

TOWN OF HOPEDALE



Municipal Vulnerability Preparedness

Summary of Findings Report

June 2021



ABOUT THE AUTHORS

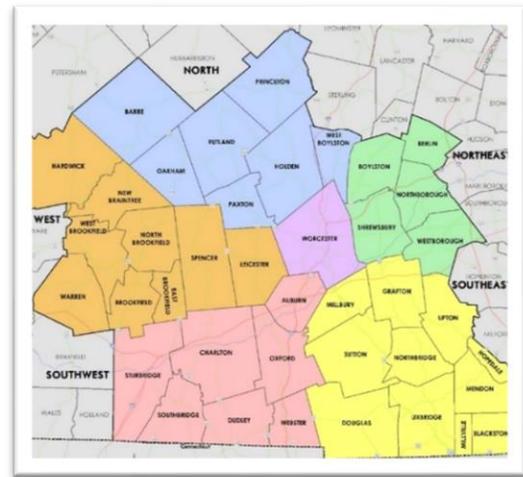
CMRPC Mission

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. CMRPC'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 Hopedale 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>

HOPEDALE: A PROFILE

The Town of Hopedale, Massachusetts saw its first colonial recorded establishment in 1669, when Benjamin Albee set a grist mill to grind corn for colonial settlers. Before that, the late precontact period (around 1620), is hypothesized to have been used by the Native American Nipmuck people for hunting, fishing, and agricultural development.

In 1669, Adin Ballou and his followers (the Practical Christians) purchased acres in downtown Hopedale in 1842 in order to establish Fraternal Community Number One. This was a social experiment of thirty houses, a chapel, workshops, and 170 people, to combine farming and manufacturing, merging Christian and socialist ideologies in attempt to create a new kind of utopian town (Unitarian Universalist Association, The Hopedale Community). Hopedale became a hub of social strides including women’s rights and abolition (Town of Hopedale, A History of Hopedale).

At the valley of the upper Mill River, Hopedale is located on the southeastern end of Worcester County (Town of Hopedale, A History of Hopedale). The town is 5.3 square miles, and bordered by Massachusetts Towns Milford, Upton, Mendon, and Bellingham. Hopedale is west of Route 140, with Route 16 running through the Town. The Mill River, which flows into the Blackstone River, runs through Hopedale, contributing to a rich history of agriculture in Hopedale (Massachusetts Department of Conservation and Recreation, Hopedale Reconnaissance Report).

Today, the total population of Hopedale is estimated to be around 5,951 residents (2018 American Community Survey). The population has seen a slight increase (around 1%) since 2010, when there were an estimated 5,902 residents. The median age of residents in Hopedale is around 45 years old, with 23.9% under 18 years old and 16.7% over 65 years old. A largely white community, Hopedale is around 97.6% White. About 2.2% of residents are Hispanic or Latino (of any race). Only about 0.6% of the population are Black or African American. 0.4% of residents are Asian. The median household income resides at \$107,550, with 4.1% of the population living below the poverty line (2018 American Community Survey).

COMMUNITY RESILIENCE BUILDING WORKSHOP

The Town of Hopedale contracted with the Central Massachusetts Regional Planning Commission (CMRPC) on October 2, 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 Hopedale. The project coordinators and CMRPC met on November 3, 2020 and December 4, 2020 to begin the initial of this planning process. And on January 22, 2021, a small group of Town Officials, Board Members, and community leaders convened to form the 'Core Team' which, together with CMRPC staff, organized and planned the CRB Workshop over the course of five meetings.

The Town of Hopedale's CRB workshop was scheduled to be held during the month of March 2021. The workshop would take place over the course of two separate virtual meetings. The first meeting would be held for three hours. The first hour would be dedicated to welcoming and introducing participants to the workshop, familiarizing with all of ZOOM's functions, and discussing a brief overview the day's objectives. The remaining two hours would be dedicated to identifying features, location, and ownership of vulnerabilities and strengths in Town. The second meeting was reserved for completion of the prior meetings work and to develop actionable items to improve resiliency throughout the Town of Hopedale.

Workshop Overview

The virtual workshop was held on **Tuesday, March 16th from 10:00 AM – 1:00 PM**, and on **Tuesday, March 23rd from 2:00 PM – 5:00 PM**. To prepare participants for the workshop all presentations were pre-recorded by the Core Team and the staff at CMRPC. Upon completion of the MVP program overview presentation, Climate Projections presentation, Hazards presentation, and Matrix/ Nature Based solutions presentation, the invitation and workshop materials document were put together. The invitation included links to the ZOOM meeting, and the workshop materials document was complete with links to each presentation, table maps, two-page MVP program overview, CRB Workbook, how to use ZOOM information, and an agenda with ZOOM log-in information for each of the two meetings. Participants were instructed to watch all presentations at their leisure prior to the workshop.

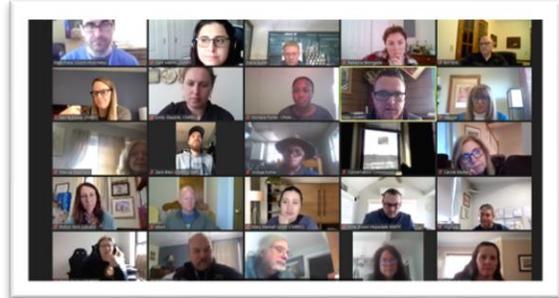


The Workshop's goal was to identify the four top natural hazards that impact Hopedale and develop strategies to enhance the town's resiliency related to climate change. Following the CRB work plan process, the Town, CMRPC facilitators and planners pre-recorded four presentations:

- Overview of the CRB process
- Overview of the MVP program

- A summary of climate change projections, impacts and mitigation strategies
- A detailed profile of natural hazards in the Town of Hopedale, including the top four hazards perceived by the core team.

During the first virtual workshop meeting date, the group discussed the top four hazards that affect Hopedale. There was agreement between the Core Team and all participants that--in no particular order-- ***flooding, severe storms (wind), winter storms/extreme cold (ice) and drought/extreme heat (wildfire/invasives)*** have the greatest effects and potential impacts on the Town. Having identified these hazards, workshop attendees were then asked to work through the CRB program’s matrix and mapping exercise. Table facilitators, along with CMRPC staff guided stakeholders in four small group to examine the resources throughout the Town and to identify the town’s most serious concerns regarding natural and climate-related hazards that threaten their community.

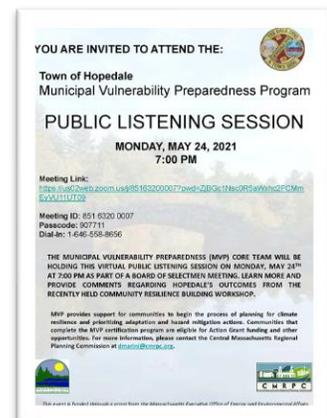


The group then reconvened one week later to build upon the first day’s work. The goal of the second session was to continue to identify features and begin to identify actionable items to reduce or mitigate the projected impacts of climate change. Once the group had completed the matrix, the groups gave a summary of findings by the table reporters.

Upon completion of the two-day virtual workshop, CMRPC compiled all information from the matrix into survey form. The survey was then distributed to all attendees of the workshop and was open from March 30, 2021 through April 16, 2021. The attendees’ participation in the survey helped to prioritize what they believed to be the top projects in the infrastructure, society, and environmental categories. Results of the survey were used to prioritize and organize the matrix and report.

Twenty-eight (28) stakeholders attended the virtual CRB Workshop, including representatives from Town government, emergency services, the MVP Core team, Municipal Department Heads, Conservation Commission, Agriculture, local contractors and concerned citizens of Hopedale.

A public listening session to discuss MVP results and recommendations for future actions was held virtually on Monday, May 24, 2021 as part of a Board of Selectmen meeting. The listening session was properly promoted across several avenues, with fifty-one (51) people in attendance. Between the two meetings, a total of seventy-nine (79) people participated in the MVP process.



Immediately following the listening session, the draft report was posted on the Town's website for further comment. The comment period was open from June 16th through June 23rd.

Summary of Findings

Overall, the workshop was received positively by all in attendance. Following the presentations, participants were asked if they agreed with the core team's identification of, in no particular order, flooding, severe storms, drought and extreme temperatures, and winter storms and extreme cold as the primary hazards facing Hopedale. All the participants agreed that these four hazards were the most relevant for Hopedale.

The Town's public buildings, historical preservation, and utilities were described as strengths, along with the water resources and recreation opportunities. The Town's location in the Blackstone River Watershed was considered to be an overall strength due to the access to many regional environmental groups. Communication access and validity were considered a vulnerability and a barrier to information distribution, though the foundation of the communication system was thought to be a benefit. Dams, culverts, and bridges were also considered vulnerable safety hazards leading to additional flooding concerns.

Another area that was widely seen as a hazard to the Town is the health and water quality of the surface waters in Town. Widespread and uncontrolled invasive species have impacted many of the ponds, streams, and rivers in Hopedale. Invasive species were also noted in the parks and forested areas across Town, threatening the native plant species in these areas and increasing wildfire risks. Other vulnerable areas mentioned were roadway flooding, runoff contamination, and beaver activity.

The compromised and limited public water supply was considered a major vulnerability by all. With one public water well having been taken offline due to contamination, and three other water sources nearing the Maximum Contaminant Level, all participants were concerned with the limited access to clean, safe drinking water. As the frequency and duration of drought increases, and as development pressures increase, the demand for clean water will also increase. Therefore, it was discussed that it will be integral to the Town's resilience to expand the public water supply, either through removing the contamination from the existing water wells, identifying and securing new water wells, or constructing additional water storage tanks.

It was also discussed that there is a need to establish a series of public education campaigns regarding stormwater management, wetlands, rainwater collection, invasive species identification and management, and eco-friendly lawncare practices.

All four tables identified specific vulnerable locations that are already in need of attention and will likely face worsening impacts due to climate change. These include forested areas, the water supply, senior residents, dams, and the Draper Mill.

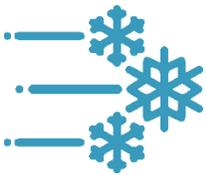
TOP HAZARDS

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 further assess solutions. 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: **drought and extreme heat (wildfire and invasive species), severe storms (wind), flooding, and winter storms and extreme cold (snow and ice).**

In 2016, Hopedale experienced extreme droughts along with most of the state of Massachusetts. Severe storms, including high winds and intense rainfall, have been increasing in frequency and impact. All of these have caused disruption to the town, including localized flooding, power outages, and calling upon mutual aid agreements. With climate change, all of these natural events are expected to increase in severity and frequency.



Flooding.



DROUGHT/EXTREME HEAT

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.

WINTER STORMS/EXTREME COLD

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.



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.



SEVERE STORMS

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.

Flooding. Extreme weather in recent years demonstrates how the various hazards impact the town. There have been numerous flooding events over the years, and this threat is only going to increase as the climate continues to change. Local dams, undersized culverts, and beaver activity have all contributed to flooding throughout Town.

Winter Storms and Extreme Cold. 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.

Drought and Extreme Heat. 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 whether or not residents and businesses are on town water or have wells.

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 fourth hazard is focused primarily on the winds associated with these storms, leaving heavy rain events to be discussed under flooding.

The workshop participants agreed that different hazards affect the town at different times of the year. Flexibility and comprehensive response by town officials is needed to ensure the safety of the citizens in different hazard situations exacerbated by climate change.

These concerns, which are largely inter-related, are based on data provided by the Massachusetts Climate Clearinghouse as well as watershed-specific data from the Northeast Climate Adaptation Science Center at the University of Massachusetts at Amherst. For the Blackstone River Basin, where Hopedale is located, projections show an expected increase in precipitation overall, with the greatest increase during winter. The number of days with more than 2” of rainfall, potentially leading to inland flooding, is also expected to increase with the average expected to be close to 15 days by the year 2100 compared with approximately 10 days now. 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 and sleet in the winter. Higher wind in the summer and storm severity increases with warmer temperatures.

Vulnerable Areas

The areas in Hopedale identified by workshop participants during discussion as vulnerable to the hazards discussed include:

Forested areas throughout town are vulnerable to increasing pressures from heat, drought, and invasive insect species. The aging tree population is of concern for the overall health of the forested area covering most of the Town. Roadside trees are also a vulnerability due to a lack of a sustainable tree trimming program or a removal and replacement program. Adin Street, Dutcher Street, and Freedom Street were noted as having particularly vulnerable street trees.

Public water supply was identified as being compromised and limited in capacity. One water well was taken offline due to reaching the Maximum Contaminant Level, and three other water sources are nearing that level and will inevitably need to be taken offline as well.

VULNERABLE AREAS

- Forested Areas
- Water Supply
- Senior Residents
- Dams
- Draper Mill

Senior residents were considered vulnerable by all groups during the breakout sessions. High concentrations of senior citizens living in condensed areas were viewed as a risk in the event of evacuation. There was special concern regarding the senior housing at the Griffin-Dennett Apartments. A lack of back of backup power was concerning for many due to the projected longer period of higher temperatures. In addition to better emergency planning, the availability of transportation for, and communications with, the senior population during these times is considered to be a key aspect of resiliency that needs upgrading and rethinking.

Town-wide dams were of concern to many in attendance as there are three dams in Town designated as Significant Hazards. Those are the Mill Pond Dam, Hopedale Pond Dam, and Spindeville Pond Dam. There was also a concern about the Fiske Mill Pond Dam which is upstream on the border of Upton and Milford.

Draper Mill was discussed at all four tables during the workshop. This historic mill is set to be demolished in the near future, and there was concern that this may have negative impacts to the river. However, with the possible daylighting of portions of the Mill River, there is belief that once the Draper Mill is demolished, there may be a positive impact on the ecology and geology of the river.

CURRENT CONCERNS AND CHALLENGES PRESENTED BY HAZARDS AND CLIMATE CHANGE

Meetings with the MVP Core Team prior to the workshop as well as the helped to identify past climate-related events that significantly impacted the Town. Disaster events of concern included frequent major winter storms (as in 2015 and 2018), ice storms (2008), severe rain events (2005, 2010, 2016), tropical storms (Irene, Sandy), infestations of invasive and otherwise undesirable species (Asian Longhorn Beetle, gypsy moths, aquatic invasive species, ticks), and extended periods of drought (2015 to 2016). Hopedale does have a public water supply in place. However, it will be important for the town to secure a backup drinking water supply as the current supply is already limited, vulnerable to drought, and vulnerable to contamination.

At the workshop, CMRPC staff presented downscaled climate change data provided by Massachusetts's Executive Office of Energy and Environment Affairs (EEA) and the Northeast Climate Science Center at the University of Massachusetts, Amherst. Hopedale lies within the Blackstone River Basin, and should projections for the watershed hold true, by mid-century, annual average temperatures will increase in the range of 3 to 6.4 degrees from the historical baseline. Hot days over 90 degrees will increase from 8 to 29 days annually; days below freezing will fall from 19 to 38 days annually; annual precipitation will increase 1.2 to 6.3 inches. Seasonal drought conditions will become more frequent as precipitation becomes more concentrated in extreme intensity events and winter snowpack is reduced. Some of the challenges of these projected changes – many of which are already being observed – were discussed in a presentation at the workshop focused on specific hazards in the Hopedale area.

Challenges highlighted in the presentations and/or discussed as a group or in the breakout groups included the following concerns:

- Issues associated climate change will exacerbate problems that are already apparent, and the town lacks the resources to address comprehensively – flooding and storm water management, vulnerable roads, ecological damage, and vulnerable populations, all within the context of a small community.
- An increase in hot and warm days and decrease in cold days will mean greater need for cooling and less need for heating, especially among vulnerable groups such as children and seniors.
- Increased temperatures can also be expected to cause changes in the water cycle, leading to more intense rain events. Increased precipitation rates will lead to more frequent and severe flooding in areas outside of designated flood zones defined using historical data – particularly around Green Street, Rockridge Road, Adin Street, Dutcher Street, and the Downtown area.
- Increased storm intensity will likely cause more tree damage leading to power outages and road closures, higher peak river flows requiring new approaches to storm water

management, and increased erosion of river and brook banks and nearby infrastructure. Severe storms will still likely damage and impact the power lines throughout the town. Tree damage will occur from intense windstorms such as recent tornadoes or from heavy snow and ice storms.

- More frequent and severe droughts will challenge water supplies and increase risks from wildfire. Increased risk of wildfire can lead to a wide range of ecological outcomes including increased damage to human property and life, removal of suitable habitat space, and changes in ecosystem services made available by forest cover.
- Invasive plant and animal species can impact public health through increasing numbers of disease carrying pests (e.g., ticks and mosquitoes) and by damaging key ecosystems such as forests and wetlands, thereby increasing wildfire and flood risks.

As the climate continues to change and natural disasters increase in frequency and strength there will be a greater need to communicate with residents, businesses, and other institutions. Changing climate will dictate the need for enhanced communications systems and related infrastructure and flexible emergency response and evacuation plans. These flexible response and evacuation plans will be particularly important for the senior citizens who live alone and do not have access to a vehicle.

SPECIFIC CATEGORIES OF CONCERNS AND CHALLENGES

The following topics were identified by workshop attendees as concerns or challenges related to Hopedale's changing climate and natural hazards.

Infrastructure Concerns



Bridges, Culverts, & Dams

During the workshop, all four tables identified bridges, culverts, and dams in Town as a vulnerability. Participants noted the bridges on Freedom Street, Mill Street, and Mellen Street as in need of repairs. Mellen Street was closed due to the condition of the bridge historically. And The Mill Street bridge next to Spindleville manufacturing plant is of special concern because of its historical significance.

INFRASTRUCTURE

- Bridges, Culverts, & Dam
- Roadways
- Water & Sewer
- Structures

Culverts were listed as a vulnerability town-wide, and the culverts on Cook Street, Dutcher Street, Mendon Street, and along Route 16 were specifically named. Many of the culverts in Town are old, historic, or undersized. Clogging and maintenance were discussed as a concern, and it is unknown if there is an inventory of all culverts in Town.

Dams were discussed in detail at all four tables during the workshop. There are three Significant Haard dams in Hopedale. Those are the Mill Pond Dam, Hopedale Pond Dam, and Spindeville Pond Dam. The Mill Pond Dam, located on the border of Hopedale and Milford, was described as being in rough shape and has not been maintained since 2013. The Hopedale Pond Dam, sometimes referred to as the Freedom Street Dam, could result in a disaster downstream if the dam were to fail and flood. The dam cannot be shut off, and has structural and mechanical issues. And the Spindleville Pond Dam, despite being rebuilt within the last decade, is in need of maintenance due to debris accumulation from frequent storms. In addition to these dams within Town, the Fiske Mill Pond Dam, on the border of Upton and Milford were mentioned as a concern upstream.

Roadways

Roads across Town were listed as a vulnerability for a variety of concerns including flooding, drainage, and street tree damage. It was noted that town-wide, roads are starting to crack and fall apart. Participants discussed flooding and icing concerns along Green Street, Rockridge Road, Adin Street, Cemetery Street, and Hope Street. The area by the airport and the industrial park were also described as being unable to handle stormwater, and buildings downtown and along Dutcher Street have had a history of damp basements. Adin Street, Dutcher Street, and Freedom Street were also identified as having vulnerable street trees. The trees along these streets are at risk of falling or dropping limbs due to wind and winter ice storm damage. In addition to these concerns, participants also noted that Fitzgerald Drive, Hopedale Street, and Freedom Street are impacted by heavy traffic and snow drifting. The intersection at Route 16 and Hopedale Street was noted as a dangerous intersection needing a traffic light.

Water & Sewer

Water sourcing was noted as a top priority during the workshop. Approximately 95% of the Town is on the public water system, and there is almost always a water ban during periods of drought, so the majority of residents have limited water availability. Participants also noted that the water supply was contaminated with polyfluoroalkyl substances (PFAS) due to mosquito spraying, further limiting the amount of available drinking water. It was identified that one of the Town's water wells had to be shut down recently due to PFAS contamination. There are three other water sources in Town nearing the Maximum Contaminant Level, and will inevitably need to be shut down as well, leaving only two of the six water sources operational. New construction and development pressures were discussed as putting a strain on the already limited water supply. This lack of available water also increases the risk of wildfire. There are no cisterns in Town, and many of the hydrants are vulnerable to drought. Hydrants of concern are located on Moore Road, Tillotson Road, and Lapworth Circle. With the projected increase in temperatures and consecutive dry days, access to clean and safe water will be integral to the Town's resiliency.

While 95% of the Town is on the public water supply, only a small portion of the Town is on the public sewer system. Therefore, the majority of residents have private septic systems that they must maintain. As such, there was concern that these private sewer systems are prone to issues during flooding and severe storm events, especially older systems. This may lead to further contamination of the water supply for homes nearby.

Structures

Participants also noted that many buildings in Town are at risk. It was discussed that the Town Hall, located at 78 Hopedale Street, is functioning, but requires upgrades and repairs. There was also concern that the lack of sufficient parking is an issue, limiting access to the site. The Bancroft Library, despite having a good foundation, was noted as a vulnerability due to its heavy oak doors that are unsecured. The Little Red Shop Museum, located at 12 Hopedale Street, concerned participants because it is very susceptible to power outages and has already had to be relocated three times. And the Hopedale Junior Senior High School, located at 25 Adin Street, was noted as needing an upgraded generator, as the current generator does not power the kitchen. It was also noted that the school experiences flooding nearby which could impact access. Participants mentioned that the buildings and houses downtown often have damp basements, and this will only worsen as the frequency and duration of heavy rain events increases. One of the biggest issues discussed during the workshop was the potential impact that the removal of the Draper Mill will have on the Mill River and to the infrastructure downstream. Many participants believed that removing the mill could change the flow and course of the Mill River, and may threaten town buildings, such as the bathhouse or the Highway Department, and other critical infrastructure. However, with careful planning and possible daylighting of portions of the river, there is belief that this demolition could have a positive impact on the ecology and geology of the Mill River. A public outreach and education campaign, led by both the Town and property owners, Hopedale Properties, LLC, could increase support for the Draper Mill demolition and provide a better understanding of its positive impacts.

Societal Concerns



Communication

With the likelihood of increased storm events and other severe weather, it will be necessary to communicate disaster preparedness information with the residents of Hopedale. However, many participants discussed that communication in Town is a vulnerability. Hopedale is fortunate to have a CodeRED system that allows the Town to send emergency notification messages to all residents who are signed up for the program. It can also send emergency responses wirelessly in the event of the loss of landlines. However, this system is only successful if a larger number of residents are signed up for the program and understand how it functions. It was noted during the workshop that a lot of residents have not signed up for the emergency alerts, and that the sign-up location is not easily accessible. In addition to concerns with the CodeRED system, participants mentioned that it is unknown who manages the Town social media pages and Town website, and as such, the information on these sites is not always updated. And frequent power outages from trees falling on power lines leaves the already vulnerable communication systems at more risk.

At-Risk Populations

Though the Town of Hopedale does offer some resources and services for at-risk populations, such as seniors and persons with disabilities, participants at the workshop felt that these populations will be more at risk as the climate continues to change. Elderly residents will feel the effects of climate change more than others in Town. Due to their age, they will be more vulnerable to extreme temperatures and the limited drinking water supply that will accompany drought and hot days. In addition, older residents are more susceptible to disease, particularly EEE and other insect-borne diseases, which will only increase as temperatures rise and precipitation becomes more frequent. Older residents will be more vulnerable in times of emergency when evacuation is necessary due to their reduced ability to mobilize quickly. In Hopedale, many seniors are spread throughout Town, which could make it difficult to respond to and assist these individuals in times of crisis. There are some senior housing facilities dispersed throughout town, however, many of these facilities require upgrades or additional services. The Atria Draper Place offers senior housing on Hopedale Street, but is vulnerable to power outages. And the Griffin-Dennett Apartments, managed by the Hopedale Housing Authority, is located near the Grafton-Upton Railroad fly ash silos. Some participants expressed concern that if the fly ash silos were to malfunction, it could impact the air quality and be detrimental to the residents nearby. Though these opinions were not shared by everyone, a public education and outreach campaign regarding what fly ash is and what its impacts are, could help ease concerns for this feature. Additionally, the Griffin-Dennett Apartments are within the floodplain of the Mill River. With the planned removal of the Draper Mill, there was some concern that the changes in the Mill River could negatively impact this area. Careful design and outreach could lessen concerns regarding the Draper Mill removal, and could improve the habitat quality of the river.

SOCIETAL

- Communication
- At-Risk Populations
- Outreach & Education

Similar to the senior population, persons with disabilities will also be more at risk as the climate changes. These individuals may not be able to drive or mobilize quickly, leaving them vulnerable when evacuation is necessary. They might also rely on medical equipment that needs to be plugged into a power source, so without a sufficient alternative power source, these individuals may be at risk of injury during times of power outages. There are a number of assisted living facilities in Town, including The Ledges, Seven Hills, and Evergreen Center. It will be important to ensure that all of these facilities have disaster preparedness plans and sufficient backup generators so that the residents living there can shelter in place.

Outreach & Education

Participants felt that the residents of Hopedale are not well informed to handle emergencies, especially those in the vulnerable populations mentioned prior. Generally, it was agreed that climate change risks are not well understood throughout Town. It was discussed that residents have minimal understanding of wildfire hazards and fire prevention techniques. Safety and precaution information regarding drought, water use, and runoff contamination are also not well understood. On the environmental side, there was a strong desire to better educate the public on invasive species, eco-friendly lawn management practices, the dangers of standing water, and insect-borne disease. As the climate worsens, it will be important for residents in Town to be informed of both the risks of climate change and the preparedness strategies needed to combat these associated threats.

Environmental Concerns



Surface Waters

Hopedale is fortunate to have a number of water resources in Town, however, many participants were concerned about water quality and health of these resources. Those specifically mentioned were the Hopedale Pond, Spindleville Pond, Mill Pond, and Mill River. Hopedale Pond, located in the central part of Town, was noted as needing an ongoing treatment plan due to the amount of invasive species growth. There is also a significant beaver population, as well as new development around the pond. Both the beaver activity and development have resulted in more flooding issues in and around the pond. Similar to Hopedale Pond, Spindleville Pond has had significant invasive species growth. In addition, the pond also experiences frequent algae blooms, impacting the water quality of the pond and in the estuaries downstream. Spindleville Pond is located in the southern portion of Town, so there is a higher likelihood that the invasive species and algae issues will impact municipalities downstream of the pond. Mill Pond, located in the northern part of Town, also has also been impacted by invasive species growth and will need an ongoing water treatment and cleaning plan to maintain the health of the pond. Some participants described that the pond has swamp land that is difficult to maintain. The Mill River cuts vertically through the center of Hopedale and runs between each

ENVIRONMENTAL

- Surface Waters
- Trees
- Parklands & Forests

of the above-mentioned ponds. As such, it is impacted by the vulnerabilities at each of these water bodies, including the invasive species growth, algae blooms, flooding, and other water quality issues. There was also concern that the removal of the Draper Mill Dam will negatively impact both the geology and ecology of the river. Without effective management strategies, these water features will become unusable resources, limiting recreation opportunities and damaging their ecological benefits.

Trees

Participants were also concerned with the health and durability of the trees in Town. A majority of the tables mentioned invasives species as a concern for their impact on the street trees in Hopedale. Invasive plants, such as bittersweet, have been observed wrapping around hardwood trees in Town. And invasive pests, such as the winter moth and gypsy moth, have infested trees around Town and negatively impacted their health. Both types of invasives leave these trees vulnerable to severe storms and wind events, which are becoming more and more frequent. Aside from invasive species, it was also discussed that the high-water table might also be harming the health of the trees in Town. With a lack of an active tree management or removal-replacement program, these dead and dying trees may fall, creating hazards in the roadways or taking down powerlines.

Parklands & Forests

The Parklands and forested areas were widely discussed as a vulnerability due to the prevalence of invasive species, wildfire risks, and contamination. Japanese knotweed, Japanese barberry, and Oriental bittersweet have all been observed in these park and forest lands. As discussed above, invasive species can be harmful to trees, putting them at more risk of dying and falling. Invasive species also out-compete native species due to a lack of a local predator, potentially impacting and changing the ecology of an area. In addition to concerns with invasive species, it was also discussed that the overgrowth of the parklands and the leaf litter accumulation in the forests has increased the risk of brush and wildfires. And because the Grafton-Upton railroad runs near these lands, there was concern that railroad sparking could increase wildfire risks. However, diligent maintenance of the rail line should limit these risks. Lastly, it was discussed that aerial pesticide spraying to control mosquito populations, contaminated the Town's environmental resources. It was noted that there was not enough notice regarding the mosquito spraying, so many native pollinator and plant species died.

CURRENT STRENGTHS AND ASSETS

Hopedale has taken some steps to address natural hazards and climate change over recent years. Public opinion holds that public safety is an “infrastructural strength” that will protect and strengthen the Hopedale community. Perceived environmental strengths focused mainly on the large and diverse number of natural resources and recreation opportunities that Hopedale residents can take advantage of.

Infrastructure Strengths



Utilities

Despite the need for some upgrades or improvements, participants at the workshop viewed the utilities in Town as an asset. Hopedale has four water wells to supply clean water to the public and has one water storage tower. Though the wells have experienced high levels of contamination, it was viewed as a strength to have a public water supply. And the water storage tank was described by participants as being a resilient feature that is not vulnerable to flooding. In addition, it was noted that the water treatment plant and sewer system are in the process of being updated. Though there are benefits to the water and sewer systems, efforts should be made to expand the water supply, either through identifying new wells or constructing a second water storage tank.

INFRASTRUCTURE

- Utilities
- Communication Systems
- Facilities

Solar was also discussed as a strength in the Town because it has reached its capacity. Participants described that there is no room in the power grid to add additional solar farms, which they viewed as a benefit to protect their natural resources. However, while solar farms can no longer be constructed in Town, it was discussed that solar panels are still able to be installed on residential homes and should be encouraged as an alternative energy source.

Communication Systems

Similar to the utilities in Town, though improvements are needed, participants viewed the foundation of the communication system as a strength. As mentioned above, the Town of Hopedale has a CodeRED system. With this system in place, the Town has the ability to send out emergency alerts to all of the residents who have signed up for the program. It can also send emergency notifications to cellphones in the event of power outages when landlines are down. That said, there was a desire to increase engagement with this program. Social media pages and the Town website were also viewed as a strength, despite the desire to maintain these pages more efficiently. Having regularly updated social media pages and websites can help to keep the community informed and engaged on events occurring in Town.

Facilities

While participants believed that many structures require upgrades or improvements to maintain their functionality, having these facilities in the first place is a strength. The Bancroft Memorial Library, located at 50 Hopedale Street, was one facility that was noted as a strength of the Town.

Built in 1898, the library is listed on the National Register of Historic Places. More than just a library, it acts as a gathering place and a means to spread information. The library was described as having a solid foundation, and the slate roof and granite block walls are already being repaired. Hopedale Memorial Elementary School and Hopedale Junior-Senior High School were also noted as strengths. The Memorial Elementary School is located at 6 Prospect Street and serves students in Kindergarten through Grade 6. And the Junior-Senior High School is located at 25 Adin Street and serves students in Grade 7 through Grade 12. Both schools can serve as emergency shelters and have backup generators, though the Junior-Senior High School generator does not power the entire facility. Other noteworthy facilities that were mentioned during the workshop include the Hopedale Airport Industrial Park, Hopedale Country Club, and the Recycling Center.

Societal Strengths



Local Organizations & Groups

During the workshop, participants discussed many different local organizations, businesses, and community groups that are a benefit to the Town. Bright Beginnings, located at 6 Park Street, serves as a daycare and Preschool for the community. There could be an opportunity to utilize Bright Beginnings to establish an early childhood environmental education course. In addition, many participants noted that the churches in Town are a strength to the community. The four churches in Hopedale are the Hopedale Unitarian Parish, Community Bible Chapel, Sacred Heart of Jesus, and Union Evangelical Church. All were described as a gathering place and have the potential to help expand communication lines and spread information. Union Evangelical Church was specifically mentioned as it hosts Girl Scouts and Boys Scouts. And finally, participants discussed the Hopedale Foundation as an important organization for the community. The Hopedale Foundation is a private, charity foundation in Hopedale that was founded in 1959. The Foundation has served the community by giving out student loans, supporting community projects, donating to the library, and purchasing land on the Town's behalf.

Sense of Community

The Town of Hopedale prides itself on its sense of community. Participants viewed the Town's willingness to help others as a strength. There are a number of Town- and private-owned housing facilities for those at-risk populations in Town. The Hopedale Housing Authority provides State Public Housing to low-income families, elderly persons, and those with disabilities. The Town provides this housing at the Griffin-Dennett Apartments, and it was noted that at least one of the apartment buildings at this complex has a backup generator, providing electricity in the event of power outages. The Town should seek to add additional backup generators to ensure that the entire complex maintains power in the event of an outage.

SOCIETAL

- Local Organizations & Groups
- Sense of Community
- Heritage

Atria Draper Place is a privately owned retirement and assisted living facility, located at 25 Hopedale Street. This facility is close to the Bancroft Memorial Library, The Little Red Shop Museum, and Hopedale Pond, providing residents easy access to a number of recreation opportunities. The Ledges is an assisted living facility that serves as a home for adults living with developmental disabilities, mental illnesses, physical disabilities, and significant medical challenges. Located at 55 Mendon Street, The Ledges provides housing opportunities, enrichment programming and activities, employment opportunities, and training for its residents. Seven Hill Pediatric Center, an affiliate of Seven Hills Foundation, located at 34 Adin Street, is another strength of the community. Seven Hills is a 12-bed “state-of-the-art” medical complex that provides medical treatment, care, and rehabilitation services for children. And Evergreen Center, located at 45 Mendon Street, is a residential school with community living for students with developmental disabilities. The Center serves male and female children aged 6 to 22 that have been diagnosed with autism, severe intellectual impairments, developmental disabilities, physical handicaps, or have been dually diagnosed.

Aside from Town-and private-owned assisted living facilities, participants the dedication of the Town’s staff, boards and committees, and volunteers. The different boards and committees were described as very involved and wearing multiple hats. The Council on Aging and Fire Department were specifically noted for their commitment to maintaining a list of high-risk residents in the event of disasters.

Heritage

In addition to its sense of community, the Town of Hopedale also views its heritage as a strength for its many historical features help to build the character of the Town. The Hopedale Village Historic District was added to the National Register of Historic Places in 2002, and includes the historic 19th century industrial village center. This district has also been included as part of the Blackstone River Valley National Historical Park. The Little Red Shop Museum, located at 12 Hopedale Street, is included in this district. This museum was built in 1841 and is the oldest industrial building in Hopedale. It symbolizes the beginning of the Draper Corporation. Today, it hosts the Hopedale Historical Commission meetings. The Statue of Hope, located at the Bancroft Memorial Library, was presented to the Town in 1904, and is another key historical feature.

Environmental Strengths



Water Resources

The Town of Hopedale is fortunate to have many water resources around Town. Hopedale Pond, located in the central part of Town, is the largest body of water in Town at 95 acres with an average depth of five feet. There are several access points around the pond, including a gravel boat ramp provided by the Town. Common fish species found in the pond

ENVIRONMENTAL

- Water Resources
- Recreation Opportunity
- Regional & Local Environmental Resources

include yellow perch, bluegills, golden shiners, largemouth bass, chain pickerel, and American eel.

Two other smaller bodies of water in Hopedale are the Mill Pond and the Spindleville Pond. Mill Pond is in the northern part of Town, on the border of Milford just off of Route 140. While Spindleville Pond is downstream of Mill Pond in the south-central part of Town.

There are also two prominent rivers that run through Town: the Charles River and the Mill River. The Charles River runs along the southeastern edge of Town. And the Mill River cuts vertically through the center of Town. The Charles River is an 80-mile-long river that flows from Hopkinton, MA across to the Atlantic Ocean at Boston, MA. While the Mill River is approximately 17.1 miles long, flowing from Hopkinton, MA down to Blackstone and into Woonsocket, RI where it meets the Blackstone River.

Recreation Opportunity

Along with the numerous water resources in Town, Hopedale is fortunate to have many recreation opportunities. The Parklands, located around Hopedale Pond, were widely discussed as an important environmental feature. This land was acquired in 1899, and in 1900, Warren H. Manning designed the landscape of the park. At the Parklands, visitors can enjoy a trail system, bird watching, and access to the pond. There is also a bathing beach and bathhouse, that used to provide swimming opportunities.

At the Hopedale Town Park, located at 32 Prospect Street, residents can enjoy many passive and active recreation opportunities. The 6.18-acre park contains a playground, bandstand, tennis courts, basketball courts, and baseball field. The Town has hosted summer recreation activities, arts and crafts programs, band concerts, and other cultural events at this site.

Phillips Field was also described as a strength to the Town. Located along Mellen Street, Phillips Field is a 29.21-acre parcel that contains conservation land, softball fields, a soccer field, playground, and other open space.

Regional Environmental Resources

Due to its location within the Blackstone Watershed, the Town of Hopedale is fortunate to have access to a few regional and local environmental resources. The Blackstone River Watershed Association (BRWA) was established in 1969 and has been integral in improving the water quality within the Blackstone River Watershed. The BRWA seeks to engage the public in watershed stewardship activities; educate members, supporters, and residents on watershed protection strategies; and advocate to residents, community leaders, non-profit partners, and state regulators to take actions that will help to ensure our waterways continue to provide healthy habitat and enjoyable recreational opportunities.

In addition, since Fall of 2019, the Narragansett Bay Estuary Program has been leading the Blackstone River Needs Assessment Project to bring together all of the different stakeholders and

partners across the watershed. By Fall 2021, this groups aims to identify actionable items that will help improve water quality, native habitat, and watershed resilience.

And finally, Hopedale also falls within the bounds of the Blackstone River Valley National Heritage Corridor (BHC). BHC is committed to the long-term vitality of the region and partners with municipalities, nonprofits, businesses, and residents to restore, retain, and reinvigorate the Valley. They facilitate volunteer work and a variety of programs and events to connect residents to the National Heritage Corridor. Programs that the BHC focuses on include economic development, tourism, resource conservation, community planning and revitalization, education, and interpretation. The Town of Hopedale is fortunate to benefit from the different projects that these different regional environmental groups undertake.

RECOMMENDATIONS TO IMPROVE RESILIENCE

Workshop attendees at each table 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 compiled from the matrices from all four tables at the Hopedale MVP Workshop. The completed Matrix for each table can be found in the Appendix at the end of this document.

Infrastructure Actions



Participants believed that **improved management of water** within town will be critical in building resilience. To accomplish this, the Town should pursue options to expand the water supply, develop an inventory of culverts in need of repairs and upgrades, and conduct a detailed vulnerability assessment of dams and bridges. Protecting the town's water supply through PFAS remediation or new water sources is also a major priority, given the already limited supply, PFAS contamination, and development pressures.

INFRASTRUCTURE

- Water Management
- Alternative Power Sources
- Building & System Upgrades

Alternative sources of power should be secured to maintain critical services. Alternate power supplies should be secured for the high school and senior housing around town. A backup generator should be purchased and installed at the high school, and the Town should explore other options for renewable power. Emergency generators should also be secured for properties owned by the Housing Authority. It was also suggested that alternative power supplies be secured for the Senior Center and the Elementary School. Additionally, it is recommended that the Town begin drafting a bylaw to mandate underground utility lines for new development.

Upgrading facilities, structures, and systems in town should maintain or improve functionality. The town hall should be renovated to address maintenance needs and build long-term resiliency, and the fire department communication system should be upgraded. Roadways and sidewalks around Town should be assessed to repair or mitigate cracking and flooding issues.

Societal Actions



With the risks and vulnerabilities that the Town will face as the climate changes, it will be important to **assess and address the resources they are lacking**. A communication plan should be developed to help disseminate climate and emergency planning issues – and this communication should be translated into different languages spoken by non-English speaking residents. The Town should also advocate for more public transportation and affordable housing options.

SOCIETAL

- Improve Access
- Enhance Community Preparedness
- Historic Preservation

Participants felt that it will be important to **enhance community preparedness and awareness of climate-related vulnerabilities**. It was recommended that the Town identify alternative emergency shelters in town and designate locations that can be used as cooling centers. Additionally, it was suggested that a citizens' climate preparedness or sustainability committee should be formed to advocate for and implement climate mitigation and resilience projects.

As heritage was a unique strength to the town, participants felt it important to **continue to preserve its history**. The Little Red Shop Museum should be repaired, and the town should invest in a resilient enclosure for the Statue of Hope. The Town should also work with the Mass Historical Commission to discuss how historic preservation regulations can take into account climate-resilient techniques.

Environmental Actions



With a limited water supply, and vulnerabilities to water quality, it is clear **that water resource protection is a top priority**. Assessing the vulnerability of wetlands, restoring Hopedale Pond, and treating algae growth were a few of the many actions suggested to improve and maintain the Town's water resources.

ENVIRONMENTAL

- Water Resource Protection
- Education & Outreach
- Upgrade Policies & Bylaws

Expanding education and outreach will help build a more resilient community. Conducting a series of education campaigns about insect-borne diseases, drought-tolerant landscaping, impacts of fertilizers and pesticides, and invasive species management should be implemented. There was also interest in converting a prominent Town-owned parcel into a drought-tolerant and native species landscape. The Town should also maintain open communication and build relationships with outside organizations and watershed partners focused on environmental issues.

Participants felt that **natural resource protection could be improved by strengthening environmental policies** in Town. Adopting a series of policies that encourage green infrastructure and low-impact development practices were discussed; as well as developing and enforcing a plan for managing invasive species. It was also suggested that the Town review their solar regulations to ensure that only roof-top solar panels are encouraged in Town.

Top Recommendations

Following the two-day virtual workshop, these actions were placed into a survey on the Survey Monkey platform so that participants could prioritize their top recommendations. 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 Hopedale complete. A copy of the survey questions and the survey results can be found in the Appendix at the end of this document.

TOP RECOMMENDATIONS

- Dam & Bridge Evaluation
- Climate Vulnerability Assessment
- Culvert Inventory
- Emergency Shelter Outreach Campaign

The majority of participants indicated that they were most concerned with both the possibility of increased flooding events and the possibility of extreme heat and drought as the climate continues to change. The top five priority recommendations include:

1. Expanding the water supply by identifying additional water sources, by constructing an additional water storage, or by removing contaminants in the existing supply.
2. Conducting a detailed vulnerability assessments of dams and bridges regarding climate-related hazards, prioritizing dam repair and maintenance, and evaluating the possibility of dam removal as a flood mitigation strategy.
3. Conducting a Town-wide climate vulnerability assessment to understand risks to infrastructure, water supply, and potential for flooding.
4. Identifying and creating an inventory of culverts that will need repairs/replacements to accommodate greater stormwater volume and include nature-based culvert designs as an option at each site, a mapping of all sites that experience roadway flooding and evaluate mitigation options including nature-based options for improving drainage or absorbing runoff.
5. Identifying emergency shelters in Town, designating locations that can be used as cooling center for residents to go to when needed, and ensure locations of shelters are well-publicized to all residents.

At the end of the two-day virtual workshop, Peter Peloquin thanked attendees for giving their time and attention, and commended the town for their willingness and flexibility to utilize a virtual platform giving the current public health conditions. The top recommendations on the following pages 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				
Water Management		Water Supply	Expand the water supply by identifying additional water sources, construct an additional water storage tank, and remove contaminants in the existing water supply.	   
			Pursue options for expanding and extending water supply through: educational campaigns AND/OR capturing more rainwater (encouraging use of cisterns or rain barrels) AND/OR encouraging greywater use for landscaping AND/OR Construct cisterns at town buildings with large footprints to collect and store roof run-off, and then use water for landscaping purposes	
		Dams and Bridges	Conduct detailed vulnerability assessment of dams and bridges to climate-related hazards AND/OR prioritize dam repair and maintenance AND/OR evaluate possibility of dam removal as a flood mitigation strategy	
		Draper Mill Dam	Pursue grant funding to upgrade the water management of Draper Mill dam from manual to mechanical	
Disaster Preparedness		Transportation	Pursue grant funding to acquire commercial bus licenses for town residents, which would allow the town to use school buses for evacuation purposes in case of emergencies	   
		Shelters	Identify emergency shelters in town, designate locations that can be used as cooling centers/areas for residents to go to when needed, and ensure locations of shelters are well-publicized to all residents	
		Climate Vulnerability	Conduct town-wide climate vulnerability assessment to understand risks to infrastructure, water supply, potential for flooding, etc.	
		Partners	Work with partners to develop a regional shelter site (identify location and equipment needed)	
Infrastructure Improvements		Streets	Road and sidewalk maintenance to address cracking and flooding	  
		Town Hall	Renovate town hall to build long-term resiliency and addresses maintenance needs	
		Communication	Upgrade fire department communication system	
Resource Protection		Hopedale Pond	Restore environmental quality at Hopedale Pond so that it attracts active recreation like swimming, kayaking, and fishing AND/OR restore shoreline landscape to better absorb water, reduce stormwater pollutants and alleviate flooding AND/OR research landscape designs that discourage Canadian Geese from inhabiting pond	  
		Griiffin-Dennett Apartments	Regularly test air quality near railroad fly ash storage AND/OR investigate railroad emergency plans for the site if it floods	
	Wetlands	Assess vulnerability of wetlands to impacts from present and future development and ensure Conservation Commission has adequate resources to meet the demand for their regulatory oversight AND/OR strengthen by-laws that enable Conservation Commission to enforce wetlands protection AND/OR draft wetlands protection bylaw		
MEDIUM PRIORITY				
Water Management		Flooding	Clean-up river around Spindleville dam AND/OR develop a long-term solution to protect route 16 from flooding	   
			Work with partners across watershed to inventory dams, assess climate vulnerability, catalog ownership, and develop a long-term, coordinated plan to address flooding and dam resilience	
		Drought	Develop plan to address lack of access to water by firefighters in certain neighborhoods AND/OR require water collection systems and tanks for new developments that will not be connected to municipal water system AND/OR ensure that the fire department has a plan for water access across town that is climate resilient and incorporates risk of future drought, extreme heat, and ecological changes	
Mill River		Explore feasibility of restoring/daylighting the Mill River downtown near Draper Mill to mitigate flooding and make better use of river as an attractive town asset AND/OR work closely with Mill owner/developer to create a climate-resilient site plan		
Access and Outreach		Communication	Improve interdepartmental communication and collaboration by instituting regular joint meetings	 
		Transportation	Advocate regionally for more public transportation that serves Hopedale.	
Infrastructure Improvements		Water Tower	Evaluate vulnerability of water tower to high winds, severe storms, and tree toppling	  
		Alternative Energy	Purchase back-up generator for high school AND/OR explore options for renewable back-up power sources	
	Purchase emergency generators for senior housing owned by the Housing Authority, and work with management to limit environmental risks due to railroad adjacency			
Disaster Preparedness		Communication	Develop a communication plan for climate resilience and emergency planning issues using community organizations like girl/boy scouts, churches, food pantries, and other community organizations or landmarks	 
		Advocacy	Encourage creation of a citizens' climate preparedness/sustainability committee to advocate for and implement climate mitigation and resilience projects AND/OR recruit members and broadcast committee to individuals that may not be involved in town governance like high school students	

		At-Risk Populations	Verify that disability facilities (Seven Hills, the Ledges, Evergreen Center) have emergency plans prepared and in place	
		Planning	Ensure long-term town plan is up-to-date and includes future climate risks as well as development pressures	
Resource Protection	 	Mill Pond	Evaluate possibility of purchasing the Mill Pond and restoring environmental quality AND/OR working with the existing owner to improve water quality and allow public access	
		Partners	Maintain open communication and build relationships with outside organizations and watershed partners focused on environmental issues	
		Wetlands	Investigate causes of trash dumping in wetlands and invest in mitigation measures such as additional signage near common dump sites	
LOW PRIORITY				
Resource Protection	 	Solar	Review solar regulations to ensure it encourages roof-top solar in Hopedale	
		Vegetation	Conduct education campaign about the importance of, and best practices for, managing vegetation near power lines	
			Educate residents on drought-tolerant landscaping in New England AND/OR convert a prominent town-owned building to drought-tolerant landscaping for demonstration purposes AND/OR educate residents on negative impacts of fertilizers on downstream ecosystems	
		Street Trees	Conduct a tree inventory AND/OR institute a town-wide, proactive tree management program to remove or trim damaged trees and replant with native and climate-resilient species AND/OR carefully review tree planting plans in new subdivision applications to ensure all new trees are climate-resilient	
		Invasive Species	Develop and enforce a plan for managing invasive species AND/OR conduct education campaign about native species and invasive vegetation management best practices	
		Insect-Borne Diseases	Conduct education campaign about insect-borne diseases and how residents should prevent standing water AND/OR educate about the importance of bats in managing mosquitos AND/OR engage youth groups or high school students in a service project to build bat houses	
		Water Resources	Treat algae growth in Mill Pond and take steps to prevent issue from recurring	
Acquire conservation land to protect waterway ecosystems AND/OR create education paths with signage in Parklands AND/OR explore partnerships with land trusts or local watershed association regarding trail creation				
Hire a full-time staff member to focus on cleaning up Spindleville Pond				
Water Management		Runoff	Conduct study to determine options for converting old dump site into a recreational facility	
		Water Supply	Enact a private well by-law to better regulate water supply town-wide	
Infrastructure Improvements	  	Utility Lines	Draft bylaw to mandate underground utility lines for new development AND/OR evaluate whether any areas of town should prioritize moving lines underground in the near-term to prevent outages	
		Sewage	Conduct in-depth planning study of town sewage system to evaluate its vulnerability to changing climate conditions, and its ability to meet future population needs	
			Update regulatory oversight of private septic systems to require inspection after a certain number of years or when a property is sold, to prevent septic leakage and contamination of ground water	
		Alternative Energy	Purchase back-up generator for the senior center AND/OR explore options for renewable back-up power sources	
			Verify that emergency generators can power the entire elementary school and purchase additional generators if needed AND/OR ensure that back-up power supply can handle air conditioning use AND/OR explore options for renewable back-up power sources	
Roadways	Assess roadways that regularly deal with snow drifts and develop snow drift mitigation plan			
Access and Outreach	 	Recycling	Address storage capacity limit at recycling center by moving buses that park at the facility to another site	
		Housing	Expand affordable housing options	
		Youth Involvement	Promote environmental education in the local school curriculums AND/OR conduct outreach to K-12 students to get youth involved in town environmental projects, planning, and committees	
		Communication	Expand use of library as a communication hub for CodeRed and other climate resilience educational information	
		At-Risk Populations	Translate climate resilience and emergency planning outreach into all languages spoken by non-English-speaking residents	
Historic Preservation		Little Red Shop	Repair structural and rot issues at Little Red Shop museum	
		Regulations	Contact Mass Historical Commission and discuss whether and how their regulations for maintenance of historic buildings takes climate resilience into account AND/OR advocate for climate-resilient historical preservation techniques	
		Statue of Hope	Invest in a resilient enclosure for Statue of Hope	

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:

- ❖ Tim Watson asked whether a Mendon and Hopedale water supply project would be considered a regional MVP Action Grant project.
- ❖ Glenda Hazard asked whether there any specific steps on the Town's side for approving the MVP Planning grant report.
- ❖ Louis Arcudi asked for clarity regarding the funding caps for MVP Action Grants.
- ❖ David Butler asked how the MVP Program started and what's the program's background.
- ❖ Rob Fahey asked would historic open spaces be included in the historic preservation sections, given that some were designated many years ago by early town founders.
- ❖ Stephanie Thomas asked for clarity regarding the concerns of the Parklands, forests, and development.

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.

CRB WORKSHOP PARTICIPANTS

Name	Affiliation	Attended	Table #
Carol Villa	Board of Health	N	1
Diana Schindler	Town Administrator	Y	1
Chris Nadeau	Highway Department, Superintendent	Y	1
Lieutenant Martin	Police Lieutenant	Y	1
Hillary King	MVP Regional Coordinator	Y	1
Jeannie Herbert	Blackstone Chamber of Commerce, President	Y	1
David Guglielmi	Conservation Commission	Y	1
Zophie Greenwald	Hopedale Schools	Y	1
Chief Giovannella	Police Department, Chief	Y	1
Robyn York	Bancroft Memorial Library, Director	Y	2
Phil Shwachman	Draper Mill	N	2
Mike Penko	Metacomet Land Trust	Y	2
Marcia Matthews	Conservation Commission	Y	2
Kylie Gibbons	Representative for Sen. Fattman	Y	2
Alysia Butler	Chair, School Committee	Y	2
Mike Brown	Sewer Department, Chief Operator	Y	2
Bill York	Profession in hurricane related damage	Y	3
Nishaila Porter	Charles River Watershed Association	Y	3
Jennie Moonan	Charles River Watershed Association	Y	3
Rebecca Mongada	Weston and Sampson	Y	3
Lindsay Mercier	Executive Assistant to the Town Administrator	Y	3
Brian Kelly	Fire Department	Y	3
Linda Hickson	Historical Society	Y	3
David Butler	Water & Sewer Commission	Y	3
Nancy Arone	Adult Day Facility (The Ledges)	Y	3
Becca Solomon	Conservation Commission	Y	4
Matthew Shwachman	Draper Mill	Y	4
Liz Reilly	Resident of Hopedale	Y	4
Sara Pellegrini	Afonso Real Estate, Sales Agent	Y	4
Carole Mullen	Council on Aging	Y	4
David McMorrow	Fire Department, Deputy Fire Chief	Y	4
Joshua Fumia	High School Senior	Y	4
John DeWaele	Grafton Upton Railroad, Senior VP	Y	4
Ed Burt	Water & Sewer Commission	Y	4
Mimi Kaplan	Associate Planner, CMRPC	Y	1
Claire Bayler	Associate Planner, CMRPC	Y	1
Mary Hannah Smith	Associate Planner, CMRPC	Y	2
Zack Blais	Assistant Planner, CMRPC	Y	2
Kerrie Salwa	Principal Planner, CMRPC	Y	3
Emily Glaubitz	Associate Planner, CMRPC	Y	3
Dani Marini	Assistant Planner, CMRPC	Y	4
Julia Moore	Assistant Planner, CMRPC	Y	4
Matt Franz	Project Manager, CMRPC, IT Support	Y	ALL
Pete Peloquin	Program Coordinator, CMRPC	Y	ALL

CRB WORKSHOP PROJECT TEAM

Name	Affiliation	Role
Diana Schindler	Town of Hopedale	Town Administrator
Lindsay Mercier	Town of Hopedale	Executive Assistant to the Town Administrator
Robyn York	Town of Hopedale	Bancroft Memorial Library, Director
Tim Watson	Town of Hopedale	Water & Sewer Department, Manager
Carol Villa	Town of Hopedale	Board of Health
Becca Solomon	Town of Hopedale	Conservation Commission
Phil Shwachman	Town of Hopedale	Draper Mill
Chris Nadeau	Town of Hopedale	Highway Department, Superintendent
Carole Mullen	Town of Hopedale	Council on Aging
Marcia Matthews	Town of Hopedale	Conservation Commission
Brian Kelly	Town of Hopedale	Fire Department
Chief Giovanella	Town of Hopedale	Police Department, Chief
John DeWaele	Town of Hopedale	Grafton Upton Railroad, Senior VP
Stephen Chaplin	Town of Hopedale	Planning Board, Chair
David Butler	Town of Hopedale	Water & Sewer Commission
Mike Brown	Town of Hopedale	Sewer Department, Chief Operator
Dani Marini	CMRPC	Assistant Planner, Lead Coordinator
Mimi Kaplan	CMRPC	Associate Planner

CITATION

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

ACKNOWLEDGEMENTS

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

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

Diana Schindler, Town Administrator
Lindsay Mercier, Executive Assistant to the Town Administrator
Robyn York, Bancroft Memorial Library, Director
Tim Watson, Water & Sewer Department, Manager
Carol Villa, Board of Health
Becca Solomon, Conservation Commission
Phil Shwachman, Draper Mill
Chris Nadeau, Highway Department, Superintendent
Carole Mullen, Council on Aging
Marcia Matthews, Conservation Commission
Brian Kelly, Fire Department
Chief Giovanella, Police Department
John DeWaele, Grafton-Upton Railroad, Senior VP
Stephen Chaplin, Planning Board, Chair
David Butler, Water & Sewer Commission
Mike Brown, Sewer Department, Chief Operator

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

Dani Marini, Assistant Planner, CMRPC
Mimi Kaplan, Associate Planner, CMRPC
Mary Hannah Smith, Associate Planner, CMRPC
Peter Peloquin, Associate Planner, CMRPC
Matt Franz, Project Manager, CMRPC
Hillary King, Regional Coordinator, EEA

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 Presentation



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Hopedale Municipal Vulnerability Preparedness (MVP)
Kickoff Meeting

Date/Time: November 3, 2020 1PM

ZOOM: <https://us02web.zoom.us/j/84375509634?pwd=bFZ5UW1OSmN6WHlLamo4M1pkZWMOU09>

Meeting ID: 843 7550 9634 Passcode: 570228

AGENDA

- Introductions
- MVP Program Background
- Roles & Responsibilities
 - Town
 - Assemble Core Team (participates in prep meetings (approximately 3), workshop and listening session)
 - Identify stakeholders to invite to workshop and lead invitation/RSVP process
 - Provide scribes for workshop
 - 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-four 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

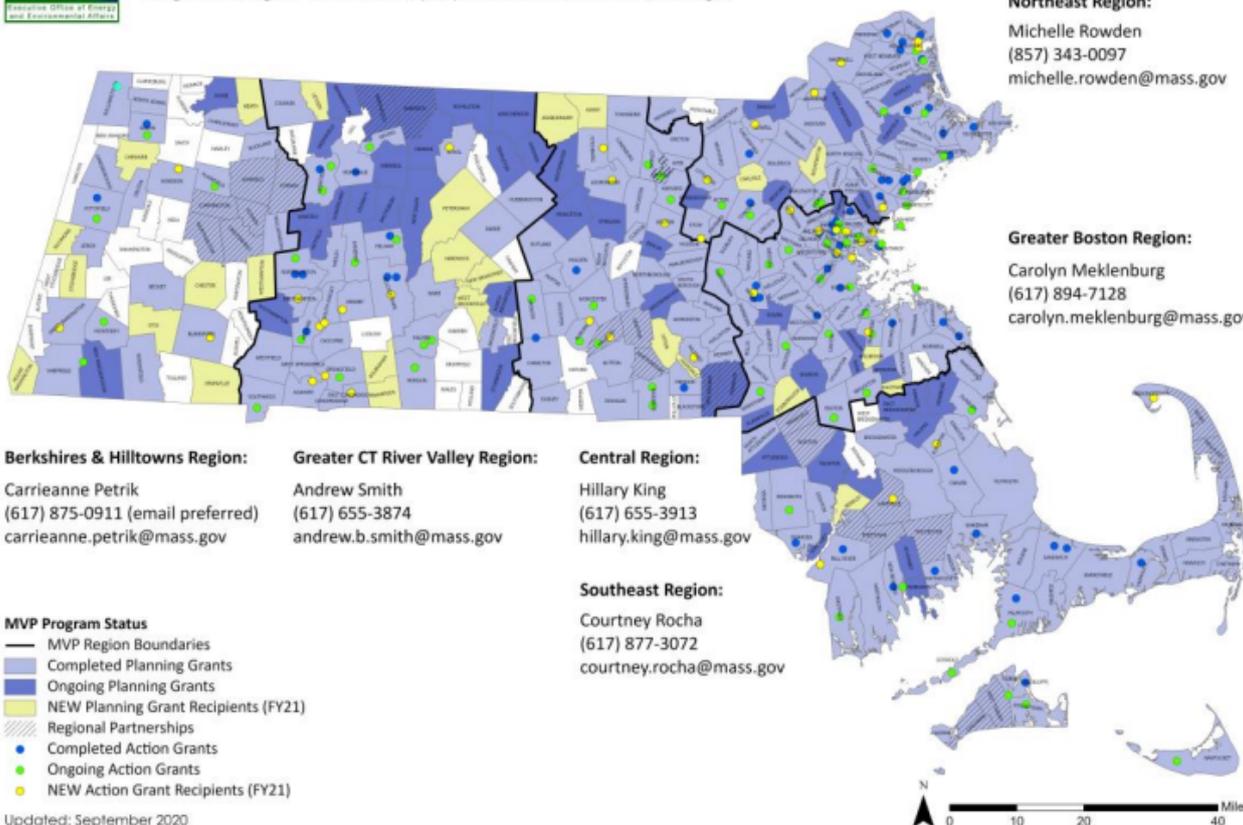
Program Manager: Kara Runsten, (617) 312-1594, kara.runsten@mass.gov

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
- Light Blue: Completed Planning Grants
- Medium Blue: Ongoing Planning Grants
- Yellow: NEW Planning Grant Recipients (FY21)
- Hatched: Regional Partnerships
- Blue Dot: Completed Action Grants
- Green Dot: Ongoing Action Grants
- Yellow Dot: 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 Trustees			
			Sustainable Group			
			Town Manager			
			Utility Company			
			Veterans Rep.			
			Waste Transfer Provider			
			Water Dept.			
			Youth Commission			

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



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Hopedale Municipal Vulnerability Preparedness (MVP)
Core Team Kickoff Meeting

Date/Time: December 4, 2020 10AM

ZOOM: <https://us02web.zoom.us/j/85199249439?pwd=cFVWOGJCVVpPSVdmempBa0xGekc2dz09>

Meeting ID: 851 9924 9439

Passcode: 884084

Dial in: 1 646 558 8656

AGENDA

- Introductions
- MVP Program Background
- Roles & Responsibilities
 - Town
 - Assemble Core Team (participates in prep meetings (approximately 3), workshop and listening session)
 - Identify stakeholders to invite to workshop and lead invitation/RSVP process
 - Provide scribes for workshop
 - 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-four 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



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Hopedale Municipal Vulnerability Preparedness (MVP)
Core Team Meeting 2

Date/Time: January 22, 2021 10AM

ZOOM: <https://us02web.zoom.us/j/81110530446?pwd=Z2h0MExjOE8zeXBqSUVZekgwZjNOQT09>

Meeting ID: 811 1053 0446

Passcode: 037551

Dial in: 1 646 558 8656

AGENDA

- Role Call
- Core Team Timeline
 - Core Team Meetings
 - Pre-Workshop meeting/Call
 - CRB Workshop
 - Listening Session (Must be held before May 31st)
- Selection of Workshop Sessions
 - Splitting up workshop into sessions (3 x 2-hour, or 2 x 3-hour)
 - Dates and times for each session
- Workshop Invitations
 - Identification of stakeholders
 - Invite stakeholders
 - Follow-up communication
- Pre-Workshop Materials
 - CMRPC
 - Overview, Climate Projections, Natural Hazards
 - Base Maps, Arc GIS Map, and other supporting documents
 - Town
 - Introduction
 - Sent out 1 week before workshop
- Workshop Agenda/Structure
 - Welcome Speaker(s) (Town)
 - Content Speakers (CMRPC)
 - Table Facilitators (Core Team/CMRPC)
 - Scribes (Town/CMRPC)
 - Climate Concerns and Priorities
 - Four (4) focus hazards
- In-Kind Match/Other/Next Meeting



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Hopedale Municipal Vulnerability Preparedness (MVP)
Core Team Meeting 3

Date/Time: February 12, 2021 1:00 – 2:30 pm

ZOOM: <https://us02web.zoom.us/j/84054514124?pwd=L2grYUZMK0p2L2l4bUp0WjdDaDJrUT09>

Meeting ID: 840 5451 4124

Passcode: 586185

Dial in: 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 Invitations**
 - [Identification of Stakeholders](#)
 - Invite Stakeholders – 3 weeks prior to kickoff
 - Follow-up communication – 1-2 times/per week leading up to kickoff
- **Pre-Workshop Materials**
 - CMRPC
 - Climate, Hazard, and MVP Program Presentations
 - [Workshop Base Maps](#)
 - Town
 - Introduction Video
 - [Examples of intro videos](#)
 - Sent out 1 week before workshop
- **Workshop Structure**
 - Welcome Speaker(s) (Town)
 - Content Speakers (CMRPC)
 - Table Facilitators (Core Team/CMRPC)
 - [Scribes \(Town/CMRPC\)](#)
- **Climate Concerns and Priorities**
 - Four (4) focus hazards
- **Town To-Do List**
 - Continue populating invite list
 - Identify Town Scribes
 - Review workshop maps
 - Record Town Intro Video
 - Continue tracking in-kind match
- **Next Meeting/Other**



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Hopedale Municipal Vulnerability Preparedness (MVP)
Core Team Meeting 4

Date/Time: February 26, 2021 10:00 – 11:00 am

ZOOM: <https://us02web.zoom.us/j/87352400344?pwd=RjdWSnc1cFdxS0JLS0ZPOW5xMWIDQT09>

Meeting ID: 873 5240 0344

Passcode: 603486

Dial in: 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 Invitations**
 - [Identification of Stakeholders](#)
 - Invite Stakeholders – *sent out by Town on 2/23/2021*
 - Follow-up communication – *1-2 times/per week leading up to kickoff*
- **Climate Concerns and Priorities**
 - Four (4) focus hazards
- **Town Introduction**
 - [Examples of intro videos](#)
 - *Sent out by Town on 3/9/2021*
- **Town To-Do List**
 - Identify [Scribes](#)
 - Reminder emails
 - Review [Workshop Maps](#)
 - Record Town Intro Video
 - Continue tracking in-kind match
- **Next Meeting/Other**



Community Resiliency Building Workshop

Town of Hopedale

Municipal Vulnerability Preparedness

Day 1- Tuesday, March 16, 2021

10:00 am – 1:00 pm; Check-in at 9:50 am

Meeting Link (Click to Join): <https://us02web.zoom.us/j/83501429031?pwd=MEVTbHdDR0JQdW hrSmRnbTJPUHRvdz09>

Meeting ID: 835 0142 9031

Passcode: 434013

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

Workshop Materials: <https://www.dropbox.com/sh/ybtqvubst84l0eu/AADR0MmrjoADJ0YgVtUxdakpa?dl=0>

Workshop Agenda

9:50 – 10:00 am:

- Login & Familiarize with Zoom

10:00 – 10:20 am:

- Welcome & Introductions

10:20 – 10:40 am

- Overview Presentation
- Questions & Answers

10:40 am – 12:45 pm:

- Breakout Groups
 - Identify Hazards & Local Features
 - Discuss Strengths & Vulnerabilities
 - Identify Actions to Build Resilience
(as time allows)

12:45 – 1:00 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 Hopedale's Virtual Community Resilience Building Workshop!





Community Resiliency Building Workshop

Town of Hopedale

Municipal Vulnerability Preparedness

Day 2- Tuesday, March 23, 2021

2:00 pm – 5:00 pm; Check-in at 1:50 pm

Meeting Link (Click to Join): <https://us02web.zoom.us/j/87062410754?pwd=OVEvM3NHSmZJMEFzelhZLzZEY0EvQT09>

Meeting ID: 870 6241 0754

Passcode: 172010

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

Workshop Materials: <https://www.dropbox.com/sh/ybtqvubst84l0eu/AADR0MmrjoADJ0YgVtUxdakpa?dl=0>

Workshop Agenda

1:50 – 2:00 pm:

- Login & Familiarize with Zoom

2:00 – 2:20 pm:

- Welcome & Recap from Day 1
- Questions & Answers

2:20 – 4:30 pm:

- Breakout Groups
 - Identify Actions to Reduce Risks and Build Resilience
 - Prioritize Actions by Urgency and Timing

4:30 – 5:00 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 Hopedale's Virtual Community Resilience Building Workshop!



