

APRIL 2021



# Town of Wendell



**Municipal Vulnerability Preparedness (MVP) Program**

# MVP Resiliency Plan

**April 2021**

Facilitated by the  
Franklin Regional Council of Governments  
A State-Certified MVP Provider





# MVP Resiliency Plan

Including the Summary of Findings from the  
Community Resilience Building Workshop  
September 2020

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# Town of Wendell

## Community Resilience Building Workshop

### Summary of Findings

#### **Overview:**

Throughout Franklin County, Massachusetts, communities are experiencing more extreme weather events – especially heavy rains and flooding – along with higher temperatures and other climate-related conditions. These types of conditions are predicted to increase as a result of climate change. According to down-scaled climate data from resilientMA.org,<sup>1</sup> the major climate change drivers in Franklin County and Wendell are:

- an increase in average temperature, as well as more extreme heat and extreme temperature fluctuations;
- an increase in annual precipitation and an increase in very heavy precipitation events – where more rain, snow, or ice falls in a short period of time – interspersed at times with very dry periods, and a change to more rain and ice in winters;
- and, due to an overall warmer climate with more moisture in the atmosphere, stronger storms with higher winds.

In the face of these changes, municipalities have more of a sense of urgency to increase their resilience and adapt to extreme weather events and mounting natural hazards. Relatively recent events in Franklin County, such as Tropical Storm Irene (August 29-30, 2011) and “Snowtober” (October 28, 2011), have reinforced this urgency and compelled communities like the Town of Wendell to proactively plan and mitigate potential risks. This type of planning will reduce the vulnerability of Wendell’s people, infrastructure and natural resources, and will empower Wendell’s officials and citizens to take steps to protect themselves and their community.

In early 2020, with funding from the Massachusetts Executive Office of Energy and Environmental Affairs, the Franklin Regional Council of Governments (FRCOG) offered the Town of Wendell technical assistance in completing their Community Resilience Building Workshop to achieve a designation as a Municipal Vulnerability Preparedness Community or “MVP” Community. As a State-certified MVP Provider, the FRCOG helped Wendell engage in a community-driven process that brought together climate change information and local knowledge to conduct community outreach and the CRB workshop, whose central objectives were to:

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<sup>1</sup> <http://www.resilientma.org/map/>

- Define top local natural and climate-related hazards of concern;
- Identify existing and future strengths and vulnerabilities;
- Develop prioritized actions for the Community;
- Identify immediate opportunities to collaboratively advance actions to increase resilience.

This report summarizes the findings of the Town of Wendell's Community Resilience-Building Workshop.

## **Community Resilience Building: Stakeholder Outreach & Workshop**

### **Stakeholder Outreach**

The Town of Wendell planned on holding their Community Resilience Building Workshop during the Spring of 2020, but the meeting was ultimately cancelled due to the COVID-19 pandemic. In place of the typical, fully in-person CRB workshop, the Committee devised a plan to conduct a hybrid MVP Planning process, in which portions of the planning process were conducted both remotely and in-person. FRCOG staff worked closely with the Committee to gather input from town officials and community members in order to build the recommendations presented in the plan.

Beginning in May, FRCOG staff and the Committee compiled a list of twenty-two community members, which was representative of Wendell's farmers, local businesses, municipal departments and boards, and residents. Informational packets about the MVP program, risks associated with climate change, sample interview questions, and findings from Wendell's recently updated Hazard mitigation Plan were sent out to each stakeholder.

FRCOG staff then called each stakeholder to conduct an interview to learn more about how their services, business, farm, or personal property (as applicable) had already been impacted by climate change and what their concerns are for the future considering Massachusetts' changing climate. Interviews were conducted with nine stakeholders, which revealed a wide variety of concerns. Responses recorded during the interviews allowed the Committee to characterize the hazards impacting Wendell, and the data gathered were presented during the in-person Community Resilience Building Workshop that was held on September 24, 2020 in a socially-distant manner outside on the Wendell Town Common. Outreach packets and interviews are presented in the Appendix.

### **Summary of Findings**

The Town of Wendell, population 862<sup>2</sup>, has conducted a number of planning projects in previous years, including its 2016 Hazard Mitigation Plan, which enabled the Town to identify high priority hazards as well as areas, infrastructure and populations vulnerable to a variety of

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<sup>2</sup> US Census Bureau: 2015-2019 American Community Survey (ACS) 5-Year Estimates

hazards, and action items to potentially address hazards. Other recent Wendell plans include the Wendell Community Development Plan (2004), Wendell Community Food Assessment (2017) and the Wendell Pollinator Action Plan (2019). The Town of Wendell Open Space and Recreation Plan expired in 2017, and the Town has indicated that they will soon undertake updating this plan. Many of these plans emphasize the importance of maintaining the rural character of the community, such as the scenic quality of the gravel roadways in town.

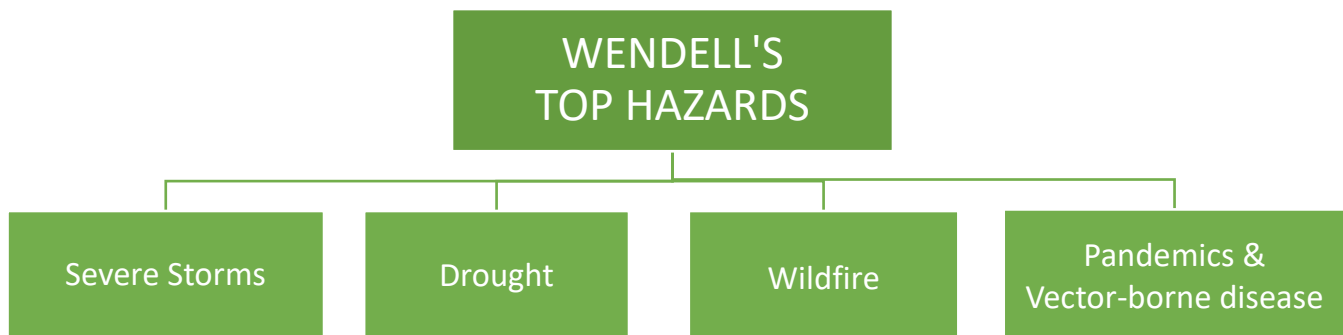
In addition to the relatively recent Hazard Mitigation Plan, there is a need for the community to conduct a hazard assessment across scales – from individual buildings and bridges to rivers and landscapes, and across sectors – infrastructure, society and environment – looking specifically through the lens of climate change and its likely impacts.

Workshop participants considered climate change impacts most likely to impact Wendell, including rising and extreme air temperatures, extreme weather events and increased precipitation, both in quantity and intensity.

The workshop was critical to enabling participants to think about and engage with people from different sectors. People representing emergency management, highway, police, fire, administration, planning, water supply, library, energy committee, and interested residents came together to discuss the most threatening hazards to the Town of Wendell and to agree upon high priorities and actions to address them.

### ***Top Hazards***

Workshop participants discussed a number of hazards that impact Wendell, deliberating on how frequent, how intense and how widespread each hazard has been and could potentially be in the future. Hazards discussed included: dam failures, severe winter storms/ice storms, earthquakes, hurricanes, wind storms/microbursts, tornados, floods, wild fires, landslides, droughts, human-made hazards and extreme temperatures. Top hazards identified by the participants are as follows:



## **Areas of Concern**

### **Infrastructure and Transportation:**

Residents isolated on impassable dirt roads; failing bridges and culverts in need of repairs or upgrades; maintenance needs along federally owned railroads; limited backup water sources, storage and distribution for households; insufficient water sources for firefighting; limited emergency access routes for firefighting; limited back up power sources for prolonged power outages; hazardous trees adjacent to power and utility lines; three significant hazard dams in town in need of updated assessments, inundation mapping, and Emergency Action Plans (EAPs).

**Facilities and businesses:** Economic impacts of extreme heat and drought on farms, economic impacts of severe storms on town and local businesses; poor cell phone reception; backup power needed at Fire Department; public and private options for small-scale battery storage for solar electricity.

**Public health:** Private wells run dry during drought or are not operable in power outages; storage and distribution of public drinking water from the town well is limited; limited backup drinking water supplies and storage options; insect-borne diseases and the COVID-19 pandemic threaten public health.

**Ecosystems and natural resources:** Invasive species, including glossy buckthorn and Japanese knotweed, are encroaching in wetlands and along roads in town; vast woodlands town wide are vulnerable to drought and wildfires; beaver impoundments at many locations in town present a risk of flooding; funding is needed to address hazardous trees on public property; a debris management site is needed for post-disaster debris.

**People:** Elders throughout town; seniors on fixed incomes who may not be able to make costly repairs due to damage from flooding or severe storms; some homeowners need support to storm proof and rehabilitate existing homes; many homes in remote woodland settings; heating and cooling centers



*In July 2006 a tornado touched down in Wendell, ripping open a large swath of forest, damaging several homes and structures, and toppling large trees near the center of town.*



*Wendell's 25 miles of gravel roads are vital to transportation, locally and between neighboring towns, but are increasing vulnerable to impacts from climate change.*



*Beaver activity requires ongoing monitoring and intervention in Wendell. They are active in streams where their impoundments cause hazardous road flooding. They are also active in the ponds above several significant hazard dams in town.*

needed to help residents cope with extreme temperatures; significant improvements needed for Swift River School to serve as a community shelter; funding needed for Fire Department upgrades and staffing; Reverse 911 notification, evacuation planning, and regional sheltering planning are needed; isolation caused by the COVID-19 lockdown is a challenge for vulnerable populations and senior citizens.

### ***Current Concerns & Challenges Presented by Hazards***

Community members and participants in the workshop discussed a number of hazards that have affected the community in recent years, such as:

- Changes in precipitation including more ice and rain in the winter and increased amounts of precipitation falling in a short period;
- Short-term, acute weather events including severe wind events, tornadoes, extreme and erratic temperatures;
- Prolonged periods of drought, such as in the summer of 2020, which threaten water supply resources and dry conditions that increase the potential for a wildfire outbreak;
- An increase in the number of mosquitos and ticks has led to more cases of insect-borne diseases: a few cases of Lyme disease and Anaplasmosis have occurred in Wendell. Eastern Equine Encephalitis (EEE) has been found in mosquitos locally, but no EEE cases have occurred in town; and
- The increased need for Board of Health services in response to COVID-19 was a challenge for the BOH and staff could be overwhelmed the face of another pandemic.

Participants in the workshop expressed concern about the vulnerability of Wendell's extensive network of dirt roads to flash flooding and hazardous erosion from heavy rain events. Washouts, flooding and mudding can make roads impassable leaving residents isolated in remote locations. This is especially a concern with spotty cell phone reception town wide. More rain and ice in the winter is resulting in more sanding and less plowing. Wendell's dirt roads are also negatively affected by dry weather. Washboarding occurs on dry gravel roads with regular traffic and causes a corrugated texture across the road surface. Wash board roads are often more of a nuisance than a hazard but can damage vehicles driving on them regularly and over time. Wendell's road conditions were worsened by the 2020 summer drought.

Severe storms were also identified as a top hazard. Community members recalled recent severe wind events that led to prolonged power outages and downed trees. Pruning and removing hazardous trees is a major project needed at municipal and private properties in Wendell. The Town lacks funding to work on hazard trees around power lines. Clean ups require communication between Verizon, which owns the poles and National Grid, which owns the wires, and that coordination is challenging. Wendell's new broadband infrastructure is similarly vulnerable to severe storms that cause power outages. When this occurs, residents with internet-based phone service won't be able to make or receive calls on their home phone.



Some Wendell residents saw their wells run dry this summer during the drought that reached Level 3, "Critical Drought" Status by September 2020. Residents had to look elsewhere for water and farms struggled to maintain production. The Town has a public well providing municipal buildings with water, but it has a low recovery rate and therefore cannot support a water distribution infrastructure. As a result, residents needing potable water in emergency situations must find ways of storing and transporting it.

Temperature extremes, such as high heat and freezing temperatures were another top concern. The elderly are particularly vulnerable to extreme temperatures and may lack air conditioning or ways to adequately heat their homes. Extreme heat can also contribute to poor air quality by trapping emitted pollutants close to the ground, affecting people with asthma and other respiratory diseases as well as young children and the elderly. Wendell farmers are experiencing the impacts of rising temperatures and the recent heat waves stress on their livestock and crops.

Wendell has had small brushfires occur over the past few years, and community members and workshop participants are concerned about this hazard given that the town is nearly 90% forest cover. Small brushfires can worsen due to drier conditions, and it can be very difficult to get fires out once they get going, especially during periods of drought and extreme heat. Nearby Towns in Franklin County such as Leverett and Orange experienced wildfires during the Summer of 2020, which burned a total of more than 60 acres of land in each Town. These fires demonstrated how even mild drought conditions can lead to serious wildfire conditions.

Like communities across the country, the COVID-19 pandemic has forced Wendell residents to observe stay-home guidelines for most of the 2020 calendar year. Isolation can be hard on residents, especially vulnerable populations and elder adults living alone in some of the town's remote locations. Wendell is home to a large number of senior citizens; an age cohort that is considered to be especially vulnerable to the virus that causes COVID-19. The Board of Health has worked hard since the beginning of the pandemic to provide education and support services to the community, including contact tracing. While Wendell is not a member of a regional public health district, the BOH is fully compliant with the State's mandate regarding MAVEN surveillance. Wendell currently has their own nurse who is serving the town well.

### ***Specific Categories of Concerns and Challenges***

**Road Drainage and Bridge/Culvert Replacements:** Approximately 25 miles of the roads in Wendell are gravel, which are more vulnerable to washouts during heavy precipitation events. Workshop participants discussed concerns about stormwater runoff causing hazardous erosion, sometimes making roads impassable in locations throughout the town and rendering residents isolated. Concern about this challenge has increased with the increasing impacts of more

frequent and intense precipitation events. The DPW regularly clears out culverts and drainage ditches throughout town to ensure proper drainage, but flash flooding, washouts and mudding occur regularly. Key troublesome locations include Stone Road, New Salem Plain Road, Cooleyville Road and Jennison Road.

Undersized and failing culverts are located throughout town, including high-priority sites on Cooleyville Road, Jennison Road, Wendell Depot Road, and New Salem Road. According to the Highway Superintendent, there is a failing bridge on Kentfield Road over Whetstone Brook, which is also the primary flood-prone area in town. Residents and emergency responders in Town are used to dealing with snow, ice, downed trees and other hazards, but flooding causes the most disruption to their services and can leave residents isolated.

