# Town of Westborough









#### CMRPC MISSION

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

We do this by (1) addressing growth and development issues that extend beyond community boundaries; (2) maintaining the region's

certification for federal transportation improvement funds; (3) providing technical knowledge and resources to assist local government in addressing specific land use, economic or environmental problems resulting from growth or decline, and (4) building strong working relationships with member communities, state and federal officials, as well as the range of area stakeholders.

#### OUR HISTORY AND PROGRESS

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

#### FEDERAL TITLE VI/NONDISCRIMINATION PROTECTIONS

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

#### **STATE NONDISCRIMINATION PROTECTIONS**

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





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#### **EXECUTIVE ORDER 569**

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 Westborough invited the Central Massachusetts Regional Planning Commission to lead them in this planning effort.

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



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





#### ACKNOWLEDGEMENTS

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

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

Kimberly Foster, Assistant Town Manager, Project lead

Kristi Williams, Town Manager

Jim Robbins, Town Planner

Chris Payant, DPW Director

Derek Saari, Assistant DPW Director

Sheri Widdiss, Interim Conservation Agent

Lisa Allain, Town Engineer

Patrick Purcell, Fire Chief

Jeffery Lourie, Police Chief

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

Peter Peloquin, Associate Planner, CMRPC Kerrie Salwa, Principal Planner, CMRPC Mimi Kaplan, Associate Planner, CMRPC Ian McElwee, Associate Planner, CMRPC Danielle Marini, Assistant Planner, CMRPC Hillary King, Regional Coordinator, EOEEA





#### WESTBOROUGH: A PROFILE

The Town of Westborough, Massachusetts was incorporated in 1717. Westborough is located at the junction of Interstates 90 and 495 some 5 miles east of Worcester and 35 miles west of Boston, serving as a bedroom community for both cities and their larger suburbs. Much of Westborough lies within the Assabet/Sudbury River Basin, except for the extreme southern edge, which lies in the Blackstone River Basin. Westborough is bordered by Northborough on the north, Southborough and Hopkinton on the east, Grafton and Upton on the south, and Shrewsbury on the west. Westborough has a total area of 21.6 square miles and a population of 18,481 (2014 American Community Survey). Westborough is a growing community, though growth is moderating as buildable land becomes scarce following booms in the 1950s-60s and 1990s. According to the CMRPC Long Range Transportation Plan, Mobility 2040, Westborough is expected to experience low to moderate population growth over the next 25 years.

According to the American Community Survey Westborough Town Report 2018, the number of residents has grown from 14,133 in the 1990 US Census to the current (2018) estimate of 18,982 residents in the town. The most recent survey of Westborough's geography (2010) concludes a population density of 888.0 people per square mile, and a total area of 20.58 square miles. Approximately 70.4% of the population is White. The median age of residents was 39.0 with 26.5% of the population under the age of 18 and 17.5% of the population over the age of 62. The median household income for the town was \$108,767 with 4.2% of the population living below the poverty line.

The Town of Westborough houses an active community through a variety of municipal and communal landscapes. Westborough is home to the Forbes Municipal Building, Town Hall, Fire Station, Senior Center, and a multitude of recreational facilities, including the Westborough Country Club and library. The Westborough Public Library is a social epicenter for senior and adolescent daily programs. The town is home to the Westborough Public Schools including the Armstrong, Fales, and Hastings Elementary Schools.

#### WORKSHOP SUMMARY

The Town of Westborough's Municipal Vulnerability Preparedness (MVP) workshop was held on Thursday, February 6, 2020 at the Forbes Building. The Town of Westborough had contracted with the Central Massachusetts Regional Planning Commission (CMRPC) 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 Westborough. A small group of Town officials convened on October 21, 2019 to form the 'Core Team' which, together







with CMRPC staff, organized and planned the CRB Workshop over the course of three meetings and three conference calls.

#### Workshop Invitees and Participants

First Name	Last Name	Affiliation	Attended
Lisa	Allain	DPW – Engineering	Y
Maureen	Amyot	Library	Y
Brian	Antonioli	Department of Public Works	Y
Steve	Baccari	Board of Health	Y
Don	Burn	Westborough Community Land Trust	Y
Alma	Demanche	Senior Center	Y
Peter	Dunbeck	Sustainable Westborough	Y
Leigh	Emery	Board of Selectman	Y
Alison	Field-Juma	Organization for the Assabet River	Y
Kim	Foster	Town of Westborough	Y
Andrew	Keonigsberg	Conservation Commission	Y
Jeff	Lourie	Westborough Police Department	Y
Robert	Moran Jr.	National Grid	Y
Chris	Payant	Department of Public Works	Y
Cara	Presley	Youth & Family Services	Y
Pat	Purcell	Westborough Fire Department	Y
Jim	Robbins	Planning Department	Y
Derek	Saari	Department of Public Works	Y
Mark	Stockman	IT Department	Y
Heena	Suratwala	Westborough Connects	Y
Sheri	Widdiss	Conservation Department	Y
Kristi	Williams	Town of Westborough	Y
Linda	Birch		Y
Kerrie	Salwa	CMRPC	Y
Faye	Rhault	CMRPC	Y
lan	McElwee	CMRPC	Y
Sarah	Adams	CMRPC	Y
Peter	Peloquin	CMRPC	Y





#### Core Team and Project Team

Name	Affiliation	Role
Kimberly Foster	Town of Westborough	Assistant Town Manager, Project Lead
Kristi Williams	Town of Westborough	Town Manager
Jim Robbins	Town of Westborough	Town Planner
Chris Payant	DPW	Director
Derek Saari	DPW	Assistant Director
Sheri Widdiss	Town of Westborough	Interim Conservation Agent
Lisa Allain	Town of Westborough	Town Engineer
Patrick Purcell	Town of Westborough	Fire Chief
Jeffery Lourie	Town of Westborough	Police Chief
Peter Peloquin	CMRPC	Associate Planner, Lead Coordinator
Kerrie Salwa	CMRPC	Principal Planner

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

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

Upon completion of the presentations, the group discussed the top four hazards that affect Westborough. There was agreement between the Core Team and all participants that--in no particular order—*flooding, wind events, winter storms, and temperatures* have the greatest effects and potential effects on the Town. Having identified these hazards, workshop attendees were then broken into four groups to work through the CRB program's matrix and mapping exercise. Table facilitators, along with CMRPC staff guided stakeholders in small groups 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.

After lunch, Peter Peloquin presented examples of projects from other municipalities in the state that were funded by MVP Action Grants, providing inspiration for participants to:

- Develop and prioritize actions to reduce or mitigate threats.
- Identify opportunities for collaboration aimed at increasing the town's resilience.

The groups then reconvened to build upon the morning work. The goal of the afternoon breakout session was to identify actionable items to reduce or mitigate the projected impacts





of climate change. Once each table had completely filled out the matrix, all the groups reconvened and the table reporters gave a summary of their findings. The workshop ended with each attendee voting for what they believed to be the top project in the infrastructure, society and environmental categories.

Twenty-Eight (28) people attended the CRB Workshop, including representatives from the town government, emergency services, the MVP Core team, Westborough Community Land Trust, local business owners and National Grid. Members from Westborough's Senior Center acted as scribes, and contributed their perspective.

A public listening session to discuss MVP results and recommendations for future action was held virtually August 18, 2020 as part of a regularly scheduled Board of Selectmen's Meeting. The listening session and Board of Selectmen's meetings were properly advertised across various media and was broadcasted on Westborough's public access channel, Westborough TV.

#### 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: **flooding, wind events, winter storms,** and **temperatures.** 

In 2016, Westborough experienced extreme droughts along with the majority of the state of Massachusetts. Severe storms, including high winds and intense rainfall, have been increasing in frequency and impact. 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.

#### TEMPERATURES

Increases in projected temperatures pose threats 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

Annual days below freezing will decrease, with 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.

#### HIGH WIND

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





**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 Westborough continues to develop. Through the introduction of the MBTA railway system and an intricately designed culvert system, Cedar Swamp has become prone to flooding during storm events. Areas with frequent drainage issues include not only Cedar Swap, but West Main Street and Chauncy Street as well.

**Winter Storms**. Winter ice storms, a regional problem, are expected to be more intense and include more mixed precipitation which is highly damaging to trees, power lines and other infrastructure. Safety and efficiency measures, including additional egresses to shelter locations and increased efficiency in emergency communications, may implement proactive strategies to combat winter storms as they become more frequent.

**Temperatures**. 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 may lead to water shortages that will impact the entire town whether or not residents and businesses are on town water or have private wells.

**High Wind**. 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 interrelated, 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 Sudbury, Assabet, Concord River Basin, where Westborough 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





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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 in the winter. Higher wind in the summer and storm severity increases with warmer temperatures.

#### 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, wind events, winter storms and temperatures as the primary hazards facing Westborough. All the participants agreed that these four hazards were the most relevant for Westborough.

The Town's public buildings and access to transportation systems were described as strengths, along with the recreation opportunity. Outreach organizations, such as Westborough Connects and the Westborough Interfaith Association. were considered to be an underutilized strength for the town. Due to its central location in town, connection to several water resources, and proximity to the MBTA Commuter Rail, Cedar Swamp was seen as both an area of concern and a strength. Culverts throughout town were considered to be a major vulnerability and a root cause for other concerns. The possibility of creating a coalition to educate and influence state organizations that own and manage culverts in town was discussed with much support from participants.

Another area that was widely seen as a prospect for management was Lake Chauncy and Parke-



Davis Brook Watershed. Lake Chauncy is a valuable water resource in town and provides both recreation and cooling opportunity during the hot summer months. Due to the changing climate, Lake Chauncy has experienced a higher frequency of algal blooms and has had to shut down for extended periods of time in order to protect the public health. The Parke-Davis Brook Watershed, located on the northeastern border of Westborough, has been identified as a flood prone area due to poor stormwater management. While developments were underway to solve this issue, ownership conflict halted the process of remediation, leaving the flood hazard unresolved.





Other vulnerable areas mentioned were issues of the overall health and maintenance of the tree canopy, the abundance of beaver and deer populations, and the need for an improved emergency shelter. There was extensive concern regarding access to emergency information and communication systems. Recommendations included increasing the language options available on the Code RED system, and utilizing outreach organizations that already have established connections with hard to reach communities.

There was agreement that the town's water system needed to be upgraded and expanded. Initiating strategies to educate state organizations, private companies, and residents on the impacts of runoff pollution, proper culvert maintenance, and water conservation were widely discussed. It was also recommended that the town establish better water conservation policies and bylaws to ensure that the public water supply is protected during times of drought.

All four tables identified specific vulnerable locations that are already in need of attention and will likely face worsening impacts due to climate change. The areas include Interstate 495, the MBTA Commuter Rail, town-owned culverts, and the town's drinking wells.

#### CURRENT CONCERNS AND CHALLENGES PRESENTED BY HAZARDS AND CLIMATE CHANGE

CMRPC, the MVP planning provider, had the unique advantage of preparing Westborough's Hazard Mitigation Plan (HMP), which was adopted by the Town's Board of Selectmen in February 2017 and was approved by FEMA in February 2017. Meetings with the MVP Core Team prior to the workshop as well as the HMP 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). Westborough has adequate public water coverage and maintains six water supply protection zones. Advisedly, it will be important for the town to maintain a backup and response plan in the event that one or more wells is damaged by drought or storm and cannot be



replenished at the prescribed rate of use.





At the workshop, CMRPC staff presented downscaled climate change data provided by Massachusetts's Executive Office of Energy and Environment Affairs (EOEEA) and the Northeast Climate Science Center at the University of Massachusetts, Amherst. Westborough lies mostly within the Sudbury, Assabet, Concord 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 by 9 to 30 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 Westborough area.

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

- Implications associated with climate change will exacerbate problems that are already apparent, and the town lacks the resources to address vulnerabilities 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. This concern was elevated because of the Town's relatively limited formal shelter capacity and the lack of backup power at the Senior Center, an important resource for many of the town's senior population and other residents.
- 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 northeastern and central portions of Westborough where existing wetlands are present.
- 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 and especially the overhead transmission lines owned and maintained by National Grid. Tree damage will occur from intense wind storms 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.

#### VULNERABLE AREAS

The areas in Westborough identified by workshop participants during discussion as vulnerable to the hazards discussed include areas adjacent to drinking wells, roadways and railways that induce flooding, and the town's emergency systems ability to inform all community members.

#### Water Supply was identified as a townwide public good

threatened by polluted runoff and inefficient flood infrastructure. Flooding during large storm events throughout the town overwhelms current flood infrastructure, allowing for pollutants to enter waterbodies via flood waters. The need for additional groundwater supplies and

increased infiltration of current supplies has grown due to increased drought conditions throughout the region.

**Interstate 495** is a major route that runs along the eastern border of Westborough. Along the interstate are a series of culverts that have failed to properly mitigate stormwater. This has led to stormwater runoff that flows into nearby tributaries of

Cedar Swamp, a larger tributary to the Westborough Reservoir which is designated as a public water supply reservoir. Pollutant runoff



**VULNERABLE AREAS** 

Water Supply

Interstate 495

Language

MBTA Commuter Rail

Cedar Swamp, photo courtesy of Derek Saari, Westborough DPW





from interstate 495 threatens the quality of nearby waterbodies and water supply.

**MBTA Commuter Rail** was addressed unanimously as a threat to the adjacent habitats, particularly surrounding Cedar Swamp. Culvert systems were designated within Cedar Swamp, as well as Kay Street, West Main Street, Chauncy Street, Alen Street, and Chestnut Street. These culverts have not been successful in mitigating flood waters and have been found to create stagnant pools of water which can harbor vector borne illnesses, like EEE.

**Language** barriers during emergency situations were of particular concern for the majority of the tables. Being able to utilize emergency communication systems for all residents was identified as an issue for non-English speaking communities within Westborough. Reconstructing communication systems, like Code Red, and ensuring accessibility to emergency plans and evacuation routes, with language in mind, is needed to promote the safety of all town residents.

#### SPECIFIC CATEGORIES OF CONCERNS AND CHALLENGES

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

#### Infrastructure Concerns:

#### Culverts

Westborough has a number of water resources throughout town such as Chauncy Lake, Cedar Swamp, Crane Swamp, Assabet River, Jackstraw Brook, and Rutters Brook, among others. Many of these waterbodies house culvert systems

#### **INFRASTRUCTURE**

- Culverts
- Water System
- Municipal Resources

to mitigate overflow of discharge and floodwaters. Attendees noted that a number of these culverts are not functioning properly, specifically those located at Kay Street, West Main Street, Chauncy Street, Allen Street, Chestnut Street, Morse Street, Upton Road, and Ulman Street.

With the increase in annual precipitation in the form of heavier and increasingly frequent storms inundating these natural resources beyond their capacity, the town will be faced with greater flooding. In fact, much of the town consists of low lying or wetland areas already experiencing flooding during heavy rain storms. The increased volume of storm water runoff will render most of the town's culverts inadequate to handle the amount of water. Spillage onto the roads and into developed areas will make streets impassable and cause property damage. And flooding near drinking wells could have negative



Chauncy Street Culvert, photo courtesy of Derek Saari, Westborough DPW





impacts to the public water system. Westborough must undertake additional study and planning to reassess the current culvert systems or implement innovative solutions to replace them.

In addition to these town-owned culverts, participants also discussed culverts that are under private or state ownership. The Massachusetts Bay Transportation Authority (MBTA) owns the commuter rail that runs through Westborough. The culverts along this railroad are not well maintained, especially the culvert located at the intersection of Route 30 which abuts Cedar Swamp. Flooding and runoff pollution from these culverts could have negative impacts to the drainage and water quality of nearby natural resources. Interstate 495 (I-495) is another notable problem area that runs through Westborough and is owned by the Massachusetts Department of Transportation (DOT). The culverts here are also not well maintained, and the flooding and runoff flows to the town's drinking well sites. The town should work to strengthen relations with the MBTA and the DOT as runoff pollution and flooding from these improperly functioning culverts directly impact town resources.

#### Water System

Attendees at all four tables noted major concerns regarding the Town of Westborough's current water system involving both flooding and drought. Although improvements have been made to increase the efficiency of the water system, groundwater and surface water resources are vulnerable to commercial, residential, agricultural, and industrial activities that occur near those sources. Poorly functioning culverts and dam failure were thought of as a risk to the town's water supply. There is one (1) High Hazard and two (2) Significant Hazard dams in Westborough. The George H. Nichols Multipurpose Dam is designated as a High Hazard dam and is owned by the Massachusetts Department of Conservation and Recreation (DCR). Both the Upper Sandra Pond Reservoir Dam and the Lower Sandra Pond Reservoir Dam are designated as Significant Hazard dams and are town-owned. The Upper and Lower Sandra Pond Dams were noted as a concern by participants. Though the dams were upgraded in 2005-2007, they are in need of a spillway replacement. If these dams fail, it will result in a flooding of the town's drinking well sites. And if these areas flood, groundwater and surface water resources are at risk of being contaminated by runoff pollution. With the projected increases in annual precipitation, the town will be faced with a greater occurrence of these risks.

On the opposite side of the spectrum, there was also concern about water conservation. Westborough lies in the Sudbury-Assabet-Concord River Basin (SuAsCo). The SuAsCo is projected to have a significant increase in the number of consecutive dry days over the next century. While the town has a standard water use policy to preserve water supplies as a preventative measure, these drinking wells are still vulnerable to drought. Additionally, a significant portion of the town's water supply is pulled from ground and surface water resources. The municipal drinking water from these sources goes through the Wastewater Treatment Plant and is discharged into the Assabet River, which exits the town into neighboring regions. Consequently, much of the town's surface and ground recharge waters are being





replenished elsewhere. In either situation, flooding or drought, caused by insufficient recharge, the town's current water system will be unable to provide Westborough's current population. Westborough must research additional groundwater resources, as well as flood and stormwater mitigation strategies.

#### Municipal Resources

Westborough is fortunate to have a number of facilities, resources, and utilities available throughout town. However, it was noted by several participants that these facilities need significant upgrades. Currently, the town has two options for shelters. The Senior Center, located at 4 Rogers Road, can serve as a shelter in times of crisis, though it lacks showers and backup power. For these reasons, the Senior Center can only be used as a temporary, short-term shelter. Westborough High School, located at 90 W Main Street, can serve a larger capacity of individuals and has showers. It acts as the town's long-term shelter; however, because this results in an interruption of schooling it was not considered a viable option. An upgraded shelter that has an alternative energy source and will not interrupt important town services is needed.

In addition to shelters, the town also has fully staffed Police, Fire, and Public Works departments. However, participants noted that there is a lack of redundancy for these services throughout town. In times of severe weather events, the operation of the police, fire station, and DPW may be limited or entirely interrupted. Equipment may also be vulnerable and unavailable, especially if proper storage options are not available.