Hopedale MVP Workshop Sign-in Sheet

Name	Department	Email	Table	16-Mar	23-Mar
Robyn York	Bancroft Memorial Library, Director	ryork@cwmars.org	2	x	x
Tim Watson	Water & Sewer Department, Manager	twatson@hopedale-ma.gov	3		
Carol Villa	Board of Health	cvilla@hopedale-ma.gov	1		
Becca Solomon	Hopedale Conservation Commission	Conservation@hopedale-ma.gov	4		
Phil Shwachman	Mill in center of Town	pos@firstamericanrealtyinc.com	2		
Diana Schindler	Town Administrator	dschindler@hopedale-ma.gov	1	x	x
Chris Nadeau	Highway Dept. - Super Intendent	cnadeau@hopedale-ma.gov	1	x	
Carole Mullen	Council on Aging		4	x	x
Lindsay Mercier	Executive Assistance to the Town Administrator	lmercier@hopedale-ma.gov	3	x	x
Marcia Matthews	Hopedale Conservation Commission	marciakmatthews@gmail.com	2	x	x
Brian Kelly	Hopedale Fire Department	Brian Kelley <BKelley@hopedalefire.org>	3	x	x
Chief Giovannella	Police Department, Chief	ChiefGiovannella@hopedale-ma.gov	1		x
John DeWaele	Grafton Upton Railroad, Senior VP	jdewaele@griftonuptonrr.com	4		x
Stephen Chaplin	Planning Board, Chair	schaplin@schaplinlaw.com	3		
David Butler	Hopedale Water/Sewer Commission	hopedalewater@hopedale-ma.gov	3	x	x
Mike Brown	Hopedale Sewer Department - Chief Operator	hopedalesewer@yahoo.com	2	x	x
Bill York	Profession in hurricane related damage (wind, water, etc.).	<a href="mailto:Bill.York<william.york1234@gmail.com>">Bill York <william.york1234@gmail.com>	3	x	x
Liz Reilly	Resident of Hopedale	liz_shop@comcast.net	4	x	x
Mike Penko	Land Trust - Metacomet	mpenko@charter.net	2	x	x
Sara Pellegrini	Afonso Real Estate - Sales Agent	<a href="mailto:Sara.Pellegrini<Spellegrini@afonsore.com>">Sara Pellegrini <Spellegrini@afonsore.com>	4	x	x
Jennie Moonan	Charles River Watershed Association	<a href="mailto:Jennie.Moonan<jmoonan@crwa.org>">Jennie Moonan <jmoonan@crwa.org>	3		x
David McMorrow	Deputy Fire Chief	dmcorrow@hopedalefire.org	4	x	x
Lieutenant Martin	Police Lieutenant	ltmartin@hopedale-ma.gov	1	x	
Denise Linder	Town resident, HS science teacher, advocate for Citizens Climate Lobby	dlinderg4@gmail.com	4		
Hillary King	EOEEA- MVP Regional Coordinators	hillary.king@state.ma.us	1	x	x
Jason King	Legislative Director for Sen Fattman	Jason.King@masenate.gov	2		
Jeannie Herbert	Blackstone Chamber of Commerce - President/CEO	<a href="mailto:Jeannie.Hebert<jhebert@blackstonevalley.org>">Jeannie Hebert <jhebert@blackstonevalley.org>	1	x	x
David Guglielmi	Conservation Commission		1		x

Zophie Greenwald	Hopedale Schools	greenwaldz22@hopedaleschools.org	1		x
Kylie Gibbons	Representative for Sen. Fattman	<a href="mailto:Gibbons,Kylie%20(SEN)<Kylie.Gibbons@masenate.gov>">Gibbons, Kylie (SEN) <Kylie.Gibbons@masenate.gov>	2		x
Joshua Fumia	Hopedale High School Senior	<a href="mailto:Joshua.Fumia%20<fumiajd@gmail.com>">Joshua Fumia <fumiajd@gmail.com>	4	x	x
Kathleen Consigli	Housing Authority	hopedalehousing@comcast.net	1		
Alysia Butler	Chair, School Committee	alysiabutler@yahoo.com	2		x
Ed Burt	Hopedale Water/Sewer Commission	eburt.hd@gmail.com	4	x	x
Nancy Arone	Adult Day Facility (The Ledges)	nancyledges@theledges.org	3		
Matthew Schwaccman	Draper Mill		4	x	
Nishaila Porter	Charles River Watershed Association		3	x	
Rebecca Mongada	Weston and Sampson		3	x	x
Linda Hickson	Historical Society		3	x	x



Participate in Hopedale's Virtual 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, virtual Community Resilience Building Workshops focused on preparing and protecting the Town of Hopedale.

The MA Executive Office of Energy and Environmental Affairs (EEA)
Municipal Vulnerability Preparedness (MVP) Program Workshops

Tuesday, March 16th, 10:00 am – 1:00 pm
Tuesday, March 23rd, 2:00 pm – 5:00 pm
All meetings will be held virtually on ZOOM

The Town of Hopedale is collaborating with EEA and the Central Massachusetts Regional Planning Commission (CMRPC) to offer this timely virtual workshop which will bring together community members to comprehensively identify and prioritize steps to reduce risk and improve resilience across Hopedale. 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 workshop, please visit the following websites:

- Community Resilience Building: <https://www.communityresiliencebuilding.com/crbworkshopguide>
- MVP 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 Hopedale's MVP workshop will be sent out on March 9th to those who RSVP. We would appreciate your participation in this timely workshop.

Please RSVP to lmercier@hopedale-ma.gov by March 9, 2021

If you have any questions about the program, please contact Lindsay Mercier, Executive Assistant to the Town Administrator, lmercier@hopedale-ma.gov or Dani Marini, CMRPC, dmarini@cmrpc.org.

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

Sincerely,
Diana Schindler, Town Administrator



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



The Town of Hopedale is collaborating with EEA and CMRPC to offer a two-day virtual workshop on **March 16th and March 23rd** which will bring together community members to comprehensively identify and prioritize steps to reduce risk and improve resilience across Hopedale. Follow the instructions below in order to help make your community more climate resilient! If you have any questions about the program, please contact Diana Schindler, Town Administrator, at Dschindler@hopedale-ma.gov. We look forward to seeing you virtually at our workshop!

Step 1. Discover Hopedale'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. If possible, you will want to have this Dropbox link open during the workshop so that you can easily access this information.

Workshop Dropbox: [Click Here](#)

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: [Click Here](#)

CRB Workbook: [Click Here](#)

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 Hopedale may face in the future, and examples of nature-based solutions. Please take some time to **review each of these presentations before March 16th**.

Presentations: [Click Here](#)

Step 4. Familiarize Yourself with the Matrix and Mapping Tools

During the virtual 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 with our ideas. The following 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 Hopedale.

Complete Matrix Example: [Click Here](#)

Maps: [Click Here](#)

Step 5. Attend the Workshop!

The 2-day workshop will be held on **March 16th and March 23rd**. The agenda for each day as well as the Zoom meeting links are listed below. Please review the agenda for each day and use the meeting links to join the Zoom.

Day 1 – March 16th, 10:00 am – 1:00 pm

Agenda Day 1: [Click Here](#)

Zoom Link Day 1: <https://us02web.zoom.us/j/83501429031?pwd=MEVTbHdDR0JQdWhrSmRnbTJPUHRvdz09>

Day 2 – March 23rd, 2:00 pm – 5:00 pm

Agenda Day 2: [Click Here](#)

Zoom Link Day 2: <https://us02web.zoom.us/j/87062410754?pwd=OVEvM3NHSmZJMEFzelhZLzZEY0EvQT09>

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 How-To: [Click Here](#)

HOPEDALE MVP WORKSHOP INVITE LIST

Notes	First Name	Last Name	Department	Email	RSVP Y/N	Table Assignment
	Lieutenant	Martin	Police Lieutenant	ltmartin@hopedale-ma.gov	Yes - 16th Only	1
	Kathleen	Consigli	Housing Authority	hopedalehousing@comcast.net	Yes	1
	Hillary	King	EOEEA- MVP Regional Coordinators	hillary.king@state.ma.us	Yes	1
	Jeannie	Herbert	Blackstone Chamber of Commerce - President/CEO	Jeannie Hebert <jhebert@blackstonevalley.org>	Yes	1
	Chris	Nadeau	Highway Dept. - Super Intendent	cnadeau@hopedale-ma.gov	Yes	1
	Chief	Giovanella	Police Department, Chief	ChiefGiovanella@hopedale-ma.gov	Yes - 23rd Only	1
	Carol	Villa	Board of Health	cvilla@hopedale-ma.gov	Yes	1
	Diana	Schindler	Town Administrator	dschindler@hopedale-ma.gov	Yes	1
	David		Conservation Commission		Yes	1
	Jason	King	Legislative Director for Sen Fattman	Jason.King@masenate.gov	Yes - 16th Only	2
	Alysia	Butler	Chair, School Committee	alysiabutler@yahoo.com	Yes - 23rd Only	2
	Kylie	Gibbons	Representative for Sen. Fattman	<a href="mailto:Gibbons, Kylie (SEN) <Kylie.Gibbons@masenate.gov>">Gibbons, Kylie (SEN) <Kylie.Gibbons@masenate.gov>	Yes - 23rd Only	2
	Mike	Brown	Hopedale Sewer Department - Chief Operator	hopedalesewer@yahoo.com	Yes	2
	Mike	Penko	Land Trust - Metacommet	mpenko@charter.net - On the Board - listed below as well	Yes	2
	Marcia	Matthews	Hopedale Conservation Commission	marciakmatthews@gmail.com	Yes	2
	Robyn	York	Bancroft Memorial Library, Director	ryork@cwmares.org	Yes	2
	Phil	Shwachman	Mill in center of Town	pos@firstamericanrealtync.com	Yes	2
	David	Butler	Hopedale Water/Sewer Commission	hopedalewater@hopedale-ma.gov	Yes - 16th Only	3
	Jennie	Moonan	Charles River Watershed Association	Jennie Moonan <jmoonan@crwa.org>	Yes	3
	Zophie	Greenwald	Hopedale Schools	greenwaldz22@hopedaleschools.org	Yes	3
	Bill	York	Profession in hurricane related damage (wind, water, etc.).	Bill York <william.york1234@gmail.com>	Yes	3
	Nancy	Arone	Adult Day Facility (The Ledges)	nancyledges@theledges.org	Yes	3
	Brian	Kelly	Hopedale Fire Department	Brian Kelley <BKelley@hopedalefire.org>	Yes	3
	Stephen	Chaplin	Planning Board, Chair	schaplin@schaplinlaw.com	Yes	3
	Tim	Watson	Water & Sewer Department, Manager	twatson@hopedale-ma.gov	Yes	3
	Lindsay	Mercier	Executive Assistance to the Town Administrator	lmercier@hopedale-ma.gov	Yes	3
	David	McMorrow	Deputy Fire Chief	dmcorrow@hopedalefire.org	Yes	4
	Denise	Linder	Town resident, HS science teacher, advocate for Citizens Climate Lobby	dlinder4@gmail.com	Yes	4
	Liz	Reilly	Resident of Hopedale	liz_shop@comcast.net	Yes	4
	Sara	Pellegrini	Afonso Real Estate - Sales Agent	Sara Pellegrini <Spellegrini@afonsore.com>	Yes	4
	Joshua	Fumia	Hopedale High School Senior	Joshua Fumia <fumiajd@gmail.com>	Yes	4
	Ed	Burt	Hopedale Water/Sewer Commission	eburt.hd@gmail.com	Yes	4
	John	DeWaele	Grafton Upton Railroad, Senior VP	jdewaele@graftonuptonrr.com	Yes	4
	Becca	Solomon	Hopedale Conservation Commission	Conservation@hopedale-ma.gov	Yes	4
	Billi	Manning	Cultural Council	billijo1@verizon.net	No	N/A
	Jim	Abbruzzese	Recreation Commission - Recreation and Fields Committee	jabbruzzese@gmail.com	No	N/A
	Eli	Potty	Highway Dept. - Road Commission	eipotty@verizon.net	No	N/A
	Jonathan	Arone	Adult Day care facility (The Ledges)	jarone@theledges.org	No	N/A
	Kevin	Sullivan	Animal Shelter - Blackstone Regional Animal Shelter	aco@blackstonepolice.org	No	N/A
	Don	Howes	Board of Health Member	bohmembers@hopedale-ma.gov	No	N/A
	Brian	Keyes	Board of Selectmen Member	bkeyes@hopedale-ma.gov	No	N/A
	Monica	Phillips	Girls Scouts	mpt_schedule@yahoo.com	No	N/A
	Rob	Hillman	Boy Scouts	rob@mayflowerbsa.org	No	N/A
	Tim	Aicardi	Building Inspector - shared building inspector	taicardi@hopedale-ma.gov	No	N/A
CEO/President	Jeannie	Hebert	Chamber of Commerce	jhebert@blackstonevalley.org	No	N/A
COA Director	Carole	Mullen	Council on Aging	hopedalecoa@comcast.net	No	N/A
	Karen	Crebase	Educators - Superintendent	kcrebase@hopedaleschools.org	No	N/A

	Sue	Ciaramicoli	Historical Commision/Master Planning Committee	sciaramicoli@hopedale-ma.gov	No	N/A
	Don	Howes	Hopedale Pond/Parks Commission	parks@hopedale-ma.gov	No	N/A
			Local business / industry - Grafton/Upton Railroad	jdewaele@graftonuptonrr.com	No	N/A
	Lobisser Building Corp		Local Construction Co.	leslie@lobisserbuildingcorp.com	No	N/A
	James J Sullivan, VP of Operations		Guerriere & Halnon Inc. Eng & Surveying	jsullivan@gandhengineering.com	No	N/A
Executive Dir	Mike	Diorio	Hopedale Foundation		No	N/A
	Bernie	Stock	Community House	bstock@hopedalecommunityhouse.org	No	N/A
Upton	Derek	Brindisi	Upton Town Admin	dbrindisi@uptonma.gov	No	N/A
Milford	Scott	Crisafulli	Neighboring Town MVP Core Team Member	scrisafulli@townofmilford.com	No	N/A
Bellingham	Jim	Kupfer	Neighboring Town MVP Core Team Member	jkupfer@bellinghamma.org	No	N/A
Mendon	Anne	Mazar	Neighboring Town MVP Core Team Member	amazar@mendonma.gov	No	N/A
Member	Kaplan	Hasanoglu	Planning Board Member	kaplanhasanoglu@gmail.com	No	N/A
	Robert (Bob)	Moran	Power Company - National Grid	Robert.MoranJr@nationalgrid.com	No	N/A
Rep	Brian	Murray	State Rep.	Brian.Murray@mahouse.gov	No	N/A
Sen	Ryan	Fattman	State Senator	Ryan.Fattman@masenate.gov	No	N/A
	Rebecca	Mongada	Weston and Sampson	MongadaR@wseinc.com	No	N/A
	Pat	Morris	Veterans Rep.	PMorris@uptonma.gov	No	N/A
	Mike	Gerel	Watershed Groups	mike.gerel@nbep.org , or Julia Bancroft (Watershed Coordinator) julia.bancroft@nbep.org	No	N/A
	Linda	Hixon	Historian, Professor at Worcester State	lhixon@worcester.edu	No	N/A
	Peter	Coffin	Blackstone River Coalition	peter.coffin@zaptheblackstone.org	No	N/A
	Ted	Beauvais	Blackstone River Watershed Association	tedbeauvais@gmail.com	No	N/A
	Patti	McAlpine	Blackstone Valley Tourism Council	patti@tourblackstone.com	No	N/A
	Judy	Hulburt	Adult/Mental Health Day care facility (Evergreen Center)	jhulburt@evergreenctr.org	No	N/A
	Brenda	Zona	Pediatric Care Facility (Seven Hills)	bzona@sevenhills.org	No	N/A
	Jason	Grifka	Assisted Living (Atria Draper Place)	jason.grifka@atriaseniorliving.com	No	N/A
Reverend	Stephen	Cook	Hopedale Unitarian Parish	hopedaleunitarian@verizon.net	No	N/A
	Doug	Scott	Lakeranch Productions/Drone Operator	dougs.1@comcast.net	No	N/A
	Dan	Malloy	Historian/Archiver	danm41@verizon.net	No	N/A

Municipal Vulnerability Preparedness (MVP) Workshop: Hopedale

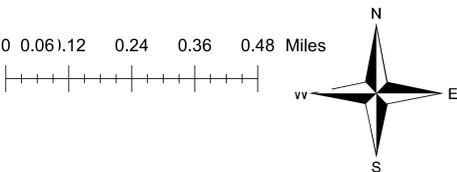
Reference Map:
Table Map

Legend

- Town Boundary
- Town Halls
- EOC
- Local Police
- State Police
- County Sheriff
- Fire Station
- Schools (Pre-K through High School)
- Dams**
- Significant 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
- 500-year Flood Area
- CIH (Points)**
- Vulnerable Critical Infrastructure
- Non-vulnerable Critical Infrastructure
- Hazard
- Vulnerable Critical Infrastructure
- Hazard
- Hazard

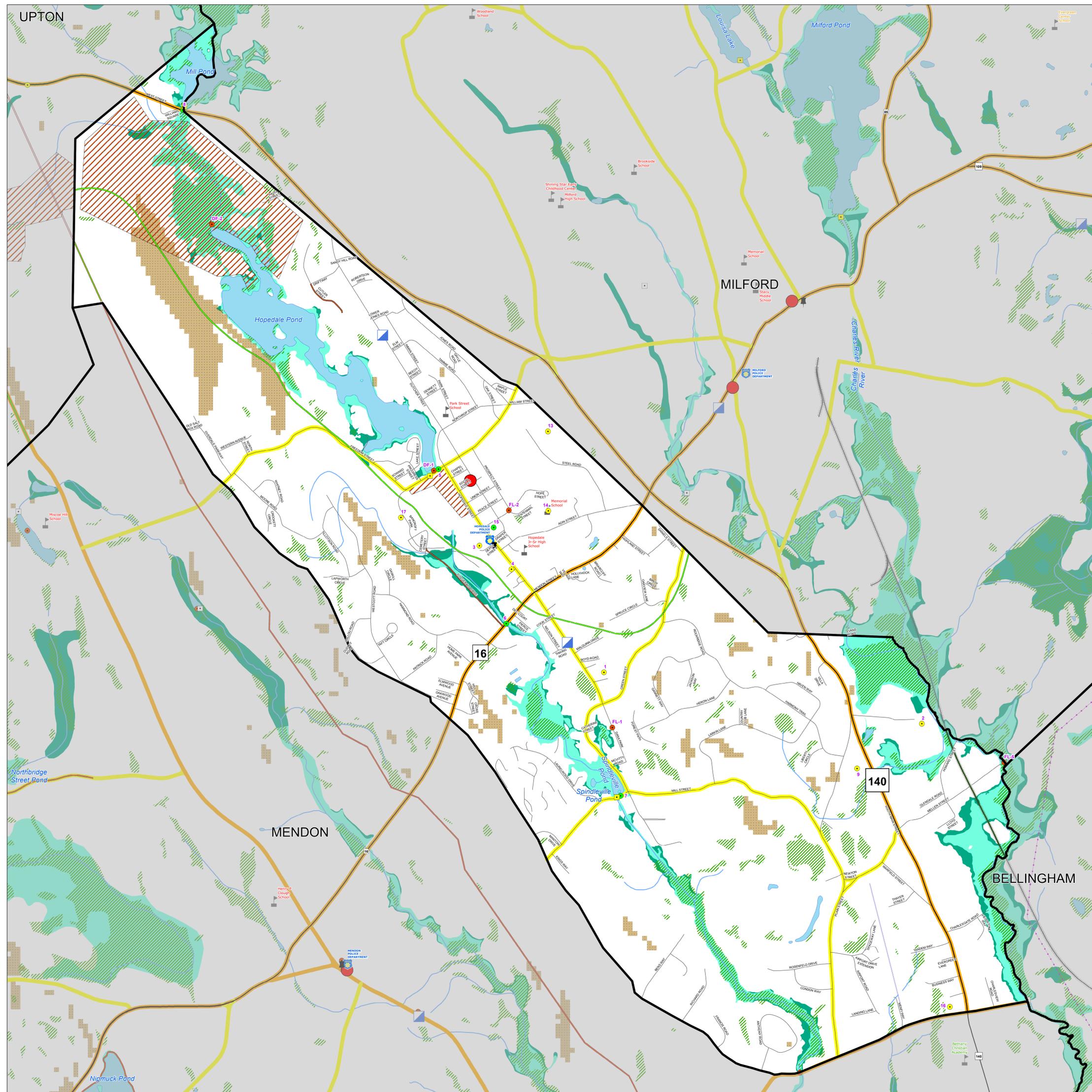


0 0.06) 0.12 0.24 0.36 0.48 Miles

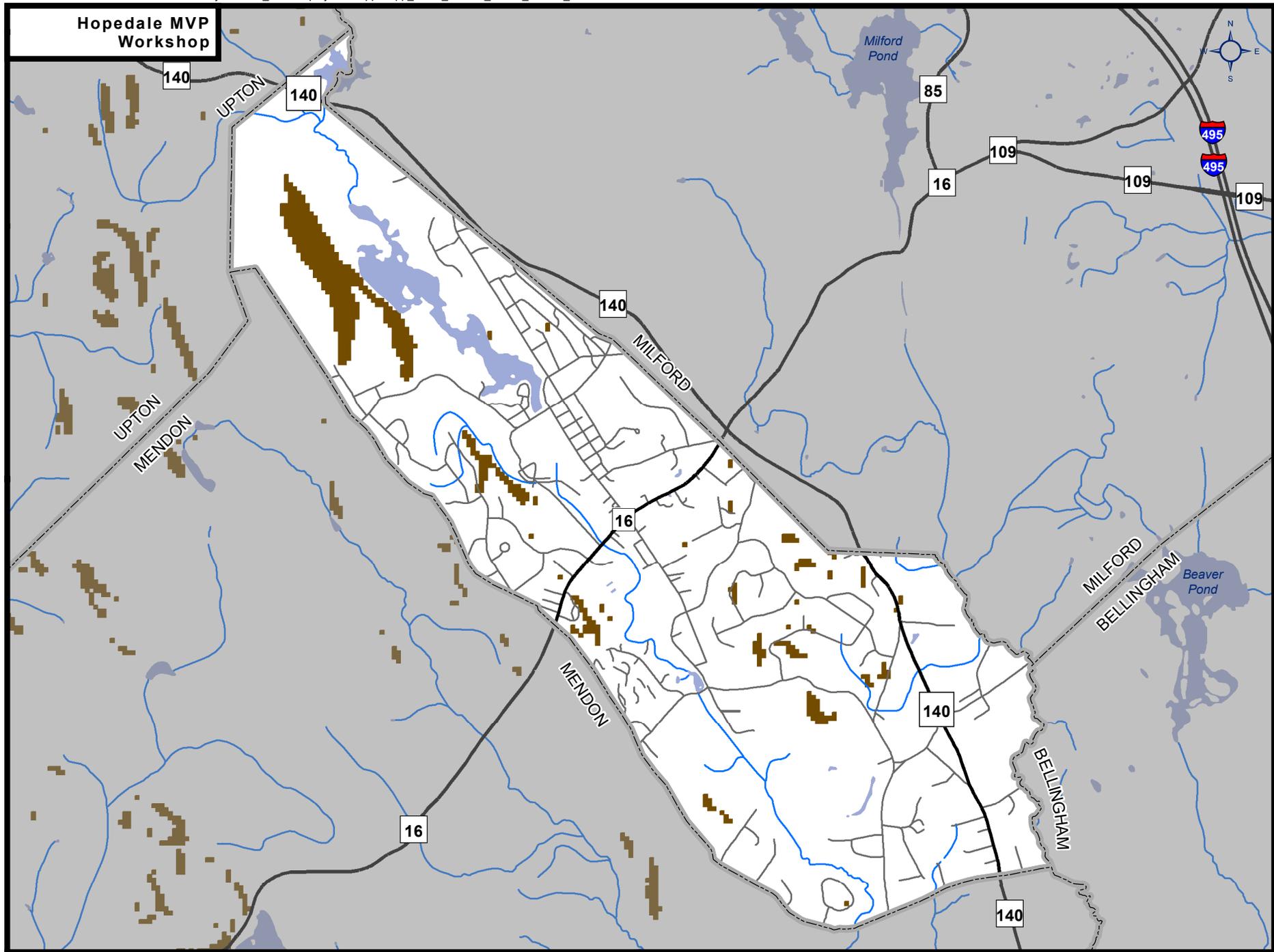


Flooding data source: FEMA's Digital Flood Insurance Rate maps(DFIRM). Other data sources include: MassGIS, MassDOT, and CMRPC. Information depicted on this map is for planning purposes only. This information is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analysis.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

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



Hopedale MVP Workshop



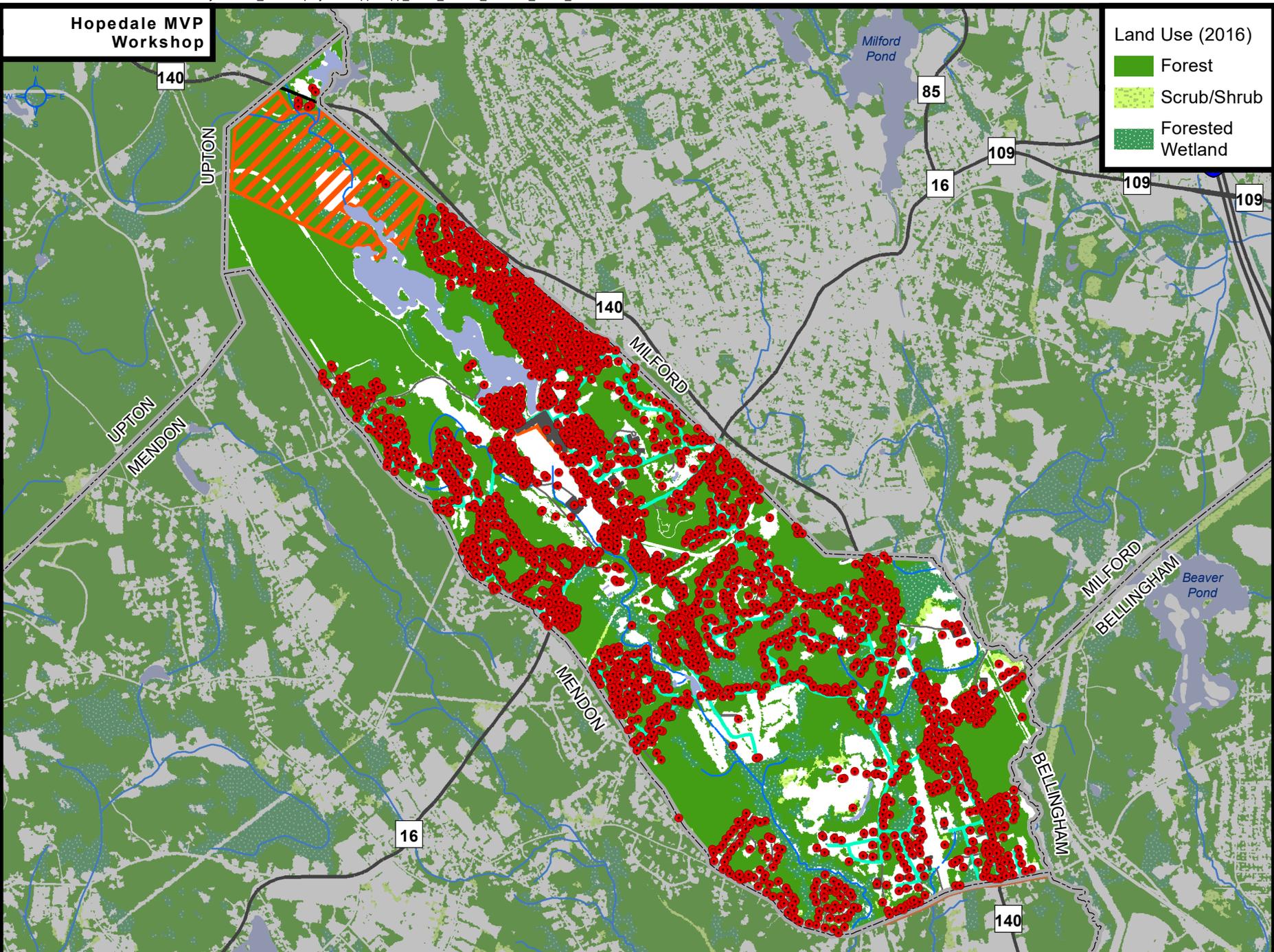
-  Locally Identified Winter Hazard
-  Locally Identified Winter Hazard
-  Locally Identified Winter Hazard
-  High Slope (15% or above)



Hopedale MVP Workshop

Land Use (2016)

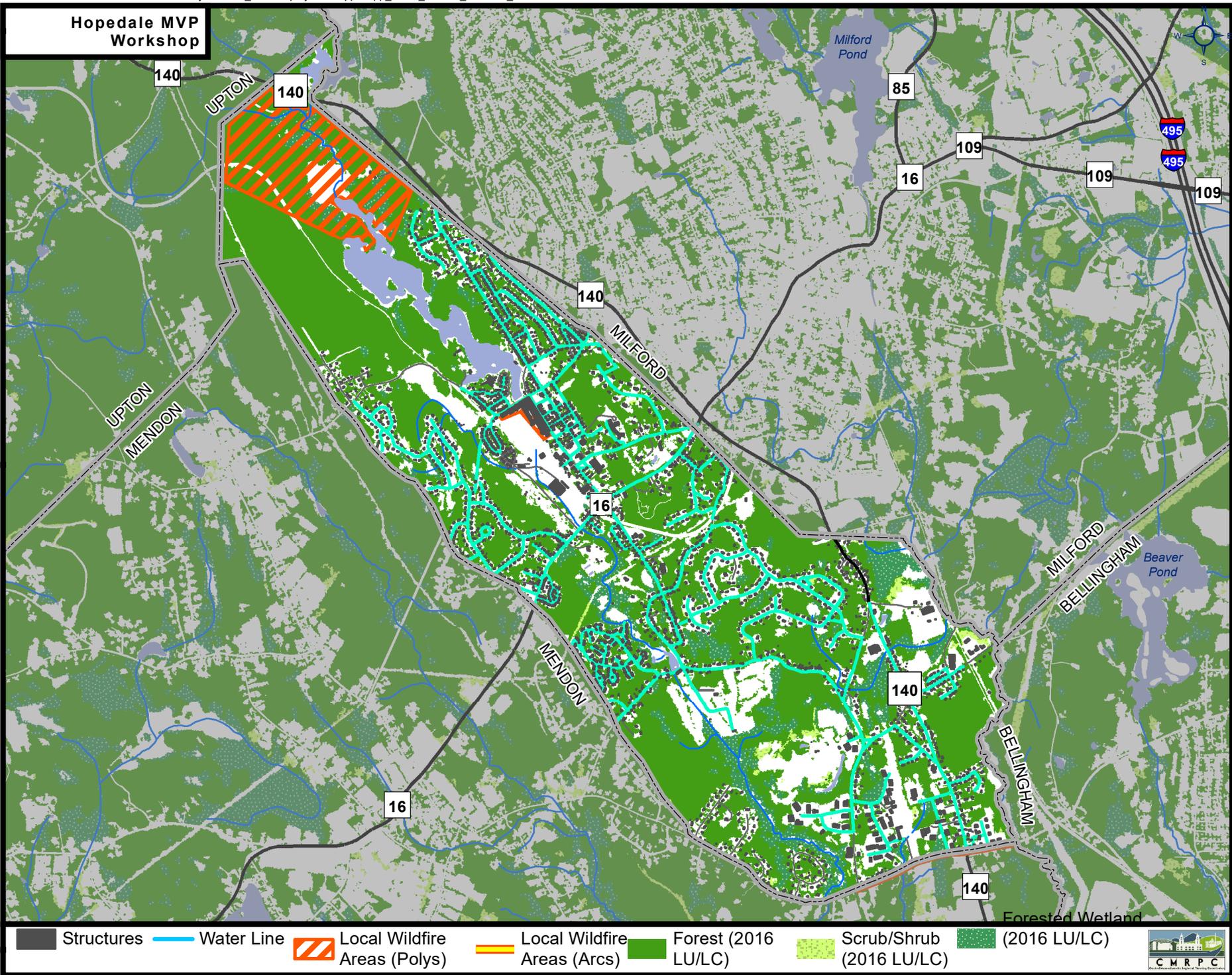
- Forest
- Scrub/Shrub
- Forested Wetland



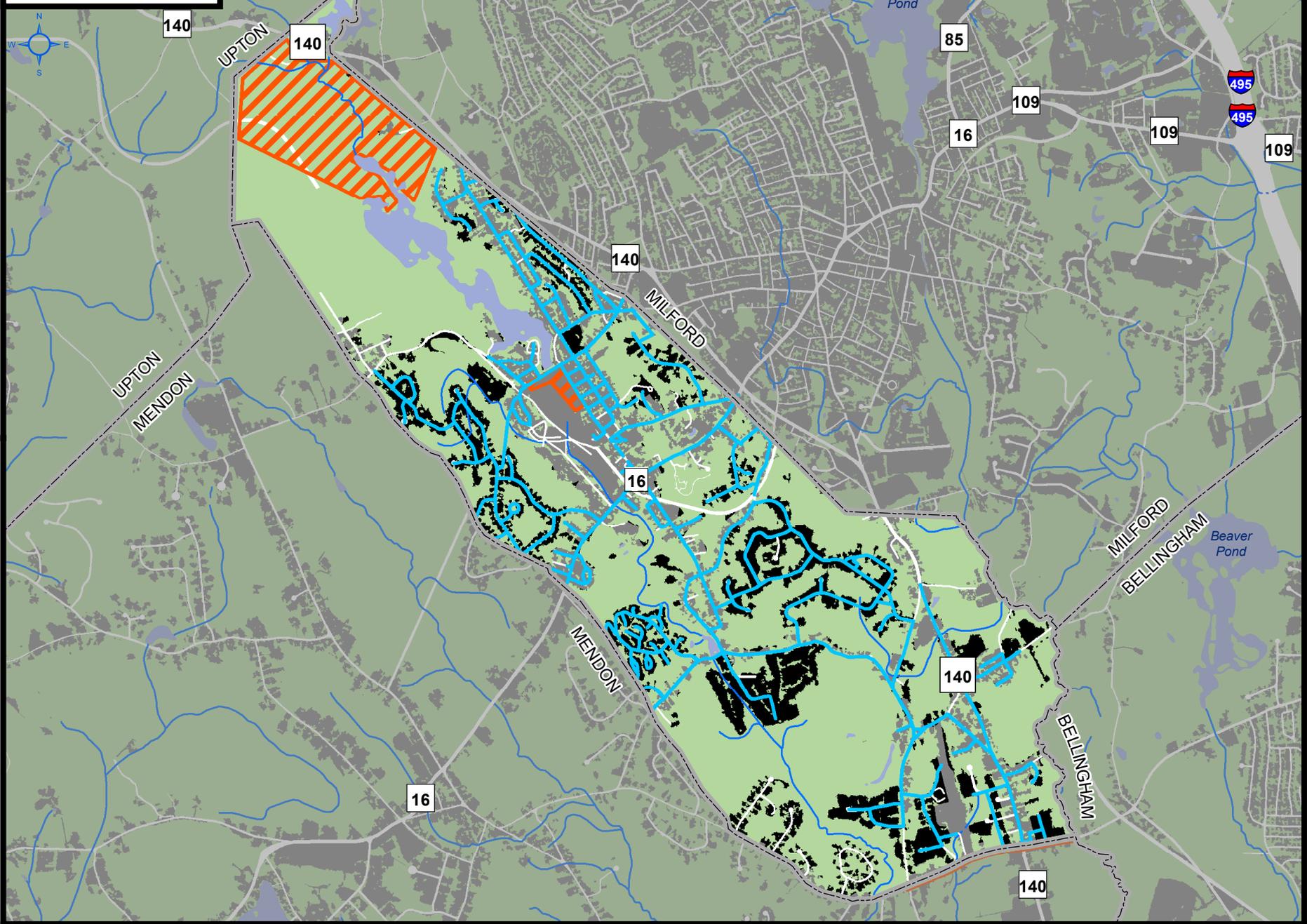
● Structures in/near Forest / Vegetation — Water Line ▨ Local Wildfire Areas (Polys) — Local Wildfire Areas (Arcs)



Hopedale MVP Workshop



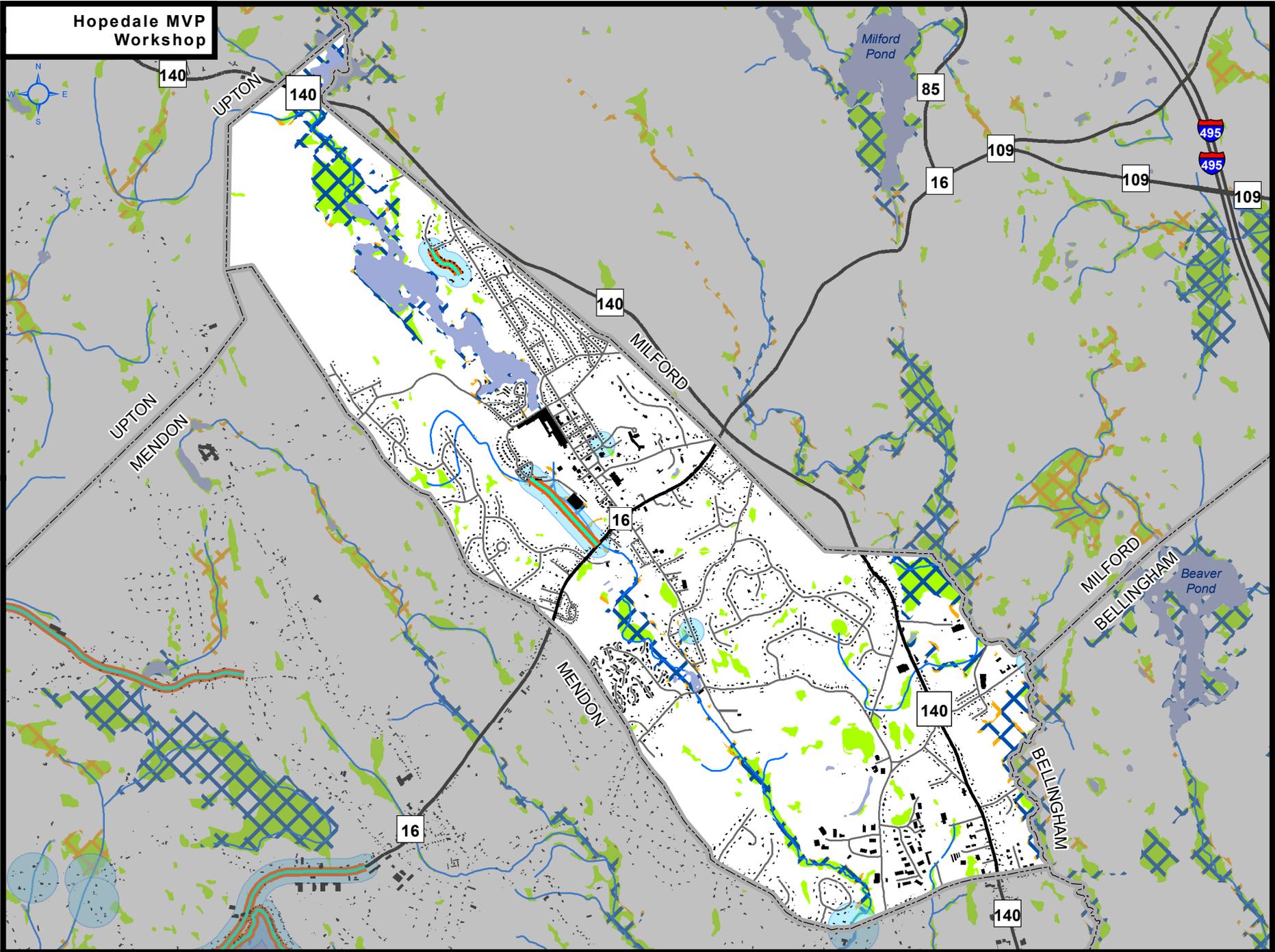
Hopedale MVP Workshop



- Land Developed (1971 to 2016)
- Undeveloped Land (2016 LU/LC)
- Developed Land (2016 LU/LC)
- Water Line
- Local Wildfire Areas (Arcs)
- Local Wildfire Areas (Polys)

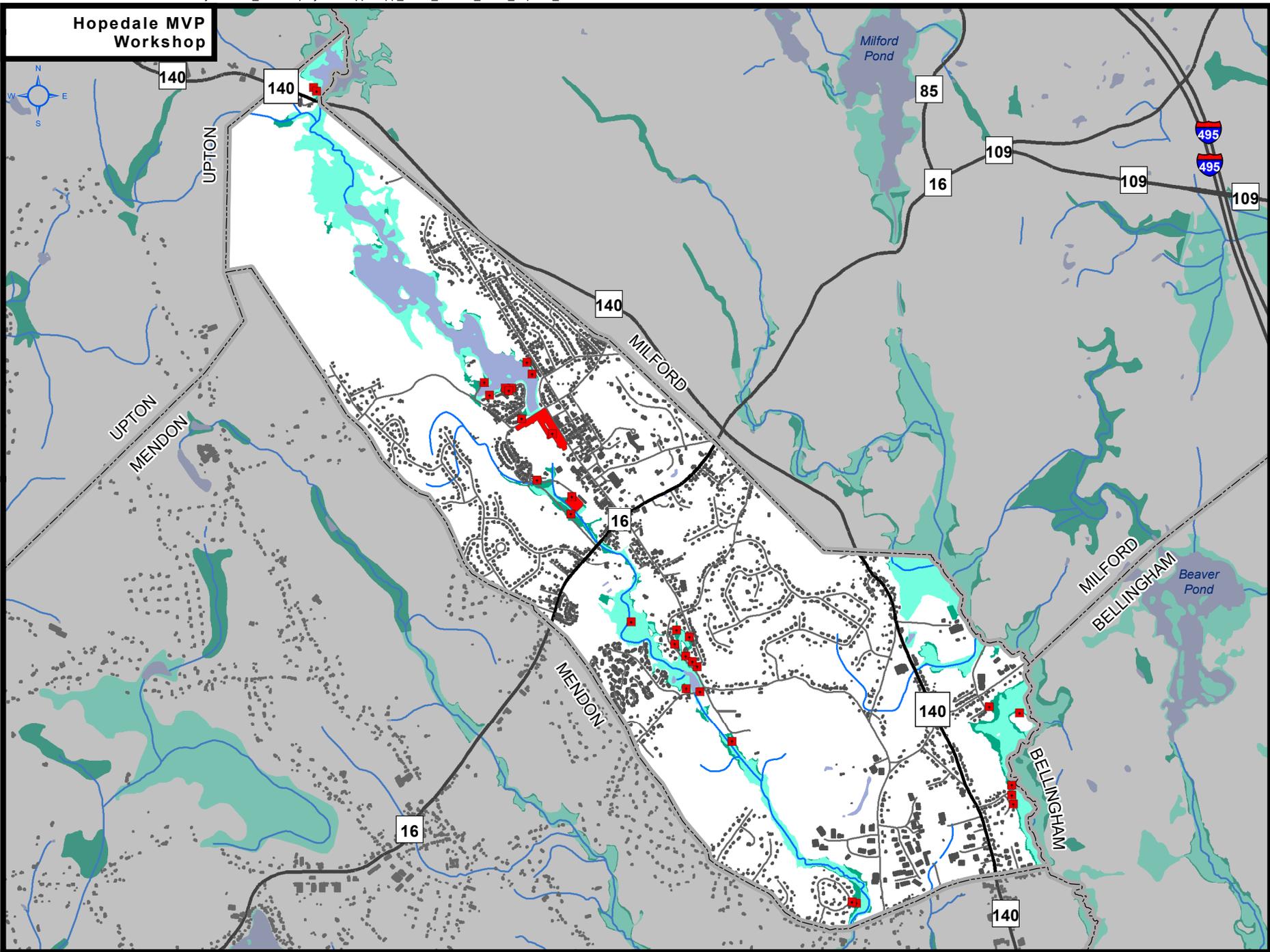


Hopedale MVP Workshop



- Repetitive Loss Property Areas
- Potential Flood Zone
- Locally Identified Flood
- 100-year Flood Area
- 500-year Flood Area
- MassDEP Wetlands

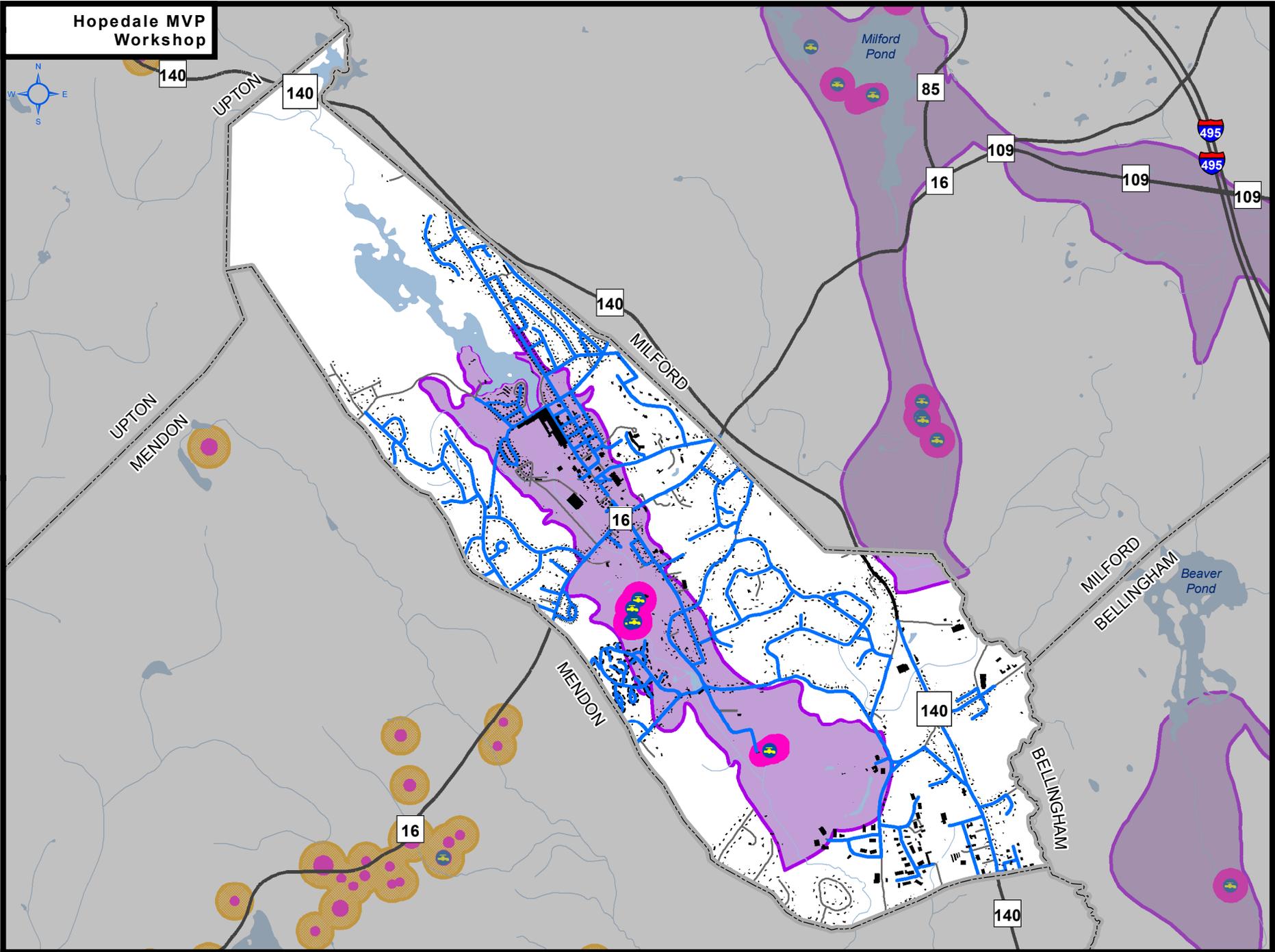
Hopedale MVP Workshop



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



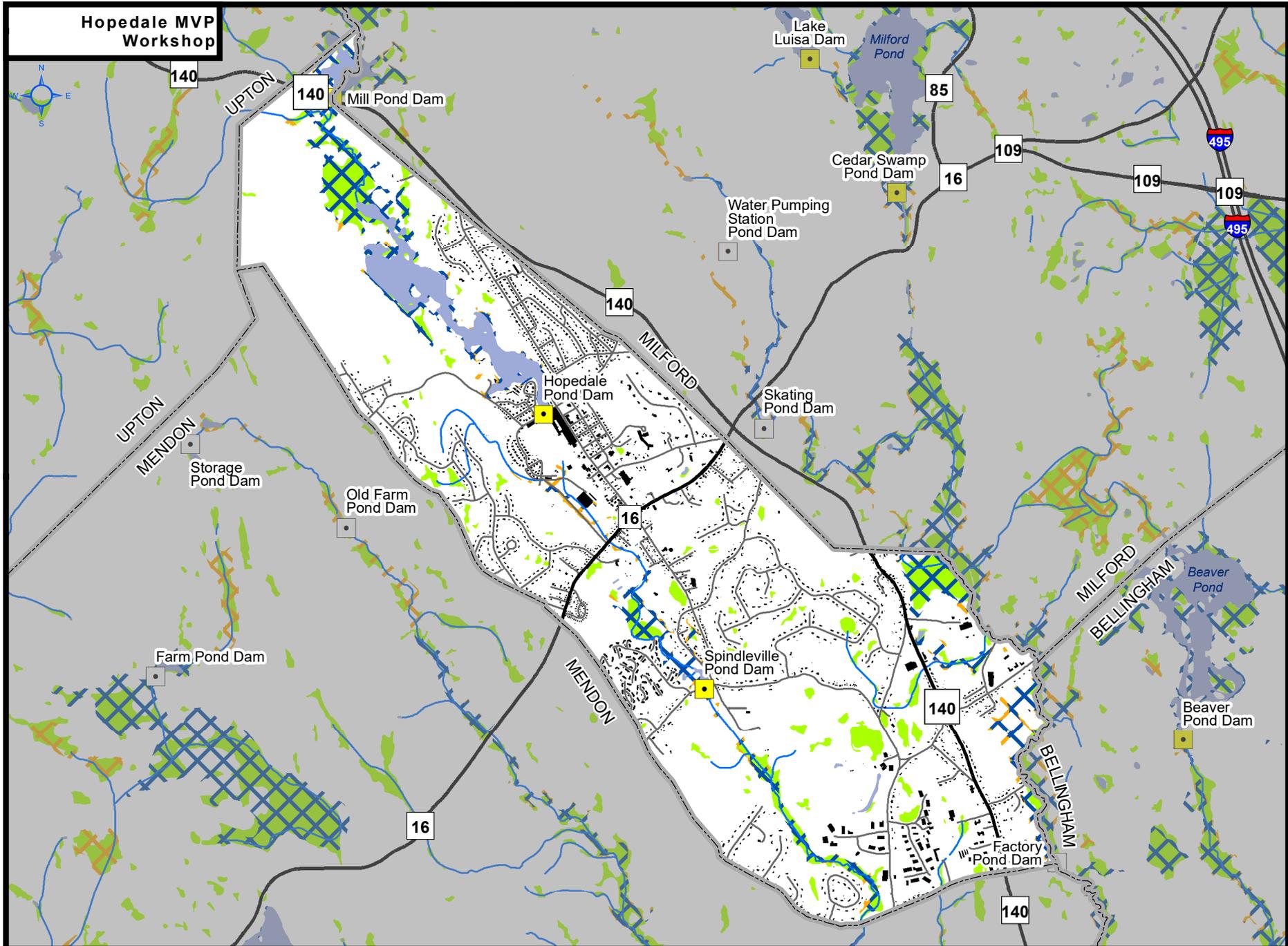
Hopedale MVP Workshop



 Public Water Supply (MassDEP)  DEP Approved Zone I  IWPA  DEP Approved Zone II  Water Line



Hopedale MVP Workshop

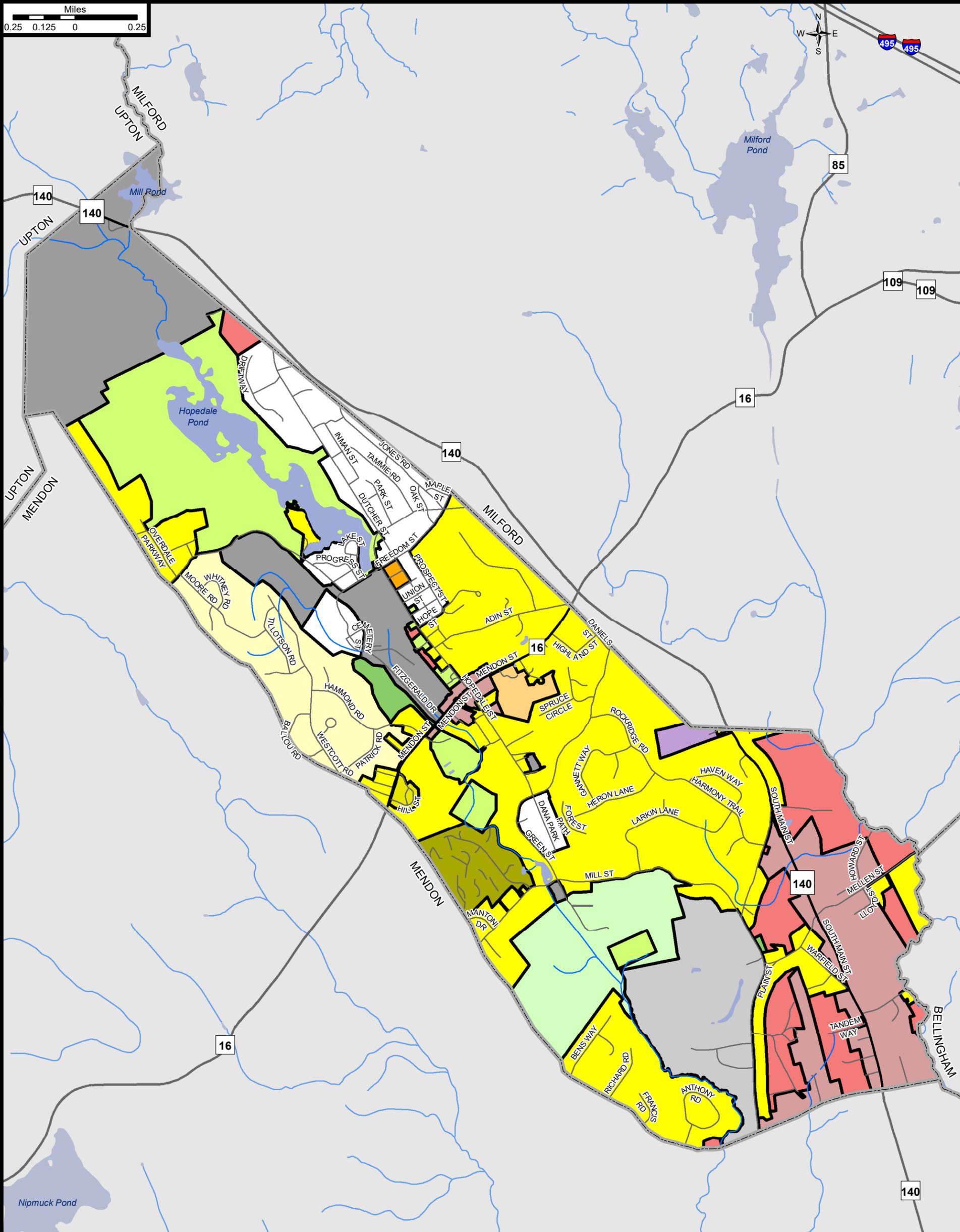


- High Hazard
- Significant Hazard
- Low Hazard
- Not Rated, Too Small
- ✂ 100-year Flood Area*
- ✂ 500-year Flood Area
- MassDEP Wetlands



Reference Map: Zoning

Town of Hopedale, Massachusetts



Zoning Districts		
Industrial (I)	Cemetery (CEM)	Residential Performance-1 (RP-1)
Light Industrial (LI)	Residential A (RA)	Historic Multiple Family (HMF)
Commercial (C)	Residential A-1 (RA-1)	Adult Retirement Community (ARC)
General Business A (GB-A)	Residential A-2 (RA-2)	
Town Land (T)	Residential B (RB)	
Recreational (REC)	Residential C (RC)	

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

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 interpreting positional accuracy.

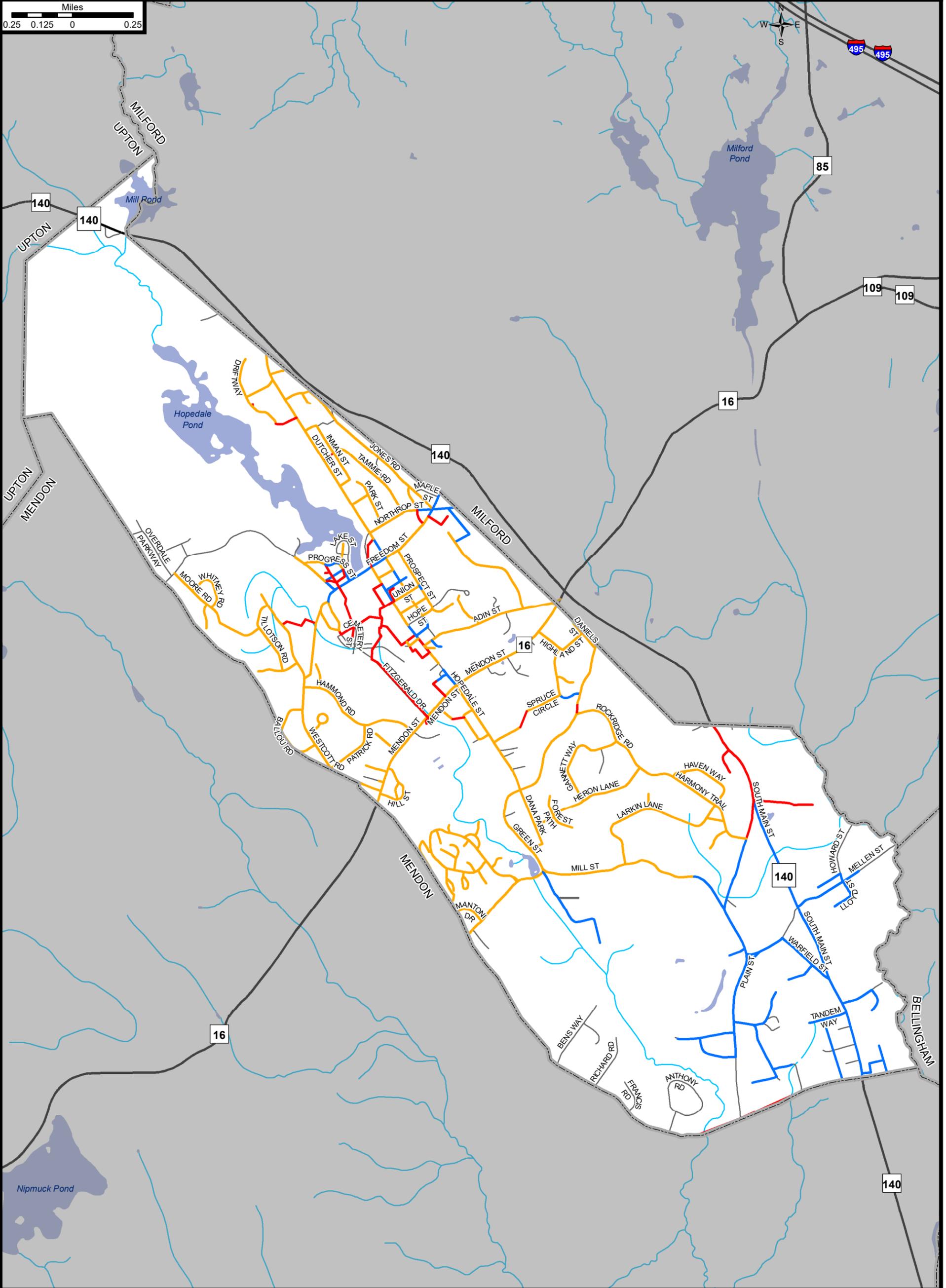


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Municipal Vulnerability Preparedness (MVP) Workshop

Reference Map: Utility Infrastructure

Town of Hopedale, Massachusetts



- Town Boundary
- Major Road
- Local Road
- Sewer Line
- Water Line
- Water/Sewer
- Water Bodies

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

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 interpreting positional accuracy.

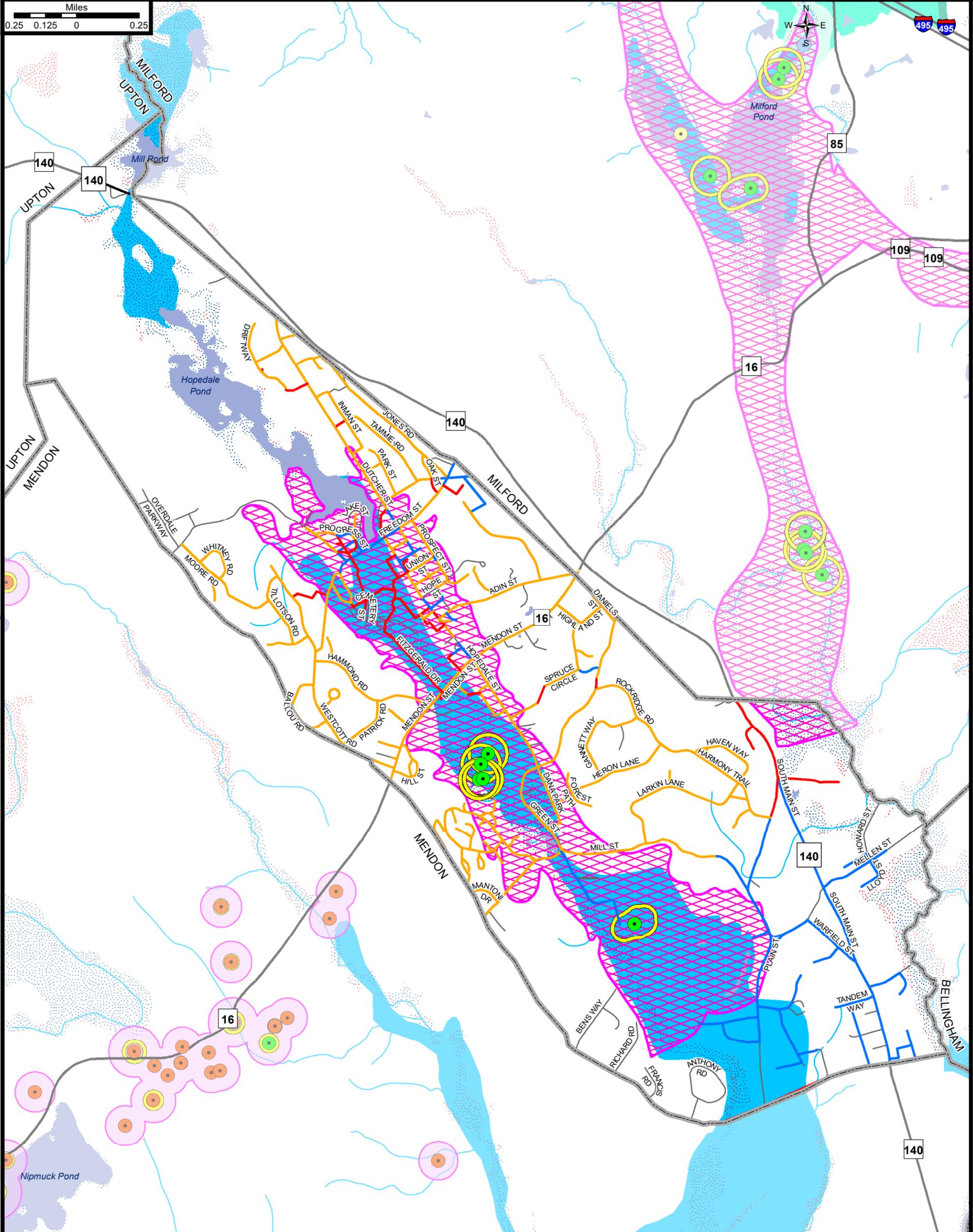


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Municipal Vulnerability Preparedness (MVP) Workshop

Reference Map: Water Resources

Town of Hopedale, Massachusetts



<p>massDEP Public Water Supplies</p> <ul style="list-style-type: none"> Community Groundwater Source Surface Water Intake Non-Community Groundwater Source Emergency Surface Water 	<ul style="list-style-type: none"> DEP Approved Zone I Approved Wellhead Protection Areas (Zone II) Interim Wellhead Protection Areas Aquifer 	<p>FEMA National Flood Hazard Layer (DFIRM Data) or FEMA Q3 Flood Zones (Pre-DFIRM)</p> <ul style="list-style-type: none"> 100-year Flood Area 500-year Flood Area 	<p>Surface Water Supply Protection Area</p> <ul style="list-style-type: none"> Zone A Zone B Zone C 	<ul style="list-style-type: none"> Sewer Line Water Line Water/Sewer 	<p>Source: Data provided by the Town of Hopedale, CMRPC, massDOT, MassGIS.</p> <p>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 interpreting positional accuracy.</p>  <p>One Mercantile Street, Suite 520 - Worcester, MA 01608</p>
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Municipal Vulnerability Preparedness (MVP) Workshop

Reference Map: Orthophoto (2019)

Town of Hopedale, Massachusetts



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

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 interpreting positional accuracy.