The Highway Department Superintendent routinely repairs/replaces small culverts to provide increased drainage for stormwater, but the Wendell DPW cannot keep up with the need for upgrades and replacements. Repairing Twin Ponds culvert on Jennison Road is a priority due to regular flooding. Morse Village Road has a failing, undersized culvert near the intersection with New Salem Road. Beavers are active in the streams, ponds and wetlands adjacent to Wendell Depot Road, Jennison Road and Cooleyville Road making the failing culverts in those locations even more vulnerable.

The FRCOG is currently conducting a project in other Franklin County towns to develop and pilot an assessment and right-sizing protocol for drainage culverts that do not cross a perennial stream. The results of this analysis can be used by Wendell DPW to determine the appropriate size of the culverts that the town is able to replace on its own. The FRCOG can work with the DPW to refine this protocol so that it applies more specifically to Wendell.

In general, dirt roads in Wendell are vulnerable to washouts and disrepair. The FRCOG is currently conducting a pilot project to showcase how various stormwater management techniques could be applied to towns with many rural and unpaved roads. The project works with Highway Superintendents to examine roads that have been experiencing stormwater issues and assess the potential for applying stormwater Best Management Practices (BMPs) to improve the situation. The information and stormwater BMP concepts provided by the FRCOG can then be used when allocating Chapter 90 funds or applying for other grant funding. Stormwater concepts can also be incorporated into future roadway improvement projects to create a more resilient roadway, save the town funding from repetitive repairs, and help protect the water quality of the many streams that run alongside our roads.

When conducting any roadway improvements, the town should be cognizant of the need to balance the rural/scenic character of the roads with any actions to increase their resiliency to climate change.

The Federally owned and managed railroad right-of-way (ROW) follows Wendell's northern town boundary, bringing with it challenges related to maintenance responsibilities. For instance, getting the railroad to address on-grade road crossings that have degraded so much as to damage vehicles that drive across, has been a challenge. The Town is also concerned about the potential for sparks generated by trains to start wildfires. With Federal ownership over

the rail ROW, there is little the Town can do to mitigate this risk. Wendell will need to call upon its state representatives to help advocate for railroad ROW maintenance at the federal level.

**Energy Resilience:** Wendell's power grid and broadband infrastructure were considered by MVP workshop participants to be vulnerable to natural hazard impacts, such as severe storms that topple trees and bring broken branches down on power lines. Snow has been less of an issue compared to ice storms causing power outages in recent years. While many residents have generators, others are vulnerable to long term power outages, and nearly 1/3 of Wendell residents are senior citizens. Though Wendell has just implemented brand new internet infrastructure, anyone with a VOIP phone will have no phone service during a power outage. As a result, energy resilience is a major concern for safeguarding residents as well as town buildings and operations during power outages. The Energy Committee would like to help residents get small backup batteries for their new internet and VOIP phone systems.

The Town offices and library have backup generators. Wendell Fire Department has a backup generator that needs to be replaced. The Senior Center, which could serve as a cooling center, and the Swift River School, which could serve as a local shelter during emergencies, do not have backup power. Many residents in town are equipped with their own gas generators for power outages. Workshop participants expressed concern about relying on diesel gas generators for energy resilience to sustain them through natural hazard events, noting that on-site renewable energy power sources, such as solar PV with back-up battery storage, are needed to increase resilience for extended power outages that could be devastating to both private citizens and town operations.

Workshop participants also mentioned that public facilities could benefit from backup battery storage, especially facilities that may be in need of new generators, such as the Fire Department.

The Wendell Energy Committee is currently working to identify opportunities to implement solar arrays with battery storage on municipal properties, and they are particularly interested in including backup battery storage for public and private solar PV systems.

**Impacts of Drought and need for Water Resilience:** At the time of the MVP Workshop in late September 2020, Wendell was in the grips of a Stage 3: Critical Level Drought. Attendees described several instances of private wells in town that had run dry, forcing residents to look elsewhere for drinking water. The vulnerability of the power infrastructure mentioned above also threatens the town's drinking water as all towns operate on private wells. Though Wendell's municipal buildings are on a public well, the well has a low recovery rate and the Town does not have any capacity to distribute water.

Farmers in Wendell are well acquainted with disruptions to their operations caused by storms, but the recent drought raised concerns about being able to continue to grow feed and maintain field crops. One Wendell farmer expressed concern about the well she relies on to water her livestock running dry this summer.

The community garden next to the town offices does have a well, but officials do not know if the water is potable. Typically, the well is only used during the summer and the pipes are drained in winter, so additional infrastructure would be needed to be able to utilize the well year-round. A Water Study could examine the feasibility of using the Community Garden well for emergencies as well as the feasibility of implementing rainwater harvesting systems on municipal buildings and land. Workshop discussion also addressed the possibility of providing subsidized rain barrels for residents along with water conservation education. Harvested rainwater could be used for non-potable uses such as flushing toilets or watering gardens in drought. Other ways to be more water resilient could examine water sharing programs between neighbors or town businesses and institutions.

**Vulnerabilities related to wildfire:** Participants also voiced concerns with regard to the possibility of a wildfire outbreak and the Town's ability to manage a fire. Wendell is nearly 90 percent forest cover, which increases the Town's vulnerability to a wildfire outbreak. Combined with other factors such as more frequent and prolonged droughts, stands of dying Eastern Hemlock trees, and unmaintained private forest land, wildfire could spread very quickly throughout the Town.

Lack of water for firefighting purposes is also a concern. The Town has access to fire ponds, but they may run dry during a drought. Water supply at the Fire Station is limited, and the dry hydrant at Bowens Pond will be lost when the dam is removed; a project currently being planned by the Massachusetts Division of Ecological Restoration. According to the Fire Chief, there are two additional dry hydrants in Wendell that need to be replaced, and that with forestland town wide, identifying new water supplies and water storage opportunities for fire prevention is urgent. Bear Mountain was noted as a particular area of concern for wildfire.

The Fire Chief explained a critical need for funding to pay for new staffing and equipment, and that this is a high priority for the Fire Department. Approximately 6-10 additional trained firefighters are needed for the Fire Department to be sufficiently prepared in the face of the increasing threat of wildfire in Wendell. The Fire Station itself needs an upgrade as well, particularly a means of egress from the second floor, and a replacement for its backup generator.

**Shelter in Place:** Workshop participants also discussed how climate change may impact the ability of many residents to shelter in place, especially seniors, who comprise nearly 1/3 of the Town's population. Severe storms are noted to have damaged homes in Wendell, which can be costly to repair. Seniors on fixed incomes may not be able to afford needed repairs. The Town has been using CDBG funding to assist homeowners with storm proofing and rehabilitation of existing homes, but the program cannot keep up with demand, and the Town currently has a waitlist. Town hall has a kitchen and backup power, so it could be used to provide hot meals and short term shelter for warming up during emergency situations.

Additionally, concerns were raised about some seniors not having air conditioning in the summer months, and during the winter they may be reluctant to turn on the heat due to the

high cost of fuel. Loss of drinking water and household water supplies is an additional threat to seniors in homes with shallow wells that are vulnerable to drought.

At the same time, Wendell residents understand the importance of being self-reliant and pride themselves on being prepared and able to take care of themselves and one another. Workshop participants recalled that after an ice storm years ago, neighborhood captains were formed who were in charge of communicating with their neighborhood and checking on residents after storms. They discovered, however, that their neighbors were so self-reliant as to not want unsolicited check-ins, and the initiative has since been discontinued.

Community outreach and education for residents to learn how to increase their own resilience to natural hazards is a fitting strategy for Wendell and builds on one of the Town's key strengths: self-reliance. This approach can help individuals as well as the greater community become more resilient. For example, assistance for residents to trim dead trees and branches near their houses and driveways; how to manage stormwater on private property; clearing brush from around houses in case of fire, having emergency preparedness kits and go-bags ready, and understanding and applying public health protocols for coping with pandemics and vector-borne illnesses. Residents should also be guided to access regional and county public health information sources, such as [mass.gov](http://mass.gov) and MEMA, to become informed and prepared in the face of new vector-borne diseases and pandemics such as COVID-19, which threaten public health. The Town can use the Select Board newsletter, town website, and community email list serve for community outreach and education, such as on the MassSave program, which can help make homes more energy efficient to help with cooling and/or heating. One of the Town's top priorities is to implement a Reverse 911/CODE RED. However, the ongoing costs of this program is currently too expensive for Wendell to afford.

**Town Trees:** The Town Tree Warden has set aside money to do a hazardous tree inventory around public right-of-ways. Additional planning and funding is needed for the Town to remove and manage the hazardous trees that currently threaten to block roads and damage the power grid. Improved communication and coordination between Verizon and National Grid is needed for hazard tree work conducted by utilities companies. Residential properties also harbor a large number of hazardous trees in town, and residents need support with managing and paying for needed tree maintenance, which can be very expensive.

**Beavers:** Ongoing monitoring of beaver activity is necessary at several manmade dams in town, including McAvoy, Bowens, and Fiske Pond Dams, and Stillwaters Dam. Beavers are also causing localized flooding and beaver dam failure hazards at more than 100 locations in town, including on Jennison Road, Wendell Depot Road, and Farley Road. The Town has had success with implementing controlled breaching and flow control devices to reduce the risk of road flooding and beaver dam failures. More of these solutions are needed in additional locations. Beavers are active in the streams, ponds and wetlands adjacent to Wendell Depot Road, Jennison Road and Cooleyville Road making the failing culverts in those locations even more vulnerable to heavy rain events and flooding.

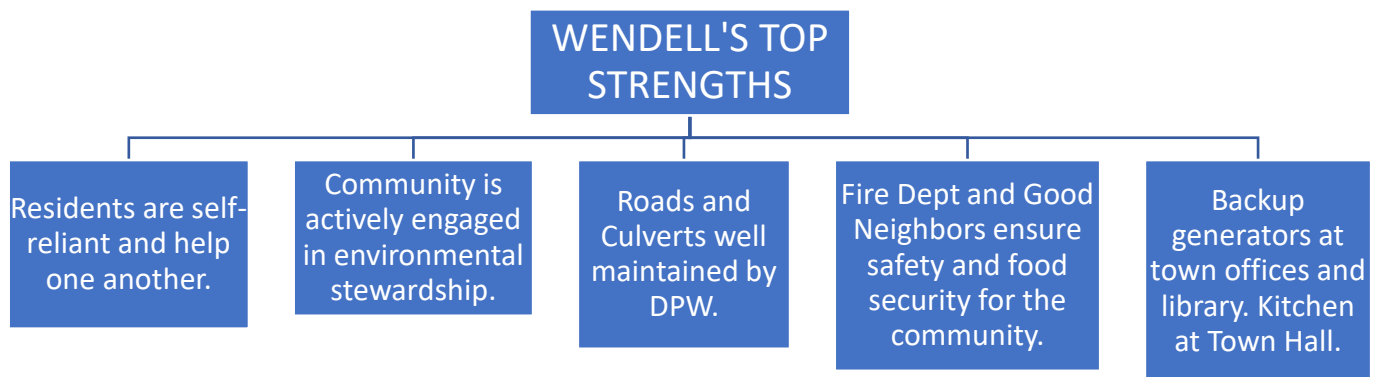
**Invasive species:** Workshop participants explained that a variety of landscapes in Wendell - from home gardens and roadsides, to forests, farm fields, and wetlands - have become increasingly susceptible to invasive species. These non-native plants pose an ecological risk by crowding out native plants, decreasing the availability of food, forage, and nesting habitat for insects, including wild native pollinators, which are keystone species that are vital to sustaining the whole ecosystem. Invasive species also threaten transportation infrastructure in town by clogging culverts, overwhelming roadsides, and destabilizing drainage areas. According to the Wendell Conservation Commission, Fiske Pond, Kentfield Brook, and Whetstone Brook are becoming overgrown with glossy buckthorn, and Japanese knotweed can be seen along roadsides and in drainage ditches.

**Pandemics and vector-borne illness:** As of February 18, 2021, Franklin County (population 68,000) has had 1,923 COVID cases since early March, with 99 deaths. Wendell has had 11 cases of COVID since the pandemic began, with some residents identified as close contacts and required to quarantine. While Wendell's BOH is fully compliant with the State's mandate regarding MAVEN surveillance, and the town's nurse is serving them well, the very small number of staff and limited resources will remain a challenge for meeting contemporary pandemic response best practices. Without shared health departments and services with neighboring towns, it is also challenging to assure consistent enforcement, disease management, and response to complaints. Public health preparedness, risk communication skills, and effective local communication channels, are areas that require vigilance, improvement, and oversight.

Massachusetts has seen cases of once non-existent or very rare tick-borne illnesses rise, including Anaplasmosis, Babesiosis, Lyme, Powassan, Spotted fever rickettsiosis and Tularemia. Tick activity and tick-borne diseases occur year-round in Massachusetts. Although tick activity is weather dependent, there are two peaks during the year; the first begins in March/April and lasts through August, and the second occurs in October-November. The majority of cases of tick-borne disease occur in June through August. Tickborne diseases experienced in residents and identified in lab tests of ticks have increased in number and in kind in Wendell due to climate change over the last ten years. Franklin County's rate of emergency department visits for tickborne diseases is among the highest in the state. Only Martha's Vineyard, Nantucket and Hampshire County have higher rates. The Board of Health reports that there has recently been an outbreak of rabies recently among the local raccoon population, which poses another threat to residents' health.

### ***Current Strengths and Assets***

The Wendell community is adept at being self-reliant and has a variety of social, environmental and infrastructural resources to draw upon to see it through natural hazard events. The Town is familiar with its vulnerabilities, but also its strengths and actions to address these vulnerabilities. Participants cited several strengths and assets that help keep their community resilient in the face of climate change and other challenges. They include:



**Emergency Operations Center:** The New Salem Fire Department provides a centralized EOC and is the preferred EOC for Wendell. There are several ways to get there, making access easy, even if one road is closed. The Wendell Fire Department can act as an EOC but has limited communications ability. It does have a generator, but it would need to be replaced. Communications will be improved when the radio towers around the county are upgraded, which is in progress.

**Town Buildings:** Town offices and the Library have backup power. Town Hall has a full kitchen, is ADA accessible, and could act as an emergency gathering place if necessary, however backup power may need to be upgraded. The Wendell Senior Center might work as a cooling center to cope with extreme temperatures. However, it is a very small building and does not have backup power.

**Societal Strengths and Assets:** Participants said that there is a strong sense of community in the Town, and neighbors are always willing to help each other out, especially during emergencies. Wendell residents are also adept at being self-reliant in the face of natural hazards. The Fire Department does wellness checks following up on the safety and needs of residents, especially elder adults.

