintree					
Town Hall + School as shelter	Memorial Dr.	Town	S	needs a shower; Quabbin High School is regional shelter with showers						
Celltower	State Police Academy	Verizon	S/V		Town needs to reach out to Verizon to make sure the past problems do not happen again.					
Culverts	Utley Rd, Wine Rd, McEvoy Rd	Town	V	need replacement; McEvoy is collapsing	New culvert might be sinking in already- possibly a grant to fix the new culvert. Also Revene rd that turns into Harwick Road culvert may need to be replaced across from the Trump Cierra Farm. Already is a grant to redo Revene Road- keeps getting pushed back- need to ask Highway Dept. - Review the reasons why that grant money has not been implemented- Silver bridge all the way up to the Four Corners. -Townwide assessment of the culverts- which are current problems, which will be a problem in 10 years? Check out the culverts on other roads besides main roads. -**West Road and Unitas road**- took out the culvert and never replaced it- danger for driving in the winter due to ice					
Internet			V	Charter is coming, many can't get internet	Get more information on the cost- and make sure internet is accessible to all of the town- and no limitations based on income. Possibly make it lower for first-time usage for a year or two- Town could speak with Charter on behalf of the citizens to make sure internet is accessible to all income levels					
Emergency communications			V	reverse 911 is shared with Hardwick; Rutland Regional Communications Center	Solution in progress: Council on Aging and going door to door- putting together list of who can be signed up for reverse 911 at least for the senior population (more people of all ages currently signing up)					
Water access for fire			V	have mutual aid	Coordinate with Highway dept to stop knocking over destroying fire hydrants- very expensive to replace and reluctant to put in more "dry hydrants" that can pump in from a fire pond- Coordinate with them to resolve this issue- put them in their budget? Police Academy has 2 tanks with 450k gallons that the town is able to use in case of fire There are some fire ponds across town that the town can tap into to fight fires					
Mary Lane Emergency, Ware			V	closed, so bigger drive toWing (Palmer) & Worcester						
Fire Station and Highway building			V	need a whole new building	Pursuing grant funding to build a new building - the State has provided the land Town needs an exclusively grant person					
Bridge repairs			V	was built in 1939 - West Brookfield Road; other bridges over Ware River, especially Unitas Rd.	Explore grant funding for bridge repair/replacement- Infrastructure bill in Congress? And use the fact that it is two towns- Hardwick involved with New Braintree Evaluation effort of transportation/bridges of the whole town MassDOT is in charge of all the inspections of all roads- communicates with the town- gets the bridge closed but not fixed.					
Societal										
Active hunting community	Townwide		S	keeping game populations in check						

Social media/Facebook			S/V		Relies on good internet access		
Elder outreach			S	existing communicaiton strategy by mail and phone, knock on doors			
Emergency supplies/readiness			V	not enough cots, blankets; disinfection supplies, food, etc.; CERT Team need more members; solar power for green emergency backup	2 Trailers with emergency supplies- Need to go through the big trailer, already went through the smaller one (may be some supplies hiding in the big trailer)= Need to do inventory Need some younger people involved to volunteer- paper slip mailed to people with taxes- to let people know volunteers are needed- young people needed! State Police Academy has showers Using the Town Hall wold be better than using the school (which is run by diesel) Quabbin was also used as a shelter		
Community resilience/mutual aid			S	neighbors work together during emergencies; fuel assistance			
Governmental communications			V	department and committee coordination and discussions	Emergency Education brochure put up for new residents- even a section on their website for new residents to gain all important knowledge Talk to Selectmen about the insufficient collaborative communication between committees Reverse 911 is there but still need to fully implemented Use Quabbin school resources line to communicate with the town?- Ask Jessica Bennett		
Civic engagement			V	need more participation, burn-out of volunteers, recruit more	Everything volunteer- may be a barrier for those that cannot spend free time working for no compensation Electric sign to communicate with people- should it be on 67? Uptown? Share it half the week. Get a hold of a lot of people- portable message board Might not send everyone an email because seniors do not have email access- but might be able to see the sign		
School staffing available for emergencies			S	student community service requirements			
Older population				young people are leaving and not returning- no fair or events that will keep younger families in town	Beautiful school not going to use- get the internet and bring back the school- people are not buying houses because kids have to leave town to go to school Taxes are high- another reason young families are not staying No low income housing- might also be contributing to higher taxes Visioning with the Town- what is the vision for the town bringing younger people back in- conservation ristrictions on a lot of land- not a ton of lots left to build		
Environmental							
Tree health	Townwide		V	along roadways, tree warden and highway department trim trees; maple sugaring is more difficult	A lot of old dead trees (ash trees)- they may be bringing in another type of insect to fight these trees- happens to be a lot of old trees Figure out who is responsible for street trees and who handles all of the connected issues		
Ticks/Mosquitoes	Townwide		V	Lymes disease and EEE	Highlight stagnant ponds, areal spraying for mosquitoes by the State- just clipped the edge of New Braintree Outreach- Michelle Miller- how to be aware of Ticks etc. EEE- in NYS can't have tired with stagnant water in them- going to come to MA Encouraging the bat populations- building bat boxes and bat houses- reach out to Mass Wildlife		
Invasive species	Townwide		V	Emerald Ash Borer, gypsy moths, bittersweet plant	Education initiatives- people are not aware when they encourage certain plants to grow Pictures of invasive species- posted in post office and town hall to familiarize people with them		
Dam conditions	Wheelwright Pond, Wine Rd.		V				
Beavers & beaver dams	Townwide		V	higher population, fewer trappers	Not really a problem but if they are people can get a trapping permit from board of health- only issued out two permits last year Beaver decievers are another control option		
Regenerative Agriculture practices			could be a S	possible projects			
Erosion at State Police Academy fields	W. Brookfield Rd.	Commonwealth	V				
Farms, food supply, foodhub	Townwide		S	impacts on livestock and veggie farmers, lacck of water in general			

Forest fires, brush				landowners have Ch. 61 lands			
Pelatized human waste				being spread on agriculture, could be a treat to aquifer, they are paying people to take it	Recieve more state guidance of when it is safe to use this- Barre banned this		
New Braintree access to Quabbin Reservoir			S				

Community Resilience Building Risk Matrix

TABLE 3

www.CommunityResilienceBuilding.org

New Braintree Table 3

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

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

Features	Location	Ownership	V or S	Description	Extreme Heat/Drought	Extreme Cold/Winter Storms	Severe Storms (Wind)	Flooding/Exreme Precipitation	Priority H - M - L	Time Short Long Ongoing
Infrastructural										
Schools			S/V	has a generator, backup shelter						
Town Hall			S	primary shelter, backup generator, residents don't typically stay the night						
State Police Academy			S	need to make sure generators are working, can house 300 people, has full						
Dams			S/V	Indian Farm Dam - had an overflow pope that collapsed; Wheelwright Dam - wants to						
Culverts	Oakham Rd.		V	inadequate						
Airport			B	worry about homelad security						
Highway barn, fire station			V							
Private water, private wells			V	wells have dried in the past						
Town water - school, state police			V	water quality concerns						
Street trees			V	falling down from wind, dead ash trees, a lot of wind comes through, no removal/replacement program						
National Grid			V	slow to respond						
Roofs			V	need steeper roofs for snow build up prevention						
CERT class			S	teaches residents skills to handle emergencies						
Hospital in Ware			V	closing down, fully stops services in June, next closest hospital is 17 miles away						
Societal										
CodeRED			S/V	not a lof people are signed up						
Town website			S/V	needs updating, plan to update in the future						
Aging/Elderly population			V	no assisted living facilities, rely on family support						
Strong sense of community			S	willing to help, knowledge sharing						
Homeowners insurance			V	hard to get insurance in New Briantree due to "lack of firefighting"						
Camp Putnam			S/V	not winterized, has 10,000 gallons of diesel on site, large kitchen						
Zoning			S/V	want to maintain rural character; used to have zoning bylaw to preserve agriclture (only 5 houses per year were approved for building) - this bylaw was removed; want permanent restrictions						
APR land in Town			S							

Development			V							
Public education (schools)			V	risk to Town; schools take half of Town's budget; a lot of money to maintain the school; want to have home economic classes						
State government/state regulations			V	detrimental to Town, hard for smaller towns to maintain, regulatory overreach						
Emergency medical			S	have mutual aid agreements, might expand these						
Self sufficient community			S							
4H			S							
Environmental										
Tornado in 1970s										
Wildfire	Winnemissett Valley		V							
Beavers	Winnemissett Valley		V	building dams on man-made dams; Hollis Swamp Rd.; Partells Pond						
Ware River			S/V							
Hydrants			V							
Road paving			S/V	chemicals runoff						
Gypsy moths, Emerald Ash Borer			V							
Road salt			V	killing trees						
Ticks, Mosquitos, EEE, Vector Borne Disease			V							
Farms			S/V	losing some farmland to solar; used to have 40 dairy farms, now only have 2; in trouble						
Wetlands			V	new regulations, not draining as well						
Landtrusts			S	Town gets a stipend for land						
Solar farms			V	big concern						
Wildlife			V	exposure to more wild animals, wildlife disease						

Community Resilience Building Risk Matrix

TABLE # 5|

www.CommunityResilienceBuilding.org

H-M-L priority for action over the Short or Long term (and Ongoing)
V = Vulnerability S = Strength

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

				extreme heat drought	severe storms	extreme cold & winter storms	flooding	Priority H-M-L	Time Short Long Ongoing	Vote
Features										
Infrastructural	**Location**	**Ownership**	**V or S**							
private wells - drinking water - salt - drought	townwide	private	V							
broadband - internet - communication for storms	town wide	?	V							
fire ponds - not maintained not enough - hydrants need for more	town wide sibley rd	private	V							
flood control - post 55 flood - culverts - dams	wine road mccay rd culvert	State	V							
trees near powerlines - ash trees	town right of ways	private and charter / town (national grid)	V							
salt shed - leaky	well's brookfield road	town	V							
dirt & paved roads salting - ground stones - freezes through cracks		town - hwy dept	V/S							
lack water supply for agriculture drought water tank during			V							
country drainage - drainage ponds storm water pollution - culverts			V							
school + town hall as shelters - generators - flood prone		town	S/V							
Societal										
communication - reverse 911 - website			S							
community - internal networks help during storm - neighboring			S							
forest maintenance - termite trees - goat herbicide		private	S							
regional aid - Hardwick etc			S							
comm. groups - some			S/V							
public depts - police, fire, highway - FOS			S							
town resources - budget - need more up front			V/S							
Elderly 1/3 of town cold vt - cold storage - plan			V/S							
farms - food - cooler - no plan?			S/V but no plan	informal assets conservation						
external workforce for farms - migrant? - seasonal?			V?							
Environmental										
Street trees - ash			V							
forest health - ash - clear cuts → fires			V							
forests → wildfires no trains remove clear cutting			V							
invasives → forests bugs	forest edges		V							
floaters - creek flooding - road washed	Note P.S. dam low spot in water		V							
aquifer → protection wells testing			S b/c its protected V unsure							
hydro waste water on state property			V							
[illegible] @ work property poor comm. poor upkeep			V							
air pollution from police academy			V							
parks, strong conservation but dry up during drought / land / water is there a plan when talk about conservation			S/V V?							

Sill traps + Ponds

Fire Station

Fire Academy

Police Academy

Elderly

Community Resilience Building Risk Matrix

Group 2

H-M-L priority for action over the Short or Long term (and Ongoing)
V = Vulnerability S = Strength

www.CommunityResilienceBuilding.org

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

Features	Location	Ownership	V or S	Extreme heat / drought	Severe Storm	Extreme cold / Winter storms	Flooding / Extreme Precipitation	Priority H-M-L	Time Short Long Ongoing	Vote
Infrastructural										
Barre Sub-stations 604W3 & W2	N. Brookfield Rd Barre	National Grid	S							
Utility lines - tree damage	town-wide	National Grid	V							
Town Hall + School as shelter	Memorial Dr.	town-wide	S	needs a shower Quabbin H.S. ~~has~~ regional shelter w/showers						
Cell tower	State Police Academy	Verizon	S & V							
Culverts	Utley Rd & Wine McEvay Rd	town	V	need replacement McEvay is collapsing						
Internet - Charter is coming, many can't get internet			V							
Emergency Communications			V	reverse 911 is shared w/ Hardwick Rutland Regional Communications Center						
Water access for fire			V	have mutual aid						
Mary Lane Emergency, Ware			V	Closed, so bigger drive to Wing (Palmer) & Worcester						
~~West Brookfield Rd.~~ bridge repairs			V	was built in 1939 - West Brookfield Road other bridges over Ware River, especially Unitas Rd						
Societal										
Active hunting community	town-wide		S	keeping game populations in check						
Social Media / Facebook			S & V							
Elder Outreach			S	existing communication strategy by mail & phone or knock on doors						
Emergency Supplies / Readiness			V	not enough cots, blankets disinfectant supplies, food, etc.	CERT team need more members Solar power for green emergency back-up					
Community Resilience / Mutual aid			S	neighbors work together during emergencies fuel assistance						
Governmental Communications				Department + committee coordination & discussions						
Civic Engagement			V	need more participation burn-out of volunteers, recruit more						
School staffing available for emergencies				student community service requirements						
Older Population, ~~[illegible]~~										
Environmental										
Tree Health		town-wide	V	along road ways tree warden & highway dept. trim trees	maple sugaring is more difficult					
Invasive species		town-wide	V	Emerald Ash borer gypsy moths, bittersweet						
Dam Conditions	Wheelwright Pond Wine Road		V							
Beavers & beaver dams	town-wide		V	higher population & fewer trappers						
Regenerative Agriculture Practices			could be S	possible projects						
Erosion at State Police Academy fields	W. Brookfield Rd	Commonwealth	V							
Farms, food supply, food hub	town-wide		S	impacts on livestock & veggie farmers lack of water in general						
Forest fires, brush				landowners have ch. 61 plans						
New Braintree access to Quabbin reservoir										

Community Resilience Building Risk Matrix

www.CommunityResilienceBuilding.org

H-M-L priority for action over the Short or Long term (and Ongoing)
V = Vulnerability S = Strength

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

Features	Location	Ownership	V or S	Flooding	~~Extreme~~ Heat / Drought	Extreme Cold / Winter Storms	Severe Storms	Priority H-M-L	Time Short Long Ongoing	Vote
Infrastructural										
Schools			S	has a generator, backup shelter						
Town Hall			S	primary shelter, backup generator, don't typically stay the night						
State police Academy			S	need to make sure generators are working can house 300 people - have offered this full kitchen, generators						
Dams Wheelwright Dam ↳ want removed			S/V	Indian Farm Dam? had an overflow pipe that collapsed						
Culverts	Dalcham Rd		V	inadequate						
Airport			B	worry about Homeland security						
Highway Barn, Fire Station			V							
Private Water, Private Wells			V	wells have dried in the past						
Town Water → school, State Police			V	water quality issue						
Street Trees			V	falling down from wind, dead ash trees, a lot of wind comes through + no removal/replacement						
Societal										
CodeRED			B	not a lot of people signed up						
Town Website			B	needs updating, plan to update in the future						
Large Aging / Elderly Population				no assisted family						
Strong sense of community										
Camp Putnam				not winterized, 10,000 gallons of diesel, Kitchen						
Zoning want to maintain rural character				had zoning to preserve agriculture used to be 5 houses a year that could be built / want permanent restrictions						
APR Land in town										
Development										
Public Education / Schools K-12 is regional			V	Risk to Town, take half of town's budget Risk that schools may get pulled out, lot of money to maintain			want home EC classes			
state government / state regulations				detrimental to Town, hard for smaller towns to maintain Regulatory overreach						
Environmental										
Tornado 1970s										
wildfire hazards	Winimisset Valley									
Beavers *	Winimisset			building dams on man-made dams Hollis Swamp Pond, Partells Pond						
Weir River										
Hydrants										
Re paving Road → chemicals, runoff,			B							
Gypsy Moths, Emerald Ash Borer			V							
Road Salt			V	killing trees						
Ticks, Mosquitos, EEE, vector borne illness			V							
Farms			B	losing some farmland to solar, 2 dairy farms, mini farms, most people don't irrigate						
Wetlands → new regulations, not draining as well			V	had 40 working farms (dairy) in trouble with hay						

National Grid
↳ slow to respond
↳ was a brush fire from active wire

Need steeper roofs
cert class
↳ teach people skills to handle emergencies

Hospital in Weare
↳ closing
↳ stops in June
next closest hospital is 17 miles away

Emergency Medical
↳ have mutual aid agreements
↳ might expand mutual aid agreements

if sufficient community

must
te land → town gets a stipend

r farms
big concern

ure to
wildlanimals
s, etc.

Homeowners insurance is difficult in
↳ lack of Town fire fighting

Dry Hydrants → places to put fire ponds, hard to maintain
highway mows over them
→ if not an actual pond → sediment flows
→ Gilbertville Rd → one of the better fire ponds
→ grass grows up over them
→ Expensive

Private Sewer → not viable to have public sewer
contamination from cellar wells
→ beaver did this

Railroad → haul salt *
not a major rail line, no sparking concerns
→ don't notify Town of activities

Invasive Plants → big issue, bittersweet → tearing trees down
→ most people don't know invasive species
→ government programs to remove invasives
→ full of poison ivy

Camp. Putnam
Ware River → swimming

No recreational water access

Library → public education programs
Friends of Library
Computer access → access to books is slow

Not connected to CWMARS

Internet → Finally made an agreement w/ Charter
last Town in Commonwealth with internet
96% tie in

Cell Coverage → good in some spots, depends on carrier

Winnimissett Wildlife Management Area → state owned

Hunting → strength, lots of access

East Quabbin Land Trust → strength, manage land, valuable to have undeveloped lands,

Public Transportation → none in town,
have to go to other towns to access
busses/vans → rely on family/friends

Barre Falls Dam → Flood protection
for the Ware River
→ Army Corps of Engineers

Beaver Dams

Brooks Pond → deepest but no access

Ware River is probably deepest

Fox swamp → state owned

Historical building in center of Town
Lots of old houses
Battle of New Braintree
Shays Rebellion

Have not adopted CPA

Enforce the state wetlands protection Act, not Town By-law

drinking water quantity/supply	School for lead wells tomorrow	V	- fountains @ school lead problem 2nd floor - testing of water may be needed during drought - would like map of good well water across farms, USDA funding program - droughts already being experienced - most of town ~~[illegible]~~ has wells - tank @ police academy provides water for ~~[illegible]~~ center, vulnerability - town muni. buildings could use a well - one aquifer along Dame river - few heavy metals in wells, good water in wells (iron and magenese [hard water] not contaminated)
Stormwater			- not collected/~~dumped~~ ~~in Brooks~~, no collective system
Sector			- divisive, restrictive, court cases
town-wide siren		V	- especially in areas where there isn't cell service - currently no siren
Storage for emergency supplies		V	- no storage, can't apply for grants b/c no place to put supplies w/n town - road closures would make access to supplies difficult

↑

Table 2

New Braintree Municipal Vulnerability Preparedness Program

Top Priority Actions Survey

Thank you for participating in New Braintree's MVP Virtual Workshop! All of the presentations, background information, and the matrix that you helped to fill out during the workshop can be accessed at the following link: https://www.dropbox.com/sh/uux8j8ccfd6fd1i/AAD0aLjXGyOsa4Pjn2iN7c_da?dl=0

Based on the action items that you came up with during the workshop, we have developed the survey below. This survey will help us identify the top priority actions that New Braintree should take in order to become more resilient. Please take some time to review those materials in the link above and complete the survey by **Monday, May 3, 2021**. The results of this survey will be described in the report and discussed during the listening session.

Thank you in advance for your help with this next step!

1. Please rank the following hazards in order from most concern (1) to least concern (4):

Flooding/Extreme Precipitation

Extreme Heat/Drought

Severe Storms (Wind)

Extreme Cold/Winter Storms (Snow/Ice)

2. Please vote on whether the following actions are High, Medium, or Low priorities. High priority actions are necessary to meet existing requirements or are needed to help prepare for/prevent a potential hazard. Low priority action items will help the town build resilience, but are not immediately necessary. Medium

priority actions are somewhere in between.

	High	Medium	Low
Establish a plan for the long-term growth of the community and assess future infrastructure needs.	○	○	○
Perform Town-wide well water testing to identify pollution or drought vulnerabilities.	○	○	○
Establish a public outreach and education campaign regarding well water, addressing depth and drought issues.	○	○	○
Improve the Town's access to water by constructing new fireponds or dry hydrants around Town. Establish a firepond maintenance strategy to ensure that the fireponds remain functioning. Engage volunteers and partnerships to help with maintenance of the fireponds/dry hydrants.	○	○	○

	High	Medium	Low
Perform a Town-wide culvert assessment.	○	○	○
Perform a water supply feasibility study to identify potential alternatives to water access.	○	○	○
Perform a Town-wide bridge assessment, and research funding opportunities to replace or repair bridges in Town.	○	○	○
Replace or repair salt shed on West Brookfield Rd.	○	○	○
Establish a CERT Team with 6-10 individuals to assist in staffing the shelter and educate the public on disaster preparedness.	○	○	○
Develop a policy or system to address and maintain stormwater drainage around Town.	○	○	○

	High	Medium	Low
Identify why the existing grant to repave Ravine Road has not been used yet. Make any necessary adjustments in order to utilize that grant for the repaving.			
Establish a program to reduce the costs of internet access in order to make it more accessible for all income levels. Work with the internet company to establish this, and distribute information to residents on internet access, costs, and any other internet FAQs.			
Continue the door-to-door campaign to sign residents up for CodeRED/Reverse 911.			

	High	Medium	Low
Establish a series of education and outreach campaigns that address the following issues: CodeRED/Reverse 911; volunteer opportunities and community involvement; emergency and disaster preparedness; youth engagement; and engagement with vulnerable or fringe populations.			
Improve the Town's disaster preparedness by creating a comprehensive disaster and evacuation plan that addresses vulnerable persons in Town. Utilize the Council on Aging to assist in disaster and sheltering plans. Create an inventory of disaster and emergency supplies available to the Town. Establish alternative shelter plans.			

	High	Medium	Low
Establish a relationship with Verizon ensure proper maintenance of the celltower.	○	○	○
Re-establish relationship with the State Police Academy and engage their partnership on a variety of resiliency issues.	○	○	○
Research different grant opportunities and apply for funding.	○	○	○
Work with the schools to establish Home Economics and EMT Training courses in the curriculum.	○	○	○
Install an electric sign or portable message boards around Town to expand communication.	○	○	○
Create and distribute a New Resident education brochure highlighting important information about the Town.	○	○	○

	High	Medium	Low
Create an inventory of shareable assets, resources, and services of residents. Coordinate mutual aid for farmers around Town.			
Improve the Town's website to make information more accessible. Add a section to the website dedicated to new residents.			
Develop a Forestry Management plan to address issues of drought, invasive species, and wildfire in forests throughout Town.			
Identify alternative beaver removal methods including beaver deceivers. Train local residents to remove beavers or construct beaver deceivers. And establish an education campaign on living with beavers.			

	High	Medium	Low
Utilize regional and State invasive species removal programs. Develop an outreach campaign to educate residents on identifying invasive species and proper techniques to remove them. Print photos of invasive species and place them around Town to display what they look like.			
Develop a prioritized list of agricultural and Chapter 61 lands for acquisition or conservation. Identify grant opportunities or pursue other resources to implement this strategy.			
Establish a Tree Removal and Replacement program to address the health of street trees. The program should utilize understory trees that are drought and pest resistant.			

	High	Medium	Low
Develop an outreach campaign to educate residents on bioswales, rain gardens, and storm drainage. Distribute resources that highlight plant species native to this region.			
Inform landowners about the impacts of converting farms to solar sites in an educational campaign.			
Develop an outreach campaign to educate residents on tick and mosquito awareness. Install bat boxes around Town to control mosquito populations.			

3. Please vote on whether the following actions are Short, Long, or Ongoing projects. Short term projects are straightforward and can be completed within two years. Long term projects take a longer time to complete, may require initial studies or public engagement strategies, and tend to be more complex. Ongoing projects are never truly completed. They require continuous action from year to year in order to maintain resilience.

	Short	Long	Ongoing
Establish a plan for the long-term growth of the community and assess future infrastructure needs.			
Perform Town-wide well water testing to identify pollution or drought vulnerabilities.			
Establish a public outreach and education campaign regarding well water, addressing depth and drought issues.			
Improve the Town's access to water by constructing new fireponds or dry hydrants around Town. Establish a firepond maintenance strategy to ensure that the fireponds remain functioning. Engage volunteers and partnerships to help with maintenance of the fireponds/dry hydrants.			

	Short	Long	Ongoing
Perform a Town-wide culvert assessment.			
Perform a water supply feasibility study to identify potential alternatives to water access.			
Perform a Town-wide bridge assessment, and research funding opportunities to replace or repair bridges in Town.			
Replace or repair salt shed on West Brookfield Rd.			
Establish a CERT Team with 6-10 individuals to assist in staffing the shelter and educate the public on disaster preparedness.			
Develop a policy or system to address and maintain stormwater drainage around Town.			

	Short	Long	Ongoing
Identify why the existing grant to repave Ravine Road has not been used yet. Make any necessary adjustments in order to utilize that grant for the repaving.			
Establish a program to reduce the costs of internet access in order to make it more accessible for all income levels. Work with the internet company to establish this, and distribute information to residents on internet access, costs, and any other internet FAQs.			
Continue the door-to-door campaign to sign residents up for CodeRED/Reverse 911.			

	Short	Long	Ongoing
Establish a series of education and outreach campaigns that address the following issues: CodeRED/Reverse 911; volunteer opportunities and community involvement; emergency and disaster preparedness; youth engagement; and engagement with vulnerable or fringe populations.			
Improve the Town's disaster preparedness by creating a comprehensive disaster and evacuation plan that addresses vulnerable persons in Town. Utilize the Council on Aging to assist in disaster and sheltering plans. Create an inventory of disaster and emergency supplies available to the Town. Establish alternative shelter plans.			

	Short	Long	Ongoing
Establish a relationship with Verizon ensure proper maintenance of the celltower.			
Re-establish relationship with the State Police Academy and engage their partnership on a variety of resiliency issues.			
Research different grant opportunities and apply for funding.			
Work with the schools to establish Home Economics and EMT Training courses in the curriculum.			
Install an electric sign or portable message boards around Town to expand communication.			
Create and distribute a New Resident education brochure highlighting important information about the Town.			

	Short	Long	Ongoing
Create an inventory of shareable assets, resources, and services of residents. Coordinate mutual aid for farmers around Town.			
Improve the Town's website to make information more accessible. Add a section to the website dedicated to new residents.			
Develop a Forestry Management plan to address issues of drought, invasive species, and wildfire in forests throughout Town.			
Identify alternative beaver removal methods including beaver deceivers. Train local residents to remove beavers or construct beaver deceivers. And establish an education campaign on living with beavers.			

	Short	Long	Ongoing
Utilize regional and State invasive species removal programs. Develop an outreach campaign to educate residents on identifying invasive species and proper techniques to remove them. Print photos of invasive species and place them around Town to display what they look like.			
Develop a prioritized list of agricultural and Chapter 61 lands for acquisition or conservation. Identify grant opportunities or pursue other resources to implement this strategy.			
Establish a Tree Removal and Replacement program to address the health of street trees. The program should utilize understory trees that are drought and pest resistant.			

	Short	Long	Ongoing
Develop an outreach campaign to educate residents on bioswales, rain gardens, and storm drainage. Distribute resources that highlight plant species native to this region.			
Inform landowners about the impacts of converting farms to solar sites in an educational campaign.			
Develop an outreach campaign to educate residents on tick and mosquito awareness. Install bat boxes around Town to control mosquito populations.			

4. Please vote for what you believe is the top priority INFRASTRUCTURAL action from the list below.

- ○ Establish a plan for the long-term growth of the community and assess future infrastructure needs.
- ○ Perform Town-wide well water testing to identify pollution or drought vulnerabilities.
- ○ Establish a public outreach and education campaign regarding well water, addressing depth and drought issues.
- ○ Improve the Town's access to water by constructing new fireponds or dry hydrants around Town. Establish a firepond maintenance strategy to ensure that the fireponds remain functioning. Engage volunteers and partnerships to help with maintenance of the fireponds/dry hydrants.
- ○ Perform a Town-wide culvert assessment.
- ○ Perform a water supply feasibility study to identify potential alternatives to water access.
- ○ Perform a Town-wide bridge assessment, and research funding opportunities to replace or repair bridges in Town.
- ○ Replace or repair salt shed on West Brookfield Rd.
- ○ Establish a CERT Team with 6-10 individuals to assist in staffing the shelter and educate the public on disaster preparedness.
- ○ Develop a policy or system to address and maintain stormwater drainage around Town.
- ○ Identify why the existing grant to repave Ravine Road has not been used yet. Make any necessary adjustments in order to utilize that grant for the repaving.
- ○ Establish a program to reduce the costs of internet access in order to make it more accessible for all income levels. Work with the internet company to establish this, and distribute information to residents on internet access, costs, and any other internet FAQs.
- ○ Continue the door-to-door campaign to sign residents up for CodeRED/Reverse 911.

5. Please vote for what you believe is the top priority SOCIETAL action from the list below:

- ○ Establish a series of education and outreach campaigns that address the following issues: CodeRED/Reverse 911; volunteer opportunities and community involvement; emergency and disaster preparedness; youth engagement; and engagement with vulnerable or fringe populations.
- ○ Improve the Town's disaster preparedness by creating a comprehensive disaster and evacuation plan that addresses vulnerable persons in Town. Utilize the Council on Aging to assist in disaster and sheltering plans. Create an inventory of disaster and emergency supplies available to the Town. Establish alternative shelter plans.
- ○ Establish a relationship with Verizon ensure proper maintenance of the celltower.
- ○ Re-establish relationship with the State Police Academy and engage their partnership on a variety of resiliency issues.
- ○ Research different grant opportunities and apply for funding.
- ○ Work with the schools to establish Home Economics and EMT Training courses in the curriculum.
- ○ Install an electric sign or portable message boards around Town to expand communication.
- ○ Create and distribute a New Resident education brochure highlighting important information about the Town.
- ○ Create an inventory of shareable assets, resources, and services of residents. Coordinate mutual aid for farmers around Town.
- ○ Improve the Town's website to make information more accessible. Add a section to the website dedicated to new residents.

6. Please vote for what you believe is the top priority ENVIRONMENTAL action from the list below:

- ○ Develop a Forestry Management plan to address issues of drought, invasive species, and wildfire in forests throughout Town.
- ○ Identify alternative beaver removal methods including beaver deceivers. Train local residents to remove beavers or construct beaver deceivers. And establish an education campaign on living with beavers.
- ○ Utilize regional and State invasive species removal programs. Develop an outreach campaign to educate residents on identifying invasive species and proper techniques to remove them. Print photos of invasive species and place them around Town to display what they look like.
- ○ Develop a prioritized list of agricultural and Chapter 61 lands for acquisition or conservation. Identify grant opportunities or pursue other resources to implement this strategy.
- ○ Establish a Tree Removal and Replacement program to address the health of street trees. The program should utilize understory trees that are drought and pest resistant.
- ○ Develop an outreach campaign to educate residents on bioswales, rain gardens, and storm drainage. Distribute resources that highlight plant species native to this region.
- ○ Inform landowners about the impacts of converting farms to solar sites in an educational campaign.
- ○ Develop an outreach campaign to educate residents on tick and mosquito awareness. Install bat boxes around Town to control mosquito populations.

7. Please vote for TWO additional top priority actions that you believe New Braintree should complete in order to build resilience. You may select actions from any category (Infrastructural, Societal, and Environmental), but do not select any actions that you already selected in the previous questions.

	Vote 1	Vote 2
Establish a plan for the long-term growth of the community and assess future infrastructure needs.		
Perform Town-wide well water testing to identify pollution or drought vulnerabilities.		
Establish a public outreach and education campaign regarding well water, addressing depth and drought issues.		
Improve the Town's access to water by constructing new fireponds or dry hydrants around Town. Establish a firepond maintenance strategy to ensure that the fireponds remain functioning. Engage volunteers and partnerships to help with maintenance of the fireponds/dry hydrants.		

	Vote 1	Vote 2
Perform a Town-wide culvert assessment.		
Perform a water supply feasibility study to identify potential alternatives to water access.		
Perform a Town-wide bridge assessment, and research funding opportunities to replace or repair bridges in Town.		
Replace or repair salt shed on West Brookfield Rd.		
Establish a CERT Team with 6-10 individuals to assist in staffing the shelter and educate the public on disaster preparedness.		
Develop a policy or system to address and maintain stormwater drainage around Town.		

	Vote 1	Vote 2
Identify why the existing grant to repave Ravine Road has not been used yet. Make any necessary adjustments in order to utilize that grant for the repaving.		
Establish a program to reduce the costs of internet access in order to make it more accessible for all income levels. Work with the internet company to establish this, and distribute information to residents on internet access, costs, and any other internet FAQs.		
Continue the door-to-door campaign to sign residents up for CodeRED/Reverse 911.		

	Vote 1	Vote 2
Establish a series of education and outreach campaigns that address the following issues: CodeRED/Reverse 911; volunteer opportunities and community involvement; emergency and disaster preparedness; youth engagement; and engagement with vulnerable or fringe populations.		
Improve the Town's disaster preparedness by creating a comprehensive disaster and evacuation plan that addresses vulnerable persons in Town. Utilize the Council on Aging to assist in disaster and sheltering plans. Create an inventory of disaster and emergency supplies available to the Town. Establish alternative shelter plans.		

	Vote 1	Vote 2
Establish a relationship with Verizon ensure proper maintenance of the celltower.		
Re-establish relationship with the State Police Academy and engage their partnership on a variety of resiliency issues.		
Research different grant opportunities and apply for funding.		
Work with the schools to establish Home Economics and EMT Training courses in the curriculum.		
Install an electric sign or portable message boards around Town to expand communication.		
Create and distribute a New Resident education brochure highlighting important information about the Town.		

	Vote 1	Vote 2
Create an inventory of shareable assets, resources, and services of residents. Coordinate mutual aid for farmers around Town.		
Improve the Town's website to make information more accessible. Add a section to the website dedicated to new residents.		
Develop a Forestry Management plan to address issues of drought, invasive species, and wildfire in forests throughout Town.		
Identify alternative beaver removal methods including beaver deceivers. Train local residents to remove beavers or construct beaver deceivers. And establish an education campaign on living with beavers.		

	Vote 1	Vote 2
Utilize regional and State invasive species removal programs. Develop an outreach campaign to educate residents on identifying invasive species and proper techniques to remove them. Print photos of invasive species and place them around Town to display what they look like.		
Develop a prioritized list of agricultural and Chapter 61 lands for acquisition or conservation. Identify grant opportunities or pursue other resources to implement this strategy.		
Establish a Tree Removal and Replacement program to address the health of street trees. The program should utilize understory trees that are drought and pest resistant.		

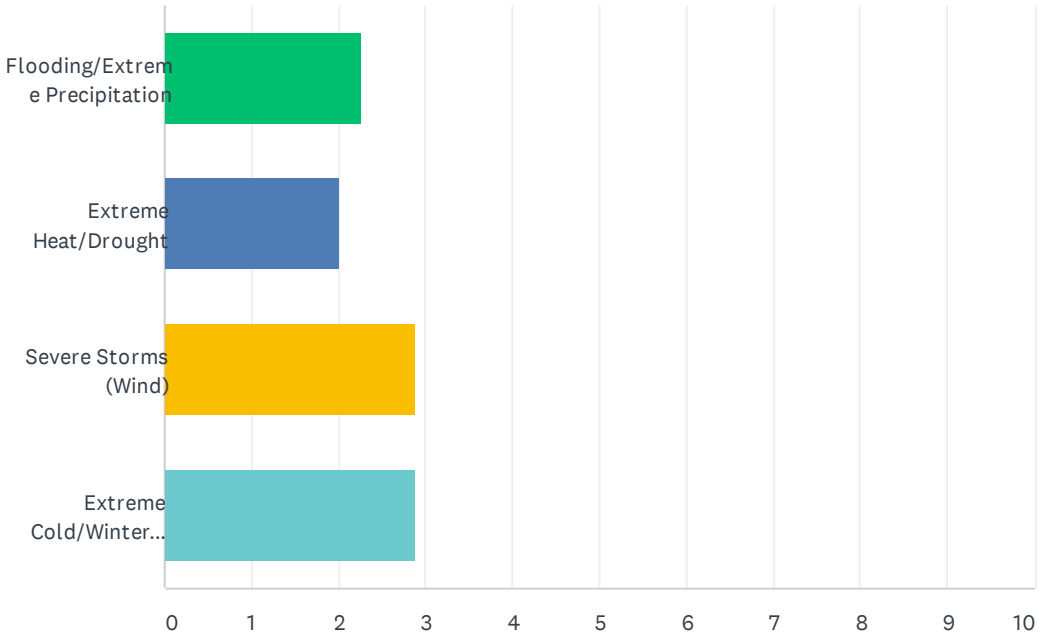
	Vote 1	Vote 2
Develop an outreach campaign to educate residents on bioswales, rain gardens, and storm drainage. Distribute resources that highlight plant species native to this region.		
Inform landowners about the impacts of converting farms to solar sites in an educational campaign.		
Develop an outreach campaign to educate residents on tick and mosquito awareness. Install bat boxes around Town to control mosquito populations.		

8. Please describe any other actions that were not listed in this survey that the town should take to improve resilience.

Thank you for participating in New Braintree's MVP Workshop and for taking the time to answer this survey!

Q1 Please rank the following hazards in order from most concern (1) to least concern (4):

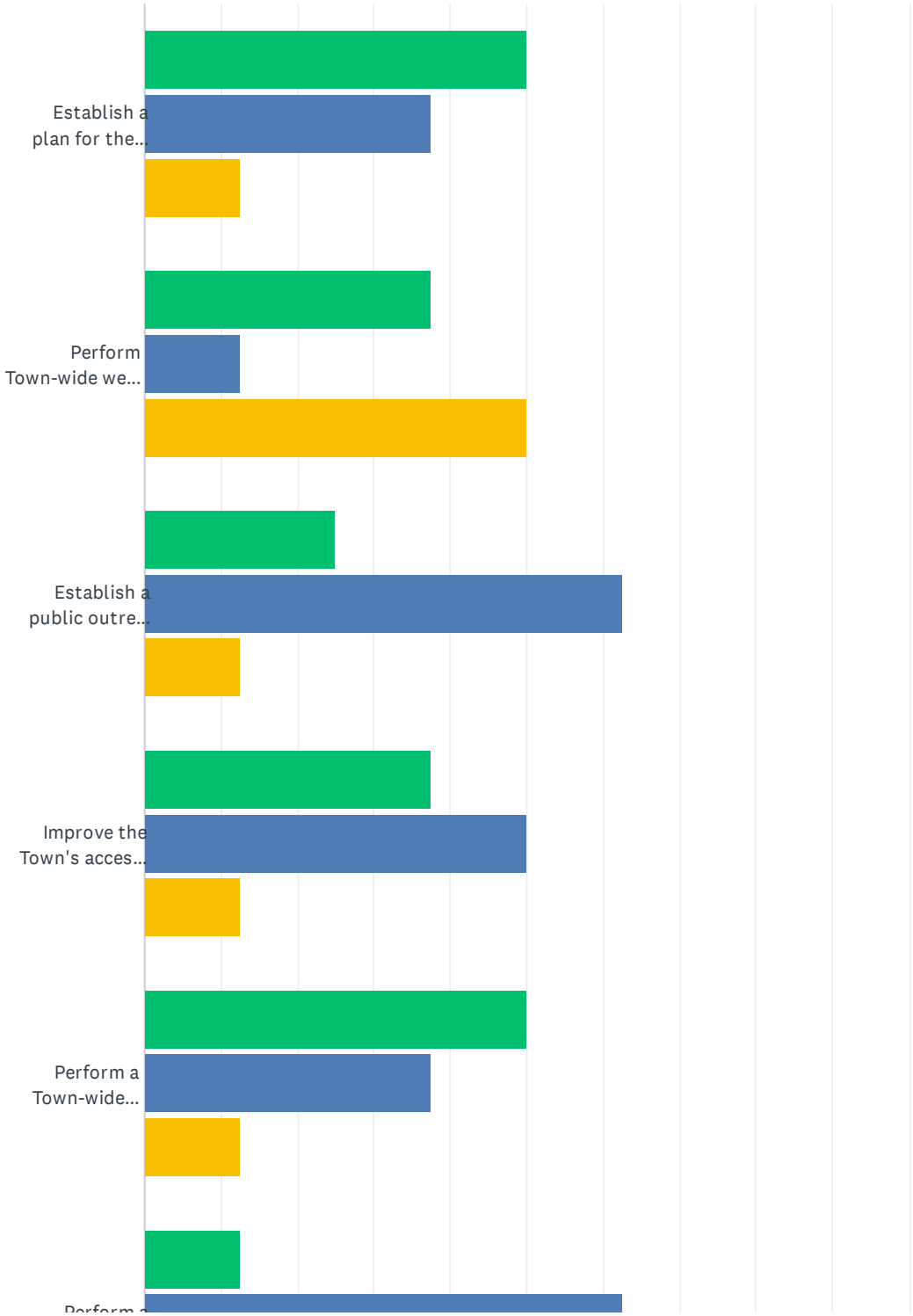
Answered: 8 Skipped: 0

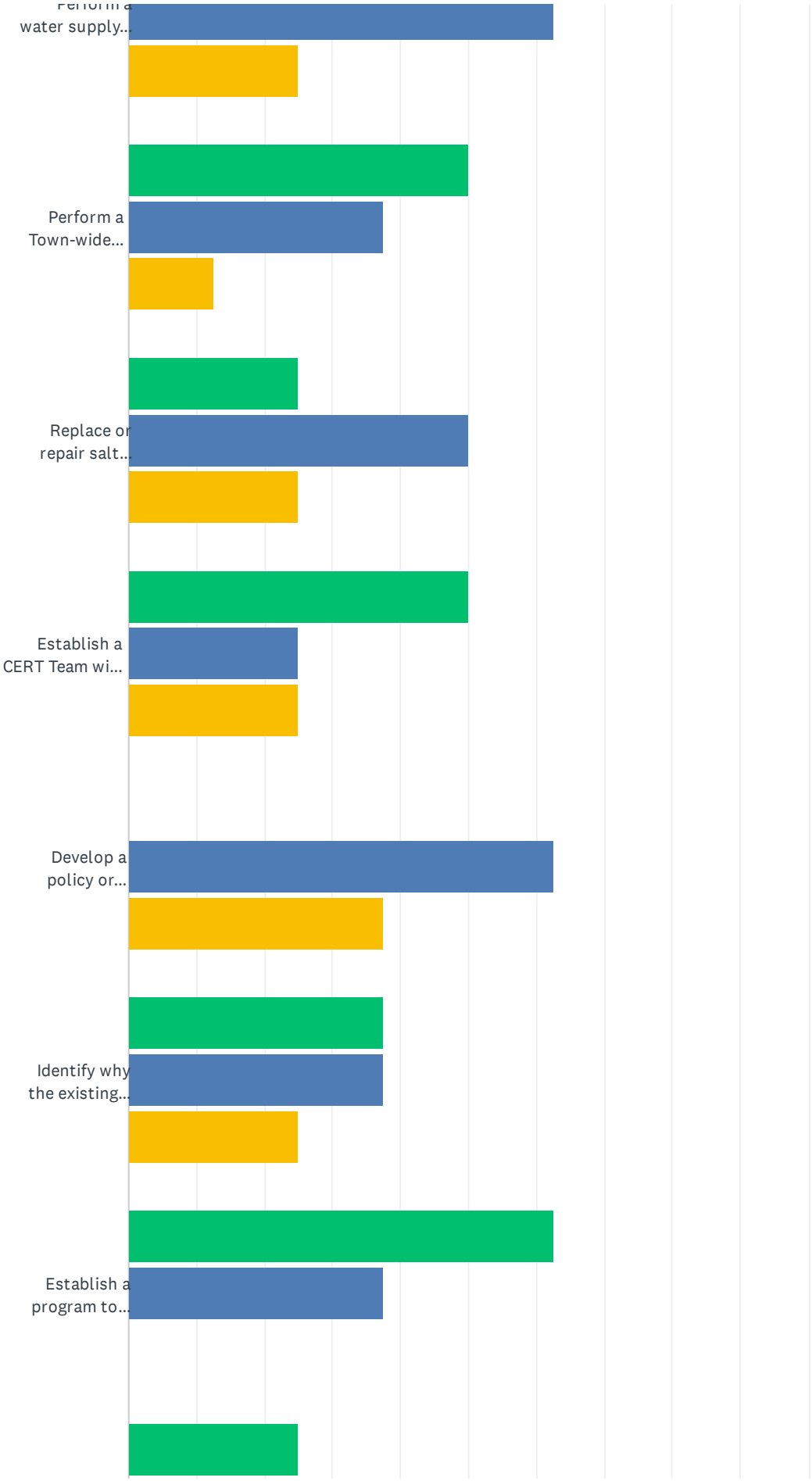


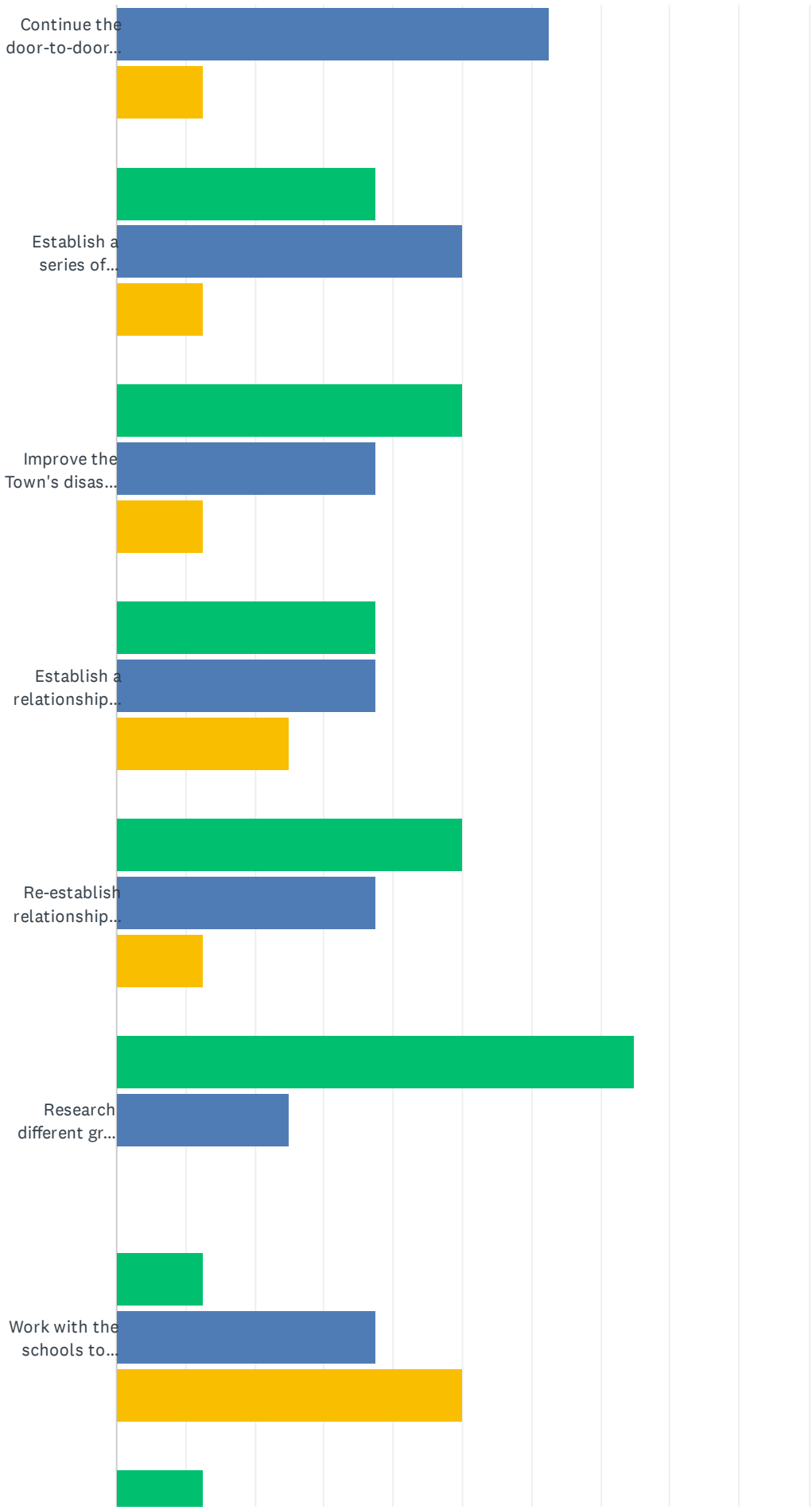
	1	2	3	4	TOTAL	SCORE
Flooding/Extreme Precipitation	12.50% 1	25.00% 2	37.50% 3	25.00% 2	8	2.25
Extreme Heat/Drought	25.00% 2	0.00% 0	25.00% 2	50.00% 4	8	2.00
Severe Storms (Wind)	25.00% 2	50.00% 4	12.50% 1	12.50% 1	8	2.88
Extreme Cold/Winter Storms (Snow/Ice)	37.50% 3	25.00% 2	25.00% 2	12.50% 1	8	2.88