#### Societal Concerns:

#### Communication



Communication was largely viewed as a barrier between the town and residents. The current communication infrastructure relies on underground copper wiring and above ground power lines. The underground copper wires need to be upgraded and should be replaced with fiber wires to improve functionality and durability. And without a consistent tree trimming program, above SOCIETAL

- Communication
- Vulnerable Populations
- Preparedness and Prevention
- Rogers Field

ground powerlines are at a risk to fallen trees and debris during winter storms. This risk will only increase with a higher frequency of storm events. Existing cell towers are also vulnerable to windstorms and require vegetation maintenance.

In addition to the infrastructural concerns, there was frequent discussion regarding the communication needs of non-English speakers. While Westborough has a Code RED system that distributes emergency notifications, the limited number of language options leaves out a significant portion of the population. English is the only language offered on the system causing





non-English speaking individuals to be more vulnerable in times of disaster. Without the ability to translate an emergency alert, residents will not be able to take precautionary actions.

#### Vulnerable Populations

Westborough has several groups of people that are at higher risk from the effects of climate change. Senior citizens are among the many vulnerable populations that require more consideration and careful planning. Older residents will feel the effects of climate change more than other citizens in town. Due to their age, they will be more vulnerable to both extreme temperatures and the limited drinking water supply that will accompany drought and hot days. In addition, senior residents are more susceptible to disease, particularly EEE and other insect-borne diseases which will only increase with the changing climate. Senior citizens will be more vulnerable in times of emergency when evacuation is necessary due to their reduced ability to mobilize quickly. There are a number of independent and assisted living communities including the Villages at Walker Meadow, Kindred Transitional Care and Rehab, Whitney Place, Beaumont Rehabilitation and Skilled Nursing, The Willows Retirement Community, and The Highlands Gracious Retirement Living. Several of these facilities are located in close proximity to one another, creating high concentrations of individuals who have either limited mobility or no mobility, and making evacuation even more challenging.

Immigrants and non-English speaking individuals were identified as another vulnerable population in Westborough. Concentrations of non-English speakers were identified in the neighborhood southwest of Hoconmonoco Pond and in the neighborhood off of Route 9 near Indian Meadows. As noted above, Westborough's Code RED system only operates in English, leaving out this portion of the population. Aside from being unable to access emergency notifications, immigrants and non-English speaking individuals may not be able to easily receive or understand education and outreach initiatives from the town. Language and cultural barriers can prevent these residents from accessing information on the risks of wildfires, the harm of insect-borne disease, and the importance of water conservation. Immigrants and non-English speakers might also be apprehensive of government agencies, further limiting their access to key information.

Other vulnerable populations that were discussed during the workshop include low-income residents, those in high density areas, and children. A mobile home park with a low-income population was identified off Route 9 near Chauncy Lake. While mobile homes tend to provide more affordable housing, they are much less secure during wind and flooding events. Projected increases in the number of storms will only worsen these risks. Low-income individuals also might not have access to reliable transportation, making evacuation difficult. A high-density area was identified in the neighborhood near Windsor Ridge Drive off of Route 30. Especially when trying to limit water use during times of drought, high concentrations of people will make conserving resources more challenging. And next to Chauncy Lake, participants identified the Robert F. Kennedy School and the Fay A. Rotenberg School. Both schools are juvenile treatment facilities operated by the Robert F. Kennedy Children's Action Corps. The close proximity of





these schools to Chauncy Lake increases the risks of flooding and mosquito exposure for the children that reside there.

#### Preparedness and Prevention

Public safety and maintenance education were of high concern for attendees. Participants felt that the residents of Westborough are not well informed to handle emergencies, especially those in the vulnerable populations mentioned above. In general, it was agreed that climate change risks are not well known throughout town. Residents have a minimal understanding of fire hazards and fire prevention techniques. Safety and precaution information regarding insect-borne illness as well as runoff pollution and contamination are also not well understood. Further, there was a strong desire to develop better evacuation and resiliency plans as many residents in town might need assistance during severe climate emergencies.

Maintenance of state-owned properties and structures provide an even more challenging prevention concern. As noted above, the MBTA-owned commuter rail has a variety of culverts that are not functioning properly. Regular maintenance of culverts is important to reduce risks of flooding. It was also noted that the railroad occasionally sparks posing wildfire risks along the forested portions of the rail. Regular debris management is necessary to reduce the fire load and prevent forest fires. Interstate-495 and Interstate-90 also pose a unique ownership challenge. The DOT has ownership over I-495 and I-90, but runoff pollution frequently flows into Westborough's natural resources and drinking water supply. Continued maintenance of culverts and roadways along these routes is necessary to reduce runoff risks. Educational efforts should be made to engage both the MBTA and DOT in consistent management strategies in order to reduce all of these risks.

#### Rogers and Hennessy Field

Rogers Field is a 47-acre park located on Forest Lane. It is situated near the behind the Senior Center and abuts Cedar Swamp. The field houses a youth baseball and softball field, a baseball field with a 90-foot diamond, a basketball court, soccer fields, a playground, and a gazebo. Rogers Field is within walking distance of the Willows Retirement Community, Cedar Estates, Westboro Knowledge Beginnings day care center, and Hastings Elementary School, providing recreation access to children, elderly residents, and low-income and disabled populations. However, it's close proximity to Cedar Swamp makes the fields more prone to flooding. Participants described that the fields are often underwater and unusable. This hinders recreational opportunities in the town, and specifically hinders recreation to the vulnerable populations that it serves. Additionally, the flooding leads to frequent standing water on and near the fields, putting nearby users at increased mosquito exposure risk. Drainage issues at Rogers Field should be addressed to improve recreational opportunities in town and decrease the risk of insect-borne illness.

Hennessy Field is a 5-acre park located on Upton Road. The field is situated along the Jackstraw Brook and Route 135. The field is home to the Town's youth soccer leagues and a place of active recreation for all of Westborough's residence. However, it's close proximity to Jackstraw





Brook makes the fields more prone to flooding. Participants at the workshop described this as hindrance to recreational opportunities and specifically to the populations that it serves.

#### Environmental Concerns:





#### **ENVIRONMENTAL**

- Cedar Swamp
- Insect-Borne Disease
- Forestry Management
- Nuisance Species
- Water Resource
  Management

Piccadilly Brook, Whitehall Brook, and Jackstraw Brook, however, this area contains poorly draining soils. Workshop attendees noted that these poorly draining soils accompanied by improperly maintained culverts along I-495, I-90, and the commuter rail have contributed to increased flooding issues in and around Cedar Swamp. This results in a wetland that is not

functioning properly and has very limited flood storage control. Rogers Field is directly impacted by the increased flooding at Cedar Swamp and has frequently been unusable due to the amount of standing water on the field. Participants also expressed concerns regarding increase mosquito and insect-borne disease exposure in these areas due to the amount of standing water. Not only is Cedar Swamp a critical resource for flood storage, it is also an important recharge area for two municipal drinking water wells. Runoff from the



Cedar Swamp Culvert, photo courtesy of Derek Saari, Westborough DPW

highways and commuter rail, exacerbated by the improperly maintained culverts, could negatively impact the water quality in these areas and consequently have a disastrous effect on the town's water supply.

#### Insect-Borne Disease

Risk of insect-borne diseases, especially EEE and Lyme disease, will worsen as the climate warms and periods of flood and drought increase. Mosquitos carry EEE and West Nile Virus

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(NV). They tend to lay their eggs in and around standing water, so populations of mosquitos will likely increase in times of flooding. Mosquitos are also more aggressive on hot, dry days, and will feed more frequently during those periods, causing greater instances of contracting those diseases. In Massachusetts, deer ticks (*lxodes scapularis*) can carry Lyme disease. Typically, deer ticks will die out during the cold winter months, controlling the deer tick population and managing the spread of Lyme disease. However, climate change will result in milder and warmer winters, causing fewer disease-carrying ticks to die out during those winter months. With fewer ticks dying, the overall tick population will increase, creating a greater chance of contracting Lyme-disease. Children and senior citizens are more susceptible to the effects of insect-borne diseases, and those living near open water or flood-prone areas could be more exposed to insect-borne diseases. Though education and prevention measures of insect-borne disease should be taught town-wide, areas of particular concern were identified near Cedar Swamp, around Chauncy Lake, near Crane Swamp, and at Rogers Field.

Along with the health risks, outdoor programming has suffered disturbance due to the heightened risk of Eastern Equine Encephalitis (EEE) and state mandated insecticide spraying. Both of these factors have led to the postponement or cancellation of outdoor activities in order to keep residents safe. With a lack of indoor facilities or alternative recreational opportunities, there was a concern that climate change will severely limit recreational programming in town.

#### Forestry Management

Street trees are a critical tool in managing and mitigating the effects of climate change. They, like their forest counterparts, have the ability to sequester carbon and remove CO2 from the atmosphere. They can also provide shading to houses, people, and infrastructure. While street trees can be helpful in mitigating climate change effects, they can also be vulnerable to them as well. The Town of Westborough has many streets trees that will be at risk as climate change impacts worsen. As winter storms and high wind events increase, dead, dying, and unhealthy trees could be at risk of falling or losing limbs. Fallen trees can cause power outages and roadway hazards. Trimming and monitoring trees on a regular basis can help trees stay healthy longer, however, attendees noted that the Town of Westborough has a limited tree trimming program and does not have a removal-replacement program.

Along with street trees, forested and vegetated lands are also vulnerable to changes in the climate. Each of these areas are at risk from drought and invasive species. Both drought and invasive species can lead to increased fire load and risk of wildfires. With an increase in temperatures and numbers of consecutive hot days, drought, and consequently more wildfires, will be an ongoing hazard. Along with drought, climate change will bring a shift in flora and fauna of the region. Plants and animals that have adapted to warmer and drier climates will increase in Massachusetts, and native species that are better adapted to cooler weather will decrease. When a non-native species invades an area, it can often outcompete the native species. Without a predator to manage population numbers, invasive species can dominate an ecosystem very quickly. This is especially detrimental to forest ecosystems. Attendees noted





the Asian Longhorn Beetle and the Emerald Ash Borer as invasive insect concerns. While these insects typically do not have direct harmful effects to humans, they do have disastrous effects on native tree species in Massachusetts. The Asian Longhorn Beetle prefers to feed on maple, poplar, willow, elm, and birch trees, while the emerald ash borer feeds on ash trees. Trees that are impacted by invasive insects are much more vulnerable to damage during intense storm events as well as drought.

Risks of drought and invasive species were of particular concern due to conflicts with the commuter rail. Attendees noted that the commuter rail bisects a large section of forested and vegetated lands. The railroad sparks frequently, and with minimal ability to access the railroad, the town has limited and challenging firefighting ability when those sparks lead to wildfires. As the MBTA has ownership over the commuter rail, the town is restricted in its debris management and vegetation trimming capacity in that area. Relations between the town and the MBTA should be improved so that these fire hazards can be properly managed or prevented.

#### Nuisance Species

The Town of Westborough has many woodlands and water resources. As a result, there are also large populations of beavers and deer. While not invasive species, due to both the abundance of resources and lack of natural predators, beaver and deer populations have grown in recent years. Attendees noted that overpopulated deer have been a concern, stating that Westborough's current deer population far exceeds the state's population density recommendation. An even larger concern regarded the presence of beavers and beaver-made dams. Current Massachusetts regulations mostly protect beavers and beaver dams from human interference. As such, it can be difficult to trap beavers or breach dams outside of the trapping season. Beaver dams can often block culverts and cause a backup of stream water that may impact to communities downstream. Especially since climate change should bring more powerful and more frequent storms, risks of increased flooding should these dams break was of even greater concern to attendees.

#### Water Resource Management

Without consistent management, existing water resources will continue to be vulnerable to the effects of climate change. Lake Chauncy is Westborough's only town beach. It provides outdoor recreation opportunities and can serve as a cooling off location for residents on hot and humid days. Attendees recalled that the Westborough Board of Health issued a public health advisory for cyanobacteria in Lake Chauncy last summer. The algae bloom that occurred was capable of producing toxins that could be dangerous to humans and pets, so as a result, the beach had to be closed for two weeks. Warm temperatures, drought, and intense storms can lead to an increased risk of algal blooms. Toxic blue-green algae prefer warmer water and warmer temperatures prevent water from mixing allowing algae to grow thicker and faster. Algal blooms also absorb sunlight, which makes water warmer and creates even more algal blooms. Alternating periods of drought and intense rain events can create more nutrient runoff into waterbodies that can feed more algal blooms. With the projected increases in the number of





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hot days and frequency of drought and flooding events, algae blooms will likely become a more common occurrence. Without effective management strategies, Lake Chauncy could become an unusable resource, limiting recreation and cooling opportunities for residents.

In addition to Lake Chauncy, participants expressed concerns regarding the management of a private pond off of Fox Lane. Historically, this area was a mill site that has since turned into an impoundment. The pond is in horrible condition and consists of many uprooted trees. Increased risks of flooding, mosquitos, and water quality issued were noted to be a concern. As the pond is privately owned, the town is restricted in their management capabilities.

The Parke-Davis Brook Watershed is an area with poor water resource management, particularly with stormwater. Not only is the watershed vulnerable to polluting runoff from nearby roadways, but is a hazard to infrastructure downstream. While there have been developments to produce a stormwater management system, the town has made little headway due conflicts with land ownership surrounding the waterbody. Without a method for remediation, Park-Davis Brook Watershed is at high risk of continued flooding and pollution.

#### CURRENT STRENGTHS AND ASSETS

Westborough has taken some steps to address natural hazards and climate change over recent years. Public opinion holds that the work town officials have completed over the years, and their plans in the area for the future are a "societal strength" that will protect and strengthen the Westborough community. Perceived environmental strengths focused mainly on the large and diverse number of natural resources that Westborough residents can use and highlight now and in the future.

#### Infrastructure Strengths:

#### Municipal Buildings

While some municipal buildings are in need of updates, Westborough has been able to provide a number of services to the community through these facilities. The town of Westborough has a number of schools that provide educational services and afterschool activities for

#### INFRASTRUCTURE

- Municipal Buildings
- Transit
- Utilities

students ranging from Pre-Kindergarten through  $12^{th}$  grade. These schools include Hastings Elementary School (Pre-K, K-3<sup>rd</sup> grade), Armstrong Elementary School (K – 3<sup>rd</sup> grade), Fales Elementary School (K – 3<sup>rd</sup> grade), Mill Pond School (4<sup>th</sup> – 6<sup>th</sup> grade), Gibbons Middle School (7<sup>th</sup> – 8<sup>th</sup> grade), and Westborough High School (9<sup>th</sup> – 12<sup>th</sup> grade). The high school also serves as a shelter in times of emergency. The Westborough Senior Center also can serve as a temporary shelter. Westborough is also fortunate to have a fully staffed and operational Police, Fire, and





Public Works Departments. Even though redundancy is desired for these departments, these three facilities provide a number of public safety services for residents.

#### Transit

Interstate 495 is considered the "beltway" of the Boston metropolitan area. Cutting through the eastern border of Westborough, Interstate 495 provides Westborough residents to the Cape and Boston. Having major interstate access in Westborough provides a means of direct access to urban centers for commuters for recreational or work related travel.

Just west of Westborough's town center is the access point for the MBTA Rail Line, specifically the Framingham/Worcester Line. This rail line connects Westborough to all other major urban centers and provides alternative commuter transportation. In addition to increased accessibility, the presence of the commuter line promotes the use of public transportation as a mode of sustainability for Westborough.

#### Utilities

Though coverage and capacity are limited, the Town of Westborough does have many utilities that residents rely on. Westborough's water system is an intricately designed set of six water supply protection zones throughout the town. Each of the protected zones house groundwater wells that supply the nearby neighborhoods. These sources include wells from Chauncy Lake, Otis Street, Indian Meadow, Andrews Street, Morse Street, and Hopkinton Street. Some of the public water supply is also supported by surface waters from Sandra Pond and the Westborough Reservoir. Recent improvements to the water system, as indicated by the 2018 Annual Drinking Water Quality Report, include fire hydrant replacement, the installation of an additional 2,700 feet of water mains which connected the Mass Department of Youth Services to the public water supply, as well as the completion of the leak detection program for water mains throughout Westborough. The town should look to expand the water system and protect existing water wells from runoff pollution and flooding.

In addition to the water system, residents also have access to electricity and cell coverage. There are a few cell towers in town that allow for improved communication. National Grid provides and maintains the electric grid in town. Efforts should be made to manage vegetation around the cell towers and powerlines to protect these services from inclement weather.

#### Society Strengths:



#### Senior Population

Westborough's Council on Aging is dedicated to providing social, educational, and recreational programs for the senior community, as well as promoting assistance to senior citizens and their families. These programs and activities are channeled

#### SOCIETAL

- Senior Population
- Outreach Groups
- Bylaws





through the Westborough Senior Center. The Senior Center offers daily programming for seniors including fitness classes, luncheons, games, crafting classes, outings, and holiday events. Numerous services are provided to aid in senior accessibility to outside resources including transportation to appointments and grocery stores, and residential services. The Council on Aging uses local resources to further engage senior citizens within the community through volunteer opportunities.

Westborough offers several options for senior and assisted living for the town's elderly population. The Willows at Westborough and the Highlands offer independent retirement living facilities with full-service amenities. Whitney Place at Westborough is an assisted living facility that specializes in Alzheimer's care. Whitney Places services include traditional assisted living, memory care, and continuum care to provide proper assistance to each individual as they age. Westborough Country Village is an independent living facility geared toward affordable senior living with maintenance services and community amenities. The Housing Authority also provides a variety of affordable housing options for disabled, special needs, and low-income residents.

#### Outreach Organizations

While there is a desire to expand communication and unify the town more, there are a number of organizations in Westborough that can serve as a great starting point to reach out to vulnerable populations. Westborough Connects is deeply vested in maintaining and celebrating the diversity and inclusiveness of Westborough. This is supported through community-based events and programs aimed to enhance connectivity between individuals and resources. Westborough Connects is also deeply rooted within other town committees including the Diversity and Inclusion Committee, Programming Committee, and Community Engagement Committee, among others. Under the Westborough Connects outreach umbrella, are a host of volunteer opportunities for community members for all ages.

The Westborough Farmer's Market is a weekly culmination of locally grown and crafted products in Westborough from June through September. Each Thursday local producers and artisans gather at the Congregational Church in Westborough's historic downtown to envelope the Town and surrounding communities in a cultural and agricultural experience unique to Westborough.