**Food Security:** Good Neighbors Wendell is a food distribution program that covers both Wendell and New Salem, serving 50% of Wendell's population and 20% of New Salem's. The program gets food donations from local grocery stores as well as monetary donations and is able to provide meats and produce as well as pantry staples to ensure food security for residents.

Wendell also has its own Local Food Security Project to increase the community's food security by bolstering local production of food. The initiative is a neighbor-to-neighbor network, providing support for new gardeners and collaboration for established operations, promoting the elements of a local economy around food.

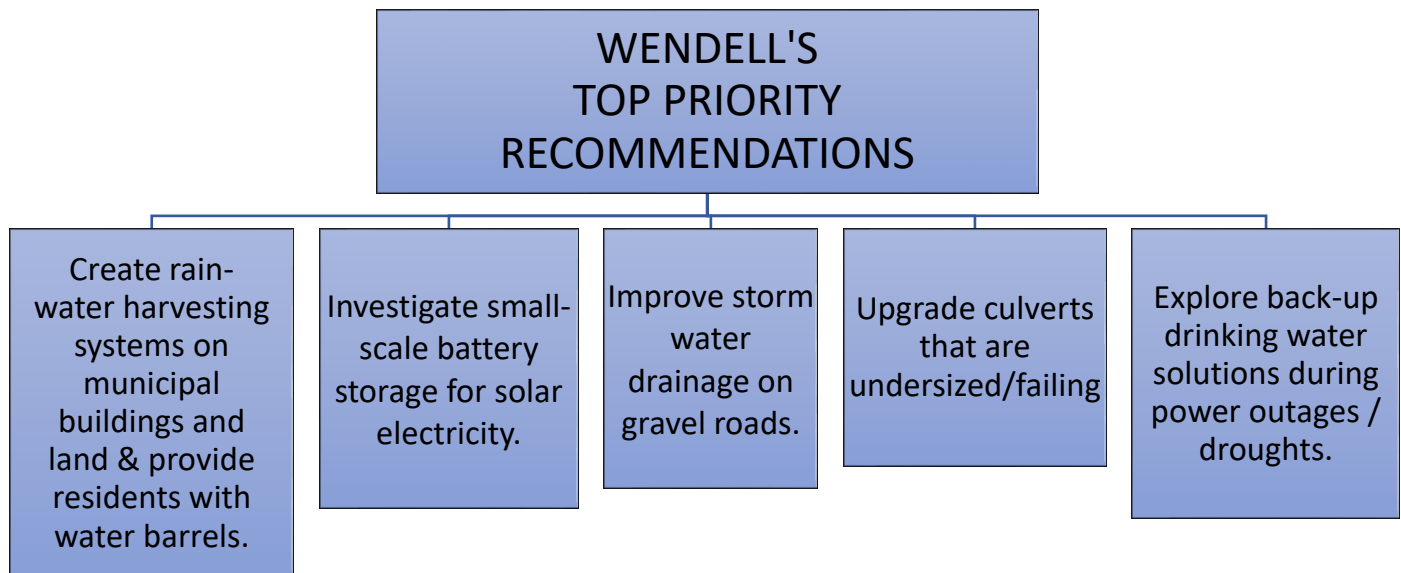
**Environmental Stewardship:** Many residents of Wendell are committed to environmental stewardship, sustainable farming, habitat conservation, clean energy, and native pollinators.





## ***Top Recommendations to Improve Resilience***

Following Wendell's in-person MVP workshop, participants voted online on the resiliency actions brainstormed during the meeting, and then ranked all of the actions via a poll in Survey Monkey. Full results from the survey are shown in the Appendix. Poll results were consolidated as appropriate to develop Wendell's top priority recommendations as shown below. Recommendations address key vulnerabilities while building upon current strengths.



***Improve storm water drainage on gravel roads*** is considered a top priority recommendation. Flash flooding is an ongoing issue affecting the extensive network of gravel roads in the Town, which can be addressing by developing Nature Based Solutions (NBS) such as green stormwater BMPs in combination with conventional drainage structures to mitigate runoff and erosion. Stone Road, New Salem Plain Road, Cooleyville Road, and Jennision Roads need stormwater BMPs to mitigate erosion hazards. For priority locations, the Town can coordinate with FRCOG to conduct stormwater site assessments and develop stormwater BMP concept designs based on the recent Franklin County Stormwater Pilot Project. This work will need to be balanced with the rural character of Wendell's roadways.

***Upgrade culverts that are undersized/failing*** is a top priority recommendation in order to address chronic flooding risks. Wendell's DPW is not able to replace with their own equipment and does not have the budget to replace the many other failing culverts town wide. Another priority is to refine the right-sizing protocol that FRCOG is currently developing so that it can be applied to Wendell's non-stream culverts as the town conducts ongoing maintenance and replacement to ensure the infrastructure is resilient to future larger rain events.

***Investigate small-scale battery storage for solar electricity in event of power outages coupled with the installation of solar generation on town properties*** was considered a high priority to address repetitive and/or long-term power outages. Public and private options for small-scale battery storage for solar electricity are needed. The Energy Committee would like to

help residents get small backup batteries for their new internet and VOIP phone systems. Some residents have generators while others have no backup power. Some town buildings have backup power while some do not. Clean energy generation and storage options need to be assessed for public and private use, and implementation guidance as well as grant funding to purchase necessary infrastructure is needed.

**Create rain-water harvesting systems on municipal buildings and land and provide residents with rain barrels** was a high priority that would apply rain harvesting as a nature-based solution to provide new sources of water for landscape uses in the face of crippling drought, but also in the event of power outages for non-drinking uses such as flushing toilets.

**Explore options for increasing drinking water resiliency** is a top priority that would establish easy access to emergency drinking water for residents whose wells run dry during a drought or stop working during a power outage. This could entail creating a neighbor water sharing program with residents, businesses, and private community institutions that would include MOUs for specific situations.

**Establish an MOU with Swift River School as a potential back-up shelter and explore back-up power options for the school** is an important next step for the Town to be able to open a shelter for residents unable to shelter in place during hazard events.

**Use CDGB funds and/or other funding to assist homeowners in rehabilitation of existing homes** was considered a medium priority. The Town is currently using CDBG funding to help residents pay for needed rehabilitation works on existing homes in Wendell, but there is more demand and a waitlist for additional interested residents.

**Identify new water sources and storage opportunities for households and water sources for fire prevention** was a medium priority to address the vulnerability of private wells to drought and of the Town's vast forestland to wildfire.

**Utilize newsletter, email lists, and website to improve emergency information outreach. Refer residents to MEMA guidance on home survival kits and how to prepare for drought, wildfires, and severe storms** was a medium priority that builds upon one of Wendell's greatest strengths, which is the self-reliance of its residents.

**Backup power at the Wendell Fire Department** The Wendell Fire Station's backup generator needs to be replaced. The building also needs a new second means of egress from the second floor. The Town is also interested in utilizing the significant open space at the Fire Department's spacious site to accommodate a solar array for renewable power generation that would be combined with battery storage. This vision stems from the Wendell Energy Committee's overall interest in developing ground mounted solar generation and storage on town owned land. The installation of solar generation is a top priority for Wendell.

**Community Resilience Building Risk Matrix**



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

**V** = Vulnerability **S** = Strength

**Top Priority Hazards**

Features	Location	Ownership	V/S	Recommendations	Severe Storms	Drought/ Extreme Heat	Wildfire	Pandemics & Vector-borne disease	Priority	Time
									H - M - L	Short Long Ongoing
<b>Infrastructural</b>										
Culverts and Bridges	Priority culverts on Cooleyville, and Jennison, Wendell Depot, and New Salem Road. The bridge on Kentfield Road.	Town	V/S	Wendell DPW conducts culvert cleanouts and maintenance regularly and on an ongoing basis. Culverts and bridges throughout town are undersized/under capacity and in need of assessment and upgrades, including on Wendell Depot Road, and New Salem Road. Failing culverts at Twin Ponds on Jennison Road and on Cooleyville Road are a priority due to regular flooding. There is a failing bridge on Kentfield Road over Whetstone Brook, which is also the primary flood-prone area in town. Develop right-sizing protocol of culverts for Wendell.	X				H	S
Heating/Cooling centers	Senior Center, Library	Town	V/S	Heating and Cooling centers may be needed to cope with extreme temperatures. The Library can act as a heating/cooling center and has backup power. The Senior Center can act as a cooling center, though capacity is very limited and the building lacks backup power. COVID-19 precautions may additionally limit group sizes in these facilities. Assess ventilation, backup power needs, and energy efficiency at the Senior Center.		X		X	M	L
Emergency Operations Center	EOC	Town	S	New Salem Fire Dept. performs well as EOC for both towns and is easy to reach via multiple routes if one road is closed during a hazard event.	X		X		H	S
Dirt Roads	Stone, Jennison, Colleyville, New Salem Plain Roads	Town	V	Wendell has 25 miles of dirt road which are increasingly difficult to maintain and isolate residents when they become muddy and impassable. Stormwater drainage upgrades and BMPs are needed on the priority hazardous dirt roads. Coordinate with the FRCOG's Planning Dept to develop a scope of work for stormwater site assessments on Wendell's gravel roads and stormwater BMP concept designs for priority locations. Seek funding to replace and upgrade failing culverts.	X				H	S

**Community Resilience Building Risk Matrix**



**H-M-L** priority for action over the **Short** or **Long** term (and **Ongoing**)

**V** = Vulnerability **S** = Strength

**Top Priority Hazards**

Features	Location	Ownership	V/S	Recommendations	Severe Storms	Drought/ Extreme Heat	Wildfire	Pandemics & Vector-borne disease	Priority	Time
									H - M - L	Short Long Ongoing
Public water supply	Priority areas	Private, Town	V	Increased water storage and distribution capacity is needed to help residents whose private wells have run dry or during power outages. Explore options. Examine feasibility of a large water storage cistern at Town Common, of using the Community Garden well as backup water supply, creating rainwater harvesting systems on municipal buildings and land, and providing residents with rain barrels along with water conservation education and strategies. Ensure that back up water storage systems are a requirement of new subdivisions and development in town.		X			H	L
Water supplies for fire prevention	Wendell State Forest, Bear Mt., Rail Roads	Private, Town	V	Water supply at the Fire Station is limited, and 1 dry hydrant will be lost at Bowens Pond after dam removal. 2 dry hydrant replacements are needed. Identify new water supplies and water storage opportunities for fire prevention town wide and in priority areas.		X	X		M	L
Public Buildings	Town-wide	Town	V/S	Town offices and library have backup generators. Wendell Fire Dept. backup generator needs to be replaced. Locate generators purchased by the Town for emergencies after an ice storm years ago. Evaluate public buildings and town-owned land for onsite power generation using renewable energy, such as solar PV, coupled with battery storage to increase resiliency. Consider a mobile battery generator as an option. Continue to implement energy efficiency measures to reduce overall energy use in municipal buildings through the Green Communities Program. Create rain-water harvesting systems on municipal buildings and land and provide residents with rain barrels.	X	X	X	X	M	S
Wireless communication facilities	Priority areas	Private	V	Cell phone reception is poor in many parts of town.	X	X	X	X	L	L
Dam Failure	Mcavoy, Ruggles, and Fiske Ponds, Stillwaters	Private, Town	V	The process for dam removal at Bowens Pond is underway. There is 1 other low hazard dam and 3 significant hazard dams in town that could impact residents, property and the environment if breached or failed. Fiske Pond Dam and 50% of Mcavoy Pond Dam is town-owned. Review dam records, inspection reports, inundation mapping and EAPS for significant hazard dams where available.	X				L	L

**Community Resilience Building Risk Matrix**



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

**V** = Vulnerability **S** = Strength

**Top Priority Hazards**

Features	Location	Ownership	V/S	Recommendations	Severe Storms	Drought/ Extreme Heat	Wildfire	Pandemics & Vector-borne disease	Priority		Time	
									H - M - L	H - M - L	Short	Long Ongoing
Power Outages and Solar Power and Battery Storage	Town-owned land	Town	V/S	Repetitive and/or long-term power outages are a risk to the community. Backup generators at town offices and library. Some residents have generators while others are vulnerable. The Wendell Fire Department needs its generator replaced. Public and private options for small-scale battery storage for solar electricity are needed. Conduct a Micro-grid feasibility study for a solar array with battery storage installed on town-owned land. If feasible, pursue grant funding to purchase necessary infrastructure. The Energy Committee would like to help residents get small backup batteries for their new internet and VOIP phone systems.	X	X			H		S	
Electrical and Internet utility grid	Town wide	Private, Town	V	Complete the Town Tree Assessment of public ROWs and municipal parcels. Support the Tree Warden to inspect hazardous trees adjacent to power and utility lines in town and communicate with Verizon and National Grid about hazard tree work to be conducted by utilities companies.	X		X		L		S	
Public funding for housing safety improvements	Priority areas	Private	V/S	Use CDB Grants and other funding where available to assist homeowners in storm proofing and rehabilitation of existing homes. The Town current has CDBG grant funding and a waitlist of interested homeowners.	X	X	X		M		S	
Electrical and Internet utility grid.	Primary Roads	Private, Town	V	Look for opportunities and funding to underground existing and new electrical utilities, especially along main roads in town.	X	X	X		L		S	
<b>Societal</b>												
Care for Vulnerable Populations	Good Neighbors, Fire Dept.	Private, Town	S	Fire departments go to great lengths to make sure people are ok. Residents help each other and work together. Good Neighbors Wendell provides food security for the elderly.	X	X	X	X	H		O	

**Community Resilience Building Risk Matrix**



**H-M-L** priority for action over the **Short** or **Long** term (and **Ongoing**)

**V** = Vulnerability **S** = Strength

**Top Priority Hazards**

Features	Location	Ownership	V/S	Recommendations	Severe Storms	Drought/ Extreme Heat	Wildfire	Pandemics & Vector-borne disease	Priority		Time	
									H - M - L		Short	Long Ongoing
Potential shelters in town	Swift River School, Town Hall	Town	S/V	Residents are self-reliant, rely on each other, and are good at sheltering in place. The Swift River School could serve as a shelter for residents who cannot shelter in place. An MOU is needed with the Town to use the school as a shelter. New solar power with storage or a new backup generator is needed at the school as well as a review of backup utilities, available supplies, susceptibility to hazards, occupancy and accessibility, and new COVID-19 safety requirements.	X	X	X	X	M		L	
Emergency response	Fire Station	Town	V	Seek funding to staff, equip, and train the Fire Department and to upgrade the Fire Station with additional egress from second floor.	X	X	X		M		L	
Pandemic preparedness	Town-wide	Town, Board of Health	V	Create or join a cross-jurisdictional sharing program for local boards of health to share nursing staff, reduce costs, qualify for funding, and expand capacity to meet current and future pandemic preparedness best practices.				X	L		L	
Household disaster preparedness	Town wide	Private	V/S	Utilize the town newsletters, email lists, and website to improve emergency information outreach. Refer residents to MEMA guidance on what to include in a home survival kit and how to prepare homes and structures for drought, wildfire and severe storms. Include links to mass.gov Pandemic Preparedness Checklists and public health guidance and directives.	X	X	X	X	H		S	
Regional Sheltering Plan and Mutual Aid Agreements	Priority areas	Private	V/S	Establish MOUs and procedures for opening, staffing, and equipping regional shelters and sharing costs among participating communities to help residents who may not be able to shelter in place.	X	X	X	X	L		L	
Evacuation	Town wide	Town	V	Wendell is nearly 90% forested and vulnerable to wildfire. Develop evacuation plans for areas that may be difficult to evacuate and where schools, senior housing, and camps are vulnerable. Work with REPC, the Fire Department and Senior Center to develop an emergency evacuation plan.	X	X	X		M		S	