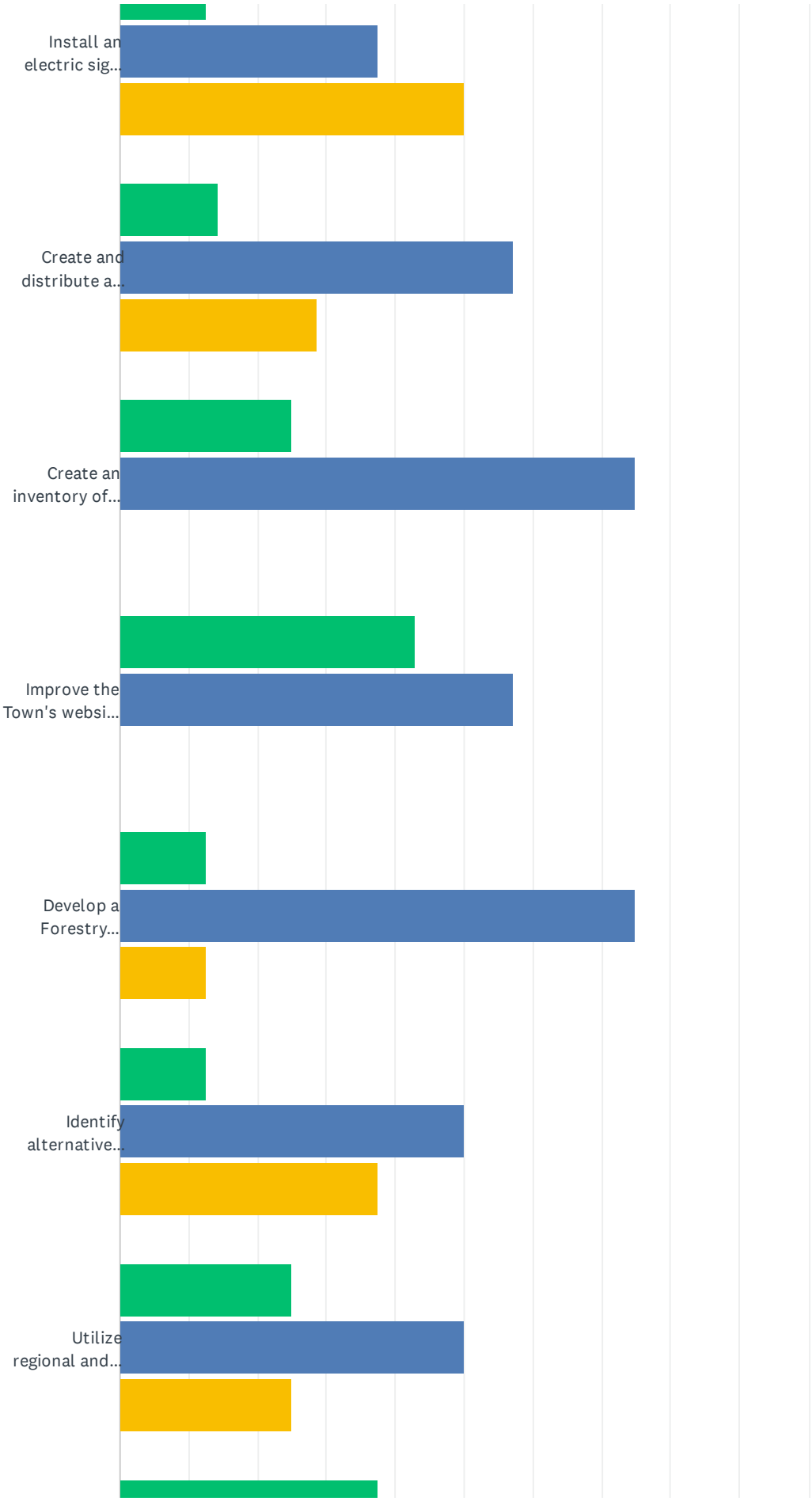
Q2 Please vote on whether the following actions are High, Medium, or Low priorities. High priority actions are necessary to meet existing requirements or are needed to help prepare for/prevent a potential hazard. Low priority action items will help the town build resilience, but are not immediately necessary. Medium priority actions are somewhere in between.

Answered: 8 Skipped: 0

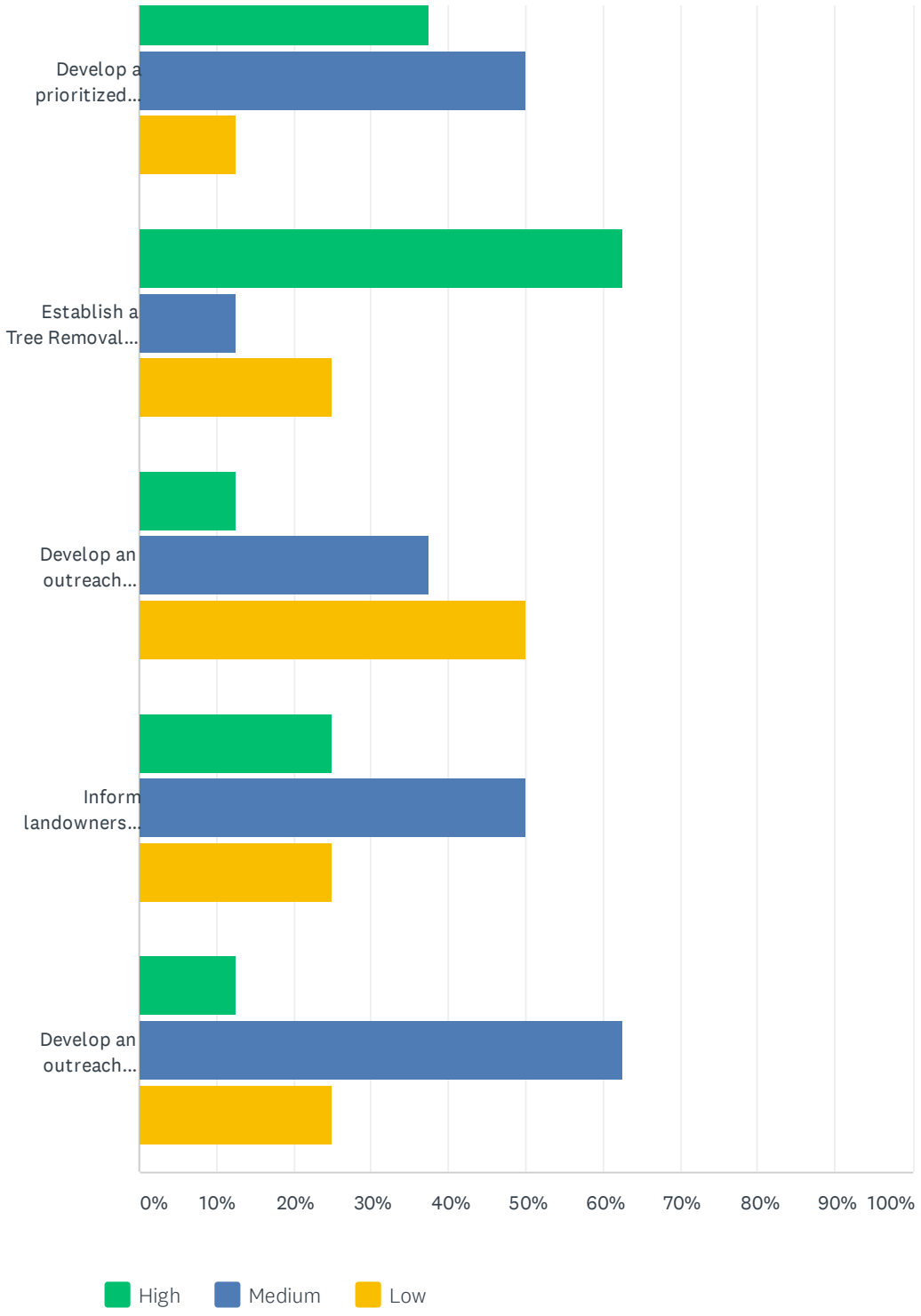



Perform a water supply...
Perform a Town-wide...
Replace or repair salt...
Establish a CERT Team wi...
Develop a policy or...
Identify why the existing...
Establish a program to...


Continue the door-to-door...
Establish a series of...
Improve the Town's disas...
Establish a relationship...
Re-establish relationship...
Research different gr...
Work with the schools to...


Install an electric sig...
Create and distribute a...
Create an inventory of...
Improve the Town's websi...
Develop a Forestry...
Identify alternative...
Utilize regional and...

New Braintree Municipal Vulnerability Preparedness Program

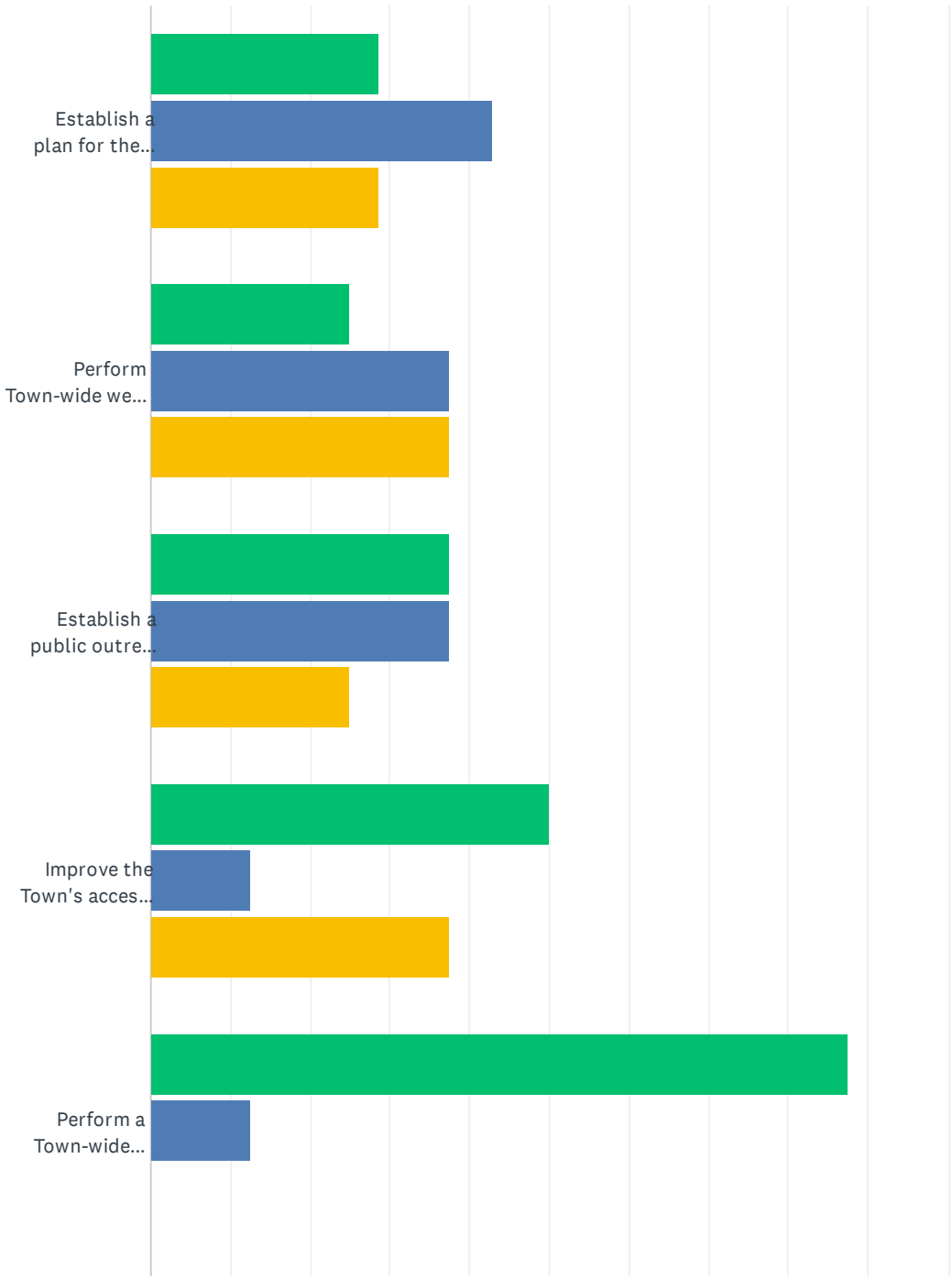


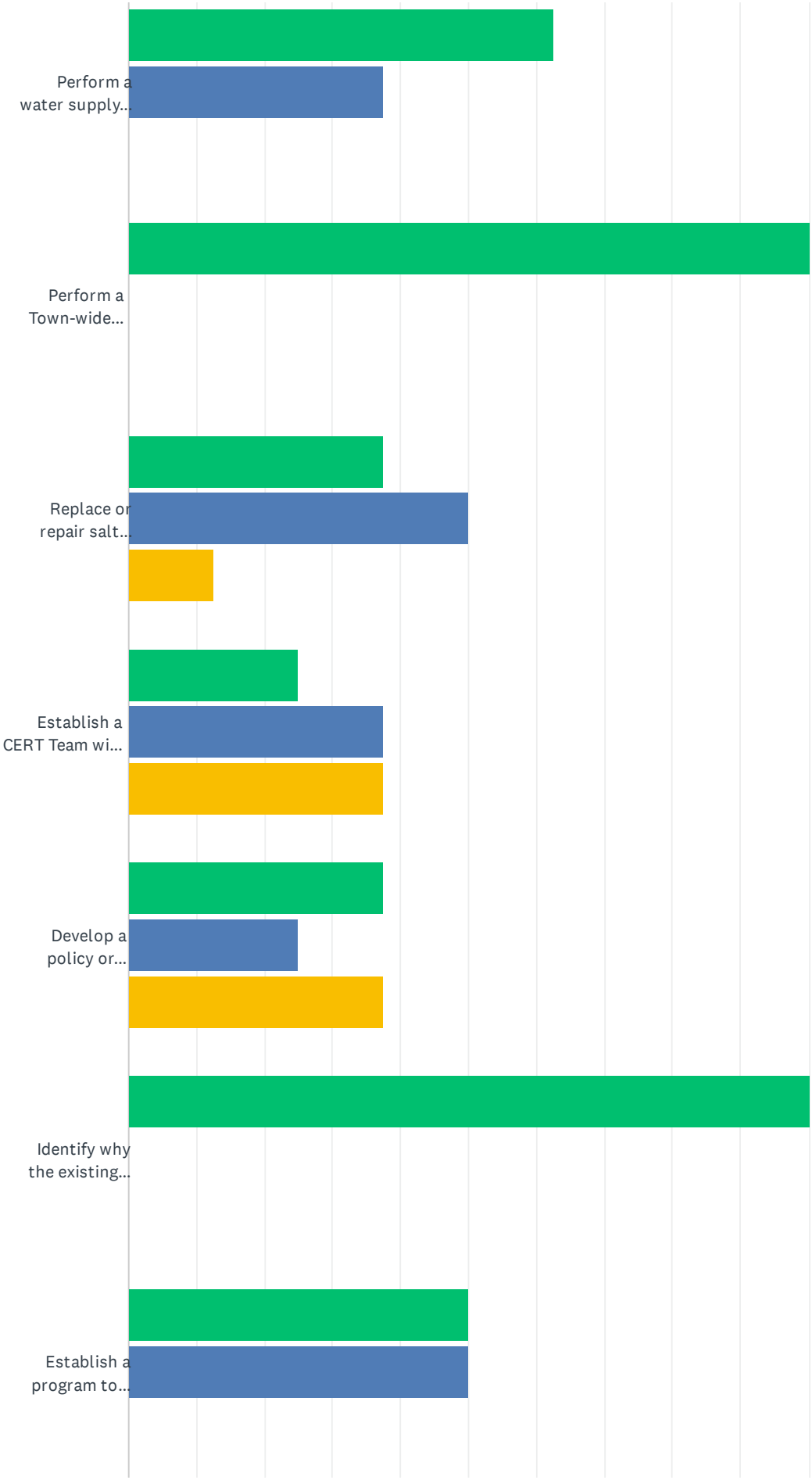
	HIGH	MEDIUM	LOW	TOTAL
Establish a plan for the long-term growth of the community and assess future infrastructure needs.	50.00% 4	37.50% 3	12.50% 1	8
Perform Town-wide well water testing to identify pollution or drought vulnerabilities.	37.50% 3	12.50% 1	50.00% 4	8
Establish a public outreach and education campaign regarding well water, addressing depth and drought issues.	25.00% 2	62.50% 5	12.50% 1	8
Improve the Town's access to water by constructing new fireponds or dry hydrants around Town. Establish a firepond maintenance strategy to ensure that the fireponds remain functioning. Engage volunteers and partnerships to help with maintenance of the fireponds/dry hydrants.	37.50% 3	50.00% 4	12.50% 1	8
Perform a Town-wide culvert assessment.	50.00% 4	37.50% 3	12.50% 1	8
Perform a water supply feasibility study to identify potential alternatives to water access.	12.50% 1	62.50% 5	25.00% 2	8
Perform a Town-wide bridge assessment, and research funding opportunities to replace or repair bridges in Town.	50.00% 4	37.50% 3	12.50% 1	8
Replace or repair salt shed on West Brookfield Rd.	25.00% 2	50.00% 4	25.00% 2	8
Establish a CERT Team with 6-10 individuals to assist in staffing the shelter and educate the public on disaster preparedness.	50.00% 4	25.00% 2	25.00% 2	8
Develop a policy or system to address and maintain stormwater drainage around Town.	0.00% 0	62.50% 5	37.50% 3	8
Identify why the existing grant to repave Ravine Road has not been used yet. Make any necessary adjustments in order to utilize that grant for the repaving.	37.50% 3	37.50% 3	25.00% 2	8
Establish a program to reduce the costs of internet access in order to make it more accessible for all income levels. Work with the internet company to establish this, and distribute information to residents on internet access, costs, and any other internet FAQs.	62.50% 5	37.50% 3	0.00% 0	8
Continue the door-to-door campaign to sign residents up for CodeRED/Reverse 911.	25.00% 2	62.50% 5	12.50% 1	8
Establish a series of education and outreach campaigns that address the following issues: CodeRED/Reverse 911; volunteer opportunities and community involvement; emergency and disaster preparedness; youth engagement; and engagement with vulnerable or fringe populations.	37.50% 3	50.00% 4	12.50% 1	8
Improve the Town's disaster preparedness by creating a comprehensive disaster and evacuation plan that addresses vulnerable persons in Town. Utilize the Council on Aging to assist in disaster and sheltering plans. Create an inventory of disaster and emergency supplies available to the Town. Establish alternative shelter plans.	50.00% 4	37.50% 3	12.50% 1	8
Establish a relationship with Verizon ensure proper maintenance of the celltower.	37.50% 3	37.50% 3	25.00% 2	8
Re-establish relationship with the State Police Academy and engage their partnership on a variety of resiliency issues.	50.00% 4	37.50% 3	12.50% 1	8
Research different grant opportunities and apply for funding.	75.00% 6	25.00% 2	0.00% 0	8
Work with the schools to establish Home Economics and EMT Training courses in the curriculum.	12.50% 1	37.50% 3	50.00% 4	8
Install an electric sign or portable message boards around Town to expand communication.	12.50% 1	37.50% 3	50.00% 4	8
Create and distribute a New Resident education brochure highlighting important information about the Town.	14.29% 1	57.14% 4	28.57% 2	7

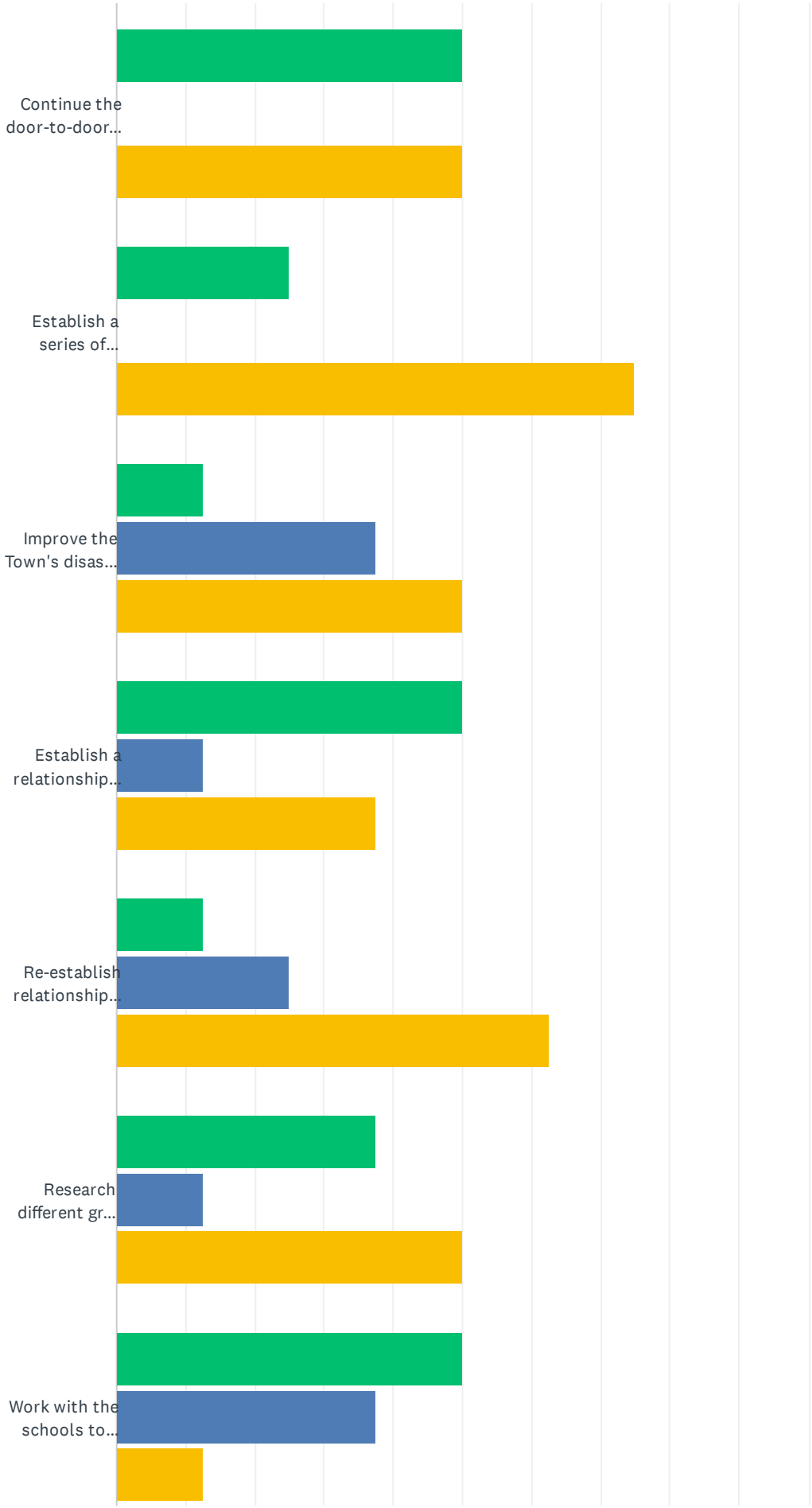
Create an inventory of shareable assets, resources, and services of residents. Coordinate mutual aid for farmers around Town.	25.00% 2	75.00% 6	0.00% 0	8
Improve the Town's website to make information more accessible. Add a section to the website dedicated to new residents.	42.86% 3	57.14% 4	0.00% 0	7
Develop a Forestry Management plan to address issues of drought, invasive species, and wildfire in forests throughout Town.	12.50% 1	75.00% 6	12.50% 1	8
Identify alternative beaver removal methods including beaver deceivers. Train local residents to remove beavers or construct beaver deceivers. And establish an education campaign on living with beavers.	12.50% 1	50.00% 4	37.50% 3	8
Utilize regional and State invasive species removal programs. Develop an outreach campaign to educate residents on identifying invasive species and proper techniques to remove them. Print photos of invasive species and place them around Town to display what they look like.	25.00% 2	50.00% 4	25.00% 2	8
Develop a prioritized list of agricultural and Chapter 61 lands for acquisition or conservation. Identify grant opportunities or pursue other resources to implement this strategy.	37.50% 3	50.00% 4	12.50% 1	8
Establish a Tree Removal and Replacement program to address the health of street trees. The program should utilize understory trees that are drought and pest resistant.	62.50% 5	12.50% 1	25.00% 2	8
Develop an outreach campaign to educate residents on bioswales, rain gardens, and storm drainage. Distribute resources that highlight plant species native to this region.	12.50% 1	37.50% 3	50.00% 4	8
Inform landowners about the impacts of converting farms to solar sites in an educational campaign.	25.00% 2	50.00% 4	25.00% 2	8
Develop an outreach campaign to educate residents on tick and mosquito awareness. Install bat boxes around Town to control mosquito populations.	12.50% 1	62.50% 5	25.00% 2	8

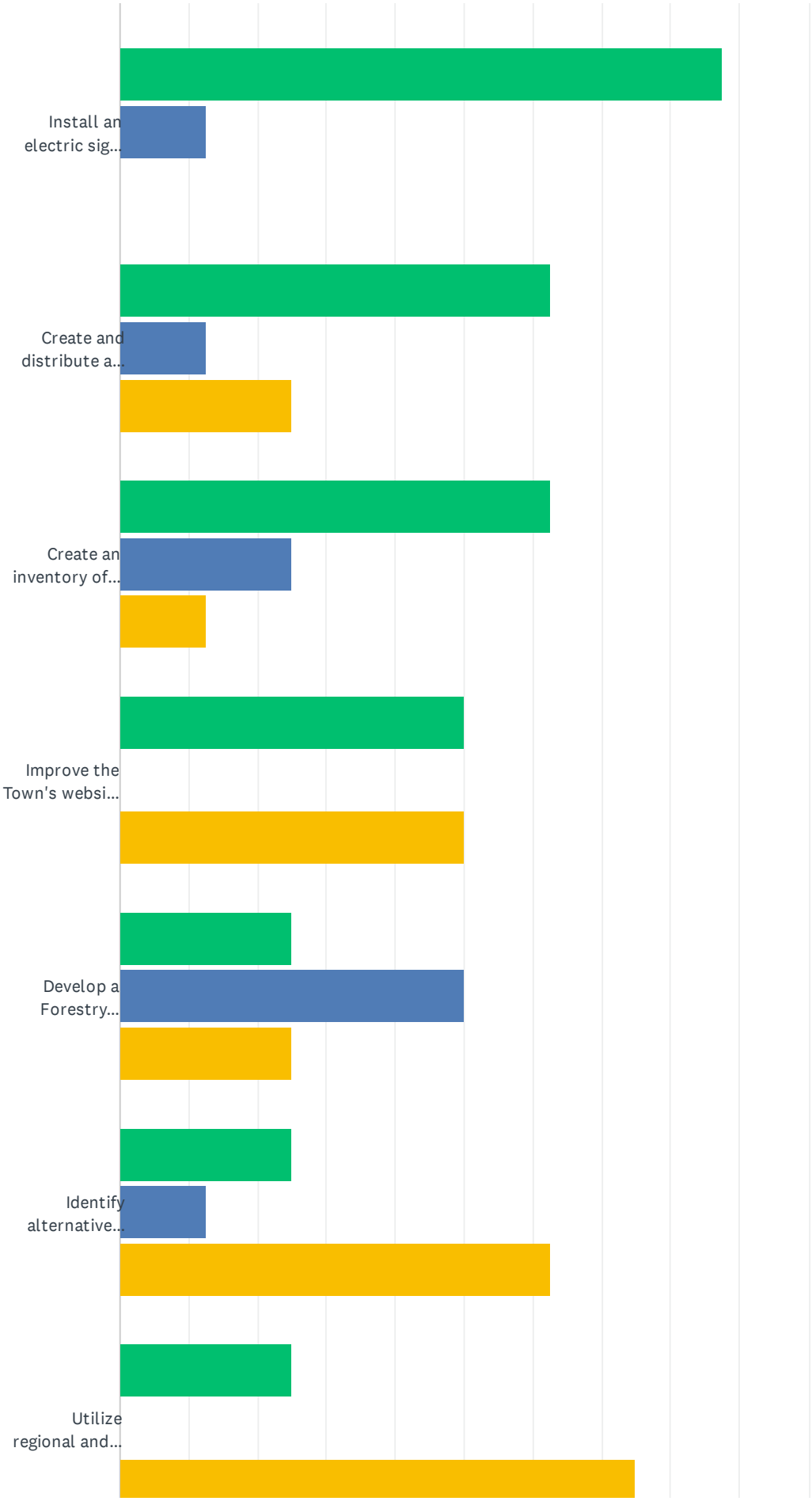
Q3 Please vote on whether the following actions are Short, Long, or Ongoing projects. Short term projects are straightforward and can be completed within two years. Long term projects take a longer time to complete, may require initial studies or public engagement strategies, and tend to be more complex. Ongoing projects are never truly completed. They require continuous action from year to year in order to maintain resilience.

Answered: 8 Skipped: 0




Perform a water supply...
Perform a Town-wide...
Replace or repair salt...
Establish a CERT Team wi...
Develop a policy or...
Identify why the existing...
Establish a program to...


Continue the door-to-door...
Establish a series of...
Improve the Town's disas...
Establish a relationship...
Re-establish relationship...
Research different gr...
Work with the schools to...


Install an electric sig...
Create and distribute a...
Create an inventory of...
Improve the Town's websi...
Develop a Forestry...
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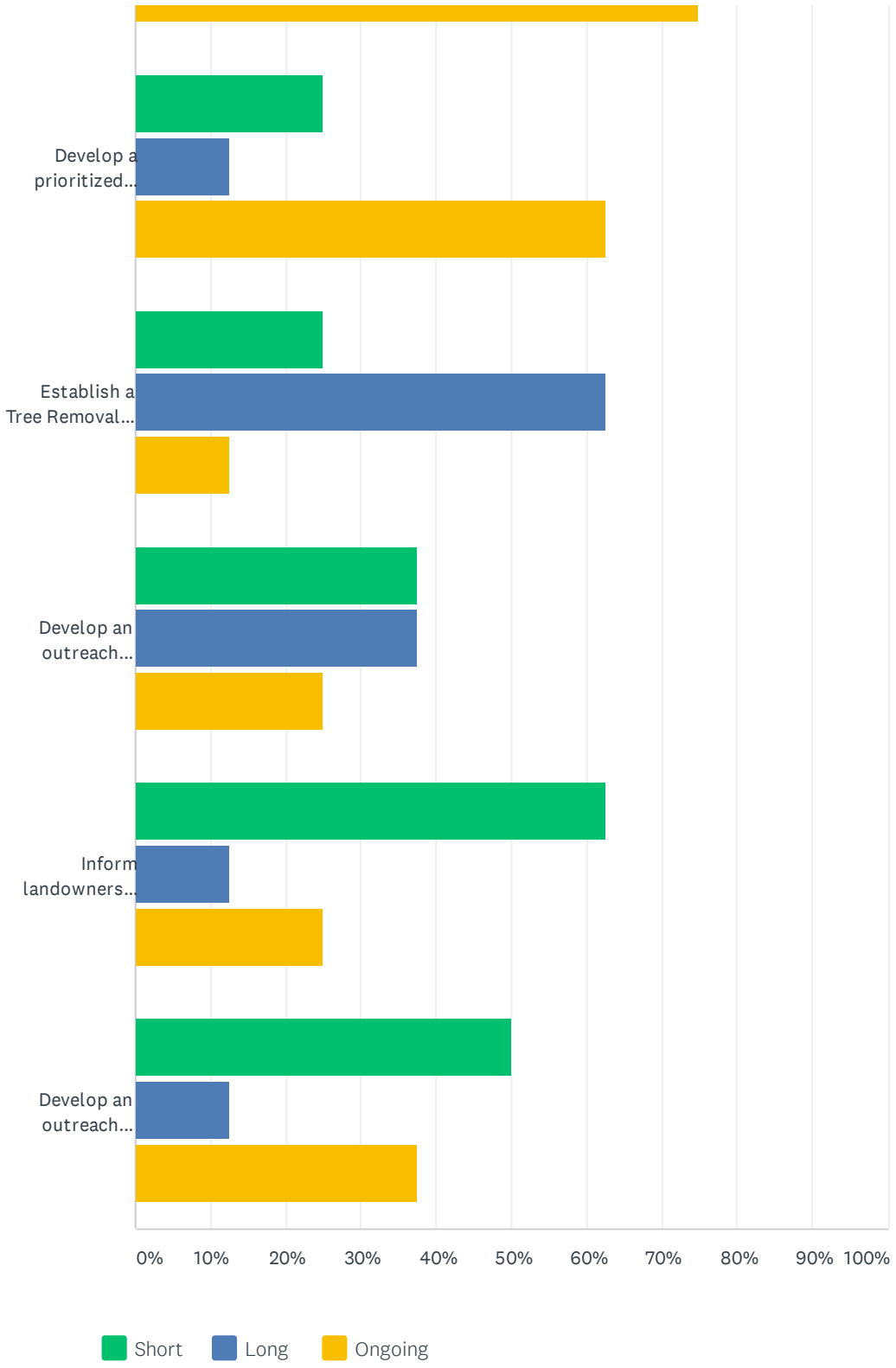
New Braintree Municipal Vulnerability Preparedness Program

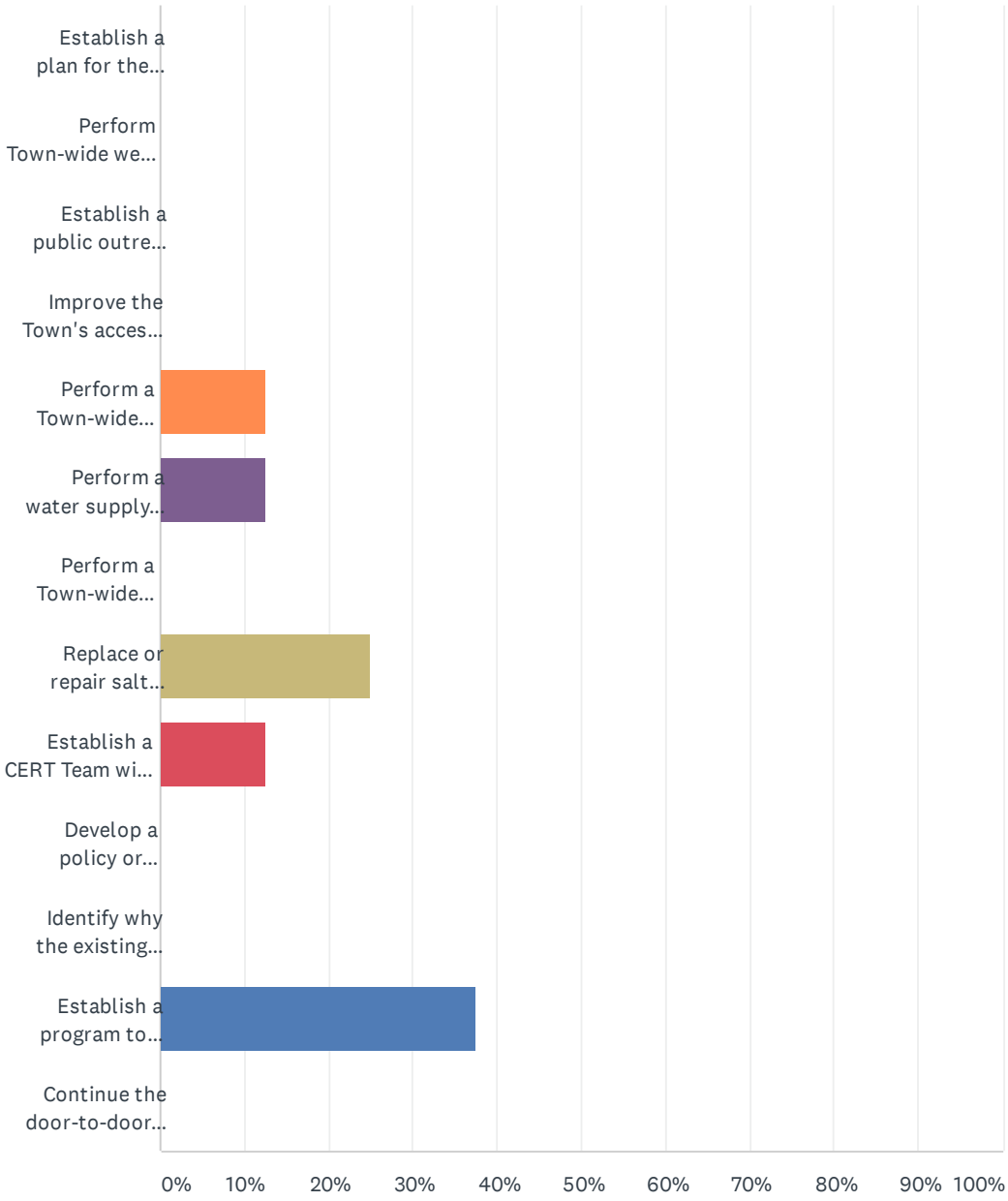


	SHORT	LONG	ONGOING	TOTAL
Establish a plan for the long-term growth of the community and assess future infrastructure needs.	28.57% 2	42.86% 3	28.57% 2	7
Perform Town-wide well water testing to identify pollution or drought vulnerabilities.	25.00% 2	37.50% 3	37.50% 3	8
Establish a public outreach and education campaign regarding well water, addressing depth and drought issues.	37.50% 3	37.50% 3	25.00% 2	8
Improve the Town's access to water by constructing new fireponds or dry hydrants around Town. Establish a firepond maintenance strategy to ensure that the fireponds remain functioning. Engage volunteers and partnerships to help with maintenance of the fireponds/dry hydrants.	50.00% 4	12.50% 1	37.50% 3	8
Perform a Town-wide culvert assessment.	87.50% 7	12.50% 1	0.00% 0	8
Perform a water supply feasibility study to identify potential alternatives to water access.	62.50% 5	37.50% 3	0.00% 0	8
Perform a Town-wide bridge assessment, and research funding opportunities to replace or repair bridges in Town.	100.00% 8	0.00% 0	0.00% 0	8
Replace or repair salt shed on West Brookfield Rd.	37.50% 3	50.00% 4	12.50% 1	8
Establish a CERT Team with 6-10 individuals to assist in staffing the shelter and educate the public on disaster preparedness.	25.00% 2	37.50% 3	37.50% 3	8
Develop a policy or system to address and maintain stormwater drainage around Town.	37.50% 3	25.00% 2	37.50% 3	8
Identify why the existing grant to repave Ravine Road has not been used yet. Make any necessary adjustments in order to utilize that grant for the repaving.	100.00% 8	0.00% 0	0.00% 0	8
Establish a program to reduce the costs of internet access in order to make it more accessible for all income levels. Work with the internet company to establish this, and distribute information to residents on internet access, costs, and any other internet FAQs.	50.00% 4	50.00% 4	0.00% 0	8
Continue the door-to-door campaign to sign residents up for CodeRED/Reverse 911.	50.00% 4	0.00% 0	50.00% 4	8
Establish a series of education and outreach campaigns that address the following issues: CodeRED/Reverse 911; volunteer opportunities and community involvement; emergency and disaster preparedness; youth engagement; and engagement with vulnerable or fringe populations.	25.00% 2	0.00% 0	75.00% 6	8
Improve the Town's disaster preparedness by creating a comprehensive disaster and evacuation plan that addresses vulnerable persons in Town. Utilize the Council on Aging to assist in disaster and sheltering plans. Create an inventory of disaster and emergency supplies available to the Town. Establish alternative shelter plans.	12.50% 1	37.50% 3	50.00% 4	8
Establish a relationship with Verizon ensure proper maintenance of the celltower.	50.00% 4	12.50% 1	37.50% 3	8
Re-establish relationship with the State Police Academy and engage their partnership on a variety of resiliency issues.	12.50% 1	25.00% 2	62.50% 5	8
Research different grant opportunities and apply for funding.	37.50% 3	12.50% 1	50.00% 4	8
Work with the schools to establish Home Economics and EMT Training courses in the curriculum.	50.00% 4	37.50% 3	12.50% 1	8
Install an electric sign or portable message boards around Town to expand communication.	87.50% 7	12.50% 1	0.00% 0	8
Create and distribute a New Resident education brochure highlighting important	62.50%	12.50%	25.00%	

information about the Town.	5	1	2	8
Create an inventory of shareable assets, resources, and services of residents. Coordinate mutual aid for farmers around Town.	62.50% 5	25.00% 2	12.50% 1	8
Improve the Town's website to make information more accessible. Add a section to the website dedicated to new residents.	50.00% 4	0.00% 0	50.00% 4	8
Develop a Forestry Management plan to address issues of drought, invasive species, and wildfire in forests throughout Town.	25.00% 2	50.00% 4	25.00% 2	8
Identify alternative beaver removal methods including beaver deceivers. Train local residents to remove beavers or construct beaver deceivers. And establish an education campaign on living with beavers.	25.00% 2	12.50% 1	62.50% 5	8
Utilize regional and State invasive species removal programs. Develop an outreach campaign to educate residents on identifying invasive species and proper techniques to remove them. Print photos of invasive species and place them around Town to display what they look like.	25.00% 2	0.00% 0	75.00% 6	8
Develop a prioritized list of agricultural and Chapter 61 lands for acquisition or conservation. Identify grant opportunities or pursue other resources to implement this strategy.	25.00% 2	12.50% 1	62.50% 5	8
Establish a Tree Removal and Replacement program to address the health of street trees. The program should utilize understory trees that are drought and pest resistant.	25.00% 2	62.50% 5	12.50% 1	8
Develop an outreach campaign to educate residents on bioswales, rain gardens, and storm drainage. Distribute resources that highlight plant species native to this region.	37.50% 3	37.50% 3	25.00% 2	8
Inform landowners about the impacts of converting farms to solar sites in an educational campaign.	62.50% 5	12.50% 1	25.00% 2	8
Develop an outreach campaign to educate residents on tick and mosquito awareness. Install bat boxes around Town to control mosquito populations.	50.00% 4	12.50% 1	37.50% 3	8

Q4 Please vote for what you believe is the top priority INFRASTRUCTURAL action from the list below.