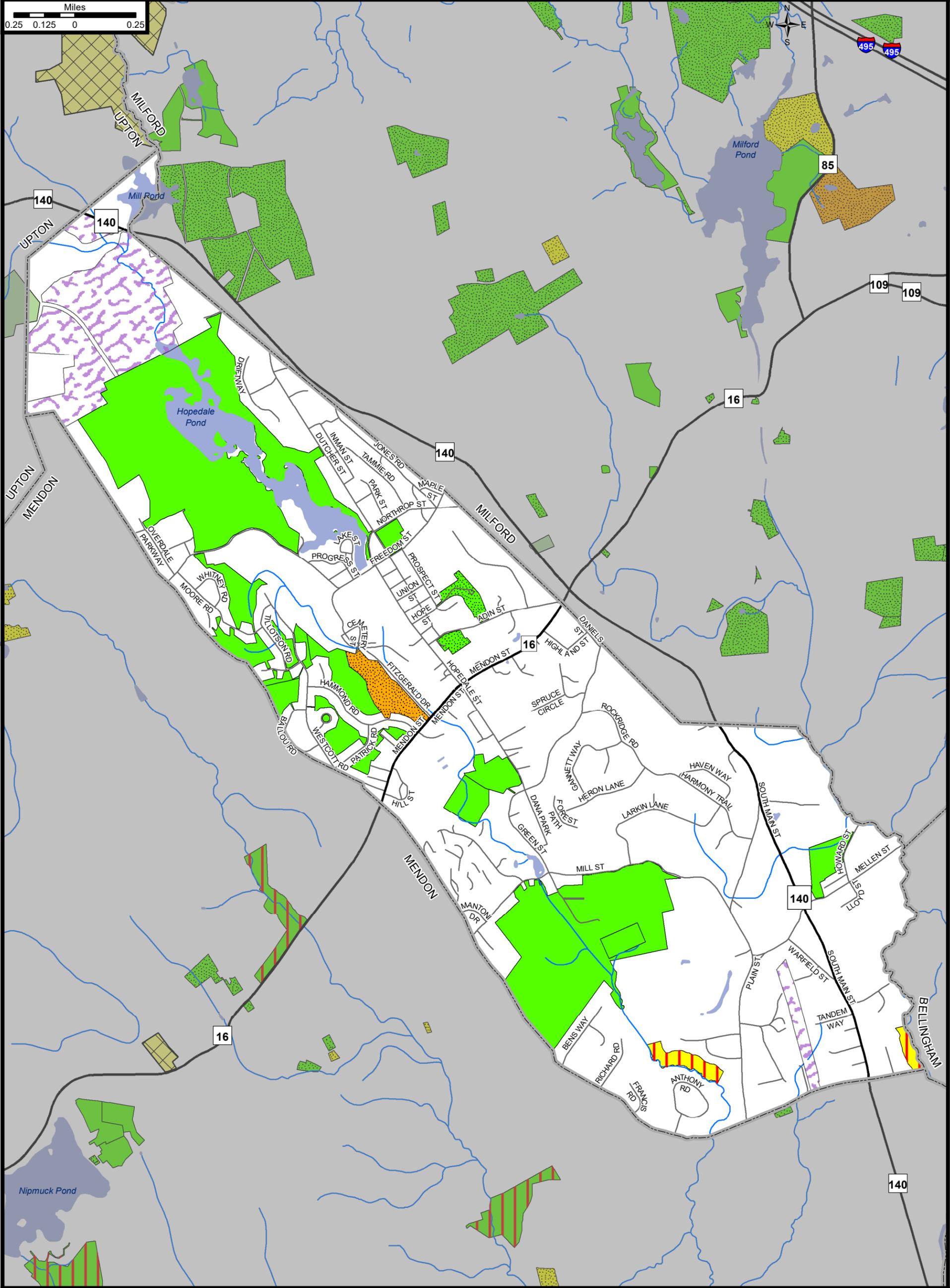
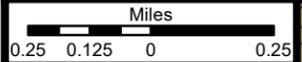
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Municipal Vulnerability Preparedness (MVP) Workshop

Reference Map: Open Space

Town of Hopedale, Massachusetts

Open Space data provided by MassGIS. Current as of 08/2020. Chapter Land data provided by Town.



- | | | | |
|---------------|-----------------------------|---------------------------|-----------------------------|
| Town Boundary | Open Space Ownership | Level of None | Chapter Land (61, 61A, 61B) |
| Water Bodies | Federal | Limited | Conservation Restriction |
| Major Road | State | Agricultural Preservation | Restriction |
| Local Road | Municipal | Private | |
| | Non-Profit | | |

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

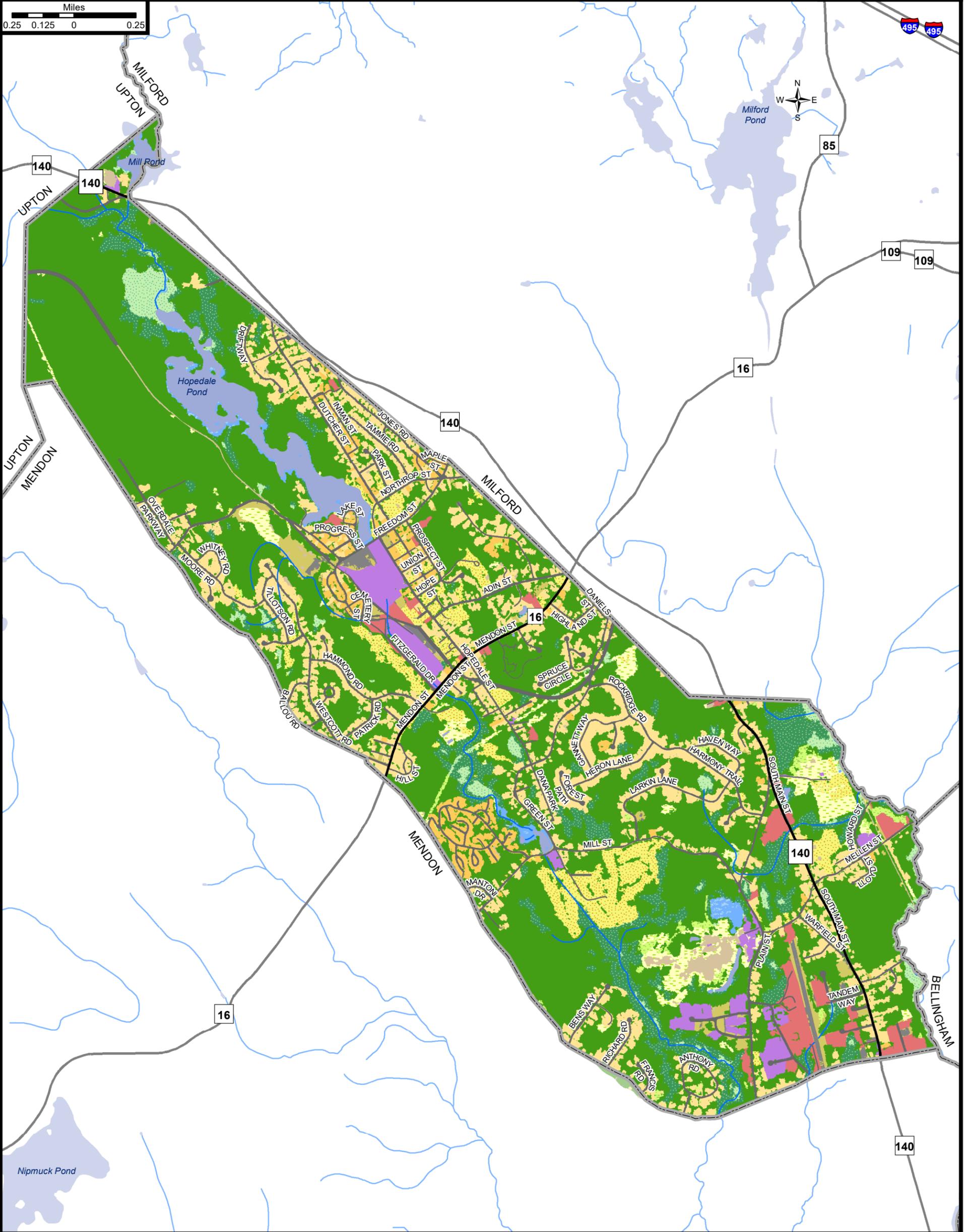
Information depicted on this map is for planning purposes only. This information is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analysis. Use caution interpreting positional accuracy.

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Municipal Vulnerability Preparedness (MVP) Workshop

Reference Map: Land Use (2016)

Town of Hopedale, Massachusetts



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

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

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 interpreting positional accuracy.

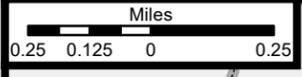
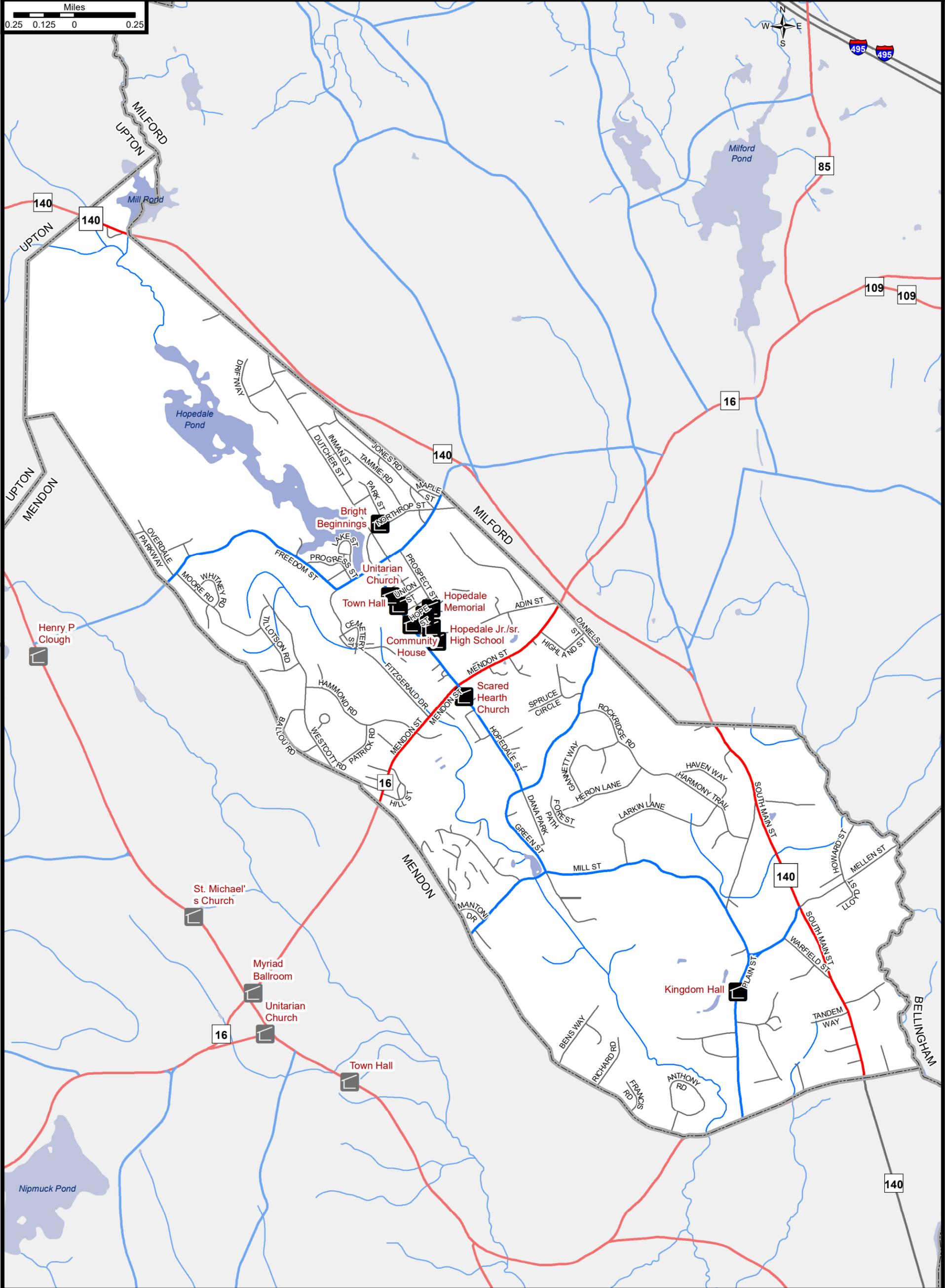


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Municipal Vulnerability Preparedness (MVP) Workshop

Reference Map: Evacuation Routes & Shelters

Town of Hopedale, Massachusetts



- Legend**
- | | | | | |
|---------------|------------|---------|---------|-----------|
| Town Boundary | Major Road | Shelter | Highway | Secondary |
| Water Bodies | Local Road | | Primary | Tertiary |

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

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 interpreting positional accuracy.



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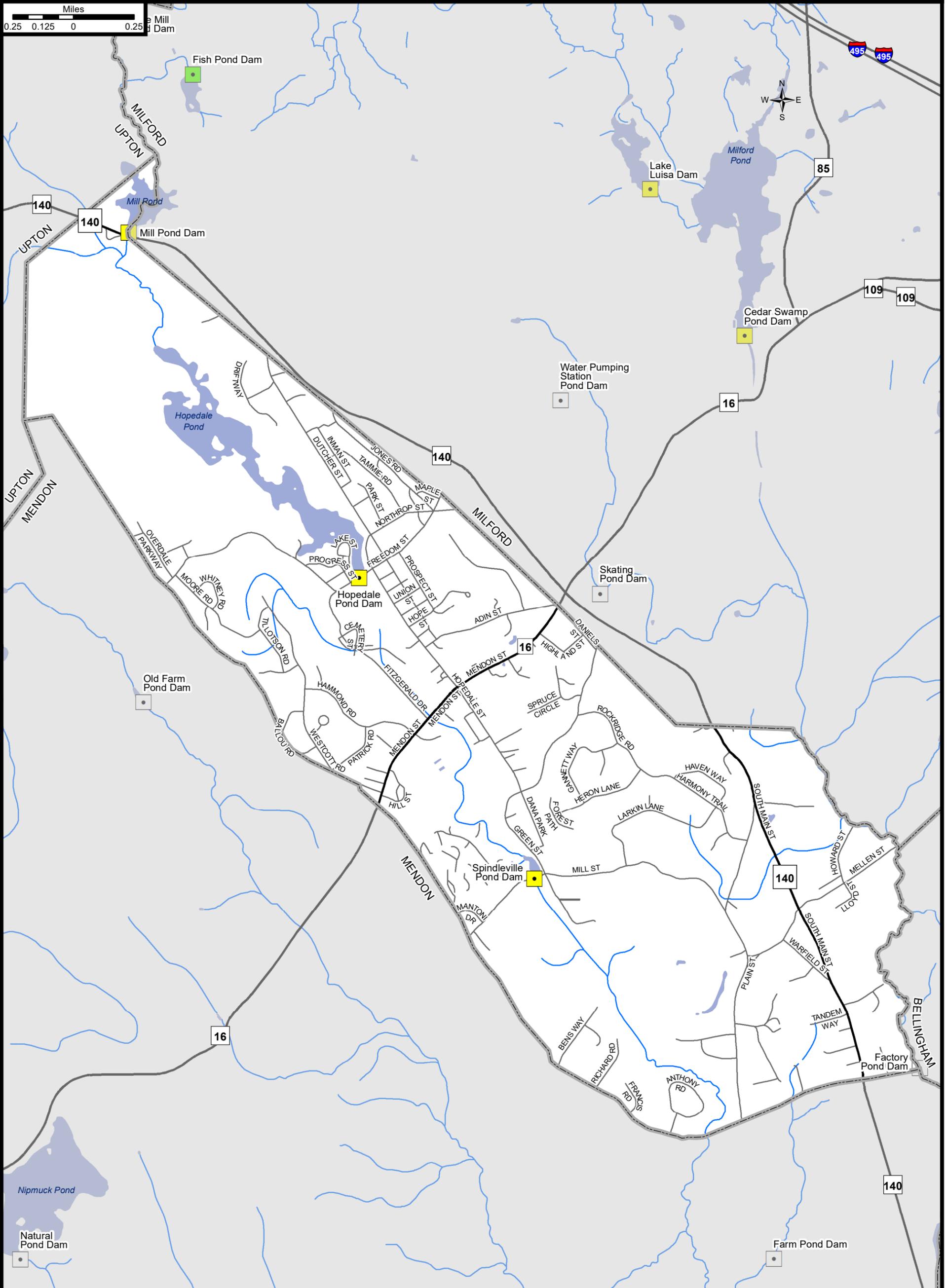
Municipal Vulnerability Preparedness (MVP) Workshop

Reference Map: Dams (2012)

Town of Hopedale, Massachusetts



Mill Dam



Legend

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

Dams

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

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

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 interpreting positional accuracy.



One Mercantile Street, Suite 520 - Worcester, MA 01608

Municipal Vulnerability Preparedness (MVP) Workshop



Hopedale Table #1

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, etc.)

Features	Location	Ownership	V or S	Description	Flooding	Drought/Extreme Heat	Severe Storms	Winter Storms	Priority	Time
									H - M - L	Short Long Ongoing
Infrastructural										
Bridges	Freedom, Mill, Mellen St	Bellingham/Milford	V	Mellen St closed due to Bridge condition						
Dams	Freedom St, Spindleville Pond - improved 2012 (Mill St), Mill Pond (Rt 140), North Pond, Fiske Mill (dam system)	Private, Town, LLC Properties (1/2 in Milford)	V	2 components to Freedom St dam, earthen, regular	1955 Major Flood/Severe Storms, Need better dam system, work with partners (Hopkinton, Upton, Milford, Bellingham, Blackstone, regional private & public, create inventory, w data, w ownership information & communication plan for coordination				H	L/ongoing
Buildings/Public Spaces	Highway Dept, Bathhouse, Parklands	Town	V	Located near Mill River	Community House. Draper Gym - small, old stone culvert under Hopedale Street, through Community House (Stormwater, behind gym empties Mill River)				M	L
GURR	Behind TH	Private	V	near Mill River, Traffic onto Rt 16	Communication, inclusion in planning efforts, support for mitigation of vulnerabilities				H	ongoing
Roads	Fitzgerald Dr., Hopedale St, Freedom Street by old dump			Traffic & River, Winter Storms, Drifts	mitigation of flooding if reopened, snow fencing, other mitigation efforts for snow drifts				H	S
Regional shelter	Memorial School			Create shelter agreements if needed	Identify place & equipment needed, Enhance Code Red enrollment, work with BoH, EMD				M/L	ongoing
Codified Plans			?	CEMP Plan, Hazard Mitigation Plan	same as above					
Bylaws/Regulations				Stormwater Mgmt, Board of Health, Wetlands (addl to WPA, jurisdiction of Con Com)	Green Infrastructure regulations/LID bylaws				M	ongoing
Communications			S	Locally strong	Sustainability Committee				H	S
Culverts - large	Mendon/Rte 16, Centennial Stone culverts		V	Dutcher St, other auxillary culverts	identifying culvert systems, creating maint and improvement plan to support Pond uses, smaller culverts, replacing with NB culvert solutions, green infrastruture solutions				H	ongoing
Hopedale Pond			V/S	Lack of flood storage	Invasive weeds				H	ongoing
Mill Pond/North Pond		Private		Algea growth since 2013	Assessment of degree of impairment; Treatment needed				H	ongoing
Green/Mill St Intersection /Mill St Bridge				Lack of updated, working Drainage	minor flooding, over the road, Stormwater issues				M	S
Adin Street/Dutcher St/Freedom St			V	Vulnerable trees. Winds, winter ice storms	Tree trimming, maint.				H	S
Public Transit			V	Lack of transportation	Need public transit to minimize use of vehicles				L	ongoing
Utilities/Electric Infrastructure	Rte 140/S Main St		S	Situation Room w National Grid	All severe storms, Code Red enrollment effort				L	ongoing
Airport/Ind Parks, Plain St		Private	V	Dry wells (i.e. catch basins) can't handle stormwater	Address Retention ponds, drainage, development bylaws				M	L

Water/Sewer/Drainage			V	Restrictions (water ban) Aged, private (under mill)	Partner w Mill owner to address under mill issues; Drought, Stormwater	H	S
Societal							
Equity/Equanimity/Diversity				Communication with stakeholders	Multiple languages, intergenerational, Garden Club	M	ongoing
Vulnerable Populations	Highland St, Daniel St	Private		Seven Hills (children/teens), Crossroads, The Ledges (adult, disabled)	Communication, inclusion in planning efforts	M	ongoing
Assisted Living	Atria	Private			Community Gardens		
Elder Housing	Hopedale St	State	V/S	Abutting Railroad/Cooling Center	Notification/Maint of Warming/Cooling shelters, etc.		
Bright Beginnings, Daycare, Preschool	S Hopedale, Hartford Ave E	Town, Private	S	Vulnerable populations	Extreme Heat, Severe Storms		
Senior Population	varied		S	Shut in, isolated	Extreme Heat, Severe Storms, Winter Storms		
Churchs (varied)			S				
Scouting/Youth/Schools	Memorial School, Jr/Sr. HS		S	educating youth through demonstration projects	Rain Gardens, permeable pavers, bioswales	H	S
Regional support, Chamber			S		Facilitate planting projects	H	S
History/Historic Commission/Society/Heritage Corridor			S	Education through workshops, etc., partner w Blackstone Valley Watershed/Heritage Corridor	Education/Training	H	S
COA			S	Outreach			
Environmental							
Hopedale Pond, Spindleville Pond, Mill Pond			V / S	Social/Cultural Asset (swimming due to lack of interest)	Flooding, Invasive Growth Maint (i.e.Weeds), Planning for use of Hopedale Pond for swimming, kayaks, fishing, solve dam issue	H	S
Mill River/Charles River					Mill River, Daylighting at Draper Mill area	H	S
Watershed (above Parklands, hillsides, Pinecrest, Bancroft Park)				Tributaries	Acquire conservation land to deter vulnerability, create education paths w signage in Parklands, partnerships with Land Trusts/Watersheds Assoc re trail creation	H	S
Trees	Parklands			Tree population on decline, Gypsy moths, beechbark disease, aged	Tree Inventory & Maint/Identifying hazards	H	ongoing
Invasives	Parklands	public/private		Japanese Knotweed, Japanese Barberry, Oriental Bittersweet	Management plan needed		
Parklands				Overgrowth	Wind Storms, wildfire education/notification		
Wetlands							

Community Resilience Building Risk Matrix



TABLE #2

Hopedale Town Table #2

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, etc.)

Features	Location	Ownership	V or S	Description	Extreme Heat, Drought, Wildfires, Invasive Species	Extreme Cold and Winter Storms	Severe Tropical Storms and Wind	Flooding	Priority	Time
									H - M - L	Short Long Ongoing
Infrastructural										
Dams	Freedom St. and Spindleville, Mill Pond	Jointly the Town and Phil Schwachman (depending on the dam)	V	The dam from Hopedale Pond (Freedom St Dam) cannot be shut off. In case of a flood, downstream to Narragansett could face a disaster. The bridge is too close to the mechanism and divers refuse to work on it. The earthen part is the main problem rather than the mechanical part of the dam. Spindleville dam needs to be cleaned out by Fire Dept - debris from storms is an annual problem. Spindleville dam was rebuilt in last 10-5 years and designed for a 100-yr storm. Mill Pond dam in rough shape. Mill Pond dam not maintained since 2013. There is also potentially a dam upstream in Millford that could pose problems for Hopedale.	pressure town committee's to prioritize dam repair and maintenance; look into possibility of dam removal for flooding				H	S/O
Culverts	Cook St.; other locations	The Town	V	Old and historic culverts. Do we have a culvert inventory? Are culverts a barrier to aquatic life? Clogging and maintenance is a problem.	Highway project to inventory and ID culverts that need repair/replacement; incorporate nature basked culvert designs (MA Stream Crossing Standards)					
Intersection at Route 16 and Hopedale St.	Rte. 16	Highway	V	Dangerous intersection needs turn light.	follow-up on status of turn-light grant					
Green St. Rock Ridge Harmony; Aydan St (near Memorial School and Elementary School)		Various		Streams on roadway and ice. Flooding coming from Harmony and flowing downhill.	Spring vernal streams; look into dry-well system; contonie re-lining old, clay pipes throughout town; look into and apply nature-based islands or other solution (less maintenance) to catch run-off and flooding concerns;					
Dutcher Street		Private/Town		Damp basements for houses backing onto pond.	High water table, snow melt, rain events, spring floods; ID any illegal connection from pumps to sewer line;					
Restore the Pond to swimming quality	Hopedale St.	Parks	V/S	We used to have a swimming beach. Now because of E coli, the water is below our standards. Although technically safe to swim in, it's not up to the level of for example, Hopkinton Lake. Parks check ecoli every year, have traced discharge up to drainage on private property.	Invasive bacteria; restore beaches to be areas that can catch water/help alleviate flood conditions; restore land next to pond; research restorative vegetation potential to address Canadian Geese					
Downtown buildings	Downtown	Private	V	Damp basements.						
Inman st homes	Inman st	Private	V	Damp basements.						
Town buildings and critical infrastructure	Town buildings at	Town		Changes to Mill River course could impact town buildings and critical infrastructure in the center of town. It currently runs under mill that is being demolished but water flow is going to change after demolition	explore feasibility to restore Mill River and area around it downtown;					L

Sewage treatment plant and waste water collection system	Sewage treatment	Town		Old collection system, clay pipes subject to infiltration. Discharging into the river affects water quality. Water flow can triple due to rain events, causing plant to discharge water; plant designed to treat only so much water 6000 g/day, flooding/rain events triple flow rapidly, plant capable of handling it so far but 3-10 in of rain in a few days can overwhelm plant; major rainstorms have happened recently (2009); plant water is discharged in river	look into expansion for new development in-town; If the plant goes underwater; in-depth vulnerability system or planning study of town sewage system to changing climate conditions and future needs;	H	
Septic systems	Townwide	Private		Prone to issues during weather events, especially older systems, may lead to worse water quality for homes nearby	come up with schedule to evaluate capacity of sewer systems; advocacy to ensure septic systems are the right size to work properly for the capacity needed	L	
Power		National Grid		National Grid has a substation in town. Good working relationship with town. Building is safe from flooding.	Trees down, lines down; solve old/weak trees near power lines;	L	O
Hydrants	Moore R., Tillotson, Lapworth, Pinecrest			Vulnerable to drought last year --had little water in tank, low pressure, if there was a big fire it would have collapsed water system.	No water at fire hydrants; locate wells for the system to work properly, especially during drought; pumping stations at higher elevations which lack; mitigate hazards; areas without municipal water can town extend water-lines here; new underground storage tanks and ensure water dept. has plan for water access during drought/fire risks		
Water storage tank	Water storage	Town	V	Water storage tank surrounded by trees, that may fall in a storm.	May fall; evaluate for vulnerability to high winds		
Cistern	n/a			do not exist in town	look into development of cistern at larger buildings to deal with run-off; look into ways to use water from cistern for landscaping purposes;		
Generator at HS	Generator at			Doesn't power the kitchen and may not be able to maintain heat. Town has discussed shifting shelter to High School but currently cost prohibitive. No back-up power	look for ways to back-up power to the cafeteria; look into making it a shelter	H	
Memorial Elementary; junior/senior highschools; kingdom hall; unitarian church; sacred heart, evangelic church;			V/S		ensure generators are able to power the whole building; add extra generators; ensure AC; explore green options; re-evaluate these locations	H	O
Statue of Hope	Library	Town	V/S	Covering the statue needs new solution. Winds are strong, statue has to be covered seasonally -- PVC piping with sheet acts as a lift with current storms; town is responsible for preserving library and statue; financial obligation for any repairs			
Bancroft Library	Library	Town	V/S	Repairing slate roof, granite block walls, oak doors. Building has good foundation. Heavy oak doors a potential risk in high winds because unsecured.	Slate roof.; restoration potential; monument protection; dry-well potential		
Water plant & Sewer system.	W/S	Town	V/S	Water quality issues. Algae blooms affect downstream estuaries.	Discharge % rises.		
Water treatment plant				Relatively new, completed in 2010?			
Sewer lift stations, water pump stations, remote stations	Townwide		V	Wind/snow/ice can have impacts, can lose power, have generators but big recurring problem			

Country Club	Golf course.	Privately owned	S/V	9 holes and a wooded area. Water dept. wells on their property. Large area, lots of woods around it, drought could potentially cause wildfires. River and water dept wells are on property. Water supply on golf course during drought. Only half has been developed so far -- may be leased from someone by Hopedale. Town maintains full access to water resources on course. Strength as a conservation area. Downstream from WWT plant.	Risk of fire.		
Airport	Beach St.	Various	S/V	Commercial income from industrial park. Companies constantly changing. Chemical storage. Emergency landing zone for helicopters. Flat roofs.			
Rosenfeld property new warehouse?	Rosenfeld property new		S/V	Large wooded area and river runs through. May be redeveloped. Potentially vulnerable to fire			
Public safety communications	Townwide	Town	V	System has gone offline in wind storms. Has happened multiple times recently; there is only one antenna for comms system; fire dept also deals with outages and has to manually open doors when out of power			
Railroads				Grafton/upton, cfx	look into sparking of vegetation as a potential fire risk		
Public schools							
Gas Lines							
Gas Stations							
Private wells							
Natural gas lines				Tennessee, Algonquin			
New development	Townwide	Private	V	Development doesn't consider existing infrastructure, town governance has to manage interaction with infrastructure during approval process.			
Societal							
Overdevelopment and overpopulation	Hopedale	Developers	V	Encroachment on wetlands, paving over permeable land, straining the W/S systems.	Water bans; overdevelopment; zoning updates; up-to-date Long Term Town Plan; new bylaws for open space/recreation land; establish regulations to enforce Conservation Commission act;		
Illegal dumping in wetlands and streams	Hopedale	Resident	V	Polluting and dumping large trash.	Trash blows around and hazardous dumping; restoring wetlands; work w/ state/local government; explore other resources and programs (i.e. MA Department of Wildlife and Fisheries); signage;		
Dedication of town boards and volunteers.	Hopedale		S	Very involved, wear multiple hats, volunteer led, good inter-communication between departments			
Hopedale Foundation	Community House		S	Offer loans to students, support community projects, donate to library, interested in purchasing land on behalf of town			
Senior Housing	Griffin Dennett	Housing Authority	V	Fly ash silos, factory. Near floodplain.	emergency generators needed; limit disaster risk to storage facility, especially with railroad;		

Disability Facilities	Seven Hills, the Ledges, Evergreen Center.	Privately owned	V	May have their own preparedness infrastructure and plans.	ensure all 3 facilities, especially Evergreen, have proper emergency plans prepared and in place		
Existing agreements with Mass Historical Commission	Townwide	N/A	V/S	Recognition is good but limits town's climate preparedness; Town has to use close to original building materials on historic properties; requirements may not be forward looking to climate change planning and energy efficiency; mass historical commission limits the changes that you can make to buildings	contact rep to discuss what is in future to repair historical infrastructure and regulations take into account these changes due to climate change		
Local sustainability or climate focused group				Hopedale may not have one yet, someone to lead future climate preparedness action in town	encourage local leaders to develop (potentially a cross-committee group); outreach to people not involved in town communities or develop social media opportunities; look into educational curriculum or ensure youth know they can be involved - for example, social justice group;		
Preparedness to assist residents with disabilities/language barriers/homelessness	Townwide		S/V	Strong system to protect these residents in case of disaster. Residents spread throughout town. Council on Aging maintains a high-risk area to help out fire department. Fire dept reaches out to people when there are outages in area.	food shelters and community-based partnerships (i.e. church meal partnership); translate other languages in town beyond spanish (arabic);		
Religious institutions							
Different languages.			V				
Environmental							
Invasive vegetation	Parklands, Hopedale St. to Dutcher St.	Town of Hopedale, Parks	V	Bittersweet is wrapping around hardwood trees. It has spread from the Parklands to private yards. Town could use more education on plants to use on private property (invasive vs native and/or climate resilient)	education; natural remediation of invasive weeds; goat weeds-treatment with water dept.		
Wetlands	Cook St.	Town of Hopedale	V	Japanese knotweed breaks off and floats downstream. Town doesn't currently have wetlands protection bylaw.	draft wetlands protection bylaws		
Private lawns	Townwide	Private	V	Can become very dry in summer, pose a fire risk.	education/publicize models or maps for yards in town that use existing model; restrict lawn watering and look at collective impact of water usage; raise awareness of drought-tolerant native plants; partner with high school; explore town-owned building to develop a way to use native plants to increase drought-tolerance at private lands; educate usage and impact of harmful fertilizers downstream;		
Town parklands	Town park, bankcroft park (private ownership), phillips st field, Charles River			Actively working on clearing and maintaining conservation land; proactively managing trees. Concern with private citizens cutting trees/brush on conservation land and causing ecological changes.			
Invasive insects	Hopedale	n/a	V	Winter moths, gypsy moths.	replace dead trees with resiliency species (i.e. street trees); review subdivision plans for new subdivisions;		
Pesticides and herbicides	Forest land	GURR	V	Annual spraying of tracks.	Kills off bees and native plants.		

Trees dying.			V	Climate extremes and invasives compromise the health of hardwoods. Shocked by drought, may be leading to down trees during big storms	Hazard from trees falling.	Hazard from falling trees and limbs.		
Charles River	Hartford Ave.		S					
Pesticides aerial spraying	Wetlands		V	Not enough notice of spraying so honeybees died. Our town could opt out of CMMCP. Central Mass Mosquito Control Project does ground-based spraying, state agency in charge of aerial spraying. Aerial spraying related to EEE threat.				
Pesticides/herbicides on railroads	Railroad tracks		V	Annual railroad track spraying, chemicals that are known to be dangerous to human/animal life				
Native plants.			S		Climate resilient.			
Mill Pond	Rte. 140	Hopedale, Milford, Upton	V	Swamp land difficult to maintain.				
Spindleville Pond				Algae blooms may become more frequent in future with ecological changes, water quality changes. Can impact downstream estuaries/watershed.				
High water table	Townwide	n/a	V	Rain events, snowmelt, any precipitation may not drain well. May be leading to downed trees				

Industrial park			S&V				
storage facility							
Societal							
Railroad fly ash tower	town center	Private	V	Currently sits in a zone 2 water protected area without permits, lots of fly ash, next to an elderly facility with no evacuation plan	Fire department has a plan on emergency situations (do they stay or skidaddle). Add a requirement to do some testing on the fly ash content in the air, testing and plans for flooding.		
Elderly Center	Town Center	Town	S	No backup generator	Get a backup generator, funded by a non-profit organization. There shouldn't be problems to the location.		
High School	Town Center	Town	S&V	Location of an emergency evacuation center without any backup generator or much supplies.	Get a backup generator to cover the entire school. Memorial school has only a partial generator while we should get the High school a complete generator system		
Disabled private houses		Private	S&V	Only one contains a generator	We have never needed to evacuate to a shelter but we shouldn't risk it any more than we already have.		
Laurelwood			S	Many elderly housing places with extra generators	Need a decent restaurant		
Country club		Private	S	Keep an eye on chemical use for their lawn			
Library				Needs work on the work	Put up some educational signage (possibly code red), mostly already done but it can be continued and expanded		
Community center							
Draper gym		Private		Needs some work on the roofs			
Little Red Shop - Museum		Town	S/V	in danger of decay - huge structural and rot issues, historical feature	Utilize the Community Preservation Act to improve this site		
Band Stand			S				
Bath house	Pond		S	used in the summer			
Hopedale Cemetery			S	a lot of litter sometimes, not sure who maintains the Plain Street cemetery	Need to upkeep the plain street cemetery		
Union Church			S	host girl scouts and boy scouts, collecting plastic bags - turn into blankets to give to the homeless	Could be used for communication		
Hopedale Foundation			S	Gives to the community			
Gardening	Elementary School						
Skating facility					Could be used for communication		
Phillips field			S		Gets soggy/wet/muddy relatively easily, could get better drainage		
Busses	Schools		S		Can't be used for evacuation due to the bus drivers living too far away, could get people who get a commercial drivers license with a grant		
Van	Senior Centers						
Bike lanes	Pike trails		V	Not that upkept, rock and roots litter it			
Childrens Education of the environment			V	We need a program to help teach our community about the beautiful environment we have, people don't think about protecting the environment unless we understand how great what we have it. Public education of our resources and what we have as a town	Start an ongoing program		
Bright Beginnings							

Environmental

Mill Pond		Unknown, Donation Possible? Mill owner owns rights		Needs an ongoing water treatment/cleaning plan	We don't have it but we could, needs to be studied, it would be nice to have it but only if we can afford it		
Spindleville Pond				Treatment unknown, Lots of litter, mostly forgotten	Put management under the conservation committee and enforce it with a conservation agent, get a full time staff member		
Hopedale Pond			S&V	Needs an ongoing water treatment/cleaning plan, has a significant beaver problem. Used to be protected but is now developing possible making a problem.			
Parklands			S	Used to be protected but it may now not be due to industrialization. 2/3 of the towns land is possible restructured	Permanently protected		
Trees			V	Winds and hurricanes knock down trees, lack of an active tree management program, there is a lack of funding. There are pests/disease and no regrowing/replanting	Needs some work with making sure it is safe around town, maybe a grant of some type, get/make a long term tree management program		
Fires				Forest fires can be a problem, small but very real threat in homes	Overdue for a big fire in the parklands, keep going into the school to do a class of fire safety,		
Forests	Parklands	Private and Public	V	Possible forest fires			
Invasive Species			V	Some people hack the weeds and we had goats once; Poison ivy, . Not much in the way if informing	Regulate management on invasive species and spread awareness		
Other insects				Ticks, knatcks, mosquitoes, .Insect spreys also kill demesticated bees and such	Add public education on standing water and diseases from insects		
Illness/disease				Covid,	We can do and keep doing many outdoor activities and no indoor activities		
Bats			S&V	We need to bring them back; A lot less bats survive then there used to be, less to eat mosquitoes that spread EEE	Educate on bats, make bat houses, boy scouts and high shcool community service project		
Wetlands			V	Unknown environmental impact due to outside influence. Bourd buey with issues within the wetlands, need help but can't get the manpower.	Didn't need active management but it will now that there is now development.		
Mill river							

Hopedale MVP Workshop

Table 1 Notes

FACILITATOR:

Mimi Kaplan, CMRPC

NOTE-TAKERS:

Diana Schindler, Town Administrator

Claire Bayler, CMRPC

DAY ONE

- Bridges:
 - Freedom St.
 - Dam is privately owned (Draper Mill)
 - Mill St. - dam, prone to flooding. 1955 flooded. Prompted major reconstruction. Flooded during high capacity conditions (new & empty), 70 years later it is much more vulnerable. Minor flooding at Green & Mill
 - Mendon St./Rt. 16 2 large culverts
 - Hopedale Pond earthen Dam – Town’s responsibility. Failed in 2005 \$106,000 to repair. 2 part of a single dam with the Freedom St./Draper Mill. Cannot function correctly without other part.
 - Spindeville Pond & Dam
 - Dam on 140 owned by LLC Properties. Freedom St.
 - Split between Milford & Hopedale
 - Freedom St. dam being address in terms of repair
 - Mill St./Spindeville Pond Dam modernized 15 years ago. Other dams in town classified a significant hazard
 - Mellen St. Bridge to Bellingham closed to traffic other than pedestrian & bike. Split ownership between towns
 - Any Draper Mill development dependent on good dam system surrounding to hold back Hopedale Pond
 - Is Hopedale a part of any regional shelter agreements/arrangements?
 - Memorial School designated shelter during Civil Defense initiative (years ago)
 - Generator
 - Cafeteria
 - AC unclear
 - Dams used to be synchronized when all owned by Draper Mill, now spread among many different entities
- Buildings
 - Flooding risk Highway Department

- Draper Mill: will sunlighting the Mill River help or harm.
Owned/controlled by railroad & LLC Properties. Enroachment issues on river. 1955 Army Corp of Engineers straightened out river to parallel road
- Fitzgerald Dr. would need to be reopened if Draper Mill redeveloped, previously subject to flooding. Hopkinton, Upton, etc. Milford, Hopedale, etc.
- Railroad
 - Vulnerability to wind storms? (trees?)
 - Transloading facility behind Town Hall, increased traffic issues
- Environmental
 - Parklands: always losing trees due to windstorms. Lots of overgrowth
 - Wind: Eden St, larger older trees. New tree warden
- Societal
 - Town center has schools right next to the pond. Is Memorial School a safe location? Issues in town center could impede response to events
 - Crossroads: Assisted living (adult disability) live in and day time
 - The Ledges: Assisted living (adult/children/teens disability) live in. Group Homes on Highland St.
 - Seven Hills: Children & teens mental health facility
 - Elder facilities: Atria – across from Draper Mill
 - Childcare facilities depending on day/time of emergency events. Town run facility Bright Beginning on Park St.
 - Non-facility elderly as a vulnerable population (transportation, communication, etc.)
 - Oxygen tank list to ensure electrical power
 - Languages
- Public Transit:
 - No buses to enable evacuation
 - Airport – main vulnerability is security
- Water/Sewer
 - Section under mill, may need to be incorporated into Town water/sewer rather than private
 - Summertime Odd/Even water ban, if bad whole water ban
 - Pond hasn't been dredged in 7 years
 -

DAY 2

1. Environmental

- a. Blackstone Valley River Watershed & Heritage Corridor could help brainstorm projects
- b. Memorial elementary school – community garden? Started 2017 behind the school
- c. Invasives
 - i. Japanese knotweed – Parklands,
 - ii. Oriental bittersweet
 - iii. Japanese barberry
 - iv. Gypsy Moth
 - v. Emerald tree borer
 - vi. Beechbark disease
 - vii. Tree inventory?
 - viii. Hopedale Pond – invasive aquatic vegetation. Must consistently treat
- d. Rivers, streams, & tributaries – protect & surrounding wetlands. Runoff issues (invasives, pollution). Education trails
- e. Daylight the mill river
- f. Dams
 - i. Set up network for synchronized operation among different dam responsible parties

2. Societal

- a. Village center: schools (junior, senior HS). Lots of blacktop – do demonstration projects? Permeable parking or rain garden, etc.
- b. Students as built in advocates

Action

- Educational piece (kids, workshops, etc). STEM programs, plantings, etc.

Partners:

- Chamber (helping find grant & private funds)
- Black Stone Valley River Watershed
- Garden Club? People who do landscaping around the library & police station. Sustainable plantings & bioswales, etc.
- Land Trusts & watershed associations
-

Hopedale MVP Workshop

Table 3 Notes

FACILITATOR:

Kerrie Salwa, CMRPC

NOTE-TAKERS:

Lindsay Mercier, Executive Assistant to the Town Administrator

Emily Glaubitz, CMRPC

PARTICIPANTS:

Bill York

David Butler

Nishaila Porter, CRWA

Rebecca Mongada

Linda Hixon

TOPIC #1: FLOODING

- There are 3 bridges in town, including Freedom St Bridge, Route 16 bridge (major access to Milford Regional Hospital)
- If one bridge goes down, how will first responders get there? If all bridges go down it would split the town into thirds
- Floodplains and low areas in town—Highway Department stores tanks in these areas which could contaminate the river. Sewer plants off of Route 16 could pollute the river downstream if compromised
- How much flooding would it take for the bridges to come down? What is the integrity of the bridges? Unknown.
- Brigham Street Dam has its own issues that are being addressed
- Railroad issue with the West Street land by the river being cleared. There will be no roots/plants to absorb rainfall and stormwater runoff will go right into the river.
- What happens when there is a power outage? Flooding impact on town's utilities
- Major floods occurred in 1927, 1938, and 1955
- Army Corps of Engineers built the West Hill Dam in Uxbridge for tributaries of the Blackstone River. What amount of rainfall would compromise this dam and how would it impact Hopedale?
- Hopedale's town museum is located in the floodplain of the Hopedale Pond/ Mill River. The building houses historical paper documents. Relocation of the museum is not really an option as it has been relocated 3 times. Would like to see an off-site archive to house the valuable paper documents, as the biggest damage to paper comes from water or fire.
- Flooding can result from hurricanes
- Strengths against flooding is the Hopedale Parklands which act as a buffer zone to manage flooding

- The majority of historic buildings are impacted by flood areas. This includes Spindleville, the historic mill building, which has suffered flooding historically but has been bought and is being utilized currently.
- Each building/bridge needs to be looked at individually for their risk to flooding. Some are in better shape than others. Cannot just have one plan for Hopedale as a whole.
- To reach all community members during emergencies, code reds are sent out as emails/texts/calls
- High risk area of fly ash is at Hope St and Centennial St
- Town is in the MS4 permitting process, which is a 5 year permit to ensure the stormwater infrastructure is in good condition
- Town is taking strides to re-align problem areas that deal with sanitary sewer system impact from flooding, as currently there is an issue with infiltration in the collection system. Outfall from the treatment facility is the Mill River, which eventually leads through Harris Pond to the Blackstone River in Rhode Island.

TOPIC #2: DROUGHT/EXTREME HEAT

- During droughts there is a higher demand for electricity to cool houses, businesses, etc. There is also greater water usage (for lawns, pools, drinking, etc.)
- Backup generators are required for essential facilities (hospitals, senior homes, etc.)
- What is the impact of drought on conservation efforts?
- Who are the vulnerable populations impacted by extreme heat? Elderly, sick, youth
- No known wildfires or any major fires. The risk is increasing due to more extreme heat and stronger winds.
- Reducing damage/risk includes clearing defensible space (300 ft) around buildings and managing brush around debris. Is there a clear plan in place for preparedness?
- Discussion of the town's cooling centers. Memorial High School is on higher elevation, what does this imply for accessibility? Will the currently assigned cooling centers be able to adequately host the needs of the entire community during an emergency? Should there be an expansion to other facilities?
- PFAS are a discharge of plastic/vinyl that are found in many items like flame retardants and do not break down. If high levels get into drinking water/groundwater it can be hazardous to the public and environment
- Drought negatively impacts groundwater recharge
- Mosquito populations are impacted with longer/hotter summers which impacts public health. What ways can mosquitoes be addressed- increased bat populations? Non-polluting sprays?

TOPIC #3: SEVERE STORMS

Wind, lightning

- High winds cause trees/branches to fall on powerlines. Access to electricity when powerlines are down is important. Fallen trees on roads block access for emergency vehicles. Fallen trees on houses are another impact of high winds.
- Challenging to fight fires during high winds
- Winds appear to be getting more severe lately

- It is critical to trim trees around powerlines
- High winds are a problem year round, however in winter there is even greater damage when trees are covered with ice and snow.
- Historic buildings need to be prioritized and protected from damage
- Power outages due to wind/lightning. Impacts on businesses in town, especially those that would lose inventory due to food expiring. Town Hall has battery backups.
- Town needs to monitor how much sand is put onto roadways as it gets into local waterways. Ensure that only what is needed is put on roads, not too much. Street sweeping is important for this. MS4 permitting will include a plan on how to effectively salt and sand roads.
- Stormwater catch basins are cleared out yearly. Might need to be more than once per year for certain structures
- No issues with lightning lately

Winter Storms

- Snow removal and storage is important to consider. Severe cold can impact vulnerable populations.
- Snow should not be put near catch basins or local waterways as its melting can cause impairments on streets and pollution in local waterways
- Most buildings in downtown area are historical, including Town Hall, and are susceptible to damage from winter storms. Library has roof issues but will be fixed.

Hopedale MVP Workshop

Table 4 Notes

FACILITATOR:

Dani Marini, CMRPC

NOTE-TAKERS:

Joshua Fumia, High School Student

Julia Moore, CMRPC

- 508-479-6520 – who is this?
- Draper Mill is being demolished
- In Master Planning effort
- Starting open space planning
- Just implemented CPA
- Green communities is hopefully going to be designated any day
- Freedom Street Dam
- Intersection at Cumberland Farms
- Ten-minute break from 11:50 am – 12:00 pm
- Dam
 - Several dams in Town
 - Mill Pond – in
- Mill Pond
 - Whether to accept the donation of the Mill Pond will be deliberated coming
 - Owned by someone else right now
 - Town meeting warrant questions – whether to accept that pond as a donation
 - Potential issues with the makeup up that pond
 - Upstream source that will flow into the Hopedale Pond and down into the SPrindel ville Pond
 - Environmental condition – raised red flags
 - Ownership – bordering with Upton and Milton?
 - Water rights are owned by the mill owner
 - Fishing
- Hopedale Pond
 - Health of pond – ongoing issues regarding treatment of the pond
 - Some years have the ability to pay for the weed mitigation
 - Let the pond get into less than desirable states in history
 - Sometimes we have not followed through with the management plan
 - Depends on annual budget
 - Fishing and kayacking
 - Ice fishing
 - Ice hockey
 - Years ago was widely used for recreation opportunities
 - Stone Bridge at Hopedale Pond

- Still intact
 - Between wetlands that feed into the Hopedale Pond
 - Part of parkland that surrounds pond
- Spindleville Pond
 - Algae bloom
 - Treatment status unknown
 - Lots of litter
 - Forgotten pond
- Ponds – beautiful, otters, skunks, ducks, geese, swans
- Beaver problem at Hopedale Pond
 - Mini empire state building back there
 - Don't know if there have been any strategies to deal with this
- Parklands – strength – The Parklands
 - Were protected by 150 acres of undeveloped land and forestry
 - Now in question
 - Now in developed areas
 - Have information on the past
 - Area could be opened up to development
 - Was protected by forestry classification by chapter 61B
 - Private ownership right now, going to sold to another private owner
 - Surrounding area – Hopedale Watershed
- Trees – vulnerable to hurricane, wind storms, ice and snow
 - Don't have budget to have active tree management in Town
 - Backlog of trees that are questionable
 - Don't have resources able to manage trees
 - Used to have heritage and unique trees
 - Windstorms
- Pests – something that has rotted pests, disease issues, possibly termites
- Roads
 - Vulnerable to flooding
 - Road conditions not great
 - Harmony neighborhood – roads starting to crack
 - Plow did a number on the sidewalks
 - Halloween flood –
 - Downtown floods a lot
 - Townwide flooding issue
- Hopedale Watershed – 150 acres
- Plain Street area – abandoned acres of abandoned areas
- Another 100 acres associated acres as the Mill is coming down
- 2/3s of the towns landscape
 - All under private owners
- 2 of the 3 owners will follow DEP restrictions
- Railroad
 - Have an easement through the parklands and the watershed
 - Comes out the other end, goes off to Milford
 - Fly Ash Tower sitting in town?
 - Current rail yard sits in Zone 2 water protected area

- Built Fly Ash Towers
 - Fly ash transporting area in a water protected area
 - A part of flood area that's all going to change
 - Built without any oversight or permitting
 - Storm or flood could be detrimental to water supply
 - Residents
 - Fire department in communication with on a weekly basis
- Elderly Housing Authority
 - No written evacuation plan
 - Fly ash tower right next to the elderly housing authority
 - Fire department does have an emergency management plan
 - Was developed as a stand alone – fire and police
 - Multiple buildings – 6 or 7
 - No backup generator
 - No plans to get one
 -
 - Fire department
- Shelters in town
 - High school is potential shelter
 - No generator
 - Brought up
 - Don't have an actual place for people to go that has the ability to feed, bath, and sleep overnight
 - Memorial School is designated as shelter
 - Has generator but is limited on what it could do
 - A generator would be extremely
 - Pet shelter
 - Don't have one?
 - Not sure if people can shelter with pets or not
- Aiden Street – children home?
- Developmentally disabled adult communities
- The Ledges – school for disabilities
 - Have a generator at the building on Mendon Street
 - Has 5 buildings in town
- Seven Hills
 - Have a generator
 - Are self sustaining
 - Have things in place if there is a disaster
- Assisted Living behind the fire station – self sustaining
- Laurel Wood – townhomes have a lot of elderly population there
 - Lots of 55+ and 65+
 - mostly electric heat – some have upgraded propoane heat
 - Some of the units have generators
- Solar Farms
 - 2 solar farms
 - One of each end of town
 - Both privately owned

- National Grid at capacity in area for solar farms
- Still probably options for residential solar
 - Unless they have battery – will be effected by power outages
- Residential solar fires
 - Potential to be a big problem
 - Tesla is doing a big push right now for solar
 - Batteries work well
 - Issues are a run away train that cannot be mitigated
 - Have to let it burn
 - Do training internally with fire department
- Culverts – unsure?
 - Drainage is always being looked at
- Primarily public water
 - 90-95% range
 - Some of the infrastructure is joined with the mill
 - Mill is upgrading some of this and taking care of that
 - Some odd piping
 - Primary well source is at the golf course
 - Golf course keeps close attention to pesticide usage
 - Water supply is very tight
 - Almost always on a water ban
 - Lots of people like to have lush green lawns – even during the
- Water Ban – source of frustration
- Library – possible could do an education campaign
- Deforestation is an issue
- Decent amount of woods in the neighborhood
 - Pine crest
- Parks Department does a good job with fire management
- Public sewer – a little less
- Historical Buildings
 - Town Hall – downtown area
 - Really needs a lot of work
 - Very poor condition
 - Financial drain on the town
 - Desperately needs renovations
 - Could be a green building
 - Used for Admin, Accounting
 - Probably 8-9 people
 - Handicap inaccessible
 - 3 floors
 - Library
 - Working on doing the roof at the library
 - Community Center
 - Draper Gym
 - Public private ownership
 - Could use some work
 - Ceilings are crumbling

- Draper Foundation
 - Bright Beginnings – used to be an old school
 - Little Red Shop(pe)
 - The Bandstand at the park
 - Bathhouse at the pond
 - Mill
 - High School recently renovated
 - Memorial School
 - Hopedale Cemetery – beautiful
 - Losing a lot of trees from storms
 - Some have rot problem
- Invasive species an issue
 - Poison ivy
 - Some other vine in town - bittersweet
 - When Pine Crest development was built – put in Norwegian maple
 - No invasive species management in town
 - Goats
 - Did them once – helped with poison ivy
 - Expensive side
 - Some residents manage it
- Communication with residents
- CodeRED
 - Phone notification system
 - Not sure what percentage of town subscribes to CodeRed
 - Lots of residents don't know about this
 - Can we do an analysis to see how many people are tuned into that?
 - A lot of people aren't aware
- Communication Systems
 - Not widely known
 - Want to know how well used they are
- Social Media
 - Privately moderated town social media
 - Could use an actual Town-managed social media pages
- Town Website
 - In the process of updating the website to be more interactive
 - Trouble with who manages and maintains this
 - Hopefully that there will be a style guide for each department to follow
- Town Water Tower
 - Strength
 - In right location not vulnerable to flooding
- Golf Course – Country Club
 - Strength
- Mosquitos
 - Parkland
 - The town sprays
 - EEE
 - Impact to outdoor activities?

- Longer hotter summers – breeds more mosquitoes
 - Had cancellations in the past for EEE
 - Had central MA mosquito group out in the fall
- Pollinators
 - Don't want the mosquito sprays
 - Toxic to the bees
- Educational Campaigns
 - Any of these in town?
- COVID
 - Can't just put everyone inside to have indoor recreational programs
- Ticks
 - Really wooded – very much an issue
 - Have increased a lot over the years
 - Dogs come back with
- Bat Population
 - 30 years – full at
 - White nose syndrome – killed a lot of bats
 - Any programs to sustain bat populations
 - Mill loss will cause the bat populations to dwindle more
 - Bats eat 1000 mosquitos at night
 - Need permission to put up bat houses
- Guano Farm?
- Old Dump
 - Freedom street?
 - Above the ball fields
 - Cross country teams run on top of that
 - Has been capped
 - Expensive project
 - Potential for recreation spot in the future
 - Testing wells in this area
 - Area below
 - Danger from flooding
 - Flood zone area
 - Town potential owns the dump
 - Town mows for the cross country
 - Stream near the dump
 - Iron and red
 - Have testing wells
 - Continue to monitor what goes on in that area
 - Area was pretty well surveyed
 - Rockwell is responsible to maintain the landfill
 - Have certain obligations that they are required to meet
- Monitoring wells
 - For dump
 - In water zone 2 protected area around the mill
- Power lines
 - Lots of power outages

- National grid sometimes maintains the street trees
- Poles being replaced – some have been replaced
 - Do another review of the poles that do need to be replaced
- Some sections where everything in underground
- Laurelwood, pince crest, and ____
 - Have underground lines
- Used to put underground during roadwork
- Recycle Center – Town owned
- Private Recycle Center – fitzgerald drive area
 - Lease the old gary building from railroad – glass
- Waste Water Treatment
 - Strength for the community
 - Vulnerability in a disaster
 - Close to being maxed out
- Water Plant
 - Vulnerability and strength
- Friends of the Library – do planting and potting around the library area
- Community Gardens – don't have any in town
- Hopedale Foundation
 - Maintain a number of buildings in town
 - Charitable foundation
 - Scholarships and loans to students
- Active churches in town
 - Crocheting masks for the homeless
- Unitarian Building – host girl scouts and boy scouts
- Union Church – does the masks
- Boy Scouts – very involved in the town
- Elementary School – was doing gardening
- Students – did projects, community service times (not during COVID)
- Wetlands
 - Embarking on a major impact to watershed and wetland area
 - Impact unknown
 - 2-3 member conservation commission
 - Lack of personnel to monitor wetland issues
 - Current board is extremely busy, lot of issues they have to hear
 - No conservation agent or town staff dedicated to helping the board
- Matt – related to the mill
- Envision Hopedale
 - Lots of public engagement
- Affordable Housing
 - No dedicated affordable housing
 - Duplexes on
 - Nothing is affordable right now
 - Compared to single family housings
 - No legal 40B housing
 - Big challenge for Hopedale
 - A 40B development would not be desirable

- Hopedale is so built out – how do we meet the required housing standards
 - Not a lot of people to put housing
 - How do we create diversity in the homestock
 - Maybe the mill to put some housing
 - Lack of inventory is killing the real estate situation
 - Driving prices up
- High School doesn't have a gym in it
- At capacity for
- Elderly housing
 - Aging community – don't have a place to transition to
- Want to see a mixed-use development in town
 - Impact on infrastructure and high school
 - Can't dramatically increase the number of students in school
- Laurelwood – condo fees really high
-
- Dana Park Circle
 - Provide a lot of good resources
- Airport in town
 - Viewed as a strength
 - Doesn't have heavy air traffic
 - Largest track of open land in Hopedale possibly
- Skating Rink facility
- Industrial Park Area
 - Green Mountain Chocolates
- South Main Street – is an issue
- Mullen Street field
 - Philips Field
 - Used for sports and has a playground
 - Soccer and softball, lacrosse
- Transportation
 - No public transportation
 - Have public transportation set up for seniors
 - For over 60 or disabled
 - Have a MWRTA shuttle for seniors
 - Is there a way to tie into the MWRTA
 - Can't pay for assessment
 - Potential link that could improve transportation
 - Have school busses
- Bike Lanes
 - No bike lanes or bike trails
 - Bike path isn't well maintained
 - There is a lot of people who ride bikes in the street
- Recreational town
- Public Education
 - Don't educate kids about resources available to them
 - Wildlife and natural education
 - Recreation opportunities

- Bright Beginnings might do some recreational programs
- Doug Scott – drone video?
 - Vantage point?
- Mill River – connects to mill pond

Day 2

- Spindleville Dam – vulnerability is upstream with Mill removal
 - Upgrade culvert in that area to a nature friendly environmentally friendly culvert
- Route 16 bridge
 - If bridge was out – all ambulance going to hospital would seek alternate route
 - Possible large culvert
 - Fitzgerald Drive – near entrance to cemetery
- Mill – comes in through Draper Mill
 - Grown in
 - Clean up this area
 - Part of this abutting area is owned by the railroad
 - Other areas are owned by private owners
- High school uphill of mill/river/railroad area
 - Two accesses and flood areas that flow into the same spot
- Action Plan for The river and mill areas
- Railroad
 - Flood issue possibly
 - What to do with route 16 crossing – installing safety apparatus
- Draper Mill Dam
 - Processes in place to create mechanical solution
 - High level of importance to the town
 - Actual boards in there - Fire Department has to replace the boards
 - Mr. Schwachman owns, but Town manages
 - Same with spindleville
- Roads all over town
 - Different way of tarring the roads?
 - Lack of resources to create ongoing maintenance schedule
 - Look for grants to be eligible for better maintenance of roads and streets
 - Dutcher gets a lot of flooding – almost like a river when it rains really hard
 - Chris Naduea has a schedule to maintain the roads
 - Modern rain capture?
 - When mill and railroad are upgrading
 - Is there a way to improve drainage
- Townwide priority planning
 - Newly re-accelerated
 - No knowledge that's out there
 - Don't have buy-in as a town yet for priority spending
- Fly Ash Tower
 - Fire Department has a plan of action for this
 - Mitigate problem and notification

- In flood plain
 - Flood warning area
 - Water protected area
- If fly ash gets in water system – that’s a big problem
- Does the railroad do intermittent testing
 - For fly ash content in the air, water, etc.
 - They don’t – aren’t required
 - Potential project to collaborate with the railroad to do testing of this
- Solar panels
 - Trying to deal with now
 - Tesla batteries – if they have a problem – it’s chernoble
 - Solar bylaw does not exist
 - Next generation batteries
- Water system
 - Expanding water supply – capturing and storing water
 - Rainwater collection or rain barrel program
 - Town could sell the rain barrels or do some education campaign
 - Town sump pump program
 - Milford will pay to have sump pump connected to drainage system
 - Underway – infiltration I and i
 - Work on drains in ditcher street downtown area
- Town Hall – no parking there
 - Needs a lot of renovations
 - Look for an alternate location to have the town hall
 - Does not have historical designation – but does have historical significance
- Communication
 - CodeRed – emergency notification
 - Did a big social media campaign when it first came out
 - But has dwindled
 - Library puts out mailings through the tax bills – could send out a reminder to have folks sign up
 - Social media – managed by Fire Department
 - Fire Department communication system needs updating
 - Radios and towers need upgrading
 - Can’t talk to anyone
 - Hopedale building – can the railroad and fire department share facilities and towers
- Town Water Tower
 - Tree work needs to be done
 - Could be vulnerable to trees falling in the area
 - Base station is up there
 - Highway department manages trees in that area
- Old dump
 - Was properly tapped
 - Testing is there
 - Parks department is doing testing – but might not be a regular schedule
 - Could be a passive recreation resource in the future
 - After a period of time – the methane pipes could be removed

- Do a study to see what can be put there and when – track?
- Power Lines
 - National grid is in process of replacing all of the poles – to increase the amps
 - Above ground poles
 - Bylaw for future development to put wires underground
 - A lot of the poles are right on the curb/street line – can these be pushed back further
 - Removes threat of being hit by vehicles
- Recycling Center
 - Just got smaller
 - Bridge issue – old bridge
 - Needs to be fixed – this would open the space and access to the recycling center
 - Busses is a one-way access
 - Bridge is near Sacred Heart Church
 - Off of thwing?
 - Gate locks off the bridge
 - Bridge should be replaced completely
 - Further south of the floodzones
- Affordable Housing
 - Government help
 - Not a lot of inventory for regular housing
 - Affordable housing in mill area?
- Airport
 - Large privately-owned parcel
- Rosenfelt Avenue
 - Has a lot of wetlands in it, ponds, swampy areas
 - Retention pond in poor condition
 - Could be cleaned up and maintained
 - 2 – 3 more buildings need to be built down there
- Senior Center
 - Located inside the non-profit community house
 - Community housing is owned by
- Town Shelter
 - High school is an option – but no generator
 - Memorial School has a generator but only powers half the building
- The Ledges
 - Main building has generator but other buildings don't
 -
- And Seven Hills
 - Has own generator
- Library needs updating – windows old
 - Utilized a lot in non-covid times
 - Hold events once a month
 - Update facebook and website a lot
- Hopedale Community House is a non-profit
- Community center
 - Got updated
- Draper Gym – private building

- Roof needs work
 - Schools use this
 - If something happened – would have to use the Memorial Gym – but that is small
- Community gardens
 - Interest in putting community gardens somewhere in town
- Skating Facility
- Philips Fields
 - Playground and athletic fields
 - ADA accessible possibly?
 - May have a flooding issue – gets soggy
 - Had an issue with spring soccer
 - Could improve the drainage here
- Busses – as an emergency transportation option
 - Need more commercial licenses
- Bike lanes
 - No bike lanes
 - Interest in putting bike lanes, lots of people bike
- Children Education
 - Have something at the pond as an educational program
- Mill Pond
 - On West Street
 - Town is voting on whether or not the town should own
 - Potential study to see if that pond should be owned
 -
- Hopedale Pond
- Spindleville Pond
 - Not sure who owns the pond
 - Runs along the side of the road – gets litter
 - Highway department cleans up the river
- Parklands
 - What the Town has not is protected
 - Some issues with encroachment
- Trees
 - Going to have an active Tree Warden
 - Need a regular tree management program
- Forest Fires
 - Haven't had a big fire in the parklands in a long time
 - SAFE program – Fire Department goes into the schools to teach fire safety education in the school
 - Limits to what can be done in the parklands
- Invasive Species
 - Don't have a lot of public education on the invasive species and how to manage it
 - Encroach on trees and power lines
- Bats
 - Public education on the good of the bats
 - Bat house campaign
 - High school or boy scout projects

- Wetlands and Mill River
 - Passively managed and taken care of by itself
 - Both will need some active management with potential development
 - Mill River disappears from Hopedale Pond then shows up again
 - Used to be wetlands but is a rail yard now



Hopedale Municipal Vulnerability Preparedness Program

Top Priority Actions Survey

Thank you for participating in Hopedale's Virtual MVP 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/ybtqvubst84l0eu/AADROMmrjoADJ0YgVtUxdakpa?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 Hopedale 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 **Friday, April 16, 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):

☰ ▾	Extreme Heat, Drought, Wildfires, Invasive Species
☰ ▾	Extreme Cold and Winter Storms
☰ ▾	Severe Tropical Storms and Wind
☰ ▾	Flooding

2. Please vote on whether the following actions should be High, Medium, or Low priorities for the town.

	High	Medium	Low
Clean-up river around Spindleville dam AND/OR develop a long-term solution to protect route 16 from flooding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pursue grant funding to upgrade the water management of Draper Mill dam from manual to mechanical	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Road and sidewalk maintenance to address cracking and flooding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Review solar regulations to ensure it encourages roof-top solar in Hopedale	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	High	Medium	Low
Pursue options for expanding and extending water supply through: educational campaigns AND/OR capturing more rainwater (encouraging use of cisterns or rain barrels) AND/OR encouraging greywater use for landscaping AND/OR Construct cisterns at town buildings with large footprints to collect and store roof run-off, and then use water for landscaping purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Renovate town hall to build long-term resiliency and addresses maintenance needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improve interdepartmental communication and collaboration by instituting regular joint meetings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Upgrade fire department communication system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluate vulnerability of water tower to high winds, severe storms, and tree toppling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conduct study to determine options for converting old dump site into a recreational facility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Draft bylaw to mandate underground utility lines for new development AND/OR evaluate whether any areas of town should prioritize moving lines underground in the near-term to prevent outages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	High	Medium	Low
Address storage capacity limit at recycling center by moving buses that park at the facility to another site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Expand affordable housing options	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conduct detailed vulnerability assessment of dams and bridges to climate-related hazards AND/OR prioritize dam repair and maintenance AND/OR evaluate possibility of dam removal as a flood mitigation strategy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conduct education campaign about the importance of, and best practices for, managing vegetation near power lines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conduct town-wide climate vulnerability assessment to understand risks to infrastructure, water supply, potential for flooding, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enact a private well by-law to better regulate water supply town-wide	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

High

Medium

Low

Inventory and identify culverts that will need repairs/replacements to accommodate greater stormwater volume and include nature-based culvert designs as an option at each site AND/OR map all sites that experience roadway flooding and evaluate mitigation options including nature-based options for improving drainage or absorbing runoff



Conduct in-depth planning study of town sewage system to evaluate its vulnerability to changing climate conditions, and its ability to meet future population needs