Westborough's Food Pantry was established in 1986 by a group of residents. The food pantry is run by a dedicated team of over 60 volunteers. Over 130 families are provided with necessary food items a week and an average of 900 people receive groceries a month. The pantry is stocked through annual food drives, food donations and financial donations.

Westborough Child and Family Services (WCFS) is considered to be a great strength to the Town of Westborough. WCFS provides services ranging from counseling services to family and youth programing. During the workshop, WCFS was considered to be a desirable place to engage Westborough's youth and their families regarding climate resiliency.





#### Bylaws

Westborough adopted the Massachusetts Non-Zoning Wetlands Protection Bylaw in 2010, later amended in 2012, to protect and administer regulation of activities within wetland zones that may affect the quality of surface and ground water, prevention of pollution and erosion, and agriculture, among others. The bylaw was adopted under the Home Rule Amendment, an amendment under the state constitution, independent of the Wetlands Protection Act. Because of this distinction, all regulation and administration of wetlands under this amendment may be interpreted as stricter than those under the Wetlands Protection Act, due to increased severity of Massachusetts regulation. This has allowed Westborough to preserve and maintain its wetlands to a higher degree and ensure the safety of community recreational areas and water supply.

In addition, Westborough also has a comprehensive stormwater management system under the National Pollution Discharge Elimination System, which was reviewed in July 2019. Westborough was deemed a MS4 community in early 2019 and adheres to the mandates within the MS4 Grant Permit to properly discharge stormwater. Water segments that receive flow from the MS4 discharge include Chauncy Lake, Cedar Swamp, Crane Swamp, Assabet River, and Rutters Brook, among others. Many of these waterbodies receiving from the MS4 house culvert systems to mitigate overflow of discharge and floodwaters.

#### Environmental Strengths:



#### Cedar Swamp

Cedar Swamp is a major wetland resource in Westborough covering approximately 1,500 acres. It is an Area of Critical Environmental Concern (ACEC) and was listed on the State Register of Historic Places.

#### ENVIRONMENTAL

- Cedar Swamp
- Recreation Opportunity

Cedar Swamp contains many unique natural resources, such as vernal pools, habitat for Spotted Turtle, host plants for the Hairstreak Butterfly, and Atlantic White Cedar trees. In addition, this wetland area provides opportunities for nature observation and canoeing, and has the potential to provide even more passive recreation.

#### Recreation Opportunity

The Town of Westborough is dedicated to conserving and preserving lands that provide ecosystem services. Through the Westborough Community Land Trust and Open Space Preservation Committee, the Town continues to focus on lands vulnerable to increasing developmental pressures, particularly those in which ecosystem services may be compromised. These landscapes are often preserved and maintained as passive recreational areas for the community. Some preserved passive recreational lands include Walkup Robinson, Bowman Conservation Area, and Assabet Headwaters Conservation Area. A newer development, under





the Open Space Preservation Committee, is the Charm Bracelet Trail, which is being designed to create linkages between all trails, major waterbodies, and conservation areas throughout the town to provide recreational access points surrounding Westborough and adjacent communities.

Lake Chauncy is a designated wildlife management area and a major recreational hub for Westborough residents. Activities include fishing, boating, swimming, walking, biking, among others. Lake Chauncy provides community access to the public beach and boating ramp for some of these activities.

The Town of Westborough houses numerous recreational areas for youth and adult enjoyment. Some of these areas include the Haskell Recreation Area, Greg's Fields, Lake Chauncy Recreational Area, Rogers Fields, Westborough Country Club, and the fields at Westborough High School. The Westborough Recreation Committee works to preserve and maintain these facilities to promote all age groups to enjoy the recreational amenities provided by the town.

Westborough continually promotes the walkability and bike ability of the town to promote alternative means of transportation and recreation to the community. The Town's Bicycle and Pedestrian Advisory Committee aims to improve conditions in Westborough through the introduction of a rail trail and bicycle community, supported through investments in bicycle and pedestrian amenities. A regional effort is also underway to work with surrounding towns in the development of the Boston Worcester Air Line Trail. The trail would provide a multi-use corridor connecting multiple towns to major urban centers, providing alternative commuter transport and additional recreational opportunities.

#### **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 three tables at the Barre MVP Workshop. The completed Matrix for each table can be found in Appendix B of this document.

#### Infrastructure Actions



Replacing and **upgrading culverts** throughout town will be critical in building resilience to increased flooding. Town-owned culverts should be assessed and repaired as needed. It was also recommended that the town strengthens its communication and education with the MBTA to ensure that the culverts along the commuter rail are properly and

#### INFRASTRUCTURE

- Upgrade Culverts
- Stormwater Management
- Expand Redundancy
- Improve Water Supply





consistently maintained. And, Westborough should form a coalition with surrounding towns in order to engage the DOT developing strategies to prevent highway runoff pollution from entering town water supplies.

Better strategies for **stormwater management** should be utilized. A town-wide drainage study that examines all stormwater management assets including culverts, basins, and dams, should be performed. Additionally, the town should consider mechanisms to recharge ground and surface water supply including a study to identify options for feeding a portion of the clean water discharge from the wastewater treatment plant back into the town's water supply. The spillway at the Sandra Pond Dams should be upgraded, and strategies should be implemented to increase upstream vegetation. Address stormwater management challenges associated with railroad. The drainage and detention systems within the Jackstraw Brook Watershed should also be upgraded. Rain garden should be planted in the center of town to help with stormwater mitigation. And, it was recommended to study the feasibility of enacting a Stormwater Utility Fee. A Stormwater Utility Fee can provide a dedicated source of funding that will address increases in runoff from impervious surfaces and help the town comply with extensive MS4 permit requirements.

As flooding, intense storm events, and other crises become more frequent, **expanding redundancy** of public safety and emergency services will be imperative. A feasibility study was recommended to consider creating additional substations to house Fire Department, Police Department, and DPW equipment in other areas of town. There was also interest in constructing a Community Center that could act as the town's upgraded shelter in times of emergency.

Projected increases in the frequency of drought led participants to view **improving water supply** as a major priority. It was recommended that the town protect existing water resources by reducing runoff pollution from nearby roads and highways. The town should also look to increase the upstream infiltration of drinking well sites to further reduce flooding and runoff risks. In an effort to conserve existing water resources, the town should perform a water meter feasibility study and consider enacting a water conservation bylaw. Conservation efforts should also include investigating alternatives for sustaining and managing water supply resources and studying water supply recharge options. Investing in drinking wells should also be considered to increase access to the water supply.

#### Societal Actions



With a significant population of non-English speakers, **expanding communication** was viewed as a priority town-wide. Risks to communication infrastructures should be assessed and back-up plans should be created. Existing cell towers and underground copper

#### SOCIETAL

- Expand Communication
- Improve Access
- Utilize Outreach Network





wires should be upgraded or replaced, and the town should consider moving utility lines underground to protect from weather related damages.

Along with expanding communication, **improving access** was also discussed. It was recommended that a town-wide Language Access Plan be implemented in order to ensure that there is equitable knowledge and access to services, emergency plans, and general town information. The town should work to identify communities where access to housing and transportation is limited and develop resiliency plans to increase those services. And, additional egresses should be created where necessary to expand evacuation and emergency response, especially in heavily forested woods where firefighting ability is hindered.

To help with communication and access improvement efforts, the town should seek to utilize **outreach with the existing networks** in town. Westborough already has a number of community organizations that reach a wide variety of people such as Westborough Connects, the Interfaith Association, the Housing Association, and the farmers market. Strategies should be implemented to work with the organizations to spread important information town-wide.

**Environmental Actions** 



Participants felt that **invasive and nuisance species management** was a priority to address public health and resource protection concerns. To help prevent insect-borne disease and manage the number of mosquitos, the town should look to reduce stagnant water through upgrading culverts and dredging other water resources. Installing bat boxes and chicken flocks can control the population of mosquitos and

#### ENVIRONMENTAL

- Invasive and Nuisance
  Species Management
- Acquire and Protect Land
- Improve Open Space and Recreation

ticks respectively. Efforts should be made to increase public awareness of insect-borne disease, invasive plants, and invasive invertebrate species. Additionally, it was suggested that beaver deceivers be installed to discourage beavers from damming culverts and streams.

There was a desire to **acquire land and protect existing resources** to help make Westborough more resilient. Conservation land should be purchased and be used to build trails to increase recreation and connectivity. The health of wetlands and waterways should be assessed and managed to prevent water quality issues. And the private pond off of Fox Lane should be purchased, the dam should be removed, and the area should be restored.

While forests and recreation were viewed as strengths in town, Westborough could benefit from further **open space improvements**. Planting public shade trees in the center of town and in recreational areas, as well as installing awnings and gazebos can increase cooling spots during hot and sunny days. Shade trees and a canopy should also be installed at Lake Chauncy





to increase shade access at the public beach. The town should develop a management plan to treat and prevent future algae blooms, and provide education to the public on the harms of algae. And, drainage issues should be addressed in and around Cedar Swamp in order to reduce flooding impacts to Rogers Field.

#### Top Recommendations

Prioritization of recommendations was achieved through four steps: 1) informal discussion at each breakout table during the workshop; 2) voting using stickers placed on the participant's table's CRB matrix (each attendee was given five stickers to select his/her top priority actions, with at least one sticker required to be used for each general topic area); 3)

#### TOP RECOMMENDATIONS

- Repair MBTA Culverts
- Develop Language Access Plan
- Investigate Drinking Well Sites
- Create I-495 Outreach Coalition

summary's from each table to the full audience to discuss and discern consensus priorities; and 4) final review and reconciliation of duplicate priorities. Several tables mentioned similar concerns and suggested similar ways to address them, but each table had a unique perspective on the challenges Barre faces. These recommendations were organized on a large sheet to enable participants to see the overlap between tables and to learn about suggestions not discussed at their table.

The overall top recommendation is to engage the MBTA in repairing and replacing the commuter rail culverts. Three four out of tables recommended investigating new water sources or further protecting existing water supply resources. The top societal action is to create a townwide Language Access Plan to ensure that everyone has access to emergency communication. Other recommended actions agreed upon by the majority include increasing education and prevention

strategies of **insect-borne disease**, as well as creating an **I-495 outreach coalition** with other communities along the highway to address runoff pollution concerns with the DOT.



MVP workshop participants voted for their top action items; this helped prioritize items in the final report.

At the end of the workshop, Peter Peloquin thanked attendees for giving their time and attention, and announced several of the actions with the most votes. The following top





recommendations were compiled based on those actions reported out by each table and those actions that participants voted for. Actions are organized by priority and project type.

### PUBLIC LISTENING SESSION COMMENTS

During the August 18, 2020 public listening session, the below comments were received:

- Lake Chauncy was described as an important resource for potable water, natural habitats and recreation. Lake Chauncy must be taken care of and protected.
- Sandra Pond is susceptible to runoff pollution from the Interstate and should be monitored and protected.
- Localized flooding is reoccurring on State owned properties and needs to be addressed.





### Appendix A

Agendas and Sign-in Sheets Workshop Meeting Materials Table Matrix, Maps and Notes Workshop Presentation Listening Session Presentation



#### Westborough Municipal Vulnerability Preparedness (MVP) Pre-Kickoff Meeting

## Date/Time:October 21, 2019 9 AMLocation:Town Hall 34 West Main Street, Westborough, MA 01581

#### <u>AGENDA</u>

- Introductions
- MVP Program Background
- Roles & Responsibilities
  - o 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
  - o Town
    - Assemble Core Team (participates in prep meetings, workshop and listening session)
    - Identify stakeholder to invite to workshop and lead invitation/RSVP process
    - Lead outreach for public listening session
    - Provide feedback on summary of findings report
    - Grant reporting and documentation of in-kind match
- 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)
- Nuts and bolts
  - Workshop location options
  - o Estimated dates

Other/next steps/next meeting:



Meeting Name	: MVP Pre-Kickoff Date: October 21, 2019	Community: Westborough Meeting Tim	Location: Town Hall ne: 9AM
Participant Name	Organization	Title	E-Mail
Hillary King	EEA	MVP Central R	-C hillary. King @mass.gov
CHEIS PAYANT	DPW	Diz	CDAYANT () TOWIN . WESTBOROUGH - MA-US
Derecsaari	DPW	ASIT. D. R	DSagnierown. westborough, mains
Kim Foster	Town Mgr's offe	Asst Town Mgr	KEster@twon.wistpormen.us
Jim Bathing	Soun Planser	- Town Plenner	Irabbins Abun westboroughing
Kristi Williams	Town	Town Manager	Kwilliams @ town. westborough.
PETE PELOQUEN	CMRRL	ASSOCILATE PLANNER	mary
PATRICK R-ZGEL	WFD	Fize chief	ppurcelle Town, Westburgh, Ma. US



#### Westborough Municipal Vulnerability Preparedness (MVP) Meeting

Date/Time:November 25, 2019 2:00 PMLocation:Westborough Town Hall, 34 West Main Street, Westborough, MA 01581

#### <u>AGENDA</u>

- Introductions
- MVP Program Background
- Core Team Timeline
  - Core Team Meetings 1 (Today) and 2
  - o Pre-Workshop call
  - o Workshop- Week of January 16th
  - o Listening Session- February 27, 2020
- Workshop Agenda/Structure
- Workshop roles & responsibilities for CMRPC & Town
  - o Table facilitators (Town w/ CMRPC support)
  - Table reporters (Town)
  - o Scribes (Town)
- Climate Concerns and Priorities
  - Identify Four (4) focus hazards
- Nuts and bolts
  - Outreach plan(s)
    - Invitations
    - Stakeholders
    - Survey
  - Logistics and IT situation
  - o Food
- Presentations and maps to be developed
  - o MVP Program; Climate Change Data; Profile of Local Hazards
  - Westborough Base Map; potential reference maps
    - Zoning, Dams, Evacuation Routes and Shelters, Land Use, Water/Sewer Systems, other
- Match Documentation
- Other/next meeting



Meeting Name: MVP	Community: Westl Date: November 25, 2019	borough Locati Meeting Ti	on: Town Managers office, Town Hall me: 2:00 PM
Participant Name	Organization	Title	E-Mail
CHRIS PAYANT	WESTBORDUG H	DPW	
LISA AUAIN	11	11	
Dereis sagri	11 11	11/1	
Sheri Widdiss	1. 1.	Conservation	
Kerrie Salwa	CMKPC	Planner	KSalwar cmpc. org
PETER PELOQUEN	CMRPL		. )
Kimberly Faster	Wistburnch	Asst Town Mar	Ktoslev@town.westowngh.ma.u
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#### Westborough Municipal Vulnerability Preparedness (MVP) Meeting

Date/Time:December 18, 2019 9:30 AMLocation:Westborough Town Hall, 34 West Main Street, Westborough, MA 01581

#### <u>AGENDA</u>

- Introductions
  - MVP Program Background
- Core Team Timeline
  - Core Team Meeting 3 (Today)
    - Pre-Workshop call
    - Workshop- Possibly move to February Date, snow date; Week of January 16<sup>th</sup>
    - o Listening Session- Possibly move to March or April; February 27, 2020
- Workshop Agenda/Structure
- Workshop roles & responsibilities for CMRPC & Town

   Scribes (Town)- Boy Scouts/Schools
- Climate Concerns and Priorities
  - o Identify Four (4) focus hazards
- Nuts and bolts
  - Outreach plan(s)
    - Invitations
      - Stakeholders
  - o Logistics and IT situation- Fish+Wildlife/Townhall
  - o Food-*Town*
- Presentations and maps to be developed
  - o MVP Program; Climate Change Data; Profile of Local Hazards
  - Westborough Base Map; potential reference maps
    - Zoning, Dams, Evacuation Routes and Shelters, Land Use, Water/Sewer Systems, other
- Match Documentation
- Other/next meeting



Meeting Name: N	IVP Core Team Meeting Comm Date: Ndecember 18, 2019	unity: Westborough Meeting Tir	Location: Town Hall me: 9:30AM
Participant Name	Organization	Title	E-Mail
Sheri Widdiss	Conservation	ast Con affe	er Swiddisso Tun Westboard
PETE PELOQUEN	CMRPC		να.τ
JEFFREY LOUVINE	w80	chiefoc Police	e JLOUGIED Town. westaar-yn. Md. us
Kim Foster	Town Manager's offe	Asst Jown Ma	Kosteratown Westburneh.wa
Kervie Salva	CMRPC	Econ Der plan	ner Ksalwale cmpc.org
CHRUS PAYANT	Dew		
Derex Suari	DPW		
LISA AULAN	DPW		
Jim Rabbins	Alanning Cart.	TownPlanner	sabeingto Town westerouch m
	i uning pros	in the second	

# Community Resiliency Building Workshop

#### Town of Westborough

Municipal Vulnerability Preparedness

Thursday, February 6, 2020

8:30am – 4:30pm; Registration at 8:00 am

- Forbes Building, Great Hall 2<sup>nd</sup> Floor
- 45 West Main Street, Westborough, MA

#### Workshop Objective

- 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







# Workshop Agenda

8:00am – 8:30am Registration, Networking & Coffee 8:30am – 10pm:

- Welcome and Overview
- CRB Overview Presentation
  - Peter Peloquin, CMRPC
- Climate Change Projections and Impacts
  - o Mimi Kaplan, CMRPC
- Profile of Natural Hazards
  - o Ian McElwee, CMRPC
- 10am 12pm:
- Breakout Groups Identify Hazards, Local Features, Strengths & Vulnerabilities

#### 12pm -1pm Lunch

1pm – 4:30pm:

- Breakout Groups Identify & Prioritize Actions
- Table Reports and Priority vote
- Closing Remarks and Wrap up

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

Westborough MVP CRB Workshop 2/6/20

First Name	Last Name	Affiliation	
Lisa	Allain	DPW - Engineering	Kallach
Maureen	Amyot	Library	Maurecomercit
Steve	Baccari	Board of Health	The band
Amber	Bock	School Superintendent	
Don	Burn	Westborough Community Land Trust	O. OB dem
Alma	Demanche	Senior Center	aema he manche
Peter	Dunbeck	Sustainable Westborough	Path 3 Durley
Leigh	Emery	Board of Selectmen	Raman /
Alison	Field-Juma	Organization for the Assabet River	
Kim	Foster	Town of Westborough	Mannus In
Kathy	Joubert	Town of Northborough	
Hillary	King	EOEEA- MVP Regionl Cordinator	
Andrew	Koenigsberg	Conservation Commission	BVIR
Kristen	Las	Town of Shrewsbury	
Sean	Lauziere	Eversource	
Jesse	Leddick	Division of Fisheries and Wildlife	
Fred	Lonardo	Building Department	1 1
Jeff	Lourie	Westborough Police Department	40 -
Robert	Moran, Jr.	National Grid	(Kat mon)
Chris	Payant	Department of Public Works	
Cara	Presley	Youth & Family Services	CP
Pat	Purcell	Westborough Fire Department	Apel
Nancy	Putnam	DCR/ACEC	
Heidi	Ricci	Mass Audubon	
Jim	Robbins	Planning Department	
Derek	Saari	Department of Public Works	Beri
Mark	Silverberg	Planning Board Chair	
Dan	Stimson	Sudbury Valley Trustees	n1 11
Mark	Stockman	IT Department	1 mills
Heena	Suratwala	Westborough Connects	H.A. Sursky als
Marc	Verreault	Carruth Capital	
Sheri	Widdiss	Conservation Department	
Kristi	Williams	Town of Westborough	hut we