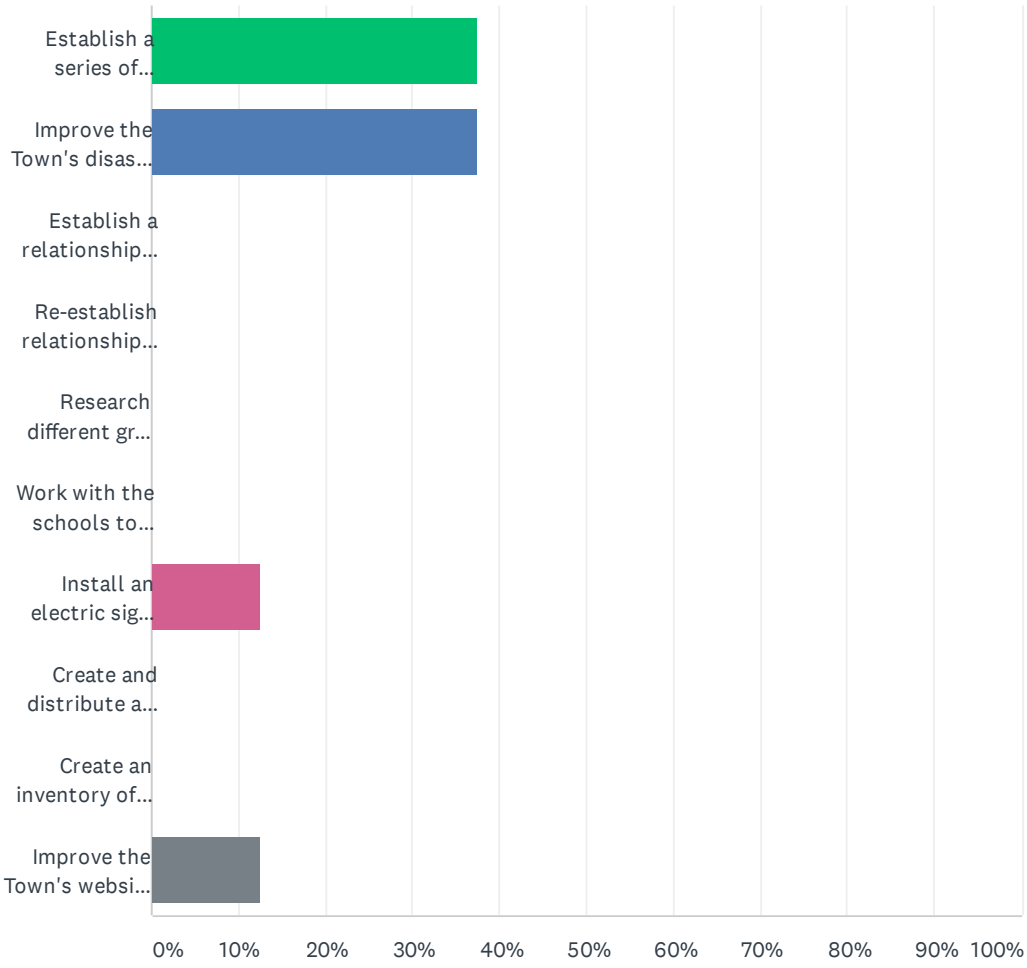
Answered: 8 Skipped: 0



ANSWER CHOICES	RESPONSES	
Establish a plan for the long-term growth of the community and assess future infrastructure needs.	0.00%	0
Perform Town-wide well water testing to identify pollution or drought vulnerabilities.	0.00%	0
Establish a public outreach and education campaign regarding well water, addressing depth and drought issues.	0.00%	0
Improve the Town's access to water by constructing new fireponds or dry hydrants around Town. Establish a firepond maintenance strategy to ensure that the fireponds remain functioning. Engage volunteers and partnerships to help with maintenance of the fireponds/dry hydrants.	0.00%	0
Perform a Town-wide culvert assessment.	12.50%	1
Perform a water supply feasibility study to identify potential alternatives to water access.	12.50%	1
Perform a Town-wide bridge assessment, and research funding opportunities to replace or repair bridges in Town.	0.00%	0
Replace or repair salt shed on West Brookfield Rd.	25.00%	2
Establish a CERT Team with 6-10 individuals to assist in staffing the shelter and educate the public on disaster preparedness.	12.50%	1
Develop a policy or system to address and maintain stormwater drainage around Town.	0.00%	0
Identify why the existing grant to repave Ravine Road has not been used yet. Make any necessary adjustments in order to utilize that grant for the repaving.	0.00%	0
Establish a program to reduce the costs of internet access in order to make it more accessible for all income levels. Work with the internet company to establish this, and distribute information to residents on internet access, costs, and any other internet FAQs.	37.50%	3
Continue the door-to-door campaign to sign residents up for CodeRED/Reverse 911.	0.00%	0
TOTAL		8

Q5 Please vote for what you believe is the top priority SOCIETAL action from the list below:

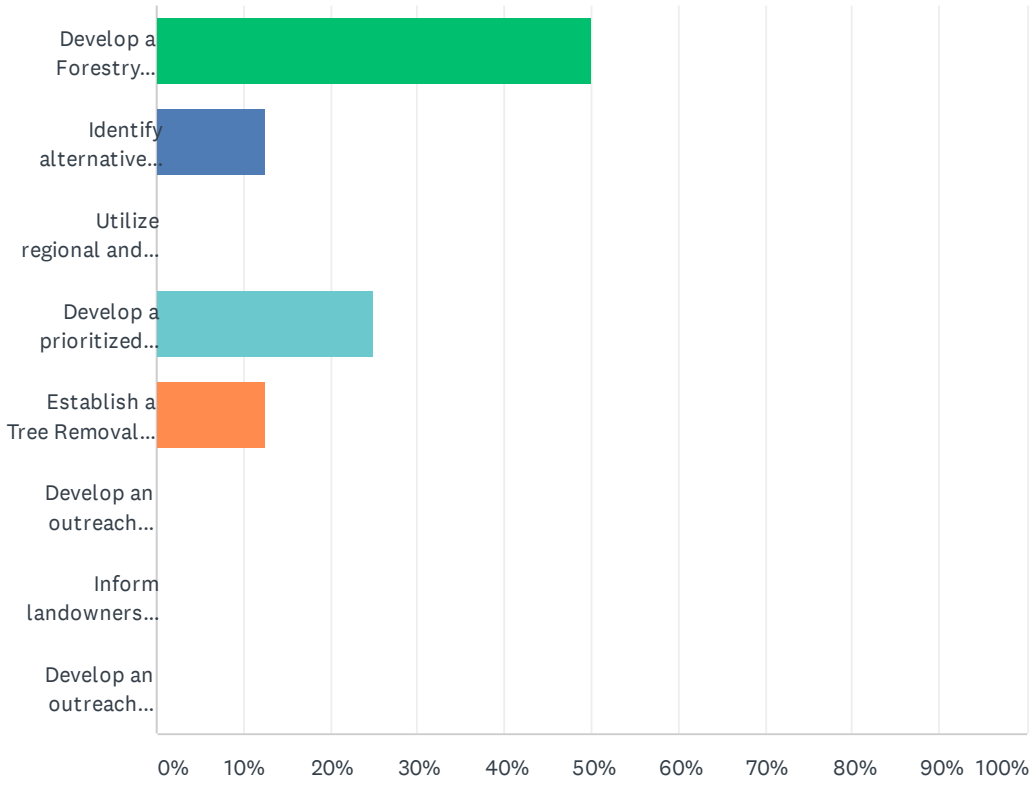
Answered: 8 Skipped: 0



ANSWER CHOICES	RESPONSES	
Establish a series of education and outreach campaigns that address the following issues: CodeRED/Reverse 911; volunteer opportunities and community involvement; emergency and disaster preparedness; youth engagement; and engagement with vulnerable or fringe populations.	37.50%	3
Improve the Town's disaster preparedness by creating a comprehensive disaster and evacuation plan that addresses vulnerable persons in Town. Utilize the Council on Aging to assist in disaster and sheltering plans. Create an inventory of disaster and emergency supplies available to the Town. Establish alternative shelter plans.	37.50%	3
Establish a relationship with Verizon ensure proper maintenance of the celltower.	0.00%	0
Re-establish relationship with the State Police Academy and engage their partnership on a variety of resiliency issues.	0.00%	0
Research different grant opportunities and apply for funding.	0.00%	0
Work with the schools to establish Home Economics and EMT Training courses in the curriculum.	0.00%	0
Install an electric sign or portable message boards around Town to expand communication.	12.50%	1
Create and distribute a New Resident education brochure highlighting important information about the Town.	0.00%	0
Create an inventory of shareable assets, resources, and services of residents. Coordinate mutual aid for farmers around Town.	0.00%	0
Improve the Town's website to make information more accessible. Add a section to the website dedicated to new residents.	12.50%	1
TOTAL		8

Q6 Please vote for what you believe is the top priority ENVIRONMENTAL action from the list below:

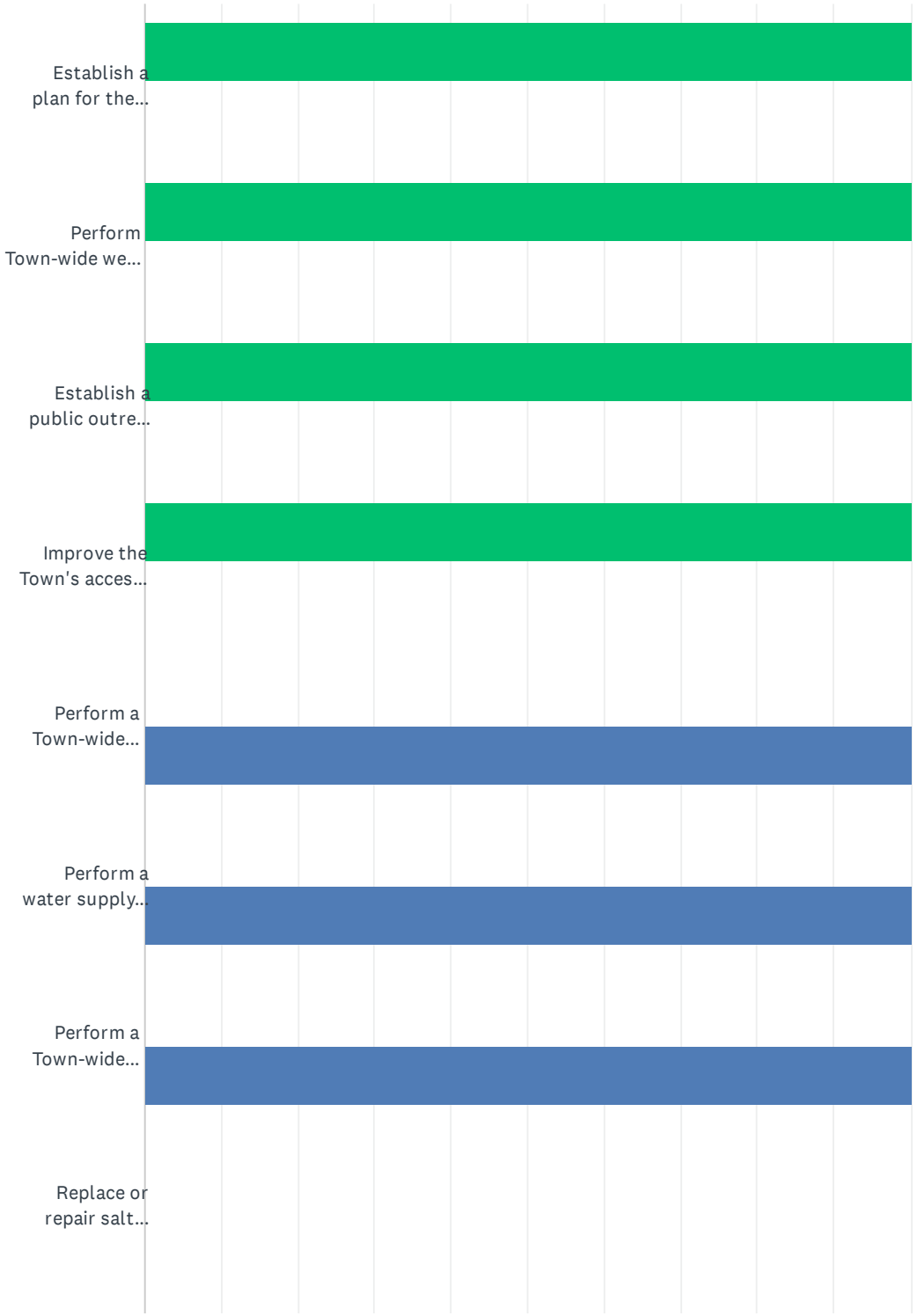
Answered: 8 Skipped: 0



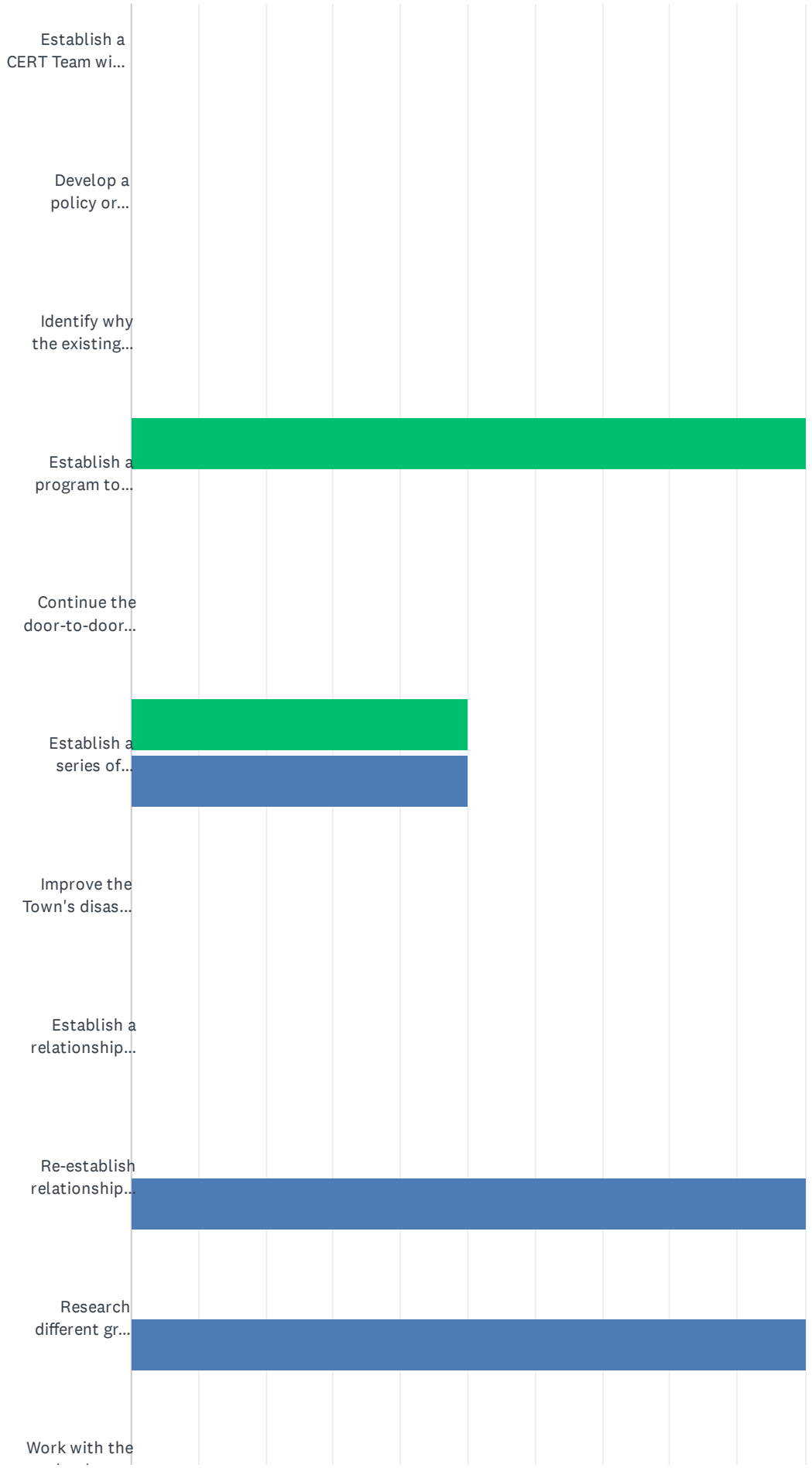
ANSWER CHOICES	RESPONSES	
Develop a Forestry Management plan to address issues of drought, invasive species, and wildfire in forests throughout Town.	50.00%	4
Identify alternative beaver removal methods including beaver deceivers. Train local residents to remove beavers or construct beaver deceivers. And establish an education campaign on living with beavers.	12.50%	1
Utilize regional and State invasive species removal programs. Develop an outreach campaign to educate residents on identifying invasive species and proper techniques to remove them. Print photos of invasive species and place them around Town to display what they look like.	0.00%	0
Develop a prioritized list of agricultural and Chapter 61 lands for acquisition or conservation. Identify grant opportunities or pursue other resources to implement this strategy.	25.00%	2
Establish a Tree Removal and Replacement program to address the health of street trees. The program should utilize understory trees that are drought and pest resistant.	12.50%	1
Develop an outreach campaign to educate residents on bioswales, rain gardens, and storm drainage. Distribute resources that highlight plant species native to this region.	0.00%	0
Inform landowners about the impacts of converting farms to solar sites in an educational campaign.	0.00%	0
Develop an outreach campaign to educate residents on tick and mosquito awareness. Install bat boxes around Town to control mosquito populations.	0.00%	0
TOTAL		8

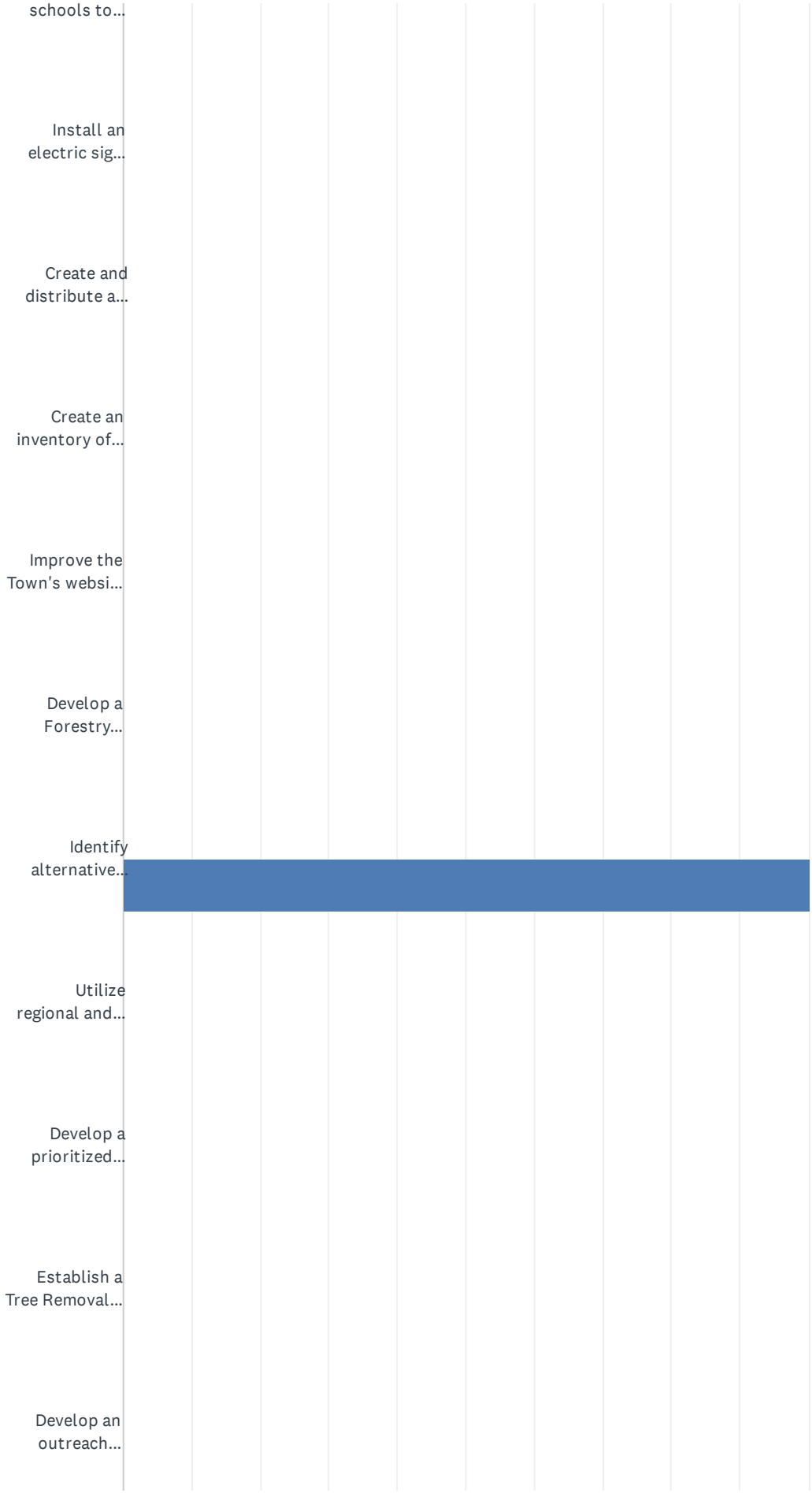
Q7 Please vote for TWO additional top priority actions that you believe New Braintree should complete in order to build resilience. You may select actions from any category (Infrastructural, Societal, and Environmental), but do not select any actions that you already selected in the previous questions.

Answered: 8 Skipped: 0

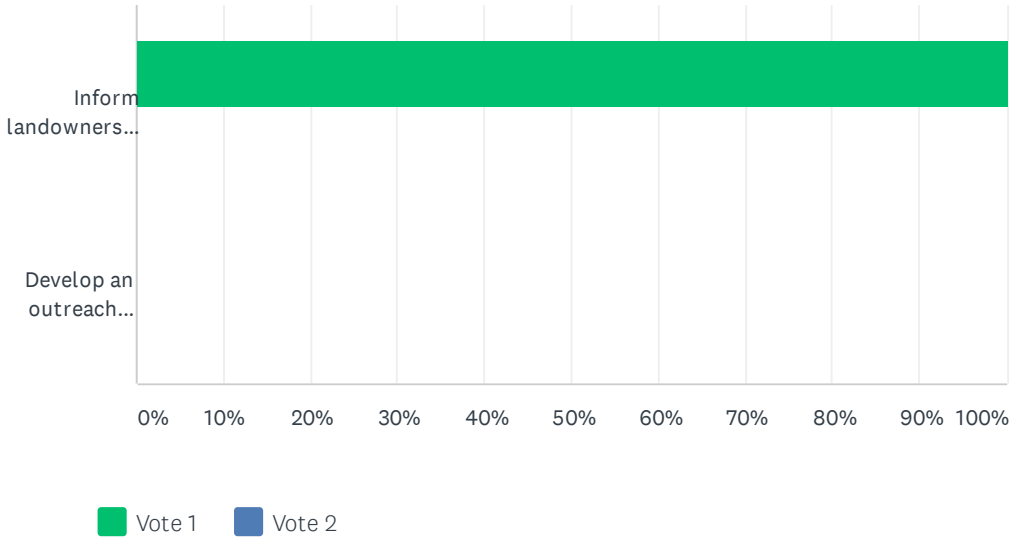


New Braintree Municipal Vulnerability Preparedness Program




schools to...
Install an electric sig...
Create and distribute a...
Create an inventory of...
Improve the Town's websi...
Develop a Forestry...
Identify alternative...
Utilize regional and...
Develop a prioritized...
Establish a Tree Removal...
Develop an outreach...

New Braintree Municipal Vulnerability Preparedness Program



	VOTE 1	VOTE 2	TOTAL
Establish a plan for the long-term growth of the community and assess future infrastructure needs.	100.00% 2	0.00% 0	2
Perform Town-wide well water testing to identify pollution or drought vulnerabilities.	100.00% 1	0.00% 0	1
Establish a public outreach and education campaign regarding well water, addressing depth and drought issues.	100.00% 1	0.00% 0	1
Improve the Town's access to water by constructing new fireponds or dry hydrants around Town. Establish a firepond maintenance strategy to ensure that the fireponds remain functioning. Engage volunteers and partnerships to help with maintenance of the fireponds/dry hydrants.	100.00% 1	0.00% 0	1
Perform a Town-wide culvert assessment.	0.00% 0	100.00% 1	1
Perform a water supply feasibility study to identify potential alternatives to water access.	0.00% 0	100.00% 1	1
Perform a Town-wide bridge assessment, and research funding opportunities to replace or repair bridges in Town.	0.00% 0	100.00% 1	1
Replace or repair salt shed on West Brookfield Rd.	0.00% 0	0.00% 0	0
Establish a CERT Team with 6-10 individuals to assist in staffing the shelter and educate the public on disaster preparedness.	0.00% 0	0.00% 0	0
Develop a policy or system to address and maintain stormwater drainage around Town.	0.00% 0	0.00% 0	0
Identify why the existing grant to repave Ravine Road has not been used yet. Make any necessary adjustments in order to utilize that grant for the repaving.	0.00% 0	0.00% 0	0
Establish a program to reduce the costs of internet access in order to make it more accessible for all income levels. Work with the internet company to establish this, and distribute information to residents on internet access, costs, and any other internet FAQs.	100.00% 1	0.00% 0	1
Continue the door-to-door campaign to sign residents up for CodeRED/Reverse 911.	0.00% 0	0.00% 0	0
Establish a series of education and outreach campaigns that address the following issues: CodeRED/Reverse 911; volunteer opportunities and community involvement; emergency and disaster preparedness; youth engagement; and engagement with vulnerable or fringe populations.	50.00% 1	50.00% 1	2
Improve the Town's disaster preparedness by creating a comprehensive disaster and evacuation plan that addresses vulnerable persons in Town. Utilize the Council on Aging to assist in disaster and sheltering plans. Create an inventory of disaster and emergency supplies available to the Town. Establish alternative shelter plans.	0.00% 0	0.00% 0	0
Establish a relationship with Verizon ensure proper maintenance of the celltower.	0.00% 0	0.00% 0	0
Re-establish relationship with the State Police Academy and engage their partnership on a variety of resiliency issues.	0.00% 0	100.00% 1	1
Research different grant opportunities and apply for funding.	0.00% 0	100.00% 1	1
Work with the schools to establish Home Economics and EMT Training courses in the curriculum.	0.00% 0	0.00% 0	0
Install an electric sign or portable message boards around Town to expand communication.	0.00% 0	0.00% 0	0
Create and distribute a New Resident education brochure highlighting important information about the Town.	0.00% 0	0.00% 0	0
Create an inventory of shareable assets, resources, and services of residents. Coordinate mutual aid	0.00%	0.00%	

for farmers around Town.	0	0	0
Improve the Town's website to make information more accessible. Add a section to the website dedicated to new residents.	0.00% 0	0.00% 0	0
Develop a Forestry Management plan to address issues of drought, invasive species, and wildfire in forests throughout Town.	0.00% 0	0.00% 0	0
Identify alternative beaver removal methods including beaver deceivers. Train local residents to remove beavers or construct beaver deceivers. And establish an education campaign on living with beavers.	0.00% 0	100.00% 1	1
Utilize regional and State invasive species removal programs. Develop an outreach campaign to educate residents on identifying invasive species and proper techniques to remove them. Print photos of invasive species and place them around Town to display what they look like.	0.00% 0	0.00% 0	0
Develop a prioritized list of agricultural and Chapter 61 lands for acquisition or conservation. Identify grant opportunities or pursue other resources to implement this strategy.	0.00% 0	0.00% 0	0
Establish a Tree Removal and Replacement program to address the health of street trees. The program should utilize understory trees that are drought and pest resistant.	0.00% 0	0.00% 0	0
Develop an outreach campaign to educate residents on bioswales, rain gardens, and storm drainage. Distribute resources that highlight plant species native to this region.	0.00% 0	0.00% 0	0
Inform landowners about the impacts of converting farms to solar sites in an educational campaign.	100.00% 1	0.00% 0	1
Develop an outreach campaign to educate residents on tick and mosquito awareness. Install bat boxes around Town to control mosquito populations.	0.00% 0	0.00% 0	0

Q8 Please describe any other actions that were not listed in this survey that the town should take to improve resilience.

Answered: 2 Skipped: 6

#	RESPONSES	DATE
1	Well, we already have a CERTeam and an electronic traffic sign. Support/awareness of the CERT program would be the most beneficial effort. And water access is probably the issue coming up.	5/4/2021 7:19 AM
2	Protect the lands along the Ware River and assist with removal of the Wheelwright Pond Dam to minimize flood hazards.	5/2/2021 12:56 PM

New Braintree Hazard Mitigation Plan Update

[Last Revised – April 9, 2019]

New Braintree, MA

Adopted by the Board of Selectmen April 8, 2019

Prepared by the **Central Massachusetts Regional Planning Commission**
1 Mercantile Street, Suite 520
Worcester, MA 01608
www.cmrpc.org

&

Local Hazard Mitigation Team
Town of New Braintree, Massachusetts

The Massachusetts Multi-Hazard Mitigation Plan does not note major concerns about catastrophic dam failure due to climate change. It does, however, mention that increased heavy rainfall events may lead to more frequent dam design failures, in which spillways overflow due to flow rates exceeding design capacity. This type of failure may have a secondary result of increased riverine flooding below dams. Overall, the risk of dam failure to people and property can be expected to stay around the same as the current risk level.

Drought

While the projections noted above show overall increases in precipitation going forward, summer rainfall is actually expected to decline slightly as the climate warms, raising the risk of seasonal droughts. According to the Massachusetts Multi-Hazard Mitigation Plan, droughts are expected to increase in frequency, severity and length. The Massachusetts Climate Change Adaptation Report finds that by the end of the century, under a high carbon emissions scenario, the occurrence of droughts lasting one to three months could go up by as much as 75% over existing conditions. Secondary to drought, wildfire risk can be expected to rise. Overall, the risk of drought to people and property can be expected to increase.

Extreme Temperatures

According to records of the US Historical Climatology Network, average temperatures in the region have increased about 0.2 degrees C (0.5°F) per decade since 1970. These higher average temperatures have primarily been the result of warmer winters (December through March), during which there has been an increase of 1.3°F per decade since 1970. In addition to average temperature increases, the number of extremely hot and record heat days has also increased: the number of days with temperatures of 90°F and higher throughout the Northeast has doubled during the past 45 years. As noted in the table elsewhere in this section, the number of days exceeding 90 degrees is expected to surge several times over, presenting a health risk to young children, the elderly, and to persons with various health conditions. Overall, the risk of extreme temperatures to people and property can be expected to increase.

5.0 CRITICAL FACILITIES & VULNERABLE POPULATIONS

Critical Infrastructure provides the essential services to the Town of New Braintree and serve as the backbone to the town's security and health. The systems and networks that make up the infrastructure would be disrupted by a natural disaster and would impact response to the disaster and safety of the town.

A Critical Facility is defined as a building, structure, or location which:

- Is vital to the hazard response effort.
- Maintains an existing level of protection from hazards for the community.
- Would create a secondary disaster if a hazard were to impact it.

5.1 Critical Facilities within New Braintree

The Critical Facilities List for the Town of New Braintree has been identified utilizing several sources, and the knowledge and expertise of the team:

- New Braintree's Comprehensive Emergency Management Plan
- MassGIS data
- Critical infrastructure mapping undertaken by CMRPC under contract with the Central Region Homeland Security Advisory Council, which is charged by the Executive Office of Public Safety and Security to administer and coordinate the State Homeland Security Grant for central Massachusetts.

New Braintree's Hazard Mitigation Team has broken up this list of facilities into four categories:

- Emergency Response Facilities needed in the event of a disaster
- Non-Emergency Response Facilities that have been identified by the Team as non-essential. These are not required in an emergency response event, but are considered essential for the everyday operation of New Braintree
- Dams
- Facilities/Populations that the Team wishes to protect in the event of a disaster

Critical infrastructure and facilities are mapped in Appendix A.

Category 1 – Emergency Response Facilities

The Town of New Braintree has identified the Emergency Response Facilities and Services as the highest priority in regards to protection from natural and man-made hazards.

1. **Police / EOC / Shelter**

Police HQ	20 Memorial Drive
State Dispatch Facility	West Brookfield Road
Mass. State Police Academy	West Brookfield Road

2. **Fire Station**

Fire Headquarters (shelter)	110 West Brookfield Road

3. **Primary Evacuation Routes**

MA-67
North Brookfield Road
Old Turnpike Road to Hardwick Road

4. **Highway Department**

Highway Garage and Emergency Storage Town Road

Category 2 – Non-Emergency Response Facilities

The town has identified these facilities as non-emergency facilities; however, they are considered essential for the everyday operation of New Braintree.

1. **Town Facilities**

Town Hall	20 Memorial Drive
Senior Center	20 Memorial Drive
Public Library	45 Memorial Drive
Historical Commission Post Office	Old Common Road

2. **Utilities**

Solar Field	Old Turnpike Road
Solar Field (proposed)	Barre Road and Ravine Road
Solar Field (proposed)	Barre Cut Off Road
Solar Field (proposed)	West Brookfield Road
Water Tower	Circle Drive
Cell Tower	Circle Drive

3. **Bridges**

Barre Road
Bridge Road
Unitas Road
Hardwick Road (2 bridges)

Category 3 – Dams

A list of dams in New Braintree is included in Chapter 4 under Dam Failure.

Category 4 – Facilities/Populations to Protect

1. **Schools/Daycare**

(Please note: The EMD has a list of current daycare facilities but these can change locations and addresses frequently, so this list should be revisited periodically.)

New Braintree Grade School 15 Memorial Drive

2. **Historic Buildings/Sites**

According to the Massachusetts Cultural Resources Information System (MACRIS) online database accessed in March 2018, within New Braintree there are 3 Areas, approximately 5 Burial Grounds, 158 Buildings, 1 Objects, and 15 Structures listed on the National Register of Historic Places, and two National Historic Landmarks. It should be noted that MACRIS records are not up to date, and therefore do not reflect the total number of resources that are no longer extant. The Local Team noted Nipmuck Village as a historical site to protect.

3. **Employment Centers**

Based on data obtained from the Massachusetts Executive Office of Labor and Workforce Development (EOLWD), the following table shows the largest employers in New Braintree:

Table 6

Largest Employers in New Braintree - April 2017		
Company	**Location**	**No. of Employees**
Mass State Police Academy	W. Brookfield Road	50-99
New Braintree Elementary School	Memorial Drive	50-99
Camp Putnam	Rutherford Road	20-49
New Braintree Fire Department	Brookfield Road	20-49
New Braintree Fire Department	Moore Road	20-49
New Braintree Fire Department	W. Brookfield Road #B	20-49
New Braintree Grade School	Memorial Drive	20-49
State Police Fire & Ambulance	W. Brookfield Road	20-49
New Braintree Regional Dispatch	W. Brookfield Road	10-19
New Braintree Town Hall	Memorial Drive #1	10-19

Source: EOLWD

4. Environmental Justice and Vulnerable Populations

The US Environmental Protection Agency defines Environmental Justice (EJ) as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Within the context of natural hazards and their mitigation, potential EJ concerns may arise from income-related factors, discrimination (overt or institutional), cultural isolation and barriers, language isolation, lack of transportation access, and disability (especially among the elderly).

In 2015, as part of its Mobility 2040 long range transportation plan, CMRPC identified disproportionate concentrations of EJ and other vulnerable populations at the US Census block group level throughout Central Massachusetts. Thresholds used in this identification process included various metrics from the 2010 Census and 2013 American Community Survey:

- Lower income households (median income below $50,259/year); or
- Minority residents (20.3% or more of population); or
- Hispanic or Latino residents (14.0% or more of population); or
- Language isolated households (9.45% or more of population); or
- Zero vehicle households (12.75% or more of population); or
- Households with persons 75+ years of age (18.8% or more of population); or

New Braintree does not have an Environmental Justice population.

More information regarding the identification of Environmental Justice and Vulnerable populations in the Central Massachusetts region can be found online.

5. Development

New Braintree is a rural town with a population of approximately 1,000 people. Very little new development has occurred over the past few years and new development us not expected to occur in the coming years. The citizens of the community wish to maintain and preserve the farming characteristics of the community. One exception in recent years is solar fields, there has been one constructed on Old Turnpike Road. Three more solar fields have been proposed, one on Barre and Ravine Road, At Barre Cut Off Road and West Brookfield Road. The completed solar field on Old Turnpike Road has gone through the required inspections, received approval from the various boards including the Planning Board and the site has been constructed with modern drainage

methods and clearance allowed for emergency vehicles around the perimeter of the facility. If the proposed solar fields are eventually approved and constructed each field would need to go through the appropriate boards and receive approvals and be constructed with modern site requirements to limit any impact on the roads and facilities in the area of the development.

The Town and various responsible boards and commissions should ensure these and other developments are taking into account potential and known hazards and ensure mitigation of the hazards occurs when needed. New Braintree utilizes various methods to ensure new development conforms with current Massachusetts General Laws and the Town's Bylaws. The Planning Board, Conservation Commission and Zoning Board of Appeals (ZBA) all take into account water resource preservation, open space and in the case of the ZBA, to hear and decide appeals. These reviews include specific evaluation criteria that are relevant to natural hazards - including requirements for preventing and mitigating flooding and stormwater impacts. Town Bylaws are amended and updated on an as needed basis to adapt to the needs and shifting forces that affect the town.

The population of New Braintree is not expected to grow and minimal additional development is likely to occurs. Officials should seek to further integrate hazard mitigation practices into its planning and development processes. The Town of New Braintree should consider development of a Master Plan and an Open Space Plan, which will provide further opportunity to identify threats and prioritize strategies to address them.

6.0 EXISTING PROTECTION

The Town of New Braintree currently makes use of most available locally-controlled tools to mitigate the consequences of natural hazards: zoning regulations, planning, and physical improvements. The town does not participate in federal programs such as StormReady and Firewise certification or Community Rating System, and it does plan to research the utility of more public awareness and education programs as a result of this planning process.

New Braintree has most of the no-cost or low-cost hazard mitigation capabilities in place. Land use zoning, subdivision regulations and an array of specific policies and regulations that include hazard mitigation best practices, such as limitations on development in floodplains, stormwater management, tree maintenance, etc. New Braintree also has appropriate staff dedicated to hazard mitigation-related work for a community of its size, including a Town Administrator, an Emergency Management Director, a professionally run Highway Department, and a Tree Warden. New Braintree has several relevant plans in place, including a Comprehensive Emergency Management Plan. Not only does New Braintree have these capabilities in place, but they are also deployed for hazard mitigation, as appropriate. The town also has very committed and dedicated

volunteers who serve on Boards, Commissions and Committees and in other volunteer positions. The town collaborates closely with surrounding communities through its and has opted in to fire protection mutual aid agreements through MEMA.

New Braintree is also an active member community of the Central Massachusetts Regional Planning Commission (CMRPC) and can take advantage of no cost local technical assistance as needed provided by the professional planning staff at CMRPC.

The table below describes existing mitigation protections in New Braintree. It includes a brief description of each activity as well as a subjective evaluation of its effectiveness and of any need for modifications.

6.1 Existing Protection Matrix

Table 7

Existing Measure	Description	Action	Effectiveness & Recommendations
Participation in National Flood Insurance Program (NFIP)	Provides flood insurance for structures located in flood-prone areas. Also, communities participating in the NFIP have adopted and enforce ordinances, bylaws and regulations that meet or exceed FEMA requirements to reduce the risk of flooding.	New Braintree monitors building activity within the flood plain to ensure compliance with provisions of state building code.	Effective New Braintree should seek to further limit development in the 100-year flood zones. It should investigate joining in the Community Rating System (CRS) under NFIP to enable its residents to obtain lower flood insurance rates. New Braintree should educate its residents about NFIP.
Stormwater Management policy and regulations in place	Planning Boards or Conservation Commissions review projects for consistency with MA DEP standards. This helps ensure adequate on site retention and recharge.	New Braintree does not have a Stormwater Management Bylaw however, Zoning, Subdivision and Wetlands Regulations have different requirements for Stormwater Management.	Effective No changes recommended

Existing Measure	Description	Action	Effectiveness & Recommendations
Community Rating System (CRS)	The goals of the CRS are to reduce flood damages to insurable property, strengthen and support the insurance aspects of the NFIP, and encourage a comprehensive approach to floodplain management.	New Braintree does not participate in CRS.	Effective New Braintree should investigate joining in CRS.
Local Open Space and Recreation Plan	Local plan identifying significant natural resources and identifying mechanisms to ensure their protection. Following Mass. Department of Conservation and Recreation guidance for development of OSRPs, this document does not focus on specific hazards. Open Space Plans can provide many tools. Towns must commit to making the land acquisitions and regulatory changes, giving increased attention to preserving undeveloped flood-prone areas and associated lands	New Braintree does not have an Open Space Plan	Not Effective New Braintree should work with DCR and appropriate partners to develop an Open Space and Recreation Plan This will help further protect the towns forests and farmlands.

Existing Measure	Description	Action	Effectiveness & Recommendations
Local wetlands protection bylaw and regulations in place (Mass. Assoc. of Conservation Commissions, 2006 data)	Local bylaws building upon the State's Wetlands Protection Act and Regulations. These add regulatory oversight provisions for development within the jurisdictional buffer zone, adding increased attention to alteration of wetlands and the opportunity to preserve capacity and quality.	New Braintree does not have a Wetlands Bylaw.	Somewhat Effective New Braintree should examine enhanced development controls at wetlands to sustain natural barriers to flooding
Drainage system maintenance and repair program	Plan to keep municipal drainage facilities (storm drains, culverts, etc.) in good order	New Braintree performs catch basin cleaning occasionally, problem locations more frequently	Effective New Braintree should examine a public education program for residents on storm drain clearance and other best practices
Tree Trimming	Plan to ensure routine maintenance of trees to reduce likelihood of vegetative debris in response to storm events	New Braintree conducts roadside mowing from April-November to remove juvenile trees. Tree trimming (take-downs and clearing dead branches) takes place as needed.	Effective New Braintree should work with its electrical utility to coordinate a more systematic tree trimming program
Street Sweeping	Sweep streets to increase stormwater management capacity; capture a dispose of debris appropriately.	All main road are swept once a year, back roads are not swept.	Effective No changes recommended

Existing Measure	Description	Action	Effectiveness & Recommendations
Culvert Maintenance and Replacement	Maintain existing culverts through regular maintenance and (in some cases) beaver controls; replace/expand culverts where needed to allow for adequate stormwater flow.	Culverts are repaired or upgraded on an as needed basis.	Somewhat effective Current efforts are piecemeal and are limited by lack of resources and systematic approach. New Braintree should develop a policy to prepare for expected climate change related precipitation increase by upsizing culverts, especially in known problematic areas. Seek external financial support. Planning must comply with 2014 Mass. Wetlands Protection Act update; culverts may not be replaced in-kind.
Code RED System	Emergency warning system that sends voicemail/text/email alerts to residents (text/email alerts are optional).	Code RED enables the town to provide residents with critical information quickly in a variety of situations, such as severe weather, unexpected road closures, missing persons and evacuation of buildings or neighborhoods.	Very effective Promote Code RED so all residents are familiar with the program.