**Community Resilience Building Risk Matrix**



**H-M-L** priority for action over the **Short** or **Long** term (and **Ongoing**)

**V** = Vulnerability **S** = Strength

**Top Priority Hazards**

Features	Location	Ownership	V/S	Recommendations	Severe Storms	Drought/ Extreme Heat	Wildfire	Pandemics & Vector-borne disease	Priority	Time
									H - M - L	Short Long Ongoing
Emergency Notification	Town wide	Town	V	Develop a project proposal and cost estimate for examining the feasibility of Reverse 911.	X	X	X	X	H	S
Fire safety	Town wide	Town	V	Increase education on general fire safety by posting regular information on the town website and in town newsletters. Advocate for a better burning season and burning hours with state officials.		X	X		M	S
Community resilience	Town wide	Town	V	Develop a community educational/promotional program to make sure residents know how to improve their self-reliance and make the community more resilient through actions on their own properties addressing stormwater, hazardous trees, rainwater harvesting, and water usage.	X	X	X	X	L	S+O
<b>Environmental</b>										
Environmental Stewardship	Town wide	Private, Town	S	The community values environmental conservation and stewardship. Many residents actively participate in ecological and environmental work in town and regionally.	X	X	X	X	M	O
Resilience to flooding, drought, and severe weather	Town wide	Private, Town	V/S	Develop a community educational or promotional program to make sure residents know how to improve personal reliance and also make the community be more resilient through actions on their own properties addressing stormwater, hazardous trees, wildfire, rain water harvesting, and water usage.	X	X	X	X	M	O
Fresh water ponds	Ruggles and Fiske Ponds	Town	S	The Town has Ruggles and Fiske Ponds for residents to cool off by swimming in hot weather.	X	X	X	X	H	S
Invasive Species	Fiske Pond, Kentfield Brook, Whetstone Brook, Wendell Depot Rd	Private, Town	V	Invasive species, including glossy buckthorn and japanese knotweed, are encroaching in wetlands and along roads in town. Create an invasive plant management plan to prioritize areas and actions.		X	X		M	O
Beaver dams posing significant hazard	Jennison Road, Wendell Depot Road, Farley Rd	Private, Town	V/S	Controlled breaching and flow control devices have been implemented at some problem areas and are working well. Beavers are still active at many locations in town, and ongoing monitoring and intervention is necessary to mitigate the risk of flooding caused by beaver impoundments.	X	X	X	X	L	O

**Community Resilience Building Risk Matrix**



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

**V** = Vulnerability **S** = Strength

**Top Priority Hazards**

Features	Location	Ownership	V/S	Recommendations	Severe Storms	Drought/ Extreme Heat	Wildfire	Pandemics & Vector-borne disease	Priority	Time
									H - M - L	Short Long Ongoing
Hazard trees	Priority areas	Private, Town	V	Complete the Town Tree Assessment and secure funding to address hazardous trees on public property. Set up a small municipal fund for residents to remove hazardous trees on private property.	X	X	X		L	S
Vector borne diseases and Pandemics	Town wide	Private or Public	V	Cases of insect-borne diseases have increased in Wendell, and EEE has been found in mosquitos locally. Explore tick and mosquito control options, and educate residents about risks associated with vector-borne diseases and actions they can take at home to protect their community, such as eliminating sources of standing water. Encourage residents to review the mass.gov Pandemic Preparedness Checklists and public health guidance on COVID-19. Support the Board of Health staff and services.				X	M	S+O
Debris Management Plan and Site	Local or Regional	Private or Public	V	The Town still needs to establish a debris management site for post-disaster debris.	X	X	X		L	L
Wildland urban interface	Town-wide	Private	V	Conduct a GIS-based forest fire risk assessment to better determine which areas in Town are at highest risk for a wildfire outbreak. Conduct public education and outreach to residents to better prepare them for a wildfire.		X	X		M	S
Privately owned forested areas	Town-wide	Private	S/V	Seek funding and technical assistance to develop educational materials and conduct outreach to landowners to encourage forest stewardship practices that produce more stable, successional forested landscapes and which reduce the risk of fire hazards and landslides. Distribute these materials via the Town website, Assessor's office tax mailings, and Conservation Commission.	X	X	X	X	L	L
Pollinator habitat	Priority locations	Private, Town	S/V	Pursue funding for final design and implementation of pollinator habitat gardens as a form of Nature Based Solutions on municipal property and engage the Wendell Pollinator Protectors in the educational outreach and long-term stewardship of pollinator gardens in Wendell.	X	X	X		L	L



## High Priority Recommendations

- Obtain funding for the design and installation of culvert upgrades at priority locations identified by the Highway Superintendent where aging and failing culverts are a chronic hazard, such as on Jennison Road, Wendell Depot Road, New Salem Road, and Cooleyville Road. The bridge on Kentfield Road over Whetstone Brook is failing and is also a priority for replacement.
- Obtain funding to address stormwater management, drainage and erosion issues throughout town and at priority locations including Stone Road, Jennison Road, Colleyville Road, and New Salem Plain Roads.
  - This includes:
    - Funding for a Rural Roads/Dirt Roads Assessment
    - Developing an education and outreach plan for residential stormwater management
    - Coordinating with the FRCOG's Planning Dept on a scope of work for stormwater site assessments and BMP concept designs for priority locations.
    - Applying a right-sizing protocol for non-stream crossing culverts.
- Investigate small-scale battery storage for solar electricity in event of power outages and install solar generation on town properties.
- Explore options to increase water storage and distribution capacity to help residents whose private wells have run dry or during power outages.
- Create rainwater harvesting systems on municipal buildings and land and provide residents with rain barrels and guidance on their installation, maintenance, and appropriate uses of stored rainwater.

## Medium Priority Recommendations

- Develop a project proposal and cost estimate for examining the feasibility of Reverse 911/CODE RED.
- Establish an MOU with Swift River School as a potential back-up shelter and explore back-up power options for the school. Consider options for onsite public and private power generation using renewable energy and combining it with battery storage. Use
- CDGB funds to assist homeowners in rehabilitation of existing homes.
- Identify new water sources and water storage opportunities for fire prevention.
- Utilize newsletter, email lists, and website to improve emergency information outreach. Refer residents to MEMA guidance on home survival kits and how to prepare for drought, wildfires, and severe storms.

- Replace the backup generator at the Wendell Fire Department and seek funding for installation of ground mounted solar power generation combined with battery storage.
- Create an invasive plant management plan to prioritize areas and actions.

### **Low Priority Recommendations**

- Work with the Regional Emergency Preparedness Committee (REPC), the Fire Dept., and the Senior Center to develop an emergency evacuation plan.
- Examine feasibility of using the Community Garden well as a backup water supply for either potable or non-potable uses.
- Complete Town Tree Assessment on public lands and right-of-ways and secure funding to address hazardous trees on public property.
- Pursue funding for final design and implementation of pollinator habitat gardens as a form of Nature Based Solutions on municipal property and engage the Wendell Pollinator Protectors in the educational outreach and long-term stewardship of pollinator gardens in Wendell.
- Develop a community educational/promotional program to make sure residents know how to improve personal self-reliance and make the community more resilient through actions on their own properties addressing stormwater, hazardous trees, rain water harvesting, and water usage.
- Create or join a cross-jurisdictional sharing program for local boards of health to share nursing staff, reduce costs, qualify for funding, and expand capacity to meet current and future pandemic preparedness best practices.

## ***CRB Workshop Participant -- Department/Commission/Representative:***

Barbara Craddock, Board of Health\*

Joe Cuneo, Fire Chief\*

Nan Riebschlaeger, Energy Committee, Co-Chair, Planning Board Clerk \*

Lori DiDonato, Selectboard, Energy Committee\*

Mary Thomas, Conservation Commission

Nina Keller, Wendell Gardeners' Ambassador

\*Completed an interview prior to the CRB Workshop

## ***Interview Respondents:***

Fletcher Harrington, Mount Grace Land Trust

Ivan Ussach Millers River Watershed Council

Anna Lawrence, Wendell Public Library

Rich Wilder, Highway Department

Nancy Aldrich, Town Coordinator for New Salem and Wendell

Barbara Craddock, Board of Health

Joe Cuneo, Fire Chief

Nan Riebschlaeger, Energy Committee, Co-Chair, Planning Board Clerk

Lauri DiDonato, Selectboard, Energy Committee

Nancy Aldrich, Town Coordinator for New Salem and Wendell

## ***CRB Workshop Project Team: Organization and Role***

### ***Town of Wendell***

Nancy Aldrich, Town Coordinator for New Salem and Wendell

Nan Riebschlaeger, Energy Committee, Co-Chair, Planning Board Clerk \*

### ***Franklin Regional Council of Governments:***

Kimberly Noake MacPhee, Land Use & Natural Resource Program Manager

Helena Farrell, Land Use & Natural Resource Planner

Megan Rhodes, Senior Land Use & Natural Resource Planner

**Recommended Citation**

Noake MacPhee K., Rhodes M., Farrell H., (2021) Town of Wendell Community Resilience Building Workshop Summary of Findings. Franklin Regional Council of Governments.

**Photo credits:**

Cover Photos: Town of Wendell flag and Wendell Town Offices, Town of Wendell

Page 7 Photos: Tree toppled by July 2006 tornado, Nancy Aldrich; Wendell dirt road, Athol Daily News, Beaver Damage, Andy Castillo, Greenfield Recorder.

Page 15 Photo: Pollinator Garden at the Wendell Free Library, Helena Farrell, FRCOG.