Update regulatory oversight of private septic systems to require inspection after a certain number of years or when a property is sold, to prevent septic leakage and contamination of ground water



	High	Medium	Low
Develop plan to address lack of access to water by firefighters in certain neighborhoods AND/OR require water collection systems and tanks for new developments that will not be connected to municipal water system AND/OR ensure that the fire department has a plan for water access across town that is climate resilient and incorporates risk of future drought, extreme heat, and ecological changes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Purchase back-up generator for the senior center AND/OR explore options for renewable back-up power sources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Purchase back-up generator for high school AND/OR explore options for renewable back-up power sources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Verify that emergency generators can power the entire elementary school and purchase additional generators if needed AND/OR ensure that back-up power supply can handle air conditioning use AND/OR explore options for renewable back-up power sources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Purchase emergency generators for senior housing owned by the Housing Authority, and work with management to limit environmental risks due to railroad adjacency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	High	Medium	Low
Expand use of library as a communication hub for CodeRed and other climate resilience educational information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Develop a communication plan for climate resilience and emergency planning issues using community organizations like girl/boy scouts, churches, food pantries, and other community organizations or landmarks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Translate climate resilience and emergency planning outreach into all languages spoken by non-English-speaking residents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encourage creation of a citizens' climate preparedness/sustainability committee to advocate for and implement climate mitigation and resilience projects AND/OR recruit members and broadcast committee to individuals that may not be involved in town governance like high school students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Repair structural and rot issues at Little Red Shop museum	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	High	Medium	Low
Contact Mass Historical Commission and discuss whether and how their regulations for maintenance of historic buildings takes climate resilience into account AND/OR advocate for climate-resilient historical preservation techniques	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Invest in a resilient enclosure for Statue of Hope	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pursue grant funding to acquire commercial bus licenses for town residents, which would allow the town to use school buses for evacuation purposes in case of emergencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote environmental education in the local school curriculums AND/OR conduct outreach to K-12 students to get youth involved in town environmental projects, planning, and committees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify emergency shelters in town, designate locations that can be used as cooling centers/areas for residents to go to when needed, and ensure locations of shelters are well-publicized to all residents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Verify that disability facilities (Seven Hills, the Ledges, Evergreen Center) have emergency plans prepared and in place	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	High	Medium	Low
Work with partners to develop a regional shelter site (identify location and equipment needed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advocate regionally for more public transportation that serves Hopedale.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work with partners across watershed to inventory dams, assess climate vulnerability, catalog ownership, and develop a long-term, coordinated plan to address flooding and dam resilience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regularly test air quality near railroad fly ash storage AND/OR investigate railroad emergency plans for the site if it floods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluate possibility of purchasing the Mill Pond and restoring environmental quality AND/OR working with the existing owner to improve water quality and allow public access	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hire a full-time staff member to focus on cleaning up Spindleville Pond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

High

Medium

Low

Conduct a tree inventory AND/OR institute a town-wide, proactive tree management program to remove or trim damaged trees and replant with native and climate-resilient species AND/OR carefully review tree planting plans in new subdivision applications to ensure all new trees are climate-resilient



Develop and enforce a plan for managing invasive species AND/OR conduct education campaign about native species and invasive vegetation management best practices



Conduct education campaign about insect-borne diseases and how residents should prevent standing water AND/OR educate about the importance of bats in managing mosquitos AND/OR engage youth groups or high school students in a service project to build bat houses



	High	Medium	Low
<p>Assess vulnerability of wetlands to impacts from present and future development and ensure Conservation Commission has adequate resources to meet the demand for their regulatory oversight AND/OR strengthen by-laws that enable Conservation Commission to enforce wetlands protection AND/OR draft wetlands protection bylaw</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>Maintain open communication and build relationships with outside organizations and watershed partners focused on environmental issues</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>Restore environmental quality at Hopedale Pond so that it attracts active recreation like swimming, kayaking, and fishing AND/OR restore shoreline landscape to better absorb water, reduce stormwater pollutants and alleviate flooding AND/OR research landscape designs that discourage Canadian Geese from inhabiting pond</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>Ensure long-term town plan is up-to-date and includes future climate risks as well as development pressures</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	High	Medium	Low
Explore feasibility of restoring/daylighting the Mill River downtown near Draper Mill to mitigate flooding and make better use of river as an attractive town asset AND/OR work closely with Mill owner/developer to create a climate-resilient site plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Investigate causes of trash dumping in wetlands and invest in mitigation measures such as additional signage near common dump sites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Educate residents on drought-tolerant landscaping in New England AND/OR convert a prominent town-owned building to drought-tolerant landscaping for demonstration purposes AND/OR educate residents on negative impacts of fertilizers on downstream ecosystems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assess roadways that regularly deal with snow drifts and develop snow drift mitigation plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Update bylaws to encourage green infrastructure and low-impact development practices for new construction or major improvements AND/OR review and update bylaws regulating on-site stormwater retention and drainage, which may be currently ineffective	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	High	Medium	Low
Treat algae growth in Mill Pond and take steps to prevent issue from recurring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Acquire conservation land to protect waterway ecosystems AND/OR create education paths with signage in Parklands AND/OR explore partnerships with land trusts or local watershed association regarding trail creation

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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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
Clean-up river around Spindleville dam AND/OR develop a long-term solution to protect route 16 from flooding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Pursue grant funding to upgrade the water management of Draper Mill dam from manual to mechanical

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Road and sidewalk maintenance to address cracking and flooding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Review solar regulations to ensure it encourages roof-top solar in Hopedale

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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	Short	Long	Ongoing
Pursue options for expanding and extending water supply through: educational campaigns AND/OR capturing more rainwater (encouraging use of cisterns or rain barrels) AND/OR encouraging greywater use for landscaping AND/OR Construct cisterns at town buildings with large footprints to collect and store roof run-off, and then use water for landscaping purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Renovate town hall to build long-term resiliency and addresses maintenance needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improve interdepartmental communication and collaboration by instituting regular joint meetings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Upgrade fire department communication system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluate vulnerability of water tower to high winds, severe storms, and tree toppling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conduct study to determine options for converting old dump site into a recreational facility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Draft bylaw to mandate underground utility lines for new development AND/OR evaluate whether any areas of town should prioritize moving lines underground in the near-term to prevent outages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Short	Long	Ongoing
Address storage capacity limit at recycling center by moving buses that park at the facility to another site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Expand affordable housing options	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conduct detailed vulnerability assessment of dams and bridges to climate-related hazards AND/OR prioritize dam repair and maintenance AND/OR evaluate possibility of dam removal as a flood mitigation strategy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conduct education campaign about the importance of, and best practices for, managing vegetation near power lines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conduct town-wide climate vulnerability assessment to understand risks to infrastructure, water supply, potential for flooding, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enact a private well by-law to better regulate water supply town-wide	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Short

Long

Ongoing

Inventory and identify culverts that will need repairs/replacements to accommodate greater stormwater volume and include nature-based culvert designs as an option at each site AND/OR map all sites that experience roadway flooding and evaluate mitigation options including nature-based options for improving drainage or absorbing runoff



Conduct in-depth planning study of town sewage system to evaluate its vulnerability to changing climate conditions, and its ability to meet future population needs



Update regulatory oversight of private septic systems to require inspection after a certain number of years or when a property is sold, to prevent septic leakage and contamination of ground water



	Short	Long	Ongoing
Develop plan to address lack of access to water by firefighters in certain neighborhoods AND/OR require water collection systems and tanks for new developments that will not be connected to municipal water system AND/OR ensure that the fire department has a plan for water access across town that is climate resilient and incorporates risk of future drought, extreme heat, and ecological changes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Purchase back-up generator for the senior center AND/OR explore options for renewable back-up power sources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Purchase back-up generator for high school AND/OR explore options for renewable back-up power sources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Verify that emergency generators can power the entire elementary school and purchase additional generators if needed AND/OR ensure that back-up power supply can handle air conditioning use AND/OR explore options for renewable back-up power sources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Purchase emergency generators for senior housing owned by the Housing Authority, and work with management to limit environmental risks due to railroad adjacency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Short	Long	Ongoing
Expand use of library as a communication hub for CodeRed and other climate resilience educational information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Develop a communication plan for climate resilience and emergency planning issues using community organizations like girl/boy scouts, churches, food pantries, and other community organizations or landmarks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Translate climate resilience and emergency planning outreach into all languages spoken by non-English-speaking residents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encourage creation of a citizens' climate preparedness/sustainability committee to advocate for and implement climate mitigation and resilience projects AND/OR recruit members and broadcast committee to individuals that may not be involved in town governance like high school students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Repair structural and rot issues at Little Red Shop museum	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Short	Long	Ongoing
Contact Mass Historical Commission and discuss whether and how their regulations for maintenance of historic buildings takes climate resilience into account AND/OR advocate for climate-resilient historical preservation techniques	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Invest in a resilient enclosure for Statue of Hope	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pursue grant funding to acquire commercial bus licenses for town residents, which would allow the town to use school buses for evacuation purposes in case of emergencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote environmental education in the local school curriculums AND/OR conduct outreach to K-12 students to get youth involved in town environmental projects, planning, and committees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify emergency shelters in town, designate locations that can be used as cooling centers/areas for residents to go to when needed, and ensure locations of shelters are well-publicized to all residents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Verify that disability facilities (Seven Hills, the Ledges, Evergreen Center) have emergency plans prepared and in place	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Short	Long	Ongoing
Work with partners to develop a regional shelter site (identify location and equipment needed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advocate regionally for more public transportation that serves Hopedale.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work with partners across watershed to inventory dams, assess climate vulnerability, catalog ownership, and develop a long-term, coordinated plan to address flooding and dam resilience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regularly test air quality near railroad fly ash storage AND/OR investigate railroad emergency plans for the site if it floods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluate possibility of purchasing the Mill Pond and restoring environmental quality AND/OR working with the existing owner to improve water quality and allow public access	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hire a full-time staff member to focus on cleaning up Spindleville Pond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Short	Long	Ongoing
<p>Conduct a tree inventory AND/OR institute a town-wide, proactive tree management program to remove or trim damaged trees and replant with native and climate-resilient species AND/OR carefully review tree planting plans in new subdivision applications to ensure all new trees are climate-resilient</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>Develop and enforce a plan for managing invasive species AND/OR conduct education campaign about native species and invasive vegetation management best practices</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>Conduct education campaign about insect-borne diseases and how residents should prevent standing water AND/OR educate about the importance of bats in managing mosquitos AND/OR engage youth groups or high school students in a service project to build bat houses</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Short

Long

Ongoing

Assess vulnerability of wetlands to impacts from present and future development and ensure Conservation Commission has adequate resources to meet the demand for their regulatory oversight AND/OR strengthen by-laws that enable Conservation Commission to enforce wetlands protection AND/OR draft wetlands protection bylaw



Maintain open communication and build relationships with outside organizations and watershed partners focused on environmental issues



Restore environmental quality at Hopedale Pond so that it attracts active recreation like swimming, kayaking, and fishing AND/OR restore shoreline landscape to better absorb water, reduce stormwater pollutants and alleviate flooding AND/OR research landscape designs that discourage Canadian Geese from inhabiting pond



Ensure long-term town plan is up-to-date and includes future climate risks as well as development pressures



	Short	Long	Ongoing
Explore feasibility of restoring/daylighting the Mill River downtown near Draper Mill to mitigate flooding and make better use of river as an attractive town asset AND/OR work closely with Mill owner/developer to create a climate-resilient site plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Investigate causes of trash dumping in wetlands and invest in mitigation measures such as additional signage near common dump sites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Educate residents on drought-tolerant landscaping in New England AND/OR convert a prominent town-owned building to drought-tolerant landscaping for demonstration purposes AND/OR educate residents on negative impacts of fertilizers on downstream ecosystems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assess roadways that regularly deal with snow drifts and develop snow drift mitigation plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Update bylaws to encourage green infrastructure and low-impact development practices for new construction or major improvements AND/OR review and update bylaws regulating on-site stormwater retention and drainage, which may be currently ineffective	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Short	Long	Ongoing
Treat algae growth in Mill Pond and take steps to prevent issue from recurring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Acquire conservation land to protect waterway ecosystems AND/OR create education paths with signage in Parklands AND/OR explore partnerships with land trusts or local watershed association regarding trail creation

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

- Clean-up river around Spindleville dam AND/OR develop a long-term solution to protect route 16 from flooding
- Pursue grant funding to upgrade the water management of Draper Mill dam from manual to mechanical
- Road and sidewalk maintenance to address cracking and flooding
- Review solar regulations to ensure it encourages roof-top solar in Hopedale
- Conduct detailed vulnerability assessment of dams and bridges to climate-related hazards AND/OR prioritize dam repair and maintenance AND/OR evaluate possibility of dam removal as a flood mitigation strategy
- Conduct education campaign about the importance of, and best practices for, managing vegetation near power lines
- Conduct town-wide climate vulnerability assessment to understand risks to infrastructure, water supply, potential for flooding, etc.
- Enact a private well by-law to better regulate water supply town-wide

- Pursue options for expanding and extending water supply through: educational campaigns AND/OR capturing more rainwater (encouraging use of cisterns or rain barrels) AND/OR encouraging greywater use for landscaping AND/OR Construct cisterns at town buildings with large footprints to collect and store roof run-off, and then use water for landscaping purposes
- Renovate town hall to build long-term resiliency and addresses maintenance needs
- Improve interdepartmental communication and collaboration by instituting regular joint meetings
- Upgrade fire department communication system
- Evaluate vulnerability of water tower to high winds, severe storms, and tree toppling
- Conduct study to determine options for converting old dump site into a recreational facility
- Draft bylaw to mandate underground utility lines for new development AND/OR evaluate whether any areas of town should prioritize moving lines underground in the near-term to prevent outages
- Address storage capacity limit at recycling center by moving buses that park at the facility to another site
- Expand affordable housing options
- Inventory and identify culverts that will need repairs/replacements to accommodate greater stormwater volume and include nature-based culvert designs as an option at each site AND/OR map all sites that experience roadway flooding and evaluate mitigation options including nature-based options for improving drainage or absorbing runoff
- Conduct in-depth planning study of town sewage system to evaluate its vulnerability to changing climate conditions, and its ability to meet future population needs
- Update regulatory oversight of private septic systems to require inspection after a certain number of years or when a property is sold, to prevent septic leakage and contamination of ground water
- Develop plan to address lack of access to water by firefighters in certain neighborhoods AND/OR require water collection systems and tanks for new developments that will not be connected to municipal water system AND/OR ensure that the fire department has a plan for water access across town that is climate resilient and incorporates risk of future drought, extreme heat, and ecological changes
- Purchase back-up generator for the senior center AND/OR explore options for renewable back-up power sources

- Purchase back-up generator for high school AND/OR explore options for renewable back-up power sources
- Verify that emergency generators can power the entire elementary school and purchase additional generators if needed AND/OR ensure that back-up power supply can handle air conditioning use AND/OR explore options for renewable back-up power sources
- Purchase emergency generators for senior housing owned by the Housing Authority, and work with management to limit environmental risks due to railroad adjacency

Other (please specify)

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

- Expand use of library as a communication hub for CodeRed and other climate resilience educational information
- Develop a communication plan for climate resilience and emergency planning issues using community organizations like girl/boy scouts, churches, food pantries, and other community organizations or landmarks
- Pursue grant funding to acquire commercial bus licenses for town residents, which would allow the town to use school buses for evacuation purposes in case of emergencies
- Promote environmental education in the local school curriculums AND/OR conduct outreach to K-12 students to get youth involved in town environmental projects, planning, and committees

- Translate climate resilience and emergency planning outreach into all languages spoken by non-English-speaking residents
- Encourage creation of a citizens' climate preparedness/sustainability committee to advocate for and implement climate mitigation and resilience projects AND/OR recruit members and broadcast committee to individuals that may not be involved in town governance like high school students
- Repair structural and rot issues at Little Red Shop museum
- Contact Mass Historical Commission and discuss whether and how their regulations for maintenance of historic buildings takes climate resilience into account AND/OR advocate for climate-resilient historical preservation techniques
- Invest in a resilient enclosure for Statue of Hope
- Other (please specify)

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

- Work with partners across watershed to inventory dams, assess climate vulnerability, catalog ownership, and develop a long-term, coordinated plan to address flooding and dam resilience

- Regularly test air quality near railroad fly ash storage AND/OR investigate railroad emergency plans for the site if it floods
- Evaluate possibility of purchasing the Mill Pond and restoring environmental quality AND/OR working with the existing owner to improve water quality and allow public access
- Hire a full-time staff member to focus on cleaning up Spindleville Pond
- Conduct a tree inventory AND/OR institute a town-wide, proactive tree management program to remove or trim damaged trees and replant with native and climate-resilient species AND/OR carefully review tree planting plans in new subdivision applications to ensure all new trees are climate-resilient
- Develop and enforce a plan for managing invasive species AND/OR conduct education campaign about native species and invasive vegetation management best practices
- Conduct education campaign about insect-borne diseases and how residents should prevent standing water AND/OR educate about the importance of bats in managing mosquitos AND/OR engage youth groups or high school students in a service project to build bat houses
- Restore environmental quality at Hopedale Pond so that it attracts active recreation like swimming, kayaking, and fishing AND/OR restore shoreline landscape to better absorb water, reduce stormwater pollutants and alleviate flooding AND/OR research landscape designs that discourage Canadian Geese from inhabiting pond
- Ensure long-term town plan is up-to-date and includes future climate risks as well as development pressures
- Explore feasibility of restoring/daylighting the Mill River downtown near Draper Mill to mitigate flooding and make better use of river as an attractive town asset AND/OR work closely with Mill owner/developer to create a climate-resilient site plan
- Investigate causes of trash dumping in wetlands and invest in mitigation measures such as additional signage near common dump sites
- Educate residents on drought-tolerant landscaping in New England AND/OR convert a prominent town-owned building to drought-tolerant landscaping for demonstration purposes AND/OR educate residents on negative impacts of fertilizers on downstream ecosystems
- Assess roadways that regularly deal with snow drifts and develop snow drift mitigation plan

- Assess vulnerability of wetlands to impacts from present and future development and ensure Conservation Commission has adequate resources to meet the demand for their regulatory oversight AND/OR strengthen by-laws that enable Conservation Commission to enforce wetlands protection AND/OR draft wetlands protection bylaw
 - Maintain open communication and build relationships with outside organizations and watershed partners focused on environmental issues
 - Other (please specify)
-
- Update bylaws to encourage green infrastructure and low-impact development practices for new construction or major improvements AND/OR review and update bylaws regulating on-site stormwater retention and drainage, which may be currently ineffective
 - Treat algae growth in Mill Pond and take steps to prevent issue from recurring
 - Acquire conservation land to protect waterway ecosystems AND/OR create education paths with signage in Parklands AND/OR explore partnerships with land trusts or local watershed association regarding trail creation

7. Please vote for TWO additional top priority actions that you believe Hopedale 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
Clean-up river around Spindleville dam AND/OR develop a long-term solution to protect route 16 from flooding	<input type="radio"/>	<input type="radio"/>
Pursue grant funding to upgrade the water management of Draper Mill dam from manual to mechanical	<input type="radio"/>	<input type="radio"/>
Road and sidewalk maintenance to address cracking and flooding	<input type="radio"/>	<input type="radio"/>

	Vote 1	Vote 2
Review solar regulations to ensure it encourages roof-top solar in Hopedale	<input type="radio"/>	<input type="radio"/>
Pursue options for expanding and extending water supply through: educational campaigns AND/OR capturing more rainwater (encouraging use of cisterns or rain barrels) AND/OR encouraging greywater use for landscaping AND/OR Construct cisterns at town buildings with large footprints to collect and store roof run-off, and then use water for landscaping purposes	<input type="radio"/>	<input type="radio"/>
Renovate town hall to build long-term resiliency and addresses maintenance needs	<input type="radio"/>	<input type="radio"/>
Improve interdepartmental communication and collaboration by instituting regular joint meetings	<input type="radio"/>	<input type="radio"/>
Upgrade fire department communication system	<input type="radio"/>	<input type="radio"/>
Evaluate vulnerability of water tower to high winds, severe storms, and tree toppling	<input type="radio"/>	<input type="radio"/>
Conduct study to determine options for converting old dump site into a recreational facility	<input type="radio"/>	<input type="radio"/>

Vote 1

Vote 2

Draft bylaw to mandate underground utility lines for new development AND/OR evaluate whether any areas of town should prioritize moving lines underground in the near-term to prevent outages

Address storage capacity limit at recycling center by moving buses that park at the facility to another site

Expand affordable housing options

Conduct detailed vulnerability assessment of dams and bridges to climate-related hazards AND/OR prioritize dam repair and maintenance AND/OR evaluate possibility of dam removal as a flood mitigation strategy

Conduct education campaign about the importance of, and best practices for, managing vegetation near power lines

Conduct town-wide climate vulnerability assessment to understand risks to infrastructure, water supply, potential for flooding, etc.

Enact a private well by-law to better regulate water supply town-wide

Vote 1

Vote 2

Inventory and identify culverts that will need repairs/replacements to accommodate greater stormwater volume and include nature-based culvert designs as an option at each site AND/OR map all sites that experience roadway flooding and evaluate mitigation options including nature-based options for improving drainage or absorbing runoff

Conduct in-depth planning study of town sewage system to evaluate its vulnerability to changing climate conditions, and its ability to meet future population needs

Update regulatory oversight of private septic systems to require inspection after a certain number of years or when a property is sold, to prevent septic leakage and contamination of ground water

Vote 1

Vote 2

Develop plan to address lack of access to water by firefighters in certain neighborhoods AND/OR require water collection systems and tanks for new developments that will not be connected to municipal water system AND/OR ensure that the fire department has a plan for water access across town that is climate resilient and incorporates risk of future drought, extreme heat, and ecological changes



Purchase back-up generator for the senior center AND/OR explore options for renewable back-up power sources



Purchase back-up generator for high school AND/OR explore options for renewable back-up power sources



Verify that emergency generators can power the entire elementary school and purchase additional generators if needed AND/OR ensure that back-up power supply can handle air conditioning use AND/OR explore options for renewable back-up power sources



Purchase emergency generators for senior housing owned by the Housing Authority, and work with management to limit environmental risks due to railroad adjacency



Vote 1

Vote 2

Expand use of library as a communication hub for CodeRed and other climate resilience educational information

Develop a communication plan for climate resilience and emergency planning issues using community organizations like girl/boy scouts, churches, food pantries, and other community organizations or landmarks

Translate climate resilience and emergency planning outreach into all languages spoken by non-English-speaking residents

Encourage creation of a citizens' climate preparedness/sustainability committee to advocate for and implement climate mitigation and resilience projects AND/OR recruit members and broadcast committee to individuals that may not be involved in town governance like high school students

Repair structural and rot issues at Little Red Shop museum

Vote 1

Vote 2

Contact Mass Historical Commission and discuss whether and how their regulations for maintenance of historic buildings takes climate resilience into account AND/OR advocate for climate-resilient historical preservation techniques

Invest in a resilient enclosure for Statue of Hope

Pursue grant funding to acquire commercial bus licenses for town residents, which would allow the town to use school buses for evacuation purposes in case of emergencies

Promote environmental education in the local school curriculums AND/OR conduct outreach to K-12 students to get youth involved in town environmental projects, planning, and committees

Identify emergency shelters in town, designate locations that can be used as cooling centers/areas for residents to go to when needed, and ensure locations of shelters are well-publicized to all residents

Verify that disability facilities (Seven Hills, the Ledges, Evergreen Center) have emergency plans prepared and in place

Vote 1

Vote 2

Work with partners to develop a regional shelter site (identify location and equipment needed)

Advocate regionally for more public transportation that serves Hopedale.

Work with partners across watershed to inventory dams, assess climate vulnerability, catalog ownership, and develop a long-term, coordinated plan to address flooding and dam resilience

Regularly test air quality near railroad fly ash storage AND/OR investigate railroad emergency plans for the site if it floods

Evaluate possibility of purchasing the Mill Pond and restoring environmental quality AND/OR working with the existing owner to improve water quality and allow public access

Hire a full-time staff member to focus on cleaning up Spindleville Pond

Vote 1

Vote 2

Conduct a tree inventory AND/OR institute a town-wide, proactive tree management program to remove or trim damaged trees and replant with native and climate-resilient species AND/OR carefully review tree planting plans in new subdivision applications to ensure all new trees are climate-resilient



Develop and enforce a plan for managing invasive species AND/OR conduct education campaign about native species and invasive vegetation management best practices



Conduct education campaign about insect-borne diseases and how residents should prevent standing water AND/OR educate about the importance of bats in managing mosquitos AND/OR engage youth groups or high school students in a service project to build bat houses



Vote 1

Vote 2

Assess vulnerability of wetlands to impacts from present and future development and ensure Conservation Commission has adequate resources to meet the demand for their regulatory oversight AND/OR strengthen by-laws that enable Conservation Commission to enforce wetlands protection AND/OR draft wetlands protection bylaw

Maintain open communication and build relationships with outside organizations and watershed partners focused on environmental issues

Restore environmental quality at Hopedale Pond so that it attracts active recreation like swimming, kayaking, and fishing AND/OR restore shoreline landscape to better absorb water, reduce stormwater pollutants and alleviate flooding AND/OR research landscape designs that discourage Canadian Geese from inhabiting pond

Ensure long-term town plan is up-to-date and includes future climate risks as well as development pressures

Vote 1

Vote 2

Explore feasibility of restoring/daylighting the Mill River downtown near Draper Mill to mitigate flooding and make better use of river as an attractive town asset AND/OR work closely with Mill owner/developer to create a climate-resilient site plan

Investigate causes of trash dumping in wetlands and invest in mitigation measures such as additional signage near common dump sites

Educate residents on drought-tolerant landscaping in New England AND/OR convert a prominent town-owned building to drought-tolerant landscaping for demonstration purposes AND/OR educate residents on negative impacts of fertilizers on downstream ecosystems

Assess roadways that regularly deal with snow drifts and develop snow drift mitigation plan

Update bylaws to encourage green infrastructure and low-impact development practices for new construction or major improvements AND/OR review and update bylaws regulating on-site stormwater retention and drainage, which may be currently ineffective

Vote 1

Vote 2

Treat algae growth in Mill Pond and take steps to prevent issue from recurring

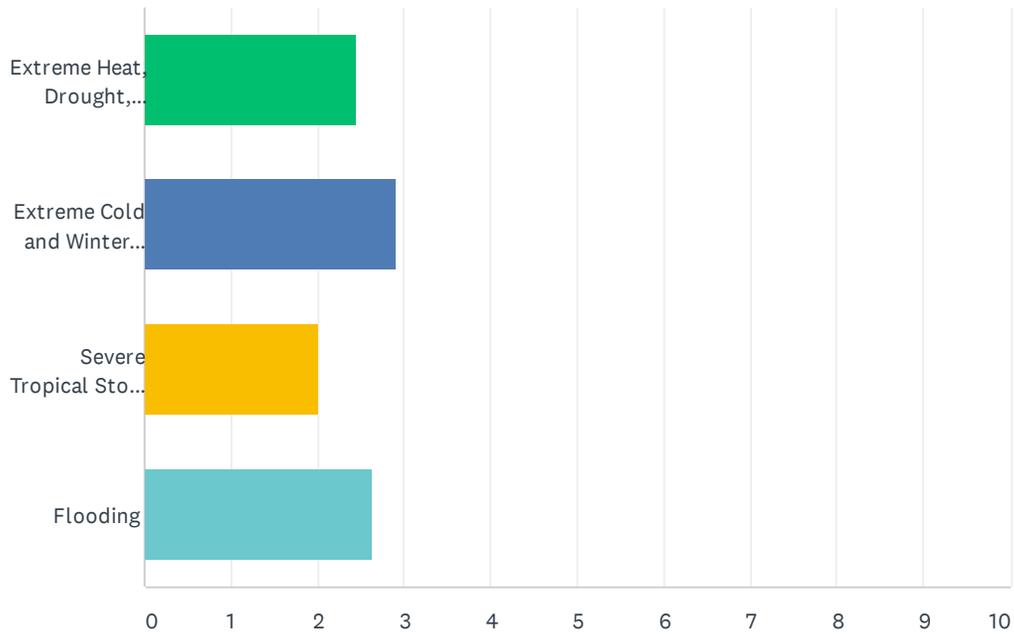
Acquire conservation land to protect waterway ecosystems AND/OR create education paths with signage in Parklands AND/OR explore partnerships with land trusts or local watershed association regarding trail creation

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 Hopedale'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):

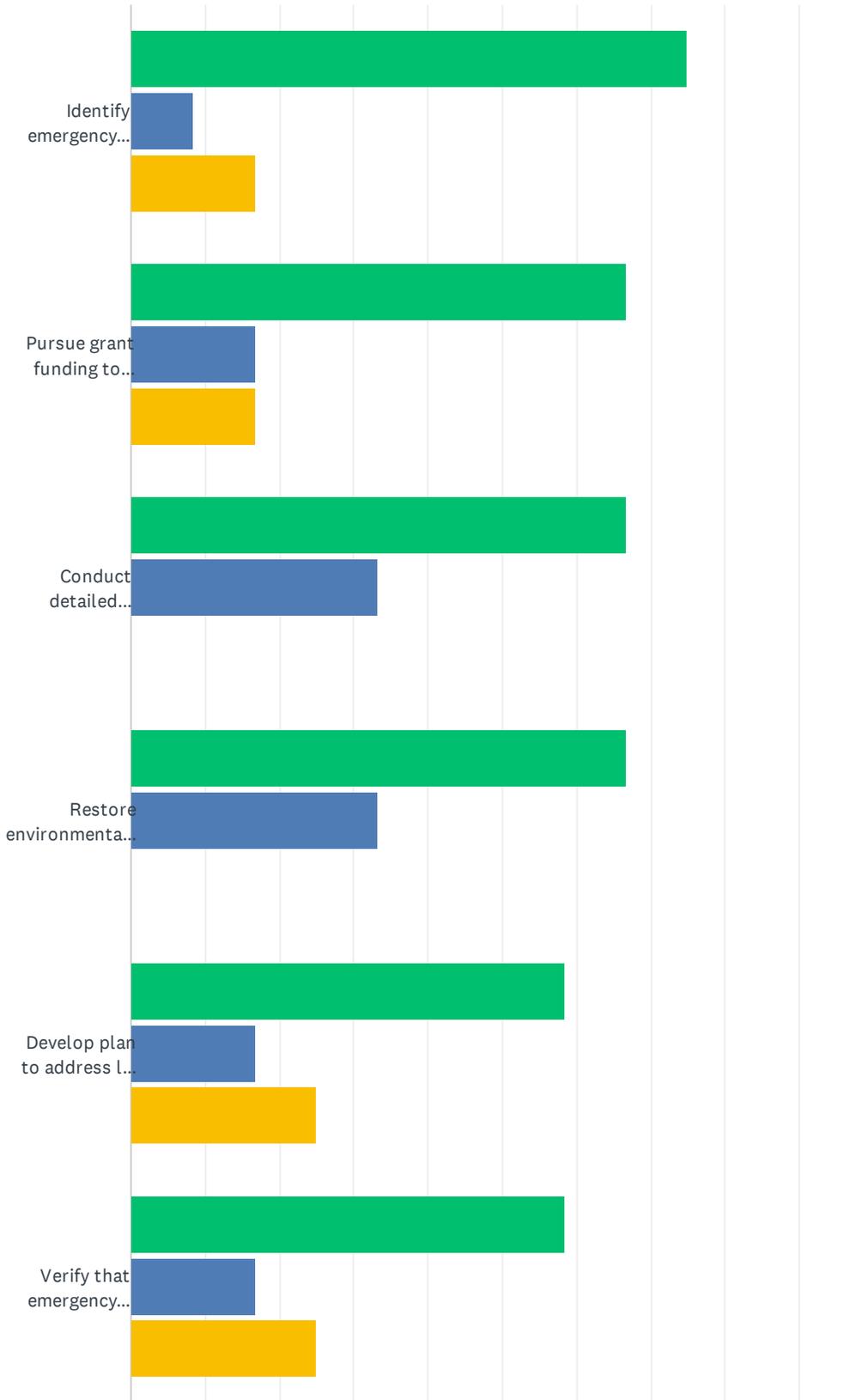
Answered: 11 Skipped: 1



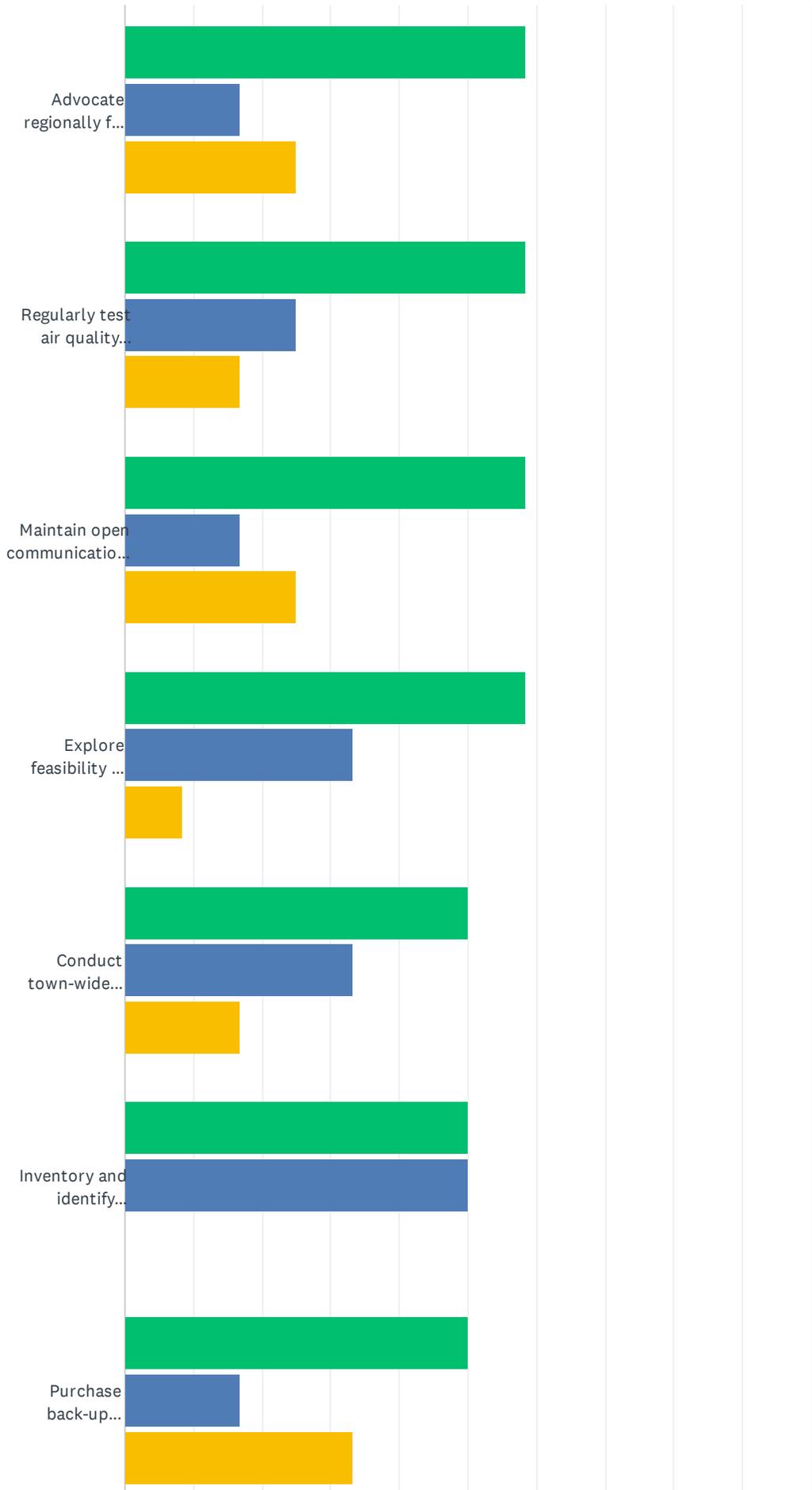
	1	2	3	4	TOTAL	SCORE
Extreme Heat, Drought, Wildfires, Invasive Species	33.33% 3	11.11% 1	22.22% 2	33.33% 3	9	2.44
Extreme Cold and Winter Storms	20.00% 2	60.00% 6	10.00% 1	10.00% 1	10	2.90
Severe Tropical Storms and Wind	10.00% 1	20.00% 2	30.00% 3	40.00% 4	10	2.00
Flooding	36.36% 4	9.09% 1	36.36% 4	18.18% 2	11	2.64

Q2 Please vote on whether the following actions should be High, Medium, or Low priorities for the town.

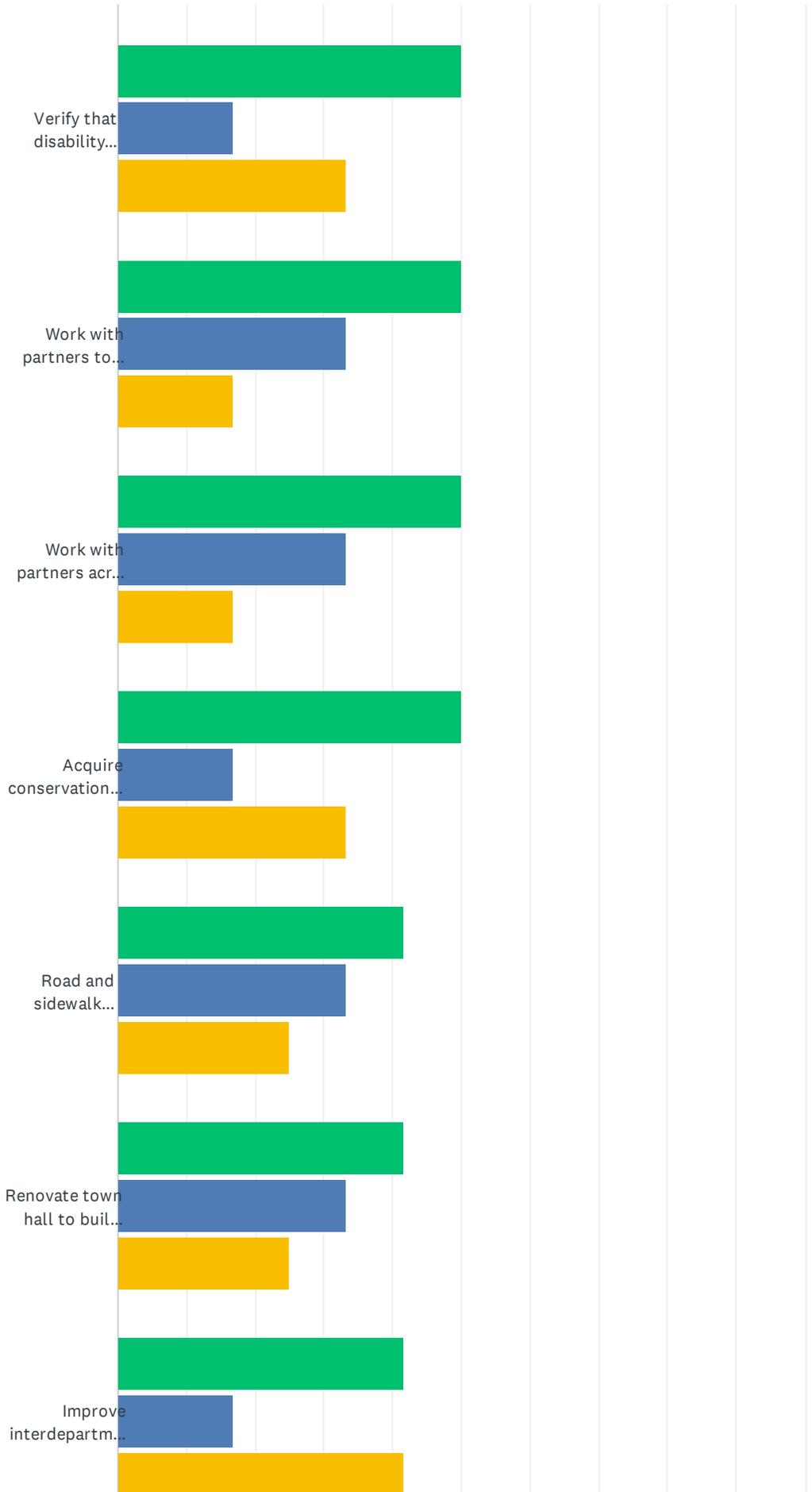
Answered: 12 Skipped: 0



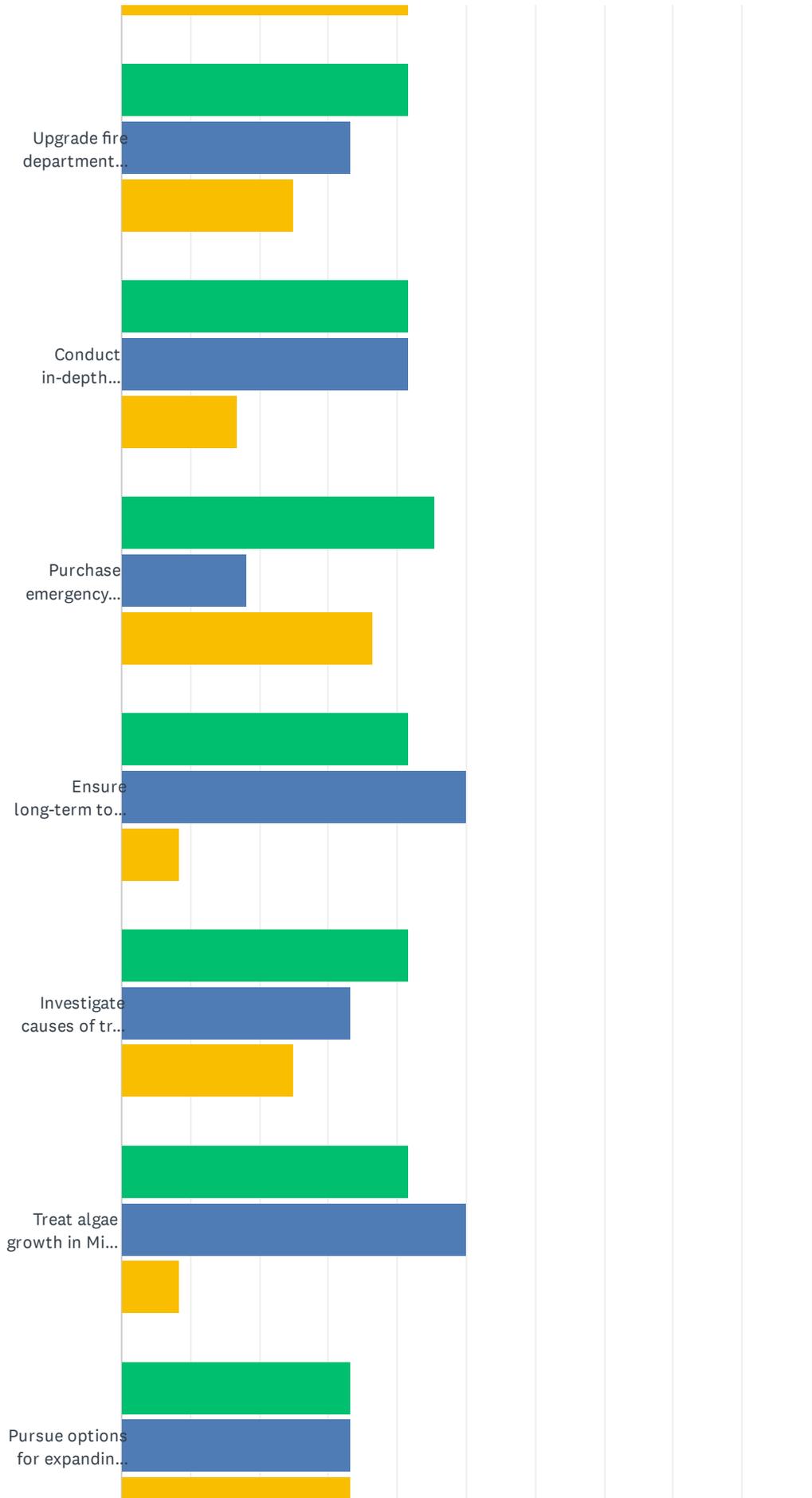
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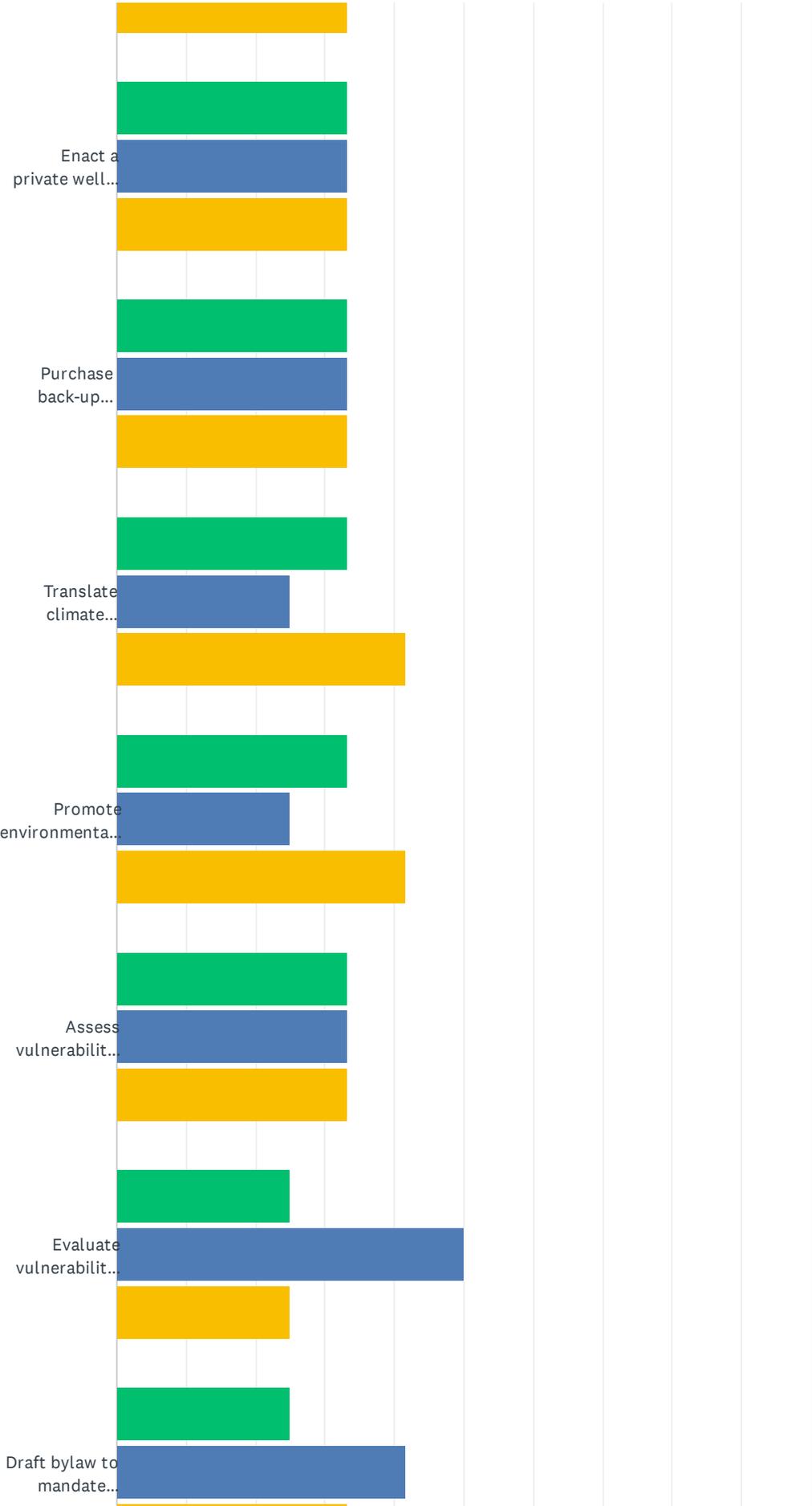
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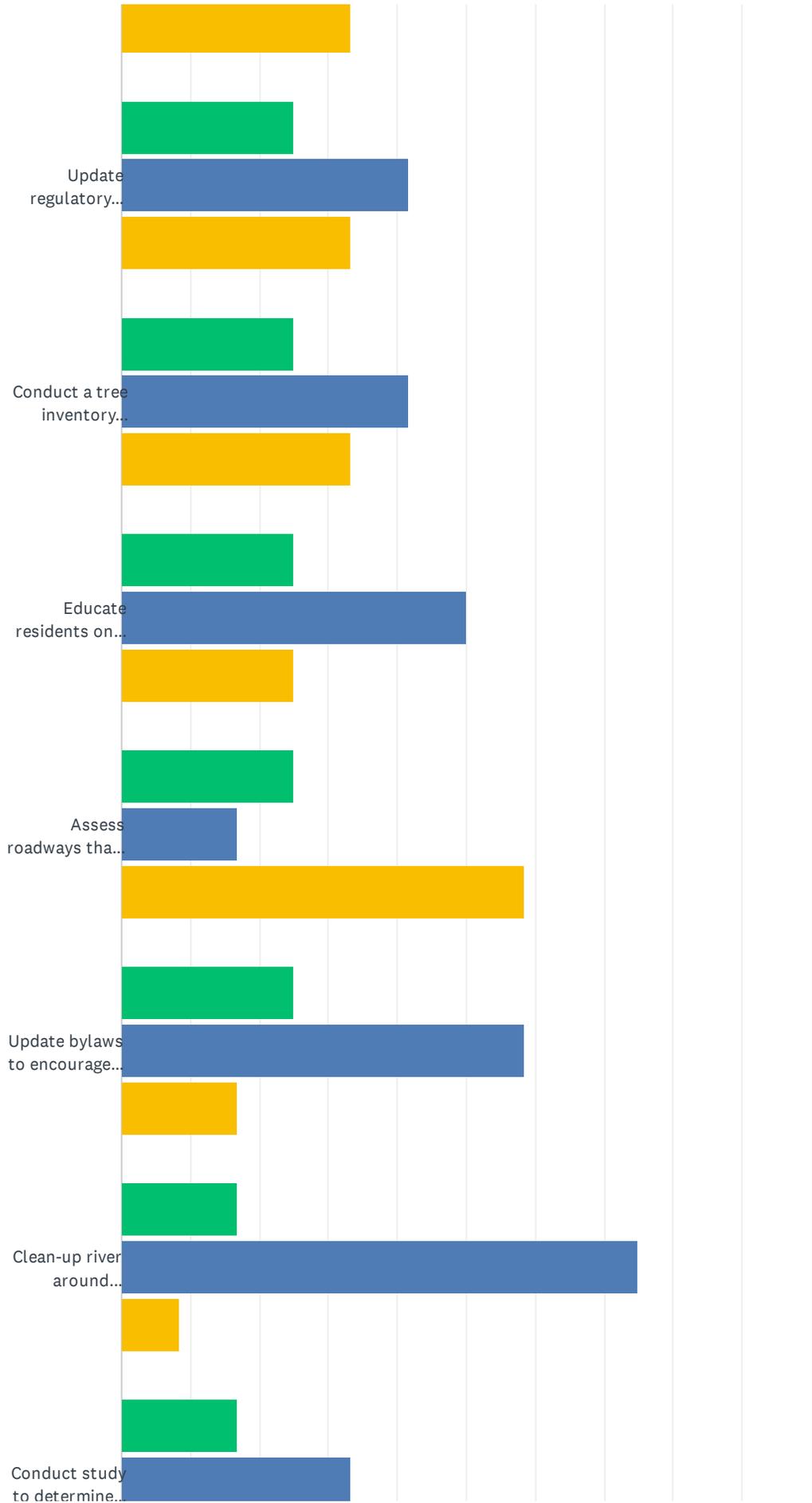
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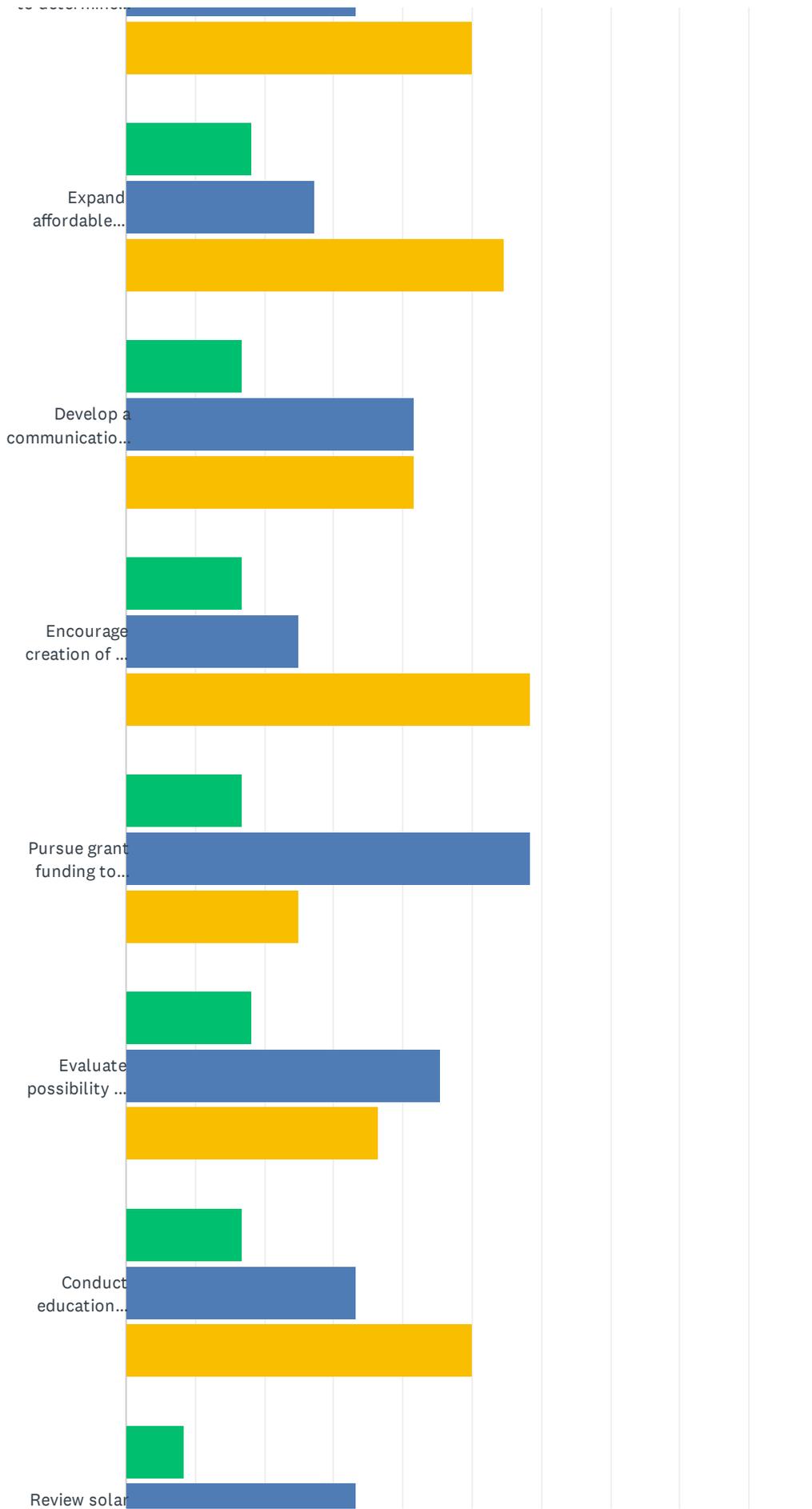
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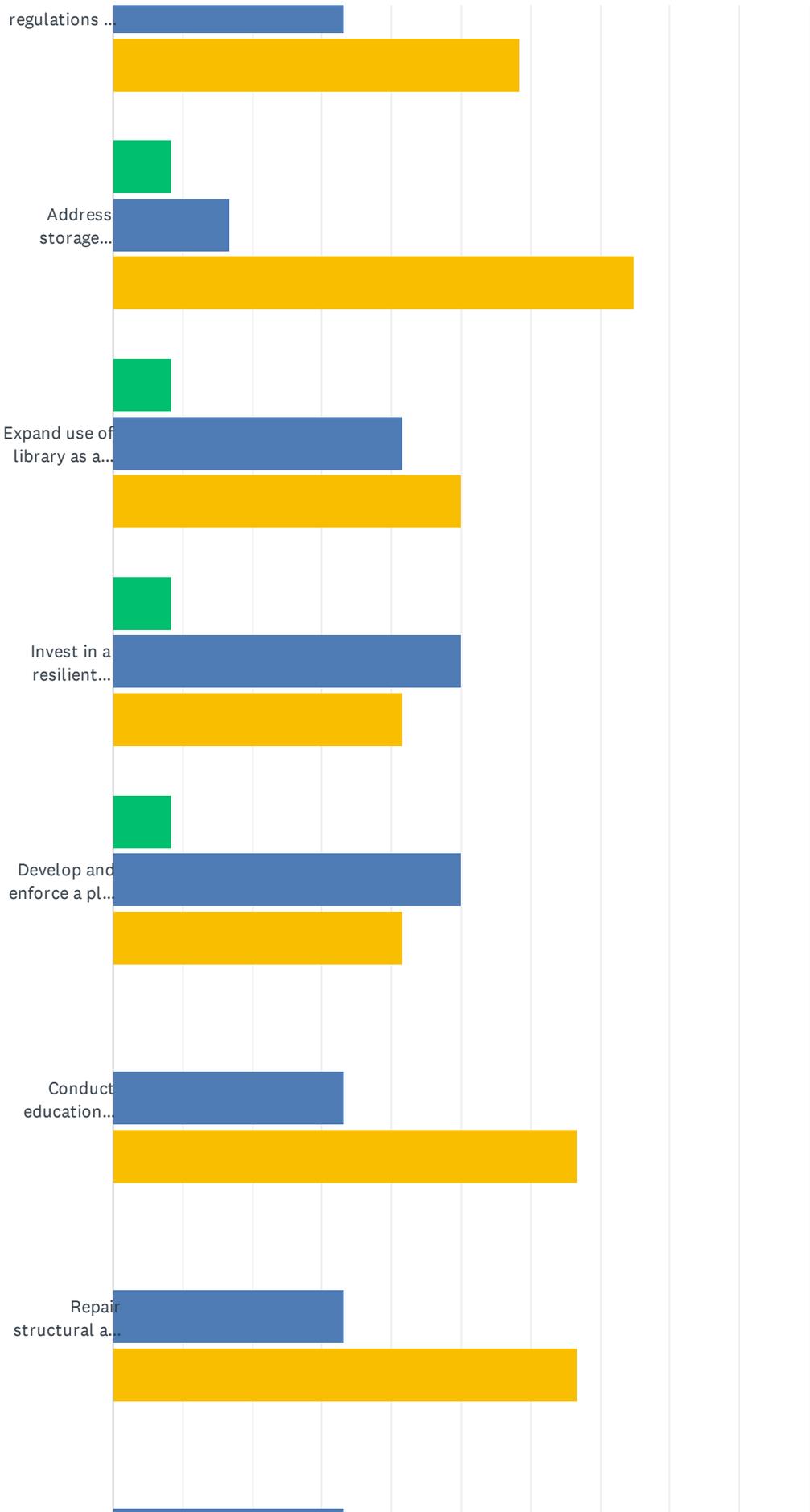
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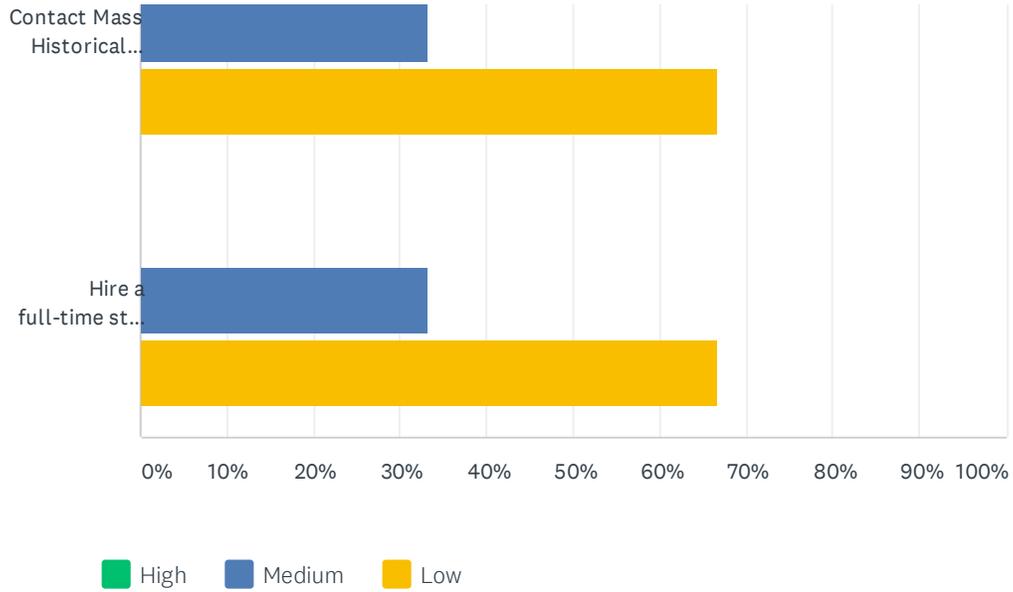
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	HIGH	MEDIUM	LOW	TOTAL
Identify emergency shelters in town, designate locations that can be used as cooling centers/areas for residents to go to when needed, and ensure locations of shelters are well-publicized to all residents	75.00% 9	8.33% 1	16.67% 2	12
Pursue grant funding to upgrade the water management of Draper Mill dam from manual to mechanical	66.67% 8	16.67% 2	16.67% 2	12
Conduct detailed vulnerability assessment of dams and bridges to climate-related hazards AND/OR prioritize dam repair and maintenance AND/OR evaluate possibility of dam removal as a flood mitigation strategy	66.67% 8	33.33% 4	0.00% 0	12
Restore environmental quality at Hopedale Pond so that it attracts active recreation like swimming, kayaking, and fishing AND/OR restore shoreline landscape to better absorb water, reduce stormwater pollutants and alleviate flooding AND/OR research landscape designs that discourage Canadian Geese from inhabiting pond	66.67% 8	33.33% 4	0.00% 0	12
Develop plan to address lack of access to water by firefighters in certain neighborhoods AND/OR require water collection systems and tanks for new developments that will not be connected to municipal water system AND/OR ensure that the fire department has a plan for water access across town that is climate resilient and incorporates risk of future drought, extreme heat, and ecological changes	58.33% 7	16.67% 2	25.00% 3	12
Verify that emergency generators can power the entire elementary school and purchase additional generators if needed AND/OR ensure that back-up power supply can handle air conditioning use AND/OR explore options for renewable back-up power sources	58.33% 7	16.67% 2	25.00% 3	12
Advocate regionally for more public transportation that serves Hopedale.	58.33% 7	16.67% 2	25.00% 3	12
Regularly test air quality near railroad fly ash storage AND/OR investigate railroad emergency plans for the site if it floods	58.33% 7	25.00% 3	16.67% 2	12
Maintain open communication and build relationships with outside organizations and watershed partners focused on environmental issues	58.33% 7	16.67% 2	25.00% 3	12
Explore feasibility of restoring/daylighting the Mill River downtown near Draper Mill to mitigate flooding and make better use of river as an attractive town asset AND/OR work closely with Mill owner/developer to create a climate-resilient site plan	58.33% 7	33.33% 4	8.33% 1	12
Conduct town-wide climate vulnerability assessment to understand risks to infrastructure, water supply, potential for flooding, etc.	50.00% 6	33.33% 4	16.67% 2	12
Inventory and identify culverts that will need repairs/replacements to accommodate greater stormwater volume and include nature-based culvert designs as an option at each site AND/OR map all sites that experience roadway flooding and evaluate mitigation options including nature-based options for improving drainage or absorbing runoff	50.00% 6	50.00% 6	0.00% 0	12
Purchase back-up generator for high school AND/OR explore options for renewable back-up power sources	50.00% 6	16.67% 2	33.33% 4	12
Verify that disability facilities (Seven Hills, the Ledges, Evergreen Center) have emergency plans prepared and in place	50.00% 6	16.67% 2	33.33% 4	12
Work with partners to develop a regional shelter site (identify location and equipment needed)	50.00% 6	33.33% 4	16.67% 2	12
Work with partners across watershed to inventory dams, assess climate vulnerability, catalog ownership, and develop a long-term, coordinated plan to address flooding and dam resilience	50.00% 6	33.33% 4	16.67% 2	12
Acquire conservation land to protect waterway ecosystems AND/OR create education paths with signage in Parklands AND/OR explore partnerships with land trusts or local watershed association regarding trail creation	50.00% 6	16.67% 2	33.33% 4	12
Road and sidewalk maintenance to address cracking and flooding	41.67% 5	33.33% 4	25.00% 3	12
Renovate town hall to build long-term resiliency and addresses maintenance needs	41.67%	33.33%	25.00%	