Town of New Braintree
Mitigation Strategies

OVERALL GOAL: Facilitate activity within the Town of New Braintree that reduces the loss, and risk of loss, to persons and property

Mitigation Strategy Description	Hazard(s) Addressed	Who? Agencies involved	Potential Funding Sources	Priority Political & economic viability: High/Med/Low	Impact Mitigation impact: High/Med/Low	Estimated Cost High ($100k+)/ Med ($50k-100k)/ Low (<$50k)	Timeline Time needed to complete
A. Structure & Infrastructure Strategies							
Implement a vegetative debris management program	FL, ST, SS, DF	Highway	Local, State	Medium	High	Low	1 Year
Sweep the main streets once a year, backroads as needed.	FL, ST, SS	Highway	Local, State	High	High	Low	Ongoing
Clean and maintain all stormwater structures basins and other infrastructure when necessary. Continue cooperation and sharing of equipment with North Brookfield	FL, ST, SS, DF	Highway	Local, State	High	High	Low	Ongoing
Trim trees near powerlines and other infrastructure as needed	FL, ST, SS, HU	Highway, Utilities	Local, State	High	High	Low	Ongoing
Work with the state and other parties to trap and move beavers per regulations	FL, ST, SS, HU, DF	CC, BOH	Local, State	High	High	Low	Ongoing
Improve drainage at the Fire Station to mitigate flooding	FL, ST, SS	Highway	Local, State, Federal	Medium	.High	High	1-3 Years
Improve drainage at the Highway Department to mitigate flooding	FL, ST, SS	Highway	Local, State, Federal	Medium	High	High	1-3 Years

Mitigation Strategy Description	Hazard(s) Addressed	Who? Agencies involved	Potential Funding Sources	Priority Political & economic viability: High/Med/Low	Impact Mitigation impact: High/Med/Low	Estimated Cost High ($100k+)/ Med ($50k-100k)/ Low (<$50k)	Timeline Time needed to complete
B. Preparedness, Coordination & Response Action Strategies							
Increase emergency response communication and coordination between federal, state, local and other stakeholders, ensure all parties are prepared for potential natural hazards	All	All	Local, State, Federal	High	High	Low	Ongoing
Continue cooperation with National Grid and other utilities. Meet regularly and allow operating space in town as needed during an emergency.	All	EMD, TA	Local, State	High	High	Low	Ongoing
Maintain and Improve hazard warning system including Code RED, Facebook and other possible methods	All	EMD	Local	High	High	Low	Ongoing
Actively engage with the Quabbin Land Trust and other local stakeholders to limit the effects of hazards	All	TA	Local	Medium	Medium	Low	Ongoing
Maintain Unified Incident Command program, train town officials as needed	All	EMD, TA	Local	Medium	Medium	Low	Ongoing
C. Education & Awareness Strategies							
Educate all residents about hazard mitigation and the actions the community can take to protect themselves.	All	EMD	Local, State	High	High	Low	Ongoing
Promote federal and state resources such as educational material, training and National Weather Service forecasts. Continue Community Emergency Response Team (CERT) training.	All	EMD	Local, State	High	High	Low	Ongoing
D. Local Planning & Regulatory Strategies							

Mitigation Strategy Description	Hazard(s) Addressed	Who? Agencies involved	Potential Funding Sources	Priority Political & economic viability: High/Med/Low	Impact Mitigation impact: High/Med/Low	Estimated Cost High ($100k+)/ Med ($50k-100k)/ Low (<$50k)	Timeline Time needed to complete
Pursue grant funding when available	All	EMD	Local, State, Federal	High	Medium	Low	Ongoing
Continue to enforce State Building Codes including seismic standards	All	BI	Local, State	High	Medium	Low	Ongoing
Continue to enforce Mass. Wetlands Protection Act. Consider implementing a town wetlands bylaw.	All	CC	Local	Medium	Medium	Low	Ongoing
Develop a means for sharing information on a regional basis about successful hazard mitigation. Create a feedback loop to improve hazard planning and establish a formal post disaster assessment process.	All	EMD, CMRPC, State	Local, State	Medium	Medium	Low	1-2 Years
Update the Natural Hazard Mitigation Plan in 2024	All	EMD, CMRPC, State	Local, State, Federal	High	High	Low	1 Year
Incorporate hazard mitigation in local planning, including Master Plan, Open Space Plan Capital Planning and others as appropriate	All	TA, PB	Local, State	Medium	Medium	Low	1-2 Years
Integrate hazard mitigation into transportation improvements.	All	Highway, MassDOT	Local, State, Federal	High	High	Low-High	Ongoing
Develop a formal Capital Improvement Program	All	TA	Local	Low	Low	Low	1 Year
Continue working with CMRPC on evacuation planning	All	EMD, CMRPC, State	Local, State, Federal	Medium	Medium	Low	1-2 Years
Incorporate hazard mitigation into the MEPA review process	All	State	State	Medium	Medium	Low	Ongoing

Mitigation Strategy Description	Hazard(s) Addressed	Who? Agencies involved	Potential Funding Sources	Priority Political & economic viability: High/Med/Low	Impact Mitigation impact: High/Med/Low	Estimated Cost High ($100k+)/ Med ($50k-100k)/ Low (<$50k)	Timeline Time needed to complete
Inventory shelter and emergency resources. Ensure suitable shelters are available for different types of natural hazards	All	EMD	Local	Medium	Medium	Low	1 Year
Work with DCR to develop an Open Space Plan	All	TA, PB	Local, State	Low	Medium	Low	1-2 Years
Become a Mass. Municipal Vulnerability Preparedness (MVP) certified community.	All	TA, EMD	Local, State	High	High	Low	1 Year

'Hazards Addressed' abbreviations:

DF	Dam Failure	DR	Drought
EQ	Earthquake	FL	Flooding
HU	Hurricane	OT	Other
SS	Severe Snowstorm/Ice storm/Nor'easter	ST	Severe Thunderstorm/Wind/Tornado
WF	Wildfire/Brushfire	XT	Extreme Temperatures

Who? Agencies Involved' abbreviations:

BI	Building Inspector	CMRPC	Central Mass. Regional Planning Commission
CC	Conservation Commission	MassDOT	Mass. Department of Transportation
EMD	Emergency Management Director	PB	Planning Board
TA	Town Administrator	ZBA	Zoning Board of Appeals

TOWN OF NEW BRAINTREE

Municipal Vulnerability Preparedness (MVP)

Community Resilience Building Workshop

April 6th, 5:00 – 8:00 pm (In-Person)

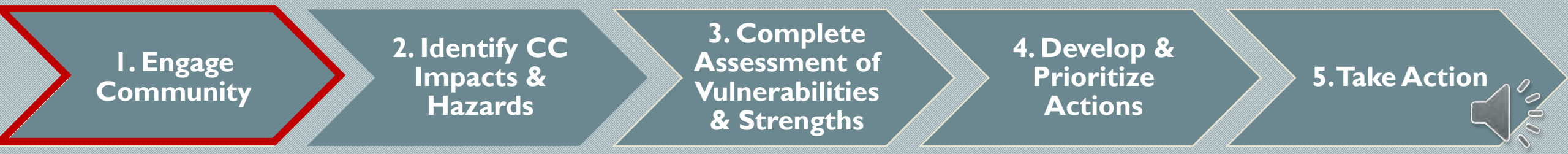
&

April 13th, 5:00 – 8:00 pm (Virtual)

CMRPC
Central Massachusetts Regional Planning Commission

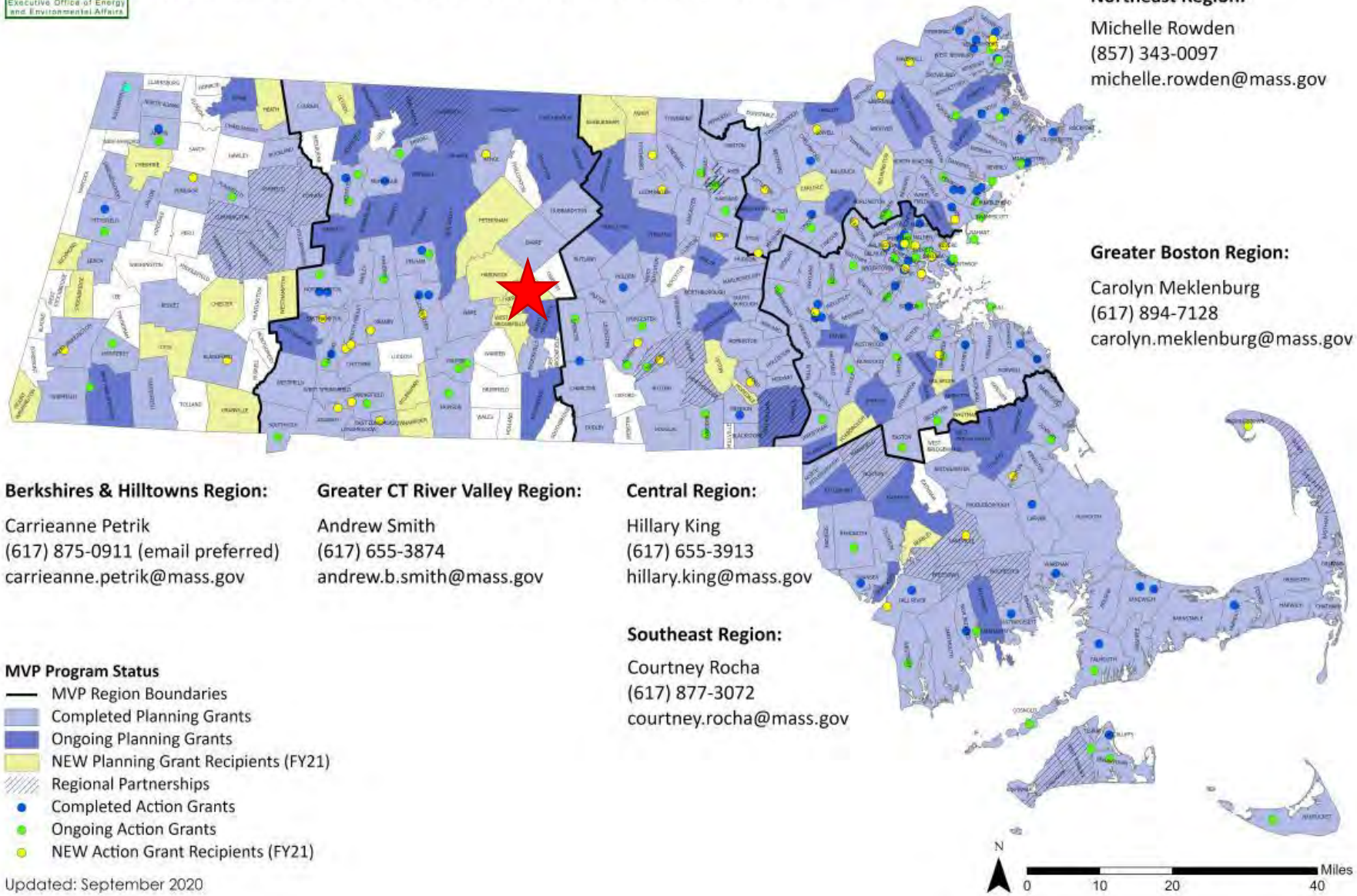
MUNICIPAL VULNERABILITY PREPAREDNESS (MVP)

- State grant program to support cities and towns to begin the process of planning for climate resiliency.
- MVP Planning Process includes CRB Workshop, Report, Listening Session and Annual Reporting
- Communities who complete the MVP Planning Process become certified as an MVP Community
- Designated communities become eligible for MVP Action Grant funding



Municipal Vulnerability Preparedness (MVP) Program

Program Manager: Kara Runsten, (617) 312-1594, kara.runsten@mass.gov



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MVP Program Status

- MVP Region Boundaries
- Completed Planning Grants
- Ongoing Planning Grants
- NEW Planning Grant Recipients (FY21)
- Regional Partnerships
- Completed Action Grants
- Ongoing Action Grants
- NEW Action Grant Recipients (FY21)

Updated: September 2020

Executive Office of Energy and Environmental Affairs

CMRPC
Central Massachusetts Regional Planning Commission

MVP Program Status

- MVP Region Boundaries
- Completed Planning Grants
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- NEW Planning Grant Recipients (FY21)
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- Completed Action Grants
- Ongoing Action Grants
- NEW Action Grant Recipients (FY21)

Updated: September 2020

CMRPC
Central Massachusetts Regional Planning Commission

HOW THE TOWN GOT HERE?

- Awarded Planning Grant
- Core Team Meeting
- COVID-19 Adaptation
- Invitation from Core Team

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COMMUNITY RESILIENCE BUILDING WORKSHOP OBJECTIVES

- Define extreme weather and climate-related hazards
- Identify current and future vulnerabilities and strengths
- Develop and prioritize actions for the community and broader stakeholder networks, and
- Identify opportunities for the community to advance actions to reduce risks and build resilience

C M R P C
Central Massachusetts Regional Planning Commission

THE MATRIX

Community Resilience Building Risk Matrix www.CommunityResilienceBuilding.com

H-M-L priority for action over the Short or Long term (and Ongoing)
V = Vulnerability S = Strength

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

Features	Location	Ownership	V or S					Priority H-M-L	Time Short Long Ongoing
Infrastructural									
Societal									
Environmental									

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Central Massachusetts Regional Planning Commission

BREAKOUT GROUPS

- 3-4 tables of 6 to 8 individuals
- Each table will discuss
  - Societal,
  - Infrastructure, and
  - Environmental
- Tools and Resources
  - Matrix, Maps, & Each Other

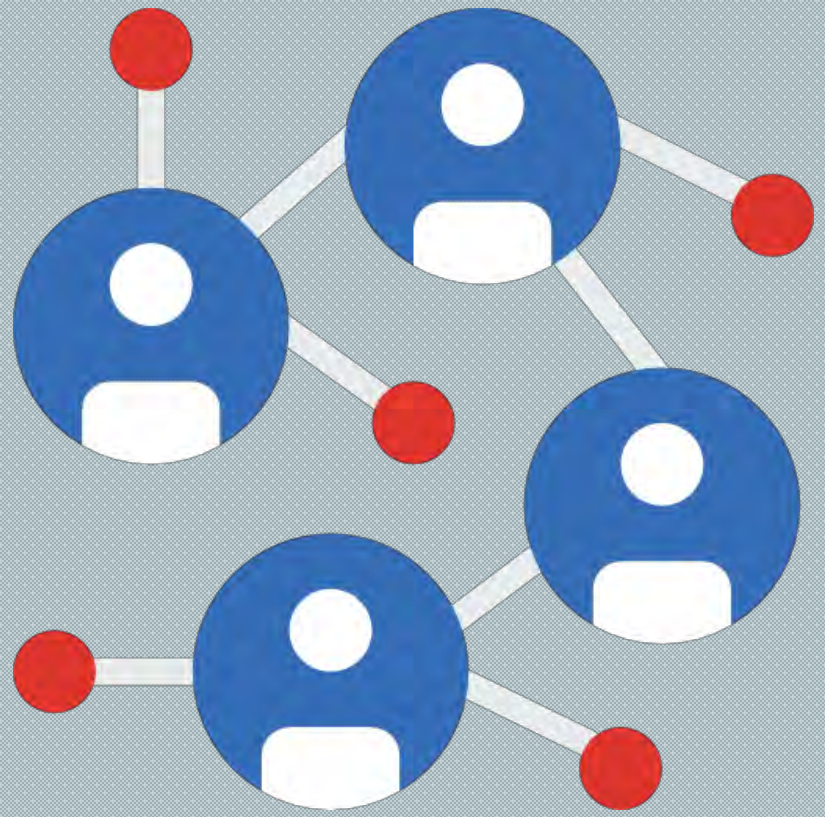

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TABLE ROLES AND RESPONSIBILITIES

- Table Facilitator directs the discussion and keeps the dialogue moving
- Scribes filling in matrix
- Participants- All of you
- CMRPC resource person
- Table spokesperson for Report Out

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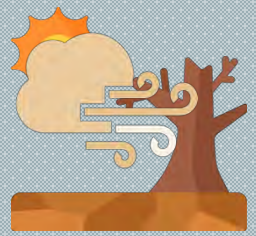
Central Massachusetts Regional Planning Commission

HAZARD IDENTIFICATION

- **Flooding**
  - Riverine
  - Street

- **Landslides**
- **Mudslides**

- **Tornadoes**



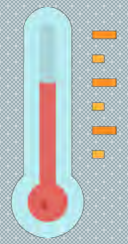
- **Drought**
- **Dust Storms**

- **Tsunami**

- **Hurricanes/ Nor'easters**

- **Wild Fires**

- **Winter Storms**
  - **Snow**
  - **Ice**



- **Extreme Temperatures**
  - **Heat**
  - **Cold**

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PRIMARY TOPIC AREAS

- Infrastructure

- Society

- Environment

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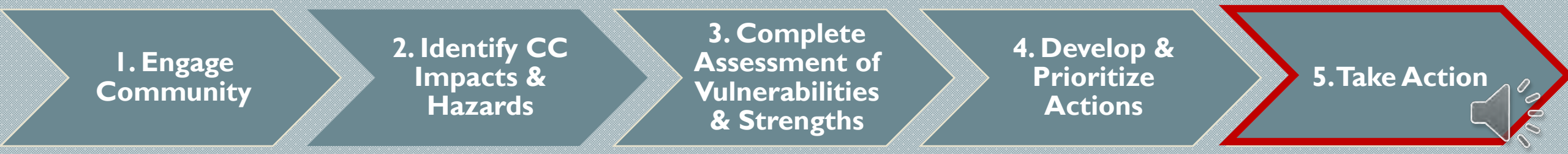
NEXT STEPS

- Complete the survey
- Report development
- Public "Listening" session with Members of the Public and Board of Selectmen Spring 2021
- Develop resources and Implement actions.



ACTION GRANTS

- Next round expected in spring 2021
- Up to $2 million for an individual community
- Up to $5 million for regional projects
- One year grant cycle (typically) July 1st- June 30th
- 25% Match - Cash or In-kind (Non-State Funds)

www.mass.gov/municipal-vulnerability-preparedness-mvp-program

www.communityresiliencebuilding.com

CMRPC
Central Massachusetts Regional Planning Commission

CONTACT US

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Executive Office of Energy and Environmental Affairs

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CMRPC
Central Massachusetts Regional Planning Commission

THANK YOU

CMRPC
Central Massachusetts Regional Planning Commission

TOWN OF NEW BRAINTREE

Municipal Vulnerability Preparedness (MVP)

Community Resilience Building Workshop

April 6th, 5:00 – 8:00 pm (In-Person)

&

April 13th, 5:00 – 8:00 pm (Virtual)

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THE MATRIX

Community Resilience Building Risk Matrix www.CommunityResilienceBuilding.com

H-M-L priority for action over the Short or Long term (and Ongoing)
V = Vulnerability S = Strength

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

Features	Location	Ownership	V or S					Priority H-M-L	Time Short Long Ongoing
Infrastructural									
Societal									
Environmental									

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STEP ONE: HAZARD IDENTIFICATION

What are the Top Four Natural Hazards in New Braintree?

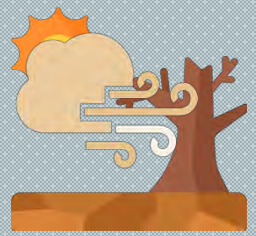
1. Engage Community
2. Identify CC Impacts & Hazards
3. Complete Assessment of Vulnerabilities & Strengths
4. Develop & Prioritize Actions
5. Take Action

STEP ONE: HAZARD IDENTIFICATION

- **Flooding**
  - Riverine
  - Street

- **Landslides**
- **Mudslides**

- **Tornadoes**



- **Drought**
- **Dust Storms**

- **Tsunami**

- **Hurricanes/ Nor'easters**

- **Wild Fires**

- **Winter Storms**
  - **Snow**
  - **Ice**

- **Extreme Temperatures**
  - **Heat**
  - **Cold**

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STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

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Top 4 Hazards

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PRIMARY TOPIC AREAS

- Infrastructure

- Society

- Environment

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Features	Location	Ownership	V or S					Priority	Time
								H-M-L	Short Long Ongoing
Infrastructural									
Dam									
Societal									
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Dam									
Societal									
Senior Housing									
Environmental									

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Environmental									
Wetlands									

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STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

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www.CommunityResilienceBuilding.com

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Estimated Location

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Estimated Location

Public? Private? State?

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Estimated Location

Public? Private? State?

Vulnerability or Strength

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DAY 1 COMPLETE

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STEP TWO: COMPLETED

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Estimated Location

Public? Private? State?

Vulnerability or Strength

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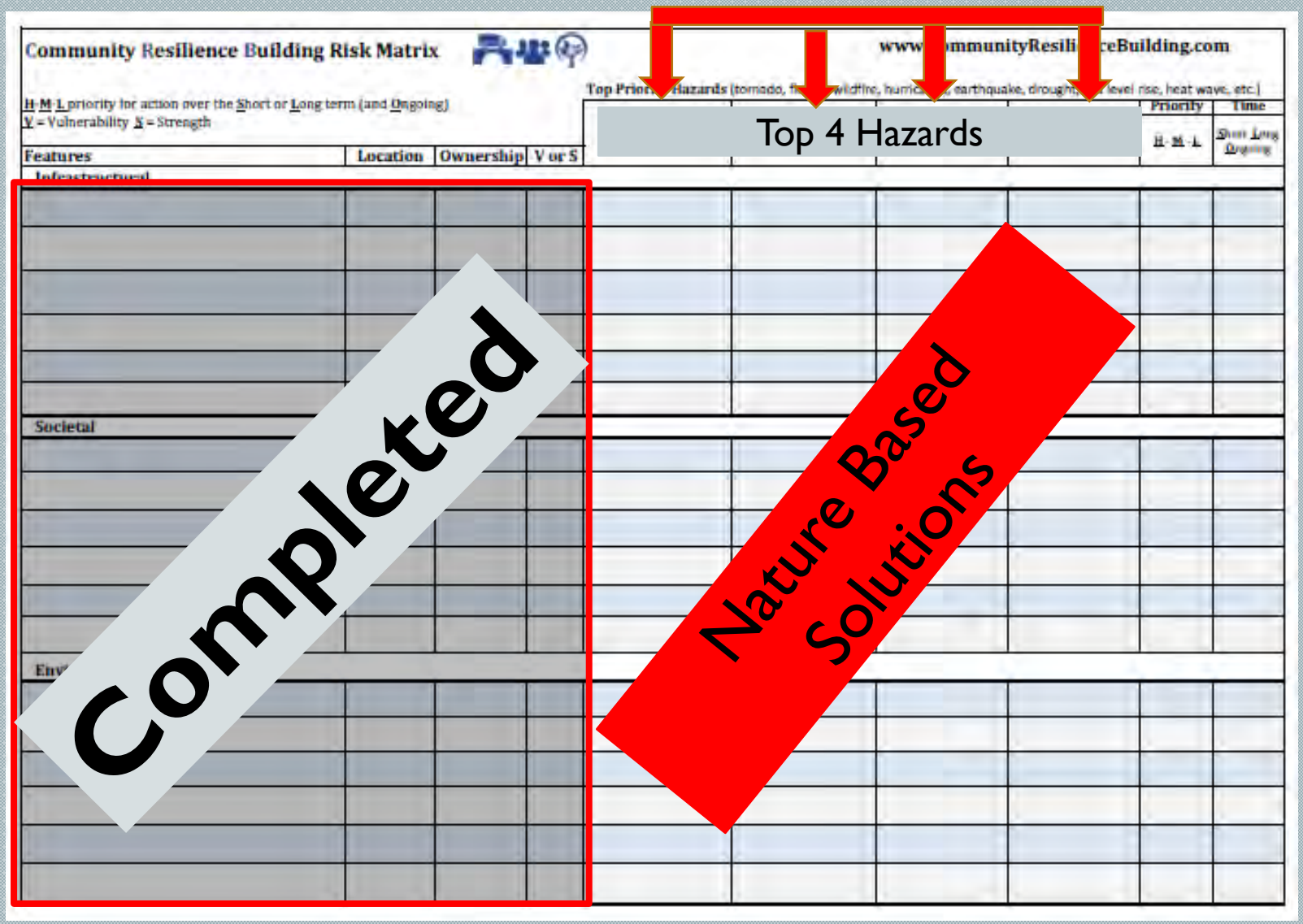
STEP THREE: ACTIONS, PRIORITY AND TIMELINE



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NATURE BASED SOLUTIONS

- Make use of natural systems
- Mimic the natural processes
- Actions to protect, sustainably manage and restore ecosystems
- Simultaneously providing well-being and biodiversity

International Union for Conservation of Nature (IUCN)

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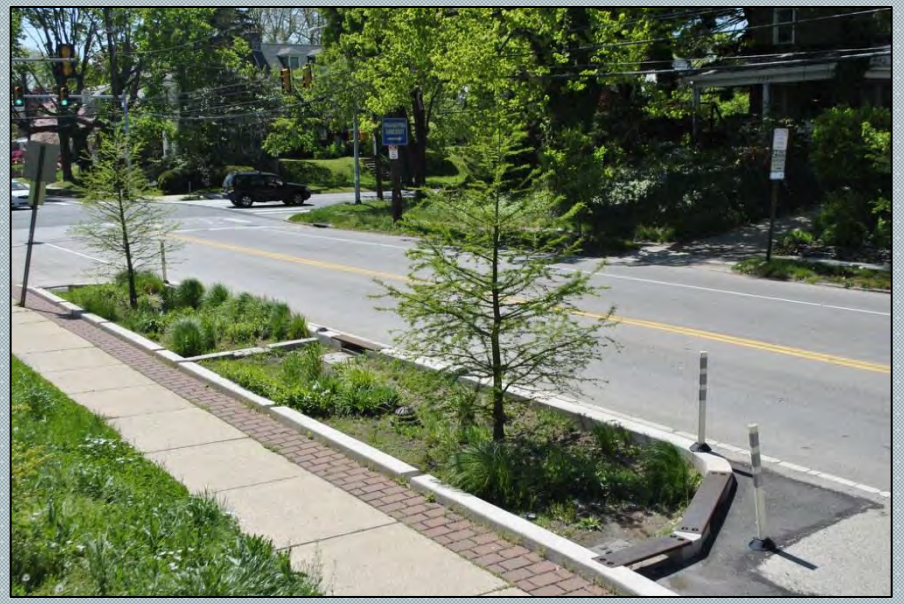
NATURE BASED SOLUTIONS (LID)

- Natural systems mimic natural processes to absorb and slow runoff and stormwater, and also reduce heat islands.

- Low impact development (LID) designs can be integrated into new development at neighborhood scales and work with traditional approaches

Bioswale between sidewalk and street



Contained bioswale or planter box

Mass Audubon

Shaping the Future of Your Community

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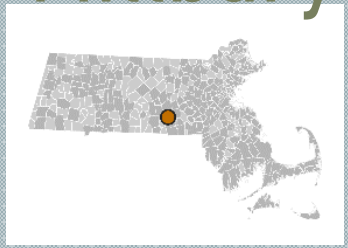
Example Action Grant Projects

Nature-Based Flood Protection, Drought Prevention, Water Quality, and Water Infiltration Techniques

Millbury



Designing green infrastructure like stormwater planters, bioretention bump outs, rain gardens, and other measures like porous pavers and pervious pavement to reduce heat island effects and stormwater runoff into the Blackstone River.

Nature-based solutions

MORE EXAMPLES OF LOW IMPACT DEVELOPMENT AND GREEN INFRASTRUCTURE

Green Parking Lots

Permeable Paving

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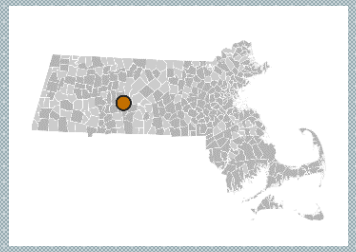
Example Action Grant Projects

Nature-Based Flood Protection, Drought Mitigation, Water Quality, and Water Infiltration Techniques

Belchertown



Designing and permitting for a replacement water storage tank that would increase storage capacity and resiliency to drought, and completing a feasibility/ concept design of a rainwater harvesting system at Belchertown High School to irrigate the athletic fields.

Nature-based solutions

Pilot potential

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ECONOMIC BENEFITS OF LID AND GREEN INFRASTRUCTURE PROJECTS

Aquatic restoration projects in MA, like these natural culverts, are contributing to a growing "restoration economy" by providing jobs and economic output.

Traditional Culvert

Nature Based Culvert

Mass Audubon

Shaping the Future of Your Community

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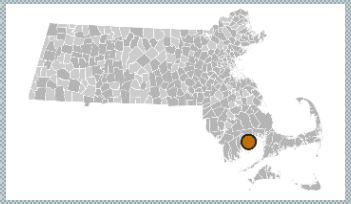
Example Action Grant Projects

Land Acquisition for Resilience

Mattapoisett



Purchasing 120 acres of forest, streams, freshwater wetlands and coastal salt marsh as conservation land to prevent development in vulnerable areas

Data Utilization

Proactive

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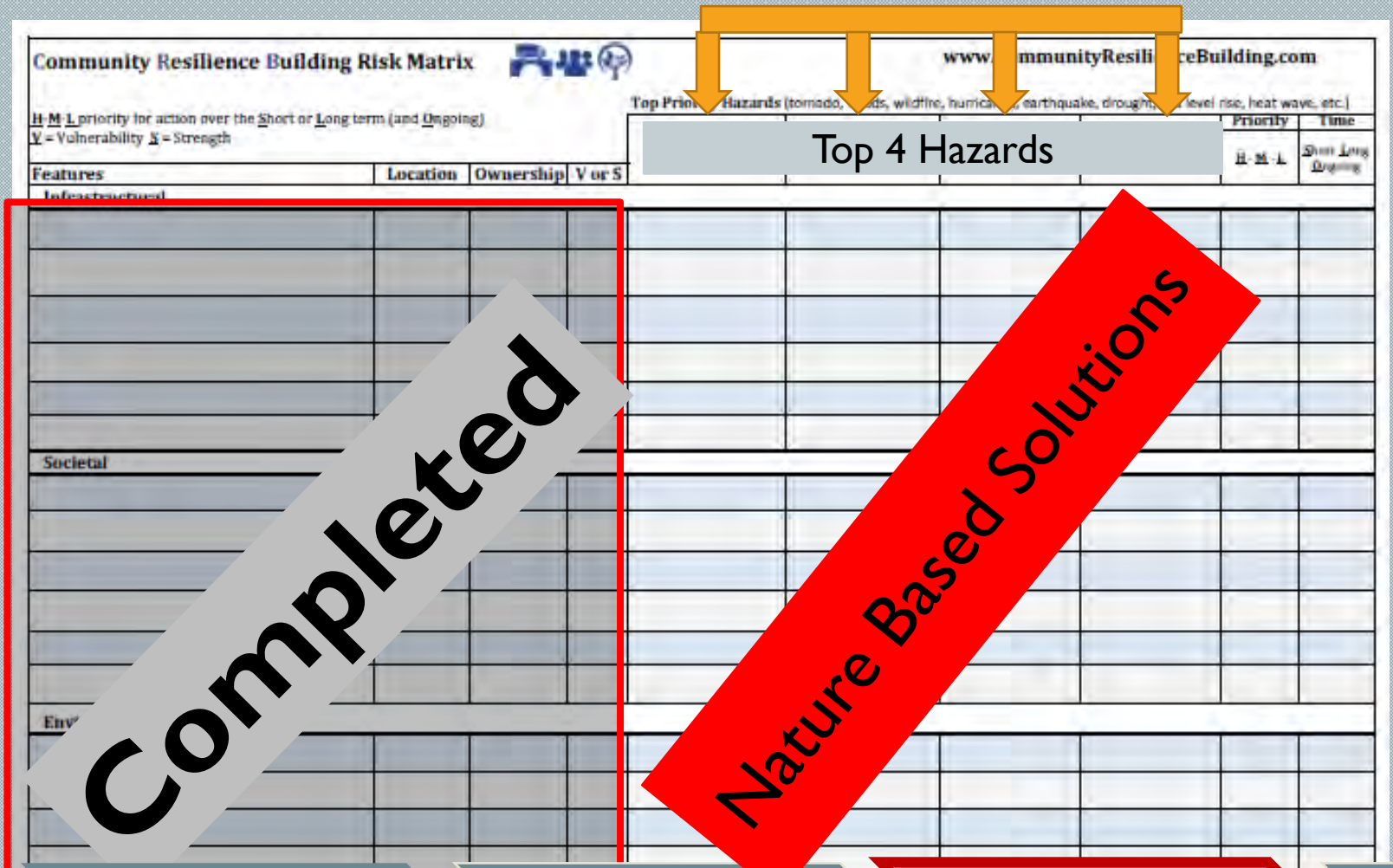
BENEFITS OF GREEN INFRASTRUCTURE AND LID

- Cost Savings
  - Reduced development costs for infrastructure and maintenance
  - Reduced energy costs for residents
- Public Safety
  - Reduced flooding
  - Improved water quality
  - Increased climate change resiliency
  - Reduced urban heat island effect
- Quality of Life
  - Protect and restore natural features for improved aesthetics
- Value
  - Increased property values
- Regulatory
  - Assistance in meeting regulatory requirements

STEP THREE: ACTIONS



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4. Develop & Prioritize Actions

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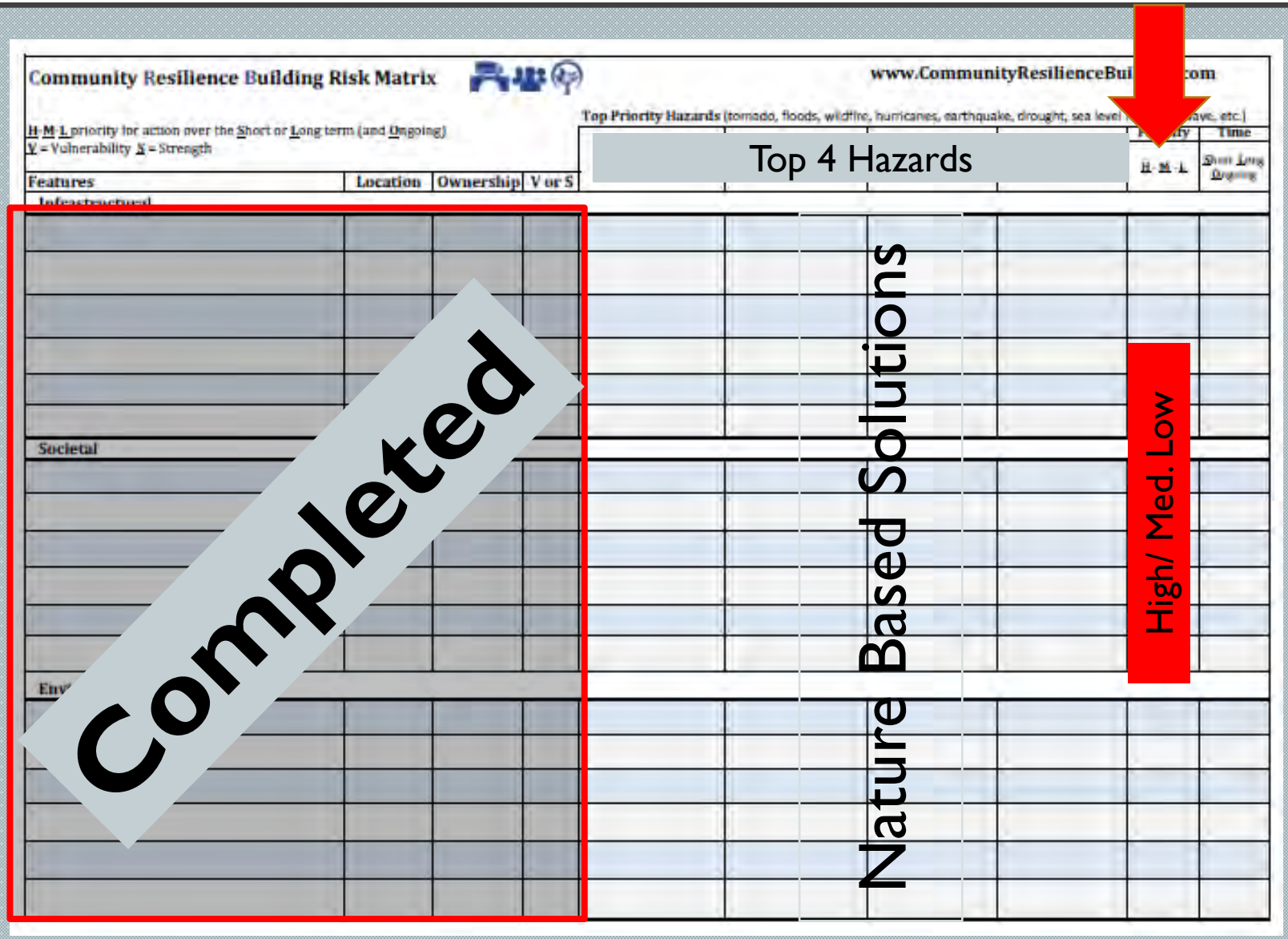
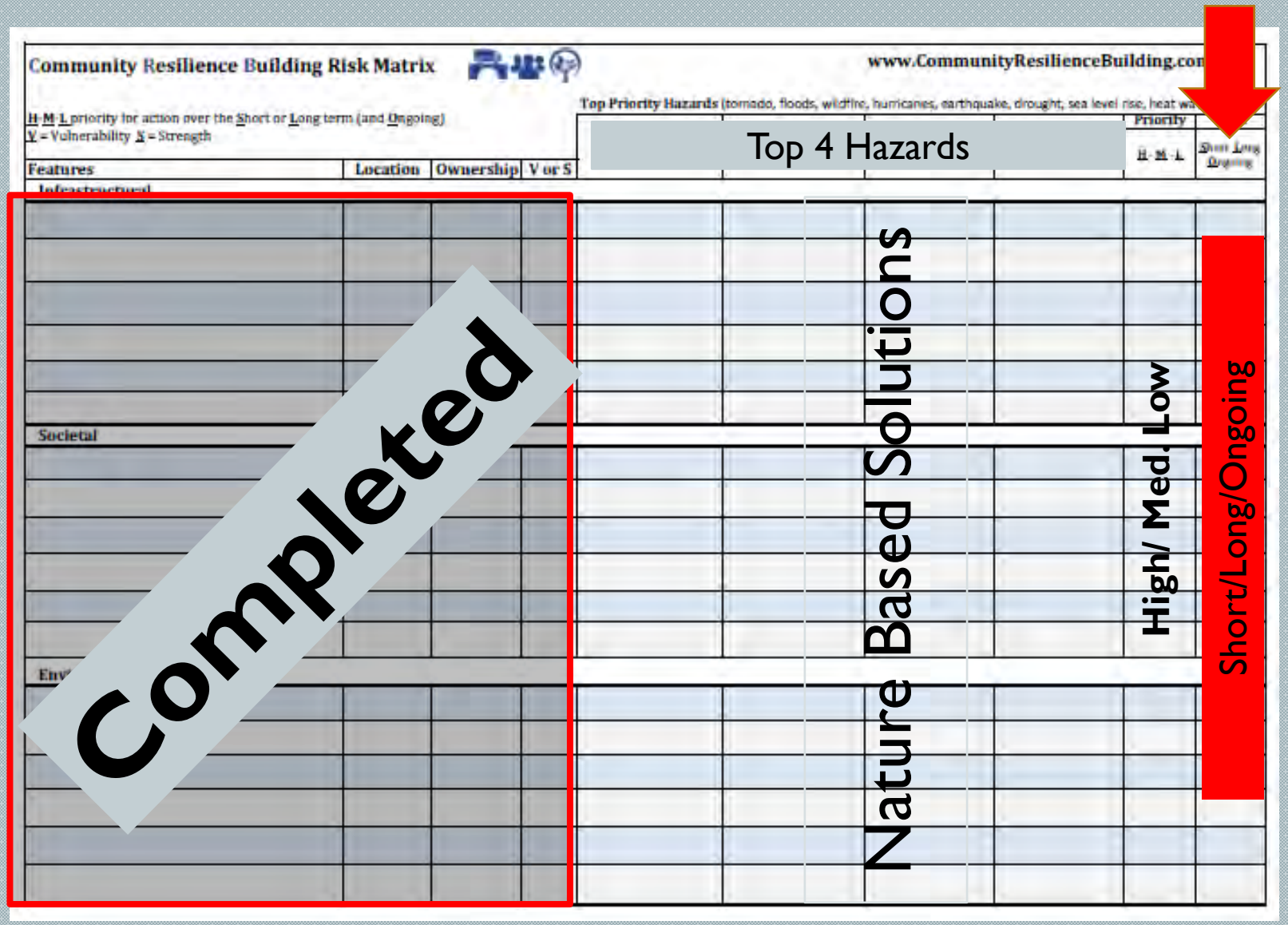
STEP THREE: PRIORITIES



STEP THREE: TIMELINE



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REPORT OUTS

What did your table find?

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SUMMARY DISCUSSION

- Areas of agreement
- Areas of unique perspectives

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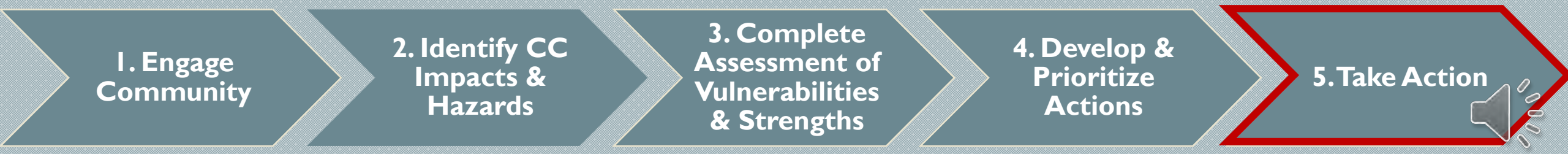
NEXT STEPS

- Complete the survey
- Report development
- Public "Listening" session with Members of the Public and Board of Selectmen Spring 2021
- Develop resources and Implement actions.



CONTACT US

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CMRPC Project Leader

Dani Marini, dmarini@cmrpc.org

Executive Office of Energy and Environmental Affairs

Andrew Smith, andrew.b.smith@state.ma.us

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THANK YOU

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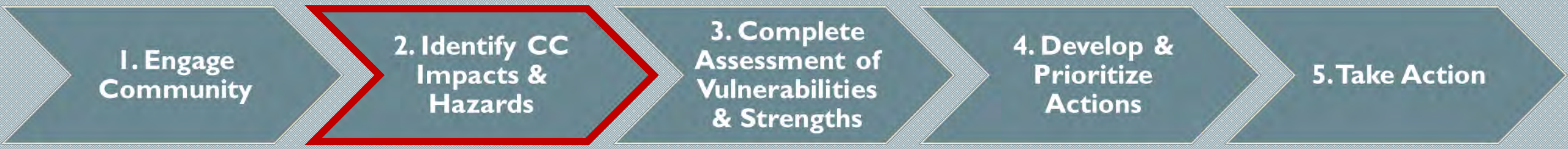
CLIMATE PROJECTIONS AND IMPACTS FOR THE TOWN OF NEW BRAINTREE



Municipal Vulnerability Preparedness
Community Resilience Building Workshop – April 6 and 13

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CLIMATE CHANGE PROJECTIONS

Climate projections

- Precipitation
  - Annual
  - Large events
  - Changes in "___ year storms"
  - Consecutive dry days
- Temperature

Natural Hazards

- Winter Storms
- Heavy Rainfall and Flooding
- Drought, Wildfire, and Heat

EXAMPLES OF IMPACTS OF CLIMATE CHANGE

Infrastructure

- **Transportation -** Increased precipitation and flooding can disrupt traffic, delay construction, and wash out soil and culverts that support roads, tunnels, and bridges.
- **Energy -** Increase in summer peak electricity demand in most regions of the United States.

Societal

- **Agriculture -** Impact on crops from more extreme temperature and precipitation
- **Human Health -** More frequent, extreme and longer heat waves will impact vulnerable populations.