## **Appendices**

Maps

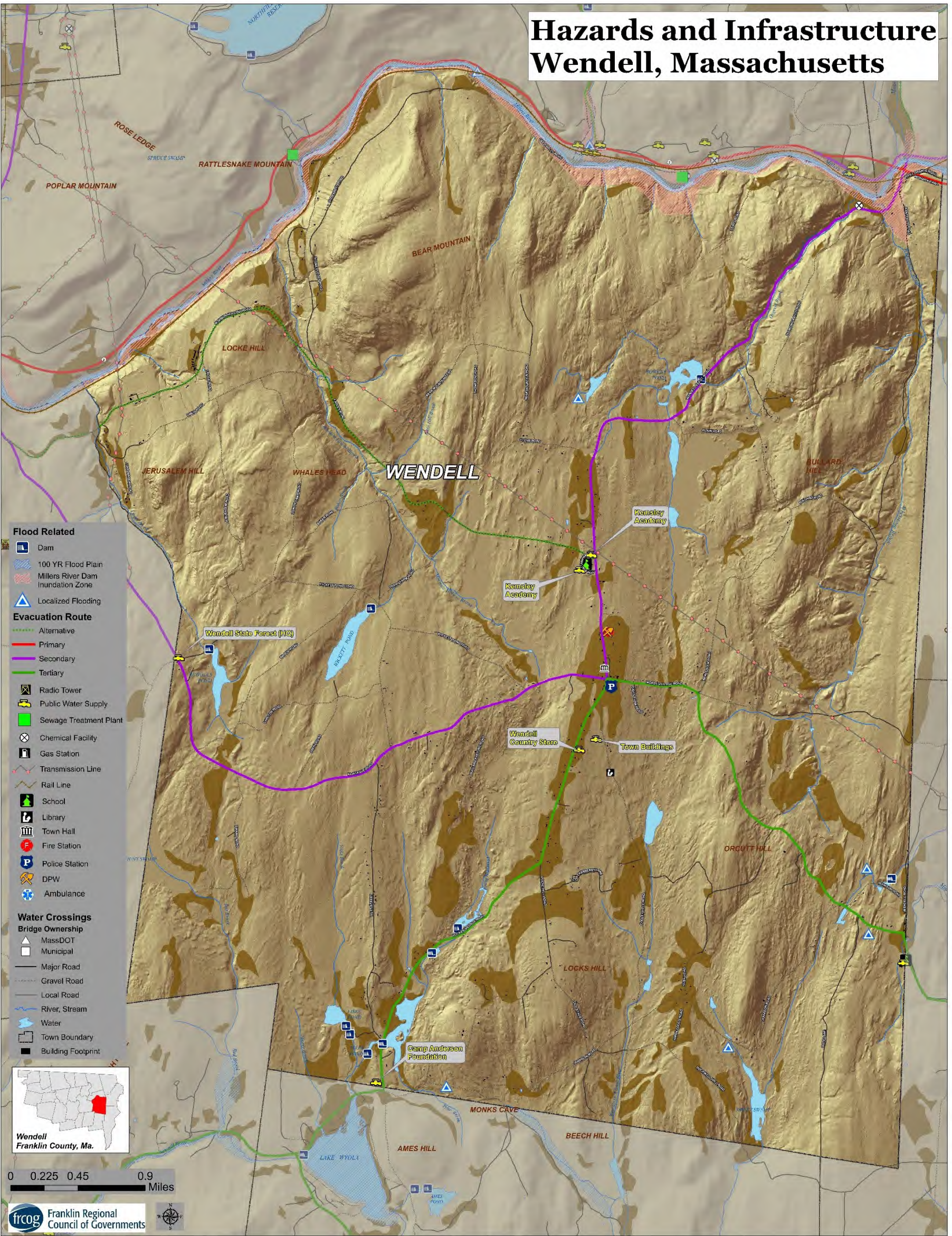
Outreach Packets

Interview Responses

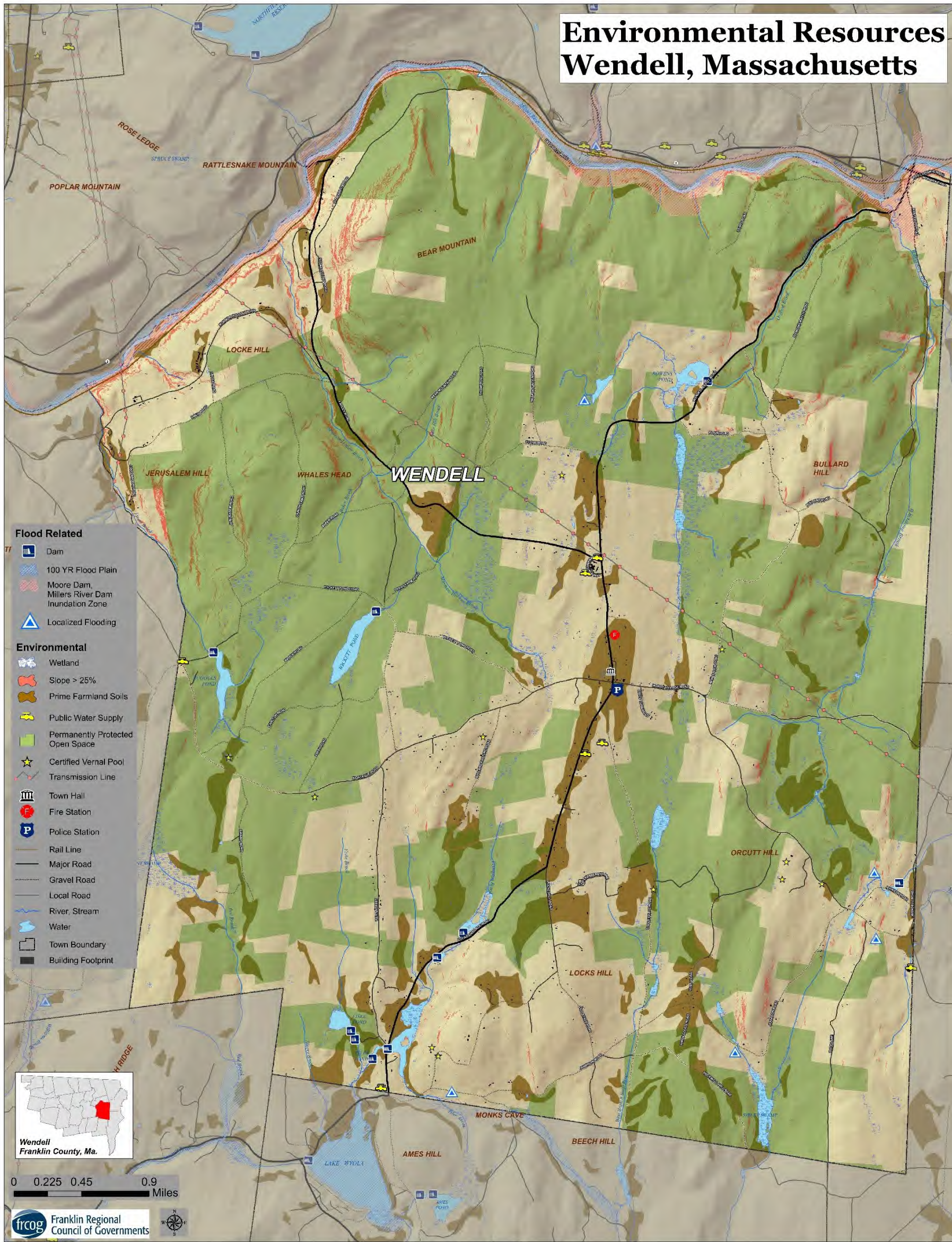
Exercise Outputs - Recommendation Prioritization

Workshop Presentation

# Hazards and Infrastructure Wendell, Massachusetts



# Environmental Resources Wendell, Massachusetts

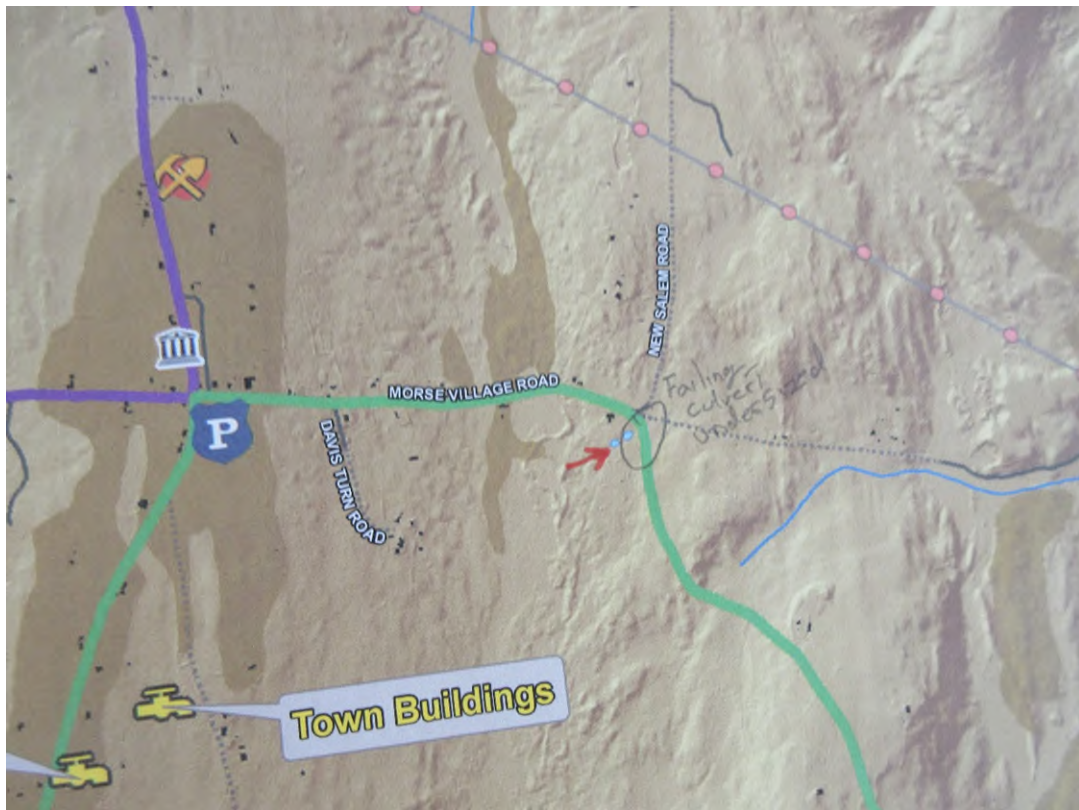




The Wendell Highway Supervisor, Rich Wilder, marked up a map of the town to indicate the locations of failing and undersized culverts, a failing bridge, and flood hazards related to beaver activity in town. This information has been documented in the MVP report.









**Community Outreach – Mailing Packets**

Please save the date and come to our  
**MVP COMMUNITY RESILIENCE BUILDING WORKSHOP**

Date: Thursday, September 24

1pm – 3pm

Please join us for a public workshop to discuss your experiences with climate related threats, such as flooding, severe winter storms, and extreme temperatures. Your thoughts will help to strengthen our climate resiliency plan.

The workshop is a part of Wendell's effort to become a designated MVP Community. During the workshop we will:

- ✓ Review the natural hazards impacting Wendell and how climate change is interacting with these hazards
- ✓ Discuss responses gathered from stakeholder outreach and further outline our strengths and vulnerabilities
- ✓ Brainstorm resiliency actions



**WE NEED YOUR INPUT!**

**Location: Wendell Town Common**

**Date: Thursday, September 24, 1pm – 3pm**

Please bring your mask and a chair. We will practice social distancing at this event.

Please RSVP to confirm attendance:

Nan Reibschlaeger, [planningboard@wendellmass.us](mailto:planningboard@wendellmass.us)

or (978) 544-3395 ext. 203



August 17, 2020

Dear Wendell Community Member:

We are working to gather information for Wendell's Community Resilience Building Plan and assist the Town in becoming a Municipal Vulnerability Preparedness (MVP)-designated community. During a kickoff meeting for the plan in March, we had the opportunity to hear from several community members and learn about some of the Town's strengths and vulnerabilities in the face of unpredictable and severe weather events. Due to the COVID-19 pandemic, our schedule for follow up meetings changed, and we are writing to let you know of next steps and opportunities for stakeholder input:

1. **Phone interviews** – We would like to **conduct a brief phone interview with you in order to gain insight on what climate change related issues are most important to you**; we will call you within the next week to schedule an interview at a convenient time. Included in this packet are background materials on how climate change may affect Wendell, and sample interview questions.
2. **Municipal Vulnerability Preparedness Workshop** – We will hold a *socially distant*, in-person workshop at the **Wendell Town Common** (details on attached flyer) on **Thursday, September 24<sup>th</sup> from 1:00pm – 3:00pm**.

As a reminder, the purpose of the Community Resilience Building Plan is to help the Town:

- Understand connections between natural hazards and local and regional planning/mitigation efforts;
- Evaluate strengths and vulnerabilities of residents, infrastructure, and natural resources;
- Develop and prioritize resilient actions for the town, residents and our local organizations and businesses; and
- Identify actions that can reduce the impact of hazards and increase resilience.

By going through this planning process, the town will become "MVP certified" and then eligible for state-funded implementation grants to help us be prepared for the lasting effects of climate change. We are eager to hear what issues are important to you and what projects you think are most important for Wendell to undertake. Your thoughts will help us to strengthen our climate resiliency plan and prioritize future projects.

We appreciate your time and we look forward to speaking with you.

Sincerely,

Nan Reibschlaeger, Town of Wendell

Megan Rhodes, FRCOG

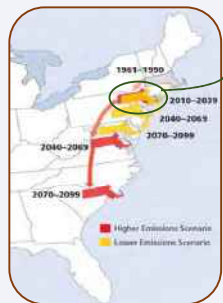
Helena Farrell, FRCOG

# Extreme Temperatures



## Current Conditions

Since the beginning of the century, temperatures in Massachusetts have increased almost 3 degrees Fahrenheit. Perhaps the most noticeable difference most of us have already recognized is that winter temperatures have risen approximately 4 degrees Fahrenheit.

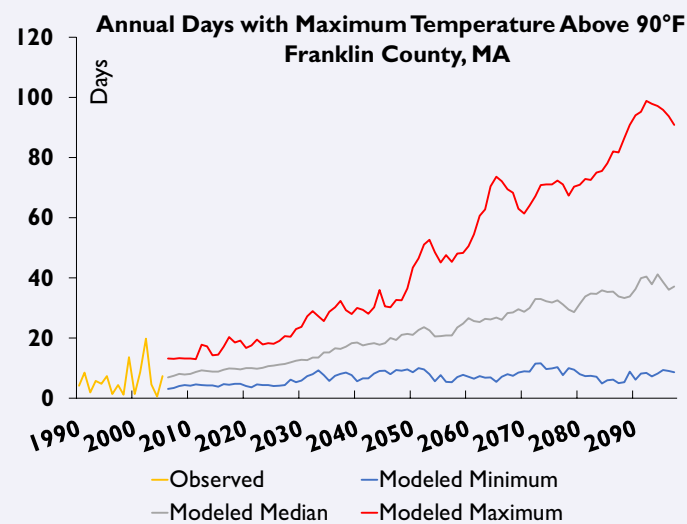


The map on the left shows how summer temperatures in Massachusetts may change through the end of the century. The circled region highlights where we currently are in the modeling scenarios.

Heavily forested areas such as Franklin County may experience more wildfires in the near future due to **drier and hotter conditions**. To the right is an image from a recent wildfire in nearby Leverett, which burned approximately 55 acres.  
*Photo courtesy of the Greenfield Recorder.*



## Future Conditions



The number of days per year with daily maximum temperatures over 90°F is projected to **increase by 18 days by the 2050s, and by 32 days** by the end of the century. Under a high emissions scenario, however, **there could be as many as 100 days** with a maximum temperature above 90°F by the end of the century.



Rising temperatures will undoubtedly have an impact on human health. Warmer climates allow populations of invasive pests such as ticks and mosquitoes to grow and live longer due to a delay of the first frost in the Fall. Additionally, an increase in the growing season means favorable habitats for these pests will expand. For example, ticks favor Japanese Barberry for nesting sites.

### TOP HAZARDS RELATED TO EXTREME TEMPERATURES



Rising Temperatures



Wildfire



Invasive Species

How have these hazards impacted your community?

How do you think they will change over time?

Some of the potential impacts to our natural resources and habitats:

- Shift in seasons
- Mismatch of key food sources & wildlife
- Mismatch of bloom time & pollinators
  - Drying of streams and wetlands
- Stresses on forest & ecosystem health
  - Loss of ecological diversity



Japanese Barberry



Garlic Mustard



Japanese Knotweed

Many species of invasive plants that **threaten biological diversity** thrive in warmer temperatures. A total of nineteen invasive species were identified in Wendell by the Franklin County Flora Group in 2019.

*Photo courtesy of the Greenfield Recorder.*



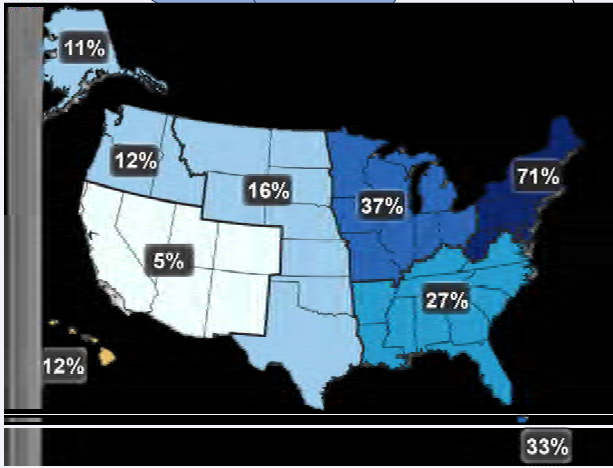
Information sourced from:  
- FRCOG's A Framework for Resilience  
- ResilientMA: Climate Change Clearing House for the Commonwealth

# Changes in Precipitation

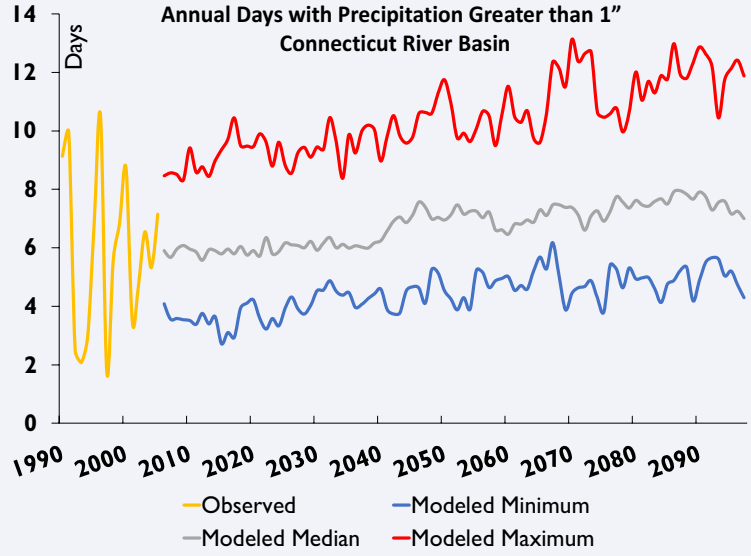
Annual precipitation in Massachusetts is projected to increase by as much as 7.3 inches by the end of this century

## Current Conditions

The Northeast has seen a greater increase in extreme precipitation than any other part of the country, experiencing a **71% increase** in heavy precipitation events between 1958 and 2012.