Hopedale Municipal Vulnerability Preparedness Program

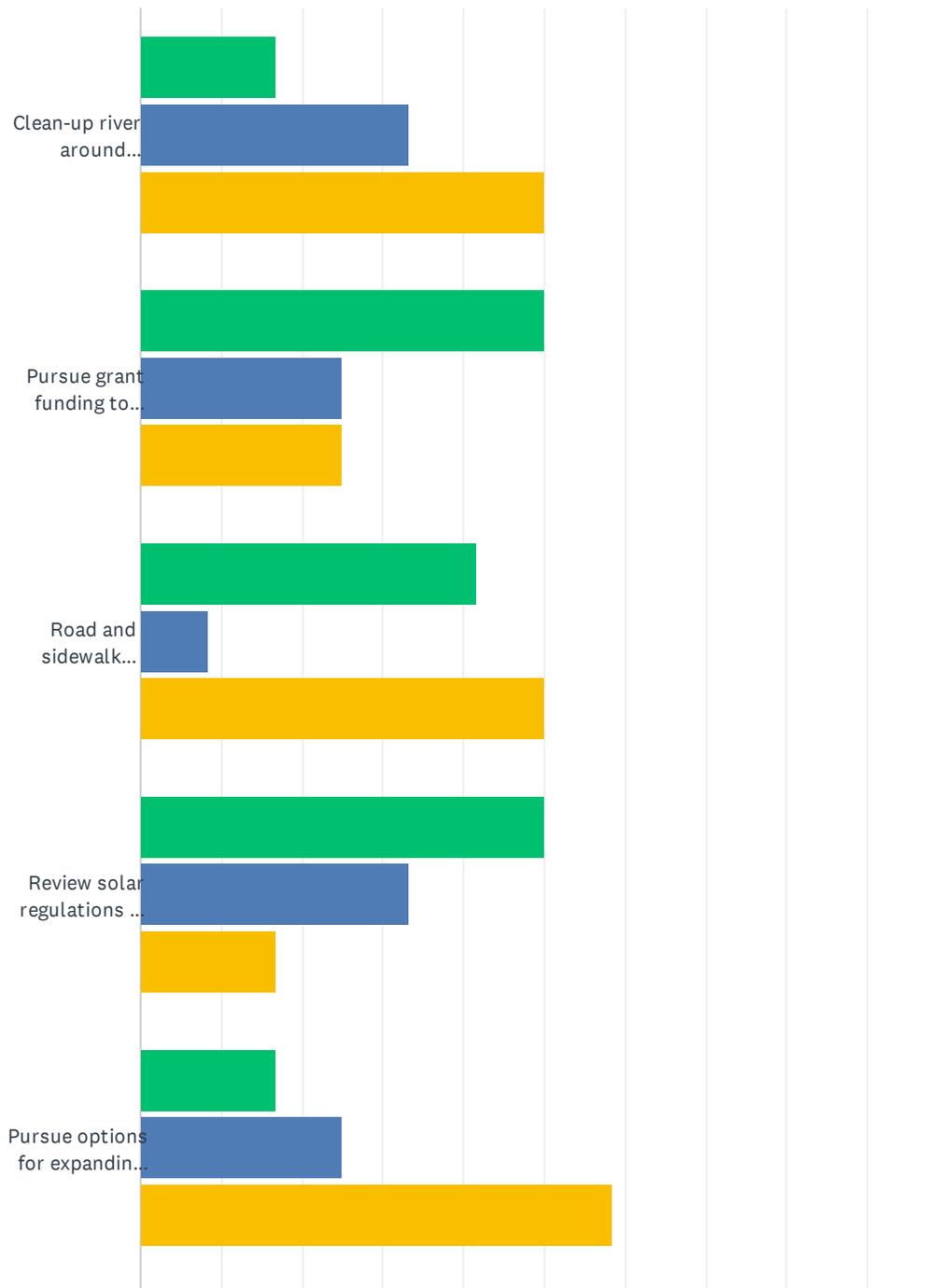
	5	4	3	12
Improve interdepartmental communication and collaboration by instituting regular joint meetings	41.67% 5	16.67% 2	41.67% 5	12
Upgrade fire department communication system	41.67% 5	33.33% 4	25.00% 3	12
Conduct in-depth planning study of town sewage system to evaluate its vulnerability to changing climate conditions, and its ability to meet future population needs	41.67% 5	41.67% 5	16.67% 2	12
Purchase emergency generators for senior housing owned by the Housing Authority, and work with management to limit environmental risks due to railroad adjacency	45.45% 5	18.18% 2	36.36% 4	11
Ensure long-term town plan is up-to-date and includes future climate risks as well as development pressures	41.67% 5	50.00% 6	8.33% 1	12
Investigate causes of trash dumping in wetlands and invest in mitigation measures such as additional signage near common dump sites	41.67% 5	33.33% 4	25.00% 3	12
Treat algae growth in Mill Pond and take steps to prevent issue from recurring	41.67% 5	50.00% 6	8.33% 1	12
Pursue options for expanding and extending water supply through: educational campaigns AND/OR capturing more rainwater (encouraging use of cisterns or rain barrels) AND/OR encouraging greywater use for landscaping AND/OR Construct cisterns at town buildings with large footprints to collect and store roof run-off, and then use water for landscaping purposes	33.33% 4	33.33% 4	33.33% 4	12
Enact a private well by-law to better regulate water supply town-wide	33.33% 4	33.33% 4	33.33% 4	12
Purchase back-up generator for the senior center AND/OR explore options for renewable back-up power sources	33.33% 4	33.33% 4	33.33% 4	12
Translate climate resilience and emergency planning outreach into all languages spoken by non-English-speaking residents	33.33% 4	25.00% 3	41.67% 5	12
Promote environmental education in the local school curriculums AND/OR conduct outreach to K-12 students to get youth involved in town environmental projects, planning, and committees	33.33% 4	25.00% 3	41.67% 5	12
Assess vulnerability of wetlands to impacts from present and future development and ensure Conservation Commission has adequate resources to meet the demand for their regulatory oversight AND/OR strengthen by-laws that enable Conservation Commission to enforce wetlands protection AND/OR draft wetlands protection bylaw	33.33% 4	33.33% 4	33.33% 4	12
Evaluate vulnerability of water tower to high winds, severe storms, and tree toppling	25.00% 3	50.00% 6	25.00% 3	12
Draft bylaw to mandate underground utility lines for new development AND/OR evaluate whether any areas of town should prioritize moving lines underground in the near-term to prevent outages	25.00% 3	41.67% 5	33.33% 4	12
Update regulatory oversight of private septic systems to require inspection after a certain number of years or when a property is sold, to prevent septic leakage and contamination of ground water	25.00% 3	41.67% 5	33.33% 4	12
Conduct a tree inventory AND/OR institute a town-wide, proactive tree management program to remove or trim damaged trees and replant with native and climate-resilient species AND/OR carefully review tree planting plans in new subdivision applications to ensure all new trees are climate-resilient	25.00% 3	41.67% 5	33.33% 4	12
Educate residents on drought-tolerant landscaping in New England AND/OR convert a prominent town-owned building to drought-tolerant landscaping for demonstration purposes AND/OR educate residents on negative impacts of fertilizers on downstream ecosystems	25.00% 3	50.00% 6	25.00% 3	12
Assess roadways that regularly deal with snow drifts and develop snow drift mitigation plan	25.00% 3	16.67% 2	58.33% 7	12
Update bylaws to encourage green infrastructure and low-impact development practices for	25.00%	58.33%	16.67%	

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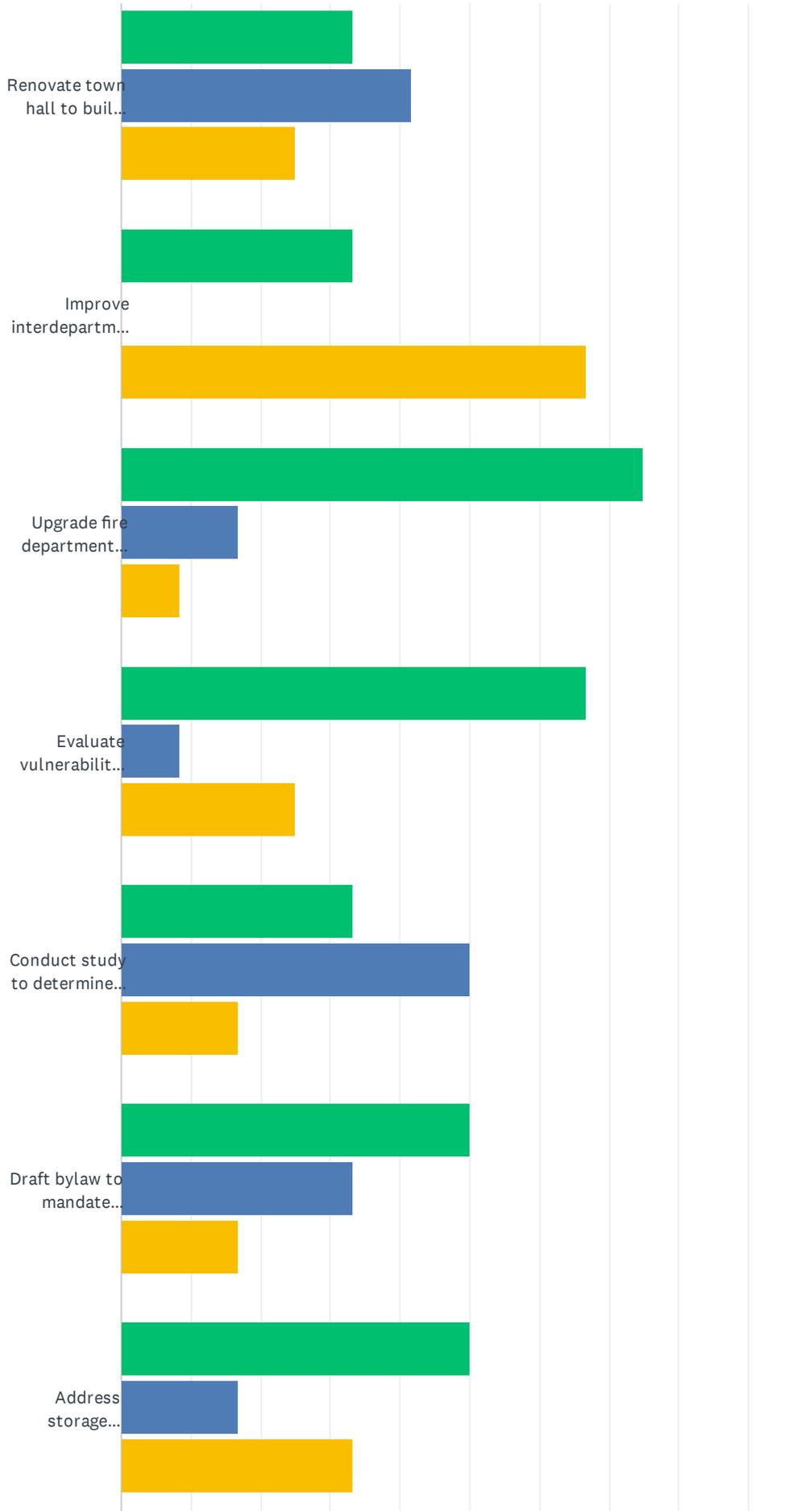
new construction or major improvements AND/OR review and update bylaws regulating on-site stormwater retention and drainage, which may be currently ineffective	3	7	2	12
Clean-up river around Spindleville dam AND/OR develop a long-term solution to protect route 16 from flooding	16.67% 2	75.00% 9	8.33% 1	12
Conduct study to determine options for converting old dump site into a recreational facility	16.67% 2	33.33% 4	50.00% 6	12
Expand affordable housing options	18.18% 2	27.27% 3	54.55% 6	11
Develop a communication plan for climate resilience and emergency planning issues using community organizations like girl/boy scouts, churches, food pantries, and other community organizations or landmarks	16.67% 2	41.67% 5	41.67% 5	12
Encourage creation of a citizens' climate preparedness/sustainability committee to advocate for and implement climate mitigation and resilience projects AND/OR recruit members and broadcast committee to individuals that may not be involved in town governance like high school students	16.67% 2	25.00% 3	58.33% 7	12
Pursue grant funding to acquire commercial bus licenses for town residents, which would allow the town to use school buses for evacuation purposes in case of emergencies	16.67% 2	58.33% 7	25.00% 3	12
Evaluate possibility of purchasing the Mill Pond and restoring environmental quality AND/OR working with the existing owner to improve water quality and allow public access	18.18% 2	45.45% 5	36.36% 4	11
Conduct education campaign about insect-borne diseases and how residents should prevent standing water AND/OR educate about the importance of bats in managing mosquitos AND/OR engage youth groups or high school students in a service project to build bat houses	16.67% 2	33.33% 4	50.00% 6	12
Review solar regulations to ensure it encourages roof-top solar in Hopedale	8.33% 1	33.33% 4	58.33% 7	12
Address storage capacity limit at recycling center by moving buses that park at the facility to another site	8.33% 1	16.67% 2	75.00% 9	12
Expand use of library as a communication hub for CodeRed and other climate resilience educational information	8.33% 1	41.67% 5	50.00% 6	12
Invest in a resilient enclosure for Statue of Hope	8.33% 1	50.00% 6	41.67% 5	12
Develop and enforce a plan for managing invasive species AND/OR conduct education campaign about native species and invasive vegetation management best practices	8.33% 1	50.00% 6	41.67% 5	12
Conduct education campaign about the importance of, and best practices for, managing vegetation near power lines	0.00% 0	33.33% 4	66.67% 8	12
Repair structural and rot issues at Little Red Shop museum	0.00% 0	33.33% 4	66.67% 8	12
Contact Mass Historical Commission and discuss whether and how their regulations for maintenance of historic buildings takes climate resilience into account AND/OR advocate for climate-resilient historical preservation techniques	0.00% 0	33.33% 4	66.67% 8	12
Hire a full-time staff member to focus on cleaning up Spindleville Pond	0.00% 0	33.33% 4	66.67% 8	12

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.

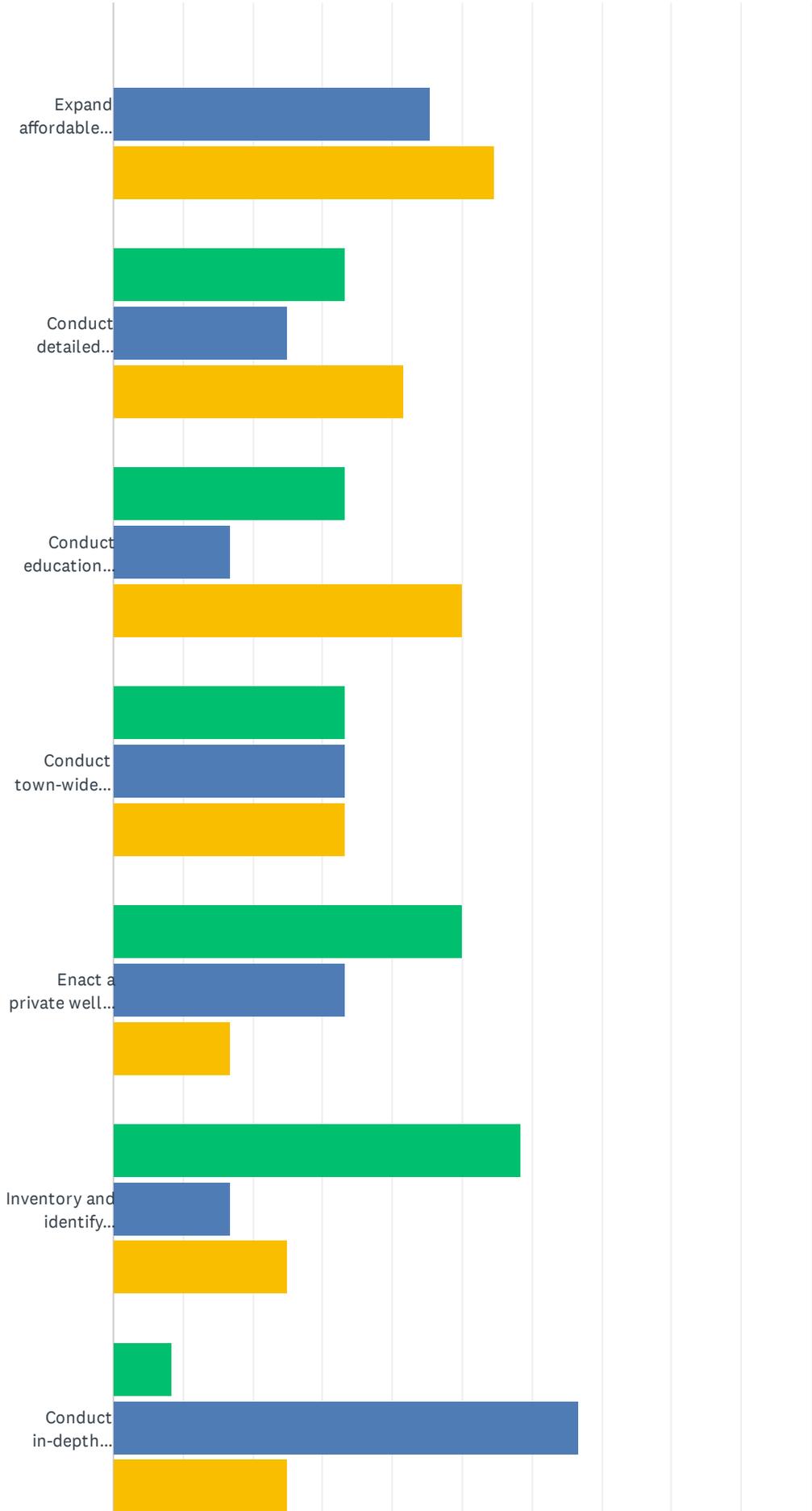
Answered: 12 Skipped: 0



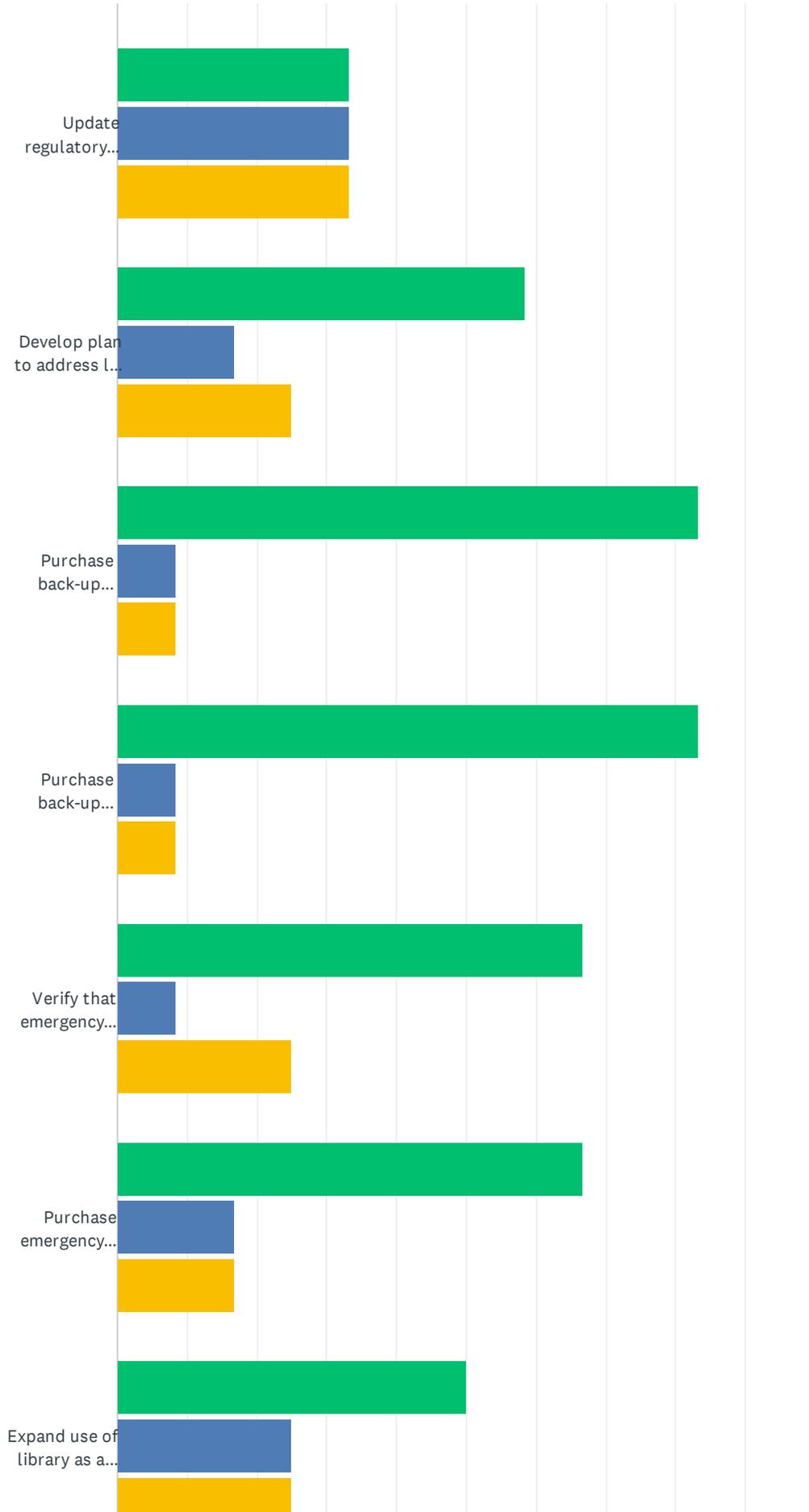
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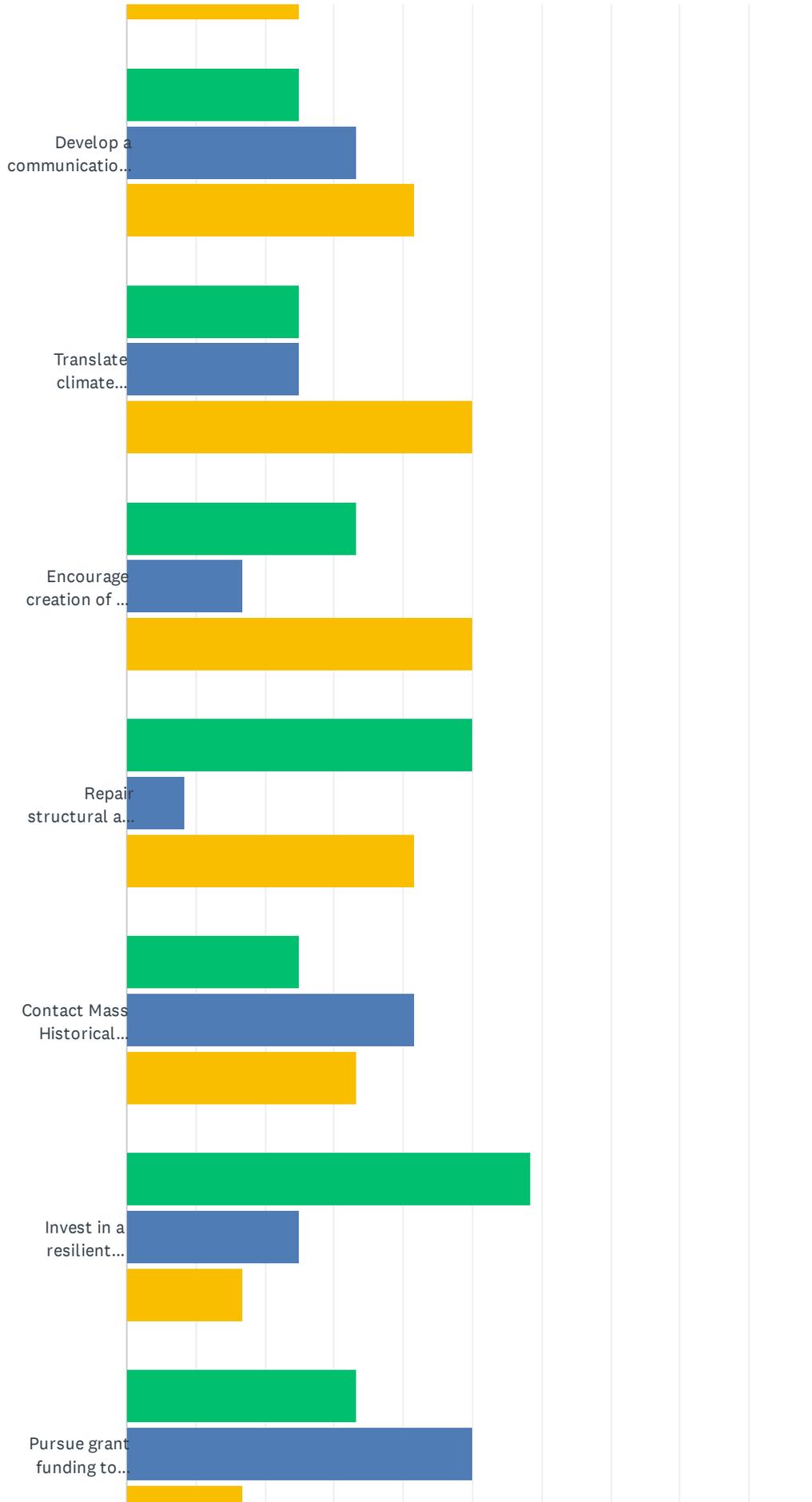
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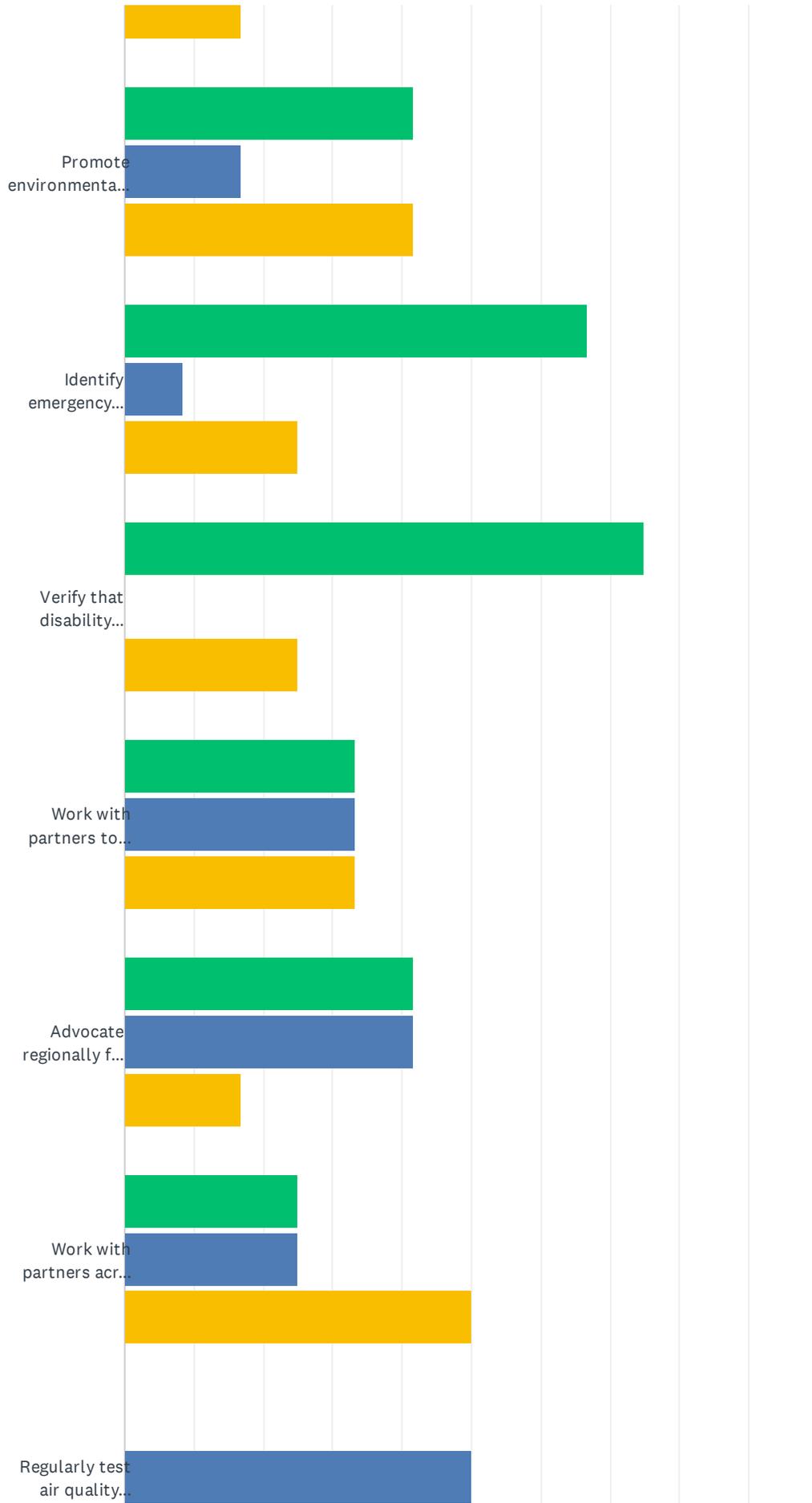
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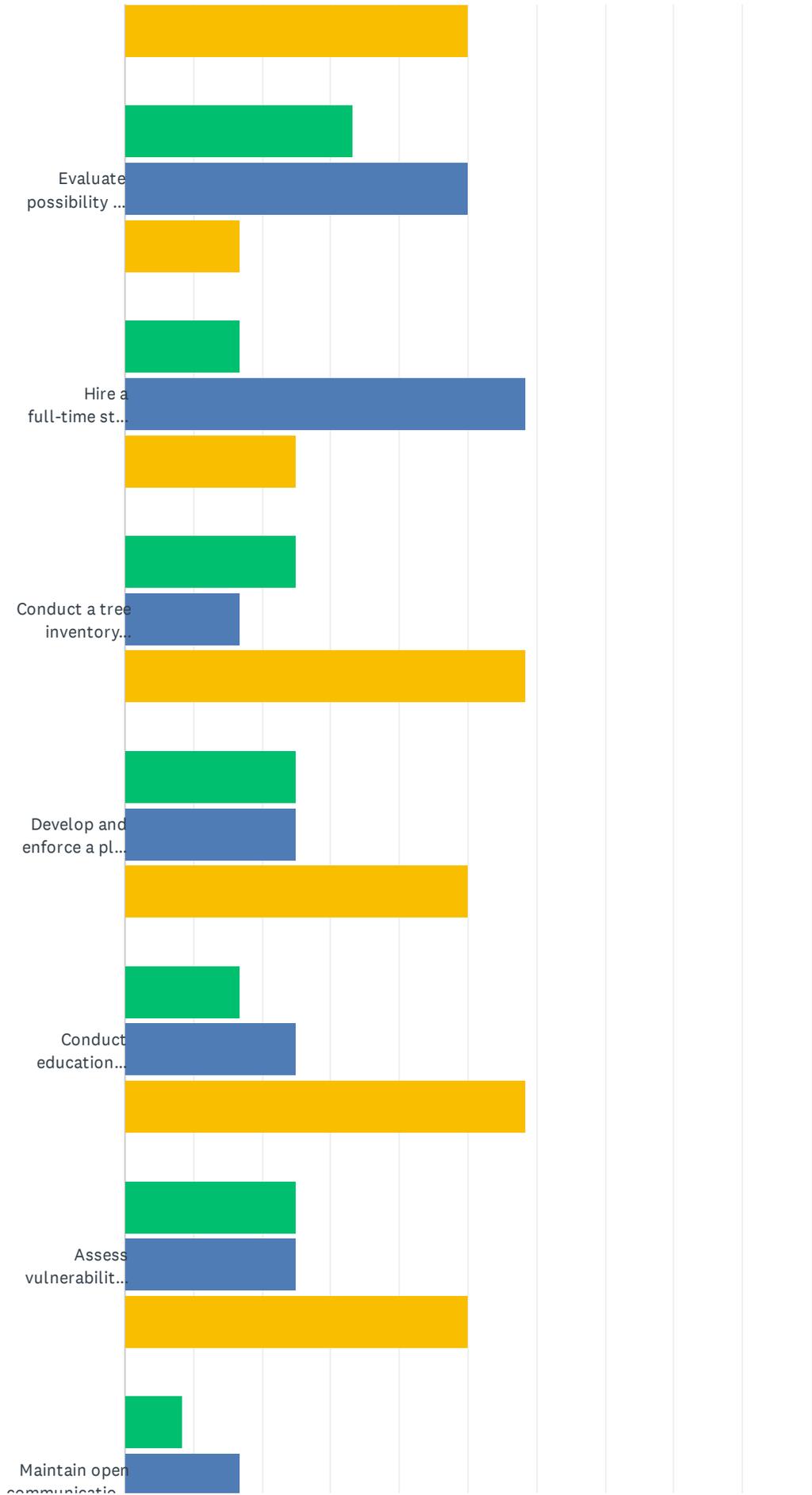
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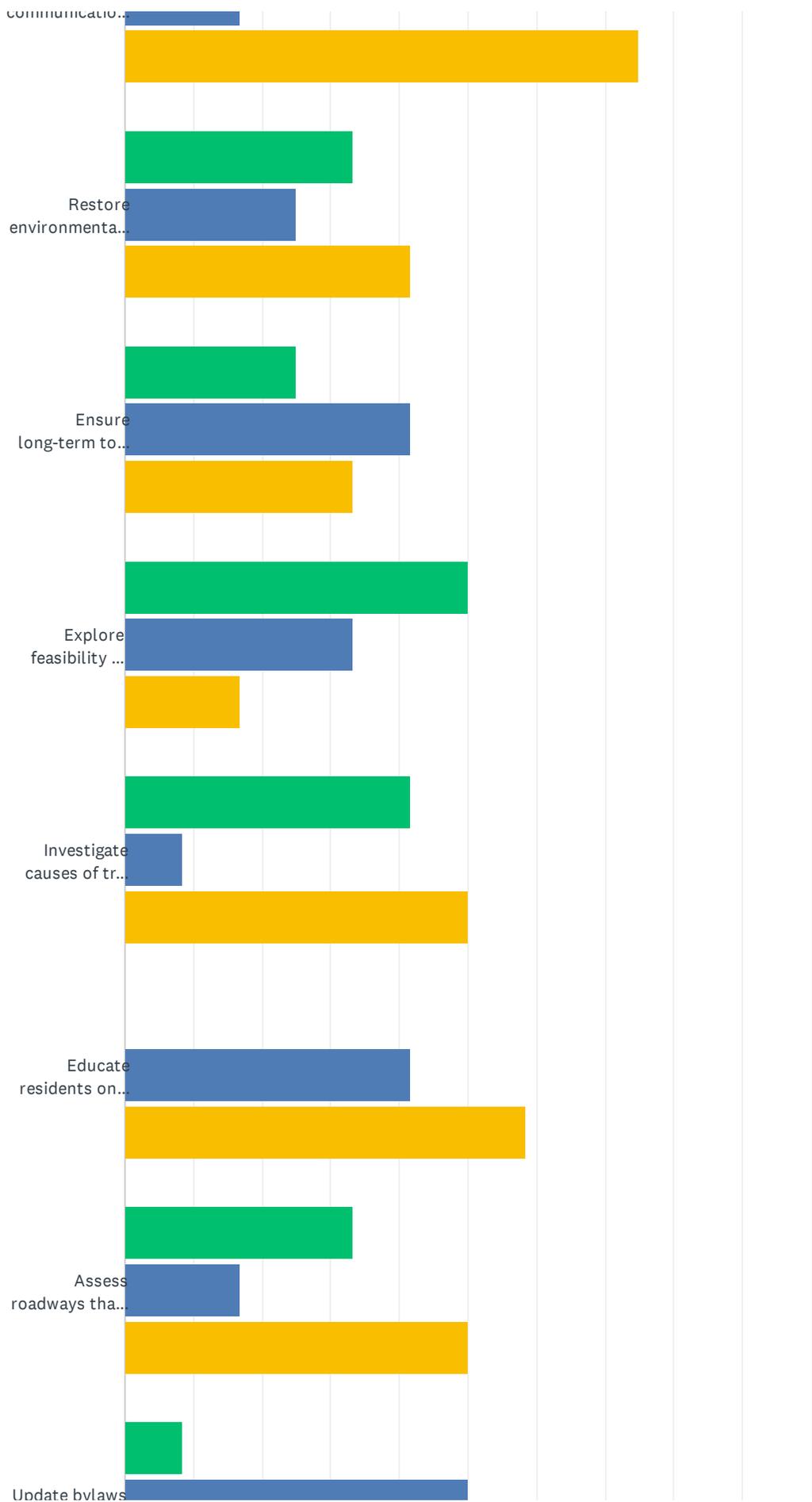
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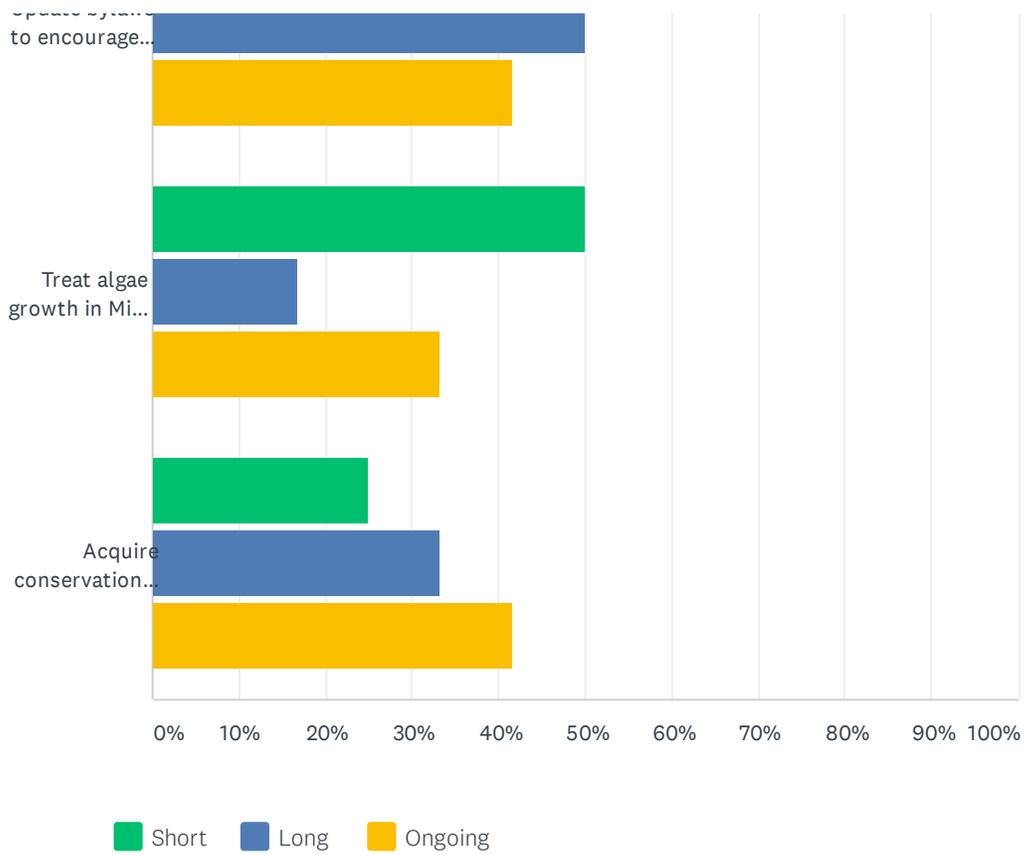
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	SHORT	LONG	ONGOING	TOTAL
Clean-up river around Spindleville dam AND/OR develop a long-term solution to protect route 16 from flooding	16.67% 2	33.33% 4	50.00% 6	12
Pursue grant funding to upgrade the water management of Draper Mill dam from manual to mechanical	50.00% 6	25.00% 3	25.00% 3	12
Road and sidewalk maintenance to address cracking and flooding	41.67% 5	8.33% 1	50.00% 6	12
Review solar regulations to ensure it encourages roof-top solar in Hopedale	50.00% 6	33.33% 4	16.67% 2	12
Pursue options for expanding and extending water supply through: educational campaigns AND/OR capturing more rainwater (encouraging use of cisterns or rain barrels) AND/OR encouraging greywater use for landscaping AND/OR Construct cisterns at town buildings with large footprints to collect and store roof run-off, and then use water for landscaping purposes	16.67% 2	25.00% 3	58.33% 7	12
Renovate town hall to build long-term resiliency and addresses maintenance needs	33.33% 4	41.67% 5	25.00% 3	12
Improve interdepartmental communication and collaboration by instituting regular joint meetings	33.33% 4	0.00% 0	66.67% 8	12
Upgrade fire department communication system	75.00% 9	16.67% 2	8.33% 1	12
Evaluate vulnerability of water tower to high winds, severe storms, and tree toppling	66.67% 8	8.33% 1	25.00% 3	12
Conduct study to determine options for converting old dump site into a recreational facility	33.33% 4	50.00% 6	16.67% 2	12
Draft bylaw to mandate underground utility lines for new development AND/OR evaluate whether any areas of town should prioritize moving lines underground in the near-term to prevent outages	50.00% 6	33.33% 4	16.67% 2	12
Address storage capacity limit at recycling center by moving buses that park at the facility to another site	50.00% 6	16.67% 2	33.33% 4	12
Expand affordable housing options	0.00% 0	45.45% 5	54.55% 6	11
Conduct detailed vulnerability assessment of dams and bridges to climate-related hazards AND/OR prioritize dam repair and maintenance AND/OR evaluate possibility of dam removal as a flood mitigation strategy	33.33% 4	25.00% 3	41.67% 5	12
Conduct education campaign about the importance of, and best practices for, managing vegetation near power lines	33.33% 4	16.67% 2	50.00% 6	12
Conduct town-wide climate vulnerability assessment to understand risks to infrastructure, water supply, potential for flooding, etc.	33.33% 4	33.33% 4	33.33% 4	12
Enact a private well by-law to better regulate water supply town-wide	50.00% 6	33.33% 4	16.67% 2	12
Inventory and identify culverts that will need repairs/replacements to accommodate greater stormwater volume and include nature-based culvert designs as an option at each site AND/OR map all sites that experience roadway flooding and evaluate mitigation options including nature-based options for improving drainage or absorbing runoff	58.33% 7	16.67% 2	25.00% 3	12
Conduct in-depth planning study of town sewage system to evaluate its vulnerability to changing climate conditions, and its ability to meet future population needs	8.33% 1	66.67% 8	25.00% 3	12
Update regulatory oversight of private septic systems to require inspection after a certain number of years or when a property is sold, to prevent septic leakage and contamination of ground water	33.33% 4	33.33% 4	33.33% 4	12
Develop plan to address lack of access to water by firefighters in certain neighborhoods	58.33%	16.67%	25.00%	

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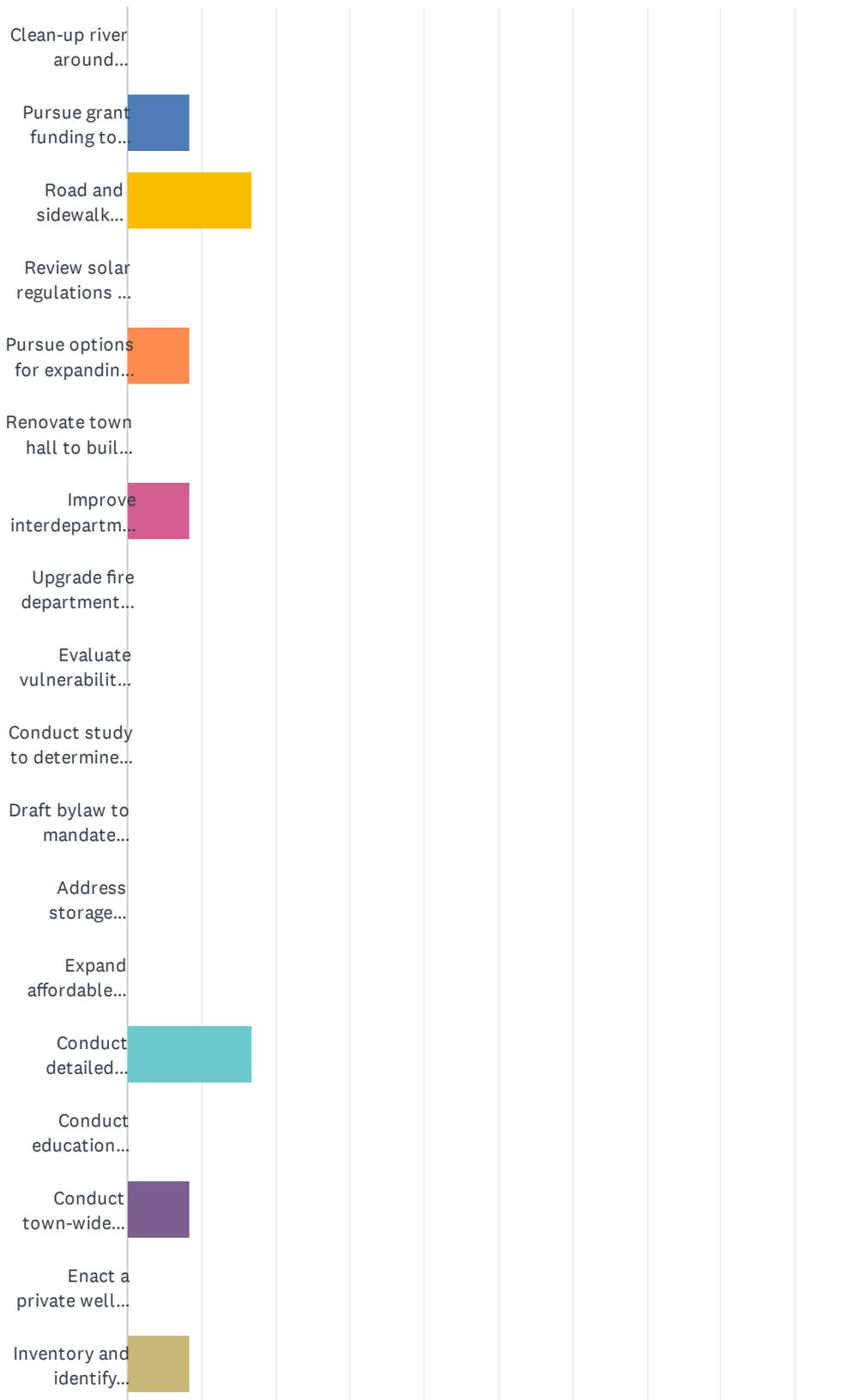
AND/OR require water collection systems and tanks for new developments that will not be connected to municipal water system AND/OR ensure that the fire department has a plan for water access across town that is climate resilient and incorporates risk of future drought, extreme heat, and ecological changes	7	2	3	12
Purchase back-up generator for the senior center AND/OR explore options for renewable back-up power sources	83.33% 10	8.33% 1	8.33% 1	12
Purchase back-up generator for high school AND/OR explore options for renewable back-up power sources	83.33% 10	8.33% 1	8.33% 1	12
Verify that emergency generators can power the entire elementary school and purchase additional generators if needed AND/OR ensure that back-up power supply can handle air conditioning use AND/OR explore options for renewable back-up power sources	66.67% 8	8.33% 1	25.00% 3	12
Purchase emergency generators for senior housing owned by the Housing Authority, and work with management to limit environmental risks due to railroad adjacency	66.67% 8	16.67% 2	16.67% 2	12
Expand use of library as a communication hub for CodeRed and other climate resilience educational information	50.00% 6	25.00% 3	25.00% 3	12
Develop a communication plan for climate resilience and emergency planning issues using community organizations like girl/boy scouts, churches, food pantries, and other community organizations or landmarks	25.00% 3	33.33% 4	41.67% 5	12
Translate climate resilience and emergency planning outreach into all languages spoken by non-English-speaking residents	25.00% 3	25.00% 3	50.00% 6	12
Encourage creation of a citizens' climate preparedness/sustainability committee to advocate for and implement climate mitigation and resilience projects AND/OR recruit members and broadcast committee to individuals that may not be involved in town governance like high school students	33.33% 4	16.67% 2	50.00% 6	12
Repair structural and rot issues at Little Red Shop museum	50.00% 6	8.33% 1	41.67% 5	12
Contact Mass Historical Commission and discuss whether and how their regulations for maintenance of historic buildings takes climate resilience into account AND/OR advocate for climate-resilient historical preservation techniques	25.00% 3	41.67% 5	33.33% 4	12
Invest in a resilient enclosure for Statue of Hope	58.33% 7	25.00% 3	16.67% 2	12
Pursue grant funding to acquire commercial bus licenses for town residents, which would allow the town to use school buses for evacuation purposes in case of emergencies	33.33% 4	50.00% 6	16.67% 2	12
Promote environmental education in the local school curriculums AND/OR conduct outreach to K-12 students to get youth involved in town environmental projects, planning, and committees	41.67% 5	16.67% 2	41.67% 5	12
Identify emergency shelters in town, designate locations that can be used as cooling centers/areas for residents to go to when needed, and ensure locations of shelters are well-publicized to all residents	66.67% 8	8.33% 1	25.00% 3	12
Verify that disability facilities (Seven Hills, the Ledges, Evergreen Center) have emergency plans prepared and in place	75.00% 9	0.00% 0	25.00% 3	12
Work with partners to develop a regional shelter site (identify location and equipment needed)	33.33% 4	33.33% 4	33.33% 4	12
Advocate regionally for more public transportation that serves Hopedale.	41.67% 5	41.67% 5	16.67% 2	12
Work with partners across watershed to inventory dams, assess climate vulnerability, catalog ownership, and develop a long-term, coordinated plan to address flooding and dam resilience	25.00% 3	25.00% 3	50.00% 6	12
Regularly test air quality near railroad fly ash storage AND/OR investigate railroad emergency plans for the site if it floods	0.00% 0	50.00% 6	50.00% 6	12
Evaluate possibility of purchasing the Mill Pond and restoring environmental quality	33.33%	50.00%	16.67%	

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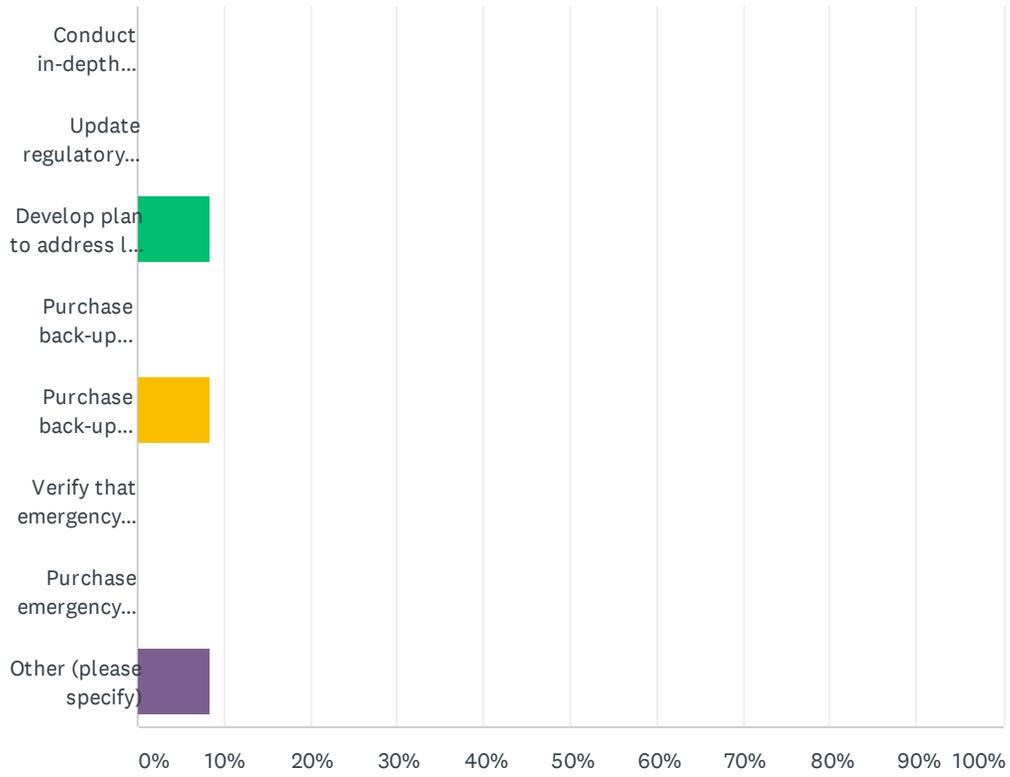
AND/OR working with the existing owner to improve water quality and allow public access	4	6	2	12
Hire a full-time staff member to focus on cleaning up Spindleville Pond	16.67% 2	58.33% 7	25.00% 3	12
Conduct a tree inventory AND/OR institute a town-wide, proactive tree management program to remove or trim damaged trees and replant with native and climate-resilient species AND/OR carefully review tree planting plans in new subdivision applications to ensure all new trees are climate-resilient	25.00% 3	16.67% 2	58.33% 7	12
Develop and enforce a plan for managing invasive species AND/OR conduct education campaign about native species and invasive vegetation management best practices	25.00% 3	25.00% 3	50.00% 6	12
Conduct education campaign about insect-borne diseases and how residents should prevent standing water AND/OR educate about the importance of bats in managing mosquitos AND/OR engage youth groups or high school students in a service project to build bat houses	16.67% 2	25.00% 3	58.33% 7	12
Assess vulnerability of wetlands to impacts from present and future development and ensure Conservation Commission has adequate resources to meet the demand for their regulatory oversight AND/OR strengthen by-laws that enable Conservation Commission to enforce wetlands protection AND/OR draft wetlands protection bylaw	25.00% 3	25.00% 3	50.00% 6	12
Maintain open communication and build relationships with outside organizations and watershed partners focused on environmental issues	8.33% 1	16.67% 2	75.00% 9	12
Restore environmental quality at Hopedale Pond so that it attracts active recreation like swimming, kayaking, and fishing AND/OR restore shoreline landscape to better absorb water, reduce stormwater pollutants and alleviate flooding AND/OR research landscape designs that discourage Canadian Geese from inhabiting pond	33.33% 4	25.00% 3	41.67% 5	12
Ensure long-term town plan is up-to-date and includes future climate risks as well as development pressures	25.00% 3	41.67% 5	33.33% 4	12
Explore feasibility of restoring/daylighting the Mill River downtown near Draper Mill to mitigate flooding and make better use of river as an attractive town asset AND/OR work closely with Mill owner/developer to create a climate-resilient site plan	50.00% 6	33.33% 4	16.67% 2	12
Investigate causes of trash dumping in wetlands and invest in mitigation measures such as additional signage near common dump sites	41.67% 5	8.33% 1	50.00% 6	12
Educate residents on drought-tolerant landscaping in New England AND/OR convert a prominent town-owned building to drought-tolerant landscaping for demonstration purposes AND/OR educate residents on negative impacts of fertilizers on downstream ecosystems	0.00% 0	41.67% 5	58.33% 7	12
Assess roadways that regularly deal with snow drifts and develop snow drift mitigation plan	33.33% 4	16.67% 2	50.00% 6	12
Update bylaws to encourage green infrastructure and low-impact development practices for new construction or major improvements AND/OR review and update bylaws regulating on-site stormwater retention and drainage, which may be currently ineffective	8.33% 1	50.00% 6	41.67% 5	12
Treat algae growth in Mill Pond and take steps to prevent issue from recurring	50.00% 6	16.67% 2	33.33% 4	12
Acquire conservation land to protect waterway ecosystems AND/OR create education paths with signage in Parklands AND/OR explore partnerships with land trusts or local watershed association regarding trail creation	25.00% 3	33.33% 4	41.67% 5	12

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

Answered: 12 Skipped: 0



Hopedale Municipal Vulnerability Preparedness Program



Hopedale Municipal Vulnerability Preparedness Program

ANSWER CHOICES	RESPONSES	
Clean-up river around Spindleville dam AND/OR develop a long-term solution to protect route 16 from flooding	0.00%	0
Pursue grant funding to upgrade the water management of Draper Mill dam from manual to mechanical	8.33%	1
Road and sidewalk maintenance to address cracking and flooding	16.67%	2
Review solar regulations to ensure it encourages roof-top solar in Hopedale	0.00%	0
Pursue options for expanding and extending water supply through: educational campaigns AND/OR capturing more rainwater (encouraging use of cisterns or rain barrels) AND/OR encouraging greywater use for landscaping AND/OR Construct cisterns at town buildings with large footprints to collect and store roof run-off, and then use water for landscaping purposes	8.33%	1
Renovate town hall to build long-term resiliency and addresses maintenance needs	0.00%	0
Improve interdepartmental communication and collaboration by instituting regular joint meetings	8.33%	1
Upgrade fire department communication system	0.00%	0
Evaluate vulnerability of water tower to high winds, severe storms, and tree toppling	0.00%	0
Conduct study to determine options for converting old dump site into a recreational facility	0.00%	0
Draft bylaw to mandate underground utility lines for new development AND/OR evaluate whether any areas of town should prioritize moving lines underground in the near-term to prevent outages	0.00%	0
Address storage capacity limit at recycling center by moving buses that park at the facility to another site	0.00%	0
Expand affordable housing options	0.00%	0
Conduct detailed vulnerability assessment of dams and bridges to climate-related hazards AND/OR prioritize dam repair and maintenance AND/OR evaluate possibility of dam removal as a flood mitigation strategy	16.67%	2
Conduct education campaign about the importance of, and best practices for, managing vegetation near power lines	0.00%	0
Conduct town-wide climate vulnerability assessment to understand risks to infrastructure, water supply, potential for flooding, etc.	8.33%	1
Enact a private well by-law to better regulate water supply town-wide	0.00%	0
Inventory and identify culverts that will need repairs/replacements to accommodate greater stormwater volume and include nature-based culvert designs as an option at each site AND/OR map all sites that experience roadway flooding and evaluate mitigation options including nature-based options for improving drainage or absorbing runoff	8.33%	1
Conduct in-depth planning study of town sewage system to evaluate its vulnerability to changing climate conditions, and its ability to meet future population needs	0.00%	0
Update regulatory oversight of private septic systems to require inspection after a certain number of years or when a property is sold, to prevent septic leakage and contamination of ground water	0.00%	0
Develop plan to address lack of access to water by firefighters in certain neighborhoods AND/OR require water collection systems and tanks for new developments that will not be connected to municipal water system AND/OR ensure that the fire department has a plan for water access across town that is climate resilient and incorporates risk of future drought, extreme heat, and ecological changes	8.33%	1
Purchase back-up generator for the senior center AND/OR explore options for renewable back-up power sources	0.00%	0
Purchase back-up generator for high school AND/OR explore options for renewable back-up power sources	8.33%	1
Verify that emergency generators can power the entire elementary school and purchase additional generators if needed AND/OR ensure that back-up power supply can handle air conditioning use AND/OR explore options for renewable back-up power sources	0.00%	0
Purchase emergency generators for senior housing owned by the Housing Authority, and work with management to limit	0.00%	0

Hopedale Municipal Vulnerability Preparedness Program

environmental risks due to railroad adjacency

Other (please specify)

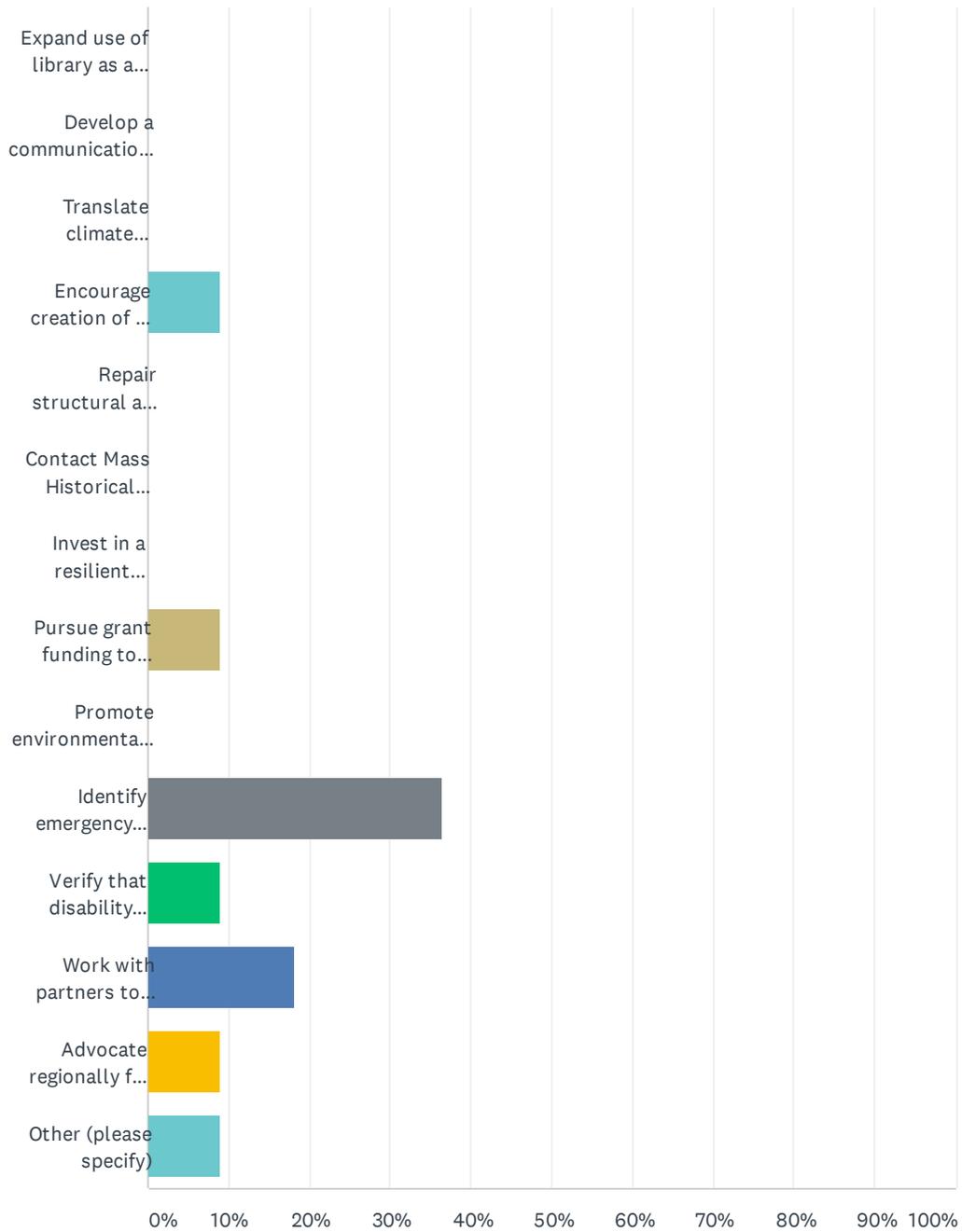
8.33% 1

TOTAL

12

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

Answered: 11 Skipped: 1



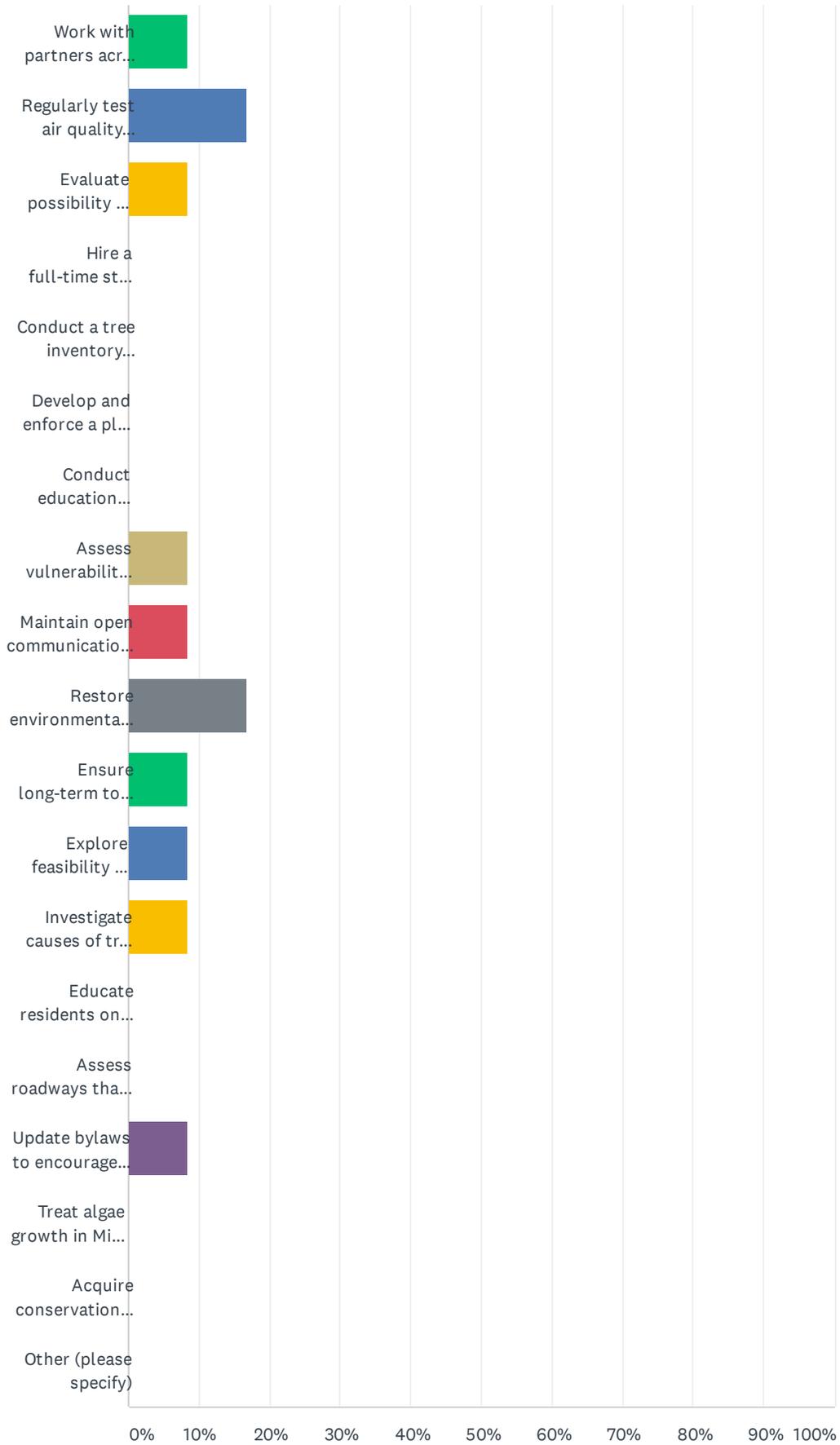
Hopedale Municipal Vulnerability Preparedness Program

ANSWER CHOICES	RESPONSES	
Expand use of library as a communication hub for CodeRed and other climate resilience educational information	0.00%	0
Develop a communication plan for climate resilience and emergency planning issues using community organizations like girl/boy scouts, churches, food pantries, and other community organizations or landmarks	0.00%	0
Translate climate resilience and emergency planning outreach into all languages spoken by non-English-speaking residents	0.00%	0
Encourage creation of a citizens' climate preparedness/sustainability committee to advocate for and implement climate mitigation and resilience projects AND/OR recruit members and broadcast committee to individuals that may not be involved in town governance like high school students	9.09%	1
Repair structural and rot issues at Little Red Shop museum	0.00%	0
Contact Mass Historical Commission and discuss whether and how their regulations for maintenance of historic buildings takes climate resilience into account AND/OR advocate for climate-resilient historical preservation techniques	0.00%	0
Invest in a resilient enclosure for Statue of Hope	0.00%	0
Pursue grant funding to acquire commercial bus licenses for town residents, which would allow the town to use school buses for evacuation purposes in case of emergencies	9.09%	1
Promote environmental education in the local school curriculums AND/OR conduct outreach to K-12 students to get youth involved in town environmental projects, planning, and committees	0.00%	0
Identify emergency shelters in town, designate locations that can be used as cooling centers/areas for residents to go to when needed, and ensure locations of shelters are well-publicized to all residents	36.36%	4
Verify that disability facilities (Seven Hills, the Ledges, Evergreen Center) have emergency plans prepared and in place	9.09%	1
Work with partners to develop a regional shelter site (identify location and equipment needed)	18.18%	2
Advocate regionally for more public transportation that serves Hopedale.	9.09%	1
Other (please specify)	9.09%	1
TOTAL		11