Environment

- **Ecosystems -** Impacts such as range shifts, habitat loss, more pests and more invasive species

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OUR CLIMATE IS ALREADY CHANGING

Temperature:	**3° F Since 1895**
Growing Season:	**11 Days Since 1895**
Sea Level Rise:	**8 inches Since 1900**
Strong Storms:	**55% Since 1958**

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NORTHEAST CLIMATE SCIENCE CENTER UMASS AMHERST

NECASC
Northeast Climate Adaptation Science Center

- NECASC downscaled climate projections for major drainage basins
- Climate Models from the IPCC Fifth Assessment Report
- Historical Data 1971-2000
- Medium and High Emission Scenarios were Chosen (RCP 4.5 and 8.5)
    - Medium Scenario Assumes Emissions Peak at Mid-Century
    - High Scenario Assumes a Continuing Emission Trajectory

CHICOPEE RIVER BASIN

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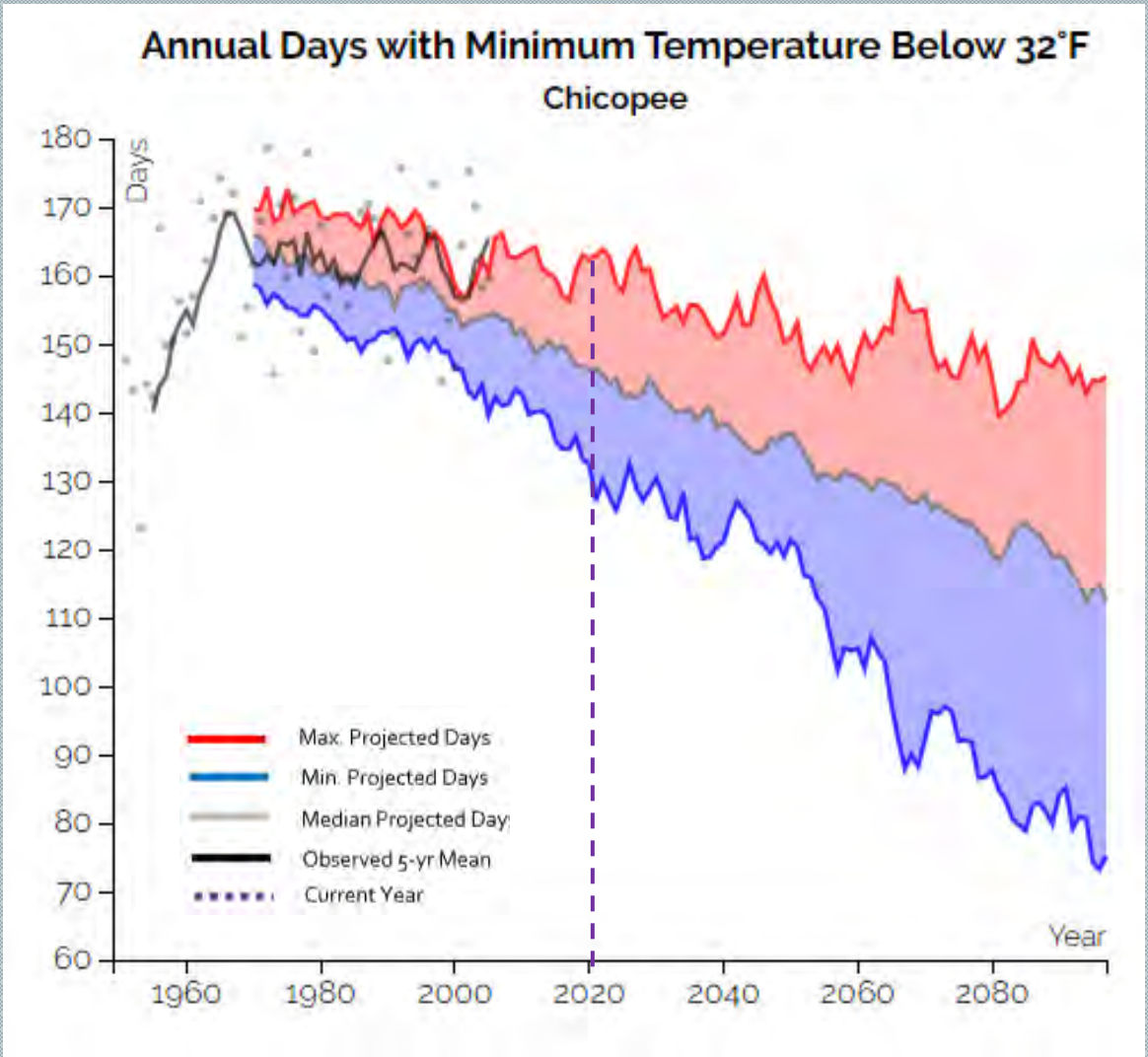
WINTER STORMS

- Annual days below freezing will decrease
- Rising temps → more winter precipitation to fall as rain or freezing rain
- Lower snowfall accumulation
- Winter - Highest projected increase in precipitation
- Storms that do occur may be worse - proximity to Atlantic Ocean increases risk of large storm events



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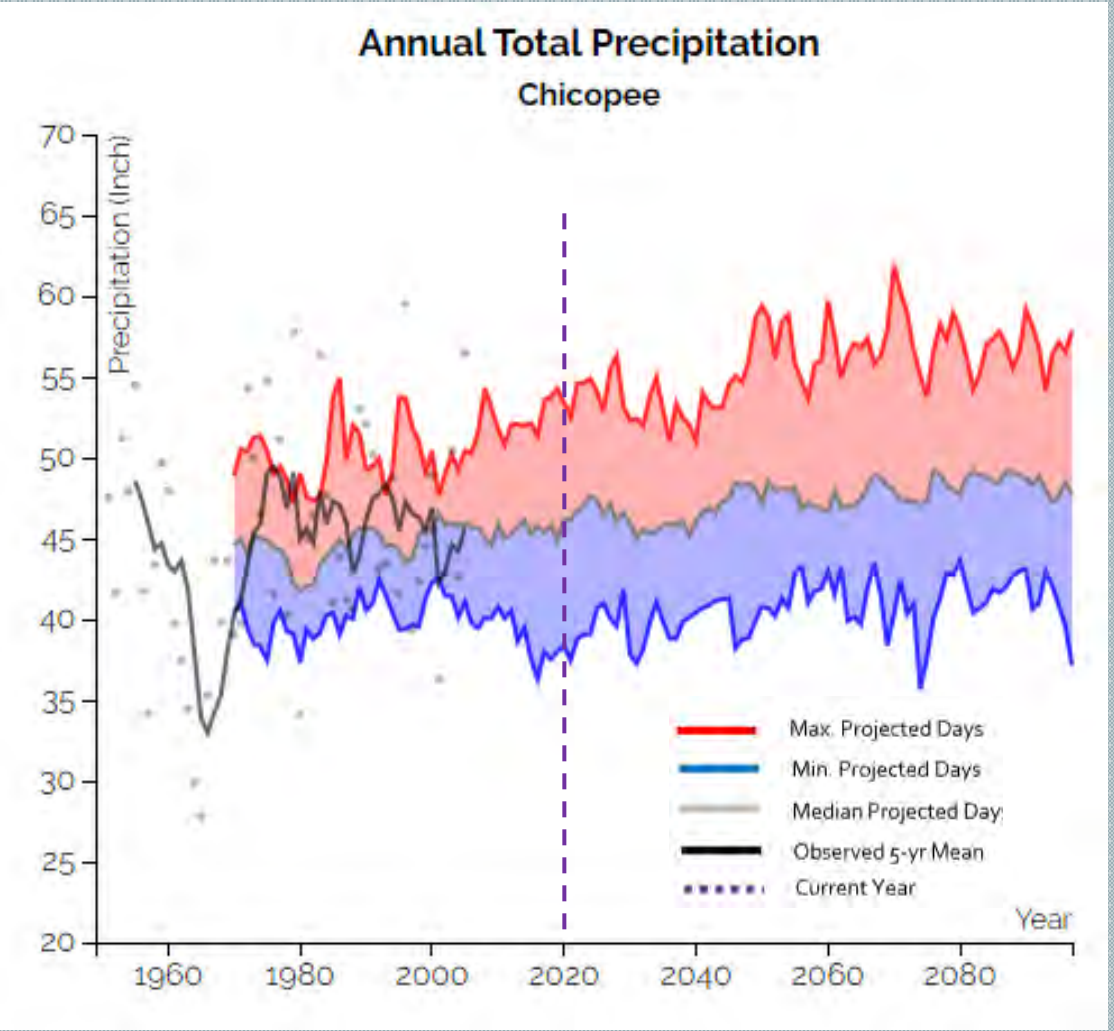
HEAVY RAINFALL AND FLOODING

Seasonal

- **Winter** – Largest increase expected, up to .6 to 3.9 inches by end of century
- **Spring** – Expected increase of .2 to 2.8 inches by end of century
- **Summer** – Possible decrease of 1.2 inches to increase of 2.0 inches by end of century
- **Fall** – Possible decrease of 1.7 inches to increase of 1.5 inches by end of century



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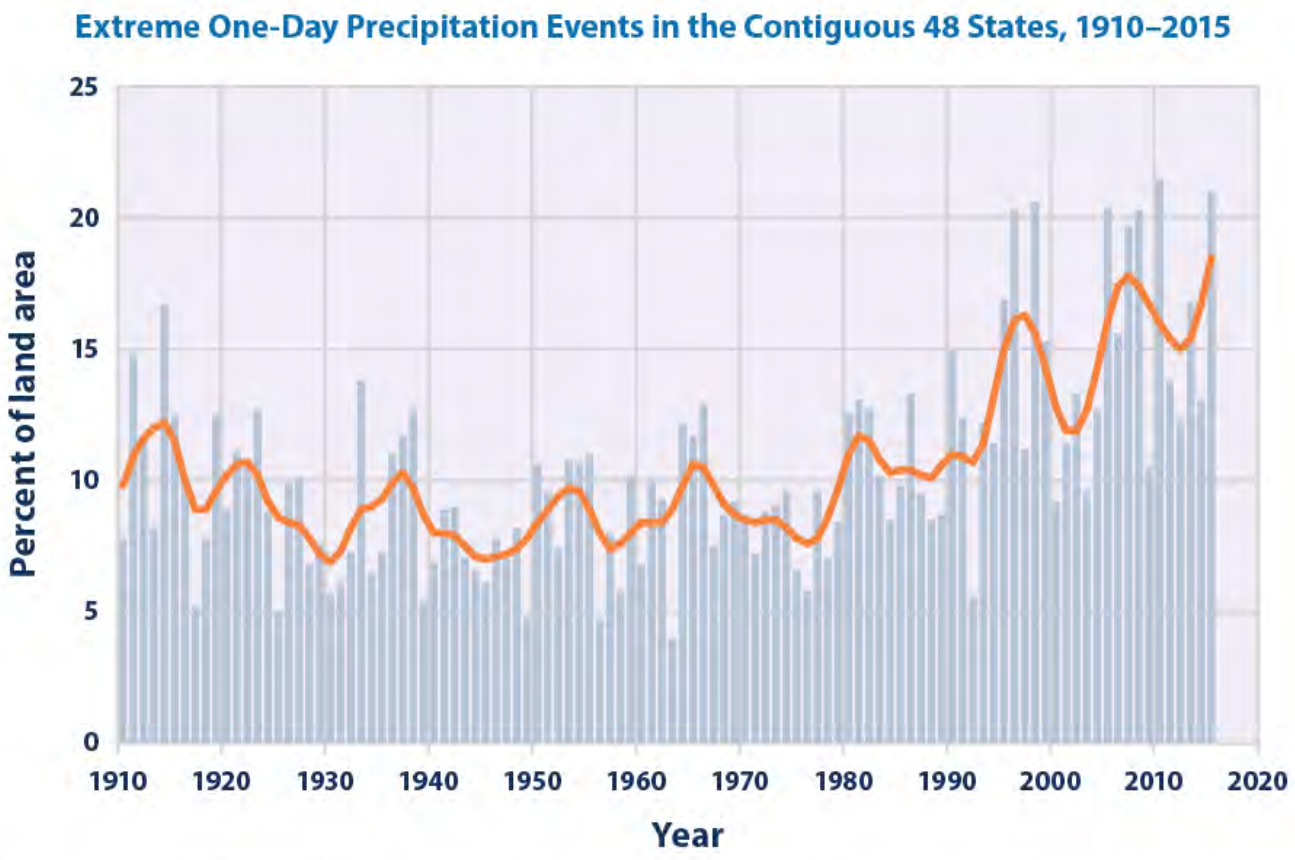
HEAVY RAINFALL AND FLOODING

- Precipitation will increase across all seasons
- Total annual rainfall will increase
- Heavy rainfall events will become more frequent
  - Overbank flooding from rainfall and snowmelt
  - Piped Infrastructure backup and or failure
- Water quality impact from flooding
  - Erosion
  - Nonpoint source pollution



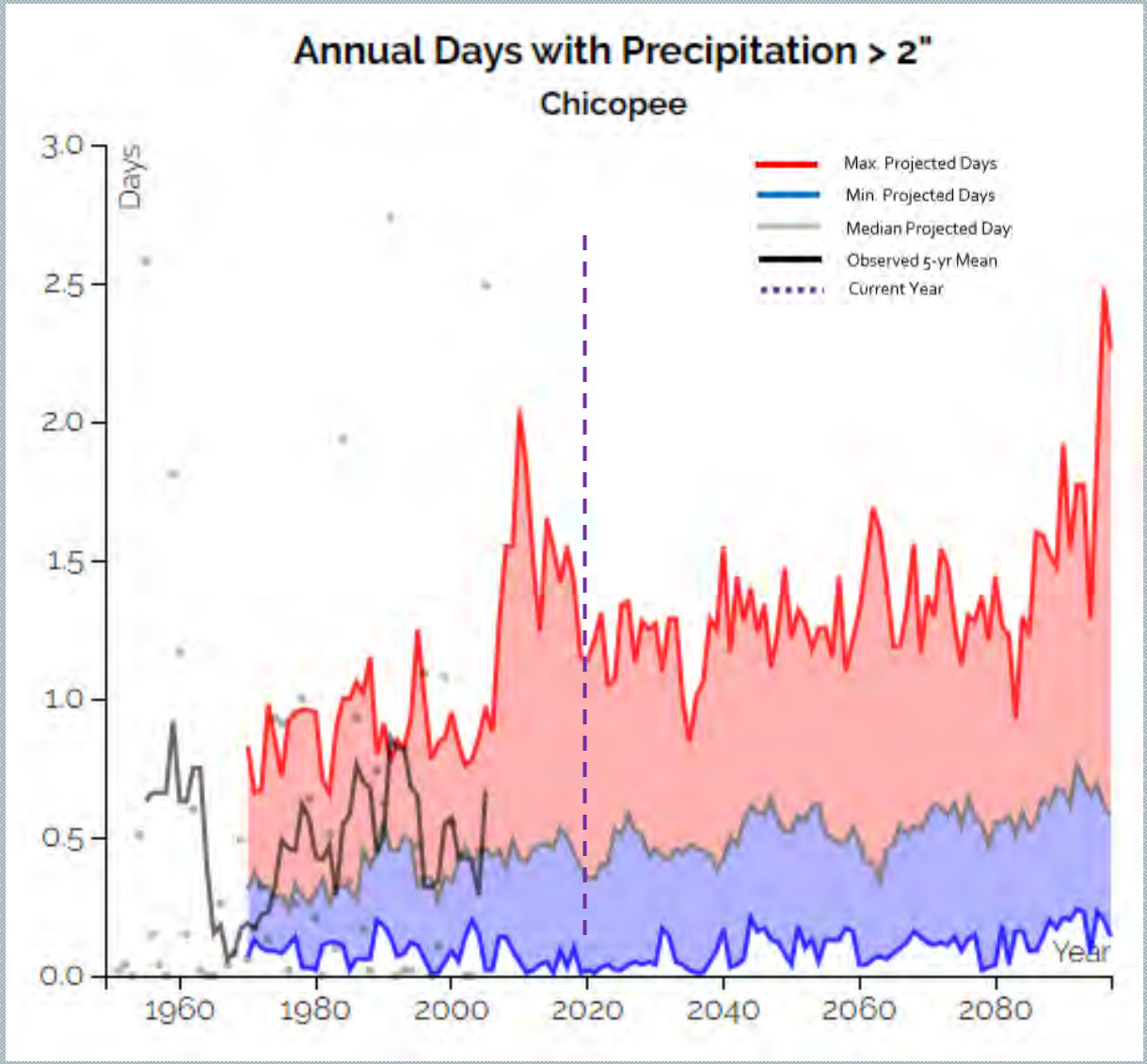
Data source: NOAA (National Oceanic and Atmospheric Administration). 2016. U.S. Climate Extremes Index. Accessed January 2016. www.ncdc.noaa.gov/extremes/cei.

For more information, visit U.S. EPA's "Climate Change Indicators in the United States" at www.epa.gov/climate-indicators.

HEAVY RAINFALL AND FLOODING

Extreme Precipitation

- The number of days each year with more than 2 inches of precipitation will increase.



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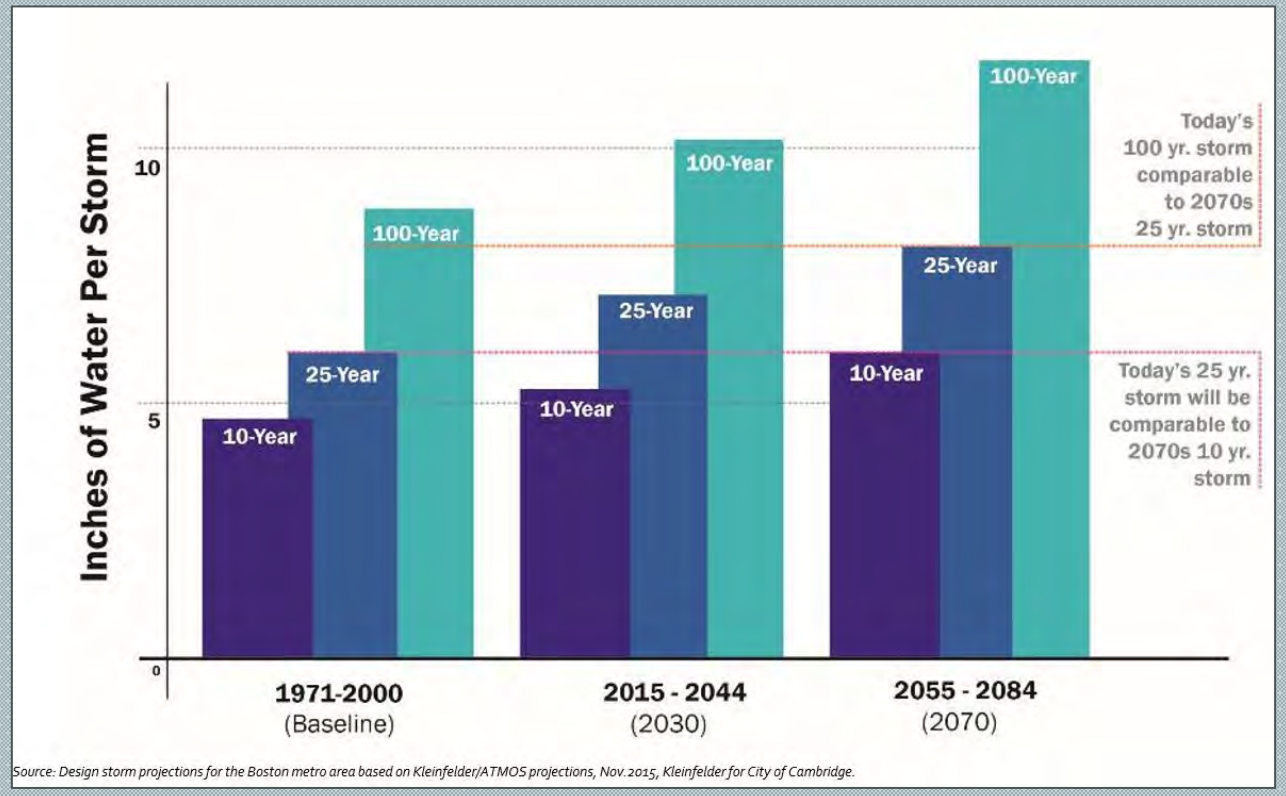
HEAVY RAINFALL AND FLOODING



Source: Design storm projections for the Boston metro area based on Kleinfelder/ATMOS projections, Nov. 2015, Kleinfelder for City of Cambridge.

Icon made by photo3idea_studio from Flaticon.com

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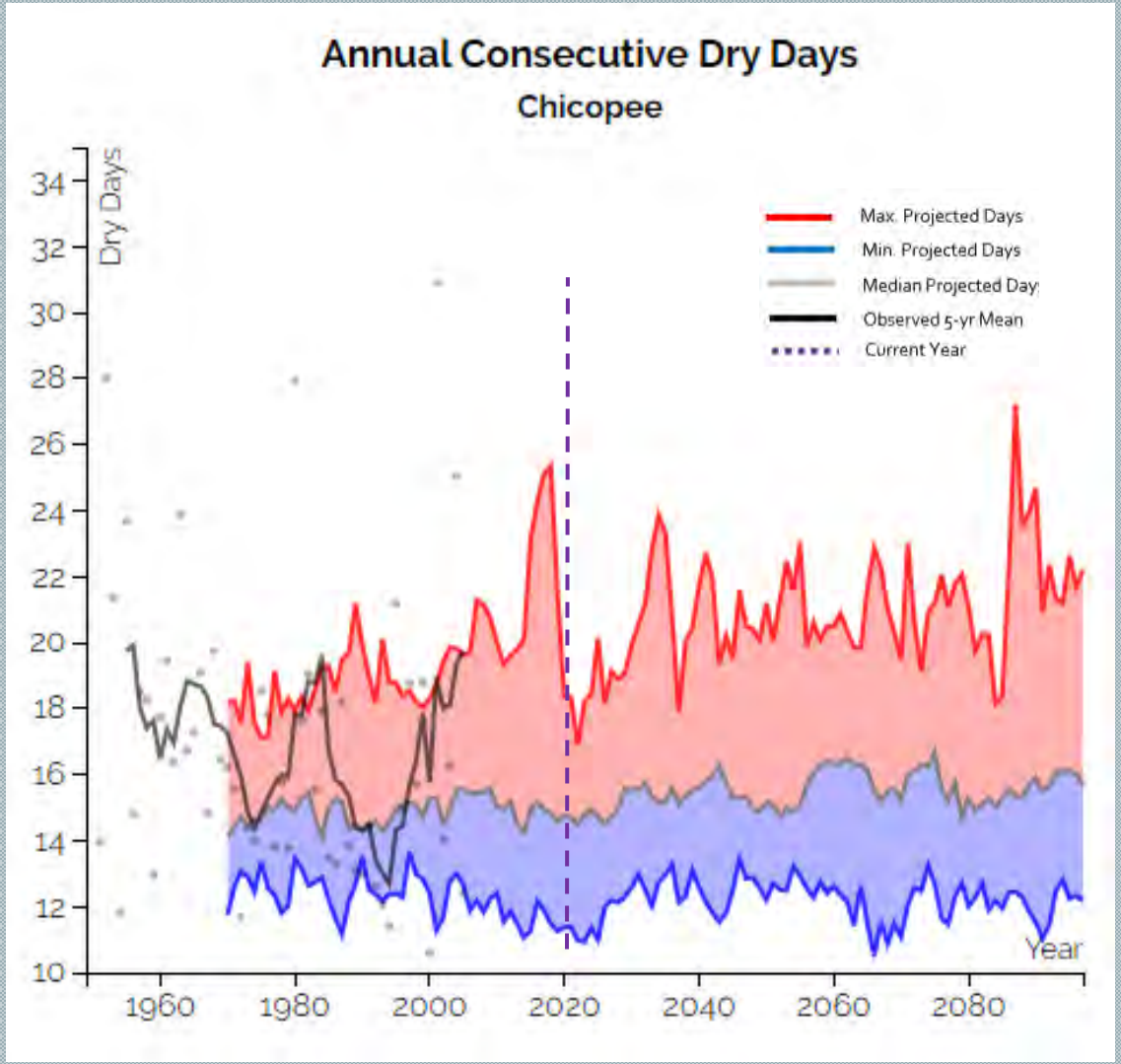
IMPACTS OF INCREASED PRECIPITATION

- More disruptive flooding events, especially with undersize stormwater infrastructure
  - Increased inland flooding
  - Soils become saturated
  - River flows rise
  - Capacity of urban SW infrastructure is exceeded
  - Impacts to property and critical infrastructure
- Increased non-point source pollution
  - Ecological damage to nearby waterbodies

DROUGHT IMPACTS

- More consecutive dry days
- Highest number of consecutive dry days in summer and fall.
- Increase of up to 3 additional consecutive dry days by the end of the century



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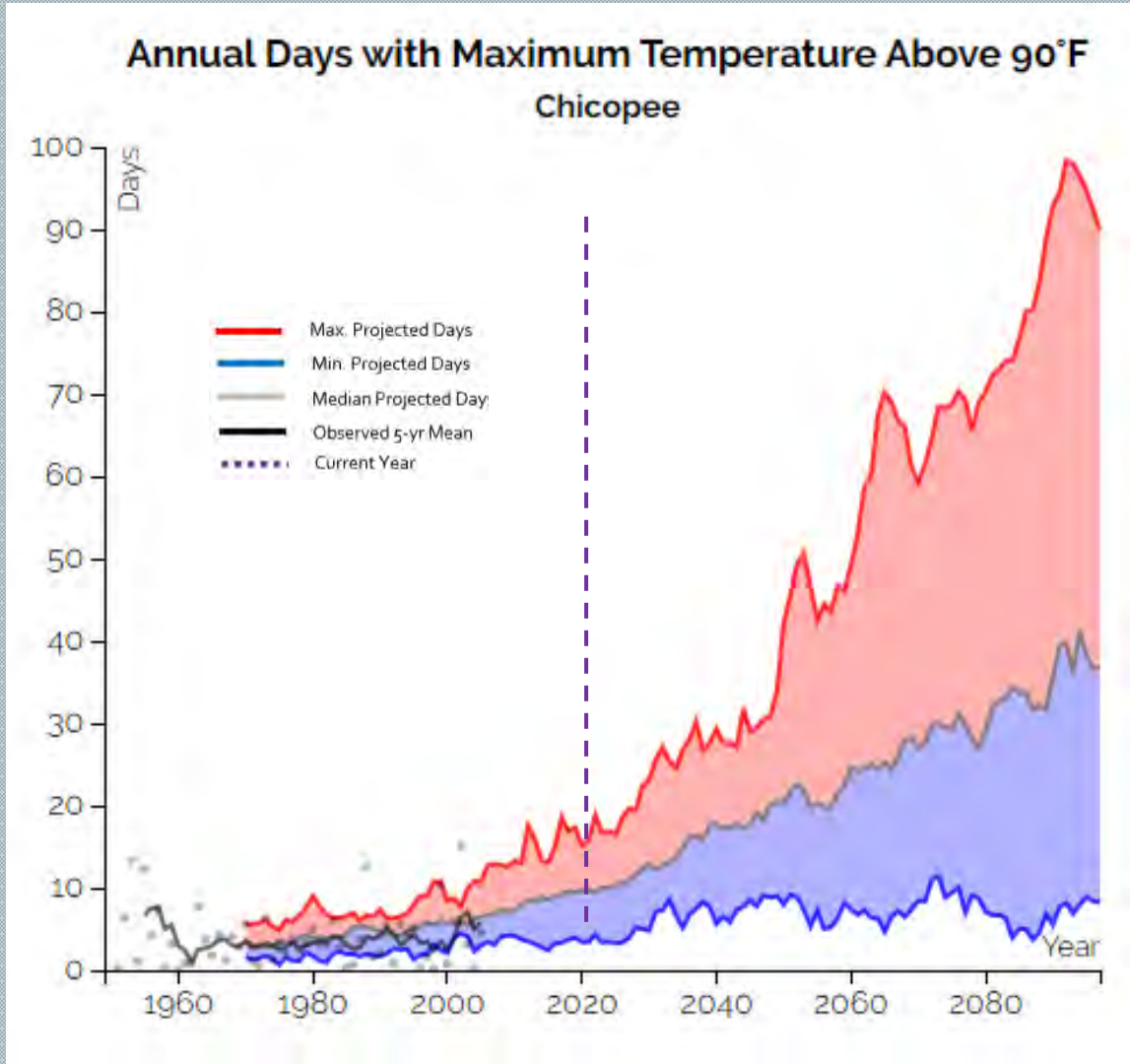
HEAT PROJECTIONS

- Projected increase of 8 to 29 days annually over 90°F by mid century
- Projected increase of 11 to 69 days annually over 90°F by end of century



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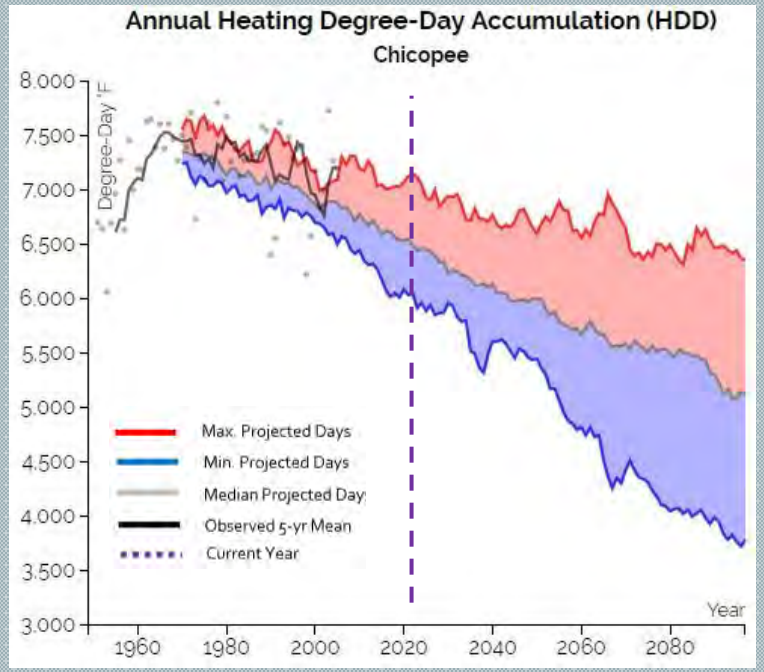
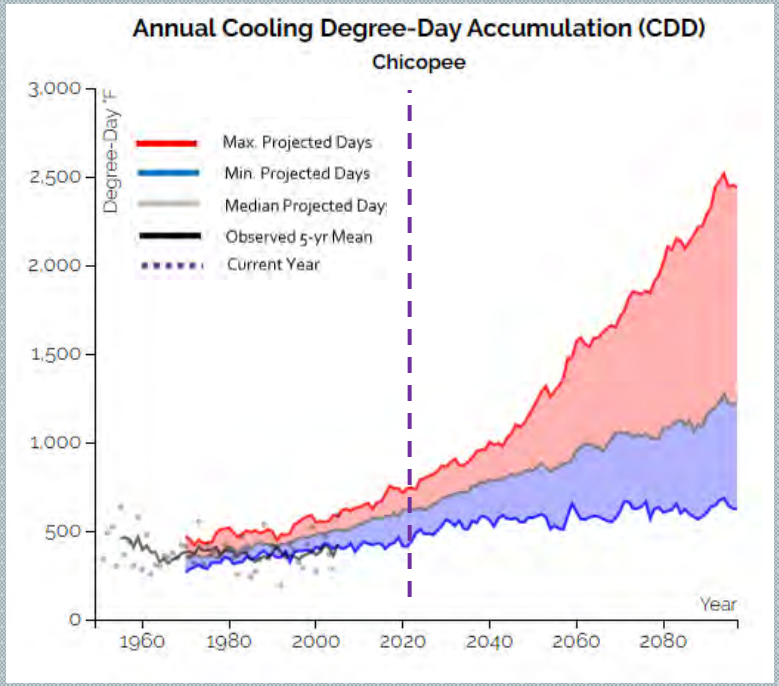
HEAT PROJECTIONS

- Projected decrease in heating degree-days and increase in cooling-degree days
- More days above 65˚F means fewer days needed to heat buildings and more days needed to cool buildings.
- Winter
  - 7-19% decrease in HDD by mid century
- Spring
  - 10-24% decrease in HDD by mid century
- Fall
  - 20-33% decrease in HDD by mid century





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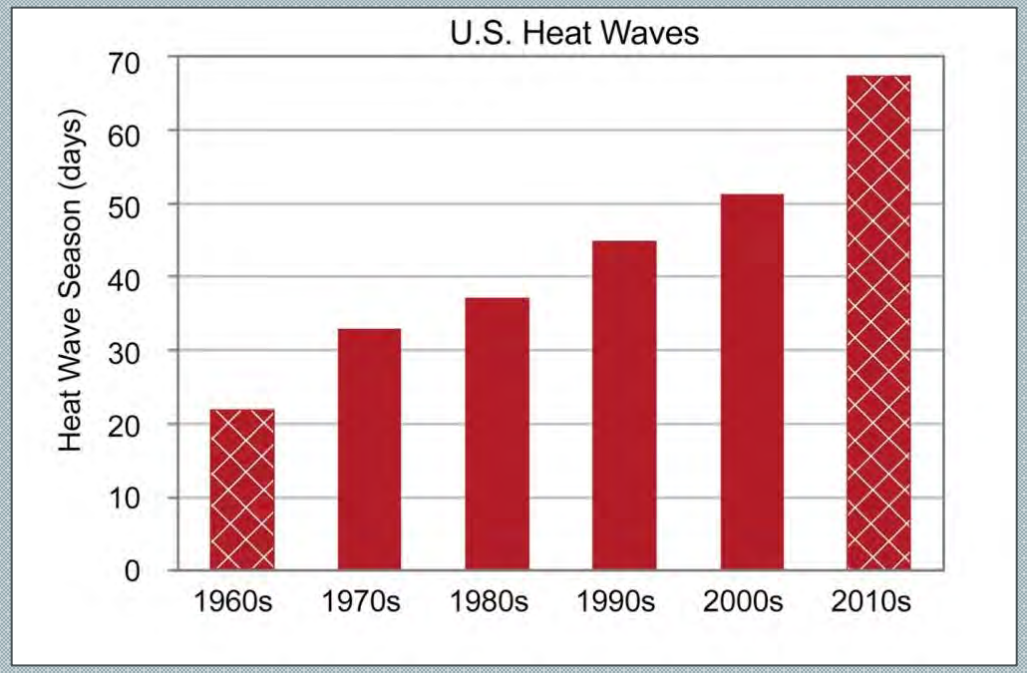
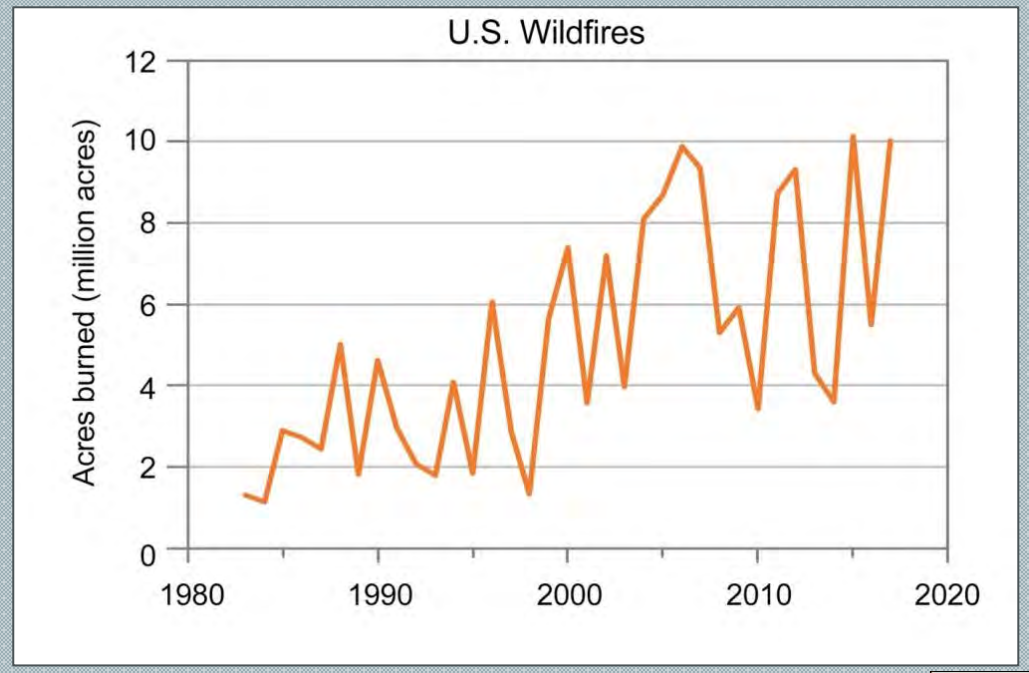
HEAT AND WILDFIRE

Nation-Wide Data

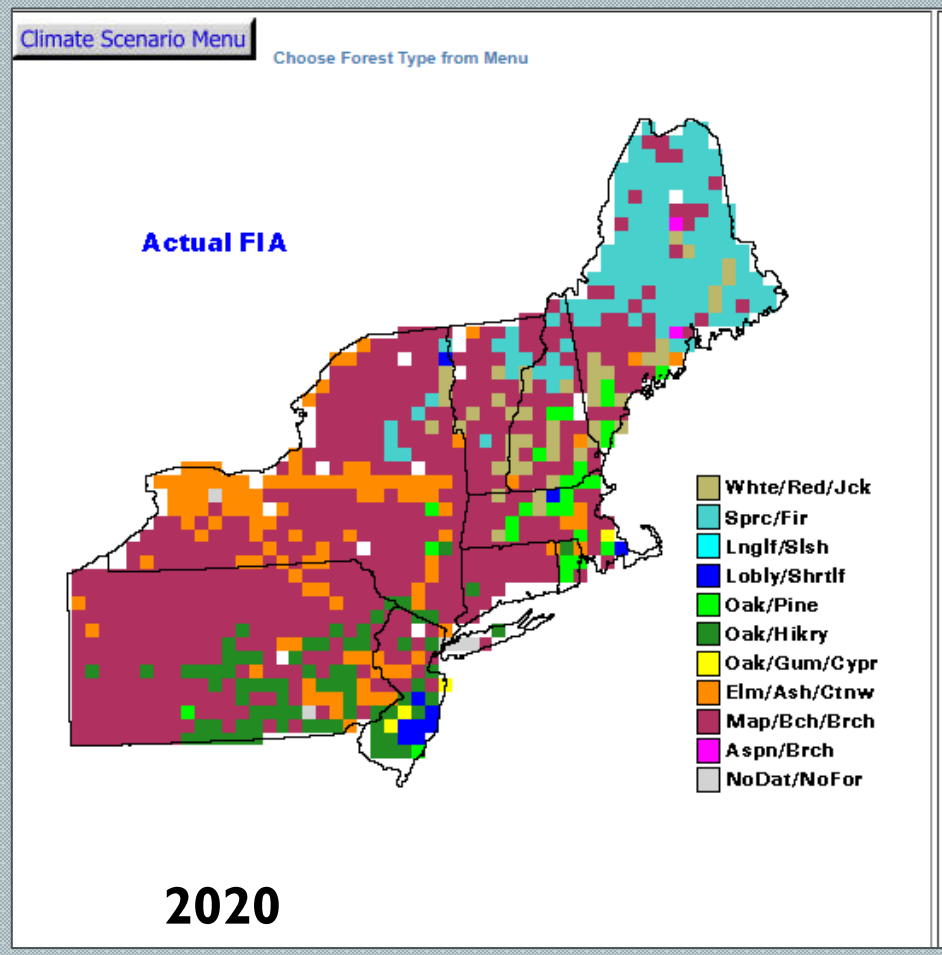
As the number and length of heat waves increase, so will the incidence of wildfires.