## Future Conditions



By the end of the century, our area could have **5 additional days** of rainstorms that dump over 1 inch of rain.

**TOP HAZARDS RELATED TO CHANGES IN PRECIPITATION**

**Flooding**

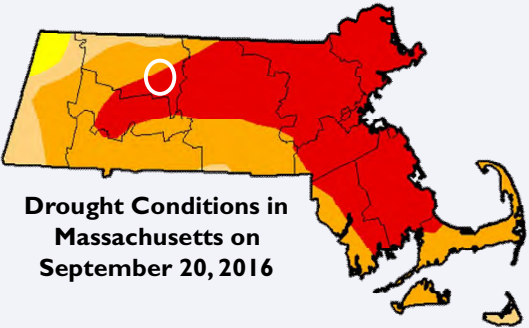
**Drought**

**Landslides**

*How have these hazards impacted your community?*

*How do you think they will change over time?*

## What about Drought?



From March 2015 to May 2016, Massachusetts experienced a prolonged drought. By September 2016, the majority of Franklin County entered a "severe drought." The drought devastated many farms in the region.

Although Massachusetts will see an increase in precipitation, it will likely come in the form of winter rain. Massachusetts is expected to see a **75% increase in drought**.



Historic dams in Massachusetts were not designed to handle the increasingly heavy rain events driven by climate change and many have aged past their life span. Wendell has three significant hazard and two low hazard dams that could destroy critical facilities and infrastructure, and impact residents, property, and the environment if they failed. Bowens Pond is pictured above. Photo by Greenfield Recorder.



Undersized or blocked culverts are located throughout town and lead to road flooding during heavy rain events. Beaver activity is also causing localized flooding at hundreds of locations in town, including Jennison Road, Wendell Depot Road, and Farley Road. Beaver activity and impoundments at Mcavoy, Bowens, Fiske Pond, and Stillwaters Dams contribute to the risk of dam failure. Photo by Greenfield Recorder.

**What other natural or built features in Wendell are affected by changes in precipitation? What areas in Town are most vulnerable to damage from increased precipitation?**

Information sourced from:  
 - FRCOG's A Framework for Resilience  
 - ResilientMA: Climate Change Clearing House for the Commonwealth

# Extreme Weather Events

Goal for Building Resilience to a Changing Climate:  
Protect life, property, natural resources and the economy

## Current Conditions

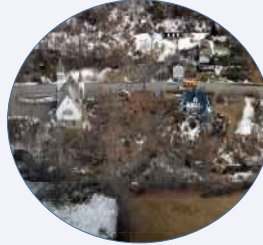
Below are some examples of recent extreme weather events that have affected Wendell and surrounding communities in Franklin County.

A tornado ripped a path of destruction through Wendell on July 11, 2006 bringing down trees and damaging structures shown in the photo to the right.



The summer of 2018 brought frequent rains and flash flood events to Franklin County, damaging crops on many local farms, as pictured to the left.

Pictured to the right is an example of the aftermath of a microburst that struck Orange in June of 2017. This storm included bouts of intense rain and hail, and caused thousands to lose power.







In February 2017, an EF-1 tornado hit Conway. Wind speeds reached 110 mph, and the tornado severely damaged or destroyed several houses and buildings. The United Congregational Church (pictured on the left) was damaged beyond repair and was eventually demolished.

The 2008 ice storm greatly impacted the Northeast. The ice downed numerous trees, branches, and power lines which resulted in wide spread power outages.






## Future Conditions

Extreme weather events are anticipated to increase due to climate change. Scientists predict the following factors will all **increase** over time:

-  **Frequency**
-  **Intensity**
-  **Duration**
-  **Geographic extent**

**Example:** A 2017 U.S. Climate Science Special Report noted that there has been an upward trend in North Atlantic hurricane activity since 1970. The report forecasts that future hurricanes formed in the North Atlantic will drop more rain and may have higher wind speeds. This is because a warmer atmosphere will hold more water, and hurricanes are efficient at wringing water out of the atmosphere and dumping it on land.

**TOP HAZARDS RELATED TO EXTREME WEATHER EVENTS**

			<i>How have these hazards impacted your community?</i>
<b>Hurricanes</b>	<b>Winter Storms</b>	<b>Tornados</b>	<i>How do you think they will change over time?</i>

- Some of the potential impacts to our infrastructure and local economy:
- Destruction of property and infrastructure
  - Disruption of critical services and transportation
    - Crop loss
  - Business interruption/economic disruption
    - Dam damage/failure

All photos in this panel are courtesy of the Greenfield Recorder.

Information sourced from:  
FRCOG's A Framework for Resilience  
ResilientMA: Climate Change Clearing House for the Commonwealth



**Community Outreach – Interview Responses**

## Wendell Municipal Vulnerability Preparedness – Outreach Guiding Questions

1. What is your name and role in Town? If a business owner, please name your business.

Ivan Ussach, Director of the Millers River Watershed Council

2. What changes have you seen in the natural environment over the course of your lifetime?

Some things that come to mind:

- Trees are leafing out earlier and leaves drop later in the fall
- Not scientific, but there has been a sense that the main stem of the millers river runs lower in the summer – doesn't have any data to back this up but just a general observation
- Increased amount of stormwater in the watershed and decreased water quality (again no hard data, just commenting as an observation)
- There has been a lot of large-scale solar development in the watershed, and there are a lot of concerns about erosion during development. People have definitely noticed sedimentation when there are construction projects going on. These projects are short lived so when it happens it is a relatively short cycle, but sedimentation is a huge problem.
- The watershed council is now doing temperature monitoring to get a handle of how the river is changing.

3. How have extreme weather events affected New Salem? Please use the ranking list below:

- a. Not at all
- b. Somewhat
- c. Moderate
- d. Frequent
- e. Extreme

He isn't all too familiar with what is going on in New Salem.

For Wendell – has worked with folks who live in Wendell and have commented that the drought for the past 6mos/year has been difficult.

Noted questions 4-9 aren't really relevant to his position – he is interested in these plans to provide a regional perspective and learn more about what is going on in these towns.

4. Which hazards have affected Wendell/New Salem the most?

- a. Flooding
- b. Drought
- c. Severe Wind
- d. Extreme Temperatures
- e. Invasive Species

## Wendell Municipal Vulnerability Preparedness – Outreach Guiding Questions

- f. Other
5. Based on your answer to #3, please provide an example of how your selected hazard(s) affected you or the Town.
  6. Which aspects of the Town (or your business or organization, as applicable) are most vulnerable to hazards?
  7. Which aspects of the Town (or your business or organization, as applicable) do you think are the most resilient to hazards?
  8. What steps (if any) are you taking to safeguard your home, business, organization services (as applicable) against severe weather hazards? Some examples include developing an emergency plan, installing hurricane windows, basement drainage, partnering with other local businesses)
    - a. If yes, please describe the actions taken.
    - b. If yes, what hazard was the adaptation in response to?
  9. What resources would be the most beneficial to you?
    - a. Information on funding
    - b. A workshop on how to prepare/enhance protection
    - c. Detailed region/sector impacts
    - d. Contact details for state or city officials
    - e. Details on how future climate changes will impact New Salem
    - f. A network of other small groups/organizations businesses (as applicable) in the area who face similar risks
    - g. Other
  10. What actions/projects would you like to see the Town undertake?

Not sure what types of projects towns would be interested in – has been involved in the MVP process with Towns in Worcester County but isn't sure about specific projects that have been adopted or what towns were most interested in.

## Wendell Municipal Vulnerability Preparedness – Outreach Guiding Questions

### ***11. Any other information you would like to provide?***

He would be interested in getting people together to talk about these issues regionally, had wanted to do a get together type thing pre-COVID. If many towns in the region/watershed are working on these plans it might be helpful to get folks together and talk about larger scale projects that could be implemented.

### ***Barbara Craddock – Board of Health***

#### **Hazards**

Tick-borne diseases – a few cases of Lyme and anaplasmosis have occurred in Wendell. EEE found in mosquitos locally but no cases.

Beavers destroying roads on Jennison Road and Wendell Depot Road plugging culverts under the road – had to give trapping permits. Residents contact BOH and Health Agent inspects site.

Trees down during storms causing power outages. Backup generators at town offices and library. Private homes vulnerable to power outages. Not as much heavy snow in recent years. Ice storms early when trees are still leafed out a concern.

Drought – a few residents with shallow wells run dry. But haven't had any wildfires recently.

#### **Strengths**

Wendell community very self-reliant and accustomed at taking care of one another. Program to volunteer to check on neighbors after hazard events had started but people lost interest.

Community values conservation and environmental stewardship.

Village neighbors program to keep in touch with elders. Good neighbors food pantry stayed open during the pandemic. Senior Care program provides rides for seniors to appointments.

#### **Vulnerabilities**

1/3 of population is senior citizens.

Sheltering in place.

## Wendell Municipal Vulnerability Preparedness – Outreach Guiding Questions

### Joe Cuneo – Fire Chief

1. What is your name and role in Town? If a business owner, please name your business.

Joe Cuneo, Fire Chief for Wendell and New Salem

2. What changes have you seen in the natural environment over the course of your lifetime?

Noticed a change in the overall weather patterns since he moved to western mass 20 years ago, it's warmer and wetter and weather events that we do get are more extreme. Also have noticed bird populations appearing earlier in the spring, and different blooming times, maple trees are in decline.

3. How have extreme weather events affected New Salem? Please use the ranking list below:
  - a. Not at all
  - b. Somewhat
  - c. Moderate
  - d. Frequent
  - e. Extreme

He didn't provide a ranking, but noted that the effect is generally manifested in power outages and roads being closed. Damage to infrastructure is a big concern.

4. Which hazards have affected New Salem/Wendell the most?
  - a. Flooding
    - i. Up on a hill, don't have many problems with flooding
  - b. Drought
    - i. Have had small brushfires occur over the past few years and they worsen due to drier conditions. Noted that it's very difficult to get fires out once they get going. He does see some fires climb up trees but not like out west, so at present there's not large explosive fires. Has noticed that fires seem to be getting worse when they do have them.  
September 2016 – had a lot of people on older shallow wells go dry. That was never really a problem up until then. Maybe 1 or 2 wells this past year that went dry, but more of a concern that it could happen again as droughts become more frequent. One woman was concerned b/c she used her well for livestock.
  - c. Severe Wind
    - i. Severe wind coupled with heavy rainfall, quick rapid heavy rainfall
  - d. Extreme Temperatures
  - e. Invasive Species
    - i. Have all kinds of problems with this – spoke to this more of an avid gardener and has seen a lot of pests. Concern for food resiliency. Ticks were worse last year than this year – concerned about tick borne diseases that are more common in southern regions becoming prevalent here.

## Wendell Municipal Vulnerability Preparedness – Outreach Guiding Questions

f. Other

5. Based on your answer to #3, please provide an example of how your selected hazard(s) affected you or the Town.

In addition to comments above:

Couple of places in both Towns where there have been washouts and that periodically happens, usually not a long term issue. Side roads are always a concern in both towns.

Beaver dams are also a concern in both towns.

6. Which aspects of the Town (or your business or organization, as applicable) are most vulnerable to hazards?

The whole electrical grid – that’s the nature of what it is and it’s not going to change unless someone buries all the lines, which would be incredibly expensive.

This becomes more acute because the Town now has fiber optic cables for internet service, not something you can just string back up like downed electrical wires.

7. Which aspects of the Town (or your business or organization, as applicable) do you think are the most resilient to hazards?

Folks that live around here are very resilient and good at making sure they are prepared

Both fire departments go to great lengths to make sure people are ok – opening EOC and providing water. Don’t have shelters but do have basic necessities.

Beyond that – not a whole lot that’s super resilient.

8. What steps (if any) are you taking to safeguard your home, business, organization services (as applicable) against severe weather hazards? Some examples include developing an emergency plan, installing hurricane windows, basement drainage, partnering with other local businesses)
- If yes, please describe the actions taken.
  - If yes, what hazard was the adaptation in response to?

Both Towns from time to time have to work on cleaning out and redesigning culvert systems to allow for better water flow, Towns are already working on this. In terms of other infrastructure and town buildings, not much you can really do with limited funding.

9. What resources would be the most beneficial to you?
- Information on funding

## Wendell Municipal Vulnerability Preparedness – Outreach Guiding Questions

- b. A workshop on how to prepare/enhance protection
- c. Detailed region/sector impacts
- d. Contact details for state or city officials
- e. Details on how future climate changes will impact New Salem
- f. A network of other small groups/organizations businesses (as applicable) in the area who face similar risks
- g. Other

10. What actions/projects would you like to see the Town undertake?

Would like to get a larger generator for the EOC because the one they have is undersized

Shared school doesn't have a generator, would like to be able to use the Swift River School as a shelter.

More assistance with redesigning culverts and bridges

Cooleyville road in New Salem, Cooleyville road in Wendell top 2 that come to mind (separate roads, there are 2 Cooleyville Roads). Wendell just completed a project on Wendell Depot road that fixed the bridge that goes into Orange.

11. ***Any other information you would like to provide?***

Wendell does have the train tracks going through the Town – there was a derailment 2 years ago and took days to get resolved. Not sure this plan can address that but it comes to mind as a hazard. Railroad crossings themselves are dangerous for drivers if they are not well maintained, fixed the one on Wendell Depot Road.

***Nancy Aldrich – Town Coordinator***

12. What is your name and role in Town? If a business owner, please name your business.

Nancy Aldrich, Town Coordinator for New Salem and Wendell

13. What changes have you seen in the natural environment over the course of your lifetime?

14. How have extreme weather events affected New Salem? Please use the ranking list below:

- a. Not at all
- b. Somewhat
- c. Moderate
- d. Frequent
- e. Extreme

## Wendell Municipal Vulnerability Preparedness – Outreach Guiding Questions

There have not been problems every year, but severe storms have been occurring more frequently which is a concern.