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

Answered: 12 Skipped: 0

Hopedale Municipal Vulnerability Preparedness Program

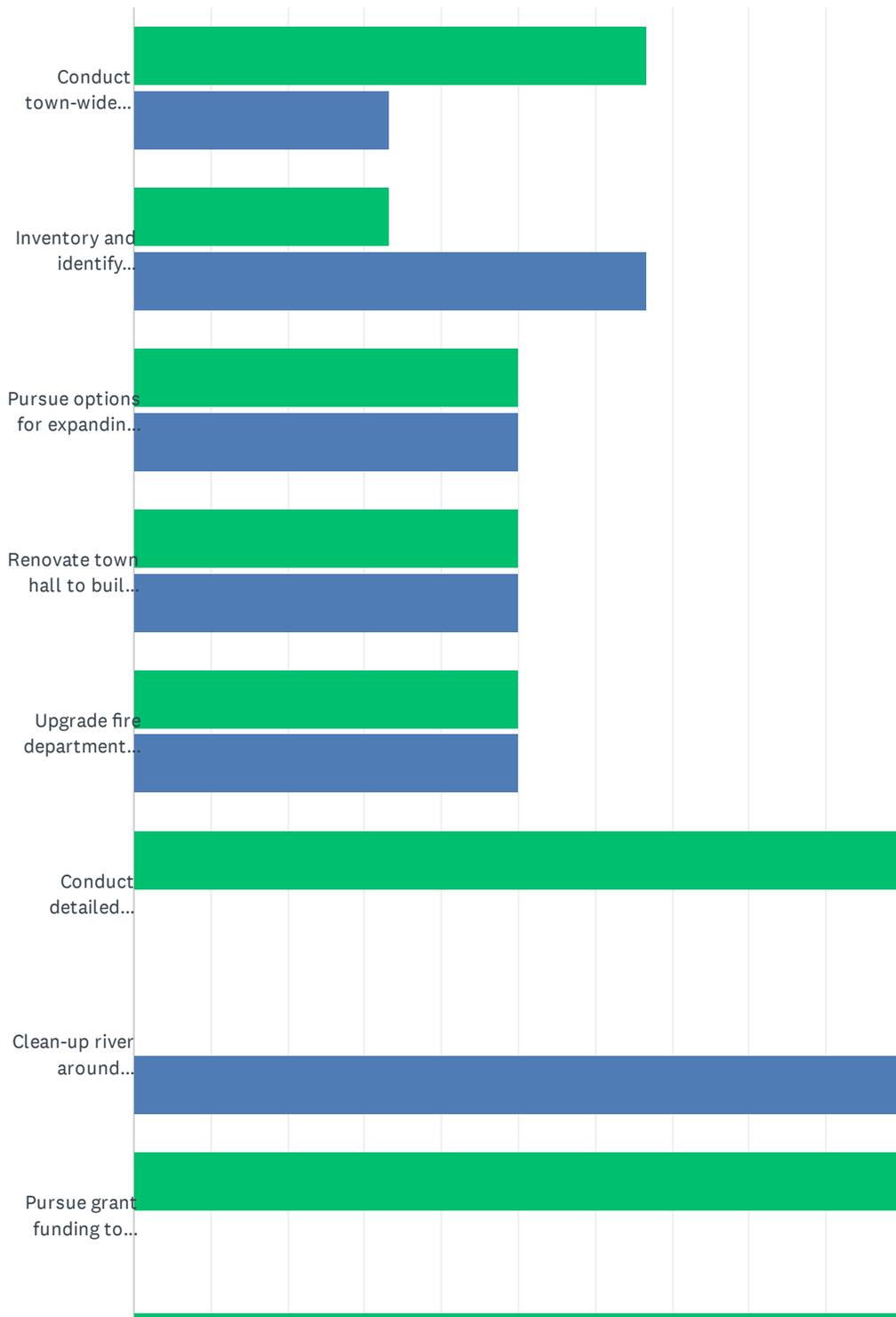


Hopedale Municipal Vulnerability Preparedness Program

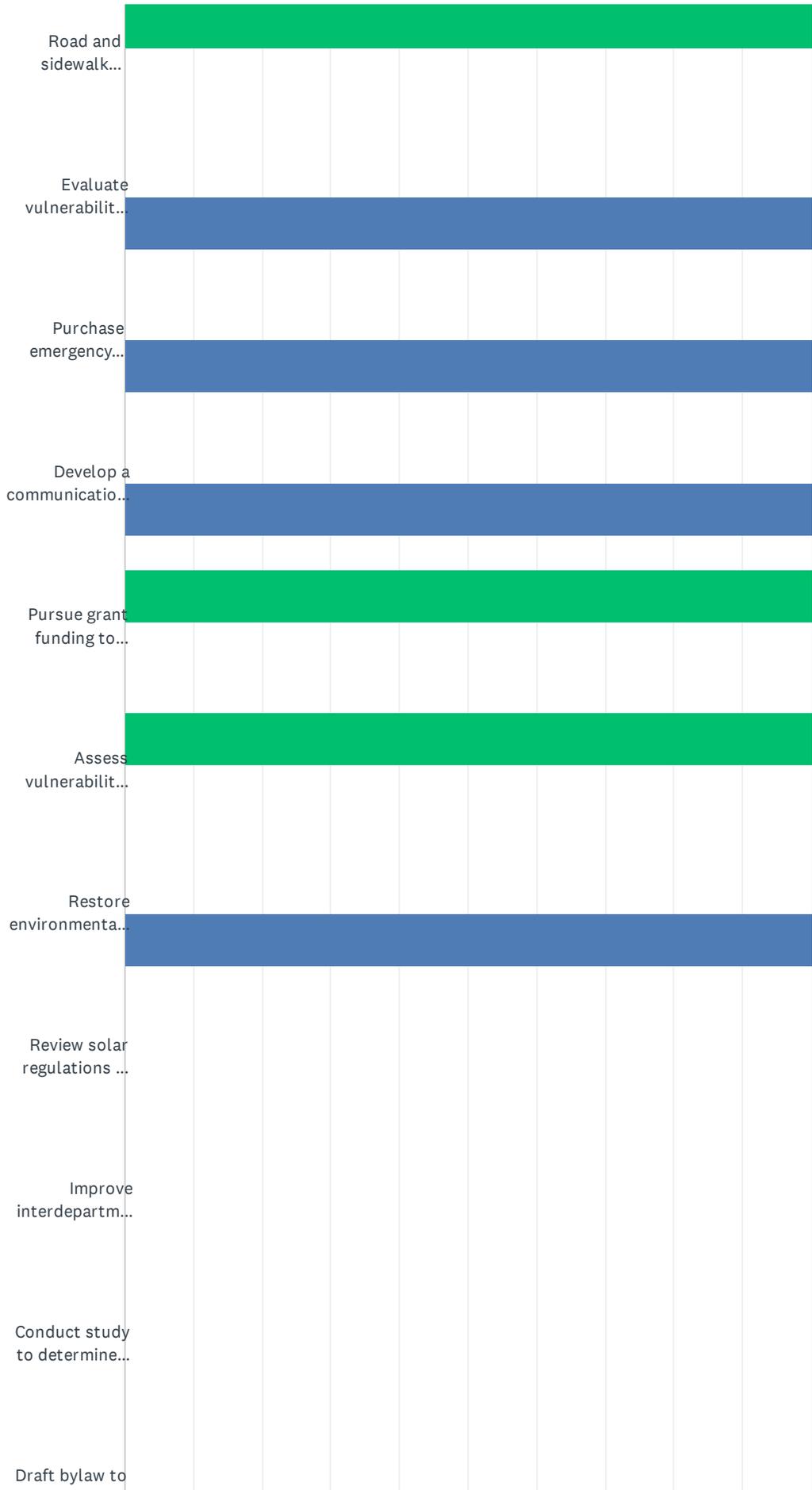
ANSWER CHOICES	RESPONSES	
Work with partners across watershed to inventory dams, assess climate vulnerability, catalog ownership, and develop a long-term, coordinated plan to address flooding and dam resilience	8.33%	1
Regularly test air quality near railroad fly ash storage AND/OR investigate railroad emergency plans for the site if it floods	16.67%	2
Evaluate possibility of purchasing the Mill Pond and restoring environmental quality AND/OR working with the existing owner to improve water quality and allow public access	8.33%	1
Hire a full-time staff member to focus on cleaning up Spindleville Pond	0.00%	0
Conduct a tree inventory AND/OR institute a town-wide, proactive tree management program to remove or trim damaged trees and replant with native and climate-resilient species AND/OR carefully review tree planting plans in new subdivision applications to ensure all new trees are climate-resilient	0.00%	0
Develop and enforce a plan for managing invasive species AND/OR conduct education campaign about native species and invasive vegetation management best practices	0.00%	0
Conduct education campaign about insect-borne diseases and how residents should prevent standing water AND/OR educate about the importance of bats in managing mosquitos AND/OR engage youth groups or high school students in a service project to build bat houses	0.00%	0
Assess vulnerability of wetlands to impacts from present and future development and ensure Conservation Commission has adequate resources to meet the demand for their regulatory oversight AND/OR strengthen by-laws that enable Conservation Commission to enforce wetlands protection AND/OR draft wetlands protection bylaw	8.33%	1
Maintain open communication and build relationships with outside organizations and watershed partners focused on environmental issues	8.33%	1
Restore environmental quality at Hopedale Pond so that it attracts active recreation like swimming, kayaking, and fishing AND/OR restore shoreline landscape to better absorb water, reduce stormwater pollutants and alleviate flooding AND/OR research landscape designs that discourage Canadian Geese from inhabiting pond	16.67%	2
Ensure long-term town plan is up-to-date and includes future climate risks as well as development pressures	8.33%	1
Explore feasibility of restoring/daylighting the Mill River downtown near Draper Mill to mitigate flooding and make better use of river as an attractive town asset AND/OR work closely with Mill owner/developer to create a climate-resilient site plan	8.33%	1
Investigate causes of trash dumping in wetlands and invest in mitigation measures such as additional signage near common dump sites	8.33%	1
Educate residents on drought-tolerant landscaping in New England AND/OR convert a prominent town-owned building to drought-tolerant landscaping for demonstration purposes AND/OR educate residents on negative impacts of fertilizers on downstream ecosystems	0.00%	0
Assess roadways that regularly deal with snow drifts and develop snow drift mitigation plan	0.00%	0
Update bylaws to encourage green infrastructure and low-impact development practices for new construction or major improvements AND/OR review and update bylaws regulating on-site stormwater retention and drainage, which may be currently ineffective	8.33%	1
Treat algae growth in Mill Pond and take steps to prevent issue from recurring	0.00%	0
Acquire conservation land to protect waterway ecosystems AND/OR create education paths with signage in Parklands AND/OR explore partnerships with land trusts or local watershed association regarding trail creation	0.00%	0
Other (please specify)	0.00%	0
TOTAL		12

Q7 Please vote for TWO additional top priority actions that you believe Hopedale 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: 12 Skipped: 0



Hopedale Municipal Vulnerability Preparedness Program



Hopedale Municipal Vulnerability Preparedness Program

mandate...										
Address storage...										
Expand affordable...										
Conduct education...										
Enact a private well...										
Conduct in-depth...										
Update regulatory...										
Develop plan to address l...										
Purchase back-up...										
Purchase back-up...										
Verify that emergency...										

Hopedale Municipal Vulnerability Preparedness Program

Expand use of library as a...

Translate climate...

Encourage creation of ...

Repair structural a...

Contact Mass Historical...

Invest in a resilient...

Promote environmental...

Identify emergency...

Verify that disability...

Work with partners to...

Hopedale Municipal Vulnerability Preparedness Program

Advocate regionally f...									
Work with partners acr...									
Regularly test air quality...									
Evaluate possibility ...									
Hire a full-time st...									
Conduct a tree inventory...									
Develop and enforce a pl...									
Conduct education...									
Maintain open communicatio...									
Ensure long-term to...									
Explore feasibility ...									

Hopedale Municipal Vulnerability Preparedness Program



Hopedale Municipal Vulnerability Preparedness Program

	VOTE 1	VOTE 2	TOTAL
Conduct town-wide climate vulnerability assessment to understand risks to infrastructure, water supply, potential for flooding, etc.	66.67% 2	33.33% 1	3
Inventory and identify culverts that will need repairs/replacements to accommodate greater stormwater volume and include nature-based culvert designs as an option at each site AND/OR map all sites that experience roadway flooding and evaluate mitigation options including nature-based options for improving drainage or absorbing runoff	33.33% 1	66.67% 2	3
Pursue options for expanding and extending water supply through: educational campaigns AND/OR capturing more rainwater (encouraging use of cisterns or rain barrels) AND/OR encouraging greywater use for landscaping AND/OR Construct cisterns at town buildings with large footprints to collect and store roof run-off, and then use water for landscaping purposes	50.00% 1	50.00% 1	2
Renovate town hall to build long-term resiliency and addresses maintenance needs	50.00% 1	50.00% 1	2
Upgrade fire department communication system	50.00% 1	50.00% 1	2
Conduct detailed vulnerability assessment of dams and bridges to climate-related hazards AND/OR prioritize dam repair and maintenance AND/OR evaluate possibility of dam removal as a flood mitigation strategy	100.00% 2	0.00% 0	2
Clean-up river around Spindleville dam AND/OR develop a long-term solution to protect route 16 from flooding	0.00% 0	100.00% 1	1
Pursue grant funding to upgrade the water management of Draper Mill dam from manual to mechanical	100.00% 1	0.00% 0	1
Road and sidewalk maintenance to address cracking and flooding	100.00% 1	0.00% 0	1
Evaluate vulnerability of water tower to high winds, severe storms, and tree toppling	0.00% 0	100.00% 1	1
Purchase emergency generators for senior housing owned by the Housing Authority, and work with management to limit environmental risks due to railroad adjacency	0.00% 0	100.00% 1	1
Develop a communication plan for climate resilience and emergency planning issues using community organizations like girl/boy scouts, churches, food pantries, and other community organizations or landmarks	0.00% 0	100.00% 1	1
Pursue grant funding to acquire commercial bus licenses for town residents, which would allow the town to use school buses for evacuation purposes in case of emergencies	100.00% 1	0.00% 0	1
Assess vulnerability of wetlands to impacts from present and future development and ensure Conservation Commission has adequate resources to meet the demand for their regulatory oversight AND/OR strengthen by-laws that enable Conservation Commission to enforce wetlands protection AND/OR draft wetlands protection bylaw	100.00% 1	0.00% 0	1
Restore environmental quality at Hopedale Pond so that it attracts active recreation like swimming, kayaking, and fishing AND/OR restore shoreline landscape to better absorb water, reduce stormwater pollutants and alleviate flooding AND/OR research landscape designs that discourage Canadian Geese from inhabiting pond	0.00% 0	100.00% 1	1
Review solar regulations to ensure it encourages roof-top solar in Hopedale	0.00% 0	0.00% 0	0
Improve interdepartmental communication and collaboration by instituting regular joint meetings	0.00% 0	0.00% 0	0
Conduct study to determine options for converting old dump site into a recreational facility	0.00% 0	0.00% 0	0
Draft bylaw to mandate underground utility lines for new development AND/OR evaluate whether any areas of town should prioritize moving lines underground in the near-term to prevent outages	0.00% 0	0.00% 0	0
Address storage capacity limit at recycling center by moving buses that park at the facility to another	0.00%	0.00%	

Hopedale Municipal Vulnerability Preparedness Program

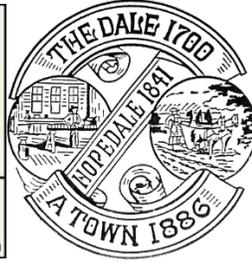
site	0	0	0
Expand affordable housing options	0.00% 0	0.00% 0	0
Conduct education campaign about the importance of, and best practices for, managing vegetation near power lines	0.00% 0	0.00% 0	0
Enact a private well by-law to better regulate water supply town-wide	0.00% 0	0.00% 0	0
Conduct in-depth planning study of town sewage system to evaluate its vulnerability to changing climate conditions, and its ability to meet future population needs	0.00% 0	0.00% 0	0
Update regulatory oversight of private septic systems to require inspection after a certain number of years or when a property is sold, to prevent septic leakage and contamination of ground water	0.00% 0	0.00% 0	0
Develop plan to address lack of access to water by firefighters in certain neighborhoods AND/OR require water collection systems and tanks for new developments that will not be connected to municipal water system AND/OR ensure that the fire department has a plan for water access across town that is climate resilient and incorporates risk of future drought, extreme heat, and ecological changes	0.00% 0	0.00% 0	0
Purchase back-up generator for the senior center AND/OR explore options for renewable back-up power sources	0.00% 0	0.00% 0	0
Purchase back-up generator for high school AND/OR explore options for renewable back-up power sources	0.00% 0	0.00% 0	0
Verify that emergency generators can power the entire elementary school and purchase additional generators if needed AND/OR ensure that back-up power supply can handle air conditioning use AND/OR explore options for renewable back-up power sources	0.00% 0	0.00% 0	0
Expand use of library as a communication hub for CodeRed and other climate resilience educational information	0.00% 0	0.00% 0	0
Translate climate resilience and emergency planning outreach into all languages spoken by non-English-speaking residents	0.00% 0	0.00% 0	0
Encourage creation of a citizens' climate preparedness/sustainability committee to advocate for and implement climate mitigation and resilience projects AND/OR recruit members and broadcast committee to individuals that may not be involved in town governance like high school students	0.00% 0	0.00% 0	0
Repair structural and rot issues at Little Red Shop museum	0.00% 0	0.00% 0	0
Contact Mass Historical Commission and discuss whether and how their regulations for maintenance of historic buildings takes climate resilience into account AND/OR advocate for climate-resilient historical preservation techniques	0.00% 0	0.00% 0	0
Invest in a resilient enclosure for Statue of Hope	0.00% 0	0.00% 0	0
Promote environmental education in the local school curriculums AND/OR conduct outreach to K-12 students to get youth involved in town environmental projects, planning, and committees	0.00% 0	0.00% 0	0
Identify emergency shelters in town, designate locations that can be used as cooling centers/areas for residents to go to when needed, and ensure locations of shelters are well-publicized to all residents	0.00% 0	0.00% 0	0
Verify that disability facilities (Seven Hills, the Ledges, Evergreen Center) have emergency plans prepared and in place	0.00% 0	0.00% 0	0
Work with partners to develop a regional shelter site (identify location and equipment needed)	0.00% 0	0.00% 0	0
Advocate regionally for more public transportation that serves Hopedale.	0.00% 0	0.00% 0	0
Work with partners across watershed to inventory dams, assess climate vulnerability, catalog ownership, and develop a long-term, coordinated plan to address flooding and dam resilience	0.00% 0	0.00% 0	0

Hopedale Municipal Vulnerability Preparedness Program

Regularly test air quality near railroad fly ash storage AND/OR investigate railroad emergency plans for the site if it floods	0.00%	0.00%	0
Evaluate possibility of purchasing the Mill Pond and restoring environmental quality AND/OR working with the existing owner to improve water quality and allow public access	0.00%	0.00%	0
Hire a full-time staff member to focus on cleaning up Spindleville Pond	0.00%	0.00%	0
Conduct a tree inventory AND/OR institute a town-wide, proactive tree management program to remove or trim damaged trees and replant with native and climate-resilient species AND/OR carefully review tree planting plans in new subdivision applications to ensure all new trees are climate-resilient	0.00%	0.00%	0
Develop and enforce a plan for managing invasive species AND/OR conduct education campaign about native species and invasive vegetation management best practices	0.00%	0.00%	0
Conduct education campaign about insect-borne diseases and how residents should prevent standing water AND/OR educate about the importance of bats in managing mosquitos AND/OR engage youth groups or high school students in a service project to build bat houses	0.00%	0.00%	0
Maintain open communication and build relationships with outside organizations and watershed partners focused on environmental issues	0.00%	0.00%	0
Ensure long-term town plan is up-to-date and includes future climate risks as well as development pressures	0.00%	0.00%	0
Explore feasibility of restoring/daylighting the Mill River downtown near Draper Mill to mitigate flooding and make better use of river as an attractive town asset AND/OR work closely with Mill owner/developer to create a climate-resilient site plan	0.00%	0.00%	0
Investigate causes of trash dumping in wetlands and invest in mitigation measures such as additional signage near common dump sites	0.00%	0.00%	0
Educate residents on drought-tolerant landscaping in New England AND/OR convert a prominent town-owned building to drought-tolerant landscaping for demonstration purposes AND/OR educate residents on negative impacts of fertilizers on downstream ecosystems	0.00%	0.00%	0
Assess roadways that regularly deal with snow drifts and develop snow drift mitigation plan	0.00%	0.00%	0
Update bylaws to encourage green infrastructure and low-impact development practices for new construction or major improvements AND/OR review and update bylaws regulating on-site stormwater retention and drainage, which may be currently ineffective	0.00%	0.00%	0
Treat algae growth in Mill Pond and take steps to prevent issue from recurring	0.00%	0.00%	0
Acquire conservation land to protect waterway ecosystems AND/OR create education paths with signage in Parklands AND/OR explore partnerships with land trusts or local watershed association regarding trail creation	0.00%	0.00%	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: 10



Hopedale Hazard Mitigation Plan



Snowstorm, Police Department in Hopedale, Massachusetts

Adopted by the Board of Selectmen February 6, 2017

Prepared by the **Central Massachusetts Regional Planning Commission**
2 Washington Square, Union Station
Worcester, MA 01604
www.cmrpc.org

&

Local Hazard Mitigation Team
Town of Hopedale, Massachusetts

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 from drought to people and property can be expected to increase.

Extreme Temperatures

According to records of the US Historical Climatology Network, average temperatures 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 from extreme temperatures to people and property can be expected to increase.

5.0 CRITICAL FACILITIES & VULNERABLE POPULATIONS

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 Hopedale

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

- Hopedale'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.

Hopedale'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 Hopedale
- 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 has identified the Emergency Response Facilities and Services as the highest priority in regards to protection from natural and man-made hazards.

1. Emergency Operations Center/Police Station

Hopedale Police Dept./EOC 70 Hopedale Street

The Hopedale Police Station has an emergency generator, and is not within or near hazards identified in this planning process.

2. Fire Station

Fire Station/EOC 40 Dutcher Street

The Hopedale Fire Station has an emergency generator, and is not within or near hazards identified in this planning process.

3. Communications Facilities

Radio Repeater/Antenna - Hopedale Water Treatment Site 212 Hopedale St

Radio Repeater/Antenna - Memorial School 6 Prospect St

Radio Repeater/Antenna - Water Tank/Tower Williams Street

4. Highway Department

Highway Department 7 Depot Street

5. Emergency Shelters

Hopedale Jr-Sr High School	25 Adin St
Hopedale Memorial School	6 Prospect St
Bright Beginnings	4 Park St
Town Hall	78 Hopedale St
Senior Center/Community House	53 Hope St
Hopedale Gymnasium	13 Dutcher St
Kingdom Hall	120 Plain St
Unitarian Church	65 Hopedale St
Sacred Heart Church	187 Hopedale St
Union Evangelist	25 Dutcher St

The Hopedale Memorial School has an emergency generator, and is not within or near hazards identified in this planning process.

6. Primary Evacuation Routes

- Route 140
- Route 16
- West St Bridge (Rte 140)
- Mendon St Bridge (Rte 16)

The Mendon Street Bridge is located within a possible flood zone for Fitzgerald Drive. The West Street Bridge is located within the 100-yr flood zone.

6. Secondary Evacuation Route

- Hopedale Street
- Freedom Street (and Bridge)
- Green Street
- Mill Street (and Bridge)
- Plain Street
- Mellen Street

The Freedom Street Bridge and Mill Street Bridge are located within the 100-yr flood zone.

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 Hopedale.

For additional information on dams and the dam failure hazard in Hopedale, also see Chapter 4.

Category 4 – Facilities/Populations to Protect

1. Special Needs Population/Elderly Housing/Assisted Living

Hopedale Housing Authority	Hopedale St
Atria Draper Assisted Living	25 Hopedale St

The Hopedale Housing Authority has emergency generators in half of their buildings, and the Atria Draper Assisted Living facility has an emergency generator. Neither building is within or near hazards identified in this planning process.

2. Public Buildings/Areas

Bancroft Memorial Library	50 Hopedale St
Hopedale Senior Center/Community House	43 Hope St

The Hopedale Senior Center/Community House is within 100 yards of a possible flood zone on Bellingham Street.

3. 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.)

Hopedale Jr-Sr High School	25 Adin St
Hopedale Memorial School	6 Prospect St
Just-A-Wee Day-Care Center	138 Hartford Ave
Luv’N Care of Hopedale	191 Dutcher St
Young at Heart Learning Cntr	286 South Main St
Steppingstones Children Cntr	391 South Main St
Ruddock, Pamela	11 Bancroft Park
Hagopian, Pamela	53 Mellen St
Lescoe-Wilson, Vivien L	180 South Main St
Howley, Danielle T	2 Steel Road
Suszanska, Dorothy	12 Moore Road
Hamel, Tina L.	9 Soward St
Murphy, Dana	32 Westcott Road
Luchini, Diane P.	Six Spruce Circle
Ozella, Deborah	319 South Main St
Ingraham, Anne	20 Driftway St

4. Historic Buildings/Sites

According to the Massachusetts Cultural Resources Information System (MACRIS) online database accessed in July 2016, there are 12 Areas, 625 Buildings, 2 Burial Grounds, 8 Objects, and 14 Structures listed for Hopedale. The Local Team did not specifically identify any of these sites as Critical Facilities or Infrastructure.

5. 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 Hopedale:

Table 28

Largest Employers in Hopedale - July 2016		
Company	Location	No. of Employees
National Grid	S Main St	250-499
Hopedale Memorial School	Prospect St	100-249
Jehovah's Witnesses	Plain St	100-249
Boston Sand & Gravel Co	Plain St	50-99
Braun's Express Inc	Tandem Way	50-99
Front Line	Mellen St	50-99
Hopedale Jr-Sr High School	Adin St	50-99
Ambro Adjustment	Business Way	20-49
Atria Draper Place	Hopedale St	20-49

Source: EOLWD website:

http://lmi2.detma.org/lmi/Top_employer_list.asp?gstfips=25&areatype=05&gCountyCode=000286

6. 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

In Hopedale, two areas in the center of Town were identified as EJ/Vulnerable Population areas because of their high concentration of households with older individuals (18.8% of households with people ages 75+). As of the 2014 American Community Survey, Hopedale's median age was 41.5, and 13% of the Town was ages 65 and over, similar to the State of Massachusetts' and Worcester County's averages (39.3 and 39.6 respectively; and 14.4% and 13.4% respectively). This concentration of older people comes in part from the nursing/rest homes and end of life facilities in these areas. These EJ/Vulnerable Population areas, and the entire Town's elderly population, should be taken into account during hazard planning considerations, especially for providing supplies or transportation to shelters. The Town of Hopedale should coordinate with the owners and managers of these nursing/rest homes and end of life facilities to ensure continued safety of elderly residents. The locations of these EJ areas are shown in Map 1 in Appendix A.

More information regarding the identification of Environmental Justice and Vulnerable populations in the Central Massachusetts region can be found online at www.cmrpc.org/mobility2040.

6.0 EXISTING PROTECTION

The Town of Hopedale 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 any federal programs such as StormReady certification or Firewise community certification, but it does use utilize CodeRed and Reverse 911 for emergency notifications. Hopedale plans to research the utility of public awareness and

education programs as a result of this planning process.

Hopedale 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, tree maintenance, etc.... Hopedale 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 Highway Superintendent, Water & Sewer Manager, and a Tree Warden. Hopedale has several relevant plans in place, including a Comprehensive Emergency Management Plan (2006), and a Master Plan which will be updated in 2017 after it expires. Not only does Hopedale 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 South Middlesex County Fire Department (Mutual Aid District 14, and has opted-in to fire protection and DPW mutual aid agreements through MEMA. Hopedale 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 Hopedale. 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 29

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.	Hopedale monitors building activity within the flood plain to ensure compliance with provisions of state building code.	Effective There are no repetitive loss properties in Hopedale. Hopedale should seek to further limit development in the 100-year flood zones. It should work to score in the Community Rating System (CRS) under NFIP to enable its residents to obtain lower flood insurance rates. Hopedale should educate its residents about NFIP.
Flood Plain District zoning bylaw in place	Requires all development to be in compliance with state building code requirements for construction in floodplains	Hopedale has a Flood Plain District (Section 14) in its Zoning Bylaw.	Very effective No changes recommended
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.	Hopedale's Open Space and Recreation Plan was issued in 1990.	Somewhat effective Plan is expired as of 1995. Hopedale should prepare plan update as per Mass. DCR guidance. Where allowable, Hopedale should use the update to integrate hazard mitigation activities and recommendations.

Existing Measure	Description	Action	Effectiveness & Recommendations
Comprehensive Stormwater Management Program	Hopedale completed a Comprehensive Stormwater Management Plan, which outlines tasks to improve stormwater management, and presented it at a public meeting.	Hopedale is in the process of seeking funding and carrying out action items in this plan.	Very effective. Hopedale should inquire with CMRPC for assistance identifying applicable grants.
Drainage system maintenance and repair program	Plan to keep municipal drainage facilities (storm drains, catch basins etc.) in good order	Hopedale performs street sweeping and catch basin cleaning yearly. Hopedale recently repaired their catch basin near the Freedom Street Bridge.	Effective Hopedale 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	Hopedale conducts roadside mowing yearly to remove juvenile trees. Tree trimming (take-downs and clearing dead branches) takes place as needed.	Effective Hopedale should work with its electrical utility to coordinate a more systematic tree trimming program
Culvert Maintenance and Replacement	Maintain existing culverts through regular maintenance and (in some cases) beaver controls; replace/expand culverts/catch basins where needed to allow for adequate stormwater flow.	The Town has historically maintained and replaced problem culverts when needed and as funding allows.	Somewhat effective Current efforts are piecemeal and are limited by lack of resources and systematic approach. Hopedale should develop a prioritized inventory of problem culverts for use in seeking external financial support. Planning must comply with 2014 Mass. Wetlands Protection Act update; culverts may not be replaced in-kind.

Town of Hopedale Mitigation Strategies

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

	Action Plan/Descriptions	Hazards Addressed	Who agencies involved	Potential Funding Sources	Priority Political and economic viability: High/Med/Low	Impact Mitigation impact: High/Med/Low	Estimated Cost High/Med/Low	Timeline
A. Structure & Infrastructure Strategies								
	Tree trimming and tree wire installation needed across Town to protect utility wires, especially in south end of Town where flooding is frequent and sump pumps are required. Focus on high-growth areas. Repeat every four years.	SS, ST, HU	National Grid, Town, Private property owners	Utility (National Grid), Local, Private (property owners)	High	Medium	High	1-2 years
	Identify / resolve issues causing flooding in the Dana Park/Harmony Estates area including catch basin cleaning	FL, SS, ST, HU	Highway Department, Water and Sewer Department, Conservation, Board of Health	Local	Medium	Medium	More information required	Ongoing
	Identify / resolve issues causing flooding near Centennial Street and the Community House	FL, SS, ST, HU	Highway Department, Water and Sewer Department, Conservation, Board of Health	Local	Medium	Medium	More information required	Ongoing
	Identify / resolve issues causing flooding near Fitzgerald Drive	FL, SS, ST, HU	Highway Department, Water and	Local	Medium	Medium	More information required	Ongoing

	Action Plan/Descriptions	Hazards Addressed	Who agencies involved	Potential Funding Sources	Priority Political and economic viability: High/Med/Low	Impact Mitigation impact: High/Med/Low	Estimated Cost High/Med/Low	Timeline
			Sewer Department, Conservation, Board of Health					
	Identify / resolve issues causing flooding near Cutler Street	FL, SS, ST, HU	Highway Department, Water and Sewer Department, Conservation, Board of Health	Local	Medium	Medium	Low	Ongoing
	Identify / resolve issues causing flooding near Mellen Street, including monitoring and clearing beaver dams	FL, SS, ST, HU	Highway Department, Water and Sewer Department, Conservation, Board of Health	Local	Medium	Medium	Low	Ongoing
	Structural upgrades to old Fire Department building and attached tower	ST, HU, EQ	Fire, Highway Departments	Local, State Grants (Various)	Low	Low	High	3-5 Years
B. Preparedness, Coordination & Response Action Strategies								
	Coordinate with Towns of Hopkinton and Milford regarding water release from Lake Maspenock, Fiske Mill Pond, and Mill Pond, which have the potential to cause significant flooding in Hopedale.	FL, SS, ST, HU	Hopedale and Mendon Highway Depts, Hopkinton DPW	Local, State (various)	High	Medium	More information required	1-2 years
	Coordinate with Town of Mendon regarding	FL, SS, ST, HU	Hopedale and Mendon	Local, State (various)	High	Medium	More information required	1-2 years

	Action Plan/Descriptions	Hazards Addressed	Who agencies involved	Potential Funding Sources	Priority Political and economic viability: High/Med/Low	Impact Mitigation impact: High/Med/Low	Estimated Cost High/Med/Low	Timeline
	water release from Hopedale Pond, which is regarded by Mendon as a potential flooding hazard.		Highway Depts					
	Continue to participate in National Flood Insurance Program (NFIP) (or other) training offered by the State and/or FEMA that addresses flood hazard planning and management	FL, SS, ST, HU	DPW, Local Emergency Management , Planning	Local	High	High	Low	Ongoing
	Investigate Community Rating System (CRS) benefits and requirements and decide whether to participate	FL, SS, ST, HU	DPW, Local Emergency Management , Planning	Local	Low	Low	Low	1-2 Years
	Road information coordination and planning for snow removal	SS	Highway Dept; MassDOT; Mass State Police; CMRPC	Local, Federal Grants (HMGP/PDM), State Grants (Various), Private Contracts	High	High	Low	Ongoing
	Evacuation Plan updates	All	Local Emergency Management , Highway Dept, CMRPC, MassDOT	Local, Federal Grants (Homeland Security via MEMA and CRHSAC)	High	High	Low	1-2 Years (update every 5 Years)
	Improve vegetation and debris management along Grafton-Upton Railway and CSX railway rights-of-way;	DR, WF	Grafton-Upton Railway, CSX, Railroad,	Private (P&W Railroad)	High	High	Low	Ongoing

	Action Plan/Descriptions	Hazards Addressed	Who agencies involved	Potential Funding Sources	Priority Political and economic viability: High/Med/Low	Impact Mitigation impact: High/Med/Low	Estimated Cost High/Med/Low	Timeline
	recurrent brush fires reported near tracks		Fire Dept					
C. Education & Awareness Strategies								
	Provide information to residents and businesses on severe snowstorms, ice storms, nor'easters, severe thunderstorms, high winds, tornadoes, lightning, and flooding, hurricanes tropical storms, and microbursts. Incorporate into school programs for students to bring home information to parents.	SS, ST, HU, FL	Local Emergency Management	Local	High	Medium	Low	Ongoing
	Provide information to residents and businesses, possibly through town-wide mailings, about proper brush and tree clearance, and other firefighting measures.	DR, WF	Local Emergency Management	Local, Federal Grants (AFG FP&S)	High	Medium	Low	< 1 year
	Provide information to residents and businesses on droughts, and water conservation through low-impact landscaping and other measures (to conserve water for firefighting). Integrate lessons from Mass Audubon. Incorporate into school programs for students to bring home information to parents.	DR, WF	Water & Sewer, Conservation	Local	High	Medium	Low	Ongoing
D. Local Plan & Regulation Strategies								

	Action Plan/Descriptions	Hazards Addressed	Who agencies involved	Potential Funding Sources	Priority Political and economic viability: High/Med/Low	Impact Mitigation impact: High/Med/Low	Estimated Cost High/Med/Low	Timeline
	Pursue local Stormwater Management Policy and Bylaw to ensure adequate on-site retention and recharge	FL, ST, HU, SS	Planning Board, Conservation	Local	High	Medium	Low	1-2 years
	Use MA Drought Management Plan as a template for Town's own drought plan, and integrate State's recommendations and actions according to Town's needs.	DR	Highway Dept, Water Dept, Conservation	Local	Medium	Low	Low	1-2 years
	Establish a Local wetlands protection bylaw to further build upon the State's Wetlands Protection Act and Regulations, which 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.	DR, WF	Conservation Commission	Local	Medium	Medium	Low	1-2 years
	Review and update local plans and development review processes (planning, zoning, stormwater management, conservation, etc.) to ensure new construction will not be affected by hazards	All	All Town Departments	Local	Medium	High	Low	Ongoing

	Action Plan/Descriptions	Hazards Addressed	Who agencies involved	Potential Funding Sources	Priority Political and economic viability: High/Med/Low	Impact Mitigation impact: High/Med/Low	Estimated Cost High/Med/Low	Timeline
	Monitor implementation of Hazard Mitigation Plan	All	All Town Departments	Local	High	High	Low	Ongoing

'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

TOWN OF HOPEDALE

Municipal Vulnerability Preparedness (MVP) Community Resilience Building Workshop

March 16th 10:00 AM – 1:00 PM

&

March 23rd 2:00 PM – 5:00 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

**1. Engage
Community**

**2. Identify CC
Impacts &
Hazards**

**3. Complete
Assessment of
Vulnerabilities
& Strengths**

**4. Develop &
Prioritize
Actions**

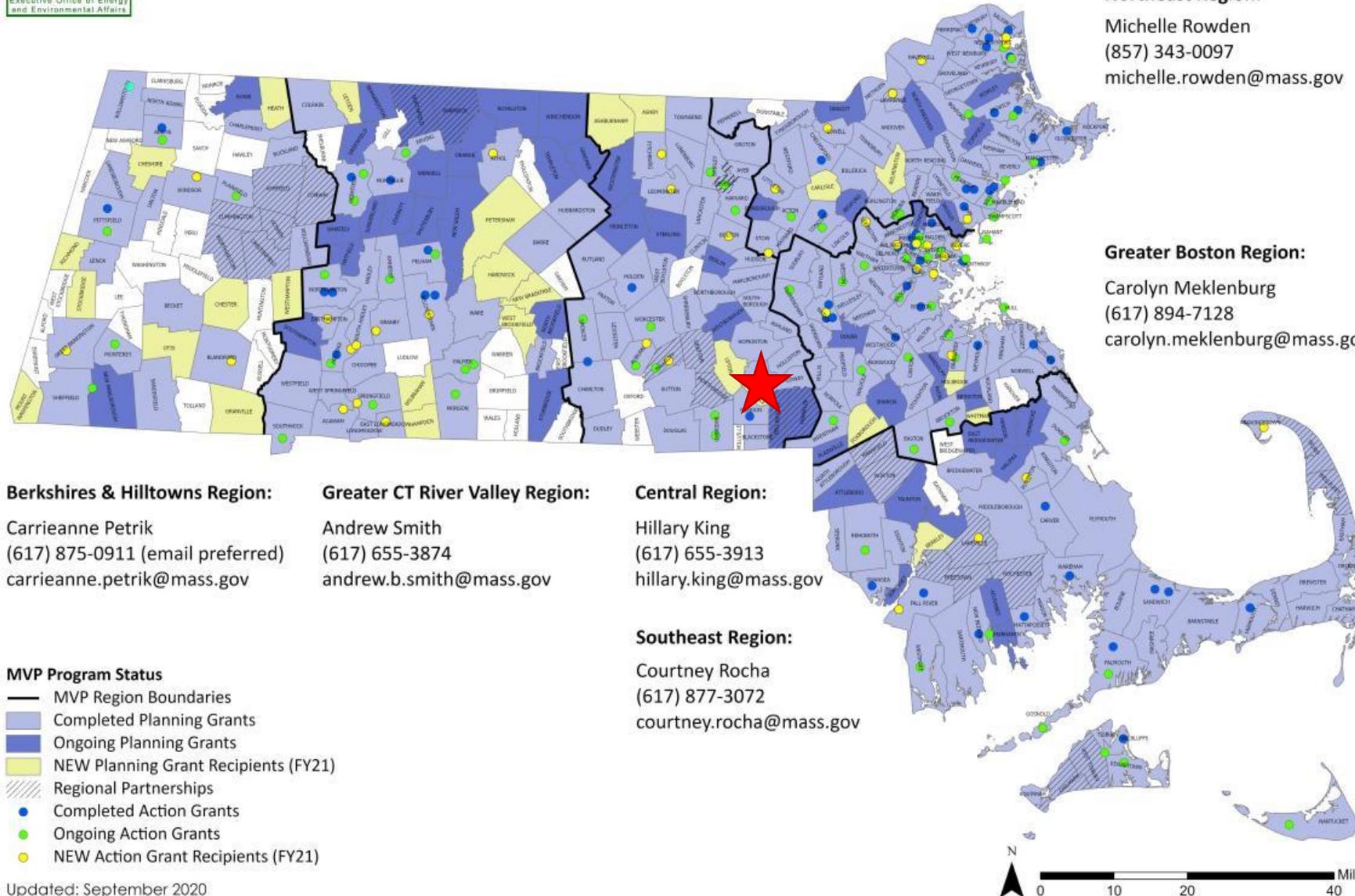
5. Take Action





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





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

HOW THE TOWN GOT HERE?

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



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

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

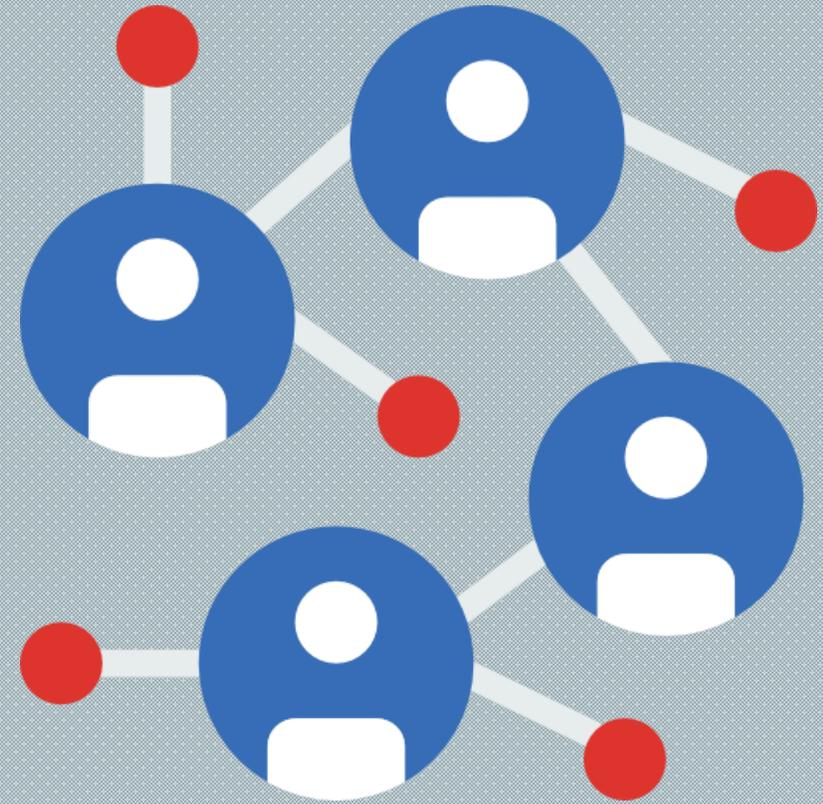


TABLE ROLES AND RESPONSIBILITIES

- 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

HAZARD IDENTIFICATION



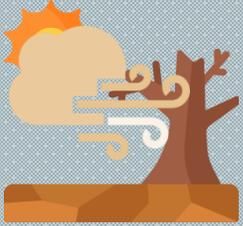
- **Flooding**
 - Riverine
 - Street



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



- **Tornadoes**



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



- **Tsunami**



- **Hurricanes/
Nor'easters**



- **Wild Fires**



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



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

PRIMARY TOPIC AREAS



- Infrastructure



- Society



- Environment

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.

1. Engage
Community

2. Identify CC
Impacts &
Hazards

3. Complete
Assessment of
Vulnerabilities
& Strengths

4. Develop &
Prioritize
Actions

5. Take Action



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

CONTACT US

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Mimi Kaplan, mkaplan@cmrpc.org

Executive Office of Energy and Environmental Affairs

Hillary King, hillary.king@state.ma.us



**THANK
YOU**

TOWN OF HOPEDALE

Municipal Vulnerability Preparedness (MVP) Community Resilience Building Workshop

March 16th 10:00 AM – 1:00 PM

&

March 23rd 2:00 PM – 5:00 PM



STEP ONE: HAZARD IDENTIFICATION

What are the Top Four Natural Hazards in Hopedale?

1. Engage
Community

2. Identify CC
Impacts &
Hazards

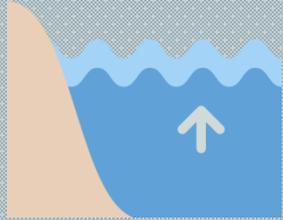
3. Complete
Assessment of
Vulnerabilities
& Strengths

4. Develop &
Prioritize
Actions

5. Take Action



STEP ONE: HAZARD IDENTIFICATION



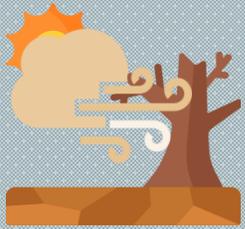
- **Flooding**
 - Riverine
 - Street



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



- **Tornadoes**



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



- **Tsunami**



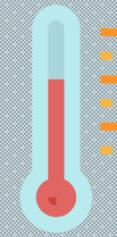
- **Hurricanes/
Nor'easters**



- **Wild Fires**



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



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

PRIMARY TOPIC AREAS



- Infrastructure



- Society



- Environment

STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

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 (tomado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)

Features	Location	Ownership	V or S	Top 4 Hazards				Priority	Time
								H-M-L	Short Long Ongoing
Infrastructural									
Dam									
Societal									
Environmental									



STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

Community Resilience Building Risk Matrix  www.CommunityResilienceBuilding.com

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

Features	Location	Ownership	V or S	Top 4 Hazards				Priority	Time
				H	M	L	S	H-M-L	Short Long Ongoing
Infrastructural									
Dam									
Societal									
Senior Housing									
Environmental									



STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

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								H-M-L	Short Long Ongoing
Infrastructural									
Dam									
Societal									
Senior Housing									
Environmental									
Wetlands									



STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES



Community Resilience Building Risk Matrix				www.CommunityResilienceBuilding.com						
H-M-L priority for action over the Short or Long term (e.g.) 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	Top 4 Hazards				Priority	Time	
								H-M-L	Short Long Ongoing	
Infrastructural										
Dam	Estimated Location									
Societal										
Senior Housing										
Environmental										
Wetlands										

STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

Community Resilience Building Risk Matrix  www.CommunityResilienceBuilding.com

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Features	Location	Ownership	V or S	Top 4 Hazards				Priority	Time
				H	M	L	S	H-M-L	Short Long Ongoing
Infrastructural									
Dam									
Societal									
Senior Housing									
Environmental									
Wetlands									

Public? Private? State?

Estimated Location

STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES



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				Top 4 Hazards				
Location	Ownership	V or S		H	M	L	Priority	Time
							Short	Long
							Ongoing	
Infrastructural								
Dam								
Societal								
Senior Housing								
Environmental								
Wetlands								

Vulnerability or Strength
 Public? Private? State?
 Estimated Location

DAY 1 COMPLETE

STEP TWO: COMPLETED

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	Top 4 Hazards				Priority	Time
								H-M-L	Short Long Ongoing
Infrastructural									
Dam									
Societal									
Senior Housing									
Environmental									
Wetlands									

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)

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

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

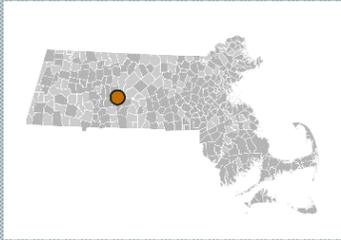


Permeable Paving

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

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

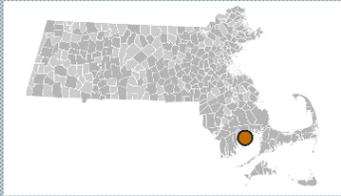


Example Action Grant Projects

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

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

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, hurricane, earthquake, drought, sea level rise, heat wave, etc.)

				Top 4 Hazards		Priority	Time
						H-M-L	Short Long Ongoing
Features	Location	Ownership	V or S				
Infrastructural							
Societal							
Env							

Completed

Nature Based Solutions



STEP THREE: PRIORITIES

www.CommunityResilienceBuilding.com

Community Resilience Building Risk Matrix

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, etc.)

				Top 4 Hazards				H-M-L	Short Long Ongoing										
Features	Location	Ownership	V or S																
<div style="border: 2px solid red; padding: 10px; transform: rotate(-30deg); font-size: 48px; font-weight: bold; opacity: 0.5;">Completed</div>				Nature Based Solutions				<div style="background-color: red; color: white; padding: 5px;">High/ Med. Low</div>											
Societal																			
Environmental																			

STEP THREE: TIMELINE

www.CommunityResilienceBuilding.com

Community Resilience Building Risk Matrix

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 waves)

Features	Location	Ownership	V or S	Top 4 Hazards				Priority	Short Long Ongoing
								H-M-L	Short Long Ongoing
Infrastructural									
Societal									
Environmental									

Completed

Top 4 Hazards

Nature Based Solutions

High/ Med. Low

Short/Long/Ongoing



REPORT OUTS

**What did your table
find?**

SUMMARY DISCUSSION

- Areas of agreement
- Areas of unique perspectives

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
- Apply for Action Grants

1. Engage
Community

2. Identify CC
Impacts &
Hazards

3. Complete
Assessment of
Vulnerabilities
& Strengths

4. Develop &
Prioritize
Actions

5. Take Action



CONTACT US

Hopedale Core Team Leaders

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CMRPC Project Leaders

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Mimi Kaplan, mkaplan@cmrpc.org

Executive Office of Energy and Environmental Affairs

Hillary King, hillary.king@state.ma.us



**THANK
YOU**

CLIMATE PROJECTIONS AND IMPACTS FOR THE TOWN OF HOPEDALE

1. Engage
Community

2. Identify CC
Impacts &
Hazards

3. Complete
Assessment of
Vulnerabilities
& Strengths

4. Develop &
Prioritize
Actions

5. Take Action

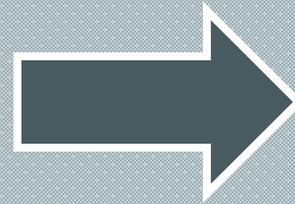
**Municipal Vulnerability Preparedness
Community Resilience Building Workshop – March 16 and 23, 2021**



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

OUR CLIMATE IS ALREADY CHANGING

Temperature:



**3° F
Since 1895**

Growing Season:



**11 Days
Since 1895**

Sea Level Rise:



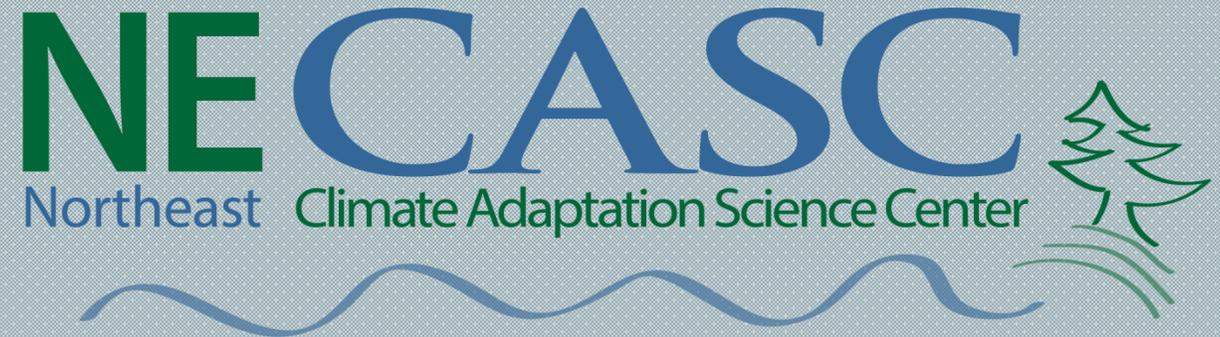
**8 inches
Since 1900**

Strong Storms:



**55%
Since 1958**

NORTHEAST CLIMATE SCIENCE CENTER UMASS AMHERST

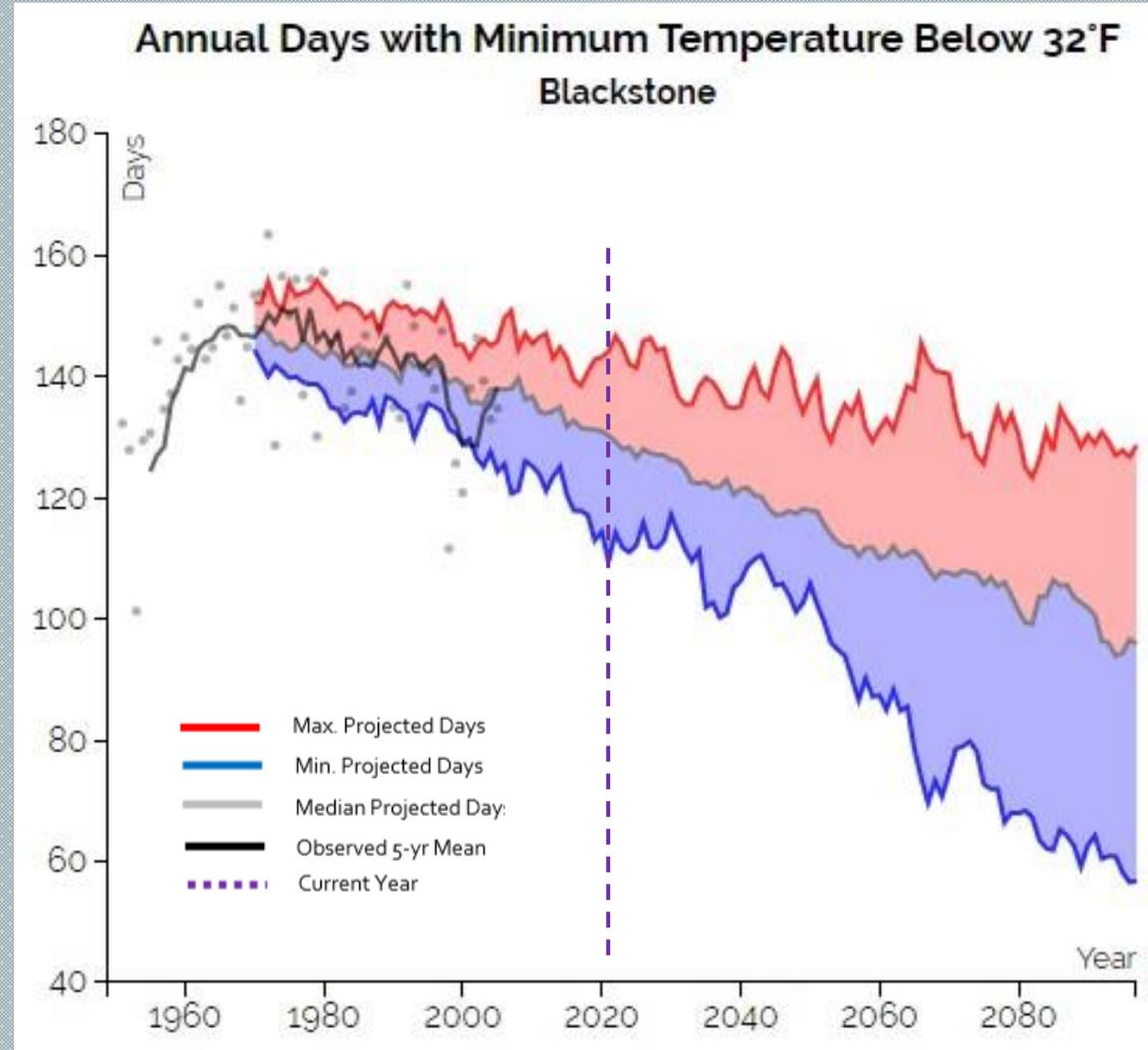


- NECASC downscaled climate projections for major drainage basins
- Climate Models from the IPCC Fifth Assessment Report
- Historical Data 1971-2000
- Medium and High Emission Scenarios were Chosen (RCP 4.5 and 8.5)
 - Medium Scenario Assumes Emissions Peak at Mid-Century
 - High Scenario Assumes a Continuing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



WINTER STORMS

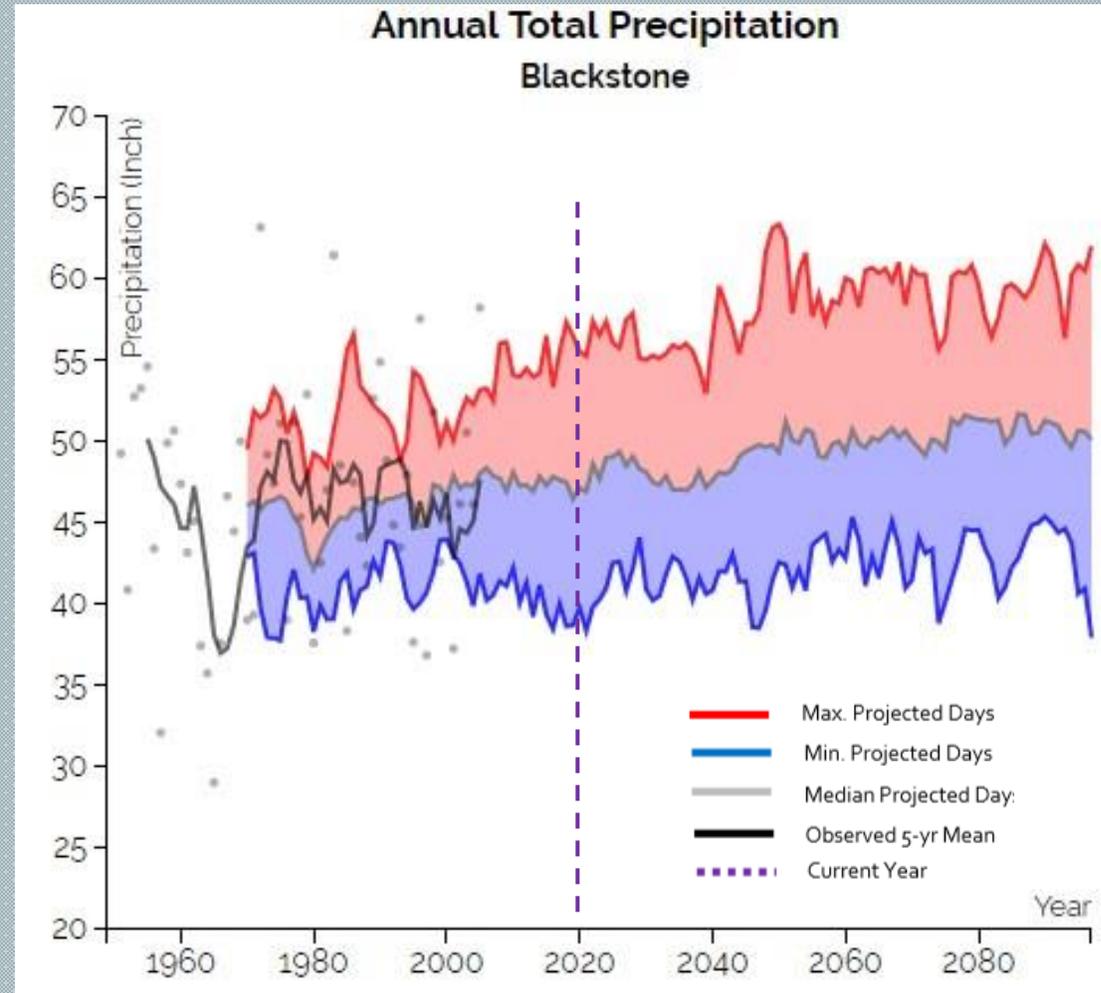
- Annual days below freezing will decrease
- Rising temps → more winter precipitation to fall as rain or freezing rain
- Lower snowfall accumulation
- Winter - Highest projected increase in precipitation
- Storms that do occur may be worse - proximity to Atlantic Ocean increases risk of large storm events



HEAVY RAINFALL AND FLOODING

Seasonal

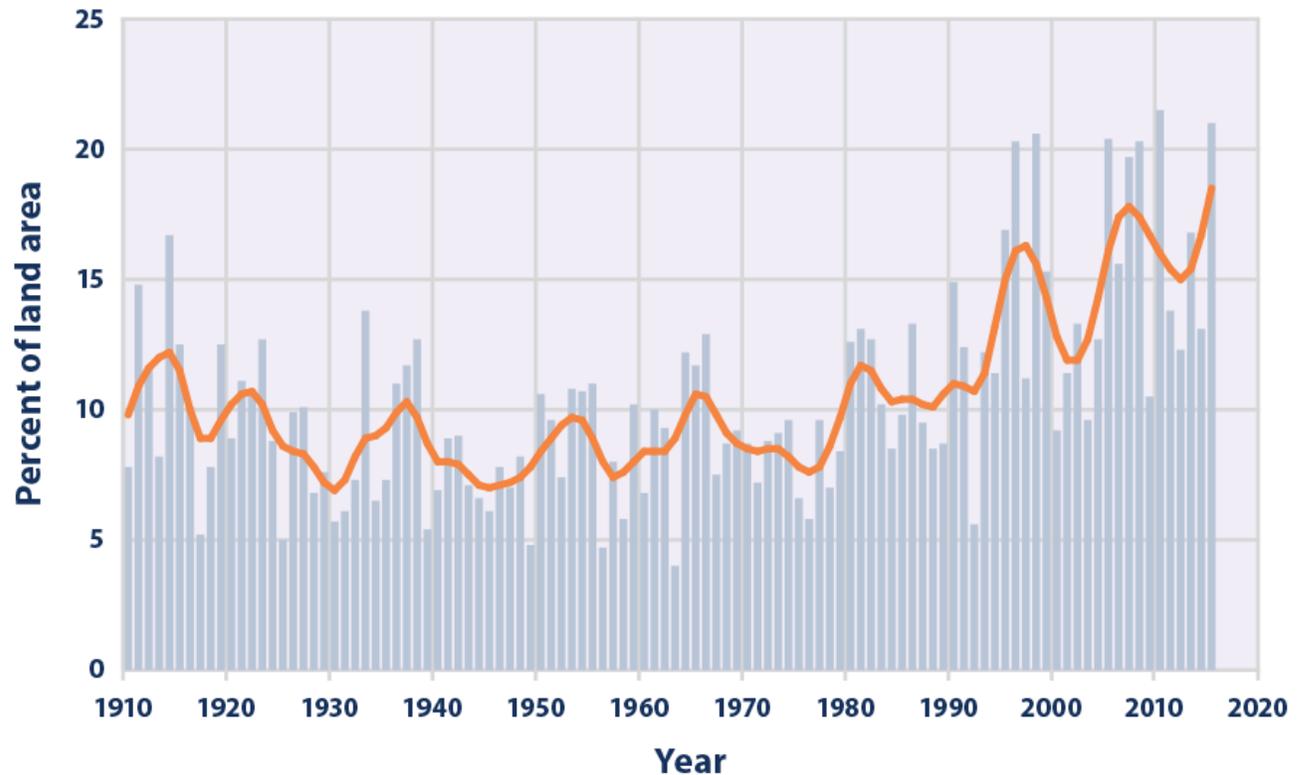
- **Winter** – Largest increase expected, up to .6 to 3.9 inches by end of century
- **Spring** – Expected increase of .2 to 2.8 inches by end of century
- **Summer** – Possible decrease of 1.2 inches to increase of 2.0 inches by end of century
- **Fall** – Possible decrease of 1.7 inches to increase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



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

Extreme One-Day Precipitation Events in the Contiguous 48 States, 1910–2015



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

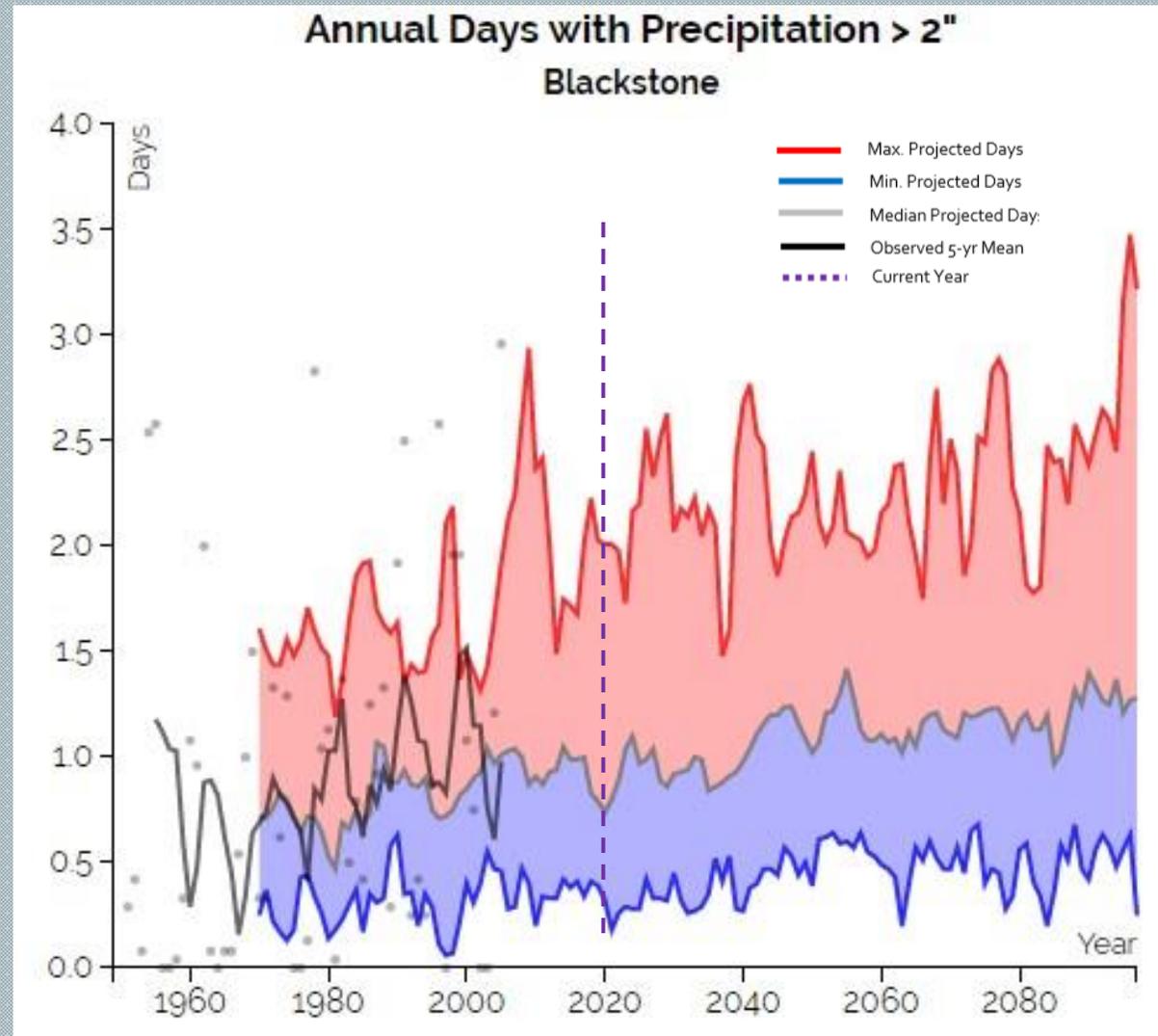
For more information, visit U.S. EPA's "Climate Change Indicators in the United States" at www.epa.gov/climate-indicators.