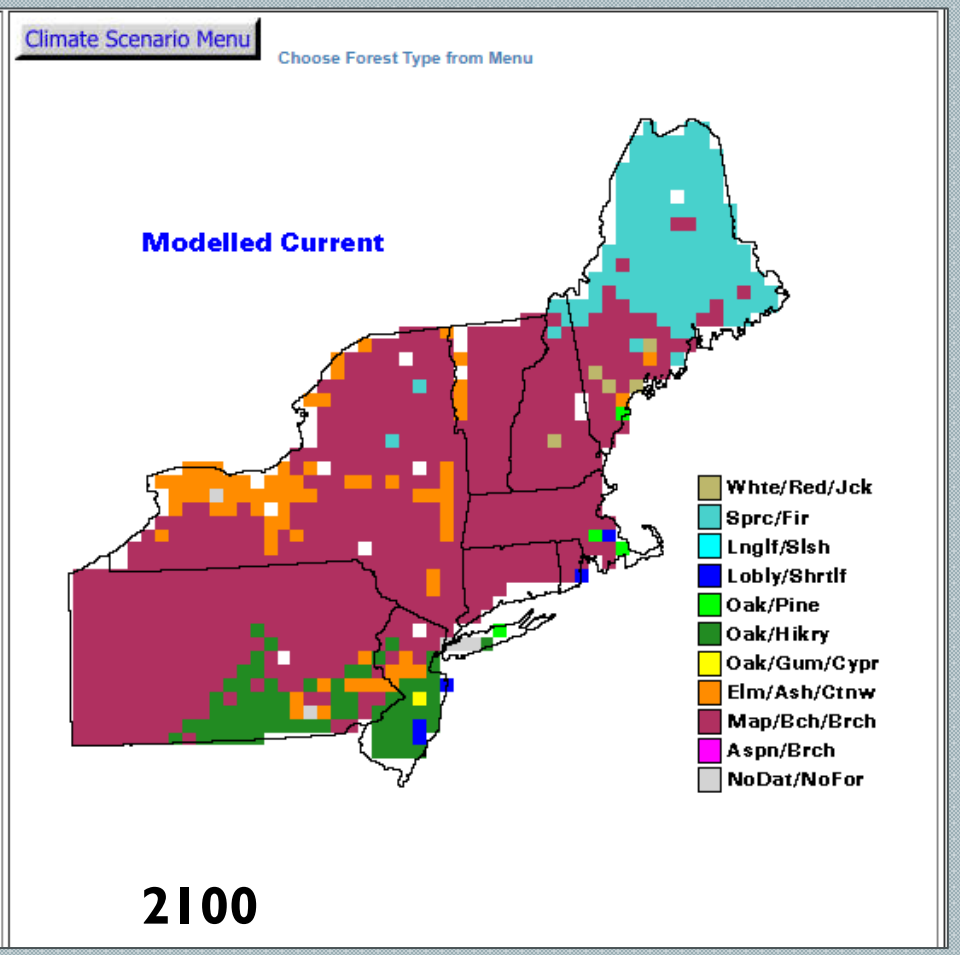




HEAT IMPACTS ON THE ENVIRONMENT

- Ranges of tree species are expected to move north
- Diversity of species will decrease
- Increases of invasive species are likely





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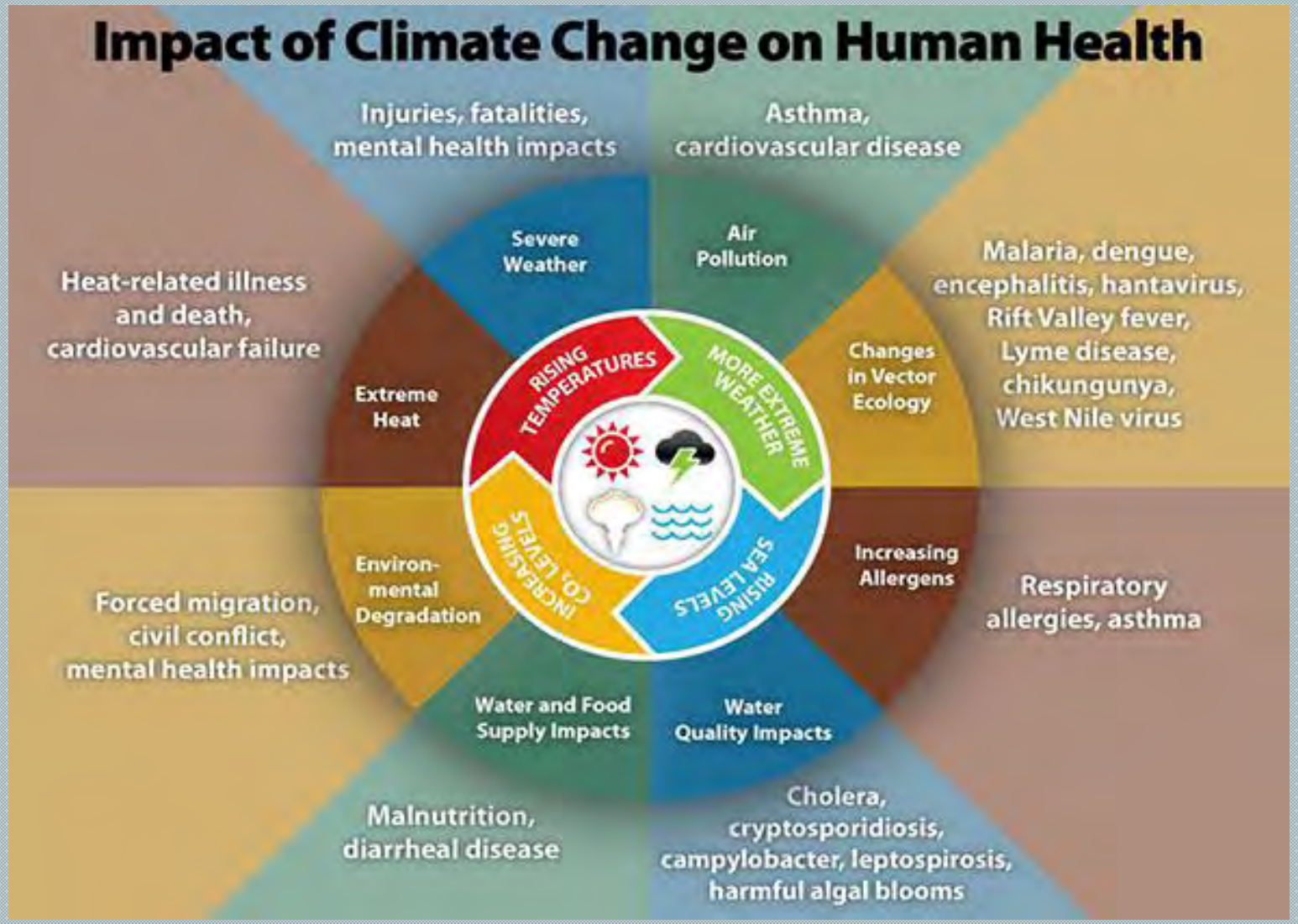
HEAT IMPACTS ON SOCIETY



https://www.cdc.gov/climateandhealth/effects/default.htm

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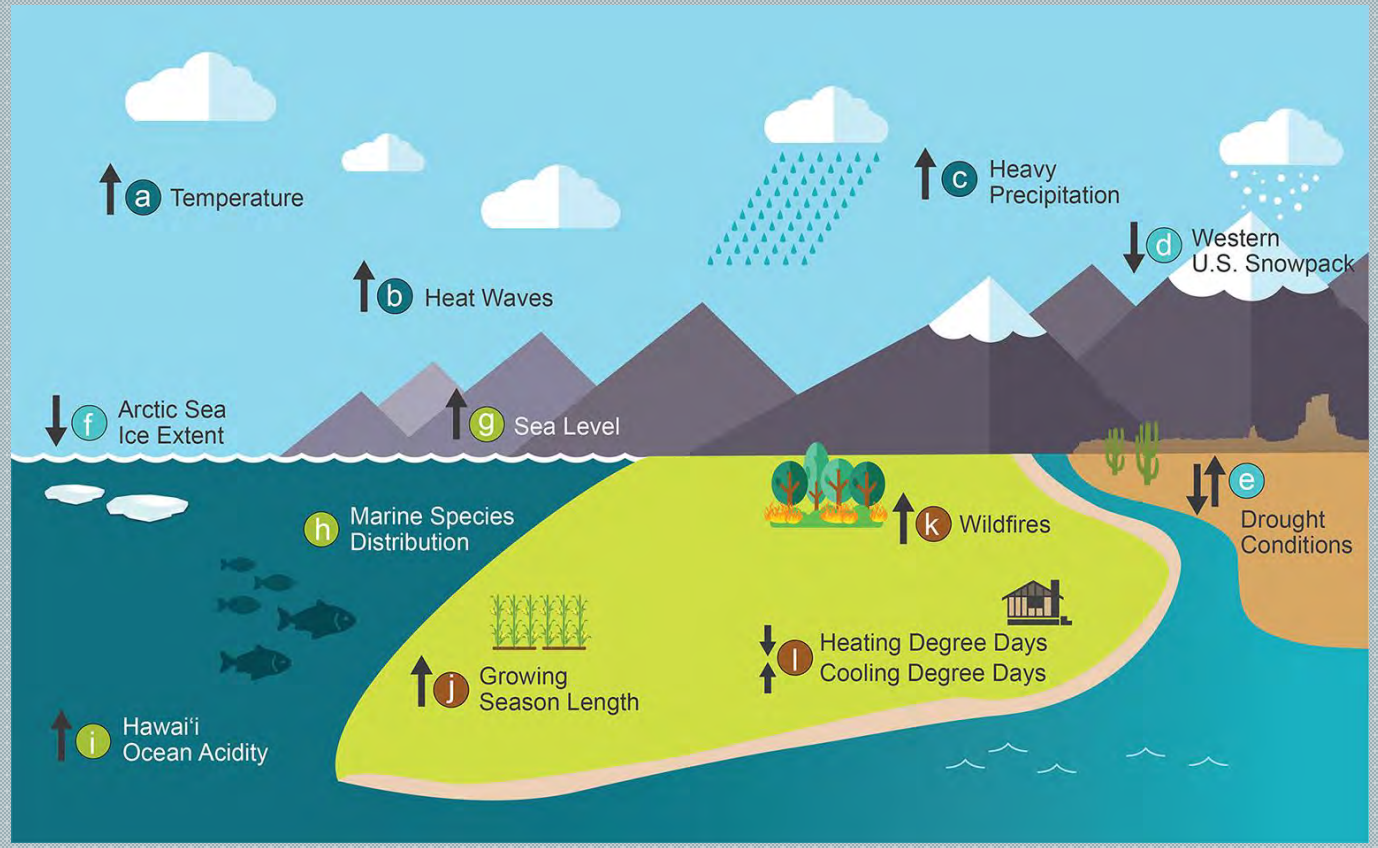
QUESTIONS OR COMMENTS?



mkaplan@cmprc.org

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TOWN OF NEW BRAINTREE

Municipal Vulnerability Preparedness (MVP)

Community Resilience Building Workshop

April 6th, 5:00 – 8:00 pm (In-Person)

&

April 13th, 5:00 – 8:00 pm (Virtual)

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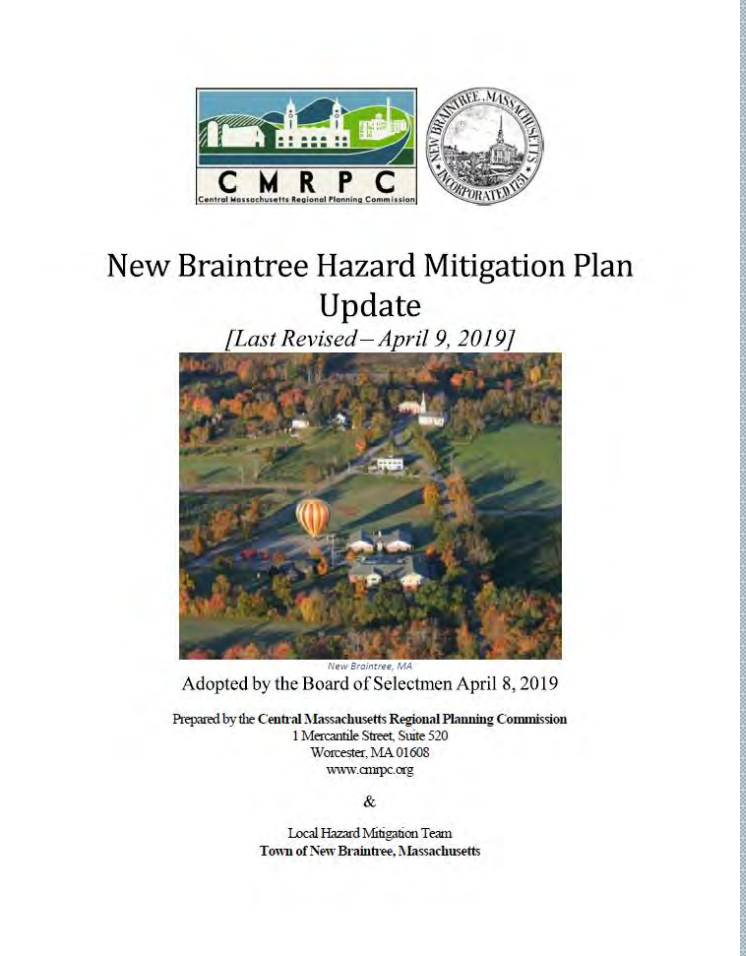
HAZARD MITIGATION PLANNING

- Overlaps somewhat with Hazard Mitigation Planning, but MVP is more focused on climate change in the long term
- New Braintree's Hazard Mitigation was adopted in April 2019.
- 5-year plans



New Braintree Hazard Mitigation Plan Update

[Last Revised – April 9, 2019]

New Braintree, MA

Adopted by the Board of Selectmen April 8, 2019

Prepared by the **Central Massachusetts Regional Planning Commission**
1 Mercantile Street, Suite 520
Worcester, MA 01608
www.cmrpc.org

&

Local Hazard Mitigation Team
Town of New Braintree, Massachusetts

BE PREPARED, MITIGATE THE COSTS

US Natural Disasters in 2017 cost $306 Billion, the most expensive year since NOAA started keeping track in 1980

National Benefit-Cost Ratio Per Peril *BCR numbers in this study have been rounded	Exceed common code requirements	Meet common code requirements	Utilities and transportation	Federally funded
Overall Hazard Benefit-Cost Ratio	4:1	11:1	4:1	6:1
Savings ($billion)	$16/year	$13/year	$2.5	$160
Riverine Flood	5:1	6:1	8:1	7:1
Hurricane Surge	7:1	Not applicable	Not applicable	Too few grants
Wind	5:1	10:1	7:1	5:1
Earthquake	4:1	12:1	3:1	3:1
Wildland-Urban Interface Fire	4:1	Not applicable	Not applicable	3:1

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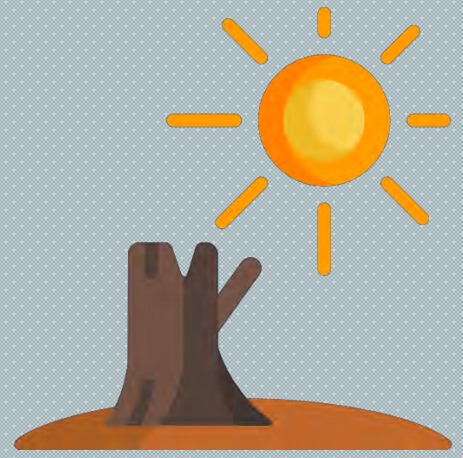
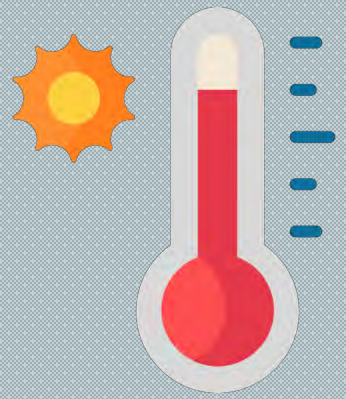
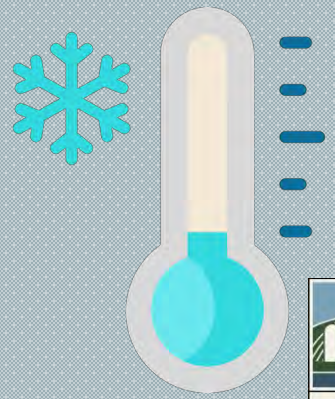
NATURAL HAZARDS

- Flooding (all types)
- Droughts and wildfires
- Winter storms
- Severe thunderstorms
- Hurricanes
- Wind and tornadoes
- Extreme temperatures
- Landslides
- Earthquakes







Icons made freepik from Flaticon.com

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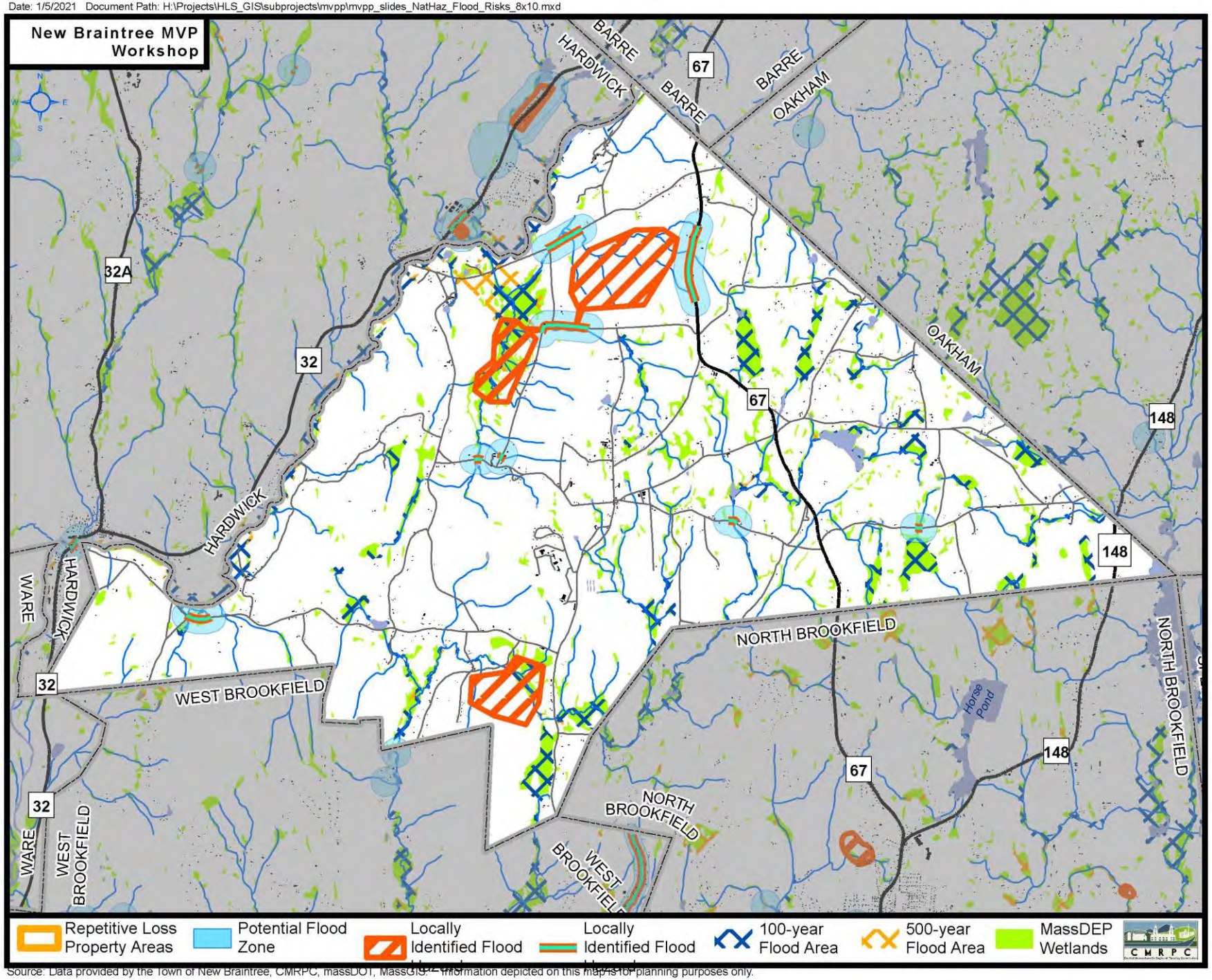
FLOOD RISKS

Date: 1/5/2021 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_slides_NatHaz_Flood_Risks_8x10.mxd



Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS. Information depicted on this map is for planning purposes only.

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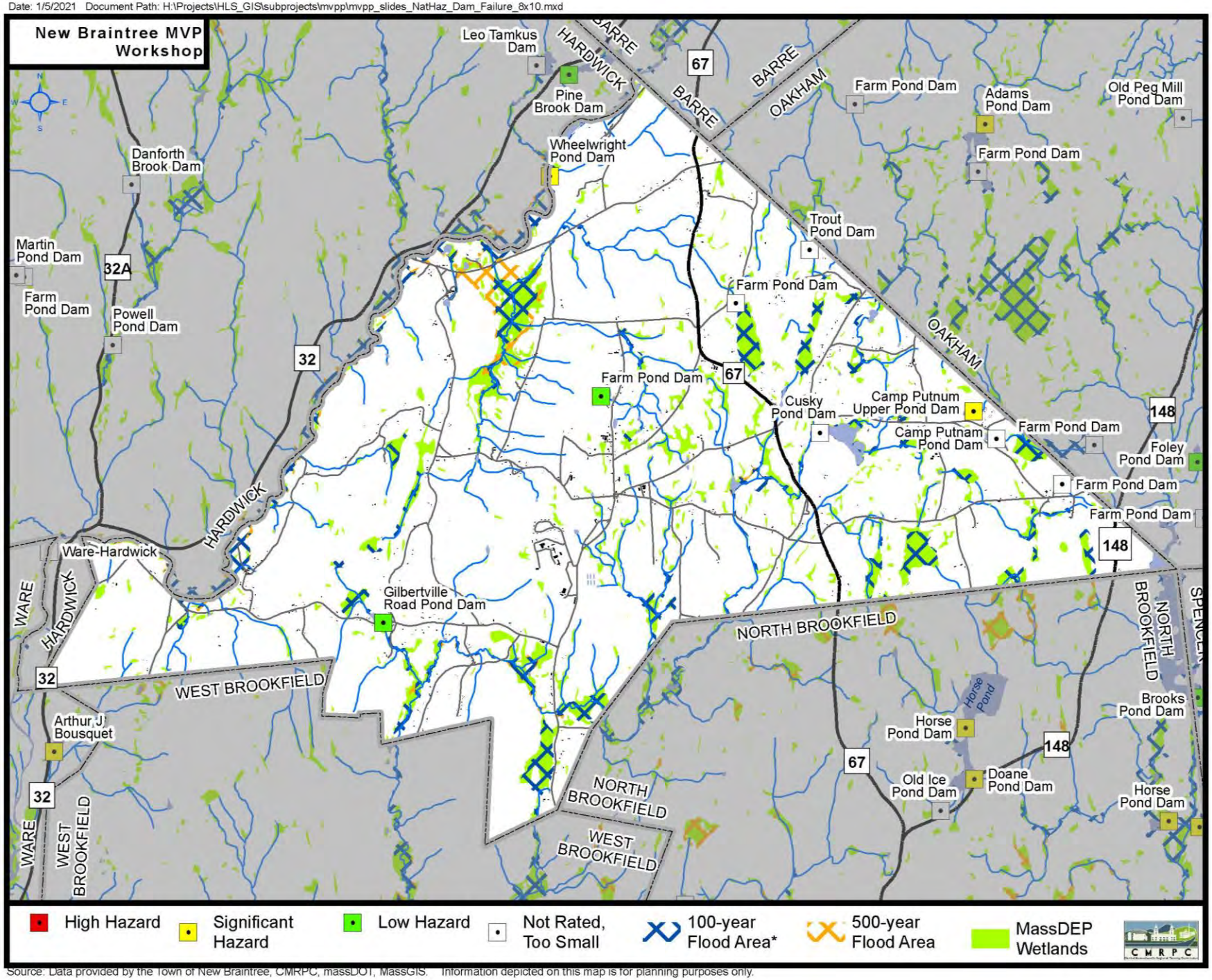
DAM FAILURE RISK

Date: 1/5/2021 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_slides_NatHaz_Dam_Failure_8x10.mxd



Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS. Information depicted on this map is for planning purposes only.

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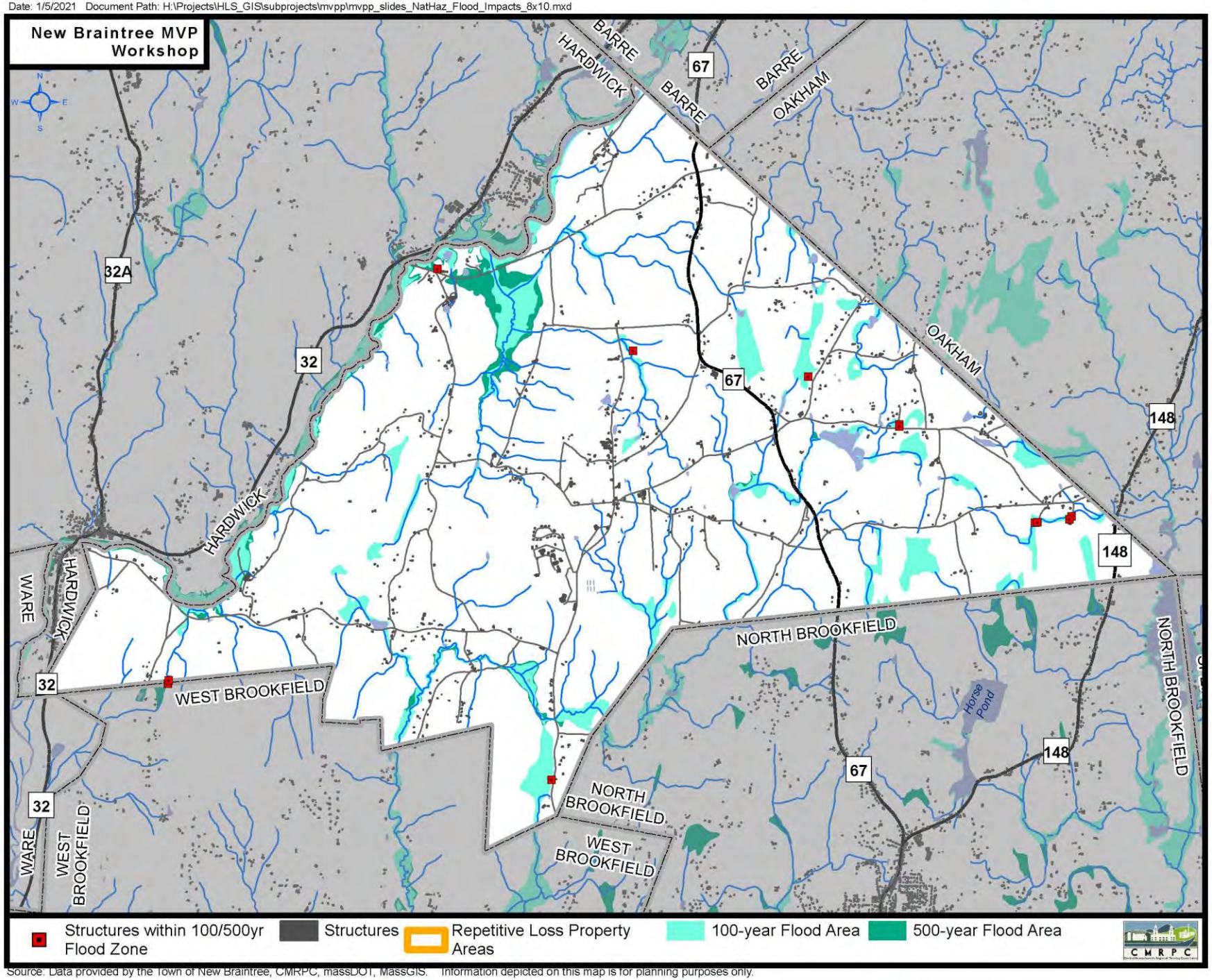
FLOODING IMPACTS

Date: 1/5/2021 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_slides_NatHaz_Flood_Impacts_8x10.mxd



Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS. Information depicted on this map is for planning purposes only.

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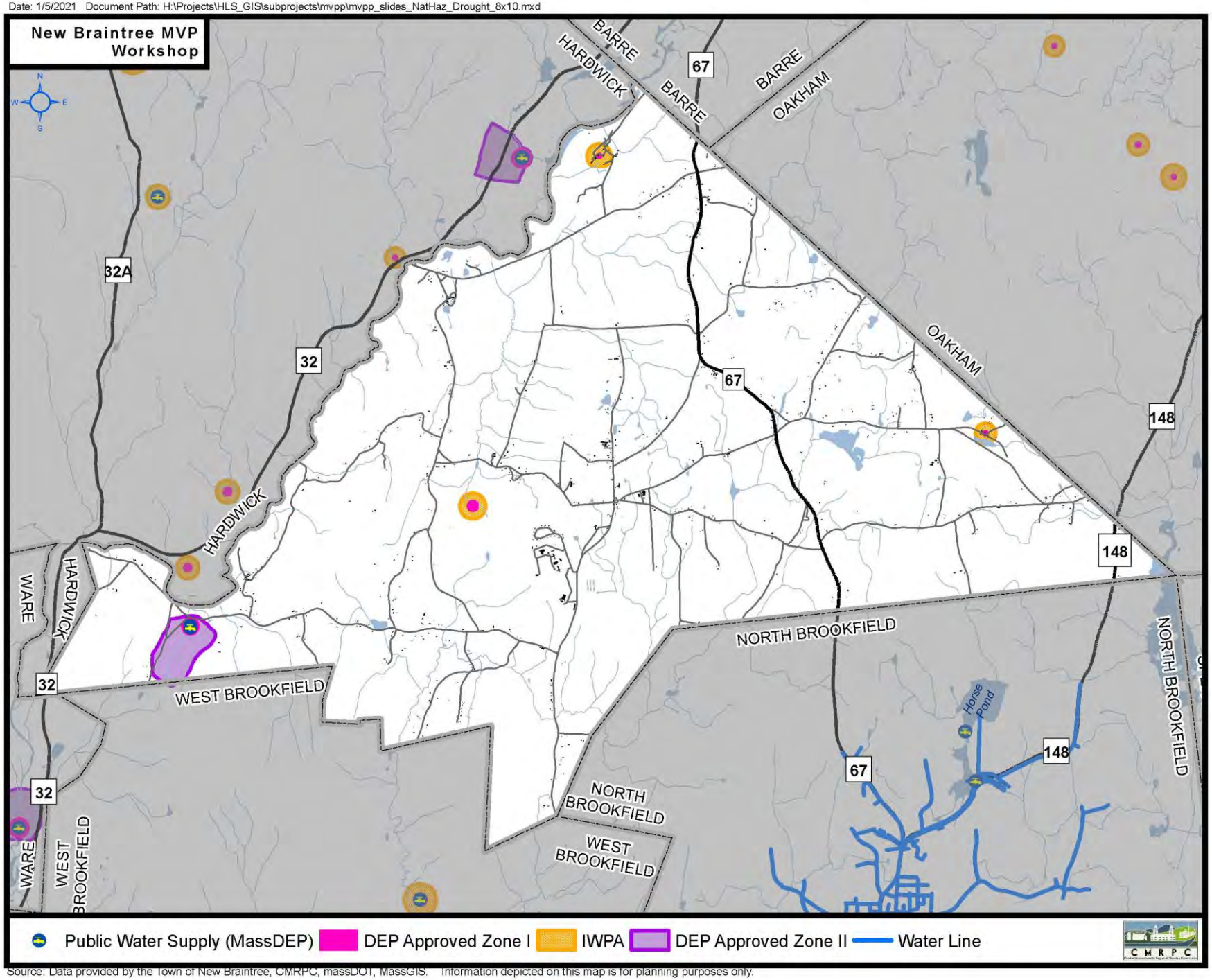
DROUGHT IMPACTS

Date: 1/5/2021 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_slides_NatHaz_Drought_8x10.mxd



Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS. Information depicted on this map is for planning purposes only.

C M R P C
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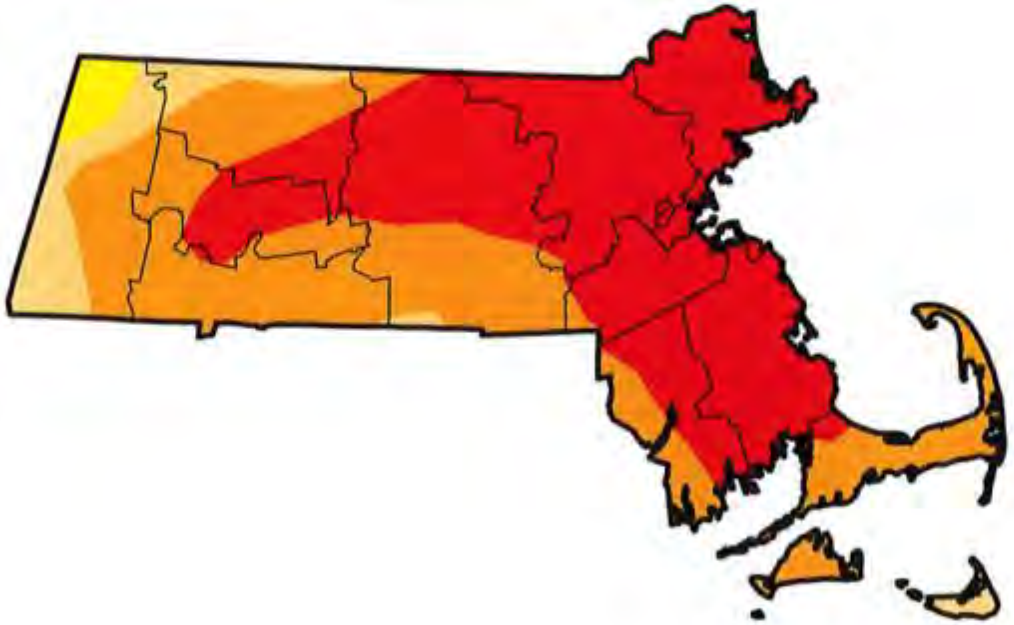
DROUGHT IMPACTS

U.S. Drought Monitor
Massachusetts



September 13, 2016
(Released Thursday, Sep. 15, 2016)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	98.15	89.95	52.13	0.00
Last Week 9/6/2016	0.00	100.00	94.38	77.38	22.67	0.00
3 Months Ago 6/14/2016	20.09	79.91	13.56	0.00	0.00	0.00
Start of Calendar Year 12/29/2015	22.85	77.15	26.34	0.00	0.00	0.00
Start of Water Year 9/29/2015	12.90	87.10	30.43	0.00	0.00	0.00
One Year Ago 9/15/2015	34.81	65.19	0.23	0.00	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Eric Luebehusen
U.S. Department of Agriculture

http://droughtmonitor.unl.edu/

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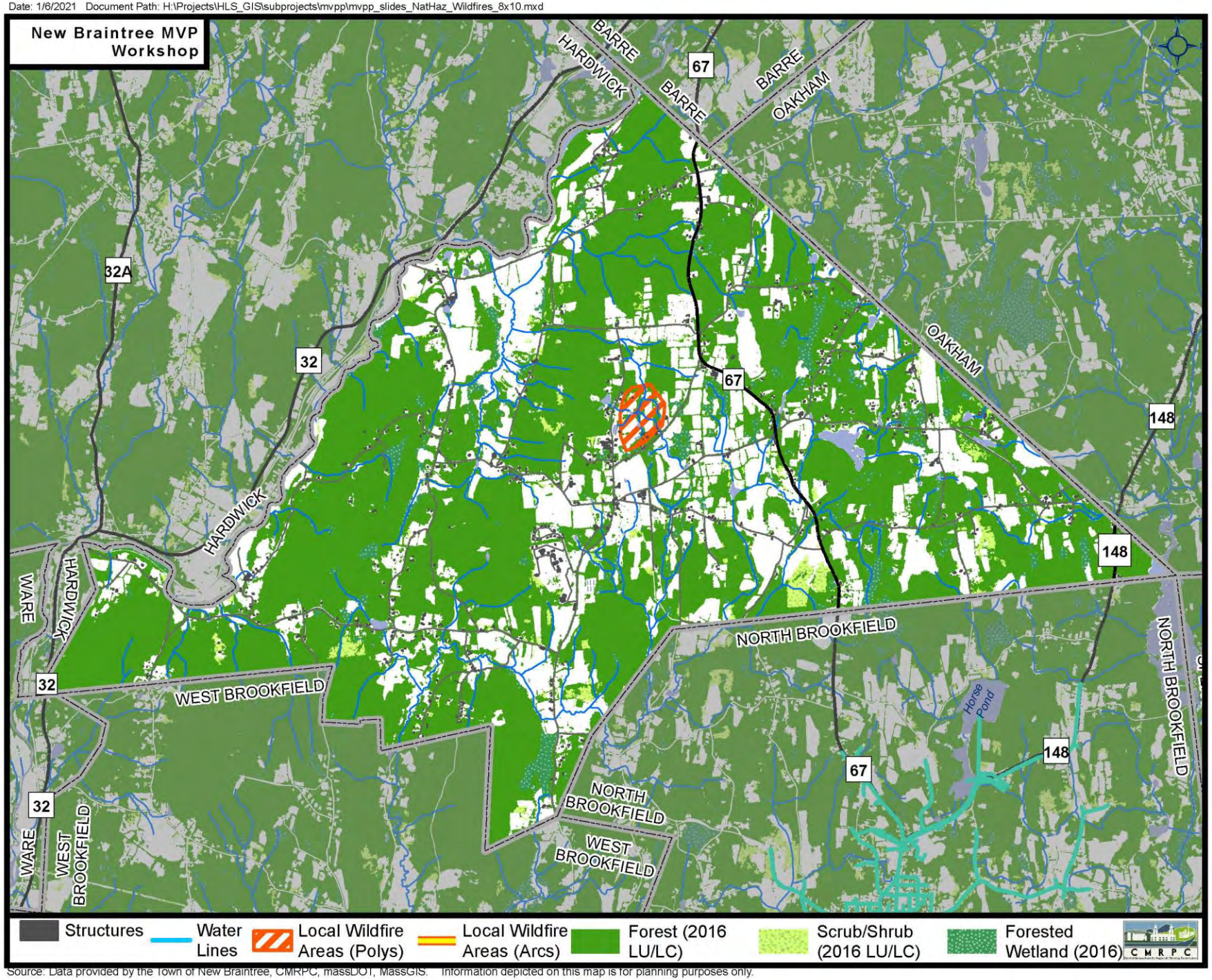
Central Massachusetts Regional Planning Commission

WILDFIRE

Date: 1/6/2021 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_slides_NatHaz_Wildfires_8x10.mxd



Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS. Information depicted on this map is for planning purposes only.

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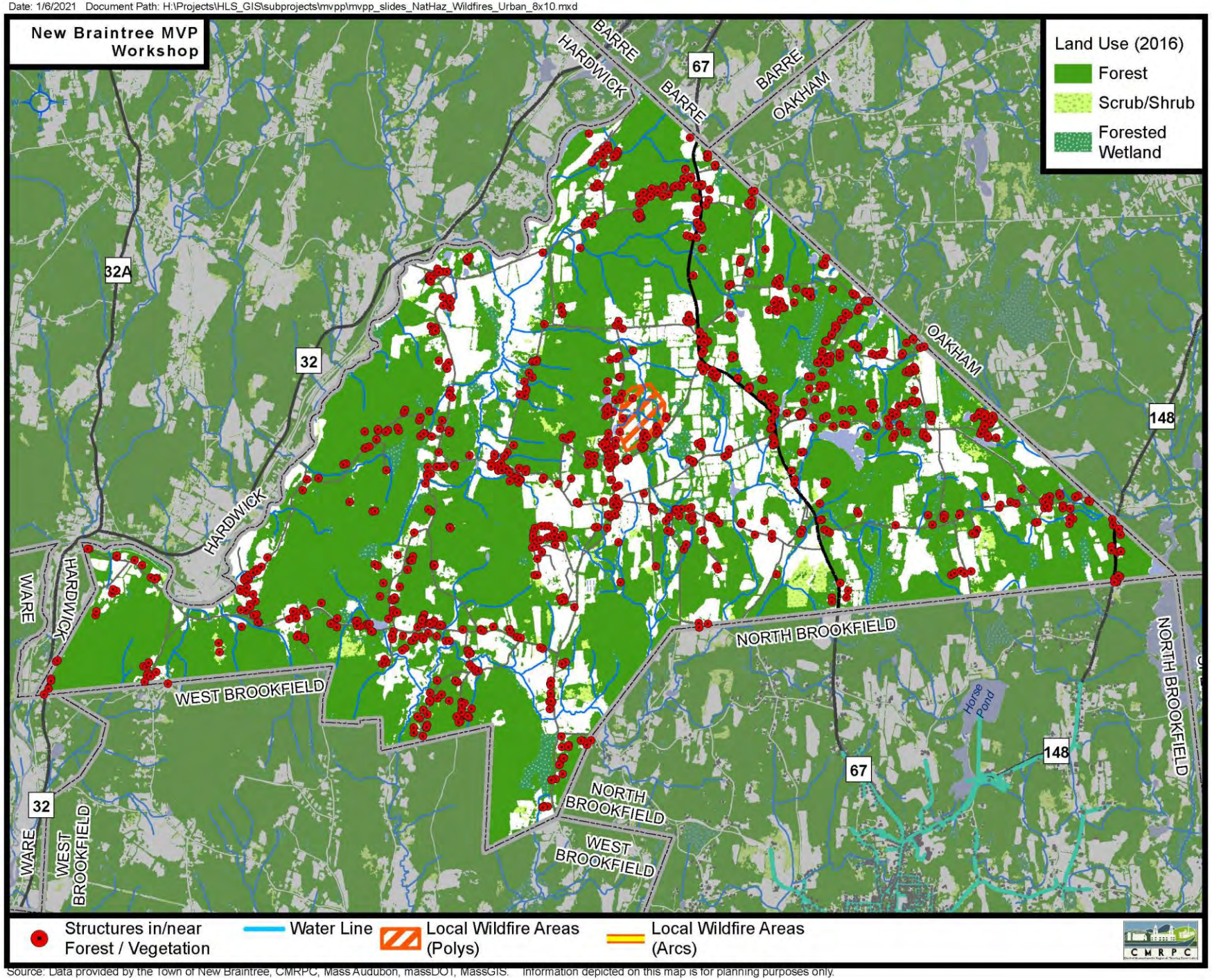
WILDLAND/URBAN INTERFACE

Date: 1/6/2021 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_slides_NatHaz_Wildfires_Urban_8x10.mxd



Source: Data provided by the Town of New Braintree, CMRPC, Mass Audubon, massDOT, MassGIS. Information depicted on this map is for planning purposes only.

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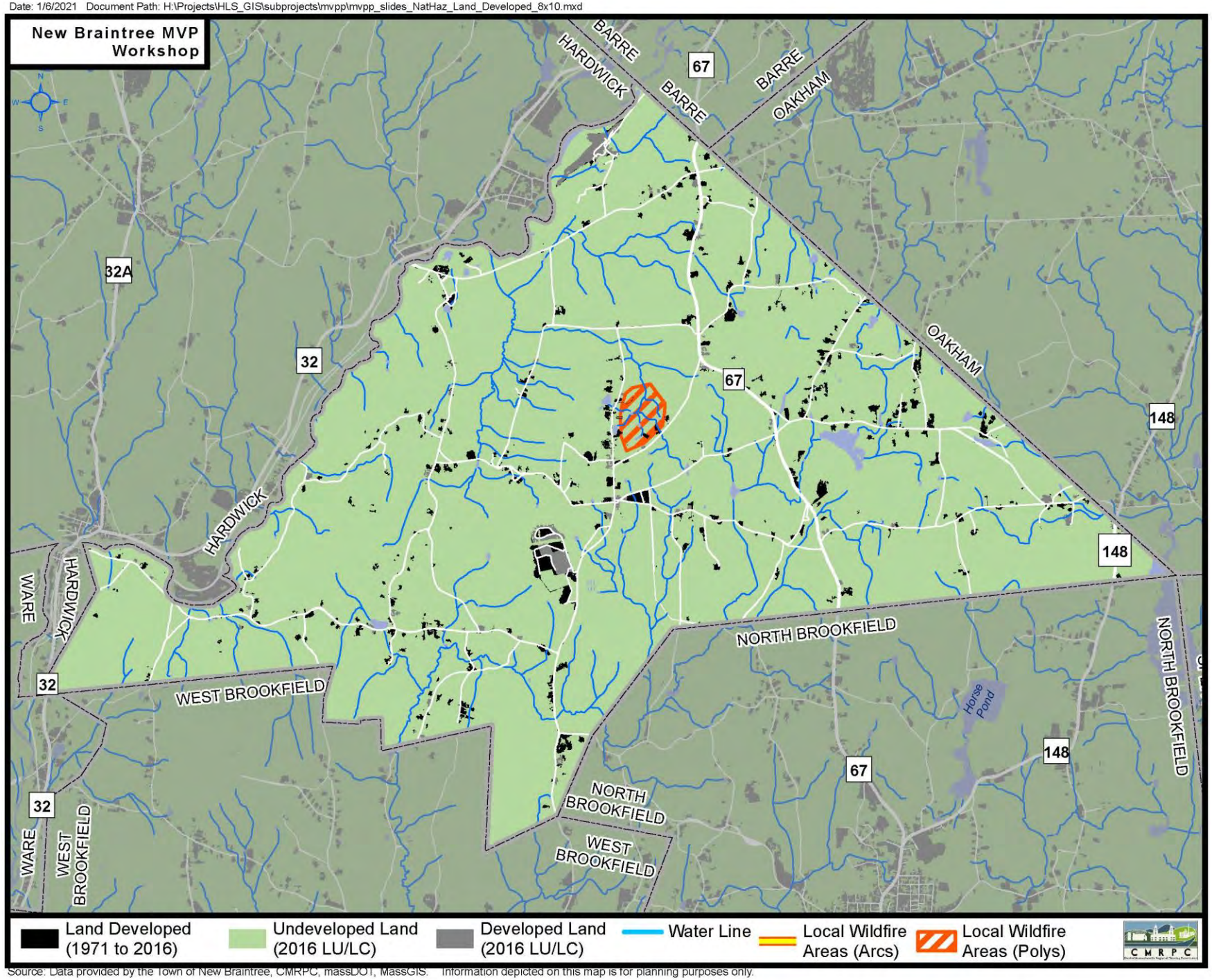
FIRE & NEW DEVELOPMENT

Date: 1/6/2021 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_slides_NatHaz_Land_Developed_8x10.mxd



Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS. Information depicted on this map is for planning purposes only.

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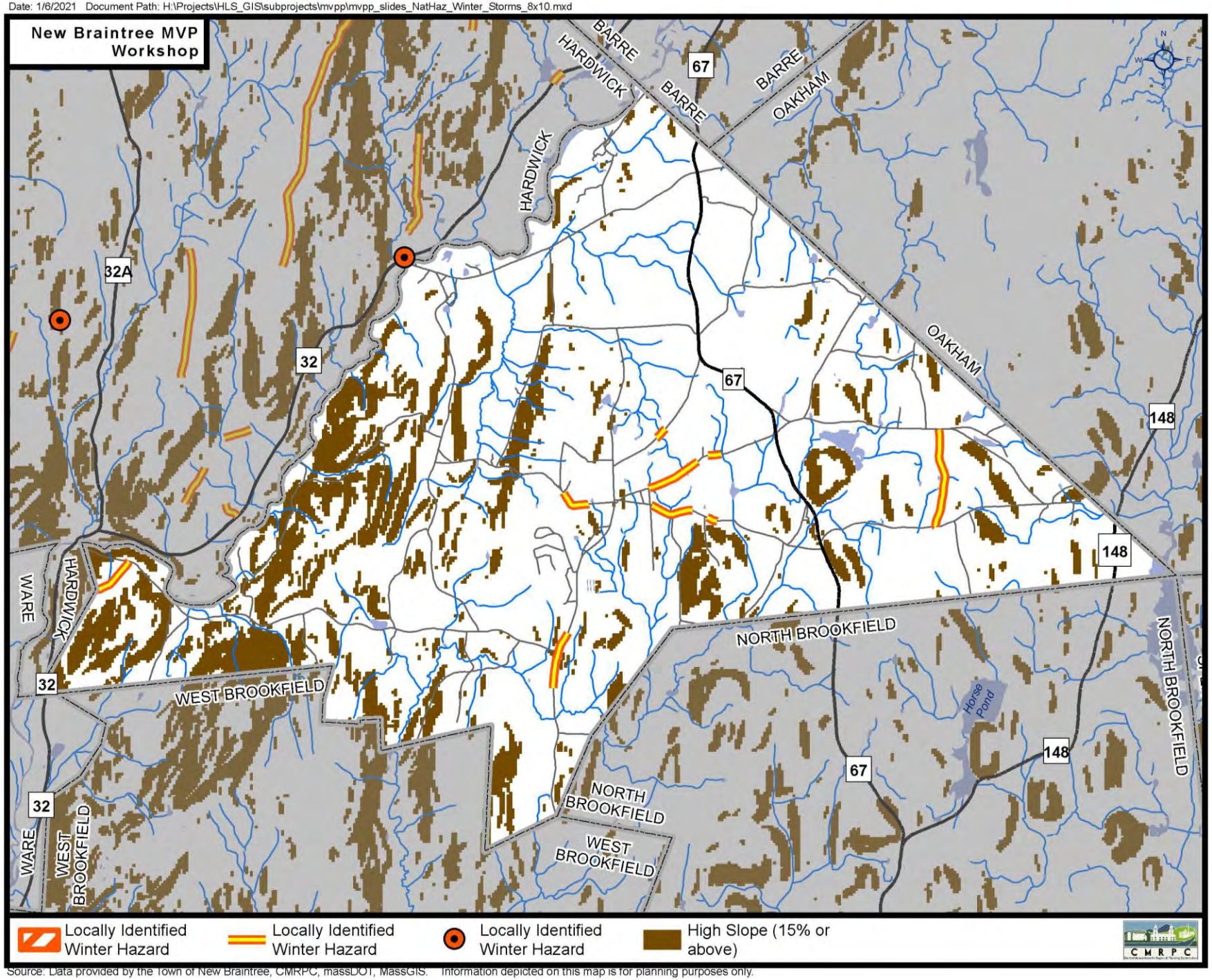
WINTER STORMS

Date: 1/6/2021 Document Path: H:\Projects\HLS_GIS\subprojects\mvpp\mvpp_slides_NatHaz_Winter_Storms_8x10.mxd



Source: Data provided by the Town of New Braintree, CMRPC, massDOT, MassGIS. Information depicted on this map is for planning purposes only.