Westborough MVP Workshop 2/6/20

Kernie Salwa CMRPC WW BORD CONCOM ANDREW KOGWIGSBERG Faye Bhault Brian Antonioli Seff Lourie CMRPC DPW Police Dept-PETE PELOQUEN CMRPC tan McElwee CMRPC Westborough Connects Herro Surativala Alison Field - Juna OARS Kinda Birch Leigh ameny Bas DANI MARINI CMRPC SARAH ADAMS CMRPC

#### WESTBOROUGH BOARD OF SELECTMEN MEETING AGENDA Tuesday, August 18, 2020 REMOTELY 5:00PM



#### **OPENINGS ON TOWN BOARDS & COMMITTEES**

#### **Town Manager Appointed:**

Cable TV Advisory Committee- 2 members (Ad Hoc) Constable- 1 position (1 year term) Diversity & Inclusion Committee- 3 members (indefinite term) Insect & Pest Control Officer- 1 position (1 year term) Measurer of Wood-1 position (1 year term) Municipal Building Committee- 2 members (3 year term) **Board of Selectmen Appointed:** Community Preservation Act Exploratory Committee - 3 positions (Ad Hoc) Council on Aging- 1 member (3 year term) Country Club Operating Committee- 1 non-voting member (3 year terms) Cultural Council- 12 members (3 year term) Historical Commission-1 non-voting member (3 year term) Housing Partnership Committee- 1 member (3 year term) Open Space Preservation Committee- 1 member (3 year term) Recreation Commission- 1 non-voting member (3 year term) Senior/Disabled Taxation Aide Committee- 2 members (indefinite term) Trustees of Soldiers Memorial-1 voting and 1 non-voting member (3 year term)

Veterans' Advisory Board-1 member (1 year term)

Youth Commission-1 adult member (3 year term)

#### **Moderator Appointed:**

Walkup-Robinson Fund Committee- 1 member (3 year term)

1.	5:00PM	Municipal Vulnerability Preparedness Planning Grant Public Listening Session / Peter Peloquin, Central Massachusetts Regional Planning Commission
2.	6:00PM	Approval of Meeting Minutes: June 30, 2020; July 7, 2020; July 14, 2020
3.	6:05PM	Discussion/Vote: Applications for Alteration of Premises for Outdoor Dining/Building Commissioner
4.	6:10PM	Request to Appoint Julie Squires to Public Safety Committee
5.	6:15PM	Presentation: Upcoming Election Processes & Procedures/Town Clerk

6.	6:30PM	Discussion/Vote: Signing Election Warrant for State Primary/Town Clerk
7.	6:35PM	Discussion/Vote: Naming of Pickleball Courts/Recreation Director
8.	6:45PM	Presentation: Subdivision Preliminary Site Plan Review for 228 Ruggles Street, 3 lot subdivision
9.	7:00PM	Presentation: Revised Capital Plan Policy
10.	7:20PM	Discussion/Vote: Right of First Refusal for 112 Deacon Shattuck Way/ Town Manager
11.	7:25PM	Discussion/Vote: Execute Amendment to Purchase and Sale Agreement for Property Located at 31-33 Eli Whitney Street
12.	7:35PM	Discussion/Vote: Approve Proposed Legislation for Acquisition of Off Oak Street Parcel
13.	7:45PM	Discussion/Vote: Execute Purchase and Sale Agreement for 30 Belknap Street
14.	7:50PM	Town Manager Report
15.	8:00PM	Issues & Correspondence of the Selectmen

Pursuant to Governor Baker's March 12, 2020 Order Suspending Certain Provisions of the Open Meeting Law, G.L. c. 30A, §18, and the Governor's March 15, 2020 Order imposing strict limitation on the number of people that may gather in one place, this meeting of the Westborough Board of Selectmen will be conducted via remote participation to the greatest extent possible. Specific information and the general guidelines for remote participation by members of the public and/or parties with a right and/or requirement to attend this meeting can be found on the Town of Westborough's website at town.westborough.ma.us. For this meeting, members of the public who wish to watch the meeting may do so in the following manner: WestboroughTV. No in-person attendance of members of the public will be permitted, but every effort will be made to ensure that the public can adequately access the proceedings in real time, via technological means. In the event that we are unable to do so, despite best efforts, we will post on the Town of Westborough's website an audio or video recording, transcript, or other comprehensive record of proceedings as soon as possible after the meeting.



### **Municipal Vulnerability Preparedness (MVP)**

**Program Information** 



In September 2016, Governor Charlie Baker signed Executive Order 569, instructing state government to provide assistance to cities and towns in Massachusetts to complete climate change vulnerability assessments and resiliency planning.

The Municipal Vulnerability Preparedness grant program (MVP) provides support for cities and towns to begin the process of planning for resiliency. The MVP program provides support for communities to address the challenges of climate change, and to prioritize climate adaptation practices actions at the local level in order to create a safer and more resilient future.

The state awards communities with funding to complete vulnerability assessments and develop action-oriented resiliency plans. MVP-certified providers across the state have been trained to provide technical assistance in completing the assessments and resiliency plan using the Community Resilience Building Framework. Municipalities work with a MVP-certified provider through a community-led process to identify key climate-related hazards, vulnerabilities and strengths, develop adaptation actions, and prioritize next steps.

The MVP Program is led by a Project Coordinator from the community with a Core Team of town staff and volunteers representing town planning departments, emergency managers, conservation commissioners, economic councils, the business community, and other key stakeholders who care about the future health and resilience of the community.

The MVP program helps communities to:

- Define extreme weather and natural and climate related hazards
- Identify existing and future vulnerabilities and strengths
- Develop and prioritize actions for the community
- Identify opportunities to build resiliency and reduce risk

Results of the workshops and planning efforts will be incorporated into existing local plans, grant applications, budgets, and policies in order to ensure that resilience is a community priority. One area of focus will be using the findings to inform Master Plans, Hazard Mitigation Plans, Open Space Plans, and other comprehensive planning processes.

Upon successful completion of the program, communities will be designated as a "*Municipal Vulnerability Preparedness (MVP) Program Community*" and are eligible for MVP Action Grant funding and other opportunities.

All MVP-certified communities will acquire priority status for follow-up state grant funding.

#### Flip page to learn more about MVP grant opportunities $\rightarrow$





### **Municipal Vulnerability Preparedness (MVP)**

**Program Information** 



The MVP Program offers two grant programs for municipalities or groups of municipalities to either
 1) conduct community resilience-building workshops and develop resiliency plans, <u>OR</u>
 2) for communities that have already completed the MVP process, to implement priority projects.

#### **MVP PLANNING GRANTS**

**To participate in the MVP program, communities first apply for Planning Grants,** which are used to complete a community-based workshop and prioritize next steps to address climate change impacts. Applications may be for single communities or may be regional, with a single community serving as the fiscal agent. Municipalities with no current local hazard mitigation plan (HMP), or those with plans expiring in 2019 or 2020 are eligible for additional funding to complete or update a full draft of the HMP for MEMA review. Please note that an in-kind match is required for the MVP Planning Grant. All projects are required to provide quarterly reporting as well as a Final Report. All proposals must provide the following:

- A signed letter of support from the chair of the board of selectmen, mayor, a town administrator, or similar city or town official
- A short statement of the community's commitment to taking on this grant and planning for the impacts of climate change in the city or town
- The name of a qualified employee of the municipality, committee member or volunteer who can serve as the local project manager and point of contact for the grant
- A summary of community support and any project partners and letters of support from all relevant local boards, departments, commissions, businesses, organizations and other partners
- A description of any ongoing planning efforts such as local hazard mitigation plans, open space plans, master plans, etc.
- A description of the community's need to address climate change, expected impacts, and any ongoing climate-change related projects within the community or region
- If the community wishes to expand the scope of the planning grant provide a description of the additional work you intend to complete.

#### **MVP ACTION GRANTS**

Already a MVP Community? Apply for an Action Grant to implement priority projects identified at your community workshop and in your resiliency plan. *MVP* Action Grants are available only to designated "*MVP* Communities" to implement key priorities and projects identified through the MVP planning process. The MVP Action Grants allow municipalities to implement crucial measures to prepare for the effects of climate change while strengthening community engagement and collaboration among town departments.

Applicants may request up to \$2,000,000 in funding and awards are expected to range from \$25,000–\$2,000,000. Regional proposals may request up to \$5,000,000. Note that exceptions may be made at EEA's discretion. These projects include follow-up vulnerability assessments, design studies, local bylaws and ordinances, redesigns and retrofits, natural infrastructure and storm protection, and education and outreach. Projects should be proactive, and applicants should clearly demonstrate how the projects have been redesigned, re-evaluated, or reconsidered to better respond to changing climate conditions and to incorporate new climate change data. Projects that propose nature-based solutions or strategies that rely on green infrastructure or conservation and enhancement of natural systems to improve community resilience will receive higher scores.

Please note that a 25% in-kind/cash match is required for the MVP Action Grant.



# Westborough Hazard Mitigation Plan



Nichols Dam intake and spillway, Westborough, Massachusetts (CMRPC Photo)

## Adopted by the Board of Selectmen February 14, 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 Westborough, Massachusetts

#### Drought

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

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

- Westborough'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.

The local planning 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 nonessential. These are not required in an emergency response event, but are considered essential for everyday town operations
- 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 Emergency Response Facilities as its highest priority for protection from natural and man-made hazards.

#### 1. Police Department

Police Station 45 West Main Street

The station has a generator. No known previous damage from natural hazards.

#### 2. Fire Department/EMS & Emergency Operations Center (EOC)

Fire Station

42 Milk Street

The fire station/EOC (opened in 2014) has a generator. No known previous damage from natural hazards.

#### 3. Emergency Communications Facilities

Fire Station/EOC Fay Mountain repeater site Newton Hill repeater site MEMA repeater site

42 Milk Street Isaac Miller Road Friberg Parkway Oak Street All repeater sites have generators. The repeaters were recently switched from copper wire to fiber optic, increasing both capability and resilience. No known previous damage from natural hazards.

#### 4. Public Works Department (Highway)

DPW Yard and Office

131 Oak Street

The DPW facility is equipped with a generator and has not been impacted substantially by natural hazards.

#### 5. Primary Evacuation Routes

Interstate 90	
Interstate 495	
Route 9	aka Boston-Worcester Turnpike, Turnpike Road
Route 135	aka Milk Street, South Street, Hopkinton Road
Route 30	aka Nourse Street, West Main St, East Main St
Otis Street	
Flanders Road	
Connector Road	aka New Flanders Road

Routes 30 and 135, Flanders Road, Otis Street and Connector Road are partially within FEMA flood zones.

#### 6. Primary Shelter

Westborough High School 90 West Main Street

See Schools section below for more information on the shelter site.

#### **Category 2 – Non Emergency Response Facilities**

The Town has identified these facilities as non-emergency facilities; however, they are considered essential for everyday Town operations.

#### 1. Water Supply

Andrews 1 & 1 A Wells Andrews 2 Well Bowman St. Booster Station Chauncy 1 Well Gate at end of Andrews Street Gate at end of Andrews Street 44 Bowman Street 21 Chauncy Street

Chauncy 2 Well	21 Chauncy Street	
Fay Mountain Water Tank	Off Adams Street (500,000 gal.)	
Fisher Street Purification Facility	111 Fisher Street & 59 Smith Valve Parkway	
Hopkinton Road Well	15 Hopkinton Road	
Indian Meadows Well	275 Turnpike Road	
Morse Street Well	Upton Road	
Oak Street Water Purification Plant	129 Oak Street	
Otis Street Well	57 Smith Valve Parkway	
Newton Hill/Rt 9 Water Tank	100 Friberg Pkwy. (Research Dr.) (3,300,000 gal.)	
Ruggles St. Water Tank	143 Ruggles Street (2,000,000 gal.)	
Westboro Reservoir/Pump House	71 Upton Road (aka Sandra Pond)	
W. Main Pressure-Sustaining Vault	West Main Street	
Wilkinson Water Pump Station	Gate at end of Andrews Street	

Most facilities listed above are served by backup generators, though the DPW has identified a need to plan for long-term replacement of generators and switch gear. Those that lack generators include: Fay Mountain Water Tank, Otis Street Well, Newton Hill/Rt 9 Water Tank, Ruggles Street Water Tank, Westboro Reservoir/Pump House, W. Main Pressure-Sustaining Vault, and Wilkinson Water Pump Station. The local planning team reports that the water system has not seen serious impacts from natural hazards in recent years; on occasion, the Morse Street Well is isolated by flood waters, but the well station itself is not impacted. Several well houses with flat roofs had to be shoveled off following heavy snow in 2015 to prevent roof damage, but no notable damage occurred.

#### 2. Sewer System

Arch Street Sewer Pump Station	42 Arch Street
Baker Way Sewer Pump Station	12 Baker Way
Banyan Sewer Pump Station	119 Flanders Road
Bay State – (A) Sewer Pump Station	Union Street (private)
Bay State – (F) Sewer Pump Station	Union Street (private)
Beachmont Sewer Pump Station	34 Beachmont Street
Belknap Sewer Pump Station	32 Belknap Street
Birchwood Sewer Pump Station	33 Thomas Newton Dr.
Bowman Sewer Pump Station	72 Bowman Street
Brook Way Sewer Pump Station	1A Brook Way
CASA Sewer Pump Station	4A Harvest Way
Chauncy Sewer Pump Station	5 Chauncy Street
Cumberland Sewer Pump Station	187 Flanders Road
Denny Brook Sewer Pump Station	154 South Street

Dover Sewer Pump Station	205 Flanders Road
East Main St. Grinder/Pump Station	236 East Main Street
Fay Acres Sewer Pump Station	5A Elizabeth Drive
Fisher Street Sewer Pump Station	123 Fisher Street
Flanders Grinder/Pump Station	91-93 Flanders Road
Fox Lane Sewer Pump Station	9 Fox Lane
Glen Street Sewer Pump Station	22 Glen Street
Great Way Sewer Pump Station	279 Turnpike Road
Linda Street Sewer Pump Station	20 Jasper Street Ext.
Longmeadow Sewer Pump Station	32 Flanders Road
Maynard St. Sewer Pump Station	23A Maynard Street
Metering Sewer Pump Station	187 Flanders Road
Old Flanders Sewer Pump Station	7 Old Flanders Road
Otis Street Sewer Pump Station	15 Sassacus Road
Piccadilly Sewer Pump Station	75 Hopkinton Road
Route 9 Sewer Pump Station	330 Computer Drive
Stage Coach Sewer Pump Station	225A Turnpike Road
Wachusett Sewer Pump Station	19A Wachusett View Dr.
Walker St. Sewer Pump Station	26A Walker Street
Walkup Dr. Sewer Pump Station	26 Walkup Drive
West Main Sewer Pump Station	159 West Main Street
Willy's Sewer Pump Station	336A Turnpike Road
Westborough WWTP	238 Turnpike Road (off Meadow Road)

Most facilities listed above are served by backup generators, though the DPW has identified a need to plan for long-term replacement of generators and switch gear. Exceptions include Great Way Sewer Pump Station and Willy's Sewer Pump Station, which are equipped with auxiliary motors rather than generators. Denny Brook Sewer Pump Station and Maynard St. Sewer Pump Station experienced overflow events during heavy rains in July of 2009. The treatment plant (WWTP) flooded in 1978 and 1985 and abuts the Assabet River and its 100 year flood zone. Renovations since the 1980s have improved the facility's resilience to flooding. The plant occasionally experiences inflow of stormwater during severe weather, generally from illicit connections and home sump pumps discharged to storm drains.

#### 3. Other Town Facilities

Town Hall Forbes Municipal Building Senior Center 34 West Main Street45 West Main Street4 Rogers Road

Public Library	55 West Main Street
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The Senior Center and Town Hall have generators, and the Forbes Building is scheduled to receive a generator in 2017 or 2018. The Library lacks a generator. The Senior Center is located adjacent to the 100 year flood zone associated with Rutters Brook; the access road is more vulnerable than the center itself.

#### 4. Utilities/Other Facilities

CSX/MBTA/AMTRAK railroad	East-west through town
Westborough MBTA Station	Smith Parkway
EL Harvey transfer station	68 Hopkinton Road (private contract with Town)
National Grid substation	95 Milk Street
National Grid substation	East Main Street (east of Granger Road)
Westborough MBTA Station EL Harvey transfer station National Grid substation National Grid substation	Smith Parkway 68 Hopkinton Road (private contract with Tow 95 Milk Street East Main Street (east of Granger Road)

The railroad occupies a raised bed passing through flood-prone areas and wetlands throughout much of its route, but serious flooding that impacts rail service has not been reported in many years. The MBTA station is adjacent to but not within the flood zone. The East Main Street substation is located immediately upgradient from a wetland.

#### Category 3 – Dams

A list of dams in Westborough is provided under section 4.8.

#### **Category 4 – Facilities/Populations to Protect**

#### 1. Special Needs Population/Elderly Housing/Assisted Living

Kennedy and Rotenberg Schools	288 Lyman Street (DYS juvenile detention centers)
Whittier Rehabilitation Hospital	150 Flanders Road
NE Center for Autism	170 Flanders Road
Kindred Westborough	8 Colonial Drive
Whitney Place	5 Lyman Street
Beaumont Rehabilitation	3 Lyman Street
The Willows	1 Lyman Street
Highlands Gracious Living	129 East Main Street
The Ridings	88 Adams Street
Villages at Walker Meadow	Walker Street
Park Place	26 Park Street (under construction)
Housing Authority (elderly/disabled)	2 Rogers Road (aka Cedar Estates)
Housing Authority (elderly/disabled)	20 Mayberry Drive

Housing Authority (special needs) 83 East Main Street

#### 2. Large Residential Complex

Fountainhead Apartments Rt 9 & Otis Street

#### 3. Schools/Daycares

(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.)