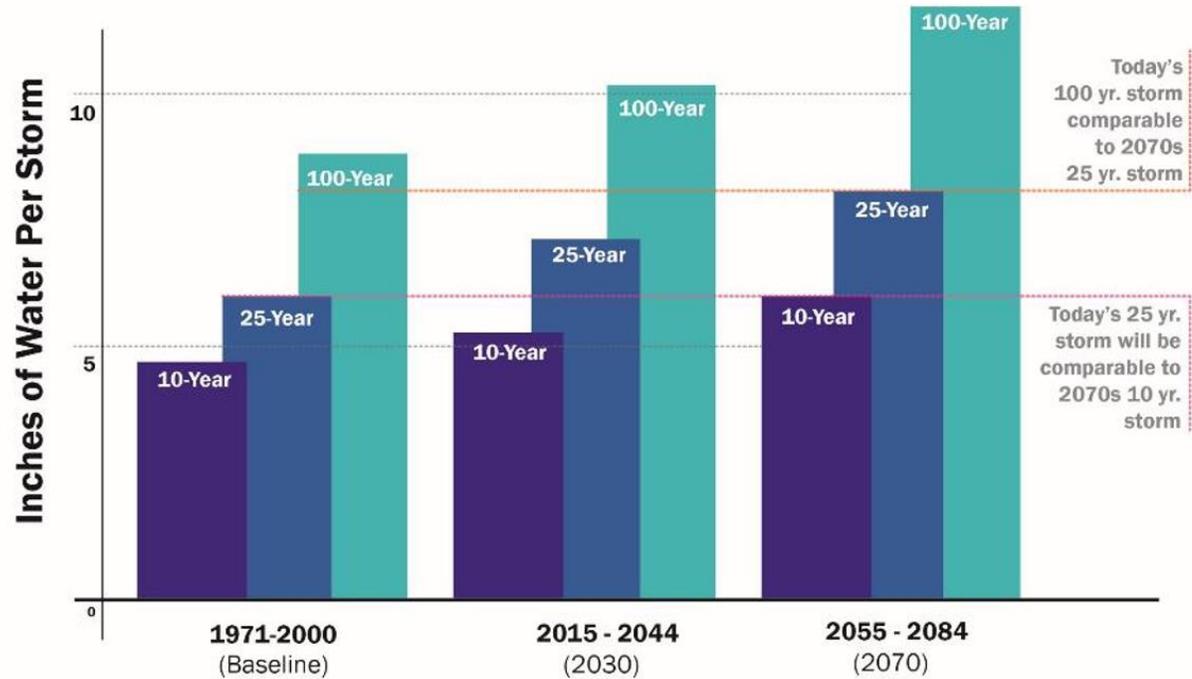
HEAVY RAINFALL AND FLOODING

Extreme Precipitation

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



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

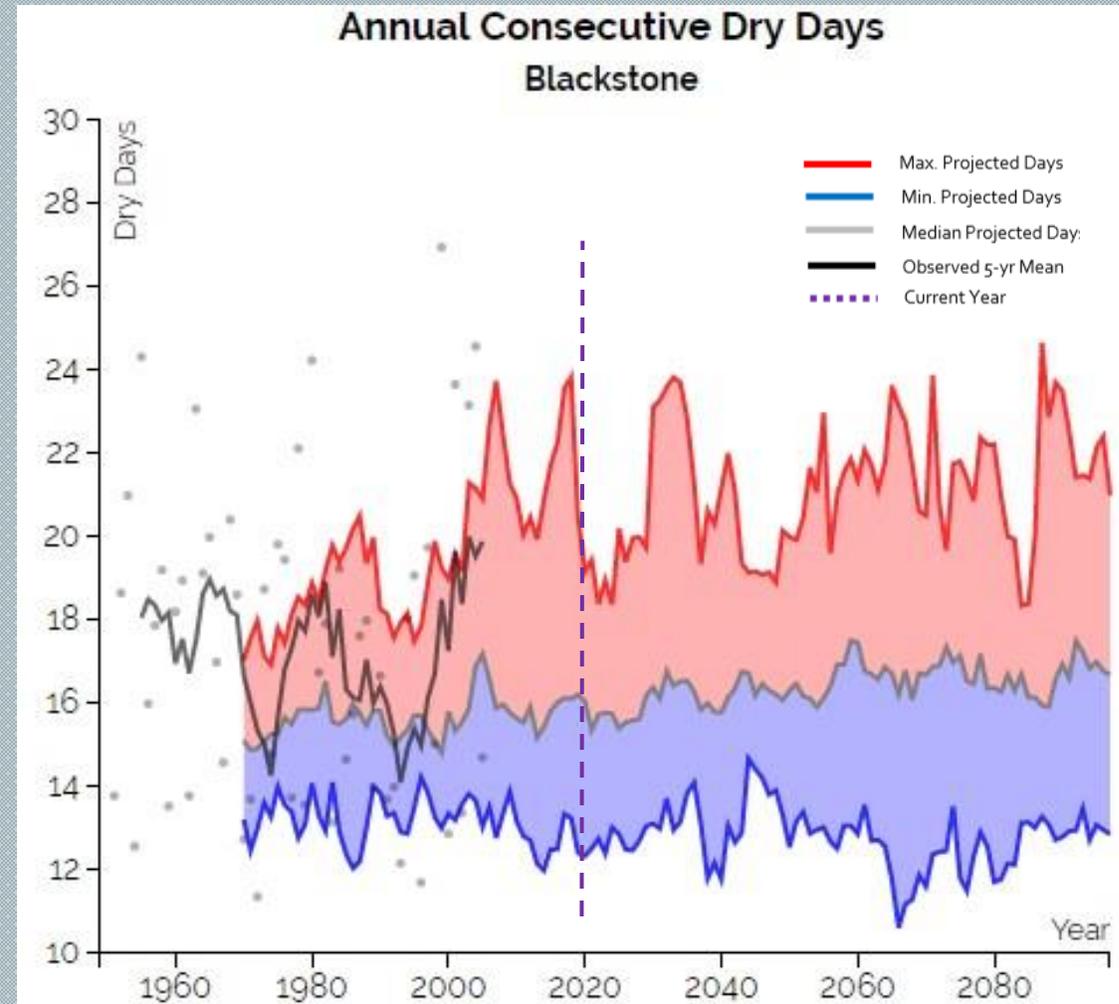
IMPACTS OF INCREASED PRECIPITATION

- 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



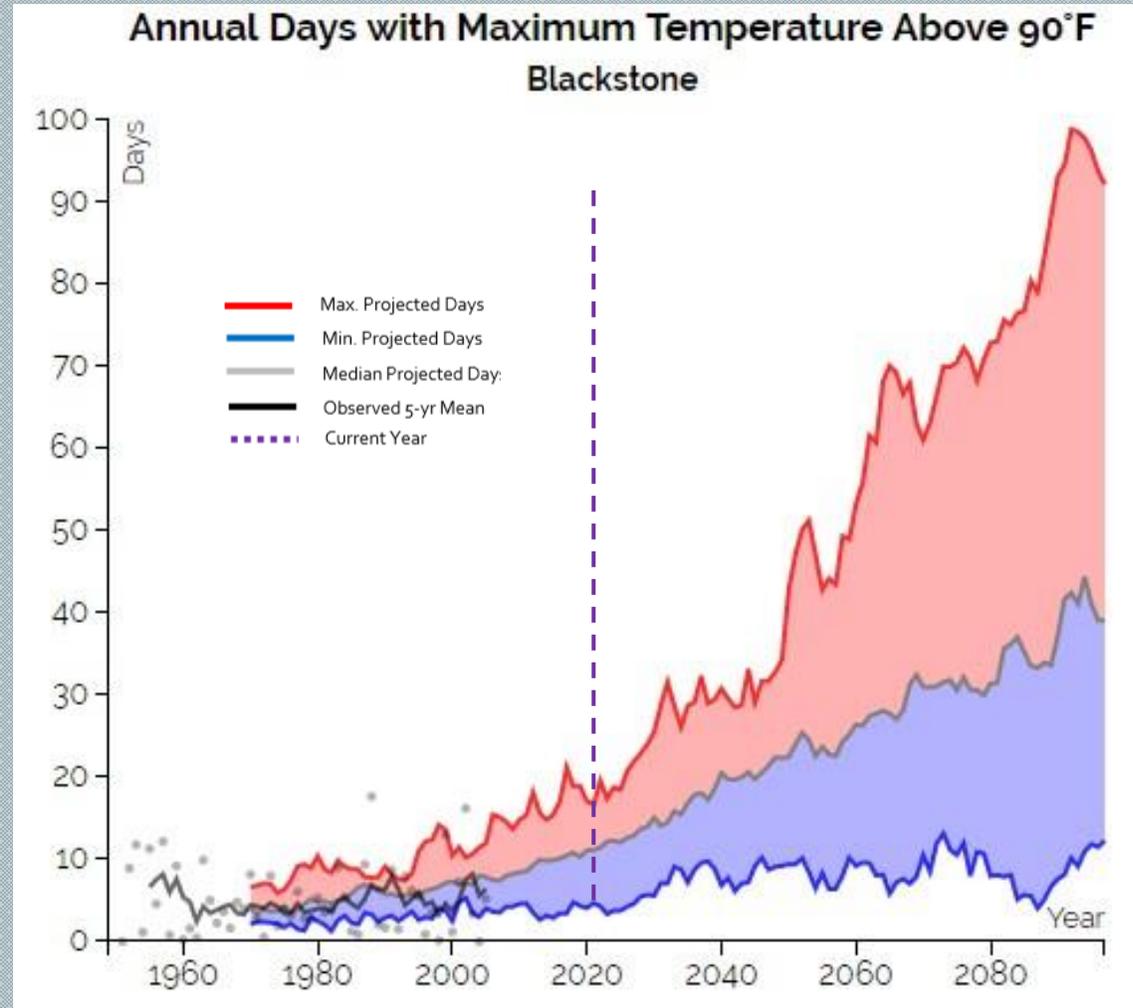
DROUGHT IMPACTS

- 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



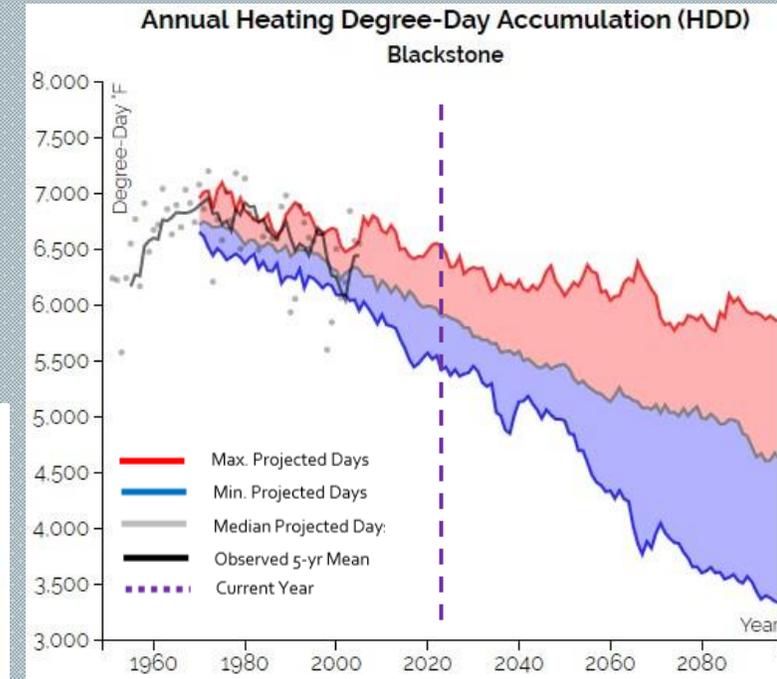
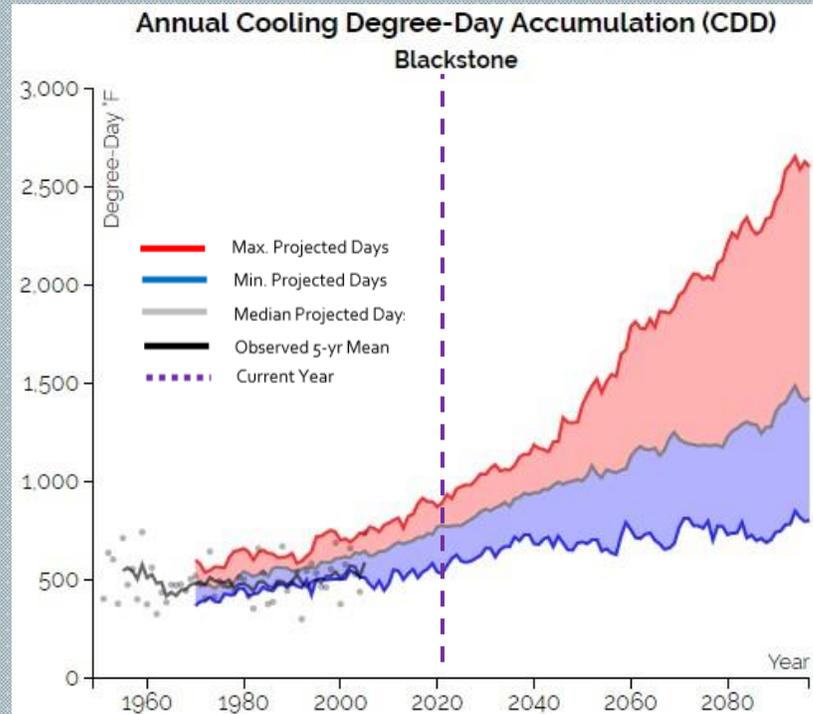
HEAT PROJECTIONS

- 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 PROJECTIONS

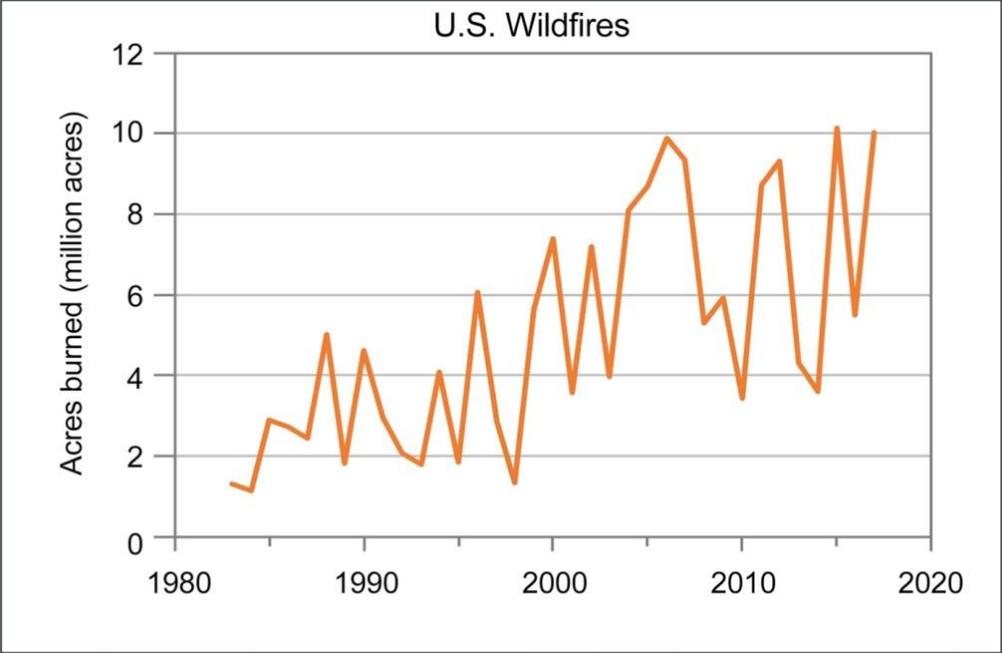
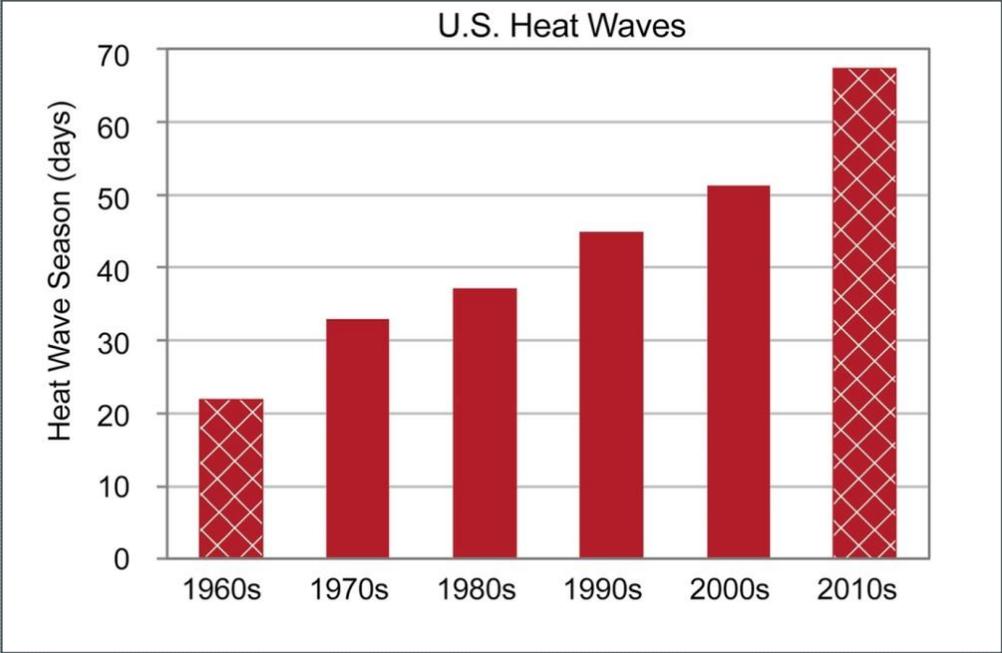
- Projected decrease in heating degree-days and increase in cooling-degree days
- More days above 65°F means fewer days needed to heat buildings and more days needed to cool buildings.
- Winter
 - 7-19% decrease in HDD by mid century
- Spring
 - 10-24% decrease in HDD by mid century
- Fall
 - 20-33%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



HEAT AND WILDFIRE

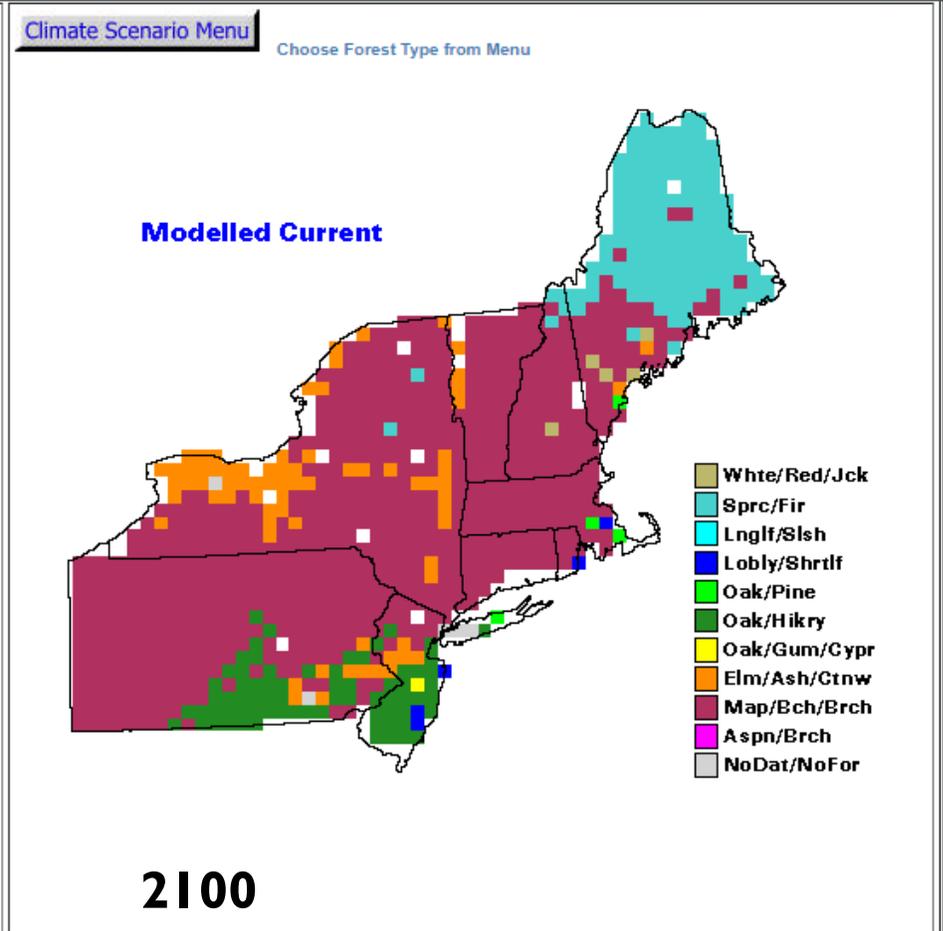
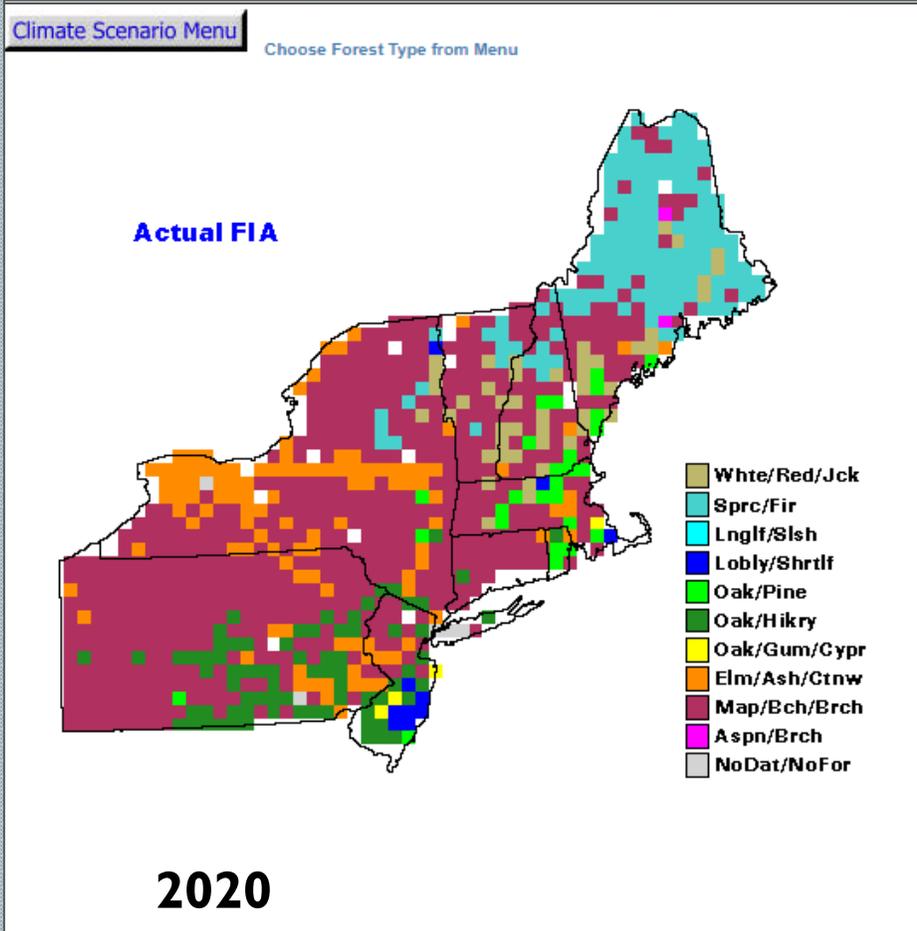
Nation-Wide Data

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

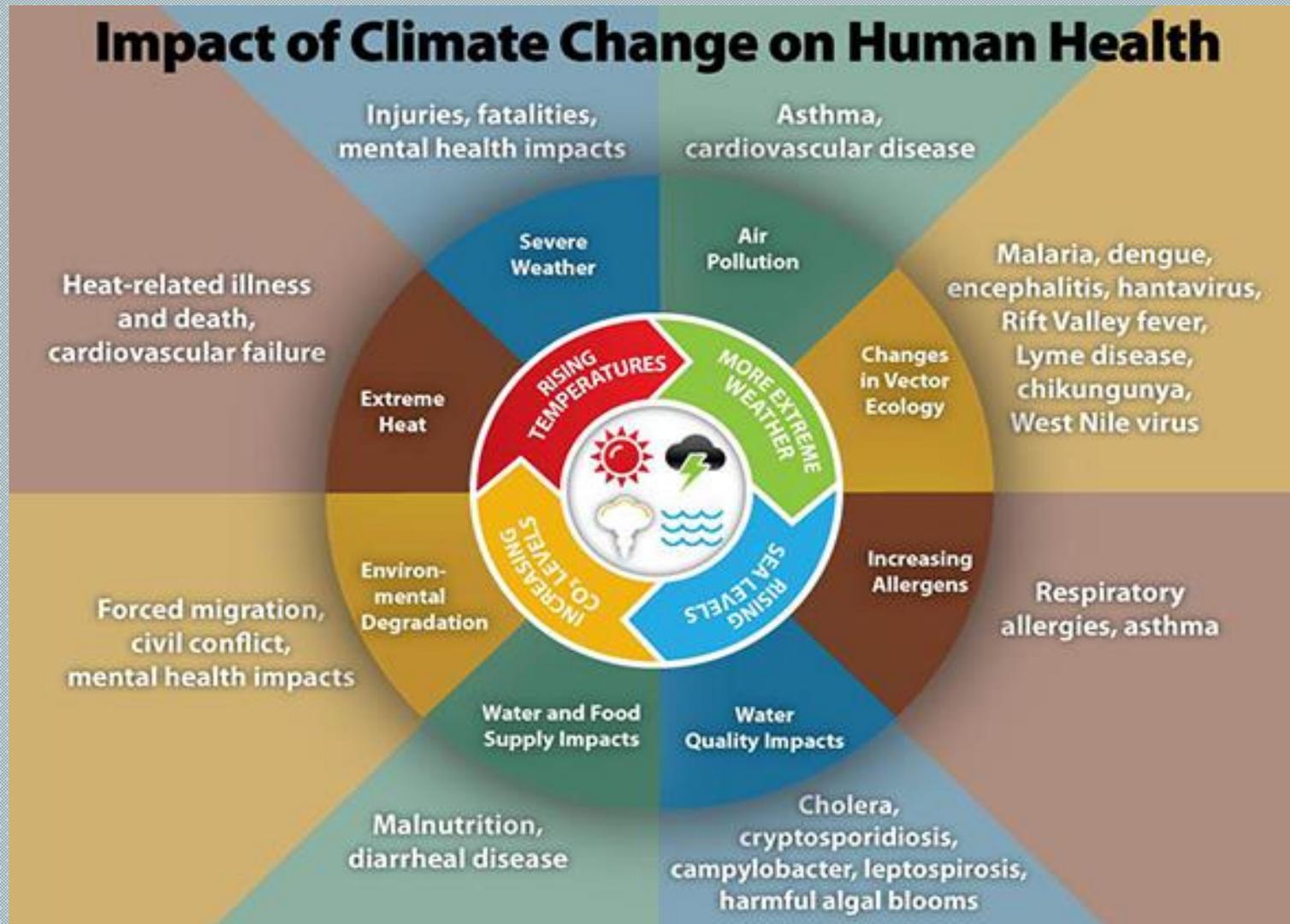


HEAT IMPACTS ON THE ENVIRONMENT

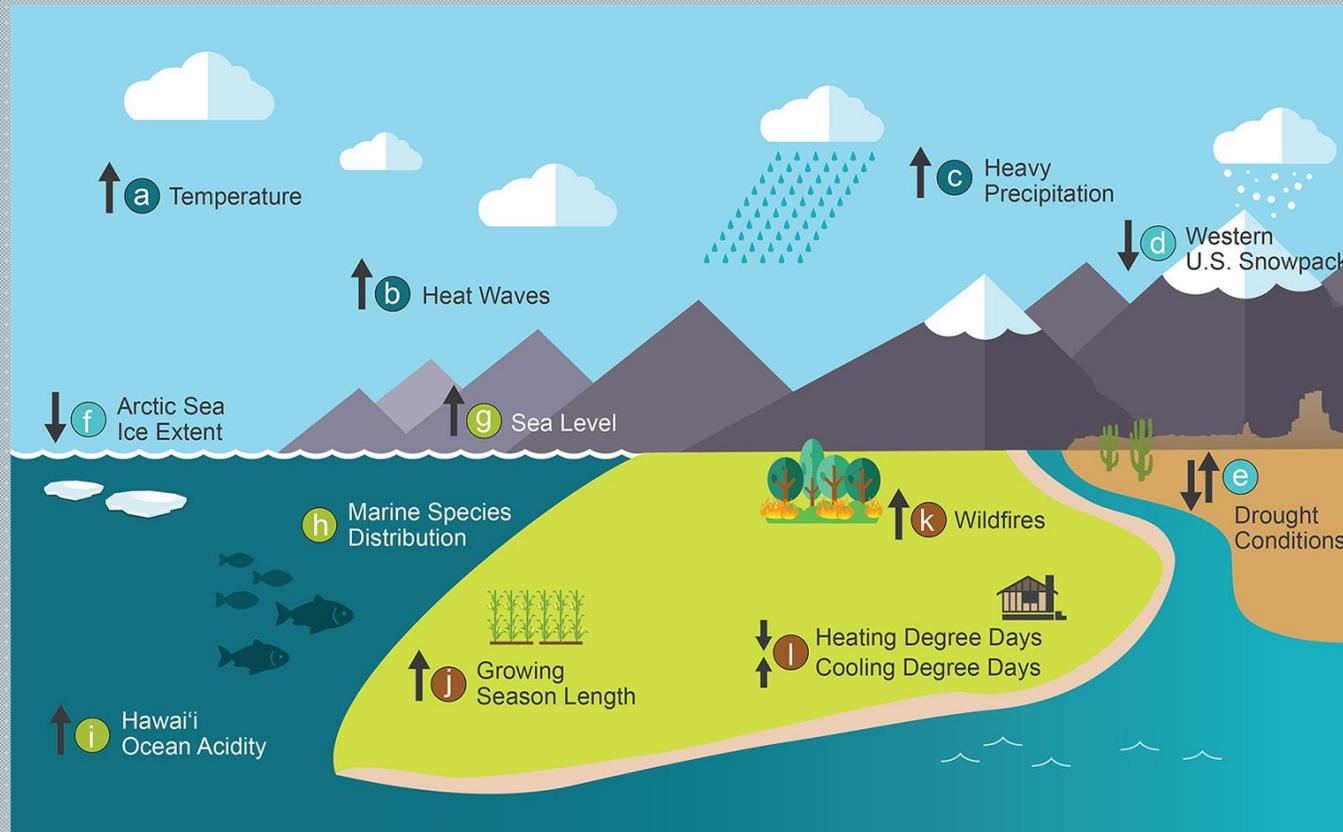
- Ranges of tree species are expected to move north
- Diversity of species will decrease
- Increases of invasive species are likely



HEAT IMPACTS ON SOCIETY



QUESTIONS OR COMMENTS?



mkaplan@cmprc.org

TOWN OF HOPEDALE

Municipal Vulnerability Preparedness (MVP)

Community Resilience Building Workshop

March 16 & 23 2021

HAZARD MITIGATION PLANNING

- Overlaps somewhat with Hazard Mitigation Planning, but MVP is more focused on climate change in the long term
- Hopedale's Hazard Mitigation received Final FEMA Approval in 2017.
- 5-year plans



Hopedale Hazard Mitigation Plan



Snowstorm, Police Department in Hopedale, Massachusetts

Adopted by the Board of Selectmen February 6, 2017

Prepared by the Central Massachusetts Regional Planning Commission
2 Washington Square, Union Station
Worcester, MA 01604
www.cmrpc.org

&

Local Hazard Mitigation Team
Town of Hopedale, Massachusetts



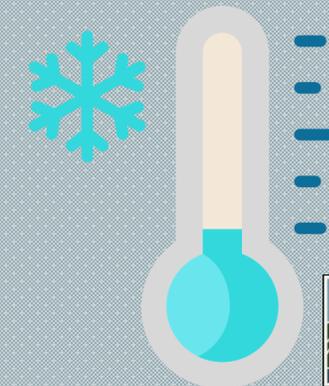
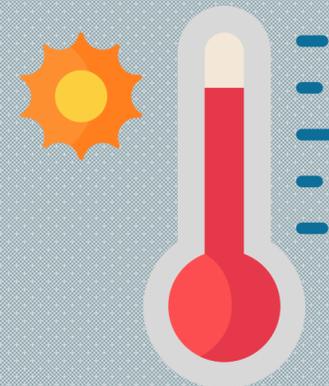
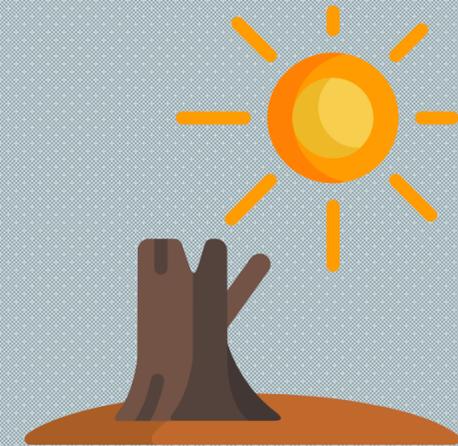
BE PREPARED, MITIGATE THE COSTS

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

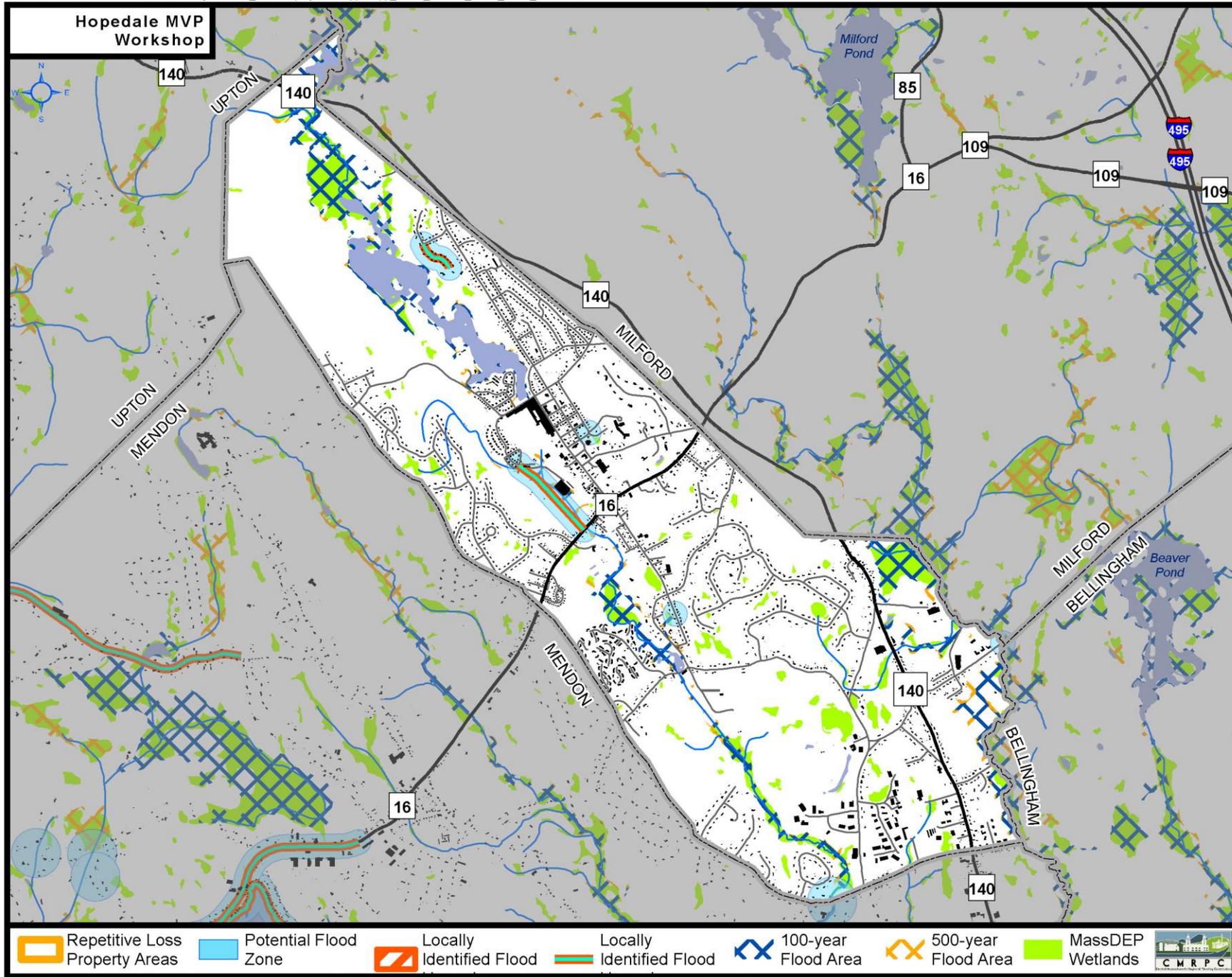
National Benefit-Cost Ratio Per Peril <small>*BCR numbers in this study have been rounded</small>		Exceed common code requirements	Meet common code requirements	Utilities and transportation	Federally funded
Overall Hazard Benefit-Cost Ratio		4:1	11:1	4:1	6:1
Savings (\$billion)		\$16_{/year}	\$13_{/year}	\$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

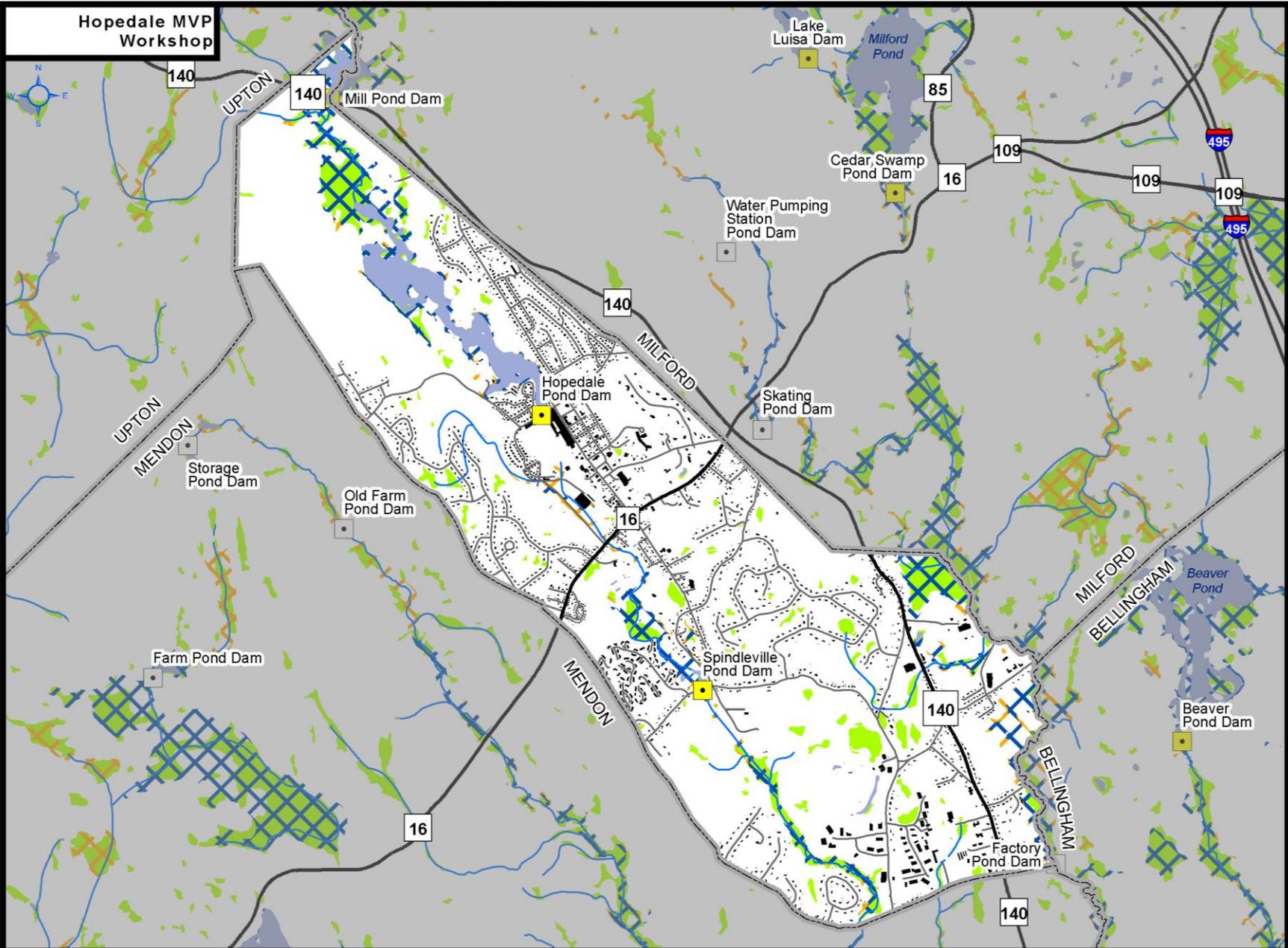
NATURAL HAZARDS

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



FLOOD RISKS





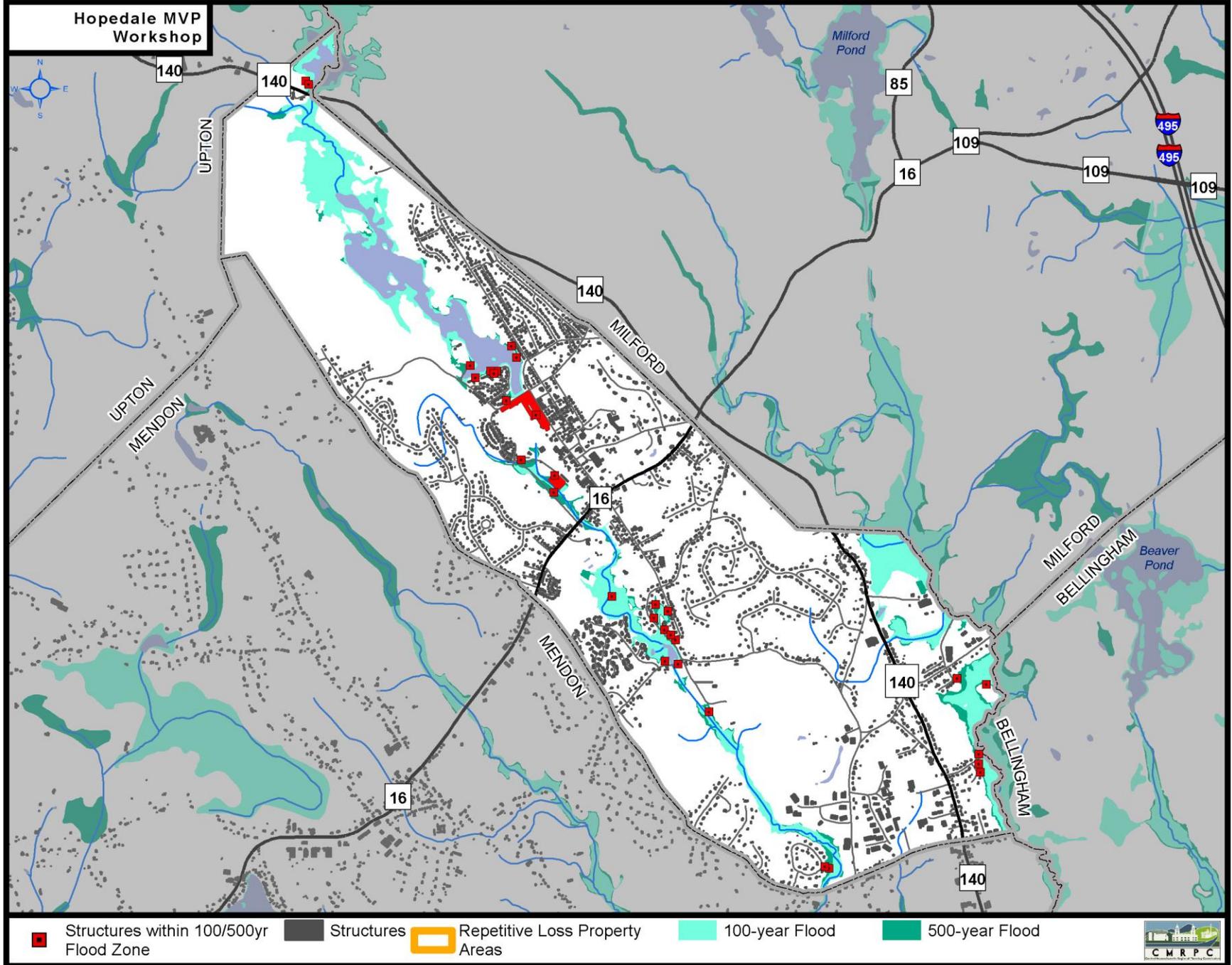
High Hazard	Significant Hazard	Low Hazard	Not Rated, Too Small	100-year Flood Area*	500-year Flood Area	MassDEP Wetlands	
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Source: Data provided by the town of Hopedale, CMRPC, massDOT, MassGIS. Information depicted on this map is for planning purposes only.

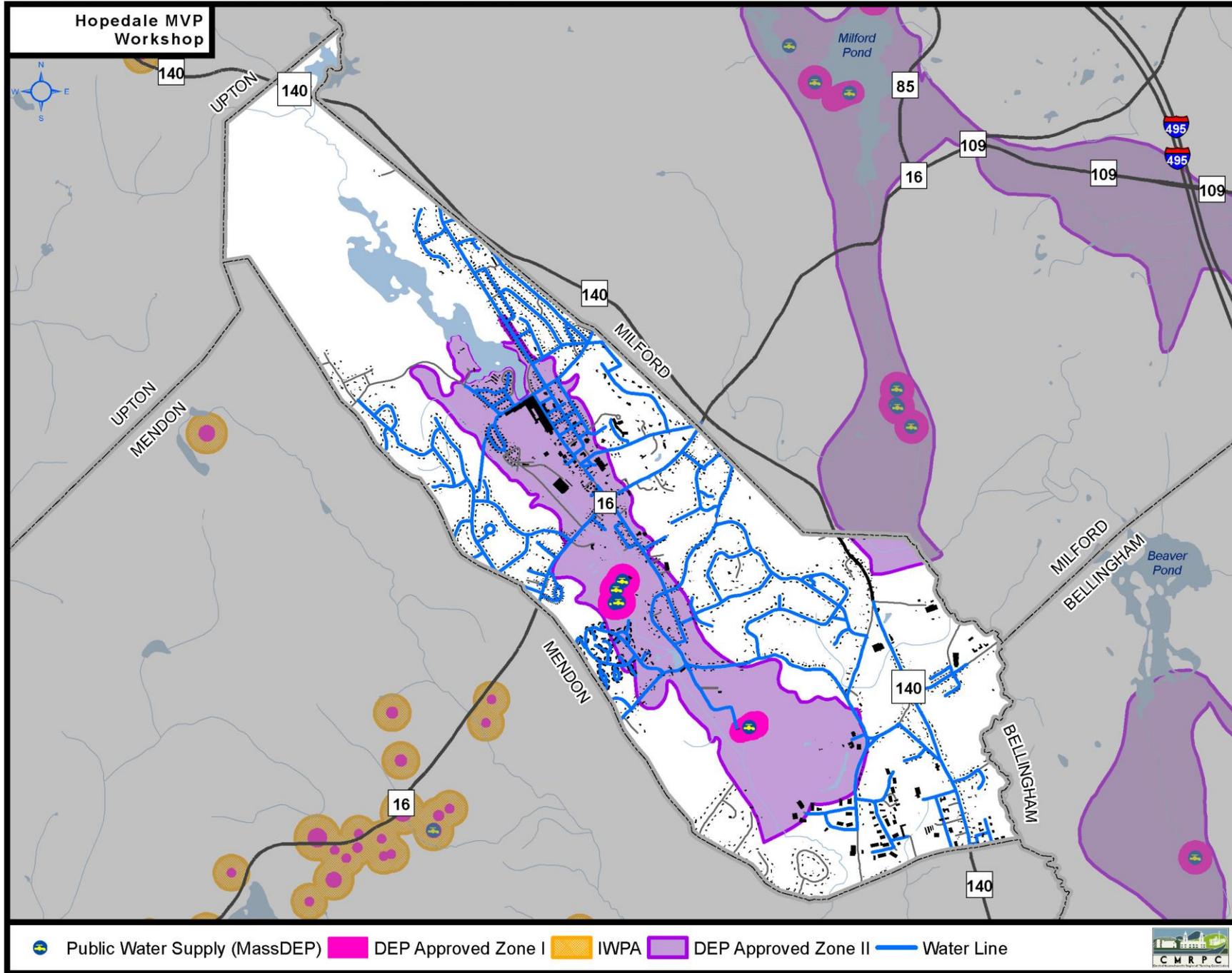
DAM FAILURE RISK



FLOODING IMPACTS



DROUGHT IMPACTS

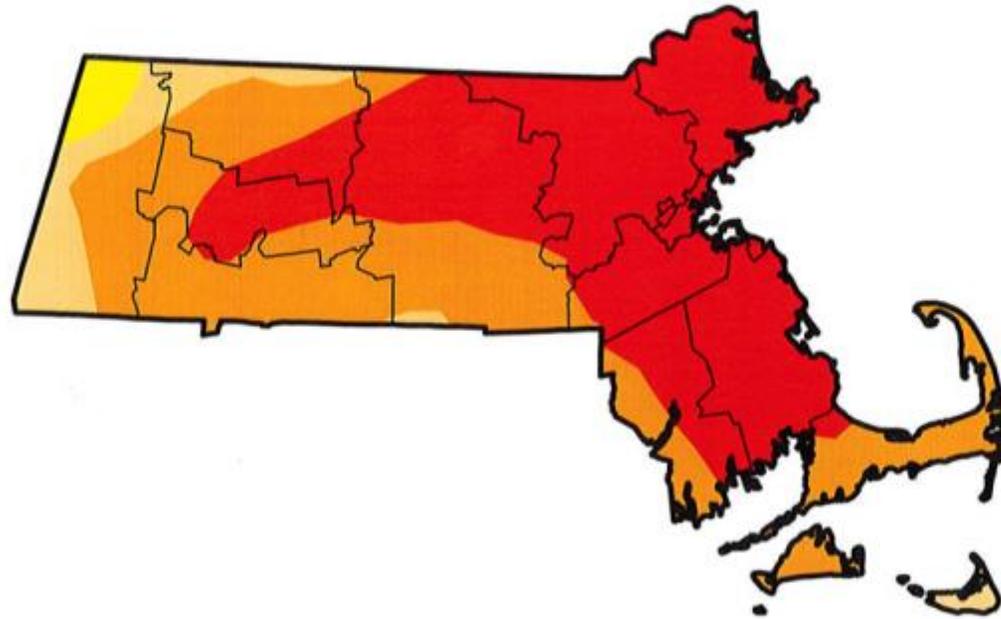


Source: Data provided by the Town of Hopedale, CMRPC, massDOT, MassGIS. Information depicted on this map is for planning purposes only.



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 <i>9/6/2016</i>	0.00	100.00	94.38	77.38	22.67	0.00
3 Months Ago <i>6/14/2016</i>	20.09	79.91	13.56	0.00	0.00	0.00
Start of Calendar Year <i>12/29/2015</i>	22.85	77.15	26.34	0.00	0.00	0.00
Start of Water Year <i>9/29/2015</i>	12.90	87.10	30.43	0.00	0.00	0.00
One Year Ago <i>9/15/2015</i>	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

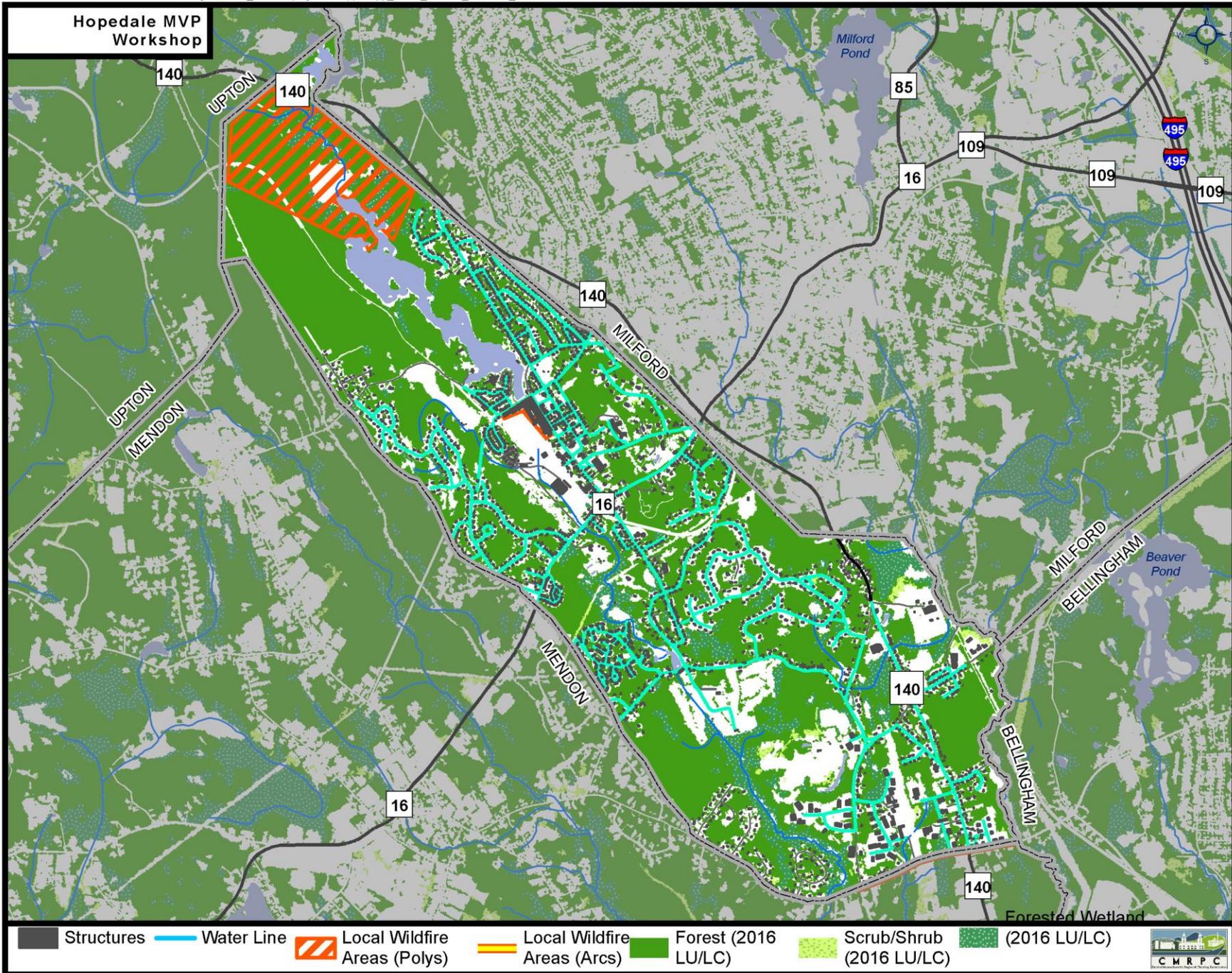


<http://droughtmonitor.unl.edu/>



CMRPC
Central Massachusetts Regional Planning Commission

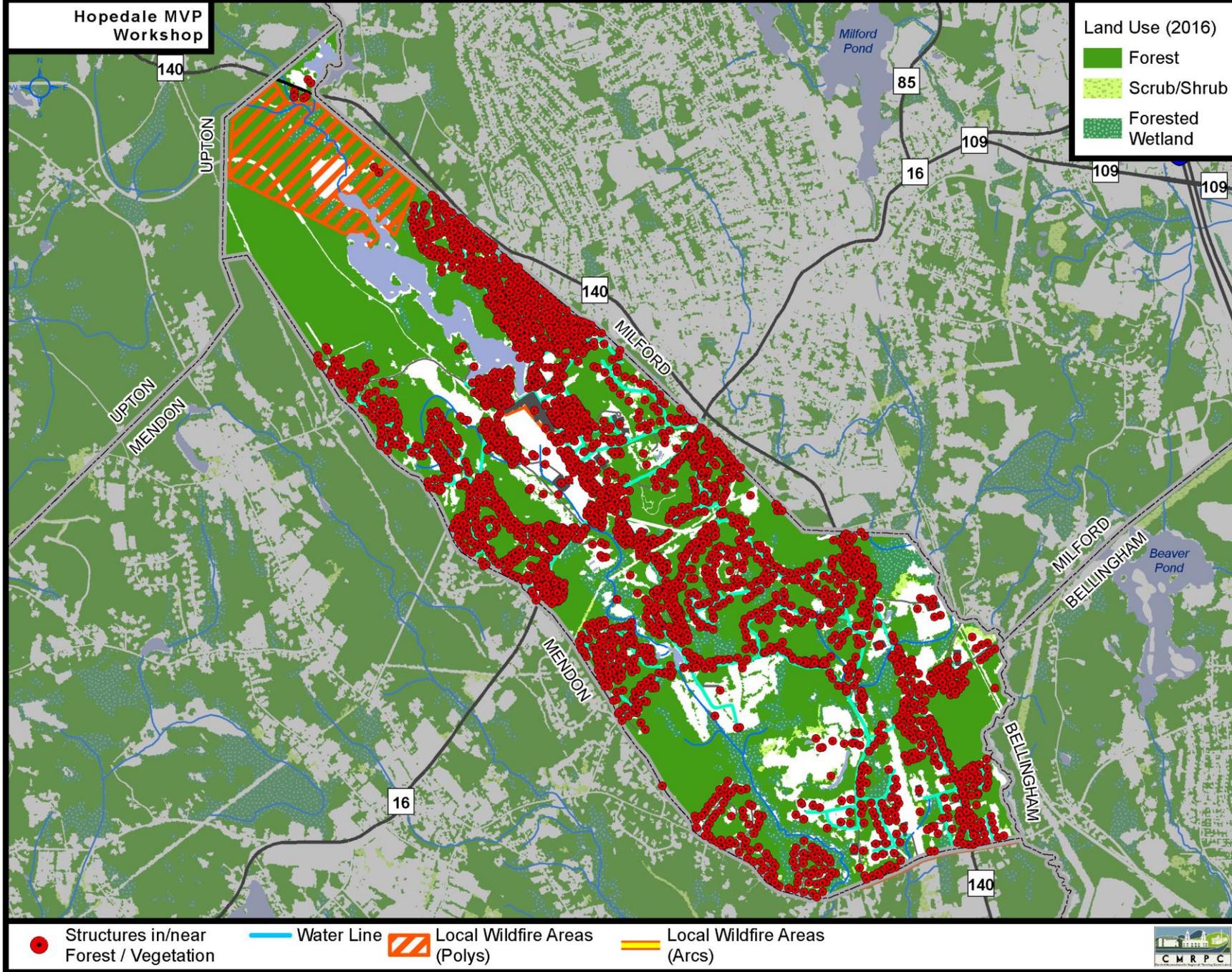
WILDFIRE



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



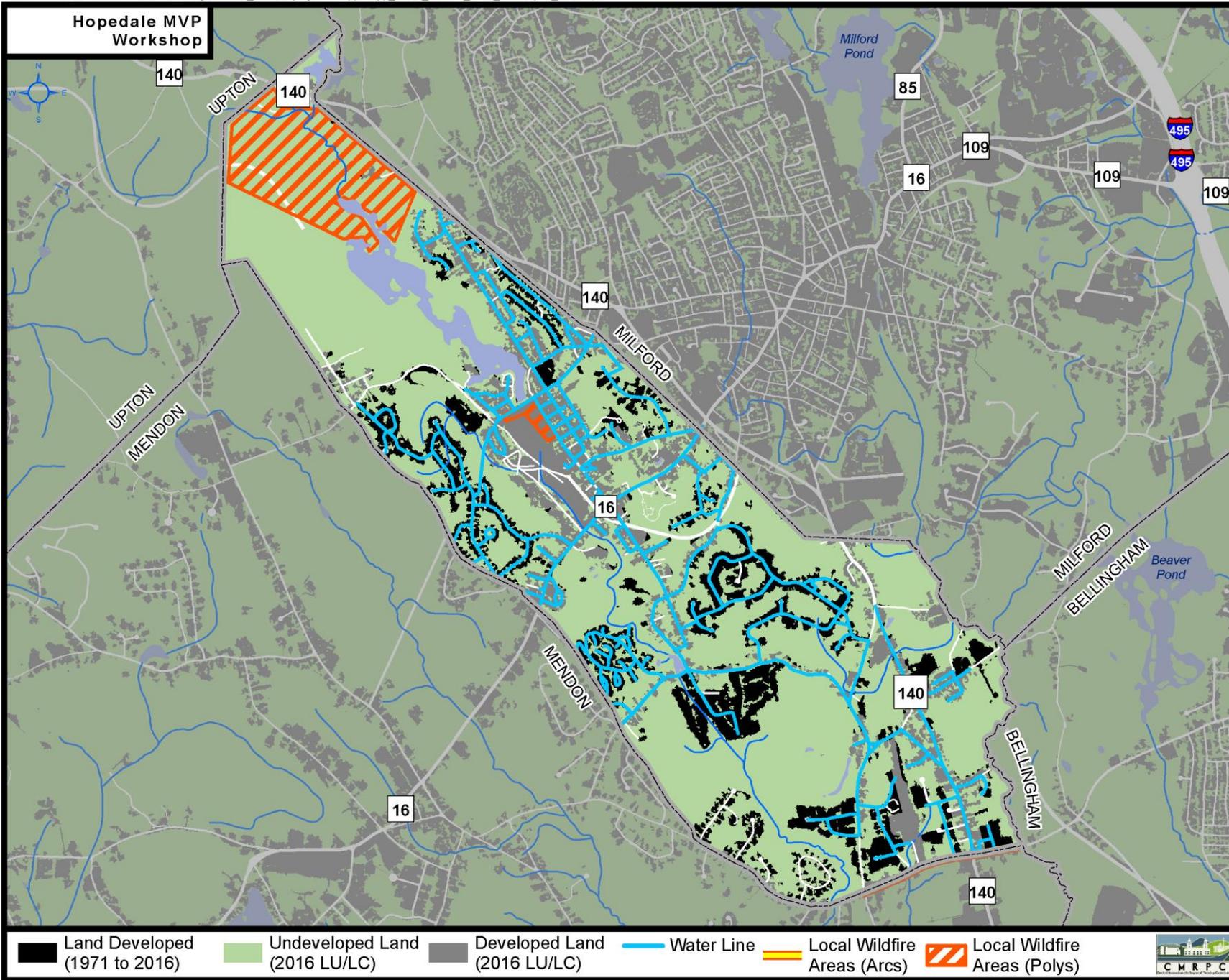
WILDLAND/URBAN INTERFACE



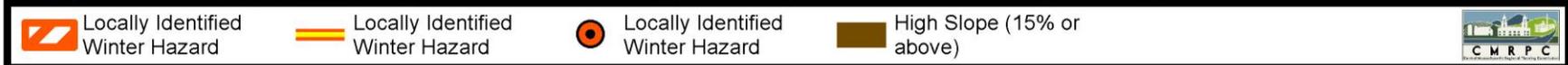
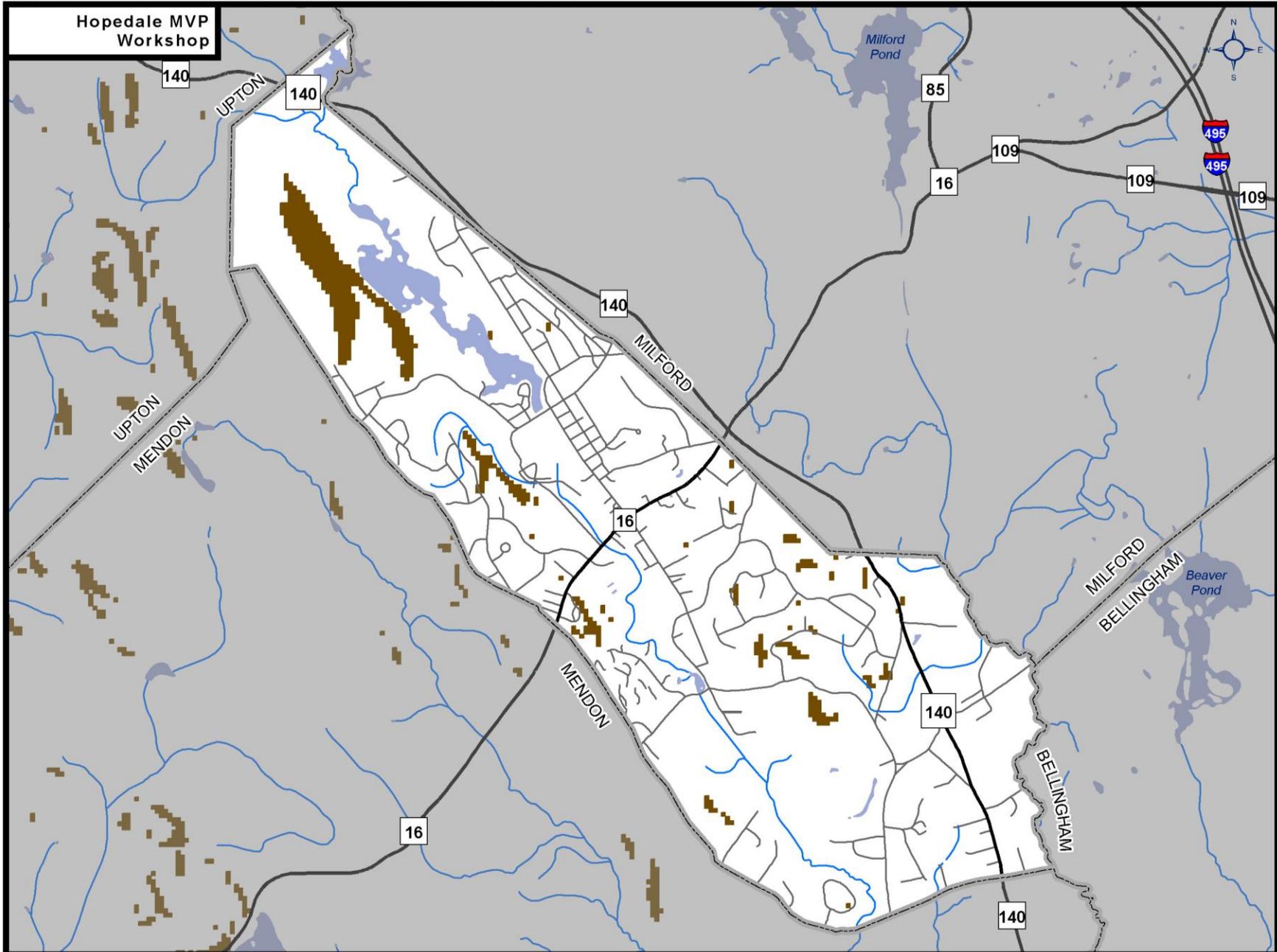
Source: Data provided by the Town of Hopedale, CMRPC, Mass Audubon, massDOT, MassGIS. Information depicted on this map is for planning purposes only.