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EXTREME STORMS

Tornado Tracks, 1950-2017

- [x] **Show Touchdown Points**

Filter by Magnitude:

- [x] F/EF 0
- [x] F/EF 1
- [x] F/EF 2
- [x] F/EF 3
- [x] F/EF 4
- [x] F/EF 5

Filter by Year Range:

1950 through 2017

Filter by Month:

All Months

Filter by Casualties:

- [ ] Injuries > 0
- [ ] Fatalities > 0

For more information, click any:

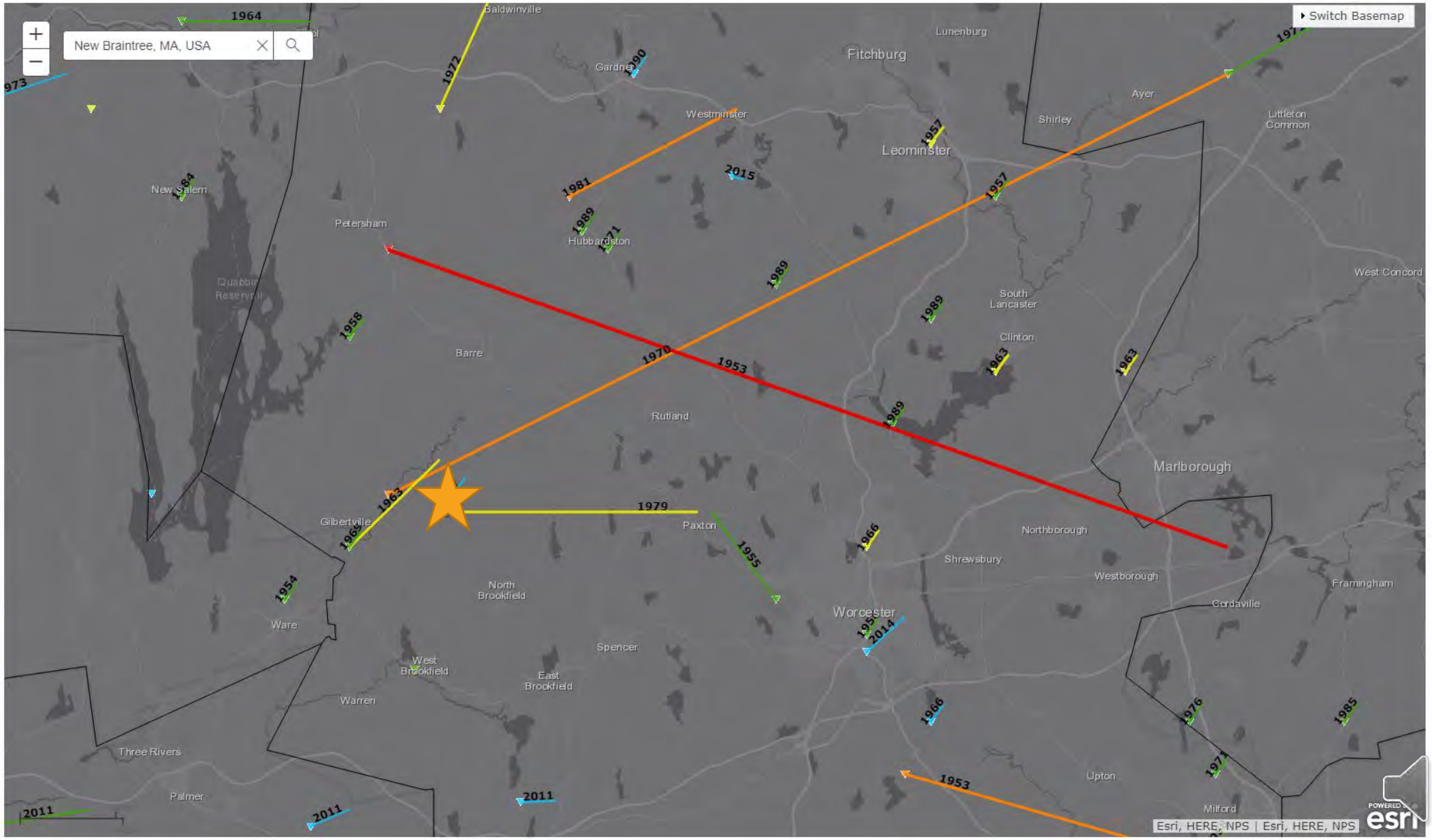
- (•) Track (for tornado data)
- ( ) County (for county image)

Please note: Attempting to view many tracks may significantly hinder performance.

MRCC Midwestern Regional Climate Center

Send Feedback

Tornado data from the National Weather Service Storm Prediction Center:
http://www.spc.noaa.gov/gis/svrgis



CRITICAL INFRASTRUCTURE & FACILITIES

- What infrastructure and facilities are critical to the region and its residents? Which do we most <u>need</u> or <u>desire</u> to protect from hazards?

  - Those needed to respond to hazard events or which would exacerbate hazard scenarios, if affected
  - Those needed to perform day-to-day municipal operations and to support basic services and economic activity
  - Major employers and institutions, natural and cultural resources, recreational and historic sites, etc…

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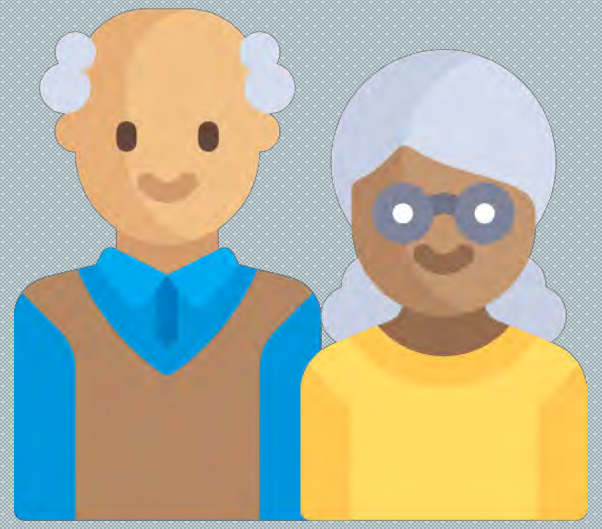
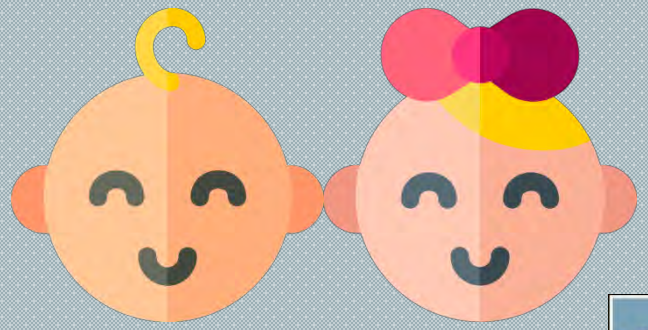
VULNERABLE POPULATIONS

- Vulnerability is not just about utilities, facilities, or businesses
  - Disproportionate populations of potentially vulnerable demographic groups (elderly, children, etc.) or socioeconomic groups (low income households, etc.) living/working in high-risk areas
  - Can be on neighborhood scale, or at specific locations
  - Cultural vulnerability (cultural or language isolation)
  - These will evolve over time, as climate and populations change





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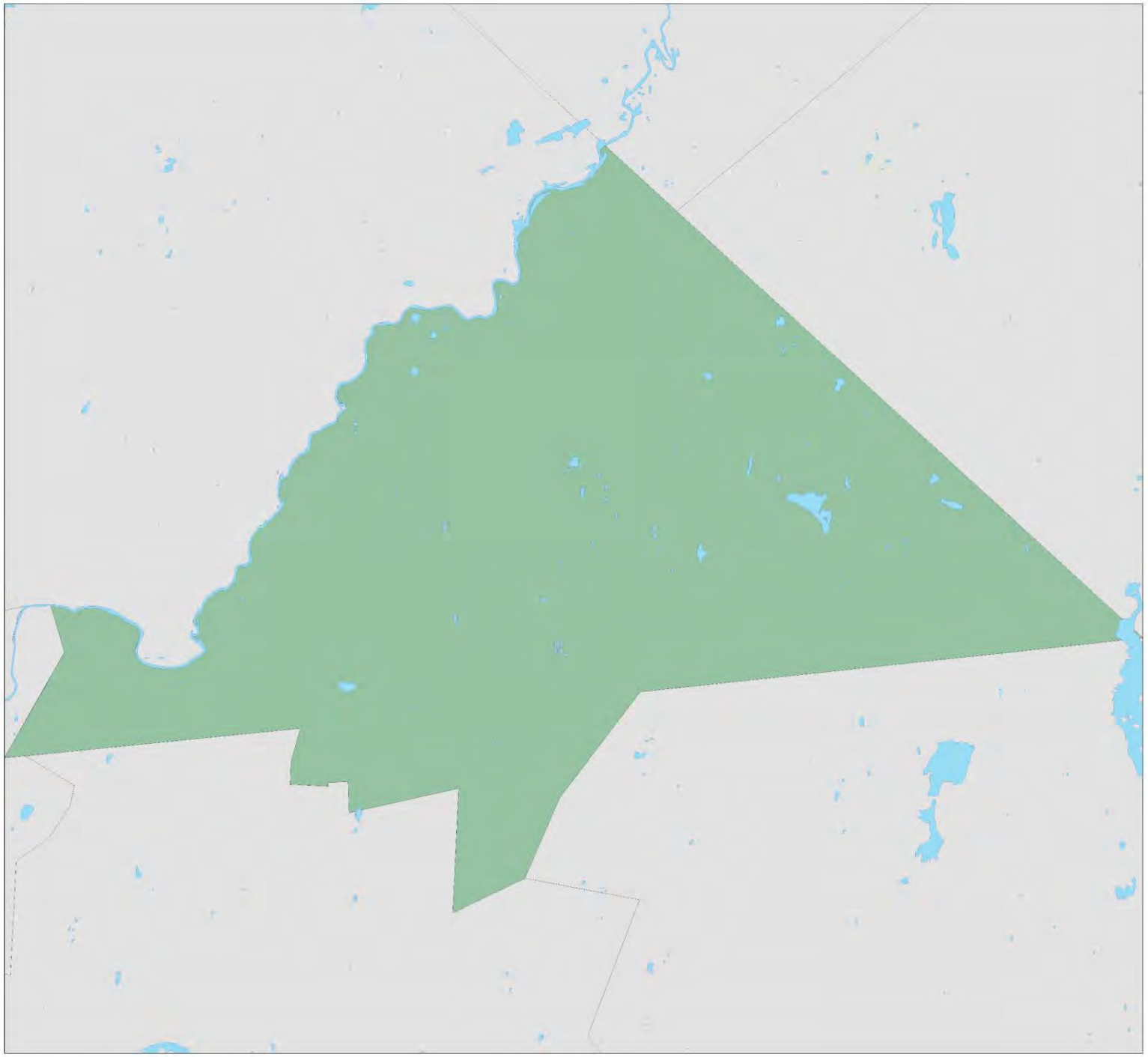
VULNERABLE POPULATIONS: SENIORS (65+)

Municipal Vulnerability Preparedness (MVP) Workshop:New Braintree

Legend

Percent Population over 65

- 0% - 9.51%
- 9.52% - 13.05%
- 13.06% - 17.21%
- 17.22% +



N
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0 0.375 0.75 1.5 Miles

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Visit us on-line at - http://www.cmrpc.org

R:\Pre-Disaster Mitigation\MVP

Date: 12/24/2019

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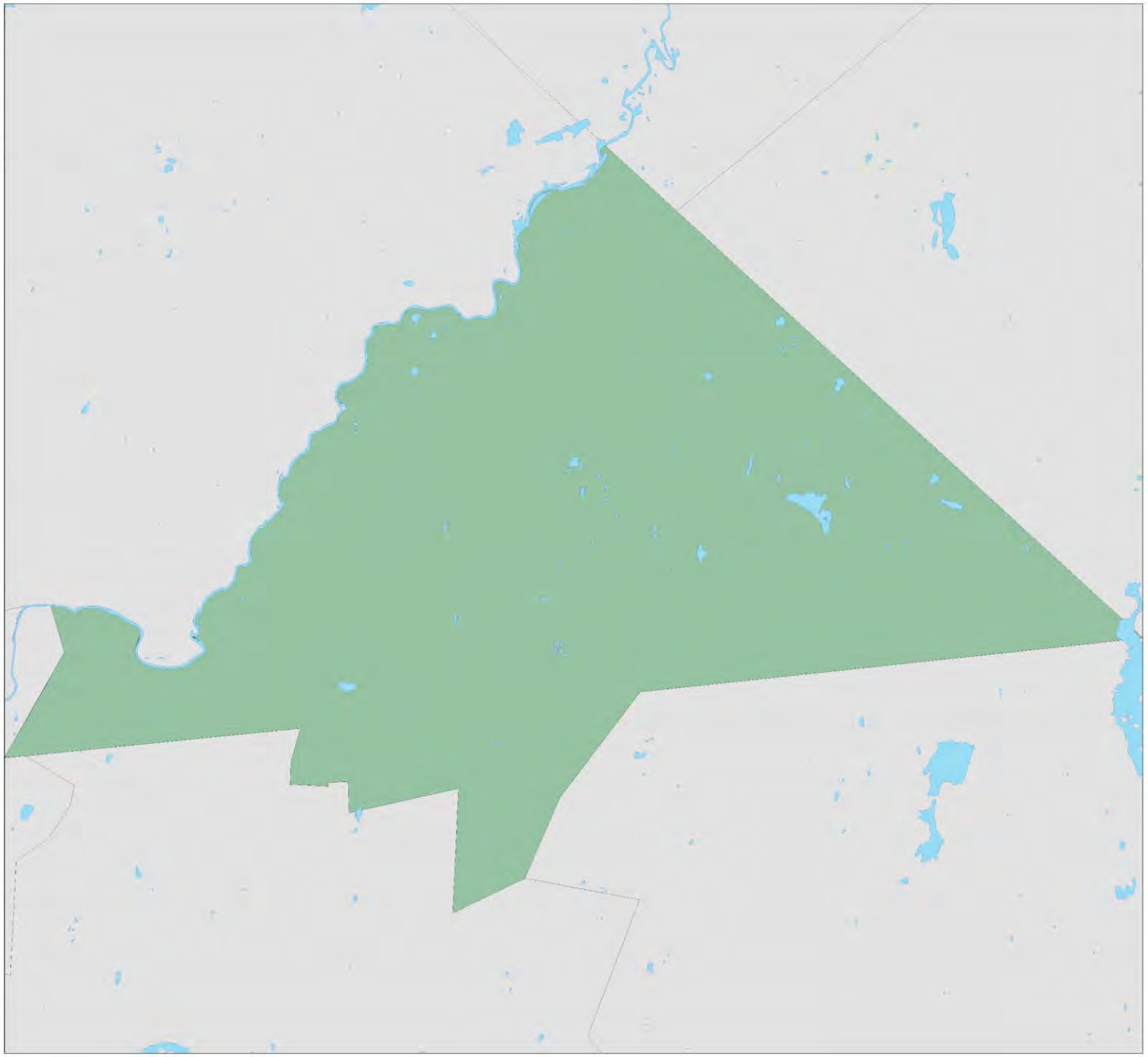
VULNERABLE POPULATIONS: UNDER AGE 18

Municipal Vulnerability Preparedness (MVP) Workshop:New Braintree

Legend

Percent Population Children

- 0% - 16.27%
- 16.28% - 20.01%
- 20.02% - 23.68%
- 23.69% +



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R:\Pre-Disaster Mitigation\MVP

Date: 12/24/2019

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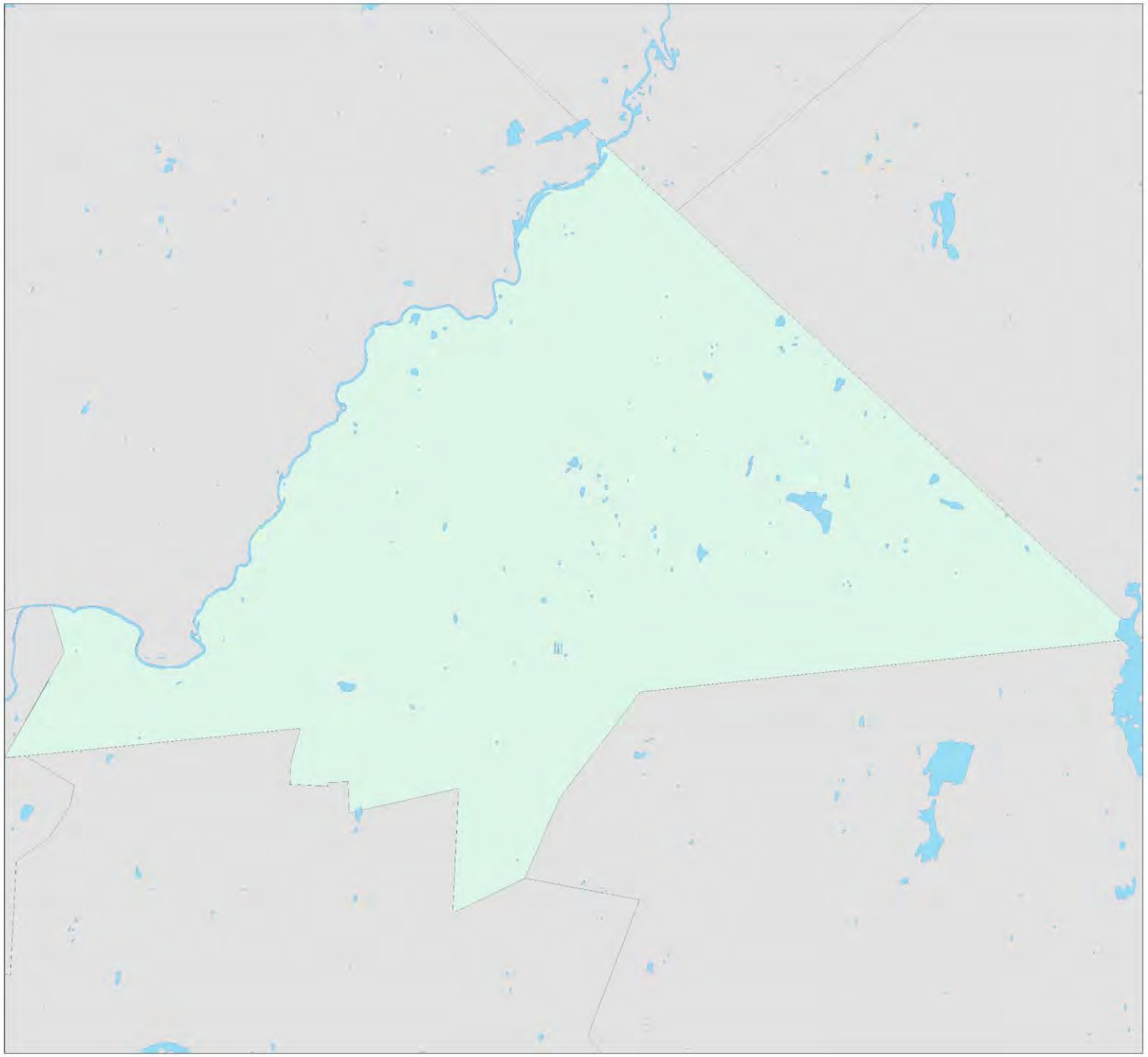
VULNERABLE POPULATIONS: RENTER OCCUPIED

Municipal Vulnerability Preparedness (MVP) Workshop:New Braintree

Legend

Percent of Renters

- 0% - 13.571429%
- 13.57143% - 33.333333%
- 33.333334% - 58.894646%
- 58.894647% - 100%



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0 0.375 0.75 1.5 Miles

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R:\Pre-Disaster Mitigation\MVP

Date: 12/24/2019

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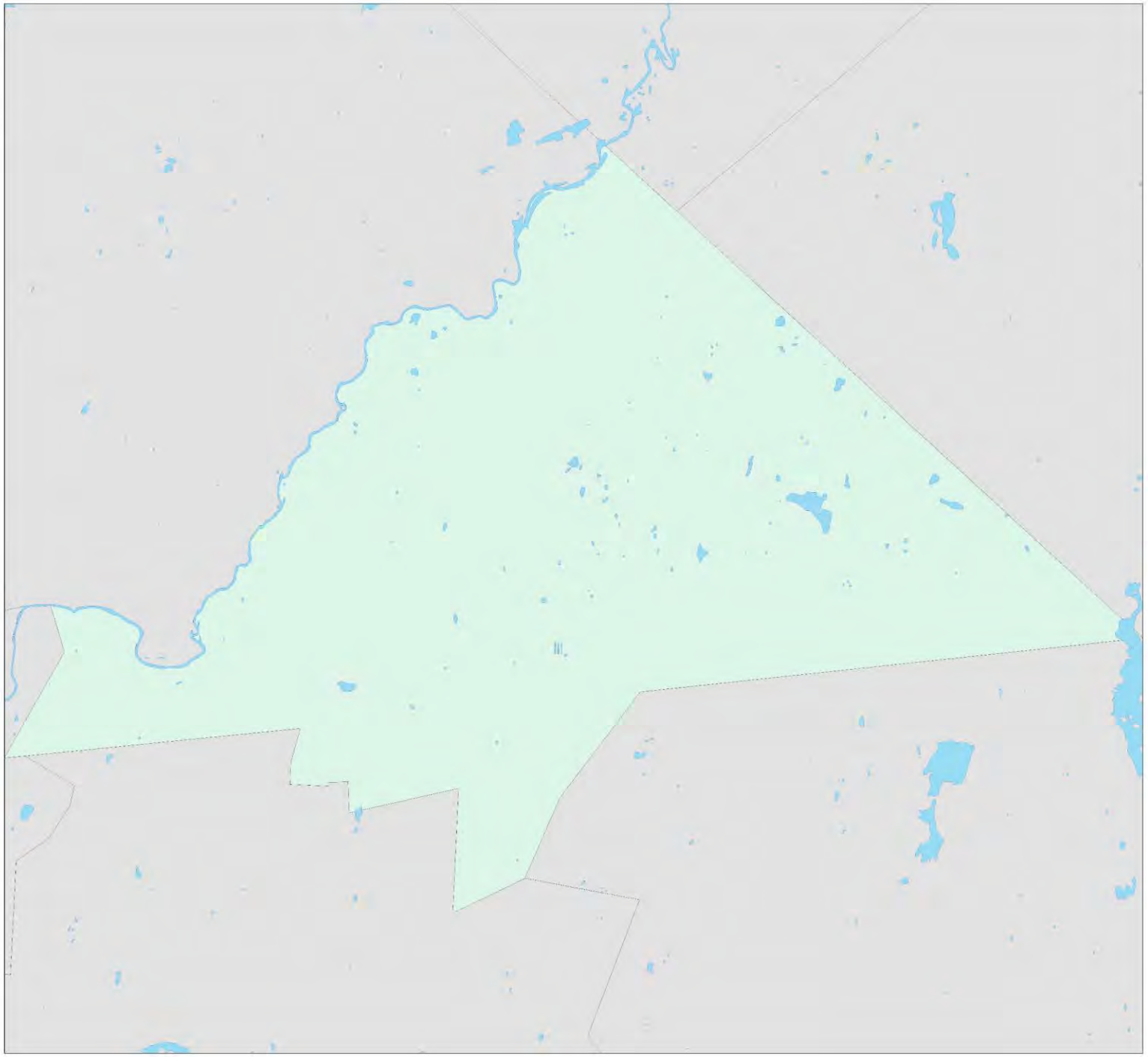
VULNERABLE POPULATIONS: LATINO/HISPANIC

Municipal Vulnerability Preparedness (MVP) Workshop:New Braintree

Legend

Limited English Proficency

- 0.32% - 1.52%
- 1.53% - 4.19%
- 4.2% - 8.29%
- 8.3% - 16.61%
- 16.62% - 39.62%



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0 0.375 0.75 1.5 Miles

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R:\Pre-Disaster Mitigation\MVP

Date: 12/24/2019

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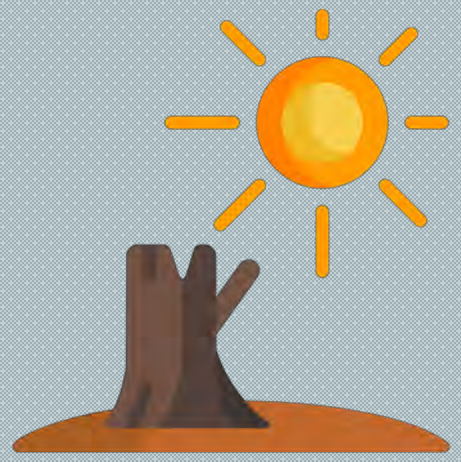
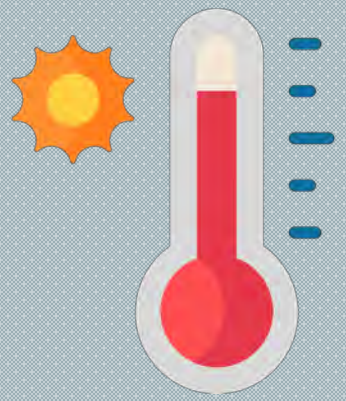
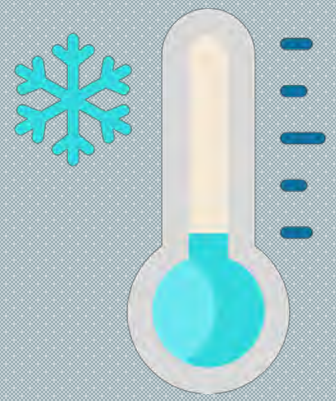
QUESTIONS







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THANK YOU

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TOWN OF NEW BRAINTREE

Municipal Vulnerability Preparedness (MVP)

Community Resilience Building

Virtual Workshop

April 6th and April 13th

Day Two, April 13th

5:00 PM – 8:00 PM

CMRPC
Central Massachusetts Regional Planning Commission

Thank You for Your Participation in New Braintree's Municipal Vulnerability Preparedness (MVP) Program!

The Town of New Braintree is collaborating with EEA and CMRPC to offer a two-day workshop on ***April 6th and April 13th*** which will bring together community members to comprehensively identify and prioritize steps to reduce risk and improve resilience across New Braintree. Follow the instructions below in order to help make your community more climate resilient! If you have any questions about the program, please contact Dani Marini, CMRPC Environmental Planner, at dmarini@cmrpc.org. We look forward to seeing you at our workshop!

Step 1. Discover New Braintree's MVP Dropbox

The resources included in this invitation will help you learn more about the MVP program and prepare you for the upcoming workshop. All of these resources and more can be found in the following Dropbox link.

Workshop Dropbox: https://www.dropbox.com/sh/uux8j8ccfd6fd1i/AAD0aLjXGyOsa4Pjn2iN7c_da?dl=0

Step 2. Review the Program Overview and Workshop Guide

The following two documents will give you an overview of the MVP program and will describe a typical Community Resiliency Building (CRB) workshop.

MVP Program Overview: https://www.dropbox.com/s/3mkn60pdbuncjgv/MVP Program Info_Updated 2019.pdf?dl=0
CRB Workbook: https://www.dropbox.com/s/e9jf17uf7gcttna/CRB Workshop Guide.pdf?dl=0

Step 3. Watch the MVP Presentations Prior to Workshop

The following link contains pre-recorded presentations that will help you be better prepared for the MVP workshop. The presentations include an overview of the program and the MVP process, climate projections and hazards that New Braintree may face in the future, and nature-based solutions examples. Please take some time to **review each of these presentations before April 6th.**

Presentations: https://www.dropbox.com/sh/gvwhp7xs3fv0pq2/AAC9wl02-j7k8IwEZJ9SKk4xa?dl=0

Step 4. Familiarize Yourself with the Matrix and Mapping Tools

During the workshop, we will divide up into breakout groups to discuss strengths, vulnerabilities, and possible actions that the town can take. During this process, we will be filling out a matrix and marking up a map with our ideas. The following two links will show you an example of a completed matrix and will give you a set of pre-made maps that already display various features, hazards, and resources in New Braintree.

Complete Matrix Example: https://www.dropbox.com/s/vb6anpt3o9csebi/Completed Matrix Example.pdf?dl=0
Maps: https://www.dropbox.com/sh/fadnonccavocrl7/AACzKu9GD8NCrI-ZFIbdGfNPa?dl=0

Step 5. Attend the Workshop!

The 2-day workshop will be held **in-person on April 6th** and **virtually on April 13th**. The agenda for each day as well as the meeting location and Zoom meeting link are listed below. Please review the agenda for each day.

Day 1: April 6th, 5:00 – 8:00 pm (In-Person)
Agenda Day 1: https://www.dropbox.com/s/v887n3i1re959y3/Day 1 Agenda %28In-Person%29.pdf?dl=0
Meeting Location: Town Hall, 20 Memorial Drive, New Braintree, MA 01531

Day 2: April 13th, 5:00 – 8:00 pm (Virtual)
Agenda Day 2: https://www.dropbox.com/s/wmmgvent8pehmmc/Day 2 Agenda %28Virtual%29.pdf?dl=0
Zoom Link Day 2: https://us02web.zoom.us/j/84533531422?pwd=K1JBekgyaG5sUDlzeUxUUkkwN3ZFZz09
Dial-in Phone Number: 1-646-558-8656
Meeting ID: 845 3353 1422
Passcode: 771955

Learn How to Zoom

New to Zoom? The following document contains a series of instructional videos to help guide you through Zoom from downloading the app to joining a meeting for the first time.

Zoom Instructions: https://www.dropbox.com/s/z7sks13hjk0rz84/How To Zoom.pdf?dl=0

Community Resiliency Building Workshop

Town of New Braintree
Municipal Vulnerability Preparedness
Day 2- Tuesday, April 13, 2021
5:00 pm – 8:00 pm; Check-in at 4:50 pm

Meeting Link (Click to Join): https://us02web.zoom.us/j/84533531422?pwd=K1JBekgyaG5sUDlzeUxUUkkwN3ZFZz09

Meeting ID: 845 3353 1422

Passcode: 771955

Call in Number (if unable to join online): 1-646-558-8656

Workshop Materials: https://www.dropbox.com/sh/uux8j8ccfd6fd1j/AAD0aLjXGyOsa4PJn2iN7c_da?dl=0

Workshop Agenda

4:50 – 5:00 pm:
- Login & Familiarize with Zoom

5:00 – 5:20 pm:
- Welcome & Recap from Day 1
- Questions & Answers

5:20 – 7:30 pm:
- Breakout Groups
  - Identify Actions to Reduce Risks and Build Resilience
  - Prioritize Actions by Urgency and Timing

7:30 – 8:00 pm:
- Reconvene as Large Group
- Table Reports
- Closing Remarks & Wrap Up

Day 2: Workshop Objectives

- Review vulnerabilities and strengths identified on Day 1
- Develop and prioritize actions;
- Identify opportunities for the Town to advance actions and reduce risks to build resilience

Homework

- Review actions to reduce risks and build resilience
- Vote for top priority actions via survey (link to be emailed)
- Attend Listening Session

Thank you for participating in New Braintree's Community Resilience Building Workshop!

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THE MATRIX

Community Resilience Building Risk Matrix www.CommunityResilienceBuilding.com

H-M-L priority for action over the Short or Long term (and Ongoing)
V = Vulnerability S = Strength

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

Features	Location	Ownership	V or S					Priority	Time
								H-M-L	Short Long Ongoing
Infrastructural									
Societal									
Environmental									

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STEP THREE: ACTIONS, PRIORITY AND TIMELINE

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Top 4 Hazards

Features	Location	Ownership	V or S					Priority H-M-L	Time Short Long Ongoing
Infrastructural									
Societal									
Environ									

Completed

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NATURE BASED SOLUTIONS

- Make use of natural systems
- Mimic the natural processes
- Actions to protect, sustainably manage and restore ecosystems
- Simultaneously providing well-being and biodiversity

International Union for Conservation of Nature (IUCN)

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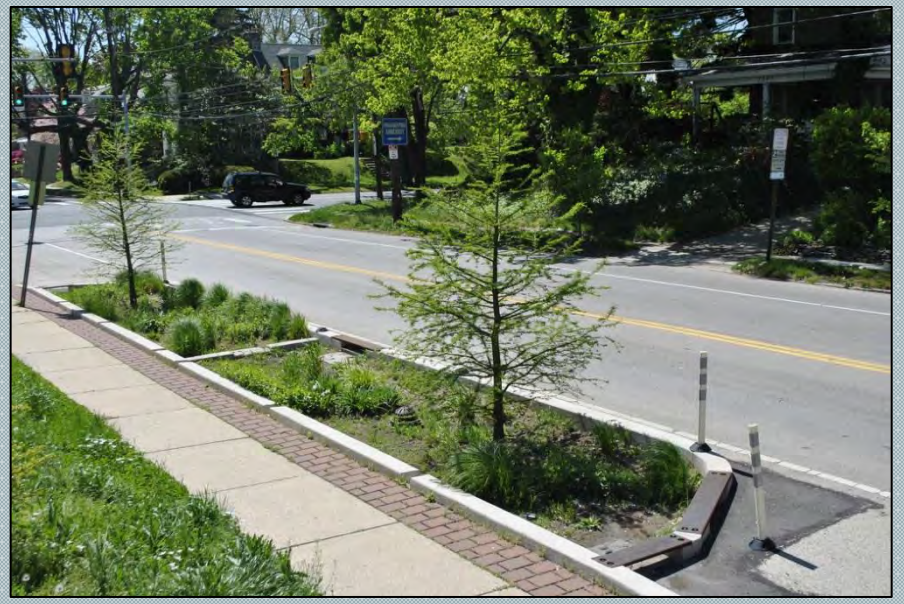
NATURE BASED SOLUTIONS (LID)

- Natural systems mimic natural processes to absorb and slow runoff and stormwater, and also reduce heat islands.

- Low impact development (LID) designs can be integrated into new development at neighborhood scales and work with traditional approaches

Bioswale between sidewalk and street



Contained bioswale or planter box

Mass Audubon

Shaping the Future of Your Community

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MORE EXAMPLES OF LOW IMPACT DEVELOPMENT AND GREEN INFRASTRUCTURE

Green Parking Lots

Permeable Paving

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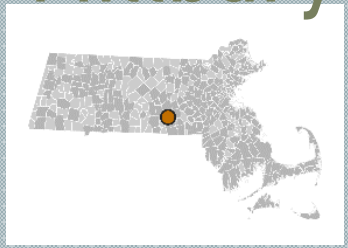
Example Action Grant Projects

Nature-Based Flood Protection, Drought Prevention, Water Quality, and Water Infiltration Techniques

Millbury



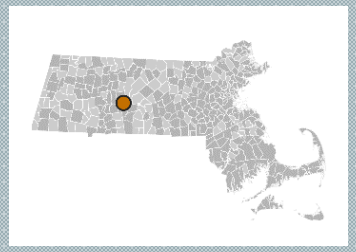
Designing green infrastructure like stormwater planters, bioretention bump outs, rain gardens, and other measures like porous pavers and pervious pavement to reduce heat island effects and stormwater runoff into the Blackstone River.

Nature-based solutions

Example Action Grant Projects

Nature-Based Flood Protection, Drought Mitigation, Water Quality, and Water Infiltration Techniques

Belchertown



Designing and permitting for a replacement water storage tank that would increase storage capacity and resiliency to drought, and completing a feasibility/ concept design of a rainwater harvesting system at Belchertown High School to irrigate the athletic fields.

Nature-based solutions

Pilot potential

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INFRASTRUCTURE PROJECTS

Traditional Culvert

Nature Based Culvert

Mass Audubon

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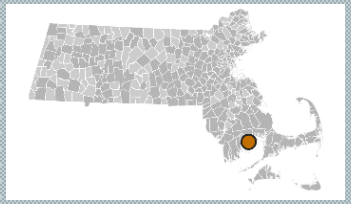
Example Action Grant Projects

Land Acquisition for Resilience

Mattapoisett



Purchasing 120 acres of forest, streams, freshwater wetlands and coastal salt marsh as conservation land to prevent development in vulnerable areas

Data Utilization

Proactive

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BENEFITS OF GREEN INFRASTRUCTURE AND LID

- Cost Savings
  - Reduced development costs for infrastructure and maintenance
  - Reduced energy costs for residents
- Public Safety
  - Reduced flooding
  - Improved water quality
  - Increased climate change resiliency
  - Reduced urban heat island effect
- Quality of Life
  - Protect and restore natural features for improved aesthetics
- Value
  - Increased property values
- Regulatory
  - Assistance in meeting regulatory requirements

STEP THREE: ACTIONS, PRIORITY AND TIMELINE

Community Resilience Building Risk Matrix

www.CommunityResilienceBuilding.com

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Top 4 Hazards

Features	Location	Ownership	V or S					Priority H-M-L	Time Short Long Ongoing
Infrastructural									
Societal									
Environ									

Completed

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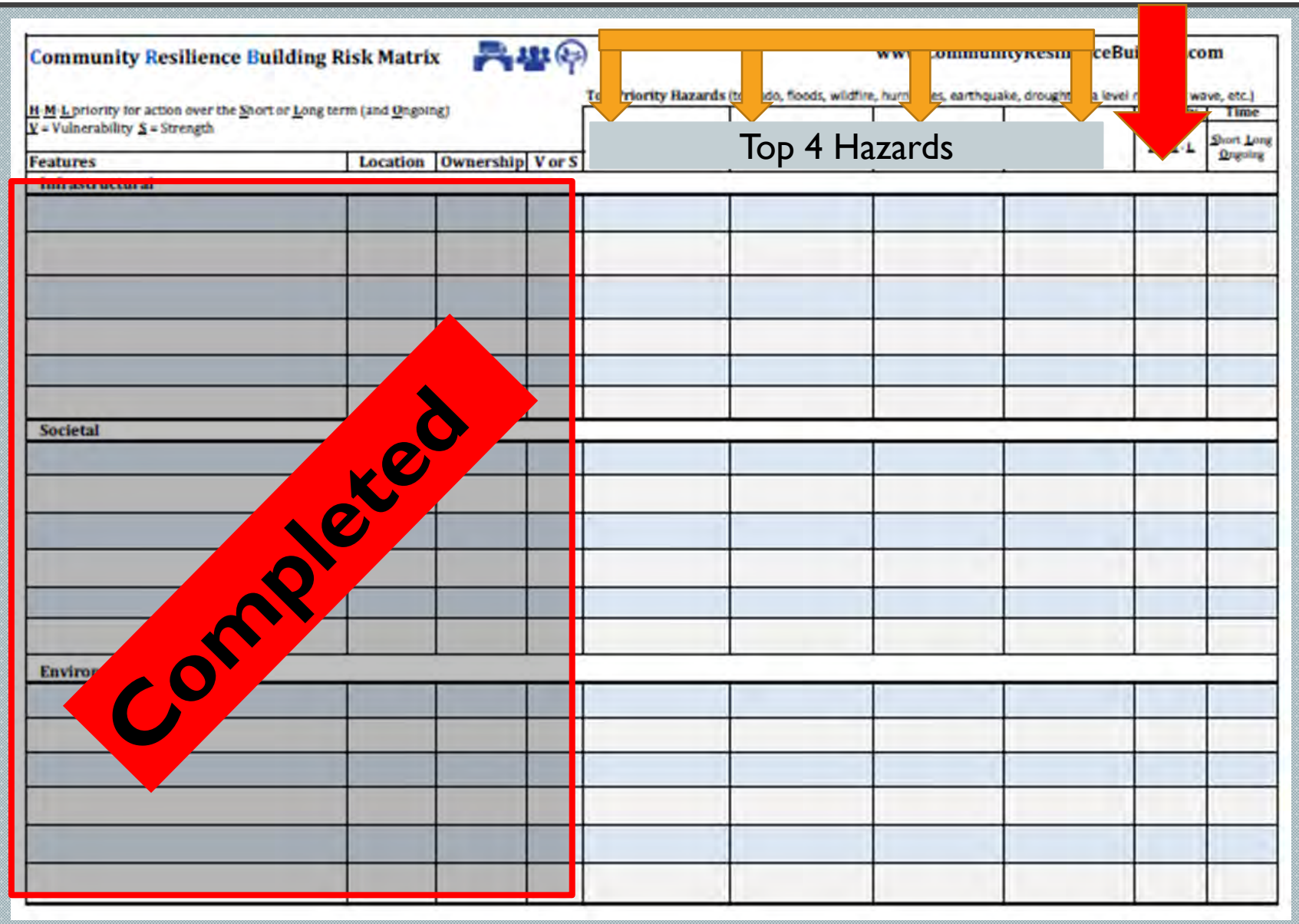
STEP THREE: ACTIONS, PRIORITY AND TIMELINE



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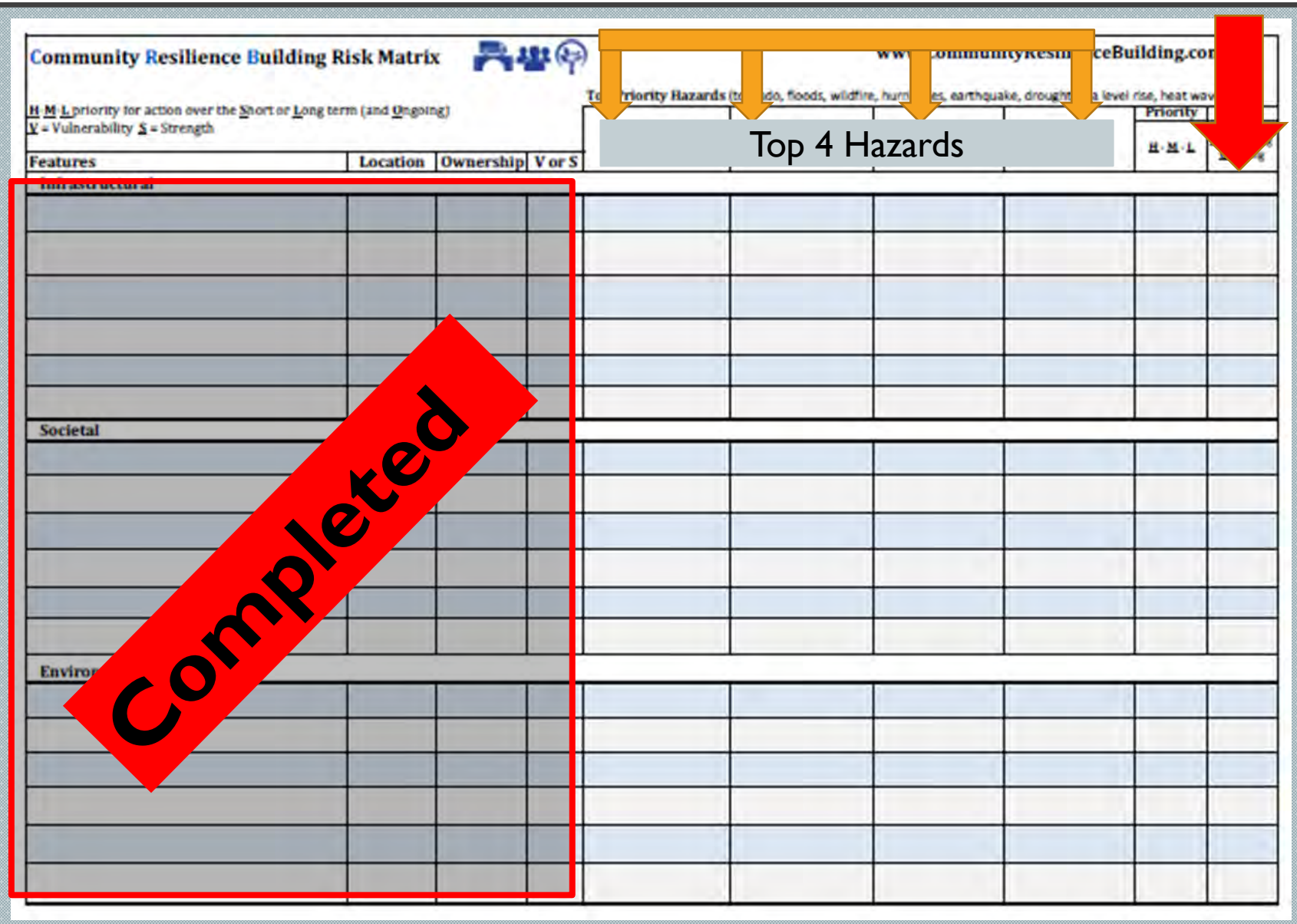
STEP THREE: ACTIONS, PRIORITY AND TIMELINE



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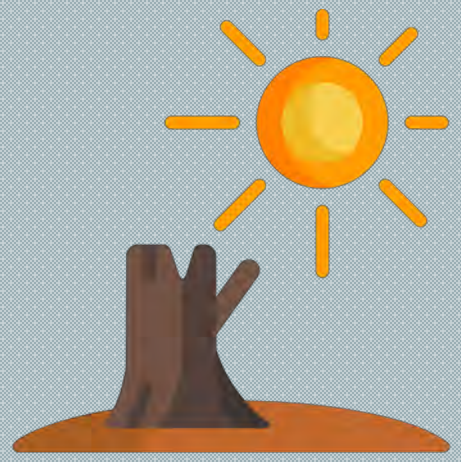
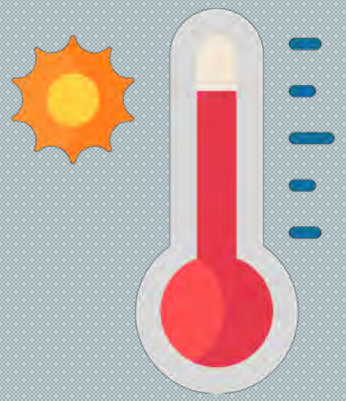
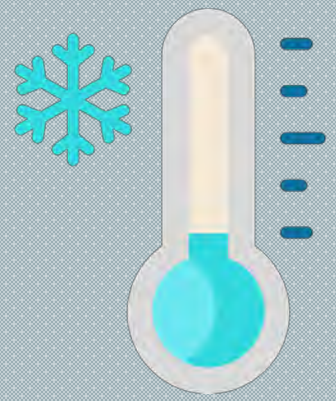
QUESTIONS







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THANK YOU

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YOU ARE INVITED TO ATTEND THE:

Town of New Braintree
Municipal Vulnerability Preparedness Program

PUBLIC LISTENING SESSION

MONDAY, MAY 24, 2021
TOWN HALL
7:00 PM

THE MUNICIPAL VULNERABILITY PREPAREDNESS (MVP) CORE TEAM WILL BE HOLDING THIS PUBLIC LISTENING SESSION ON MAY 24TH AT 7:00 PM IN THE TOWN HALL LOCATED AT 20 MEMORIAL DRIVE. THIS LISTENING SESSION IS BEING HELD IN CONJUNCTION WITH THE SELECTBOARD MEETING. LEARN MORE AND PROVIDE COMMENTS REGARDING NEW BRAINTREE'S OUTCOMES FROM THE RECENTLY HELD COMMUNITY RESILIENCE BUILDING WORKSHOP.