15. Which hazards have affected New Salem the most?

- a. Flooding
- b. Drought
- c. Severe Wind
- d. Extreme Temperatures
  - i. Ice Storm, October snowstorm, knocked out power for days on end. New Salem gets power from 5 different directions so sometimes takes a while.
- e. Invasive Species
- f. Other

16. Based on your answer to #3, please provide an example of how your selected hazard(s) affected you or the Town.

Most issues are related to a loss of power -- people losing heat in the winter (no one comes to emergency shelters, New Englanders don't want to use shelters) people only come to get water or charge cell phones. Instead of using the shelters, most find neighbors with generators. There are no public utilities to fall back on.

17. Which aspects of the Town (or your business or organization, as applicable) are most vulnerable to hazards?

Getting the roads plowed in the winter, large trees falling after severe wind storms

Nancy wrote letters to DOT/Jo Comerford to do tree clearing along Route 202 – for some reason they keep stopping work in Shutesbury. Belchertown to Shutesbury is clear but as soon as the road enters New Salem they have a habit of stopping work.

Wildfires such as the ones in Orange could convictable happen in heavily forested areas in New Salem and Wendell.

18. Which aspects of the Town (or your business or organization, as applicable) do you think are the most resilient to hazards?

They have a great emergency operation center – the EMD gets that up and running quickly. Open it up even if people don't come, and it is used as a warming shelter in the winter. They don't do cooling shelters, because there are no buildings with AC.

The senior center in Wendell might work for a cooling center.



## Wendell Municipal Vulnerability Preparedness – Outreach Guiding Questions

Wellness checks – the fire department completes these after major storms. FD goes door to door in both towns and checks in on people to see if they're ok or need any supplies. There are a lot of seniors in both towns so they want to keep up outreach after a storm event.

The DPW (both towns) quickly clears roads after storms, they work as long as they have to.

Good Neighbors Wendell - Food distribution program in Wendell program that covers both towns. Serve 50% of Wendell's population and 20% of New Salem's, missed a couple of weeks at the beginning of COVID but after that figured out. The program gets food donations from local grocery stores and monetary donations. They are able to provide more than just pantry staples – they have meats and produce as well.

19. What steps (if any) are you taking to safeguard your home, business, organization services (as applicable) against severe weather hazards? Some examples include developing an emergency plan, installing hurricane windows, basement drainage, partnering with other local businesses)
- If yes, please describe the actions taken.
  - If yes, what hazard was the adaptation in response to?

Aside from this plan, not much progress has been made. They do their best to keep roads clear and are working to fix high hazard culverts identified in FROCG's report (New Salem). Limited personnel and limited funds to work on these types of projects.

20. What resources would be the most beneficial to you?
- Information on funding
  - A workshop on how to prepare/enhance protection
  - Detailed region/sector impacts
  - Contact details for state or city officials
  - Details on how future climate changes will impact New Salem
  - A network of other small groups/organizations businesses (as applicable) in the area who face similar risks
  - Other

21. What actions/projects would you like to see the Town undertake?

Joe will have better answers for this for both Towns – updating generator in New Salem

Maybe equipment for brushfires?

### ***Nan Riebschlaeger***

1. What is your name and role in Town? If a business owner, please name your business.  
Nan Riebschlaeger – energy committee co-chair, planning board clerk

## Wendell Municipal Vulnerability Preparedness – Outreach Guiding Questions

2. What changes have you seen in the natural environment over the course of your lifetime?  
In my community very little. In the wider world there is less natural environment every year.
  
3. How have extreme weather events affected Wendell? Please use the ranking list below: C
  - a. Not at all
  - b. Somewhat
  - c. Moderate
  - d. Frequent
  - e. Extreme
  
4. Which hazards have affected Wendell the most? A
  - a. Flooding
  - b. Drought
  - c. Severe Wind
  - d. Extreme Temperatures
  - e. Invasive Species
  - f. Other
  
5. Based on your answer to #3, please provide an example of how your selected hazard(s) affected you or the Town.  
Many of our roads are dirt and when there are extreme rains these roads can become impassable.
  
6. Which aspects of the Town (or your business or organization, as applicable) are most vulnerable to hazards?  
Then roads are impassable the people who live on them are less reachable in case of emergency.
  
7. Which aspects of the Town (or your business or organization, as applicable) do you think are the most resilient to hazards? I think the general tendency to pitch in when needed helps as the community can work together to keep people in contact and help them get things they need.
  
8. What steps (if any) are you taking to safeguard your home, business, organization services (as applicable) against severe weather hazards? Some examples include developing an emergency plan, installing hurricane windows, basement drainage, partnering with other local businesses) None taken

## Wendell Municipal Vulnerability Preparedness – Outreach Guiding Questions

- a. If yes, please describe the actions taken.
  - b. If yes, what hazard was the adaptation in response to?
9. What resources would be the most beneficial to you?
- a. Information on funding
  - b. A workshop on how to prepare/enhance protection
  - c. Detailed region/sector impacts
  - d. Contact details for state or city officials
  - e. Details on how future climate changes will impact Wendell
  - f. A network of other small groups/organizations businesses (as applicable) in the area who face similar risks
10. What actions/projects would you like to see the Town undertake?

Anything that could help make the dirt roads less susceptible to becoming too muddy to pass

### ***Rich Wilder – Highway Superintendent***

1. What is your name and role in Town? If a business owner, please name your business.  
Rich Wilder, Highway Supervisor for Wendell
2. What changes have you seen in the natural environment over the course of your lifetime?  
  
25 miles of dirt road affected by dry weather – causes washboarding. More sanding than before bc of ice, and less plowing.
3. Which hazards have affected New Salem/Wendell the most?
  - a. Tree Work
    - i. No budget to work on hazard trees around power lines – Verizon owns poles but National Grid owns wires. Clean ups may require additional communication and coordination. Need to work together.
  - b. Culverts
    - i. Have to fail before get fixed. Undersized Cooleyville and Jennision Road.
  - c. Dams
    - i. Bowens Pond
    - ii. Lockes Village Rd. has had some repairs

### ***Laurie DiDonato – Selectboard and Energy Committee Co-chair***

## Wendell Municipal Vulnerability Preparedness – Outreach Guiding Questions

1. What is your name and role in Town? If a business owner, please name your business.  
Laurie DiDonato, Member of Selectboard and Energy Committee co-chair

2. What changes have you seen in the natural environment over the course of your lifetime?

More droughts and severe storms, more invasive species, increase in tick and mosquito borne diseases.

3. How have extreme weather events affected Wendell? Please use the ranking list below:
  - a. Not at all
  - b. Somewhat**
  - c. Moderate
  - d. Frequent
  - e. Extreme

4. Which hazards have affected Wendell the most?
  - a. Flooding**
  - b. Drought**
  - c. Severe Wind
  - d. Extreme Temperatures
  - e. Invasive Species**
  - f. Other – severe storms**

5. Based on your answer to #3, please provide an example of how your selected hazard(s) affected you or the Town.

Wells run dry in drought, farms struggle. Invasive species affect wetlands and crowd out natives decreasing pollinator habitat. Severe storms cause power outages, new broadband infrastructure. Flooding can affect roads ,

6. Which aspects of the Town (or your business or organization, as applicable) are most vulnerable to hazards?

Power and broadband infrastructure, dams and culverts, roads, farms

7. Which aspects of the Town (or your business or organization, as applicable) do you think are the most resilient to hazards

Town buildings have generators

## Wendell Municipal Vulnerability Preparedness – Outreach Guiding Questions

8. What steps (if any) are you taking to safeguard your home, business, organization services (as applicable) against severe weather hazards? Some examples include developing an emergency plan, installing hurricane windows, basement drainage, partnering with other local businesses)
  - a. If yes, please describe the actions taken.
  - b. If yes, what hazard was the adaptation in response to?

Our home has solar and battery backup to respond to power outages.

9. What resources would be the most beneficial to you?
  - a. Information on funding
  - b. A workshop on how to prepare/enhance protection**
  - c. Detailed region/sector impacts**
  - d. Contact details for state or city officials
  - e. Details on how future climate changes will impact Wendell**
  - f. A network of other small groups/organizations businesses (as applicable) in the area who face similar risks**
  - g. Other

10. What actions/projects would you like to see the Town undertake?

Solar and battery storage

1. What is your name and role in Town? If a business owner, please name your business.

Fletcher Harrington, Community Conservation Program Manager

New Salem – one of the southernmost towns in the region

Has been doing land protection in Mount Grace, meets with private land owners, protects land and supports community function

2. What changes have you seen in the natural environment over the course of your lifetime?

Personally – have seen more extreme weather events clustered closer together, not scientific but the increased amount of insects, less consistency in natural phenomenon (odd times of budding)

3. How have extreme weather events affected New Salem? Please use the ranking list below:
  - a. Not at all
  - b. Somewhat
  - c. Moderate
  - d. Frequent
  - e. Extreme

## Wendell Municipal Vulnerability Preparedness – Outreach Guiding Questions

Haven't had this experience on the ground – has seen brush fires in New Salem

4. Which hazards have affected New Salem the most?
  - a. Flooding
  - b. Drought
  - c. Severe Wind
  - d. Extreme Temperatures
  - e. Invasive Species
  - f. Other

New Salem is fairly well conserved, noticed participants were concerned about flooding in specific areas  
Concerned about

Drought/brushfires are a concern

5. Based on your answer to #3, please provide an example of how your selected hazard(s) affected you or the Town.
6. Which aspects of the Town (or your business or organization, as applicable) are most vulnerable to hazards?

Vulnerabilities – Food security, being able to distribute farms and if the farms in Town are able to weather hazards – not a ton of farms in Town

Not a ton of development pressure

7. Which aspects of the Town (or your business or organization, as applicable) do you think are the most resilient to hazards?

Overall, resilience based on the land that is conserved – large tracts of intact habitat, which is more resilient to natural hazards that may take place, and the Town is water rich

8. What steps (if any) are you taking to safeguard your home, business, organization services (as applicable) against severe weather hazards? Some examples include developing an emergency plan, installing hurricane windows, basement drainage, partnering with other local businesses)
  - a. If yes, please describe the actions taken.
  - b. If yes, what hazard was the adaptation in response to?

## Wendell Municipal Vulnerability Preparedness – Outreach Guiding Questions

9. What resources would be the most beneficial to you?
- Information on funding
  - A workshop on how to prepare/enhance protection
  - Detailed region/sector impacts
  - Contact details for state or city officials
  - Details on how future climate changes will impact New Salem
  - A network of other small groups/organizations businesses (as applicable) in the area who face similar risks
  - Other

10. What actions/projects would you like to see the Town undertake?

From a broad perspective, conserving land along streams, don't want development along streams and should preserve flood storage

Emergency resources, would like to be able to see them do infrastructure changes, remove beaver activity

More protection of farmland in New Salem, any Town's ability to produce food is important, preserve land/make affordable for farmers in the future

11. **Any other information you would like to provide?**

*Greenfield – flooding is a huge issue, protecting additional land along the floodplain. Greenfield hasn't done a CR in 10 years, finding \$ is difficult but the City supports it. Important for flood storage Green River and some of tributaries have significant erosion issues and invasive issues*

*Bernardston – significant beaver issue in the Town Center, will talk to Farm program manager, interested in food system issues*

*Orange – access to local healthy food is an issue*

**Anna Lawrence – Librarian at Wendell Free Library**

### **Hazards**

### **Strengths**

Environmentally conscious residents. Good stewards of the environment.

### **Vulnerabilities**

### **Potential community actions**

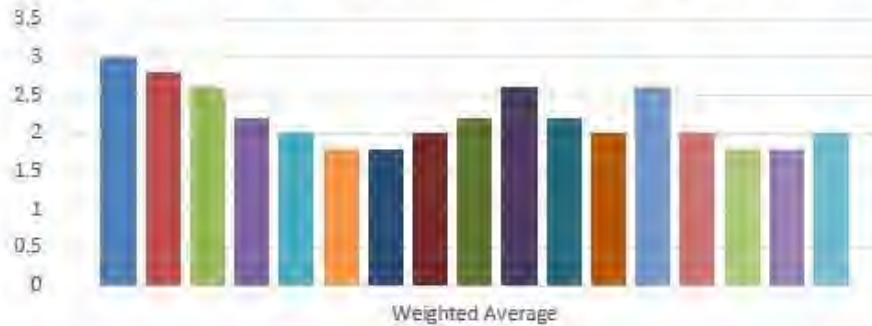
# Exercise Outputs - Recommendation Prioritization

Wendell MVP Priority Actions						
Rank the following actions in order of priority.						
	Low Priority		Medium Priority		High Priority	
Replace generator at the Wendell Fire Department.	0.00%	0	0.00%	0	100.00%	5
Upgrade culverts that are undersized/failing.	0.00%	0	20.00%	1	80.00%	4
Improve storm water drainage on gravel roads.	0.00%	0	40.00%	2	60.00%	3
Use CDGB funds to assist homeowners in rehabilitation of existing homes.	20.00%	1	40.00%	2	40.00%	2
Investigate small-scale battery storage for solar electricity in event of power outages.	40.00%	2	20.00%	1	40.00%	2
Examine feasibility of a large underground water storage cistern at Town Common.	20.00%	1	80.00%	4	0.00%	0
Examine feasibility of using the Community Garden well as a backup water supply for either potable or non-potable uses.	40.00%	2	40.00%	2	20.00%	1
Create rain-water harvesting systems on municipal buildings and land and provide residents with rain barrels.	40.00%	2	20.00%	1	40.00%	2
Identify new water sources and water storage opportunities for fire prevention.	20.00%	1	40.00%	2	40.00%	2
Establish an MOU with Swift River School as a potential back-up shelter and explore back-up power options for the school.	0.00%	0	40.00%	2	60.00%	3
Utilize newsletter, email lists, and website to improve emergency information outreach. Refer residents to MEMA guidance on home survival kits and how to prepare for drought, wildfires, and severe storms.	20.00%	1	40.00%	2	40.00%	2
Work with REPC, the Fire Dept, and Senior Center to develop an emergency evacuation plan.	20.00%	1	60.00%	3	20.00%	1
Develop a project proposal and cost estimate for examining the feasibility of Reverse 911.	20.00%	1	0.00%	0	80.00%	4
Develop a community educational/promotional program to make sure residents know how to improve personal reliance and make the community more resilient through actions on their own properties addressing stormwater, hazardous trees, rain water harvesting, and water usage.	20.00%	1	60.00%	3	20.00%	1
Create an invasive plant management plan to prioritize areas and actions.	40.00%	2	40.00%	2	20.00%	1
Complete Town Tree Assessment on public lands and right-of-ways and secure funding to address hazardous trees on public property.	40.00%	2	40.00%	2	20.00%	1
Pursue funding for final design and implementation of pollinator habitat gardens as a form of Nature Based Solutions on municipal property and engage the Wendell Pollinator Protectors in the educational outreach and long-term stewardship of pollinator gardens in Wendell.	20.00%	1	60.00%	3	20.00%	1



## Exercise Outputs - Recommendation Prioritization

Rank the following actions in order of priority.