Public Schools:	
Armstrong Elementary	18 Fisher Street
Fales Elementary	50 Eli Whitney Street
Hastings Elementary	111 East Main Street
Mill Pond School	6 Olde Hickory Path
Gibbons Middle School	20 Fisher Street
Westborough High School	90 West Main Street

The High School is Westborough's designated primary emergency shelter. Flooding (usually fairly minor) occurs at its access road off West Main Street where an unnamed brook passes under the road. Hastings Elementary abuts a flood zone, though impacts are generally confined to its ballfields. All schools have backup power generators. All schools have flat roofs which may be susceptible to snow load damage, but no damage has been sustained to date.

Other schools/daycares:	
eBridge Montessori School	57 East Main Street
Buress home daycare	22 Westminster Way
Cibelli home daycare	56 Ruggles Street
Ganjikunta home daycare	25 Oak Street
Ghosh home daycare	184 West Main Street
Johnson home daycare	9 Warren Street
Knowledge Beginnings	95 East Main Street
Lu home daycare	19 Crestview Drive
Ms Tanya's Woodland School	7 Washington Street
Next Generation Children's Center	4600 Computer Drive
The Children's Workshop	6 Bellows Road
The Methodist Preschool	120 West Main Street
YMCA Center for Child Dev.	4 Valente Drive
YWCA of Central Mass.	15 Grove Street

#### 4. Historic Buildings/Sites

According to the Massachusetts Cultural Resources Information System (MACRIS) database accessed in November 2016, there are 16 Areas, 678 Buildings, 3 Burial Grounds, 4 Objects, and 40 Structures listed for Westborough. The local planning team did not 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 Westborough:

Largest Employers in V	Vestborough - No	vember 2016
Company	Location	No. of Employees
BJ's Wholesale Club, Inc.	Research Dr	1,000-4,999
BNY Mellon Wealth Management	Computer Dr	1,000-4,999
Integrated Genetics	Computer Dr	1,000-4,999
CLEARESULT	Washington St	500-999
E Clinical Works	Technology Dr	500-999
Beaumont Rehabilitation	Lyman St	250-499
Whittier Rehabilitation Hosp	Flanders Rd	250-499
YMCA	Valente Dr	250-499
AAFCPAS	E Main St	100-249
ARRIS Group Inc	Technology Dr	100-249

#### Table 27

Source: http://lmi2.detma.org/lmi/Largest\_employer\_index.asp

#### 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 Westborough, eight block groups in the northern half of town have been identified as EJ areas due to language isolation, elderly population, minority population, low income and/or lack of vehicle access. Language isolation and minority status are mostly attributable to this area's Asian population; the local team notes that this part of town has a large South Asian demographic. Town staff should work to identify the major non-English language(s) in this area and should provide translated content for any education programs that focus on hazards that are applicable to this area. Household income in this area ranges from slightly above to slightly below the town's median, with the exception of one block group at the northern edge of the town center - centered on Water Street and East Main Street - where income is \$43,603 (2014 ACS). Because median income in this area is well below regional and local norms and suggests that some residents may lack the economic wherewithal to fully prepare for or recover from a disaster, it is recommended that outreach and education efforts for applicable hazards include extra emphasis to reach residents of this part of the town center, and that mitigation efforts in this area be prioritized when appropriate. Zero-vehicle and elderly households in this area are concentrated in two block group that respectively include the densest part of the town center and a number of 55+, assisted living and nursing home facilities. Evacuation planning updates (now underway) should take into account the lack of vehicle access in parts of the town center, and education/outreach programs should include a senior-oriented component for hazards that may impact the senior-related facilities.

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 Westborough 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 plan to research the utility of public awareness and education programs as a result of this planning process.

Westborough has most of the no-cost or low-cost hazard mitigation capabilities in place. Land use zoning, subdivision regulations and an array of specific policies and regulations that include hazard mitigation best practices, such as limitations on development in floodplains, stormwater management, tree maintenance, etc.... Westborough also has appropriate staff dedicated to hazard mitigation-related work for a community of its size, including a Town Manager, an Emergency Management Director, a professionally run Department of Public Works, a Town Planner, a Building/Zoning Official, a Town Engineer, and a Tree Warden. The Town has several relevant plans in place, including a Comprehensive Emergency Management Plan, a Master Plan, and a Debris Management Plan. These capabilities are 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 positions. The Town participates in Fire District 14, a collaborative with several nearby towns. Westborough is also an active member community of the Central Massachusetts Regional Planning Commission 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 Westborough. It includes a brief description of each activity as well as a subjective evaluation of its effectiveness and of any need for modifications.

### Town of Westborough Mitigation Strategies

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

Action	Hazards	Who	Potential Funding	Priority	Impact	Estimated Cost	Timeline
Plan/Descriptions	Addressed	agencies	Sources	Political and economic	Mitigation impact:	High/Med/Low	
		involved		viability: High/Med/Low	High/Med/Low		
	1	1	A. Structure	e & Infrastructure Strategies		-	-
Tree trimming needed	SS, ST, HU	National	Utility (National	High	High	More information	Ongoing
to protect utility wires		Grid, private	Grid), Local,			required	
from storm damage		property	Private (property				
		owners, Tree	owners)				
		Warden					
Replace emergency	All	DPW	Local, Federal	High	High	High	5+ Years
generators and switch			Grants				
gear at water and			(HMGP/PDM),				
sewer facilities; long-			State Grants				
term capital plan			(Various)				
needed as existing							
equipment ages							
Drainage improvements	FL, SS, ST, HU	DPW,	Local, Federal	Medium	Medium	High	1-2 Years
in the West Main		Conservation	Grants				
Street/Kay			(HMGP/PDM),				
Street/Adams Street			State Grants				
area; partly within 500			(Various)				
year flood zone from							
unnamed brook;							
upstream detention							
area could alleviate							
flooding							
Continue to monitor	DF	DPW,	Local, State	Medium	Medium	More information	Ongoing
conditions at the Town-		Conservation	Grants (Dam &			required	
owned Upper and			Seawall)				
Lower Sandra Pond							
dams (Significant							
Hazard); maintain							
and/or improve as							
needed							

Action Plan/Descriptions	Hazards Addressed	Who agencies involved	Potential Funding Sources	<b>Priority</b> Political and economic viability: High/Med/Low	<b>Impact</b> Mitigation impact: High/Med/Low	Estimated Cost High/Med/Low	Timeline
Engineering study to evaluate potential new well sites to enhance drought resilience	DR, WF	DPW	Local, State Grants (DEP)	Medium	Low	More information required	3-5 Years
Engineering study to identify mitigation options for flooding on Flanders Road near #165; partly within 100 year flood zone and wetlands; Flanders Road is a primary evacuation route	FL, SS, ST, HU	DPW, Conservation	Local, Federal Grants (HMGP/PDM), State Grants (Various)	Low	Medium	More information required	3-5 Years
Engineering study to identify mitigation options for flooding on Chauncy Street near Oak Street; partly within 100 year flood zone and is adjacent to Chauncy Lake	FL, SS, ST, HU	DPW, Conservation	Local, Federal Grants (HMGP/PDM), State Grants (Various)	Low	Low	High	3-5 Years
Engineering study to identify mitigation options for East Main Street at MBTA viaduct; near 100 year flood zone and area is barely above Cedar Swamp/Rutters Brook wetland	FL, SS, ST, HU	DPW	Local, Federal Grants (HMGP/PDM), State Grants (Various)	Low	Low	More information required	3-5 Years
Engineering study to identify mitigation options for Milk Street (Route 135) at Route 9; near 100 year flood zone, wetlands, and unnamed brook; these are primary evacuation	FL, SS, ST, HU	MassDOT, DPW	State	Low	Medium	More information required	3-5 Years

Action Plan/Descriptions	Hazards Addressed	Who agencies involved	Potential Funding Sources	<b>Priority</b> Political and economic viability: High/Med/Low	<b>Impact</b> Mitigation impact: High/Med/Low	Estimated Cost High/Med/Low	Timeline
routes							
Drainage improvements in the Nourse Street (Route 30)/Jasper Street/Glen Street area; partly within 500 year flood zone from two unnamed brooks; upstream detention area could alleviate flooding; Route 30 is an evacuation route	FL, SS, ST, HU	DPW, Conservation	Local, Federal Grants (HMGP/PDM), State Grants (Various)	Low	Medium	High	3-5 Years
Drainage improvements in the West Main Street (Route 30)/Jasper Street area; partly within 500 year flood zone from unnamed brook; Route 30 is an evacuation route	FL, SS, ST, HU	DPW, Conservation	Local, Federal Grants (HMGP/PDM), State Grants (Various)	Low	Medium	High	3-5 Years
Drainage improvements in the Harvey Lane/O'Neil Drive/Chestnut Street area and adjacent part of West Main Street (Route 30); partly within 100 year flood zone from unnamed brook; Route 30 is an evacuation route	FL, SS, ST, HU	DPW, Conservation	Local, Federal Grants (HMGP/PDM), State Grants (Various)	Low	Medium	High	3-5 Years
Drainage improvements in the Upton Road area near Sandra Pond; partly within 100 year flood zone from Sandra Pond/Westborough Reservoir	FL, SS, ST, HU	DPW, Conservation	Local, Federal Grants (HMGP/PDM), State Grants (Various)	Low	Low	More information required	3-5 Years

Action Plan/Descriptions	Hazards Addressed	Who agencies involved	Potential Funding Sources	<b>Priority</b> Political and economic viability: High/Med/Low	<b>Impact</b> Mitigation impact: High/Med/Low	Estimated Cost High/Med/Low	Timeline
Drainage improvements in the Bowman Street/Bowman Lane area; partly within 100 year flood zone from Jackstraw Brook and Sandra Pond/Westborough Reservoir	FL, SS, ST, HU	DPW, Conservation	Local, Federal Grants (HMGP/PDM), State Grants (Various)	Low	Low	More information required	3-5 Years
Drainage improvements in the Meadow Road area; adjacent to 100 year flood zone	FL, SS, ST, HU	DPW, Conservation	Local, Federal Grants (HMGP/PDM), State Grants (Various)	Low	Low	More information required	3-5 Years
Drainage improvements in the Maynard Street area at the Assabet River; partly within 100 year flood zone	FL, SS, ST, HU	DPW, Conservation	Local, Federal Grants (HMGP/PDM), State Grants (Various)	Low	Low	More information required	3-5 Years
Drainage improvements in the Warren Street/Morse Street/Upton Road area; partly within 100 year flood zone from Jackstraw Brook; some mitigation activities have been completed but are not considered sufficient to protect from major storms	FL, SS, ST, HU	DPW, Conservation	Local, Federal Grants (HMGP/PDM), State Grants (Various)	Low	Low	More information required	1-2 Years
Drainage improvements in the Rogers Road/Forest Lane area; adjacent to 100 year flood zone from wetlands; adjacent to Senior Center, Hastings	FL, SS, ST, HU	DPW, Conservation, Schools	Local, Federal Grants (HMGP/PDM), State Grants (Various)	Low	Low	More information required	5+ Years

Action Plan/Descriptions	Hazards Addressed	Who agencies involved	Potential Funding Sources	Priority Political and economic viability: High/Med/Low	<b>Impact</b> Mitigation impact: High/Med/Low	Estimated Cost High/Med/Low	Timeline
Elementary School and Cedar Estates Housing Authority complex							
		В.	Preparedness, Coor	dination & Response Action	n Strategies		
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, LEPC, Planning	Local	High	Low	Low	Ongoing
Investigate Community Rating System (CRS) benefits and requirements and decide whether to participate	FL, SS, ST, HU	DPW, LEPC, Planning	Local	Low	Low	Low	1-2 Years
Road information coordination and planning for snow removal	SS	DPW; MassDOT; Mass State Police; CMRPC	Local, Federal Grants (HMGP/PDM), State Grants (Various), Private Contracts	High	High	Low	Ongoing
Evacuation Plan updates; plan should consider needs of seniors and zero-vehicle households as per EJ section	All	LEPC, DPW, CMRPC, MassDOT	Local, Federal Grants (Homeland Security via MEMA and CRHSAC)	High	High	Low	1-2 Years (update every 5 Years)
Continue to coordinate with other water systems to ensure backup water supply from MWRA through neighboring towns; plan for treatment	DR, WF	DPW, MRWA, Southboroug h, Northboroug h	Local	Medium	Low	Low	Ongoing

Action Plan/Descriptions	Hazards Addressed	Who agencies involved	Potential Funding Sources	<b>Priority</b> Political and economic viability: High/Med/Low	<b>Impact</b> Mitigation impact: High/Med/Low	Estimated Cost High/Med/Low	Timeline
incompatibilities if backup system is needed							
			C. Educatio	on & Awareness Strategies			
Provide information to residents and businesses on water conservation (to conserve water for drinking and firefighting), and snow/roof safety (past snows have seen home roof collapses)	DR, WF, SS,	DPW, LEPC	Local	Medium	Medium	Low	1-2 Years, then Ongoing
Update the Emergency Preparedness Planning Guide periodically; emphasize home-based mitigation activities such as tree trimming, extreme temperature safety, defensible space, etc; core content should be translated to predominant foreign language(s) as per EJ section	All	LEPC	Local	High	Medium	Low	1-2 Years, then Ongoing
Continue education program mandated under NPDES MS4 permit that emphasizes storm drain safety/clearance and related drainage and stormwater topics	FL, SS, ST, HU	DPW, Conservation	Local	Medium	Medium	Low	Ongoing
			D. Local Pl	an & Regulation Strategies			
Review and update local plans and	All	All Town Departments	Local	Medium	High	Low	Ongoing

Action Plan/Descriptions	Hazards Addressed	Who agencies involved	Potential Funding Sources	<b>Priority</b> Political and economic viability: High/Med/Low	<b>Impact</b> Mitigation impact: High/Med/Low	Estimated Cost High/Med/Low	Timeline
development review processes (planning, zoning, stormwater management, conservation, etc.) to ensure new construction will not be affected by hazards							
Monitor implementation of Hazard Mitigation Plan	All	All Town Departments	Local	Medium	High	Low	Ongoing
Update Open Space and Recreation Plan (soon to be expired) to include mitigation goals	All	Planning, Parks	Local, CMRPC	Medium	Low	Medium/High	1-2 Years
Update Debris Management Plan (2008)	HU, EQ, SS, ST	DPW	Local	Medium	Medium	Low	1-2 Years

'Hazards Addressed' abbreviations:

DF	Dam Failure
EQ	Earthquake
HU	Hurricane
SS	Severe Snowstorm/Ice storm/Nor'easter
WF	Wildfire/Brushfire

Drought Flooding DR

FL OT Other

ST Severe Thunderstorm/Wind/Tornado

XT Extreme Temperatures

#### Key to Locally Identified Hazards and Critical Infrastructure and Facilities in Appendix A Maps

Facility/Infrastructure/Hazard	Туре	Map ID
Flooding - 165 Flanders Rd	Н	FL-1
Flooding - Oak and Chauncy	Н	FL-2
Flooding - ONeil Drive	Н	FL-3
Flooding - Harvey Lane	Н	FL-4
Flooding - Chestnut S	Н	FL-5
Flooding - West Main St	Н	FL-6
Flooding - Warren St	Н	FL-7
Flooding - Upton Rd @ Westborough Reservoir	Н	FL-8
Flooding - Upton Rd @ Morse St	Н	FL-9
Flooding - Bowman Lane	Н	FL-10
Flooding - Maynard St	Н	FL-11
Flooding - East Main St	Н	FL-12
Flooding - Milk St	Н	FL-13
Flooding - West Main St	Н	FL-14
Flooding - Kay Street	Н	FL-15
Flooding - W Main St @ Jasper St	Н	FL-16
Flooding - Rte 30, Glen St, Jasper St	Н	FL-17
Flooding - Meadow Rd	Н	FL-18
Flooding - Rogers Rd & Forrest Lane	Н	FL-19
Denny Brook SPS Overflow	Н	FL-20
WWTP Flooding	Н	FL-21
Faye Mountain Repeater Site	CI	1
Friberg Parkway Repeater Site	CI	2
MEMA Repeater Site, Oak St	CI	3
DPW Yard and Office	CI	4
Andrews 1 & 1 A Wells	CI	5
Andrews II Water Pump Station	CI	6
Bowman St Booster Station	CI	7
Chauncy 1 Well	CI	8
Chauncy 2 Water Pump Station	CI	9
Fay Mountain Water Tank (0.5 MG)	CI	10
Fisher Street Purification Facility	CI	11
Hopkinton Road Water Pump Station	CI	12
Indian Meadows Water Pump Station	CI	13
Morse Street Water Pump Station	CI	14
Oak Street Water Treatment Plant	CI	15
Otis Street Well	CI	16
Otis Street Water Pump Station	CI	17
Route 9 (Newton Hill) Water Tank	CI	18
Ruggles St. Water Tank (2.0 MG)	CI	19
Westborough Reservoir & Impoundment	CI	20
Wilkinson Water Pump Station	CI	21
Arch Street Sewer Pump Station	CI	22

Baker Way Sewer Pump Station	CI	23
Banyan Sewer Pump Station	СІ	24
Bay State – (A) Sewer Pump Station (Private)	CI	25
Bay State – (F) Sewer Pump Station (Private)	CI	26
Beachmont Sewer Pump Station	CI	27
Belknap Sewer Pump Station	CI	28
Birchwood Sewer Pump Station	CI	29
Bowman Sewer Pump Station	CI	30
Brook Way Sewer Pump Station	CI	31
CASA Sewer Pump Station	CI	32
Chauncy Sewer Pump Station	CI	33
Cumberland Sewer Pump Station	CI	34
Denny Brook Sewer Pump Station	CI	35
Dover Sewer Pump Station	СІ	36
East Main St. Grinder Sewer Pump Station	CI	37
Fay Acres Sewer Pump Station	CI	38
Fisher St Sewer Pump Station	CI	39
Flanders Grinder Sewer Pump Station	CI	40
Fox Lane Sewer Pump Station	CI	41
Glen Street Sewer Pump Station	СІ	42
Great Way Sewer Pump Station	CI	43
Linda Street Sewer Pump Station	CI	44
Longmeadow Sewer Pump Station	CI	45
Maynard St. Sewer Pump Station (has experienced	CI	46
overflow)		
Metering Sewer Pump Station	СІ	47
Old Flanders Rd. Sewer Pump Station	CI	48
Otis Street Sewer Pump Station	СІ	49
Piccadilly Sewer Pump Station	CI	50
Route 9 Sewer Pump Station	CI	51
Stage Coach Sewer Pump Station	CI	52
Wachusett Sewer Pump Station	CI	53
Walker St. Sewer Pump Station	CI	54
Walkup Dr. Sewer Pump Station	CI	55
West Main Street Sewer Pump Station	CI	56
Willy's Sewer Pump Station (equipped w/ aux. motor)	CI	57
Westborough Waste Water Treatment Plant	CI	58
Senior Center	CI	59
Public Library	CI	60
CSX/MBTA/AMTRAK railroad	CI	61
EL Harvey transfer station	CI	62
National Grid substation	CI	63
National Grid substation	СІ	64
Kennedy and Rotenberg Schools (DYS juvenile detention	СІ	65
center		
Whittier Rehabilitation Hospital	CI	66

NE Center for Autism	CI	67
Kindred Westborough	CI	68
Highlands Gracious Living	CI	69
The Ridings	CI	70
Villages at Walker Meadow	CI	71
Park Place	CI	72
Housing Authority (elderly/disabled)	CI	73
Housing Authority (elderly/disabled)	CI	74
Housing Authority (special needs)	CI	75
eBridge Montessori School	CI	76
Buress home daycare	CI	77
Cibelli home daycare	CI	78
Ganjikunta home daycare	CI	79
Ghosh home daycare	CI	80
Johnson home daycare	CI	81
Knowledge Beginnings	CI	82
Lu Home Daycare	CI	83
Ms Tanya's Woodland School	CI	84
Next Generation Children's Center	CI	85
The Children's Workshop	CI	86
The Methodist Preschool	СІ	87
YMCA Center for Child Dev.	CI	88
YWCA of Central Mass.	CI	89

# Municipal Vulnerability Preparedness (MVP) Workshop: Westborough

# <u>Reference Map:</u> <u>Table Map</u>

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gh Slope (15% and above)
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0-year Flood Area
0-year Flood Area
Inerable Critical Infrastructure
n-vulnerable Critical Infrastructure
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Flooding data source: FEMA's Digital Flood Insurance Rate maps(DFIRM). Other data sources include: MassGIS, MassDOT, and CMRPC Information depicted on this map is for planning purposes only. This information is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analysis. Use caution intrepreting positional accuracy.