FIRE & NEW DEVELOPMENT



WINTER STORMS



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



EXTREME STORMS

Show Touchdown Points

Filter by Magnitude:

- F/EF 0 —
- F/EF 1 —
- F/EF 2 —
- F/EF 3 —
- F/EF 4 —
- F/EF 5 —

Filter by Year Range:

1950 ▼ through 2017 ▼

Filter by Month:

All Months ▼

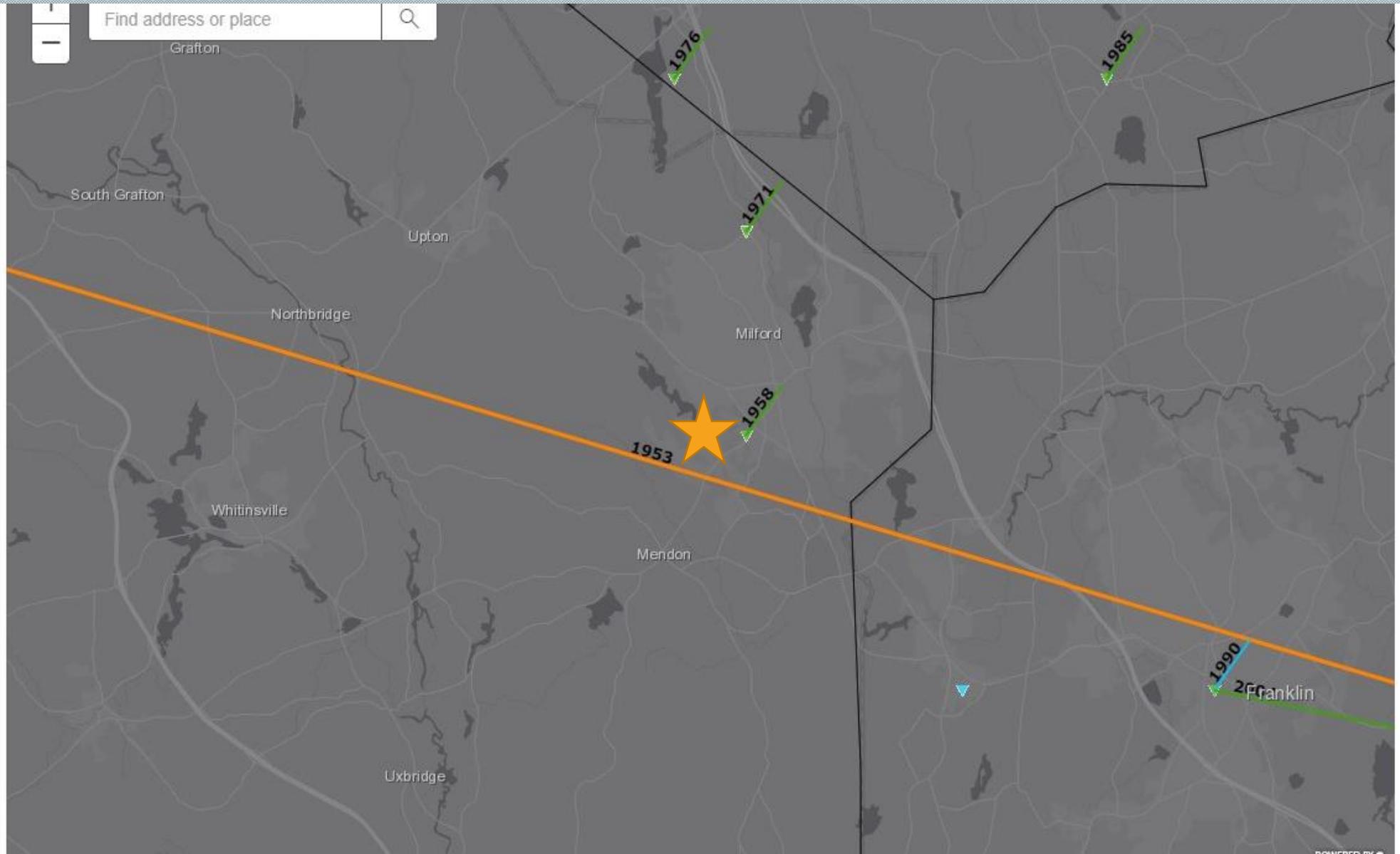
Filter by Casualties:

- 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.



CRITICAL INFRASTRUCTURE & FACILITIES

- What infrastructure and facilities are critical to the region and its residents? Which do we most need or desire 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...

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



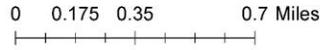
VULNERABLE POPULATIONS: SENIORS (65+)

Municipal Vulnerability Preparedness (MVP) Workshop:Hopedale

Legend

Percent Population over 65

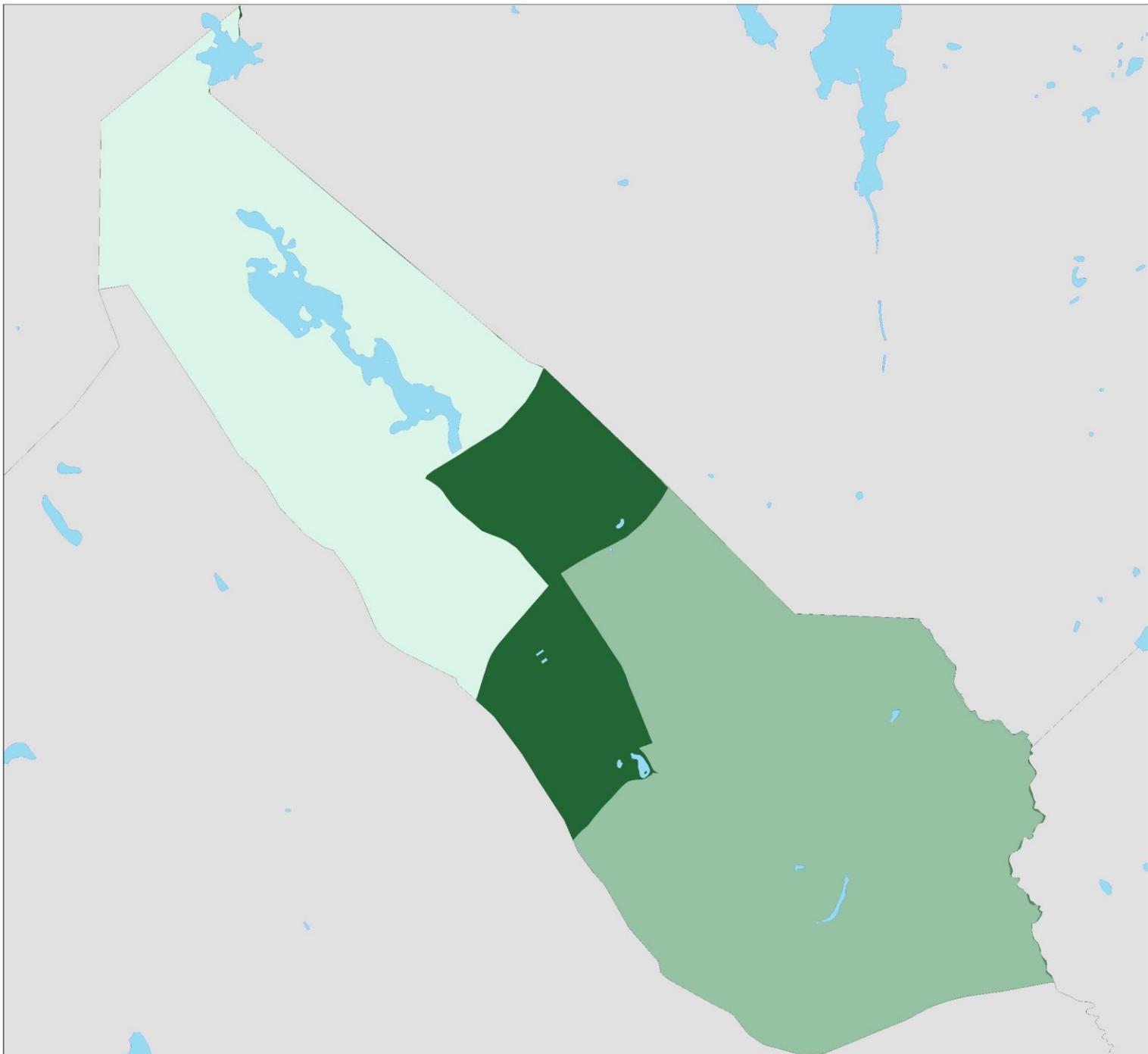
- 0% - 9.51%
- 9.52% - 13.05%
- 13.06% - 17.21%
- 17.22% +



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 interpreting positional accuracy.

Produced by the Central Massachusetts Regional Planning Commission,
1 Mercantile Street, Suite 520, Worcester, MA 01608
Visit us on-line at - <http://www.cmrpc.org>

R:\Pre-Disaster Mitigation\MVP Date: 12/24/2019



VULNERABLE POPULATIONS: UNDER AGE 18

Municipal Vulnerability
Preparedness (MVP)
Workshop:Hopedale

Legend

Percent Population Children

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



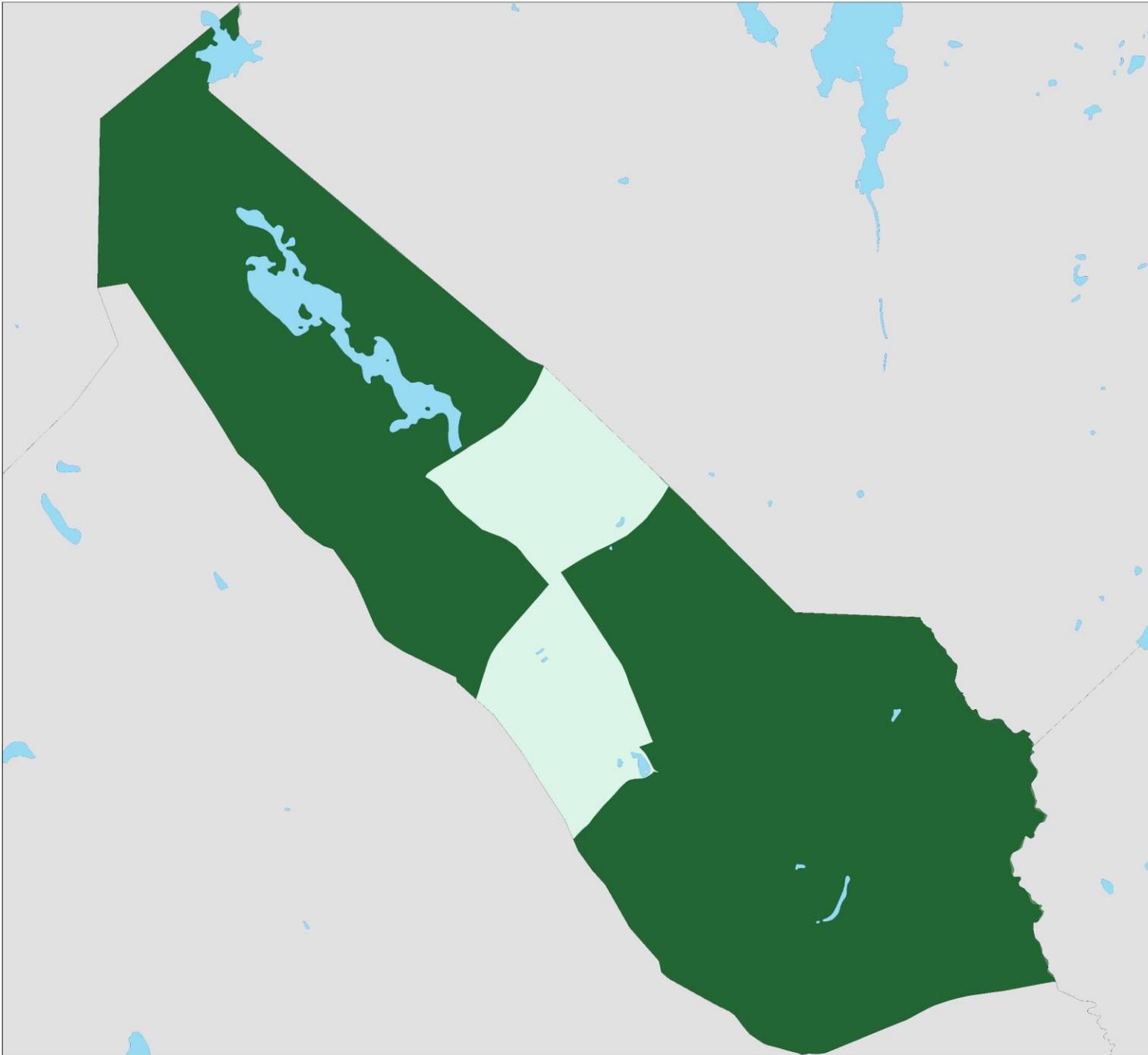
0 0.175 0.35 0.7 Miles

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R/Pre-Disaster Mitigation/MVP

Date: 12/24/2019



VULNERABLE POPULATIONS: RENTER OCCUPIED

Municipal Vulnerability Preparedness (MVP)
Workshop:Hopedale

Legend

Percent of Renters

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



0 0.175 0.35 0.7 Miles

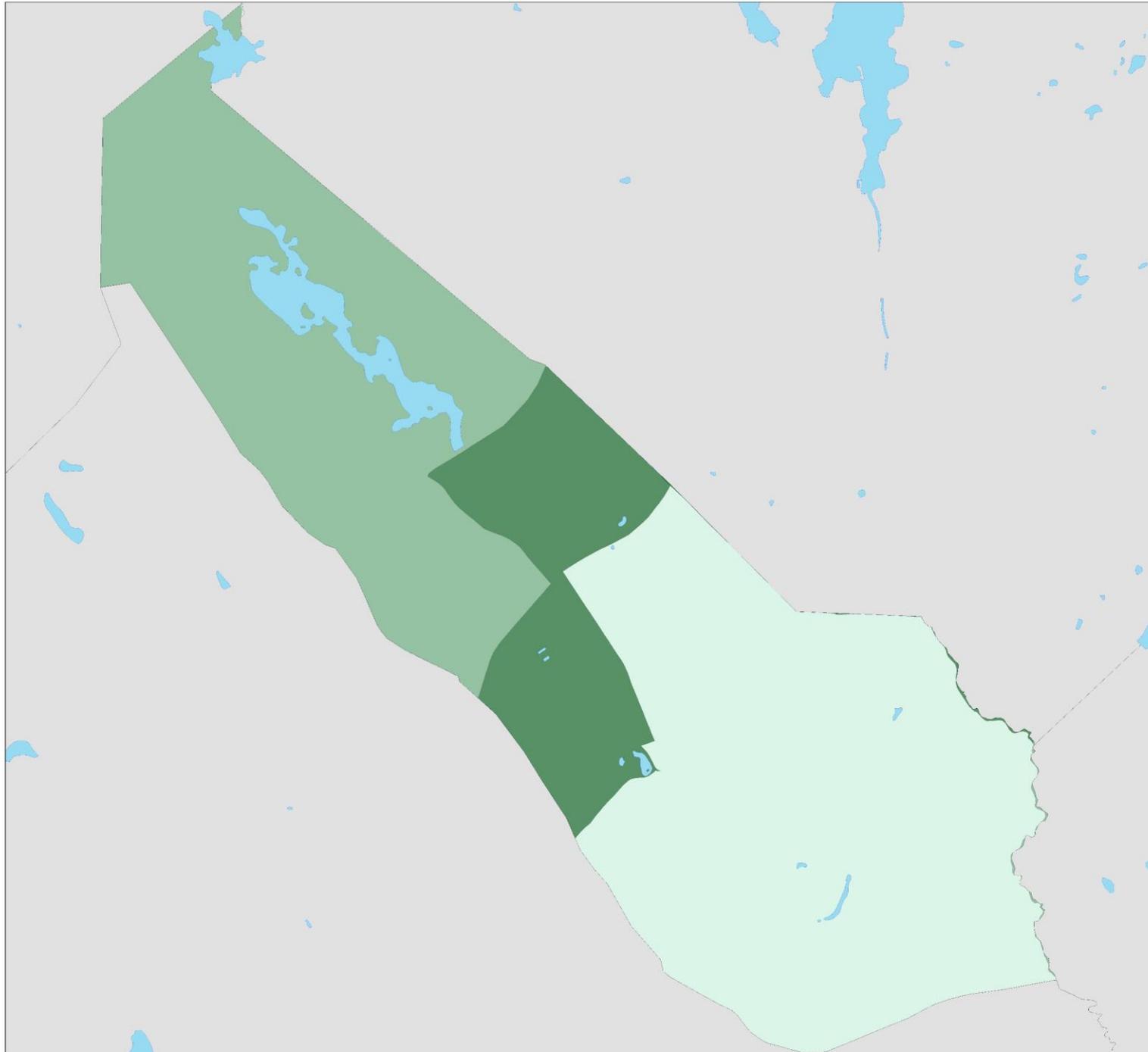


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Visit us on-line at - <http://www.cmrpc.org>

R\Pre-Disaster Mitigation\MVP

Date: 12/04/2019



VULNERABLE POPULATIONS: LATINO/HISPANIC

Municipal Vulnerability Preparedness (MVP)
Workshop:Hopedale

Legend

Limited English Proficiency

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



0 0.175 0.35 0.7 Miles

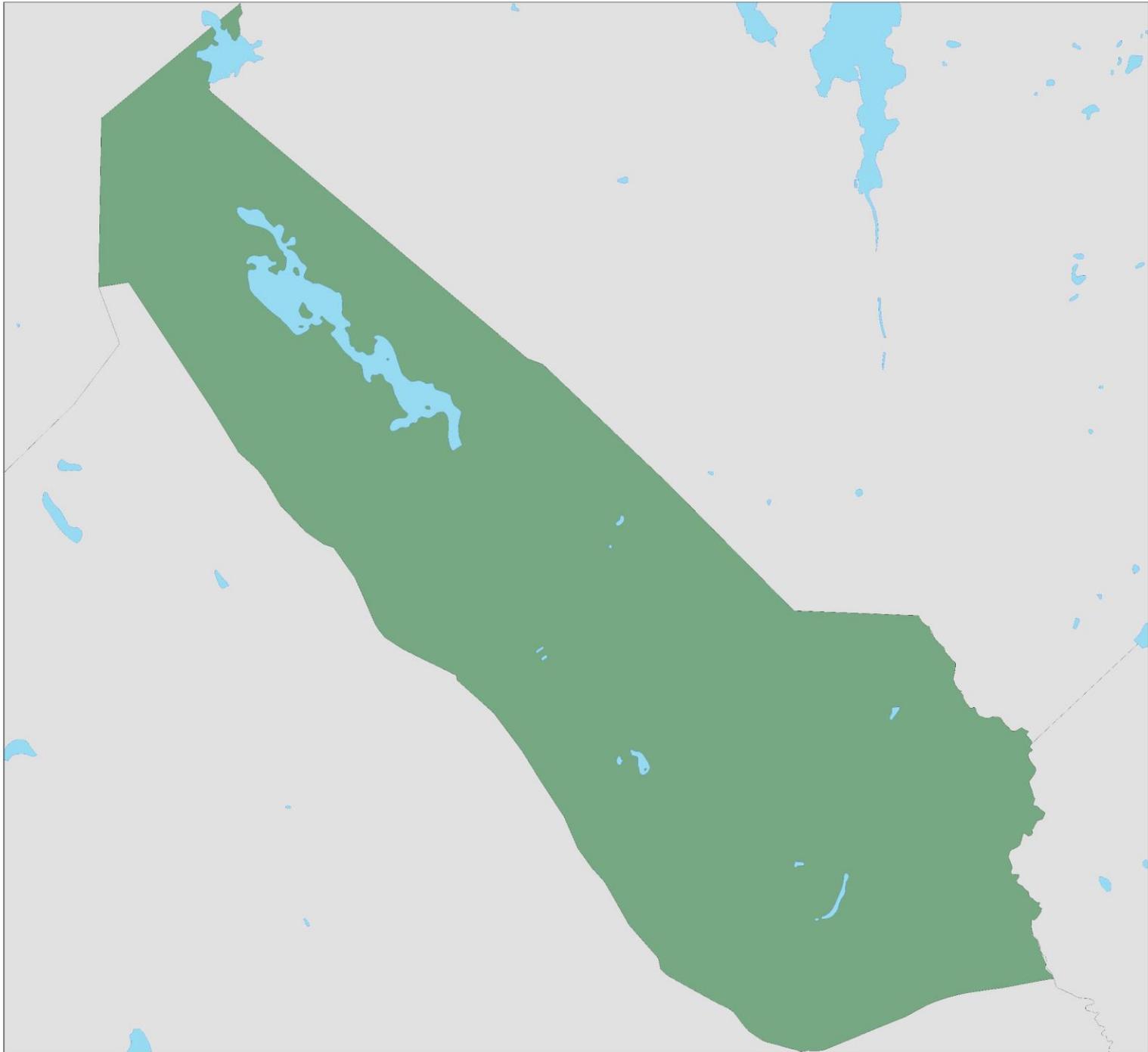


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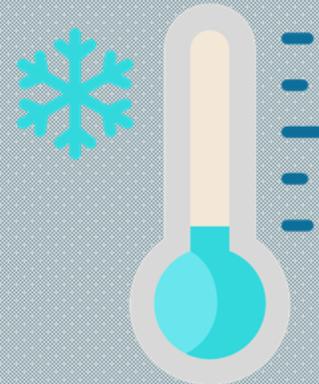
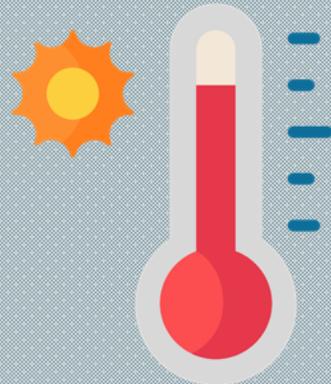
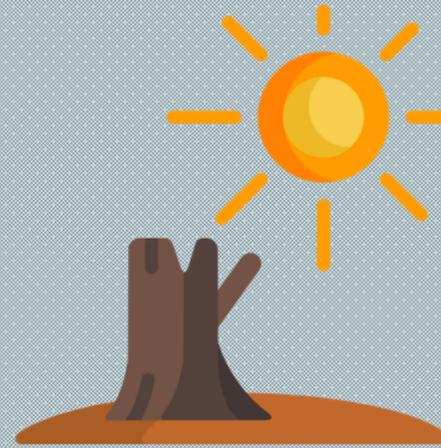
Produced by the Central Massachusetts Regional Planning Commission
1 Mercantile Street, Suite 520, Worcester, MA 01608
Visit us on-line at - <http://www.cmrpc.org>

R\Pre-Disaster Mitigation\MVP

Date: 12/24/2019



QUESTIONS



TOWN OF HOPEDALE

Municipal Vulnerability Preparedness (MVP)

Community Resilience Building

Virtual Workshop

March 16 and 23, 2021

Day One, March 16th

10:00 AM – 1:00 PM





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



The Town of Hopedale is collaborating with EEA and CMRPC to offer a two-day virtual workshop on **March 16th and March 23rd** which will bring together community members to comprehensively identify and prioritize steps to reduce risk and improve resilience across Hopedale. Follow the instructions below in order to help make your community more climate resilient! If you have any questions about the program, please contact Diana Schindler, Town Administrator, at DSchindler@hopedale-ma.gov. We look forward to seeing you virtually at our workshop!

Step 1. Discover Hopedale'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. If possible, you will want to have this Dropbox link open during the workshop so that you can easily access this information.

Workshop Dropbox: [Click Here](#)

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: [Click Here](#)

CRB Workbook: [Click Here](#)

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 Hopedale may face in the future, and examples of nature-based solutions. Please take some time to **review each of these presentations before March 16th**.

Presentations: [Click Here](#)

Step 4. Familiarize Yourself with the Matrix and Mapping Tools

During the virtual 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 with our ideas. The following 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 Hopedale.

Complete Matrix Example: [Click Here](#)

Maps: [Click Here](#)

Step 5. Attend the Workshop!

The 2-day workshop will be held on **March 16th and March 23rd**. The agenda for each day as well as the Zoom meeting links are listed below. Please review the agenda for each day and use the meeting links to join the Zoom.

Day 1 – March 16th, 10:00 am – 1:00 pm

Agenda Day 1: [Click Here](#)

Zoom Link Day 1: <https://us02web.zoom.us/j/83501429031?pwd=MEVtTbHdDR0lQdWhrSmRnbTJPUHRvdz09>

Day 2 – March 23rd, 2:00 pm – 5:00 pm

Agenda Day 2: [Click Here](#)

Zoom Link Day 2: <https://us02web.zoom.us/j/87062410754?pwd=OVEvM3NHSmZJMEFzelhZLzZEY0EvQT09>

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 How-To: [Click Here](#)





Community Resiliency Building Workshop

Town of Hopedale

Municipal Vulnerability Preparedness

Day 1- Tuesday, March 16, 2021

10:00 am – 1:00 pm; Check-in at 9:50 am

Meeting Link (Click to Join): <https://us02web.zoom.us/j/83501429031?pwd=MEVtbHdDR0lQdWhrSmRnbTJPUHRvdz09>

Meeting ID: 835 0142 9031

Passcode: 434013

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

Workshop Materials: <https://www.dropbox.com/sh/ybtqvubst84l0eu/AADROMmrjoADJOYgVtUxdakpa?dl=0>

Workshop Agenda

9:50 – 10:00 am:

- Login & Familiarize with Zoom

10:00 – 10:20 am:

- Welcome & Introductions

10:20 – 10:40 am

- Overview Presentation
- Questions & Answers

10:40 am – 12:45 pm:

- Breakout Groups
 - Identify Hazards & Local Features
 - Discuss Strengths & Vulnerabilities
 - Identify Actions to Build Resilience
(as time allows)

12:45 – 1:00 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 Hopedale's Virtual Community Resilience Building Workshop!



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

**1. Engage
Community**

**2. Identify CC
Impacts &
Hazards**

**3. Complete
Assessment of
Vulnerabilities
& Strengths**

**4. Develop &
Prioritize
Actions**

5. Take Action

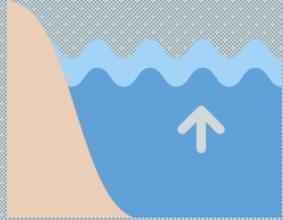
CLIMATE RESILIENCE

is defined as the ability of a community to address the needs of its built, social, and natural environment in order to anticipate, cope with, and rebound stronger from events and trends related to climate change hazards, including temperature changes, extreme weather, sea level rise, coastal and inland flooding, changes in precipitation, and other impacts.

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

STEP ONE: HAZARD IDENTIFICATION



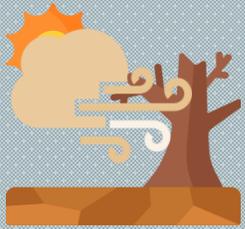
- **Flooding**
 - Riverine
 - Street



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



- **Tornadoes**



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



- **Tsunami**



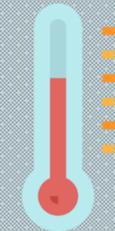
- **Hurricanes/
Nor'easters**



- **Wild Fires**



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



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

PRIMARY TOPIC AREAS



- Infrastructure



- Society



- Environment

STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

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	Top 4 Hazards				Priority	Time
				H	M	L	S	H-M-L	Short Long Ongoing
Infrastructural									
Dam									
Societal									
Senior Housing									
Environmental									
Wetlands									



STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES



Community Resilience Building Risk Matrix				www.CommunityResilienceBuilding.com					
<small>H-M-L priority for action over the Short or Long term (e.g.) V = Vulnerability S = Strength</small>				<small>Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)</small>					
Features	Location	Ownership	V or S	Top 4 Hazards				Priority	Time
								H-M-L	Short Long Ongoing
Infrastructural									
Dam	Estimated Location								
Societal									
Senior Housing									
Environmental									
Wetlands									

STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

Community Resilience Building Risk Matrix  www.CommunityResilienceBuilding.com

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				H	M	L	S	H-M-L	Short Long Ongoing
Infrastructural									
Dam									
Societal									
Senior Housing									
Environmental									
Wetlands									

Estimated Location
 Public? Private? State?

STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES



Community Resilience Building Risk Matrix				www.CommunityResilienceBuilding.com			
Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)				Priority	Time		
H-M-L priority for action over the Short or Long term (and Ongoing)				H-M-L	Short Long Ongoing		
V = Vulnerability S = Strength							
Features	Location	Ownership	V or S	Top 4 Hazards			
Infrastructural							
Dam							
Societal							
Senior Housing							
Environmental							
Wetlands							

Estimated Location
 Public? Private? State?
Vulnerability or Strength

BREAK OUT GROUP: FIRST MEETING

- Step 1- Fill in top 4 Natural Hazards

Flooding, Drought/Extreme Heat, Severe Storms, Winter Storms/Extreme Cold

- Step 2- Identify key features
 - Infrastructure- Dams
 - Societal- Senior Housing
 - Environmental- Wetlands
- Where is the Feature Located
- Identify ownership (Public, Private...)
- Identify vulnerability, strength or both

QUESTIONS

TIME TO GET TO WORK

NEXT STEPS



Community Resiliency Building Workshop

Town of Hopedale

Municipal Vulnerability Preparedness

Day 2- Tuesday, March 23, 2021

2:00 pm – 5:00 pm; Check-in at 1:50 pm

Meeting Link (Click to Join): <https://us02web.zoom.us/j/87062410754?pwd=OVEvM3NHSmZJMEFzelhZLzZEY0EvQT09>

Meeting ID: 870 6241 0754

Passcode: 172010

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

Workshop Materials: <https://www.dropbox.com/sh/ybtqvubst84l0eu/AADROMmrjoADJOYgVtUxdakpa?dl=0>

Workshop Agenda

1:50 – 2:00 pm:

- Login & Familiarize with Zoom

2:00 – 2:20 pm:

- Welcome & Recap from Day 1
- Questions & Answers

2:20 – 4:30 pm:

- Breakout Groups
 - Identify Actions to Reduce Risks and Build Resilience
 - Prioritize Actions by Urgency and Timing

4:30 – 5:00 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 Hopedale's Virtual Community Resilience Building Workshop!



QUESTIONS

dmarini@cmrpc.org

mkaplan@cmrpc.org

TOWN OF HOPEDALE

**Municipal Vulnerability Preparedness (MVP)
Virtual Community Resilience Building Workshop
March 16 and 23, 2021**

Day Two March 23rd

2:00 – 5:00 PM





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



The Town of Hopedale is collaborating with EEA and CMRPC to offer a two-day virtual workshop on **March 16th and March 23rd** which will bring together community members to comprehensively identify and prioritize steps to reduce risk and improve resilience across Hopedale. Follow the instructions below in order to help make your community more climate resilient! If you have any questions about the program, please contact Diana Schindler, Town Administrator, at DSchindler@hopedale-ma.gov. We look forward to seeing you virtually at our workshop!

Step 1. Discover Hopedale'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. If possible, you will want to have this Dropbox link open during the workshop so that you can easily access this information.

Workshop Dropbox: [Click Here](#)

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: [Click Here](#)

CRB Workbook: [Click Here](#)

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 Hopedale may face in the future, and examples of nature-based solutions. Please take some time to **review each of these presentations before March 16th**.

Presentations: [Click Here](#)

Step 4. Familiarize Yourself with the Matrix and Mapping Tools

During the virtual 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 with our ideas. The following 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 Hopedale.

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Maps: [Click Here](#)

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The 2-day workshop will be held on **March 16th and March 23rd**. The agenda for each day as well as the Zoom meeting links are listed below. Please review the agenda for each day and use the meeting links to join the Zoom.

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Agenda Day 1: [Click Here](#)

Zoom Link Day 1: <https://us02web.zoom.us/j/83501429031?pwd=MEVtTbHdDR0JQdWhrSmRnbTJPUHRvdz09>

Day 2 – March 23rd, 2:00 pm – 5:00 pm

Agenda Day 2: [Click Here](#)

Zoom Link Day 2: <https://us02web.zoom.us/j/87062410754?pwd=OVEvM3NHSmZJMEFzelhZLzZEY0EvQT09>

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Community Resiliency Building Workshop

Town of Hopedale

Municipal Vulnerability Preparedness

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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 Hopedale's Virtual Community Resilience Building Workshop!



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)

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

MORE EXAMPLES OF LOW IMPACT DEVELOPMENT AND GREEN INFRASTRUCTURE



Green Parking Lots



Permeable Paving

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.

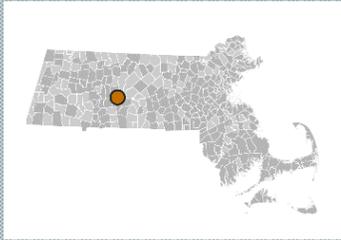


Nature-based solutions

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

INFRASTRUCTURE PROJECTS

Traditional Culvert



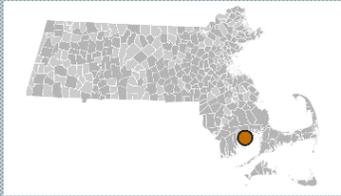
Nature Based Culvert



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

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

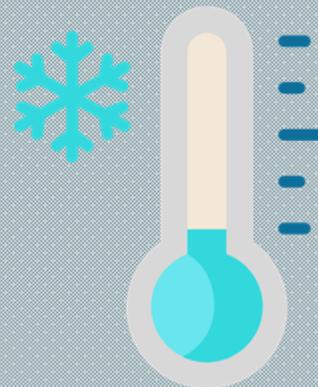
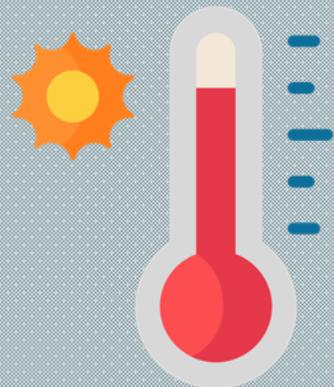
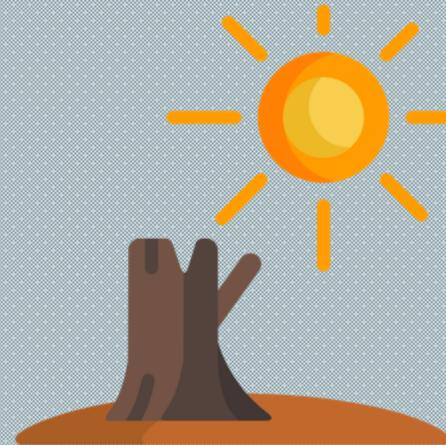
H-M-L priority for action over the Short or Long term (and Ongoing)
 V = Vulnerability S = Strength

Priority Hazards (tsunami, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat waves)

Features	Location	Ownership	V or S	Priority Hazards	H-M-L	Priority			
Infrastructure				Top 4 Hazards					
Societal									
Environmental									

Completed

QUESTIONS



TIME TO GET TO WORK

**THANK
YOU**



YOU ARE INVITED TO ATTEND THE:

Town of Hopedale

Municipal Vulnerability Preparedness Program

PUBLIC LISTENING SESSION

MONDAY, MAY 24, 2021

7:00 PM

Meeting Link:

<https://us02web.zoom.us/j/85163200007?pwd=ZjBGc1Nsc0R5aWxhc2FCMmEyVU11UT09>

Meeting ID: 851 6320 0007

Passcode: 907711

Dial-In: 1-646-558-8656

THE MUNICIPAL VULNERABILITY PREPAREDNESS (MVP) CORE TEAM WILL BE HOLDING THIS VIRTUAL PUBLIC LISTENING SESSION ON MONDAY, MAY 24TH AT 7:00 PM AS PART OF A BOARD OF SELECTMEN MEETING. LEARN MORE AND PROVIDE COMMENTS REGARDING HOPEDALE'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

Hopedale, MA

May 24, 2021

7:00 PM



MUNICIPAL VULNERABILITY PREPAREDNESS (MVP)

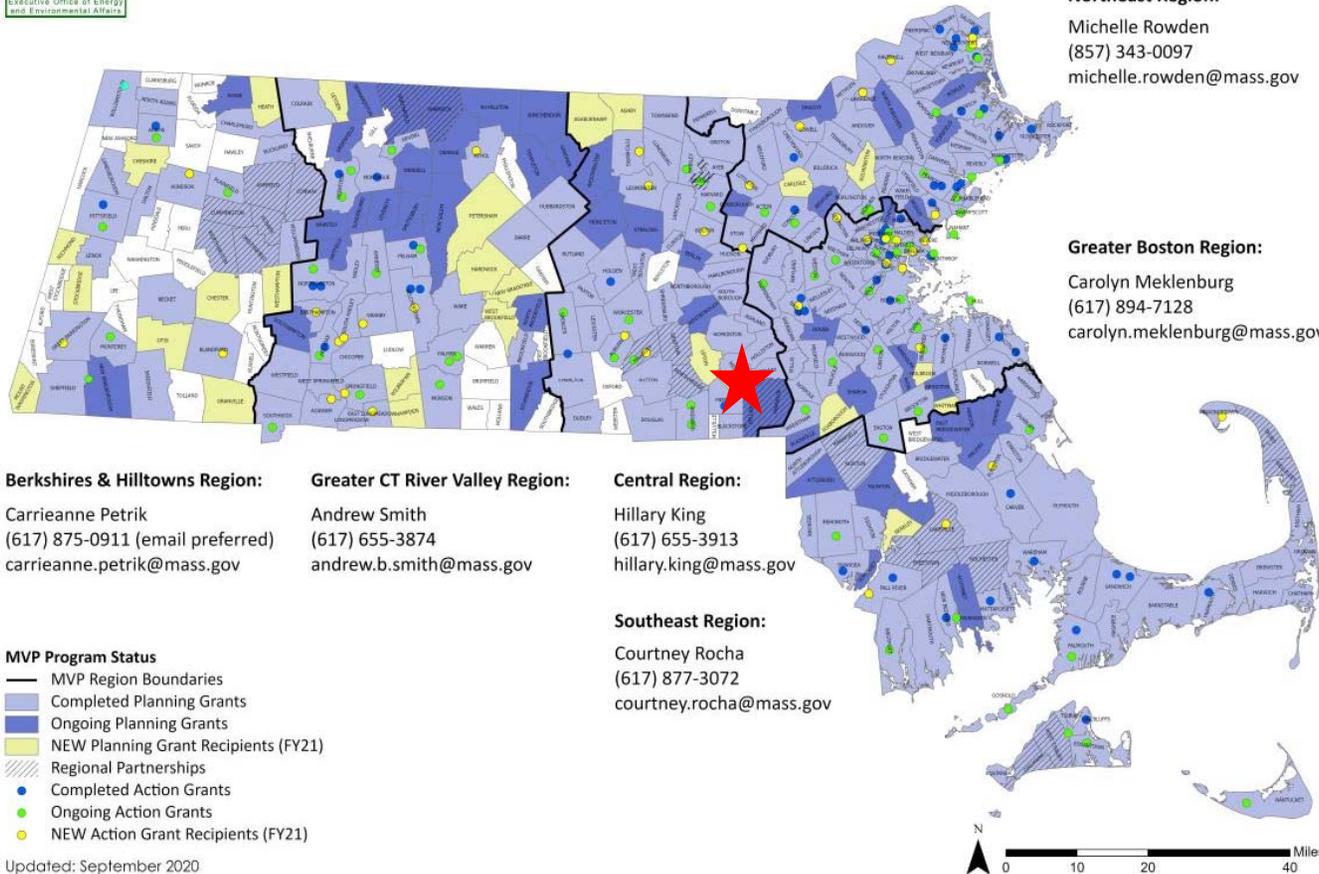
- State grant program to support cities and towns to begin the process of planning for climate resiliency.
- MVP Planning Process includes CRB Workshop, Report, Listening Session and Annual Reporting
- Communities who complete the MVP Planning Process become certified as an MVP Community
- Designated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





Municipal Vulnerability Preparedness (MVP) Program

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



COMMUNITY RESILIENCE BUILDING (CRB) PROCESS

- Community-driven process led by the project coordinators (Diana Schindler and Lindsay Mercier) with a core team of Town officials and Department Heads
- Hopedale's 17-member Core Team met 6 times in November, December, January, February, and March
- Invitation-only workshop was held virtually on March 16th and March 23rd
- 28 attendees, including local officials, board and committee members, business, schools and non-profit groups
- Listening session (today) is open to the public



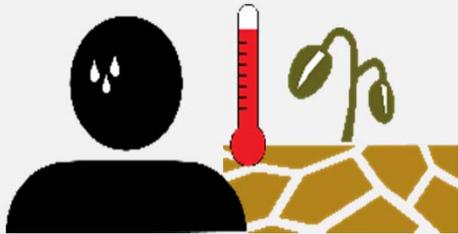
CRB WORKSHOP OBJECTIVES

- 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



STEP ONE: IDENTIFY TOP 4 HAZARDS

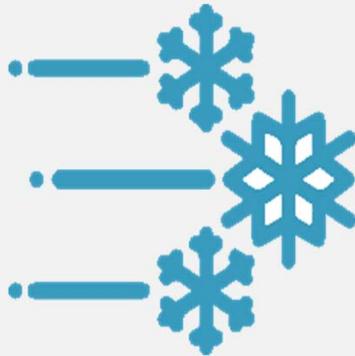
DROUGHT/EXTREME HEAT



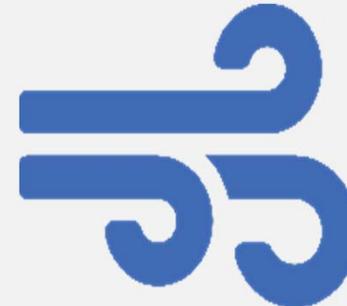
FLOODING



WINTER STORMS/EXTREME COLD

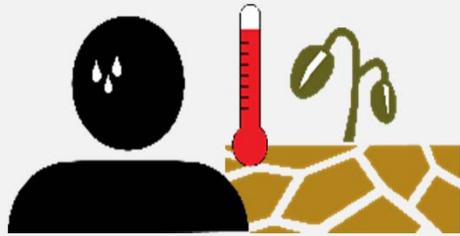


SEVERE STORMS



STEP ONE: IDENTIFY TOP 4 HAZARDS

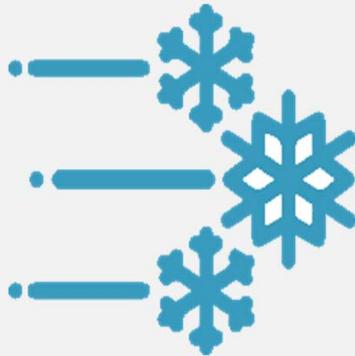
DROUGHT/EXTREME HEAT



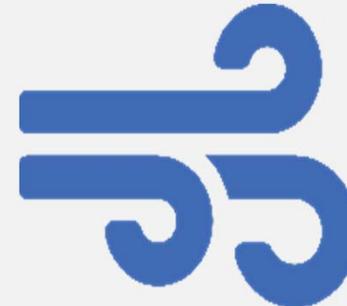
FLOODING



WINTER STORMS/EXTREME COLD



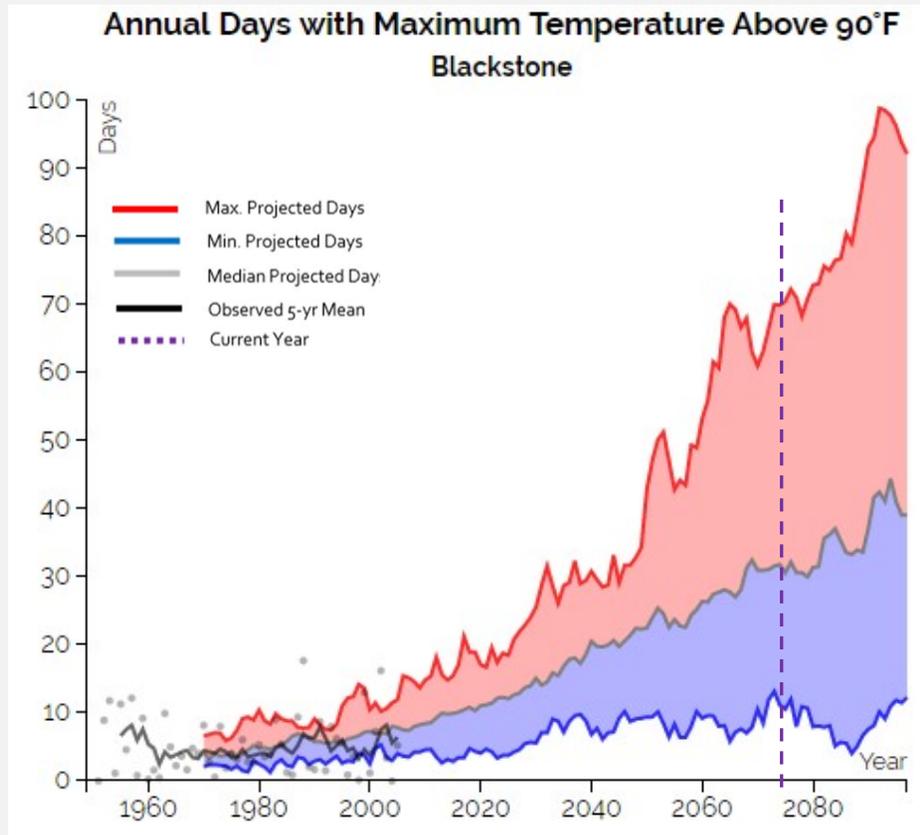
SEVERE STORMS



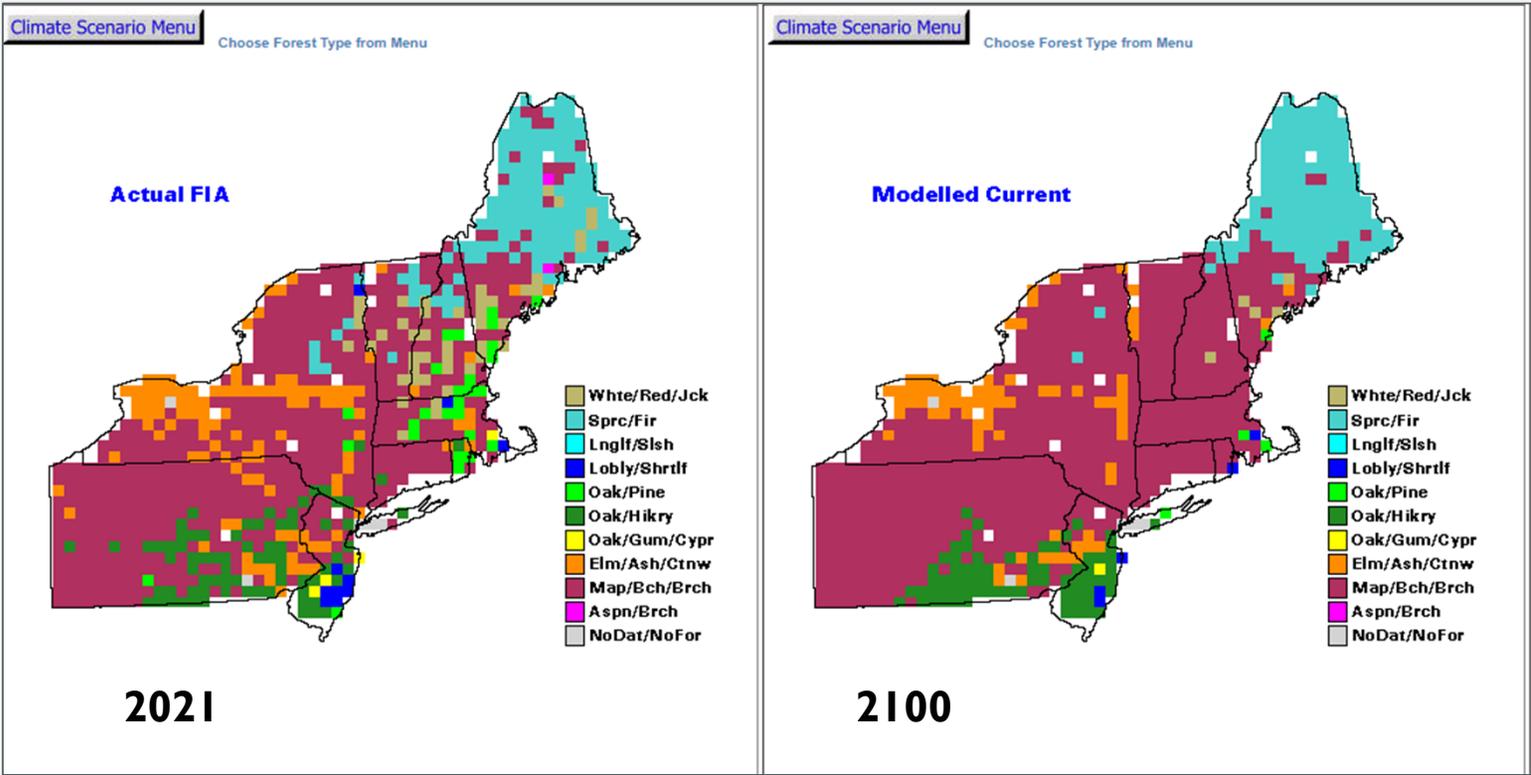
HEAT PROJECTIONS

Projected increase in days per year over 90°F

- 8 to 29 days per year by 2050
- 11 to 69 days per year by 2100



HEAT IMPACTS ON THE ENVIRONMENT

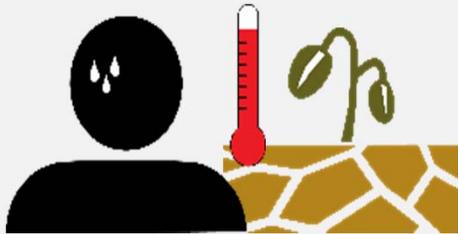


- Species expected to move north
- Diversity of species will likely decrease
- Likely increase in invasive species



STEP ONE: IDENTIFY TOP 4 HAZARDS

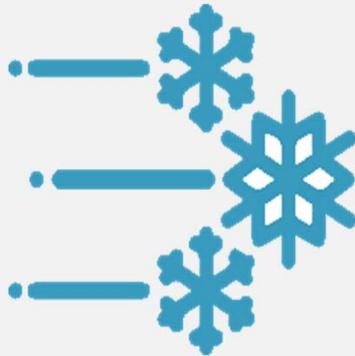
DROUGHT/EXTREME HEAT



FLOODING



WINTER STORMS/EXTREME COLD

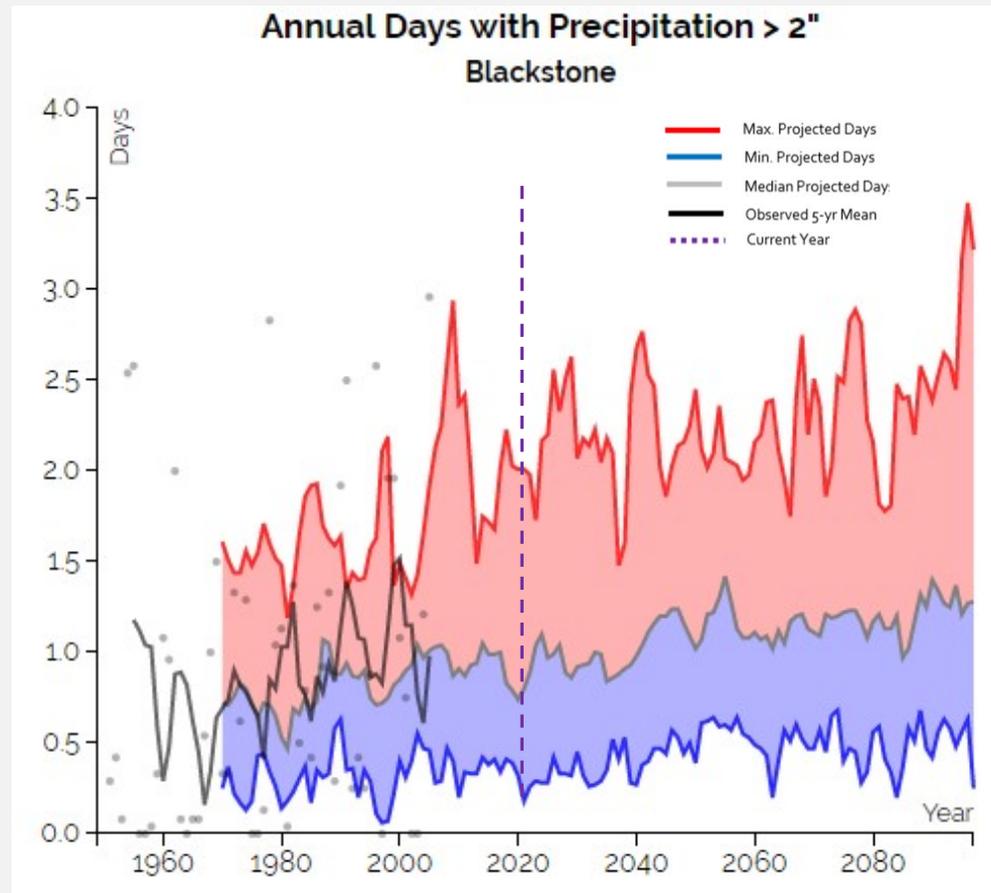


SEVERE STORMS



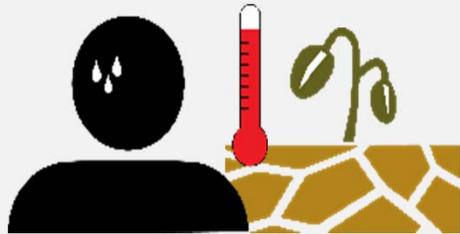
HEAVY RAINFALL AND FLOODING

Projected increase in days per year with 2 inches or more of precipitation



STEP ONE: IDENTIFY TOP 4 HAZARDS

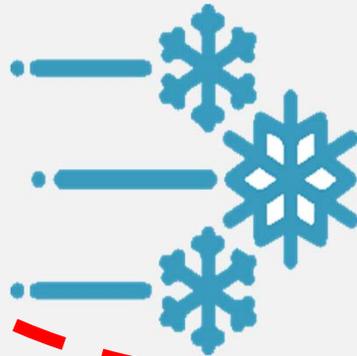
DROUGHT/EXTREME HEAT



FLOODING



WINTER STORMS/EXTREME COLD



SEVERE STORMS



WINTER STORMS

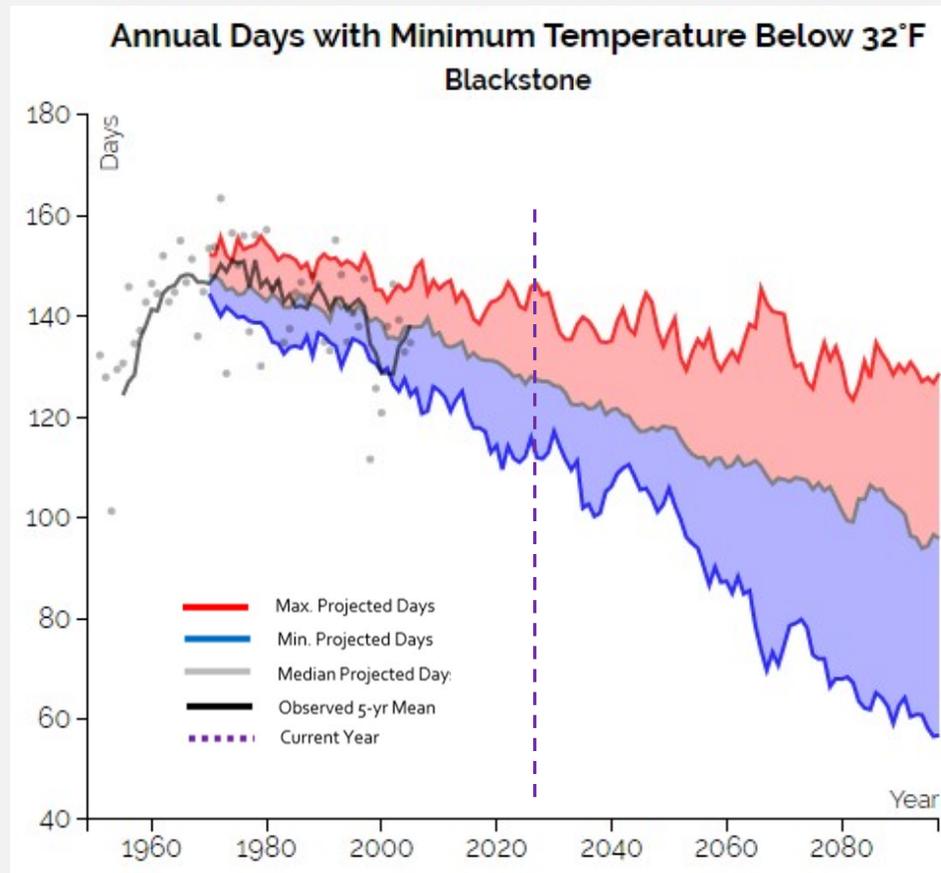
Projected decrease in days per year below freezing

- Rising temps → more winter precipitation to fall as rain or freezing rain
- Lower snowfall accumulation

BUT

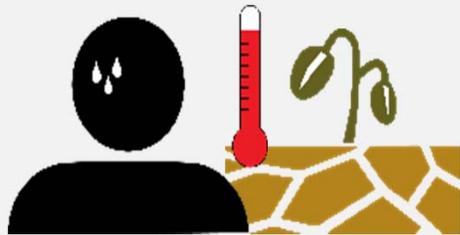
Winter = Highest projected increase in precipitation

- Storms that do occur may be worse - proximity to Atlantic Ocean increases risk of large storm events



STEP ONE: IDENTIFY TOP 4 HAZARDS

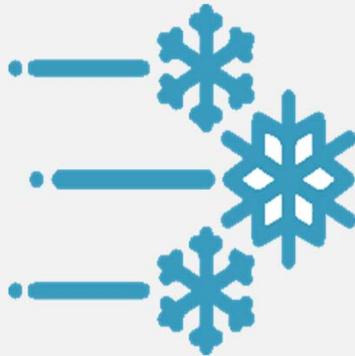
DROUGHT/EXTREME HEAT



FLOODING



WINTER STORMS/EXTREME COLD



SEVERE STORMS



PRIMARY TOPIC AREAS



- Infrastructure



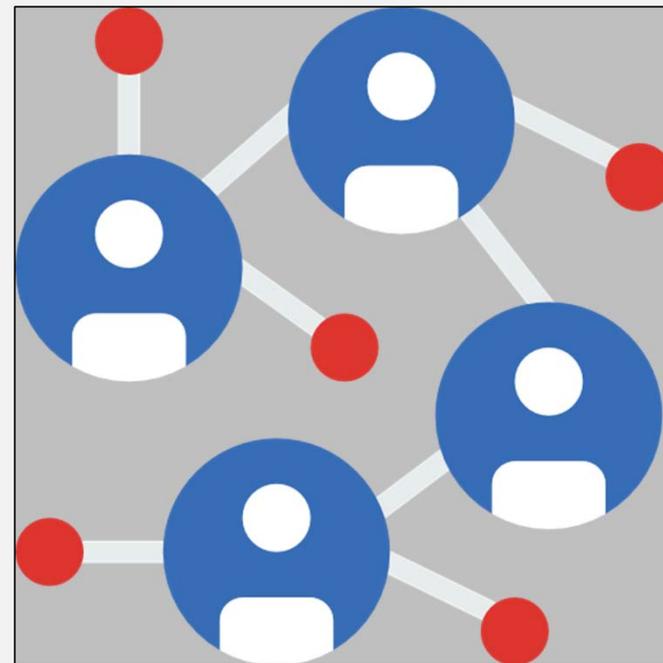
- Society



- Environment

BREAKOUT GROUPS

- 4 Breakout groups of 6-7 individuals discussed:
 - 4 Focus Hazards
 - 3 Focus Sections
 - Tools and Resources
 - Matrix, Maps, HMP & Each Other



Icon made Prettyicons from Flaticon.com

STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

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	Top 4 Hazards				Priority		Time	
				H	M	L	S	H-M-L	Short Long Ongoing		
Infrastructural											
Dam											
Societal											
Senior Housing											
Environmental											
Wetlands											



STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES



Community Resilience Building Risk Matrix				www.CommunityResilienceBuilding.com					
H = High priority for action over the Short or Long term (e.g.) 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	Top 4 Hazards				Priority	Time
								H - M - L	Short Long Ongoing
Infrastructural									
Dam	Estimated Location								
Societal									
Senior Housing									
Environmental									
Wetlands									



STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

↓

Community Resilience Building Risk Matrix				www.CommunityResilienceBuilding.com					
H M L priority for action over the <u>Short</u> or <u>Long</u> term (and <u>Ongoing</u>) V = Vulnerability S = Strength				Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)				Priority Time H - M - L Short Long Ongoing	
Features	Location	Ownership	V or S	Top 4 Hazards					
Infrastructural									
Dam									
Societal									
Senior Housing									
Environmental									
Wetlands									

Public? Private? State?

Estimated Location



STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

Community Resilience Building Risk Matrix  www.CommunityResilienceBuilding.com

H = High priority for action over the Short or Long term (and Ongoing)
M = Medium priority for action over the Short or Long term (and Ongoing)
L = Low 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	Top 4 Hazards				Priority		Time	
				H	M	L	S	H	M	L	Short
Infrastructural											
Dam											
Societal											
Senior Housing											
Environmental											
Wetlands											

Vulnerability or Strength

Estimated Location
Public? Private? State?



TABLE SUMMARIES

Hopedale Table #1

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, etc.)

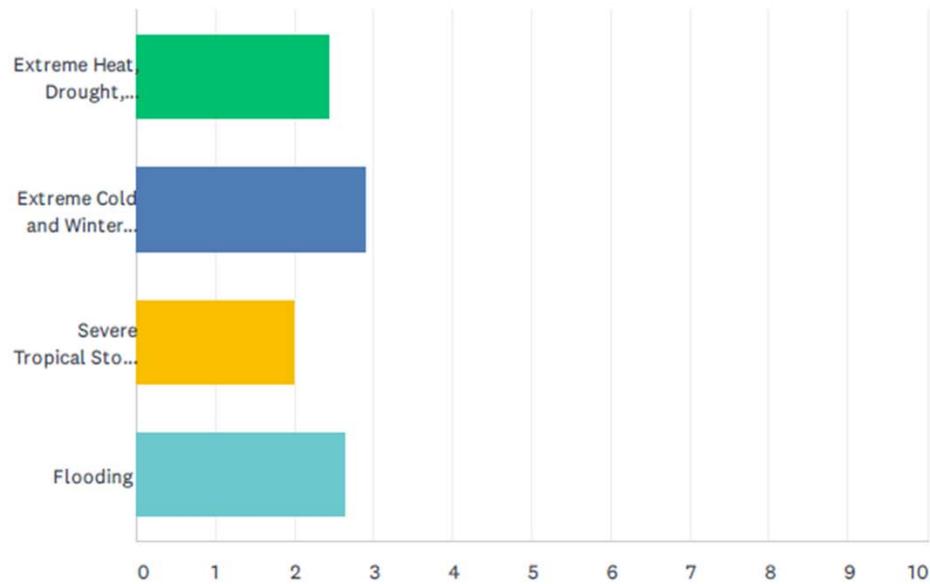
Features	Location	Ownership	V or S	Description	Flooding	Drought/Extreme Heat	Severe Storms	Winter Storms/Extreme Cold	Priority	
									H - M - L	Short Long Ongoing
Green/Mill St Intersection /Mill St Bridge				Lack of updated, working Drainage	minor flooding, over the road, Stormwater issues				M	S
Adin Street/Dutcher St/Freedom St			V	Vulnerable trees. Winds, winter ice storms	Tree trimming, maint.				H	S
Public Transit			V	Lack of transportation	Need public transit to minimize use of vehicles				L	ongoing
Utilities/Electric Infrastructure	Rte 140/S Main St		S	Situation Room w National Grid	All severe storms, Code Red enrollment effort				L	ongoing
Airport/Ind Parks, Plain St		Private	V	Dry wells (i.e. catch basins) can't handle stormwater	Address Retention ponds, drainage, development bylaws				M	L
Water/Sewer/Drainage			V	Restrictions (water ban) Aged, private (under mill)	Partner w Mill owner to address under mill issues; Drought, Stormwater				H	S
Societal										
Equity/Equanimity/Diversity				Communication with stakeholders	Multiple languages, intergenerational, Garden Club				M	ongoing
Vulnerable Populations	Highland St, Daniel St	Private		Seven Hills (children/teens), Crossroads, The Ledges (adult, disabled)	Communication, inclusion in planning efforts				M	ongoing
Assisted Living	Atria	Private			Community Gardens					
Elder Housing	Hopedale St	State	V/S	Abutting Railroad/Cooling Center	Notification/Maint of Warming/Cooling shelters, etc.					
Bright Beginnings, Daycare, Preschool	S Hopedale, Hartford Ave E	Town, Private	S	Vulnerable populations	Extreme Heat, Severe Storms					
Senior Population	varied		S	Shut in, isolated	Extreme Heat, Severe Storms, Winter Storms					
Churchs (varied)			S							
Scouting/Youth/Schools	Memorial School, Jr/Sr. HS		S	educating youth through demonstration projects	Rain Gardens, permeable pavers, bioswales				H	S
Regional support, Chamber			S		Facilitate planting projects				H	S
History/Historic Commission/Society/Heritage Corridor			S	Education through workshops, etc., partner w Blackstone Valley Watershed/Heritage Corridor	Education/Training				H	S
COA			S	Outreach						
Environmental										
Hopedale Pond, Statewide Pond, Mill Pond			V/S	Social/Cultural Asset (swimming due	Flooding, Invasive Growth Maint (i.e.Weeds), Planning for use of Hopedale Pond for					



GROUP VOTE

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

Answered: 11 Skipped: 1



WHAT DID THE GROUP FIND?



INFRASTRUCTURE CONCERNS



Dams, Culverts,
& Bridges



Water & Sewer



Roadways



Structures

INFRASTRUCTURE STRENGTHS



Utilities



Communication
Systems



Facilities

INFRASTRUCTURE ACTIONS

HIGH PRIORITY

Water
Management

Alternative
Power
Sources

Building &
System
Upgrades

SOCIETAL CONCERNS



Outreach &
Education



At- Risk Populations



Communication

SOCIETAL STRENGTHS



Sense of
Community



Local Organizations
& Groups



Heritage

SOCIETAL ACTIONS

HIGH PRIORITY

Improve
Access

Enhance
Community
Preparedness

Historic
Preservation

ENVIRONMENTAL CONCERNS



Surface Waters



Trees



Parklands & Forests

ENVIRONMENTAL STRENGTHS



Water Resources



Recreation
Opportunity



Regional
Environmental Groups

ENVIRONMENTAL ACTIONS

HIGH PRIORITY

Water
Resource
Protection

Education &
Outreach

Upgrade
Policies &
Bylaws

NEXT STEPS FOR HOPEDALE



Finalize draft report with assistance from CMRPC



Final report submitted to the EEA by June 30, 2021



Hopedale receives “MVP Community” certification



Annual reporting by Core Team



Develop and apply for MVP Action Grants



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



Questions and Comments



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Thank you