MVP provides support for communities to begin the process of planning for climate resilience and prioritizing adaptation and hazard mitigation actions. Communities that complete the MVP certification program are eligible for Action Grant funding and other opportunities. For more information, please contact the Central Massachusetts Regional Planning Commission at dmarini@cmrpc.org.

This event is funded through a grant from the Massachusetts Executive Office of Energy and Environmental Affairs

MUNICIPAL VULNERABILITY PREPAREDNESS (MVP) PROGRAM

Public Listening Session

New Braintree, MA

May 24, 2021

7:00 PM

MUNICIPAL VULNERABILITY PREPAREDNESS (MVP)

- State grant program to support cities and towns to begin the process of planning for climate resiliency.
- MVP Planning Process includes CRB Workshop, Report, Listening Session and Annual Reporting
- Communities who complete the MVP Planning Process become certified as an MVP Community
- Designated communities become eligible for MVP Action Grant funding

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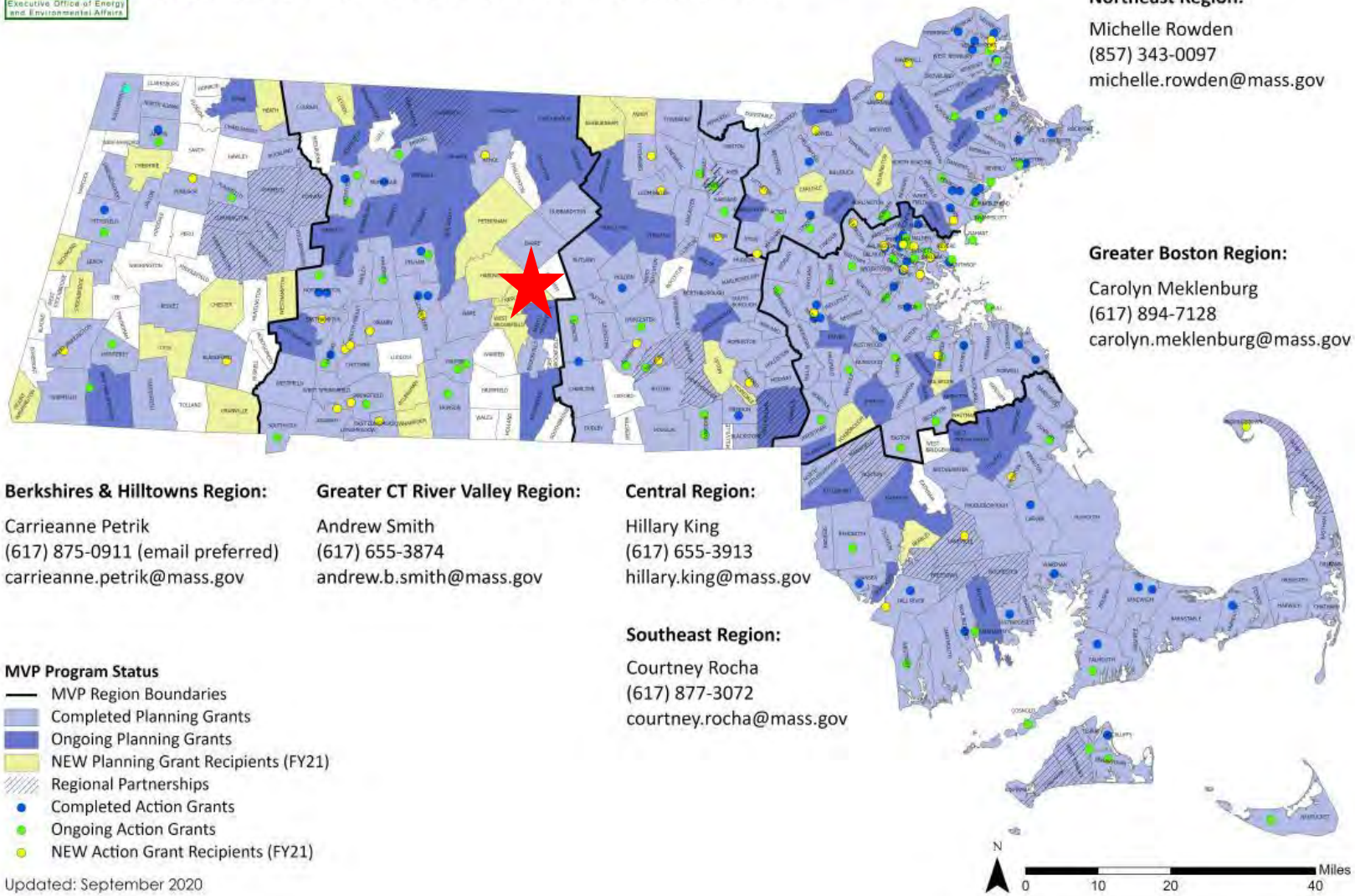
Municipal Vulnerability Preparedness (MVP) Program

Program Manager: Kara Runsten, (617) 312-1594, kara.runsten@mass.gov



Northeast Region:

Michelle Rowden
(857) 343-0097
michelle.rowden@mass.gov

Greater Boston Region:

Carolyn Meklenburg
(617) 894-7128
carolyn.meklenburg@mass.gov

Berkshires & Hilltowns Region:

Carrieanne Petrik
(617) 875-0911 (email preferred)
carrieanne.petrik@mass.gov

Greater CT River Valley Region:

Andrew Smith
(617) 655-3874
andrew.b.smith@mass.gov

Central Region:

Hillary King
(617) 655-3913
hillary.king@mass.gov

Southeast Region:

Courtney Rocha
(617) 877-3072
courtney.rocha@mass.gov

MVP Program Status

- MVP Region Boundaries
- Completed Planning Grants
- Ongoing Planning Grants
- NEW Planning Grant Recipients (FY21)
- Regional Partnerships
- Completed Action Grants
- Ongoing Action Grants
- NEW Action Grant Recipients (FY21)

Updated: September 2020

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COMMUNITY RESILIENCE BUILDING (CRB) PROCESS

- Community-driven process led by the project coordinator (Eric Vollheim) and Core Team members (Deb Morrison and Cynthia Henshaw)
- Hopedale's 3-member Core Team met 6 times in November, December, January, February, March, and April
- Invitation-only workshop was held in-person on April 6th and virtually on April 13th
- 30 attendees, including local officials, board and committee members, business, schools and non-profit groups
- Listening session (today) is open to the public

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CRB WORKSHOP OBJECTIVES

- Define extreme weather and climate-related hazards
- Identify current and future vulnerabilities and strengths
- Develop and prioritize actions for the community and broader stakeholder networks, and
- Identify opportunities for the community to advance actions to reduce risks and build resilience

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PRIMARY TOPIC AREAS

- Infrastructure

- Society

- Environment

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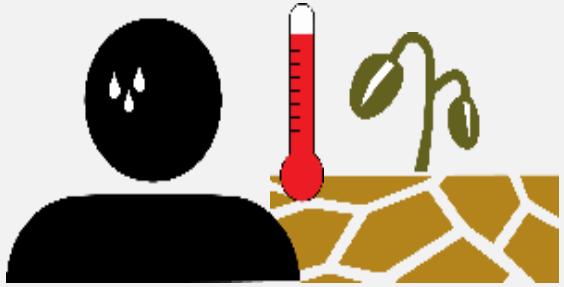
STEP ONE: IDENTIFY TOP 4 HAZARDS

DROUGHT/EXTREME HEAT



FLOODING

WINTER STORMS/EXTREME COLD

SEVERE STORMS

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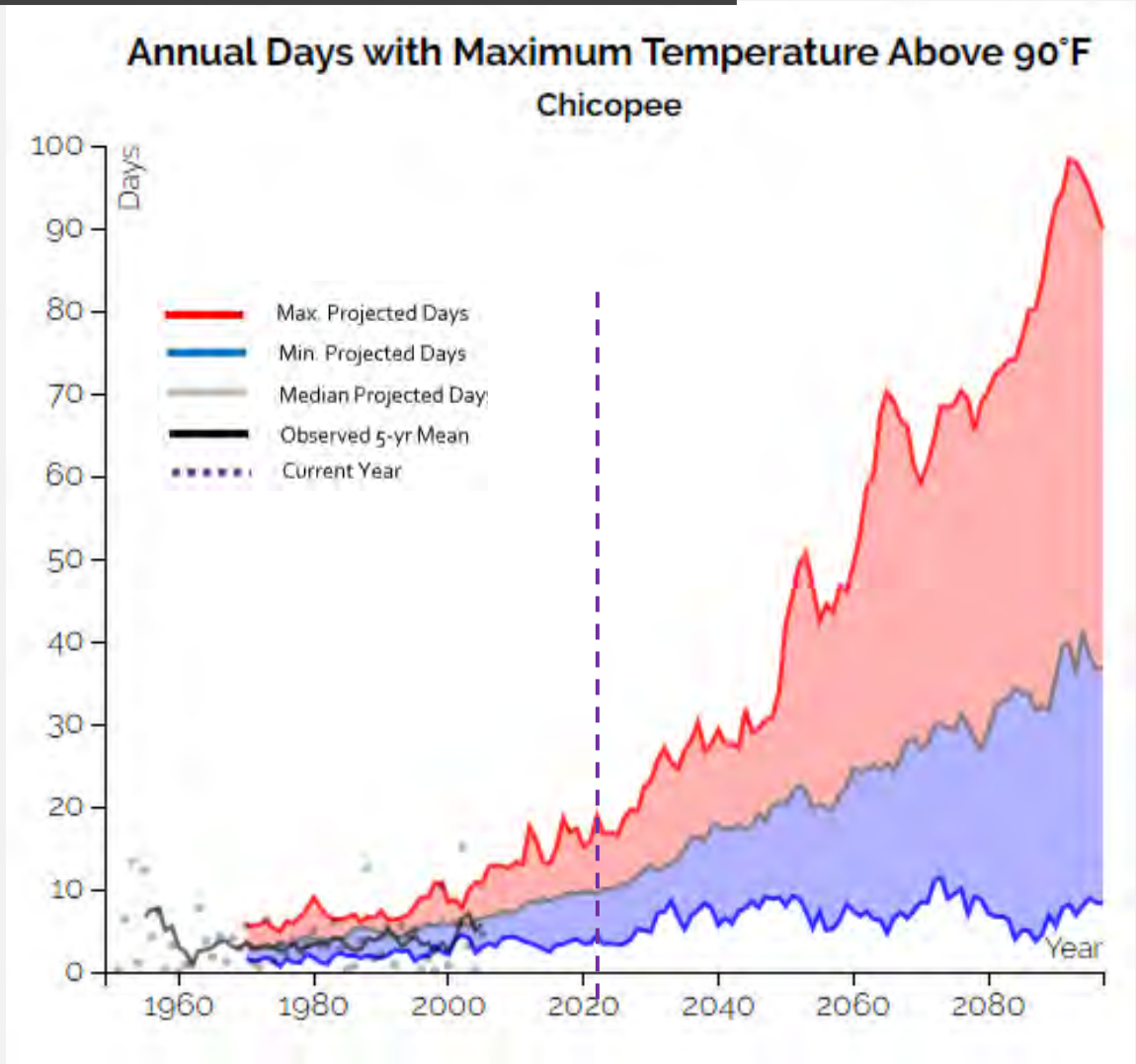
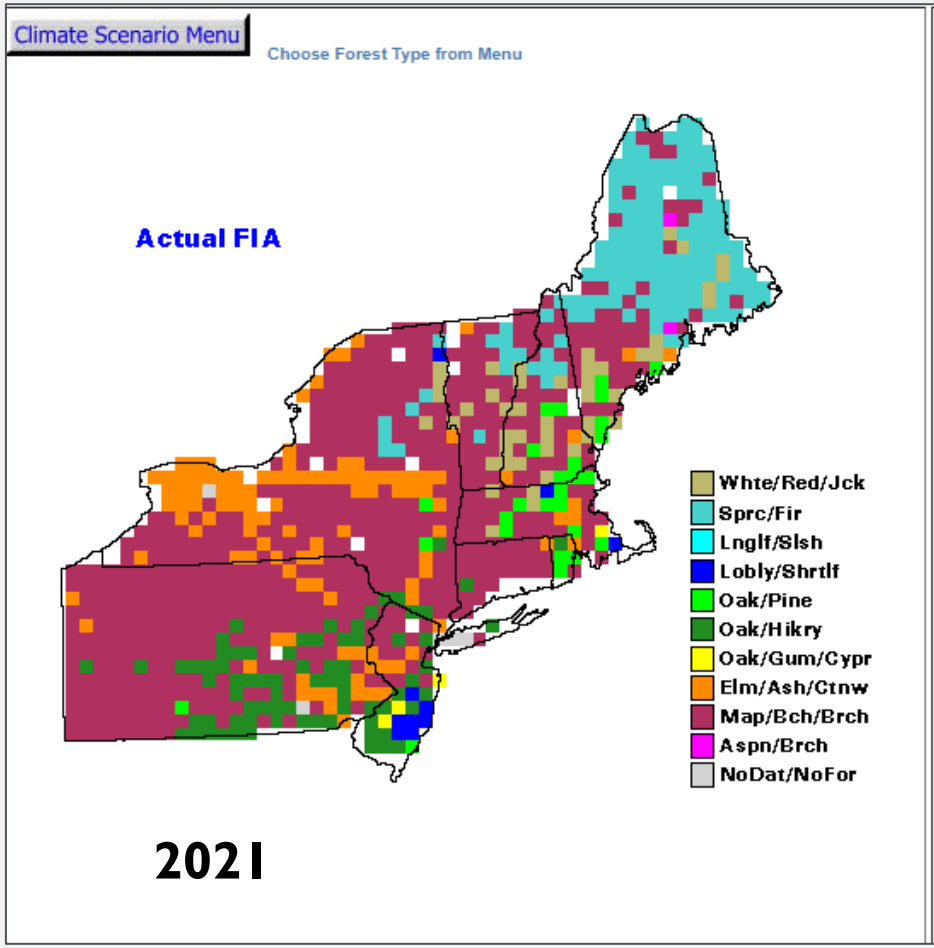
HEAT PROJECTIONS

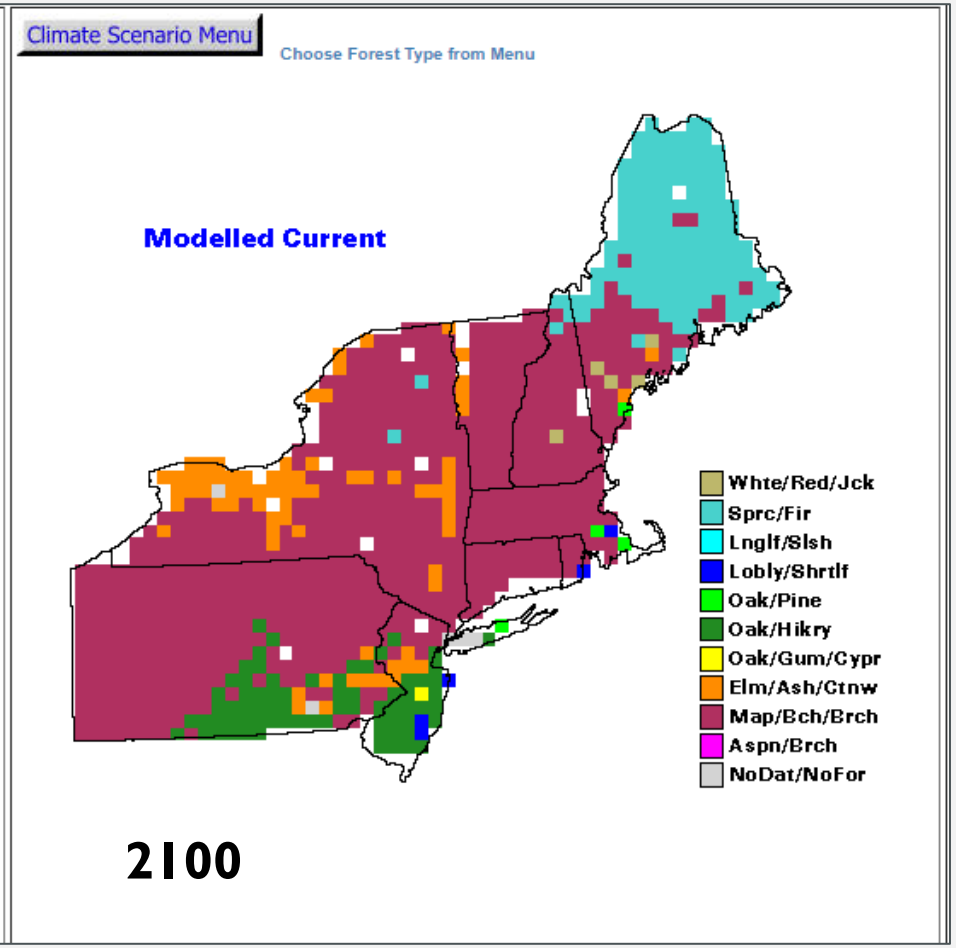
- Projected increase of 8 to 29 days annually over 90°F by mid century

- Projected increase of 11 to 69 days annually over 90°F by end of century



HEAT IMPACTS ON THE ENVIRONMENT



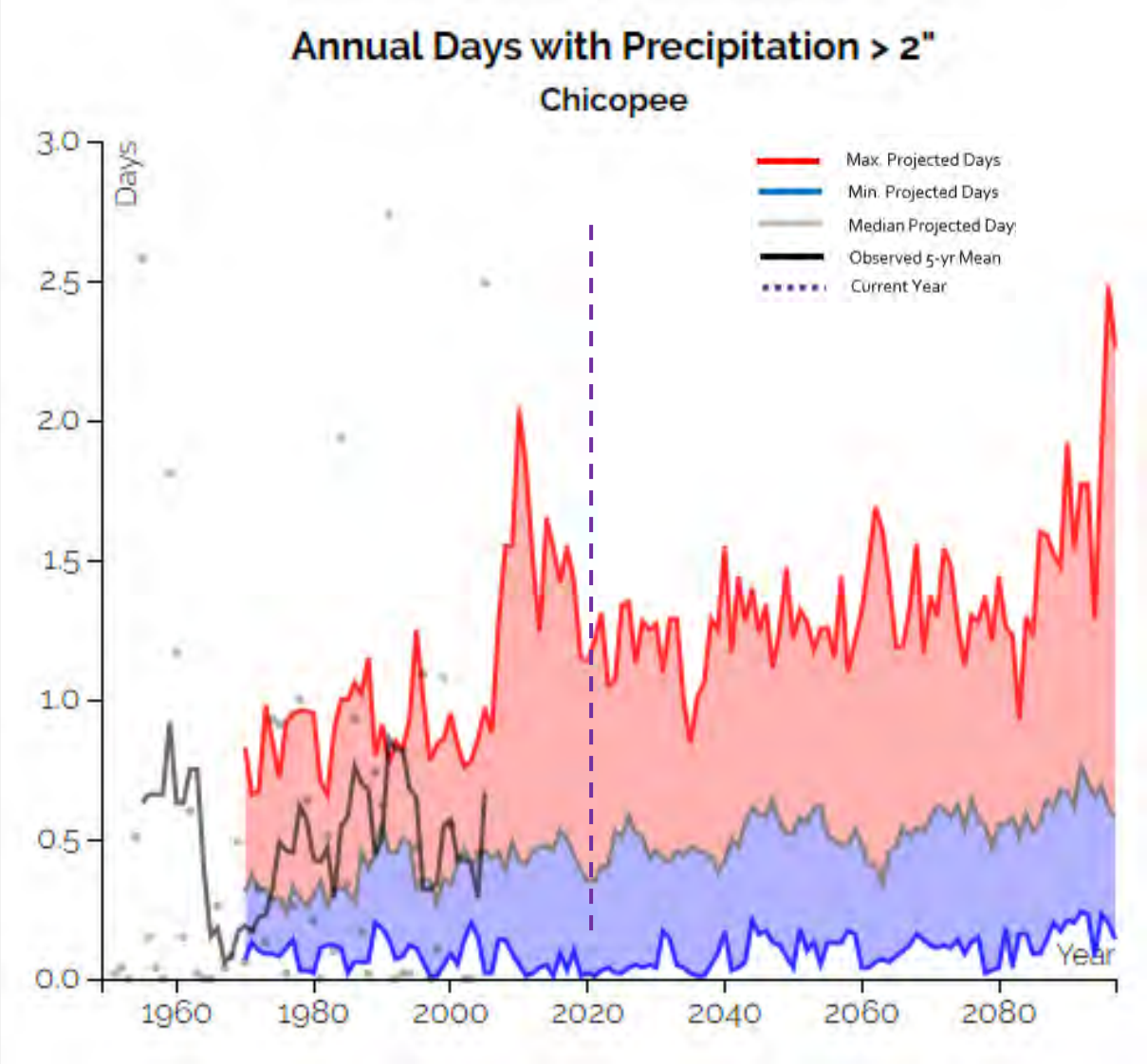


- Species expected to move north
- Diversity of species will likely decrease
- Likely increase in invasive species

HEAVY RAINFALL AND FLOODING

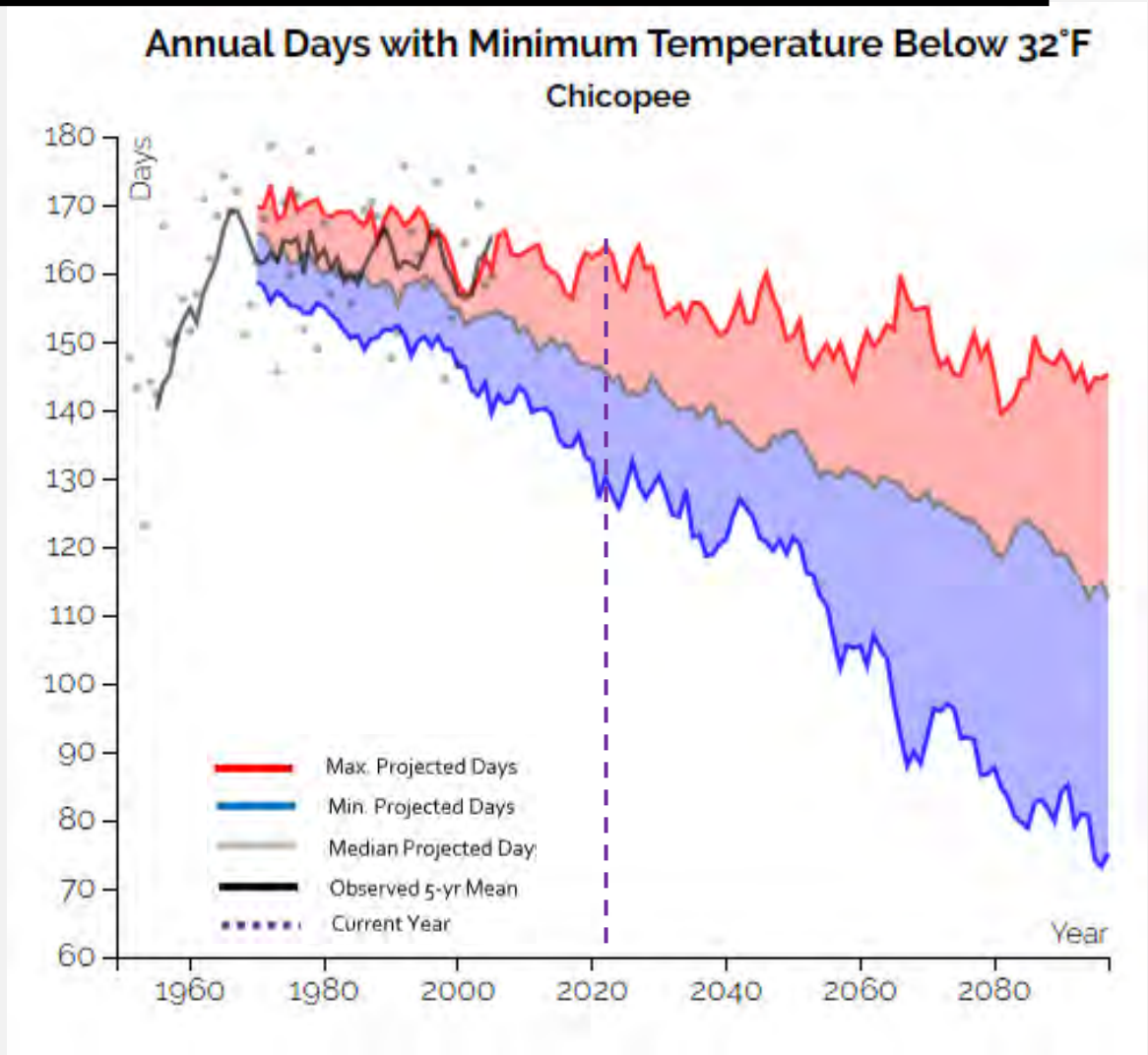
Extreme Precipitation

- The number of days each year with more than 2 inches of precipitation will increase.



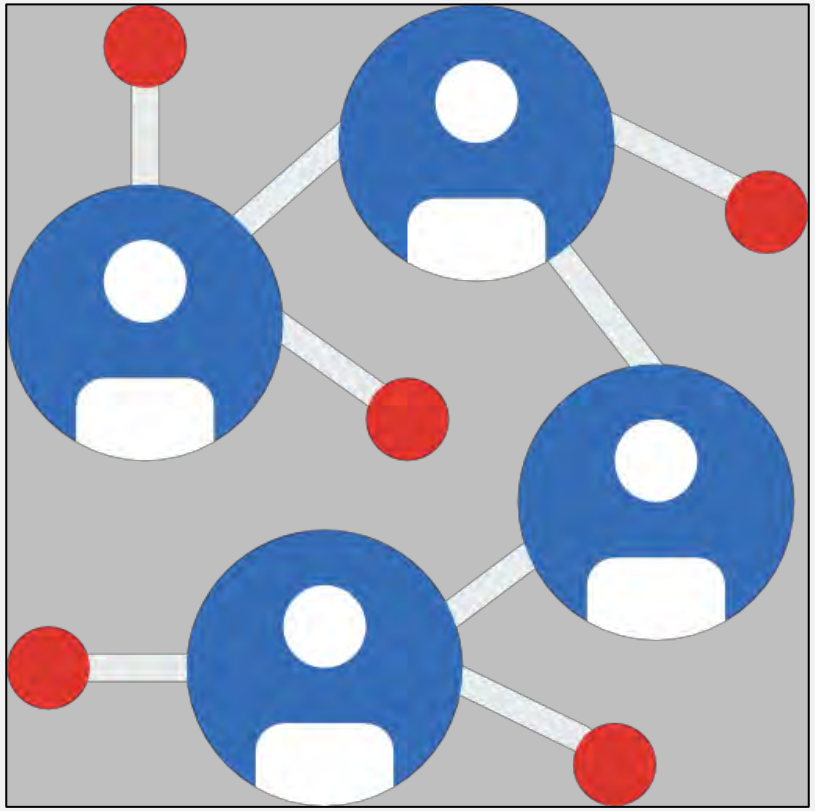
WINTER STORMS

- Annual days below freezing will decrease
- Rising temps → more winter precipitation to fall as rain or freezing rain
- Lower snowfall accumulation
- Winter - Highest projected increase in precipitation
- Storms that do occur may be worse - proximity to Atlantic Ocean increases risk of large storm events



BREAKOUT GROUPS

- 4 Breakout groups of 7-8 individuals
- 4 Focus Hazards
- 3 Focus Sections
- Tools and Resources
  - Matrix, Maps, HMP & Each Other



Icon made Prettyicons from Flaticon.com

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THE MATRIX

Community Resilience Building Risk Matrix www.CommunityResilienceBuilding.com

H-M-L priority for action over the Short or Long term (and Ongoing)
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Features	Location	Ownership	V or S					Priority	Time
								H-M-L	Short Long Ongoing
Infrastructural									
Societal									
Environmental									

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STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

Community Resilience Building Risk Matrix www.CommunityResilienceBuilding.com

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Top 4 Hazards

Features	Location	Ownership	V or S					Priority H-M-L	Time Short Long Ongoing
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STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

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Top 4 Hazards

Features	Location	Ownership	V or S					Priority	Time
								H-M-L	Short Long Ongoing
Infrastructural									
Dam									
Societal									
Senior Housing									
Environmental									
Wetlands									

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STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

Community Resilience Building Risk Matrix

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Infrastructural									
Dam									
Societal									
Senior Housing									
Environmental									
Wetlands									

Estimated Location

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STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

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Wetlands									

Estimated Location

Public? Private? State?

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STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

Community Resilience Building Risk Matrix www.CommunityResilienceBuilding.com

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Wetlands									

Estimated Location

Public? Private? State?

Vulnerability or Strength

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STEP THREE: ACTIONS, PRIORITY AND TIMELINE

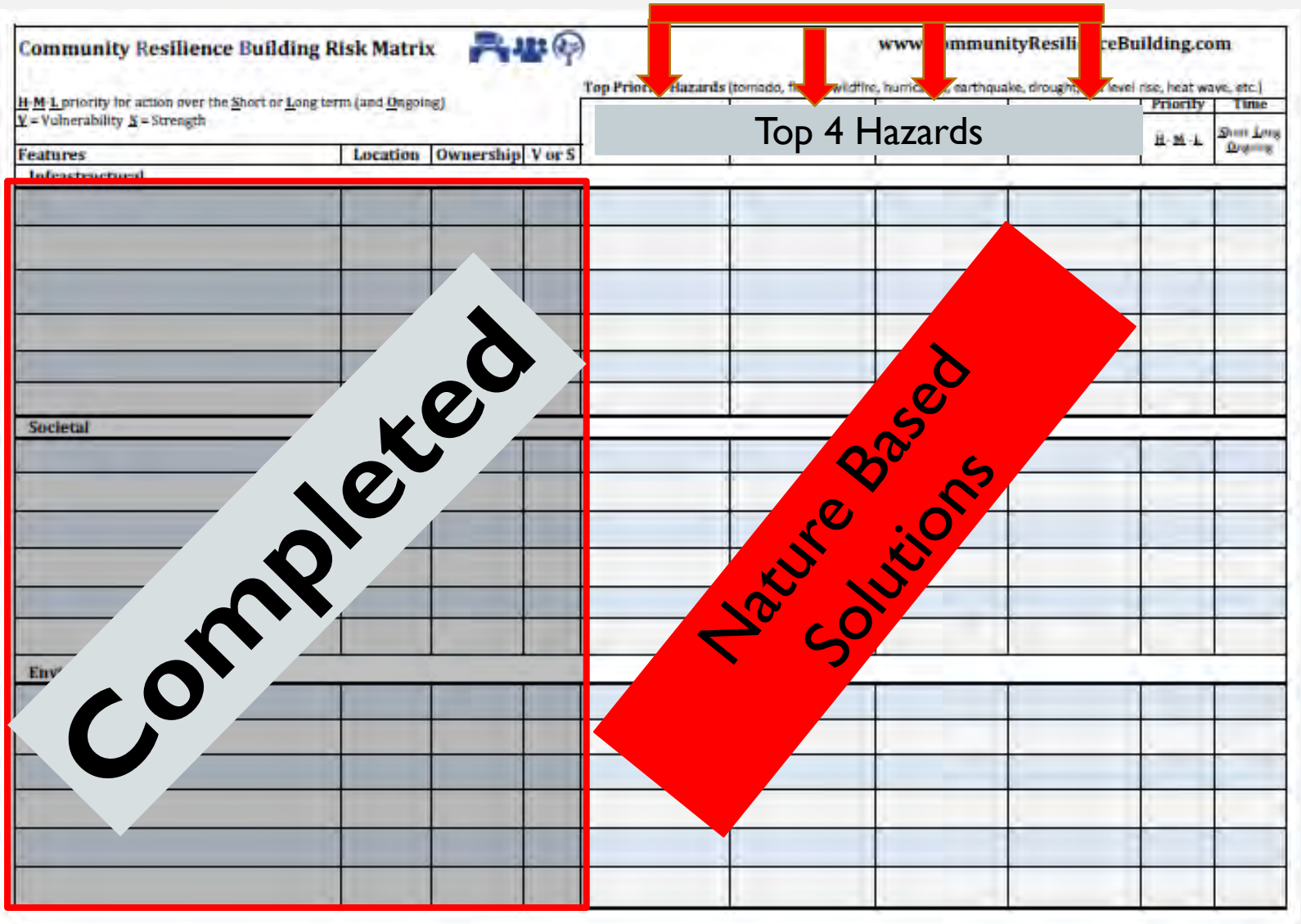

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TABLE SUMMARIES

Community Resilience Building Risk Matrix **TABLE 1** www.CommunityResilienceBuilding.org

New Braintree Table 1

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

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

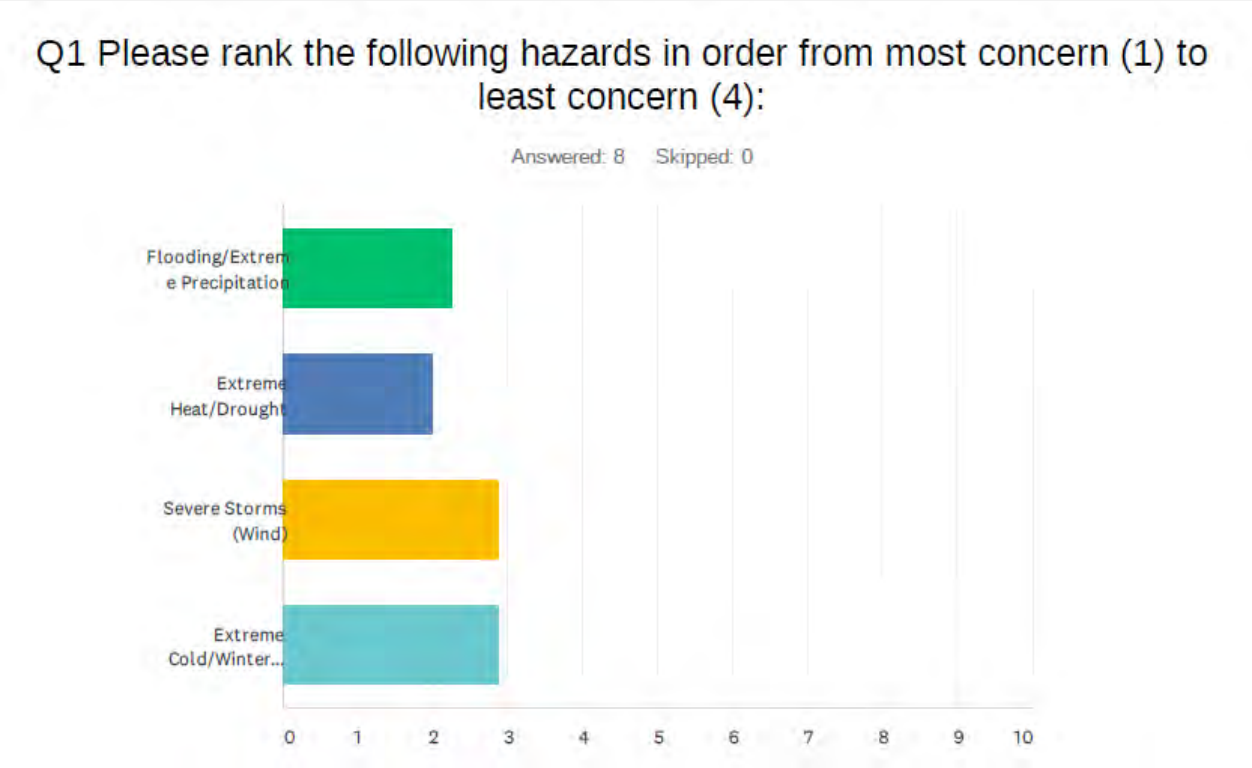
Features	Location	Ownershi	V or S	Description	Extreme Heat/Drought	Extreme Cold/Winter Storms	Severe Storms (Wind)	Flooding/Exreme Precipitation	Priority H - M - L	Time Short Long Ongoing
Infrastructural										
Private wells	Townwide	Private	V	drinking water, vulnerable to salt and drought	explore well water testing programs that are townwide to get baseline data and figure out if there is an issue that needs to be further explored, through DEP?; survey residents regarding well depth/drought impacts; possible well maintenance programs; plan for long-term growth of community and assess future infraastructure needs				H for sampling	S/O
Broadband	Townwide	?	V	internet, impact to communication during storms						
Firepond	Townwide, Sibley Road	Private	V	not maintained and not sure who maintains them; not enough fireponds; there is a need to have more fireponds to increase firefighting ability	increase the amount of fireponds in the appropriate places (drought); formalize who maintains the fireponds and explore volunteers to help maintain (drought); exploring altneratives for water such as a water tank (drought); create/formalize a plan for mutual aid among pond owners (drought); check/engage with the police academy regarding use of water tower, check if a dry hydrant can be installed near town hall/school (drought)				H/M	L
Flood control	Wine Road, McCay Road culvert	State	V	dam on Wine Rd, culverts, post 55 flood, Barre Lower Falls Dam	Engage the "State" (police academy?) to determine the status of the "dam" on Wine Rd (flooding);				H	S
Trees near powerlines	Town right of ways	Private, Charter (National Grid), and	V	ash trees vulnerable	Explore the town's capacity to trim trees (wind); town forestry management plan (wind)				H	O
Salt shed	West Brookfield Road	Town	V	leaky	pursue resources to either replace or repair salt shed (winter); perform testing if needed				H	S
Dirt and paved roads salting		Town (Highway Department)	V/S	grooved stones	increase the amount of bioswales, rain gardens, and drainage on private property to improve drainage of roads (winter/flooding); pave more roads in town (winter); increase the level of tech on highway dept vehicles to help control amount of salt					
Lack of water supply for agriculture			V	during drought, water tank	See Firepond (row 11); coordinate system of mutual aid for farmers; create partnership to develop fireponds/agriculture water ponds, develop a simple program, explore other grant opprotunities (Farm Service Agency); explore additional tanks				H	S/O
Country drainage	Ravine Rd		V	stormwater, pollution, drainage ponds, culverts; Ravine Rd	see private wells (row 9); test for pollution; explore nature based solutions (flooding); develop a policy or a system to maintain the drainage (flooding)				M	O
Police Academy			S/V		reengage to establish communication/relationship					
School and Town Hall		Town	V/S	as shelters, both have generators, floodprone	Create a CERT team to assist in the staffing of the shelter (6-10 people), community outreach; education on disaster prep					
Societal										

GROUP VOTE

New Braintree Municipal Vulnerability Preparedness Program
Top Priority Actions Survey
Thank you for participating in New Braintree's MVP Virtual Workshop! All of the presentations, background information, and the matrix that you helped to fill out during the workshop can be accessed at the following link:
https://www.dropbox.com/sh/uux8j8ccfd6fd1l/AAD0aLjXGyOsa4Pjn2iN7c_da?dl=0

Based on the action items that you came up with during the workshop, we have developed the survey below. This survey will help us identify the top priority actions that New Braintree should take in order to become more resilient. Please take some time to review those materials in the link above and complete the survey by **Monday, May 3, 2021**. The results of this survey will be described in the report and discussed during the listening session.

Thank you in advance for your help with this next step!



WHAT DID THE GROUP FIND?

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INFRASTRUCTURE CONCERNS

Stormwater

Water Supply

Communication Systems

Facilities

INFRASTRUCTURE STRENGTHS

Shelter

Power Grid

Regional Cooperation

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INFRASTRUCTURE ACTIONS

HIGH PRIORITY

Water Management

Wildfire Prevention

Building & System Upgrades

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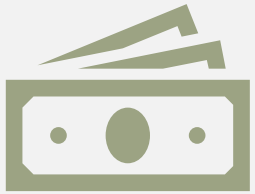
SOCIETAL CONCERNS

Emergency Preparedness

Aging Population



Access to Resources

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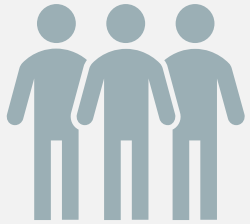
SOCIETAL STRENGTHS



Sense of Community

Local Organizations & Groups

Farming

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SOCIETAL ACTIONS

HIGH PRIORITY

Increase Engagement

Enhance Community Preparedness

Outreach

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ENVIRONMENTAL CONCERNS

Invasive & Nuisance Species

Tree Health

Farmland

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ENVIRONMENTAL STRENGTHS

Forest Management

Open Space

Water Resources

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ENVIRONMENTAL ACTIONS

HIGH PRIORITY

Invasive & Nuisance Species Management

Education

Update Policies & Bylaws

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NEXT STEPS FOR NEW BRAINTREE

- Finalize draft report with assistance from CMRPC
- Final report submitted to EOEEA by June 30, 2021
- New Braintree receives "MVP Community" certification
- Annual reporting by Core Team
- Develop and apply for MVP Action Grants

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ACTION GRANTS

- Action Grants were launched this Spring
- Up to $2 million for an individual community
- Up to $5 million for regional projects
- One year grant cycle (typically) July 1st- June 30th
- 25% Match - Cash or In-kind (Non-State Funds)

www.mass.gov/municipal-vulnerability-preparedness-mvp-program

www.communityresiliencebuilding.com

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Questions and Comments

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CONTACT

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Thank you

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Central Massachusetts Regional Planning Commission

Meeting Name: MVP Listening Session **Community: New Braintree** **Location: Town Hall**

Date: May 24, 2021 **Meeting Time: 7:00 PM**

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