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





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Date: 12/3/2019 Document Path: H:\Projects\HLS\_GIS\subprojects\mvpp\_2019\mvpp\_ref\_Water\_Sewer\_11x17.mxd

# Reference Map: Water Resources Town of Westborough, Massachusetts Miles 20 .35 0.175 0 MARIBOROUGH NORTHBOROUGH MARLBOROUGH SOUTHBOROUGH 20 135 Bartlett Pond 30 20 135 NORTHBOROUGH SMITH ST NORTHBOROUGH 9 9 SOUTHBOROUGH 30 135 9 9 GILMOR FISHER ST SHREWSBUR 135 HOPKINTON 30 30 GRAFTON 135 Whitehall Reservoi UPTON



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## Reference Map: Open Space Town of Westborough, Massachusetts



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## Municipal Vulnerability Preparedness (MVP) Workshop

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## Community Resilience Building Risk Matrix



## www.CommunityResilienceBuilding.org

W	esti	<u>borough Table 1</u>	
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Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.) Priority Time

**<u>H</u>-<u>M</u>-<u>L</u> priority for action over the <u>S</u>hort or <u>L</u>ong term (and <u>U</u>ngoing) V = Vulnerability S = Strength** 

<u>v</u> – vumerability <u>s</u> – strengti	Wind Events	Winter Storms	Flooding	Temepratures	H - M - L	<u>S</u> hort <u>L</u> ong			
Features	Location	Ownership	V or S						<u>O</u> ngoing
Infrastructural									
Access/Egress			s	Clarify and inform Re: Acces	Clarify and inform Re: Access for emergencies and communicate to all				
Access - Housing		Private & Town or State	B (both)	Evaluate access, create and	communicate for improved a	access - resiliency plan		н	
Access - Forest/Woods		Private & Town or State	B (both)	Assess conditions of access r	oads, create access where n	eed is identified		L	
Acess - Vulnearable Populations (ADA)		Private & Town or State	B (both)	Identify communities where	access is limited, create acce	ess plan		н	
Communication			s	Asses/understand risks to co	ommunication infrastructure	s, ensure backup plan		н	
Communication - Cell Towers		Town/Private	B (both)					м	
Communication - Underground Copper		Utility Company	v					м	
Communication - Language Access			v	Create townwide language a	iccess plan			н	
MBTA Culverts	Cedar Swamp	State/MBTA	v	Assess, maintain; reconstruc	t as needed in conjunction w	vith MBTA		н	
Societal	•	•	•						
Vulnearable Populations				Ensure equitable knowledge	and access to services, eme	rgency plans, information	to all in Westborough	н	
Vulnearable Populations - Language Access and Communication		Town/State	v	Create townwide language a	iccess plan			н	
Vulnearable Populations - Access/Evacuation/Transport		Private & Town or State	B (both)	Identify sites (buildings, insti educate about emergency a	tutions, hotels, neighborhoo ccess at these locations	ds) where access is questi	onable (high density),	н	
Vulnearable Populations - Housing (Density/Affordability)		Private & Town or State	v	Identify sites (buildings, insti educate about emergency a	tutions, hotels, neighborhoo ccess at these locations	ds) where access is questi	ionable (high density),	н	
Housing			B (both)	Develop and implement nei	ghborhood resiliency plans			н	
Housing - Access/Evacuation		Private & Town or State	v	Evaluate access needs in res	idential areas, create and co	mmunicate resiliency plan	S	н	
Housing - Proximity to Forests/Wetlands		Private & Town or State	v	Evaluate access needs in residential areas, create and communicate resiliency plans				н	
Environmental									
Water			S	Protect existing resources				м	
Water - Drinking Water		Town/Private	B (both)	Investigate recharge options	s, review and update water p	lans		м	
Water - Weltands		Private & Town or State	B (both)	Assess health fo wetlands, ic issues	lentify opportunities to maxi	mize use of existing wetla	nds to manage future	м	
Forests			s	Create forest management	olan - partnership with public	and private		м	
Forests - Ecological Imbalances		Private & Town or State	v	Identify prominent threats a multiple departments (BOH,	nd create mitigation plan, re REC, schools, ConCom)	view and revise plans free	quently, coordinate with	М	

Forests - Access		V	Assess conditions of access roads, create access as need is identified (fire roads)	L	

# Municipal Vulnerability Preparedness (MVP) Workshop: Westborough

# Reference Map: Table Map #1

Legend
Town Boundary
Town Halls
EOC
Local Police
State Police
County Sheriff
Fire Station
Schools (Pre-K through High School)
Dams
High Hazard
Significant Hazard
Low Hazard
Males Devid
Major Road
Active Condina Dation
Mater Bedies
Stroome
Willing MossDER Wotlands
High Slope (15% and shows)
FEMA National Flood Hazard Laver (DEIRM)
100-year Flood Area
500-year Flood Area
CIH (Points)
Vulnerable Critical Infrastructure
<ul> <li>Non-vulnerable Critical Infrastructure</li> </ul>
<ul> <li>Hazard</li> </ul>
Hazard
TTT Hazard
CMRPC
Central Massachusetts Regional Flatment N
18 0.36 0.54 0.72 Miles
toutont wat
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tata source: FEMA's Digital Flood Insurance Rate maps(DFIRM) MassDOT, and CMRPC
In depicted on this map is for planning purposes only find in depicted on this map is for planning definition, regulatory
Ion, or parcel-level analysis. Use cablor a positional accuracy.

A Start



**Community Resilience Building Risk Matrix** TABLE #1 H-M-L priority for action over the Short or Long term (and Ungoing)  $\underline{\mathbf{V}} = \mathbf{Vulnerability} \ \underline{\mathbf{S}} = \mathbf{Strength}$ Features Location Infrastructural ACCESS EGRESS - Housing - Forests / Woods - ADA - Vulnerable Pops COMMUNICATION - Cell Towers - Underground Copper - Language Access MBTA Culverts Cedo Societal Vulnerable Populations - Language Access Communication - Access / Evacuiation Transport. - Housing - Dense Actordatily HOUSING - Access / Evocuation-- Provinsily to Forcels Environmental WATER -Trinking Water -Wellands FORESTS - Ecological Imbalances , Access





ocation	Ownership	V or S	
		5	Clarify and infor
	Private & Rublic State	V, S(some)	· Evaluate access · Create & communica
	State, Town, Private	V,S	· Assess conditions of · Create access when
	State, Town Private	V.S	· I dentify sites a
			- mane mocros plan
	Town	S	· Assess Understand
	Town, Private	S,V	price price up p
	Utility Comp.	$\vee$	
		V	> Greate town-wid
Swamp	State MBTA	V	· Assess, maintain; re

P

24

		Ensure equitable !
Town, State	V	Create town wide
Town. State, Private	V,5	Educate about em
Town, state, Private	V	> (same)
	S,V	Develop à implement
Private Town, State	V	Evaluate + communi
Private, Town State		- (sanc)

and the second se			
		S	"trotect existing re
	Town, Private	S.V	Review and update
	Town, State, Primate	S,V	· Assess health of • Identify opportunitie
		S	Create Forest
	Town, Slatt, Prival	1	Review & revise elect free
		V	· Assess conditions of · Creak access as need
		And and a second se	

www.CommunityResilienceBuilding. Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, heat wave, etc.) Winter Storms Flooding Temp m Re: Access for emergencies and communicate te plan for improved access - Resilience Plan access roads need is identified there communities where access is limited risks to communication infrastructures, Language Accoss Han construct as needed in conjunction with MBTA knowledge & access to services, emergency plans, informa Language Access Plan mildings, neighborhoods) where access is questionable (high density mergency access at these locations) - neighborhood resiliency plans Faccess needs in residential areas sources al options wetlands to maximize use of existing wetlands to manage fi Management, Plan - Partnership w/ Public & Prin threads a create mitogration plan frequently · Coordinate w/Muttiple Depts/BOH, Rec, Schools, 1 & access roads is identified (Fire Roads)

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5	H-M-L	Time Short Long Qngoing	Vote	
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Conservation	M		00	
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Sewers Cell Towers - Wind Storms Power Substations - Wind Storms Emerg. Services Communications Water the facility - well protected; emerg. plans in place

Societal

Schools Senior Centers Housing - Affordable / Seniors

Medical Facilities Town Offices/Town Facilities Environmental Capped Landfills / Hazardous Stres Anostructurel - limited emerg. access roads - Fire Risk oforest Areas · Railroads(v) - locations - Near Sr. Ctr. - Maintenance of trees + · JAVASIVE Species Management • Wetlands - Culverts ANAD ocietal Forest Areas - Limited Emag. Access Roads Invasive Species - Health, Recreation A Culverts - Wetlands - near commercial areas, Mosquitous, Recreation Railrook (V#5) Environmental Forest -> 002 - Erosion - Envisive Spacies -Elevated Species - Deer, Insects, Beavers Wetlands - decline in wild like - increase in Insects

TADLE 1

The set

Key Valnerabilities Strengths - Walker Meadow - Jense King Pop, Access I 5 Seniors are Engaged - Willows on Swamp (Floods) = = 5 ADA compleance - some Seniors - Orchard Hill - (Flood, Windjevacution Is Senior Gr-Services / Social Sac U Senior Ctr - Feninsub & - Senior Gtr - Swrounded by woork/writer 5 Housing -Planning for future Affordable Hsg-Form - Densely Populated Blogs Complexes wind Evacuation, overcrowding (stams - Access Roots -Town Strategic Plan -Trailer, Parks -2 Fire Police Towers -Park Central - limited Access Vegetation Walking Trails - Poison Iny (Fire, Wind) Culvers Basins - Woodlands - Limited access roads -forest managements (to high commercial -forest managements) - Mosquite management -Insects (temps) - Mosquite management Research & Panning Kei Water -Dams Repaired - Reservoir / Drinking Supply (Fire, Wind) - Already Systems In Place Miller Pipes drop to stream - Lots of Well's Intown - Culverts & Wethands-disease, floods Water Opportunities for AWRTA - Limits to transport to cooling (turs) onless evaluation limitations (turs) Transportation -Railroads - Transport Haz Mats (Flood) TADLE #1 Strengths

and. Institutions

Inerable Pops

Valnerabilities - Detention Centers, Nursicoy Homes, - where would people go? Communication Hranshin - Non-English Speakers Evaluation Hedical Care personal Pollution of Fish Fishing - Elders - Disabled Immigrants EEE West Nile School Emerging Plans? School Emerging tions -Kids

Police & Fire Emergency Plans in Place Local Emerg Plan Comm - Inter - Departmental & Community Collaboration - Town investment in equilomental \$ social justice -Diversity & Thelusion

- Underground Copper (Flood) Echnology - Cell Towers (Wind, Storms) -1 TABLE#1

Master Planning Process Not - Rublic Balas-Gunerators - Cell Phanes for Many Town Employees - Futurnot / Cland base for -Muttiple Interest Casners - Nestborough T.V.

## Community Resilience Building Risk Matrix



## www.CommunityResilienceBuilding.org

<u>Westborough Table 2</u>				Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)					
<u><b>H</b>-M</u> - <u><b>L</b></u> priority for action over the <u>S</u> hort or <u>L</u> ong					Priority	Time			
$\underline{\mathbf{v}}$ = vulnerability $\underline{\mathbf{s}}$ = strength			Wind Events	Flooding	Winter Storms	Temperature	H . M . I	<u>S</u> hort <u>L</u> ong	
Features	Location	Ownership	V or S	or S Changes				<u>n - w - r</u>	<u><b>O</b></u> ngoing
Infrastructural									
Pump Stations	Townwide (Adjacent to flood zones)	Town	B (both)	Solar Power				L	
Sewage Treatment Plant	Meadow Rd.	Town and Regional	B (both)	Build berms and flood conta	inment			L	
Failing Culverts Along RR + 495	Rte 30 to Cedar Swamp Rd.	S	v	Replace or renovate culverts	5			н	s
Center of Town - Poor Drainage		Multiple	v	Put in raingardens, box plant	ts. Plant more street trees			м	s
Parkers Folly - Pond Flooding	Folly Lane	Town	v						
Jackstraw Brook Watershed (inadequate storwater infrastructure)		Town	v	Upgrade drainage and deten	ntion systems. Box culverts?			м	L
Wells - Vulnearable to Drought	Townwide	Town/Private	B (both)	Alternative power				н	
Communication and Telecommunications - Emergency (utilities)	Townwide	Town/Private	B (both)	Move utility lines undergrou	nd - protect from wind and	protect trees		L	L
High School - Shelter		Town	s	Backup solar generator - inst planting	tall geothermal energy, sola	r canopies in parking lot - L	ID in parking lot + tree	м/н	S/L/O
Plans - Disaster Debris Plan / Evacuation Plants/Routes			s						
Societal	·								
Senior Center/Senior Housing	Rogers Rd.	Town/Private	B (both)	Solar powered energy/gener	rators, tree planting, evacua	ition		м	S/O
Correctional Facilities	State Hospital Property	State	v						
Apartment Complexes	Townwide	Private	v	Evacuaction, training + educa	ation			н	S/O
Behaviroral Facilities/Mental Health		Private	v						
Health Care Facilities - Whittier Rehabilitation		Private	B (both)						
Group Homes		State/Private	v	Evacuaction, training + educa	ation				
Recreational Areas/Fields			s	Provide shade - trees, awnin	gs, gazebos			м	s
Religious Organizaitons		Private	s	Communication, outreach				м	S
Youth Organizations			s	Planting projects, build bat b	ooxes/houses			н	s
Regulations/Bylaws		Town	S	Passive + active solar buildin	g regulations			н	s
Environmental									

Runoff and Polutants from MassPike	Upton Rd.		v			
Street Trees			s	Plant street trees especially in center of town	м	s
Lake Chauncy			B (both)	Shade trees in parking lot, back of beach. Treat algea and provide education about algae, put in gazebo/canopy	н	s/o
Conservation Areas/Trails	Townwide	Town/Private	S	Purchase conservation land	н	
Forested Areas	Townwide	Town/Private	B (both)	Maintenance, building trails	м	L
Cedar Swamp			B (both)	Educational signage	L	
Hoccomonco Pond - Recreation			B (both)			
Mosquitos	Townwide		v	Reduce standing water - maintaining culverts, dredging, bat boxes	н	s
Invasice Pests/Blight	Townwide		v	Education - Asian Longhorn Beetle. Invasive plants species removal	м	
Wildlife/Beavers			v	Beaver deciever - culverts, weirs		

# Municipal Vulnerability Preparedness (MVP) Workshop: Westborough

Reference Map: Table Map #2

Legend
Town Boundary
Town Halls
EOC
C Local Police
State Police
County Sheriff
Fire Station
Schools (Pre-K through High School)
Dams
High Hazard
Significant Hazard
Low Hazard
N/A
Major Road
Local Road
Active Service Railroads
Water Bodies
Streams
MassDEP Wetlands
High Slope (15% and above)
FEMA National Flood Hazard Layer (DFIRM)
100-year Flood Area
500-year Flood Area
CIH (Points)
Vulnerable Critical Infrastructure
Non-vulnerable Critical Infrastructure
Hazard
Vulnerable Critical Infrastructure
Hazard
Hazard
CMRPC
Central Massachusetts Regional Planning Commission
0.000 0.54 0.72 Miles
8 0.50 0.04 0.72 Willes
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Flooting data source: FEMA's Digital Flood Insurance Rate maps(DFIRM). Other data sources include: MassGIS, MassDOT, and CMRPC Other data sources include: MassGIS, MassDOT, and CMRPC Information depicted on this map is for planning purposes only. This 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 interpretation, or parcel-level analysis. Use caution

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**Community Resilience Building Risk Matrix** TABLE 2 H-M-L priority for action over the Short or Long term (and Ungoing) V = Vulnerability S = StrengthFeatures Infrastructural HUMP Stations-Sewage Treatment Plant Failing culverts along RR-1495 Center of Town - Your Drainage Barkers Folly - Pond Flooding Jackstram Brook Watershed Infinshi Wells - Vuln to Drought Communicand Telecommunication-Emergency Wt. I.trep chool-sheller Plans- Disaster Delon's Plan Evacuation Plans frontes Societal Senior Center / Senior Housing Correctional Facilities Apartment Complexes ADW Behavioral Facilities/Mentul Hearth Health Care facilities - Whitten Reliant Group hornes Recreational Areas/Fields Religious orgs Youth org. hegulations/Bylaws Environmental Runoff + pollutants from MassPike Upto Street Trees Hanther-plan Lake Chancy Town Conservation areas/Trails Town Forested areas Cedar Swamp Port Hocomonics Pord - rec. Town Masquitoes ITVASILE Posts, blights Wildlife, Bearloss

		P	
			Top Priority Hazards (tornado, floo
Location	Ownership	V or S	Wind Events
wh wide	nes T	VIS	Solar power
adow Rd	Tregiant	V/S	Build berms, Flood
30 to an SwampR	5	V	Replace culverts
	Mulhple	V	Put in raingarde
Thank	T	V	
dute	T	V	Upgrade drainage
wide		VIS	Backap sola
	T/p	SN	> Move utility
	T	5	Back UP Solar
5		5	
ogers Rd	1 P	shi	Salar non cal
Ky Dorert	1 5	<u></u>	Jular powered
n l	P	V	Evacuation
wiae	P	V	A Maining A &
	P	SN	
	50	 V	
	3,1	5	Punide Shade - Ti
	P	5	Communi
		5	As Plantina
	T	5	Packing Solar bi
			10177140, 20100 131
mad		V	11.44
		S	Plant trees esp. (
		vls	Shade Trees in
Wide	TP	5	Purchase con
mide	TP	SIV	Maintenar
		SN	Glucitic
		Chi	Caucant
		>V<	p. t. 1
vide		V	heave standi
wide		V	Equation - 1
		V	Beaverd

www.CommunityResilienceBuilding.org ods, wildfire, hurricanes, earthquake, drought, heat wave, etc.) Flooding Winter Storms Containment ons, box planters. Plant more street trees and detention systems. Box culverts? Alternative power ty lines underground - Protect from wind t generator. Install geothermal energy. generators, Tree Manting ducation res, Awnings, Gazebos cation, autreach projects, build bat boxes/pouses uilding regulations center of town Pkg lot, back of beach. Put in gase bo/canopy servation land rce, Building Trails chal Gignage ng water - maintaining culverts, dredging, Bat Boxes Asian longhown beatle. Invasive plant species removal ecenver " culverts, weirs



Sewage treatment plant Pump stations - some on edge of flood 2016 44 Jun 201, 37, 27, 35, 42 2010 s 2016 Wells (5+6) + pump station - Andrews St. Indersize Failing culverts along railroad and 495 wells-vulnerable in drought near RR Beavers from RF 30 to Beavers Cedar Swamp Pond RR Bridge Arch St-flooding Center of town vulnerable to Flooding -Older section poor drainage Parker's Folly - Pond w/ undergrzed wetert, prone to Flooding Jack straw Brook Watershed - Inadequate stormwater infortucture Dann-Mill Rd Runoff and pollutants from Masspike-No filtration-Upton Rd area

Docretal Correctional Facilities Group Homes (6-7) - Adult + children Behavioral Hospital / Mental Health Facilities Walter Meadow Senior Housing the - low-mcome senior housing Apartment Complexes - Rentals Ordrand Hill Spectrum-Drug Treatment Facility Transportation for seniors - vans enorgency overall School buses Partners Day Surgery Hogp. - Being built

Whither Hospital

Reliant Medical

Mass Memorial - Regional

Solar Backup



## **Community Resilience Building Risk Matrix**



www.CommunityResilienceBuilding.org

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

### <u>Westborough Table 3</u>

<u>H-M-L</u> priority for action over the <u>Short or Long</u> term (and <u>Ungoing</u> )							Priority	Time	
$\underline{\mathbf{V}}$ = Vulnerability $\underline{\mathbf{S}}$ = Strength				Wind Events	Flooding	Winter Storms	Temperatures	H . M . I	<u>S</u> hort <u>L</u> ong
Features	Location	Ownership	V or S				_	<u><u>m</u>-<u>m</u>-<u>r</u></u>	<u><b>O</b></u> ngoing
Infrastructural			•		-	-	-		
Water/Sewer		Town		Enforcing existing sw/conser	rvation regions				
Fire Station + EOC		Town		Evaluate redundacy options					
DPW Facilities		Town		Evaluate redundacy options					
Cell Towner - Public Safety and Communication		Public/Private		Vegetation clearing, energy	storage				
Shelter (HS + 'Unofficial')		Town/Private/ Pulbic		Redundacy options					
Roads/Bridges		Town/State		Evaluate nature based/GI du	uring ongoing road repairs/m	naintenance, Upton Rd. (ice	e) - control hedge signage		
Debris Management				Resident education/incentiv	re?				
Hazmat Facilities				Evaluate energy storage (ter	mperature sensitive mat)				
Utilities (lines)				Regulations - encourage und	derground				
Police Department									
Societal		1	1						
Seniors		Public/Private		"R U OK?" work with familie	s/senoir center outreach				
Socio-economic (low income/vulnearable)		Public/Private		Emergency response publish	ned. (partner with human se	rvices/schools)			
Public/Private Partnerships		Public/Private		Gym, club/Y agreements Re	: indoor recreation				
Transportation Access (daytime population)		Town/State		Encourage employers to pro	ovide transit				
High Density Areas		Public/Private							
Communication		Public/Private							
Rehab Facilities (Whittier)									
Environmental									
Illnesses (insect borne)				Bathouses, possums, chicker	ns, public education, emerge	ency dispensing site			
Buildout				Best [practices for dev, esta	blish and review process for	impact			
Wildlife (beavers)				Education/public outreach R	Re: dam removal for propert	y owners			
Bodies of Water/HW									
Stormwater									
Solid Waste									

Summer Heat (activity impacts)			
Debris Management			
Algae			

Preparedness (M)	ollity (D)
Workshop: Westbor	Oligh
Reference M	ougn
Table Map:	
# 3 wiap	
Legend	
Town Boundary	
Town Halls	the state
EOC	
Local Police	
State Police	III II
Eiro Station	
Schoole (Decision	1. 6
Dams	
High Hazard	
Significant Hazard	
Low Hazard	• •
D N/A	10
Major Road	SHREM
Local Road	
Active Service Railroads	En A
Water Bodies	
Streams	1
MassDEP Wetlands	
High Slope (15% and above)	in my
FEMA National Flood Hazard Layer (DFIRM)	
100-year Flood Area	
500-year Flood Area	
CIH (Points)	
<ul> <li>Vulnerable Critical Infrastructure</li> </ul>	······································
<ul> <li>Non-vulnerable Critical Infrastructure</li> </ul>	
Hazard	
Hazard	11 11
Hazard	1
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	The Mi
CMRPC	in Allin
Central Massachusetts Regional Planning Commission	with 1 1/2

0.09.18 0.36 0.54 0.72 Miles \*\*\* \*\*\*\*

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

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**Community Resilience Building Risk Matri** TABLE #3 H-M-L priority for action over the Short or Long term (and Ung  $\mathbf{Y} =$ Vulnerability  $\mathbf{S} =$ Strength Features Infrastructural Water/Sewer Fire Station + EOC DPW facilities Cell towers Public safery Cell towers Communic. Shelter (Hs . "unofficer Roads/bridges Hazmat facilities DEBRIS MGMT UTILITIES (LINES) POICE PEPT. Societal Seniors Low inc. Socio-economic Vulnerable Pub./Priv. Partnerships Transportation Access Highdensity areas (Communication) Rehab facilities (whit Environmental Illnesses LINSECT AGRA Buildout Wildlife - beavers Bodies of water/HW Stormwater Salid waste Wood land Sactivity ummer heat-impacts DEBRIS MGM' ALGAE

rix	24	P	
oingj			Top Priority Hazards (tornado,
Location	Ownership	V or S	-Flood INO
	Tours		FNEGECU
	Tauro		ENFURCH
	Tours		EVALUA
	Public		
-1+1	Town		VEG. CLEAN
<u> </u>	Town .		EVALIATE
	<b>94046</b>		-UPTON ROA
			EVALEN
			KESIDENI
			REGULATION
	Public		"ABENGLIOK
	Public		EMERGEN
	Public	-	CULA ALIOIN
	Town		GYPI, CUD/ 1
	Rubine	~	PENCOVEAU
	Public		
	Private		
tier)			ALT. ENER
VE)			BATHOUSES
			BESTPRACT
			DEDUCATI
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			5
		0	
			VEG. MGM

www.CommunityResilienceBuilding.org floods, wildfise, hurricanes, earthquake, drought, heat wave, etc.) VIER NGEXISTING SW/CONSERVATION REGS TE REPUNDACY OPTIONS RING, ENERGY STORAGE ANCY OPTIONS NATURE BASED/GI DURING ONGOING ROAD AD (ICE) -> CONTROL HEDGESSIGNAGE MAINT VERCY STORAGE (TEMP. SENSITIVE MAT) ED. / INCENTIVE? IS EXCURAGE UNDERGROUND ?" WORK WI FAMILIES / SR. CENTER OUTREACH NCY RESPONSE PUBLICED. (PARTNER W/ INPOCE HUMAN SERVICE/SCHOOLS) INPOCK AGREEMENTS RE: REC GE EMPLOYERS TO PROVIDE FRANSIT 64 STORAGE OPTIONS, LOOK @ LOCAL MASSCAWALLY , POSSUMS, CHICKENS, PUBLICED, EMERGENCY FILES FOR DEV., ESTABLISH REVIEW PROCESS FOR IMPACT ION / PUBLIC OUTREACH RE: DAMREMOVAL MIT. T/CUTTING PLAN. ED FOR RESIPENTS







PANSPORTATION ACCESS CENSUS - ACCURATE? DAYTIME POPULATION 7 FIGHDENSITY AREAS

![](_page_92_Picture_2.jpeg)

![](_page_93_Picture_0.jpeg)

FACILITTES NURSINGHOMES PARKS/REC CONSERVAN MEDICAL FACILITIES POADS, BRIDGES JDEWALKS 

## Community Resilience Building Risk Matrix

![](_page_94_Picture_1.jpeg)

## www.CommunityResilienceBuilding.org

Westborough Table 4 $\underline{H}$ - $\underline{M}$ - $\underline{L}$  priority for action over the  $\underline{S}$  hort or  $\underline{L}$  ong term (and  $\underline{U}$ ngoing) $\underline{V}$  = Vulnerability  $\underline{S}$  = Strength

<b>Top Priority Hazards</b>	(tornado, floods,	wildfire,	, hurricanes,	earthquake	drought, sea level r	ise, heat way	ve, etc.)
						Priority	Time

• vanierability <u>o</u> barengai				Wind Events	Flooding	Winter Storms	Temperatures	H - M - L	<u>S</u> hort <u>L</u> ong
Features	Location	Ownership	V or S						<u><b>O</b></u> ngoing
Infrastructural					-				
Railroad Culverts	Cedar Swamp 5	Railroad	v	Strengthen communication a	and eduation, replace/update	e culvets		н	S
Substations Electrical	Summer St. and East Main St.	National Grid	B (both)	Flooding issues - outflow				L	L
Sandra Pond Dams	Upton Rd.	Town	V/S	Upgrade spillway, increase u	pstream infiltration			н	0
Drinking Well Sites	Townwide (Morse St. and Hopkinton St.	Town	B (both)	Ongoing maintenace, increas	se upstream infiltration			н	o
Sewer Stations	Townwide	Town	B (both)	Wetlands restoration of area	3			н	0
Highway Access - Railroad - Transit	Townwide	Multiple	B (both)					м	0
Emergency Communication	Townwide	Town	B (both)	Outreach communication				н	s/o
Culverts (Kay St., West Main St., Chauncy St., Alen St., Bowman St. at Jackstraw Break, Chestnut St.)	Townwide	Town	v	Culvert + drainage studies (to	ownwide)			н	S/L
Garfield Drive Detention Basin	Garfield	Town	v	Drainage study				н	S
Stormwater Infrastructure	Townwide	Town	v	Drainage study (townwide),	utility fund study			н	s
Societal									
Emergency Shelter	Senior Center + High School	Town	B (both)	Feasibility study for commur	nity shelter			м	0
Drinking Well Sites	Townwide	Town	B (both)	Water meter study and upgr conservation (mutual aid agr	ades (water conservation by reement)	aw), education and outrea	ach on water	н	S/L
Railroad and Highway Access	Townwide	Multiple	s	Improve relations and emerge	gency communication			н	S
Emergency Communication	Townwide	Town	B (both)	Westborough Connects, Inte library	rfaith Association, HOA, Hou	sing Association, food pan	try, library, and mobile	н	0
Interfaith Association	Townwide	Multiple	s	Transportation study				м	0
Walkability/Bike Ability	Townwide	Multiple	s	Complete streets + trails, gre	een infrastructure + add beno	hes		н	s
Rogers Field	Rogers Rd.	Town	s	Drainage improved				н	0
Public Safety	Townwide	Town	B (both)	Additonal publiic safety area	s, substation study			н	L
Bylawas	Townwide	Town	s	Strengthen local bylawas + tr	ree protection			м	0
Environmental									
Drinking Well Sites	Townwide	Town	S					н	0
Urban Forestry	Townwide	Town	B (both)	Street tree inventory, tree re	eplacement, tree species eval	luation, tree management	education	м	L

Cedar Swamp	Central East Location	Multiple	B (both)	Relationship coallation	н	s
Mass: Turnpike/Reservoir	Southwets	DOT	v	Outreach coallation to DOT to prevent pollution to water supply	н	L
Private Pond Off Fox Lane	Fox Lane	Private	v	Purchase land, remove dam	L	L
Watershed	Townwide	Multiple	s	Delete study	н	s
Stormwater	Downtown	Town	v	Nutrient loading study	м	L
Railroad Fire Potential	Townwide	Railroad	v	Education, access, outreach to RR	м	L

# Municipal Vulnerability Preparedness (MVP) Workshop: Westborough

Reference Map:
Table Map
#4

	Long	ind
	Lege	
	-	Town Boundary
	T	Town Halls
		EOC
		Local Police
	-	State Police
		County Sheriff
		Fire Station
	Dams	Schools (Pre-K through High School)
		High Hazard
		Significant Hazard
		Low Hazard
	•	N/A
		Major Road
		Local Road
		Active Service Railroads
	1	Nater Bodies
		Streams
	·/////////////////////////////////////	AassDEP Wetlands
	H	ligh Slope (15% and above)
	FEMA Nati	onal Flood Hazard Laver (DFIRM)
	10	00-year Flood Area
	50	00-year Flood Area
	CIH (Points)	)
	• Vu	Inerable Critical Infrastructure
	<ul> <li>No</li> </ul>	n-vulnerable Critical Infrastructure
	• Ha	zard
-	Vul	nerable Critical Infrastructure
-	Haz	ard
7	Haz	ard
Z	1110	
	C	MRPC
L	Central Mass	achusetts Regional Planning Commission
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Flooding data source: FEMA's Digital Flood Insurance Rate maps(DFIRM). Other data sources include: MassGIS, MassDOT, and CMRPC 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 information, or parcel-level analysis. Use caution interpretation, or parcel-level analysis. Use caution

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![](_page_96_Picture_5.jpeg)

**Community Resilience Building Risk Matrix** TABLE # 4 H-M-L priority for action over the Short or Long term (and Ungoing)  $\mathbf{Y} =$ Vulnerability  $\mathbf{S} =$ Strength Features Infrastructural RAILRoad Culverts Cedo electrical Summ SUBSTATIONS EAST SANdra Pand Dams UPTO Drinking Town Well Sites Monors, Sewer Stations Town highway access TOW Railroad Transit Emergency Communication TUW Ray st w. mArn st Culverts Chouncy St. culvest Alen St. culvert Bownian St. at SACK Tows Strow Break, Chesdowd St. Culverds GARFIELD Drive detention BASIN GARGI STORM WATER JASA Structure Town Societal Sr. Ce Emergency Shelter Drinking High well sites Jun-TANIFOAd -JONUhighway access Emergency Communication Jown. Interfaith Assoc. TOWN WALKAbility - Bike Ability Towr ROGENS - Rogers Ficho Tiwn 4 Public SAFETY Eylaws Jown Environmental Drinking Well Sites Tan Urban Forestry Town Contral Ledar Swamp -Locati MASS Turnpike/Resulvoin So. Wps Fox LA Private Pond OFF Fox LANE Town WATER Shed. Something down To STORM WATEr Mail Runo Fire Fodendial TUNALU

	24	P	
			Top Priority Hazards (tornado, floods
			1
Location	Ownership	V or S	Wind
	01		
5	r Railroad	V	strengthon commu
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www.CommunityResilienceBuilding.org s, wildfire, hurricanes, earthquake, drought, heat wave, etc.) Flooding Winter S-krins Temperatu mication Education replace Update Culverts JUH FLOW infiltration nance Unfiltration esteration of Area nieation age Studies Town Wide Tudy LLITTY Find .. Tour wide Tondy for Community Shelter Study and upgrades Water Conversation by law WARE Conservation mutual aid agreement rging Communication aith Assoc, Home Owners Assoc. Housing Association mobile hibrary ld Benchos SUBSTATION Study. Tree Protection Tree Replacement Tree management Education POT Supply

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prooding - Railroad What's!

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> Trees - bottone boves re: Masquito "BAT" issues Temp - bylaw/Reg take advantage of passile solar for bidg. Education - amergeng preparduess evaluation plane y

Address Beaver 1554es! Grude tres danatann in scholls \* Beavers' - currents design "Scour decessions" While Aarding oraces address water from

Beaver Activity Rugor Fields Wells (Pump Statione - Solar for back up power soarce? Tratmore plant - bern avond to

domition- frie planning rain gardon retention/disin system

RECESS - Informing + clayfing residents r: evaduation MBTA CUVERTS! Temp/snade constideration: - Senior center Garebos - Senior center Garebos Trees - Solar generation Trees - Solar generation Canopy - Solar generation concur Ar Scilosifs Canopy - Unerable population concur - Jetnines Aisabled - Jetnines Aisabled - Jetnines Age Keessibility

New water metering Grudg (24% water Interfain Associations Connectuly Blavers! Nater Quality: dvinking water - protection ecological imbalances - communicat orgoing concerns re vector + invasive disease [species

Mildlife josanes H: Immedicate health concerns x: future health impacts

· Railroad Wiress! METH Conversations - Coaction DPW/ DCK/private/ Sud LT/CLT · Rogers Field - tail water (swimp) Incetic Field use Downtown Praincy Concerns Prod control issue

Drinking well sites commen (beavers)

Stormnator Brainage / current Study - snarel ready Revaltional facilities as an Option for schelter (keep kids entertained) Broad 1000K at cooring centers - vale chang - walking Thails (schade) Cedar Swamp MA Dot Avainage to Nator - Regional project? Supply Stormwater Study for each barin. Where are sub basing

LOOK into Consumation Land grants Agae problems need to be addressed

![](_page_98_Picture_19.jpeg)

Issue	Project Type	Category	Location	Recommended Action	Hazard			
High Priority								
Water	Culverts		Route 30 to Cedar Rd.	Replace or renovate culverts				
			Cedar Swamp	Designate an assesment, maintenance, or reconstruction plan based on culvert condition, in accordance with MBTA. Continue to strengthen communication and education between town and MBTA.				
			Kay St. West Main St. Chauncy St. Alen St. Bowman St. Chestnut St.	Pursue culvert and drainage studies townwide.	***			
	Dams		Sandra Pond	Upgrade spillway and increase upstream infiltration.				
	Basins		Garfield Drive Detention Basin	Pursue a drainage study	60			
	Drinking Water		Morse St. Hopkinton St.	Continue with ongoing maintenance and increase upstream infiltration for the security of drinking wells.				
			Townwide	Investigate recharge options. Review and update water plans. Conduct a water meter study and necessary upgrades. Pursue educational and outreach programs on water conservation to protect existing resources.				
	Stormwater		Townwide	Conduct drainage, nutrient loading, and utility fund studies for the town.				
Access	Roads		Townwide	Create additonal egresses where necessary for emergency responders and evacuation situtations.				
	Housing			Evaluate and create improved access as part of the town's resiliency plan.				

Access	Vulnearable Populations Railroad and Highway		Townwide	Identify communities where access is limited and create an access plan for those regions. Create a townwide language access plan for non-English speaking populations. Improve relations and emergency communications and access.			
Communication	Utilities		Townwide	Assess risks to communication infrastructures and ensure backup plans. Update and/or replace cell towers and underground copper, potentially moving utility lines underground to protect from weather related damages. Work with town organizations (HOA, designated shelters, library, etc.) to provide outreach communication to town residents.	နန္နာ ပြိ		
	Vulnearable Populations			Create a townwide language acess plan. Ensure equitable knowledge and access to services, emergency plans, and general town information.	 ₩ ₩		
Vector Borne Illness	Mosquitos		Townwide	Reduce stagnant water by maintaining culverts, dredging, and introducing bat houses.			
	Invasives			Further education on invasive plant and invertebrate species (Asian Longhorn Beetle and Blight) to reduce destruction and and biodiversity loss of trees.			
Medium Priority							
Services	Shelters	() ()	High School	Implement backup generators (solar). Using LID (low impact development) further implement solar canopies in parking lot and plant trees.			
			Senior Center	Conduct a feasability study for community shelter			
	Police/Fire Deptartments Health Care DPW Facilities		Townwide	Continue to enhance facilities with necessary access and communication to support residents and emergency response.	<mark>း ရန်န</mark> ို		

Recreation	Improvements	AP 222	Lake Chauncy Rogers Field	Implement shade trees in parking lot at the back of the beach and canopies/gazebos for additional shading. Treat for algae. Improve drainage for continued use.		
Urban Asthetics	Street Trees		Townwide	Improve urban forestry through creation of a street tree inventory to enhance tree replacement, species evaluation, and education management.		
	Versitility			Implement a complete streets initiative with trails, benches, and green infrastructure to accommodate all populations.	٩ĥ	
Habitat	Forest		Townwide	Create a forest management plan (potential partnership between public and private sectors).		
	Wetlands			Assess health of wetlands and identify opportunities to maximize use of wetlands to manage future issues.		
Low Priority						
Access	Forest		Townwide	Asses conditions of acces roads and create those access points (fire roads) as needed.		

# **TOWN OF WESTBOROUGH**

Municipal Vulnerability Preparedness (MVP)

**Community Resilience Building Workshop** 

February 6, 2020

![](_page_102_Picture_4.jpeg)

## Community Resiliency Building Workshop

### Town of Westborough

Municipal Vulnerability Preparedness

Thursday, February 6, 2020

8:30am - 4:30pm; Registration at 8:00 am

Forbes Building, Great Hall 2nd Floor

45 West Main Street, Westborough, MA

![](_page_103_Picture_8.jpeg)

![](_page_103_Picture_9.jpeg)

### Define extreme weather and climate related hazards;

Workshop Objective

- 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

## Workshop Agenda

8:00am – 8:30am Registration, Networking & Coffee 8:30am – 10pm:

- Welcome and Overview
- CRB Overview Presentation
  - o Peter Peloquin, CMRPC
- Climate Change Projections and Impacts
   Mimi Kaplan, CMRPC
- Profile of Natural Hazards

   Andrew Loew, CMRPC

10am – 12pm:

 Breakout Groups – Identify Hazards, Local Features, Strengths & Vulnerabilities

### 12pm -1pm Lunch

![](_page_103_Picture_24.jpeg)

- Breakout Groups Identify & Prioritize Actions
- Table Reports and Priority vote
- Closing Remarks and Wrap up

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

![](_page_103_Picture_29.jpeg)

# 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

![](_page_104_Figure_5.jpeg)

![](_page_105_Figure_0.jpeg)

![](_page_105_Picture_1.jpeg)

Updated 09-23-2019

![](_page_106_Figure_0.jpeg)

![](_page_106_Picture_1.jpeg)

## **HOW DID WE GET HERE?**

• Awarded Planning Grant

Core Team Meeting

Invitation from Core Team

![](_page_107_Picture_4.jpeg)

![](_page_107_Picture_5.jpeg)

Icon made by ProSymbols from Flaticon.com
# 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**

- Five Tables of 5-8 individuals
- Three focus sections
  - Infrastructural
  - Societal
  - Environmental
- Tools and Resources
  - Matrix, Maps, HMP Strategies, Markers, Dots, & Each Other





Icon made Prettyicons from Flaticon.com

# **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



# CLIMATE PROJECTIONS AND IMPACTS

I. Engage Community 2. Identify CC Impacts & Hazards 3. Complete Assessment of Vulnerabilities & Strengths

4. Develop & Prioritize Actions

5. Take Action



# **CLIMATE CHANGE PROJECTIONS**

### **Climate projections**

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



### **Natural Hazards**

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

### EXAMPLES OF IMPACTS OF CLIMATE CHANGE

### Agriculture

Impact on crops from more extreme temperature and precipitation

### • Human Health

More frequent, extreme and longer heat waves will impact vulnerable populations.

### Transportation

Increased precipitation and flooding can disrupt traffic, delay construction, and weaken or 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.

### • Ecosystems

Impacts such as range shifts, habitat loss, and more invasive species







# 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



# SUDBURY-ASSABET-CONCORD RIVER BASIN





# 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





### <u>Seasonal</u>

- 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 <u>decrease</u> of 1.2 inches to increase of 2.0 inches by end of century
- Fall Possible <u>decrease</u> of 1.7 inches to increase of 1.5 inches by end of century



### **Extreme Precipitation**

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





- 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.



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





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### IMPACTS OF INCREASED PRECIPITATION

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



### **DROUGHT IMPACTS**

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





# **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 degreedays 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

### **Impact of Climate Change on Human Health**



CMRPC Central Massachusetts Regional Planning Commission

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

# **QUESTIONS?**





# HAZARD MITIGATION PLANNING

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



### Westborough Hazard Mitigation Plan



Webob Dam Intake and spillway, Westborough, Massachusetta (CMRPC Photo)

Adopted by the Board of Selectmen February 14, 2017

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

&

Local Hazard Mitigation Team Town of Westborough, Massachusetts



# **BE PREPARED, MITIGATE THE COSTS**

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

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



### NATURAL HAZARDS

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





















### **DROUGHT IMPACTS**

### U.S. Drought Monitor Massachusetts



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

### Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	02-04	03-04	D4
Current	0.00	100.00	98.15	89.95	52.13	0.00
Last Week	0.00	100.00	94.38	77.38	22.67	0.00
3 Months Ago 8/14/2016	20.09	79.91	13,56	0.00	0.00	0.00
Start of Calendar Year 12/29/2015	22.85	77.15	26.34	0.00	0.00	0.00
Start of Water Year 9/29/2015	12.90	87.10	30.43	0.00	0.00	0.00
One Year Ago	34.81	65.19	0.23	0.00	0.00	0.00

### Intensity:



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

### Author: Eric Luebehusen

U.S. Department of Agriculture



http://droughtmonitor.unl.edu/











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# WINTER STORMS





### **EXTREME STORMS**



# CRITICAL INFRASTRUCTURE & FACILITIES

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

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



# **VULNERABLE POPULATIONS**

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







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Municipal Vulnerability Preparedness (MVP) Workshop:Westborough





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C M R P C Central Massachusetts Regional Planning Commission

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

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

Date: 12/24/2019

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Date 12/04/2019





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Municipal Vulnerability Preparedness (MVP) Workshop:Westborough



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## QUESTIONS











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## **STEP ONE: HAZARD IDENTIFICATION**

# What are the <u>Top Four</u> Natural Hazards in Westborough?

I. Engage Community 2. Identify CC Impacts & Hazards 3. Complete Assessment of Vulnerabilities & Strengths

4. Develop & Prioritize Actions

5.Take Action



Icons made by freepik, goodware, smashicons, those icons, icongeek26 and iconicar from Flaticon.com

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## **BREAK OUT GROUP: STEP I AND 2**

At your table:

- Step I Fill in top 4 Natural Hazards
- Step 2- Identify key features
  - Infrastructure- Dams
  - Societal- Senior Center
  - Environmental-Wetlands
  - Where is the Feature Located
  - Identify ownership (Public, Private)
  - Identify vulnerability, strength or both



# TIME TO GET TO WORK



### **STEP TWO: COMPLETED**





#### STEP THREE: ACTIONS, PRIORITY AND TIMELINE

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#### STEP THREE: ACTIONS, PRIORITY AND TIMELINE

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## NATURE BASED SOLUTIONS (LID)

- Natural systems mimic natural processes to absorb and slow runoff and stormwater, and also reduce heat islands.
- Low impact development (LID) designs can be integrated into new development at neighborhood scales and work with traditional approaches





Bioswale between sidewalk and street

Contained bioswale or planter box



#### **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.





### 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





A Mass Audubon

#### **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





## BENEFITS OF GREEN INFRASTRUCTURE AND LID

- Cost Savings
  - Reduced development costs for infrastructure and maintenance
  - Reduced energy costs for residents
- Public Safety
  - Reduced flooding
  - Improved water quality
  - Increased climate change resiliency
  - Reduced urban heat island effect

- Quality of Life
  - Protect and restore natural features for improved aesthetics
- Value
  - Increased property values
- Regulatory
  - Assistance in meeting regulatory requirements



### **STEP THREE: ACTIONS**

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## **STEP THREE: PRIORITIES**

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### **STEP THREE: TIMELINE**

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#### NON-COMPETITIVE PROJECTS

Maintenance
Diesel generators
Emergency preparedness
Hard infrastructure must be inline with MVP core components



# TIME TO GET TO WORK



# **REPORT OUTS**

# What did your table find?



## **SUMMARY DISCUSSION**

• Areas of agreement

Unique perspectives



# **ΤΙΜΕ ΤΟ VOTE**

- Add one dot to each category
  - Infrastructure
  - Environment
  - Society
- Place remaining two dots any where you would like
- Return to your seat when completed



# **NEXT STEPS**

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


# QUESTIONS OR COMMENTS



# **CONTACT US**

- Westborough Core Team leaders,
  - Kristi Williams, kwilliams@town.westborough.ma.us
  - Kimberly Foster, <u>kfoster@town.westborough.ma.us</u>
- CMRPC Project Leader,
  - Peter Peloquin, <u>ppeloquin@cmrpc.org</u>
  - Kerrie Salwa, <u>ksalwa@cmrpc.org</u>
- Executive Office of Energy and Environmental Affairs Regional Coordinator
  - Hillary King, <u>hillary.king@state.ma.us</u>



# THANK YOU



#### WESTBOROUGH BOARD OF SELECTMEN MEETING AGENDA Tuesday, August 18, 2020 REMOTELY 5:00PM



#### **OPENINGS ON TOWN BOARDS & COMMITTEES**

#### **Town Manager Appointed:**

Cable TV Advisory Committee- 2 members (Ad Hoc) Constable- 1 position (1 year term) Diversity & Inclusion Committee- 3 members (indefinite term) Insect & Pest Control Officer- 1 position (1 year term) Measurer of Wood-1 position (1 year term) Municipal Building Committee- 2 members (3 year term) **Board of Selectmen Appointed:** Community Preservation Act Exploratory Committee - 3 positions (Ad Hoc) Council on Aging- 1 member (3 year term) Country Club Operating Committee- 1 non-voting member (3 year terms) Cultural Council- 12 members (3 year term) Historical Commission-1 non-voting member (3 year term) Housing Partnership Committee- 1 member (3 year term) Open Space Preservation Committee- 1 member (3 year term) Recreation Commission- 1 non-voting member (3 year term) Senior/Disabled Taxation Aide Committee- 2 members (indefinite term)

Trustees of Soldiers Memorial-1 voting and 1 non-voting member (3 year term)

Veterans' Advisory Board- 1 member (1 year term)

Youth Commission- 1 adult member (3 year term)

#### **Moderator Appointed:**

Walkup-Robinson Fund Committee- 1 member (3 year term)

1.	5:00PM	Municipal Vulnerability Preparedness Planning Grant Public Listening Session / Peter Peloquin, Central Massachusetts Regional Planning Commission
2.	6:00PM	Approval of Meeting Minutes: June 30, 2020; July 7, 2020; July 14, 2020
3.	6:05PM	Discussion/Vote: Applications for Alteration of Premises for Outdoor Dining/Building Commissioner
4.	6:10PM	Request to Appoint Julie Squires to Public Safety Committee
5.	6:15PM	Presentation: Upcoming Election Processes & Procedures/Town Clerk

6.	6:30PM	Discussion/Vote: Signing Election Warrant for State Primary/Town Clerk
7.	6:35PM	Discussion/Vote: Naming of Pickleball Courts/Recreation Director
8.	6:45PM	Presentation: Subdivision Preliminary Site Plan Review for 228 Ruggles Street, 3 lot subdivision
9.	7:00PM	Presentation: Revised Capital Plan Policy
10.	7:20PM	Discussion/Vote: Right of First Refusal for 112 Deacon Shattuck Way/ Town Manager
11.	7:25PM	Discussion/Vote: Execute Amendment to Purchase and Sale Agreement for Property Located at 31-33 Eli Whitney Street
12.	7:35PM	Discussion/Vote: Approve Proposed Legislation for Acquisition of Off Oak Street Parcel
13.	7:45PM	Discussion/Vote: Execute Purchase and Sale Agreement for 30 Belknap Street
14.	7:50PM	Town Manager Report
15.	8:00PM	Issues & Correspondence of the Selectmen

Pursuant to Governor Baker's March 12, 2020 Order Suspending Certain Provisions of the Open Meeting Law, G.L. c. 30A, §18, and the Governor's March 15, 2020 Order imposing strict limitation on the number of people that may gather in one place, this meeting of the Westborough Board of Selectmen will be conducted via remote participation to the greatest extent possible. Specific information and the general guidelines for remote participation by members of the public and/or parties with a right and/or requirement to attend this meeting can be found on the Town of Westborough's website at town.westborough.ma.us. For this meeting, members of the public who wish to watch the meeting may do so in the following manner: WestboroughTV. No in-person attendance of members of the public will be permitted, but every effort will be made to ensure that the public can adequately access the proceedings in real time, via technological means. In the event that we are unable to do so, despite best efforts, we will post on the Town of Westborough's website an audio or video recording, transcript, or other comprehensive record of proceedings as soon as possible after the meeting.

### MUNICIPAL VULNERABILITY PREPAREDNESS (MVP) PROGRAM

### **Public Listening Session**

Westborough, MA August 18, 2020









### 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







### COMMUNITY RESILIENCE BUILDING (CRB) PROCESS

- Community-driven process led by a project coordinator (Kim Foster) with a core team of Town officials and Department Heads
- Westborough's 6 member Core Team met 3 times in-person, October, November, December, and conference call twice January and February
- Invitation-only workshop was held on February 6, 2020
- 28 attendees, including local officials, board and committee members, business, schools and non-profit groups
- Listening session (today) is to inform the public of the process M R P

### 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



#### PRIMARY TOPIC AREAS







### STEP ONE: IDENTIFY TOP 4 HAZARDS

#### EXTREME TEMPS.





#### FLOODING



HIGH WIND EVENTS





### **HEAT PROJECTIONS**

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



### HEAT IMPACTS ON THE ENVIRONMENT



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



### HEAVY RAINFALL AND FLOODING

#### **Extreme Precipitation**

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





### WINTER STORMS

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





### **BREAKOUT GROUPS**

- 4 Tables of 5-6 individuals
- 4 Focus Hazards
- 3 Focus Sections
- Tools and Resources
  - Matrix, Maps, Markers & Each Other



Icon made Prettyicons from Flaticon.com



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### **STEP THREE: ACTIONS**

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### **STEP THREE: TIMELINE**

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#### TABLE SUMMARIES



#### **GROUP VOTE**





### WHAT DID THE GROUP FIND?





### INFRASTRUCTURE CONCERNS



- Culverts
- Water Systems
- Municipal
   Resources



Chauncy Street Culvert, Photo courtesy of Derek Saari, DPW

### INFRASTRUCTURE STRENGTHS



- Municipal Buildings
- Transit
- Utilities
- Public Safety



### **INFRASTRUCTURE ACTIONS**

### High Priority

- Culvert/ Catch Basin Upgrades
- Stormwater Management
- Water Provisions
- Expand Redundancy



#### SOCIETAL CONCERNS



- Communications
- Vulnerable Populations
- Community Preparedness
- Rogers Field



### SOCIETAL STRENGTHS



Senior Population
Outreach Groups
By-Laws



### SOCIETAL ACTIONS

### High Priority

- Expand Communications
- Improving Access
- Community Outreach


## ENVIRONMENTAL CONCERNS



- Insect-Borne DiseaseCedar Swamp
- Forest Maintenance
- Nuisance Species
- Water Resources



#### ENVIRONMENTAL STRENGTHS



- Cedar Swamp
- Recreation Opportunity
- Open Space



### ENVIRONMENTAL ACTIONS

# High Priority

- Invasive and Nuisance Species
- Acquire and Protect Land
- Improve Open Space and Recreation



### NEXT STEPS FOR WESTBOROUGH

- Finalize draft report with assistance from CMRPC
- Final report submitted to EOEEA no later than June 30, 2021
- Projected to submit in September 2020
- Westborough receives "MVP Community" certification
- Annual reporting by Core Team
- Develop and apply for MVP Action Grants



#### 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 1<sup>st</sup>- June 30<sup>th</sup>
- 25% Match Cash or In-kind (Non-State Funds)

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

www.communityresiliencebuilding.com



# **Questions and Comments**



# **CONTACT US**

- Westborough's Project Manager,
  - Kimberly Foster <u>kfoster@town.westborough.ma.us</u>
- <u>CMRPC Project Leader</u>,
  - Peter Peloquin, ppeloquin@cmrpc.org
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  - <u>Regional Coordinator, Executive Office of Energy and</u> <u>Environmental Affairs</u>
  - Hillary King, <u>Hillary.King@mass.gov</u>