- Replace generator at the Wendell Fire Department.
- Upgrade culverts that are undersized/failing.
- Improve storm water drainage on gravel roads.
- Use CDGB funds to assist homeowners in rehabilitation of existing homes.
- Investigate small-scale battery storage for solar electricity in event of power outages.
- Examine feasibility of a large underground water storage cistern at Town Common.
- Examine feasibility of using the Community Garden well as a backup water supply for either potable or non-potable uses.
- Create rain-water harvesting systems on municipal buildings and land and provide residents with rain barrels.
- Identify new water sources and water storage opportunities for fire prevention.
- Establish an MOU with Swift River School as a potential back-up shelter and explore back-up power options for the school.
- Utilize newsletter, email lists, and website to improve emergency information outreach. Refer residents to MEMA guidance on home survival kits and how to prepare for drought, wildfires, and severe storms.
- Work with REPC, the Fire Dept, and Senior Center to develop an emergency evacuation plan.
- Develop a project proposal and cost estimate for examining the feasibility of Reverse 911.
- Develop a community educational/promotional program to make sure residents know how to improve personal reliance and make the community more resilient through actions on their own properties addressing stormwater, hazardous trees, rain water harvesting, a
- Create an invasive plant management plan to prioritize areas and actions.
- Complete Town Tree Assessment on public lands and right-of-ways and secure funding to address hazardous trees on public property.
- Pursue funding for final design and implementation of pollinator habitat gardens as a form of Nature Based Solutions on municipal property and engage the Wendell Pollinator Protectors in the educational outreach and long-term stewardship of pollinator gar

# WORKSHOP PRESENTATION

Community Resilience Building Workshop

Town of Wendell

September 2020

## Participant Introductions



Average/Extreme Temperatures



Hurricanes/Tropical Storms



Wildfires



Severe Winter Storm



Invasive Species



Tornadoes



Other Severe Weather



Earthquake

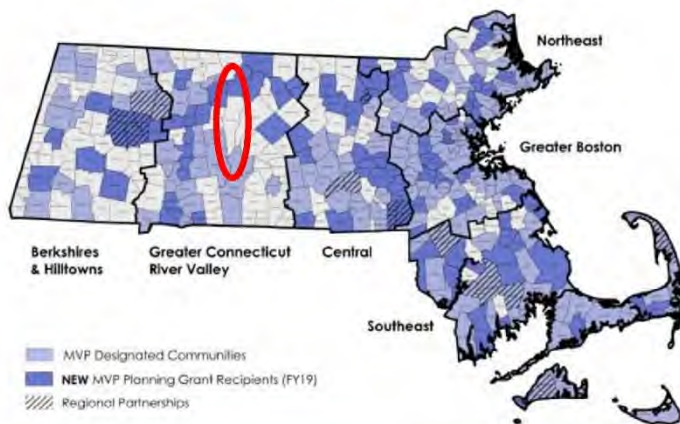
- Name
- Position/Department
- How have you/your community been impacted by natural hazards?

## Workshop Agenda

- Overview of the Municipal Vulnerability Preparedness (MVP) Program
- Review community outreach and top hazards
- Identify Strengths and Vulnerabilities and develop action items
- Discuss next steps

## Municipal Vulnerability Preparedness (MVP) Program

**\$25 Million since 2017**



## Why the MVP program?

*A climate resilient town will be able to maintain functions, protect its residents and emerge stronger and better prepared for future storm events and a changing climate.*



The goal of building resilience is to protect life, property, natural resources and the economy

## Massachusetts' Changing Climate

### Changing Weather



Changes in  
Precipitation



Rising  
Temperatures



Extreme  
Weather

### Amplifies Existing Risks



Natural resources & habitat



Human health & welfare

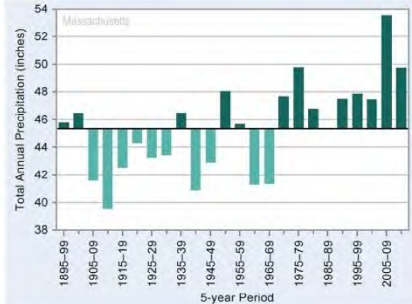


Local economy & infrastructure

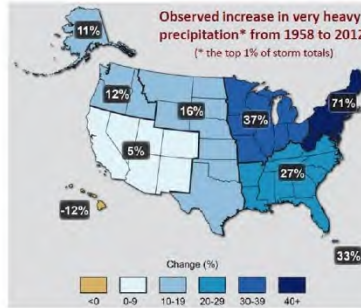


# Heavy Precipitation

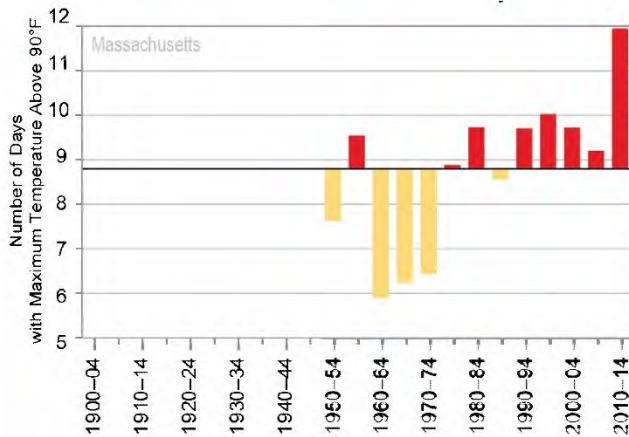
### Observed Annual Precipitation



### Observed Increase in Heavy Precipitation



# Higher Temperatures



- Number of days >90° are predicted to increase.
- By 2050 - 6 to 25 more days
- By 2100 - 9 to 60 more days

# Extreme Weather Events



Flash flooding,  
tropical storms

Photo credit: John Lepore



Severe wind,  
thunderstorms



Tornadoes

Photo credit for bottom two photos: The Greenfield Recorder



The frequency,  
intensity,  
duration and  
geographic  
extent of these  
extreme storms  
is likely to  
increase.

# Community Resilience Building Activities

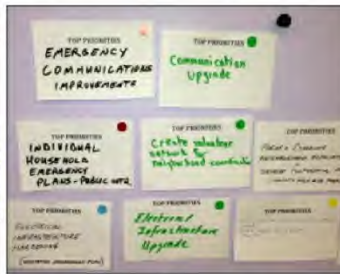


Photo credit: The Nature Conservancy

# Project Tasks

- Conduct stakeholder **interviews** ★
- Complete MVP **Workshop Activities**
  - ❖Review Massachusetts’ changing climate ★
  - ❖Identify top hazards
  - ❖Identify strengths and vulnerabilities ←
  - ❖Brainstorm resiliency projects

# Workshop Outcomes

Main goal: build resilience!

1. Understand strengths and vulnerabilities in three sectors



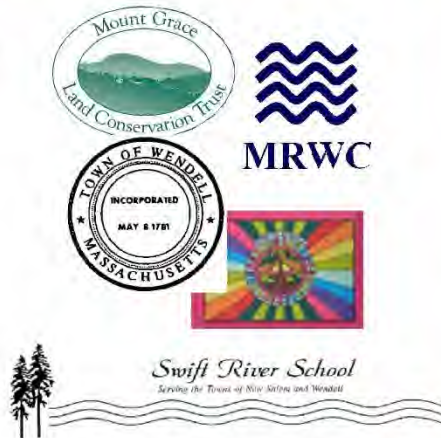
Infrastructure Society Environment



2. Actions to build on strengths and address vulnerabilities

## Community Outreach

- Committee developed a list of 21 community stakeholders
- Local businesses, town departments, conservation organizations
- Asked how they have been impacted by hazards and what their concerns are for the future
- Interviewed 7 community members – heard a variety of perspectives and concerns



## Community Outreach

### Identified Top Hazards

Severe Storms



Tick-borne illness



Drought



Wildfires



Photo credit: Wendell Fire Department





## Severe Storms: strong wind and heavy rain

- Electrical grid and fiber optic internet services vulnerable to tree damage from sever storms
- Power comes in from several directions and some residents lose power for days on end
- Severe wind coupled with heavy rainfall can damage infrastructure
- The backup generator for the Emergency Operation Center is undersized

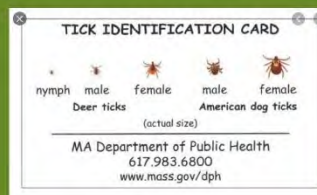


Photo credits: Athol Daily News (above) The Greenfield Recorder (below)



## Vector-borne diseases

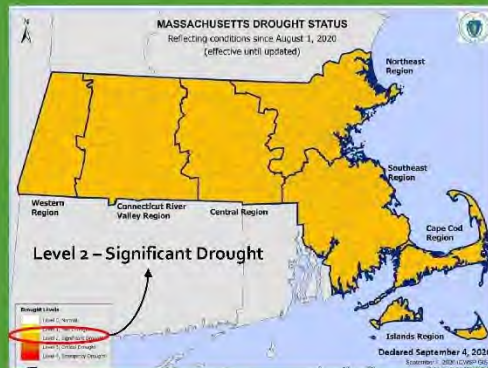
- Tick populations have increased and are prevalent for longer periods of time
- Concern that the community will see an increase in insect-borne diseases that are more common in warmer climates
- Lyme and anaplasmosis have occurred in Wendell. EEE found in mosquitos locally but no cases.





## Drought

- Small brushfires can grow rapidly during droughts – difficult to extinguish
- More shallow wells may run dry more frequently
- Affects local forests, farms, orchards and vineyards



## Wildfire

- Brushfires have occurred in recent years and worsened due to drier conditions
- Very difficult to put out wildfires once they start
- Water for fire suppression may be insufficient in some densely wooded areas of town



Photo credit: The Greenfield Recorder

## Workshop Process

### 1 Identify strengths and vulnerabilities



Infrastructure

#### Strength

- Culvert maintenance is regular and on-going

#### Vulnerability

- Undersized culverts and bridges
- Electrical grid and fiber optic cable



Environment

- Large parcels of conserved land

- Culverts are blocked by beaver dams



Society

- Residential emergency preparedness
- Good Neighbors Food Pantry

- Sheltering facility lacks backup power

## Workshop Process

### 2 Brainstorm resiliency projects

Examples:



Upgrade culverts, flood-proof drinking water supplies



Evacuation drills and severe storms communications protocols to protect vulnerable populations



Develop water supply for fire suppression



Photo credit: Mass DER

## Nature Based Solutions



Rain garden at the Girls Club in Greenfield



Stormwater management project on Olive Street in Greenfield

## Community Resilience Building Matrix

Features	Location	Identified Strength or Vulnerability	Proposed Action	Priority	
				H - M - L	Short Term / Long / Ongoing
<b>Infrastructure</b>					
Culverts and bridges	Diverse areas such as Colbyville Road	Culverts and bridges throughout town are under repair and require 100% of New Salem's culverts are in critical condition. There are several culverts in critical condition on Robinson Road and Jewell Road.			
Power outages	Town-wide	Repetitive and/or long temporary outages are a risk to the community. The Town gets power from several directions and outages for some residents last a long time. Also, new broadband cables throughout Town are more difficult to repair than electric wires after being knocked down.			
Gravel roads	Town-wide & paved areas - New Salem, Colbyville Road	Approximately 52% of the roads in New Salem are unpaved. Gravel roads can exacerbate already present issues with flooding, and become increasingly damaged during quick freeze/thaw periods.			
Water resilience	Town-wide	New Salem doesn't have a public water supply and water for firefighting purposes may be limited.	Develop a water resiliency plan and inventory possible sources of water for fire suppression.		
Dam Failure	Marsava North Dam and Mattawa South Dam in Orange	New Salem should continue to work with the Town of Orange to repair the inundation areas of the dams and establish emergency evacuation plans.			
Department of Public Works	Town-wide	The DPW responds quickly to hazards and routinely clears roads to keep emergency evacuation routes open and safe.			
Municipal Offices	Town Hall, Old Academy Building	Town buildings are in need of repair and upgrades.			
Development in the floodplain	Town-wide	There is very little residential development in the floodplain, which safeguards residents against flooding and property damage.			

Information gathered during stakeholder outreach and the kickoff meeting

We'll focus on brainstorming actions

## Next Steps

- Compile Information into Wendell's **MVP Plan**
- **Listening Session** with Town Residents and Stakeholders
- Finalize MVP Report and Request **MVP Designation**

## **PUBLIC INPUT DOCUMENTATION**

A public listening session and public comment period were held to provide Wendell residents and Town Officials an opportunity to review and comment upon the draft Wendell MVP Resiliency Plan.

The public listening session was held as a virtual standalone meeting on March 25, 2021 at 10:00 a.m. via zoom. FRCOG staff presented the MVP program as well as findings from the workshop, provided opportunities for feedback on the Town's top resiliency actions, and answered questions from attendees.

The following were in attendance:

- Barbara Craddock, Board of Health
- Joe Cuneo, Fire Department
- Laurie DiDonato, Select Board and Energy Committee
- Nancy Riebschlaeger, Planning Board and Energy Committee
- Andrew Smith, Regional MVP Coordinator
- Helena Farrell, Land Use Planner, FRCOG
- Megan Rhodes, Land Use/Transportation Planner II, FRCOG

Participants provided feedback on the draft report attended and asked questions during the listening; comments are summarized below. Overall the meeting attendees were happy with the plan and the presentation.

Summary of comments from the March 25, 2021 Listening Session:

1. Participants were concerned with the impacts from storm events on power outages and roadways
2. Resiliency in power and water are high priorities
3. Participants were interested in the Town taking on projects that address:
  - a. Road infrastructure and drainage
  - b. Back up power and solar generation
  - c. Reinforcing communication lines
  - d. The need for balance between the rural, scenic character of the town and infrastructure projects.

We held a vote on which resiliency actions the Town should take on first and the following responses were recorded:

1. Improve gravel roads and drainage
2. Increase water resiliency during drought and power outages
3. Increase energy resiliency for power outages

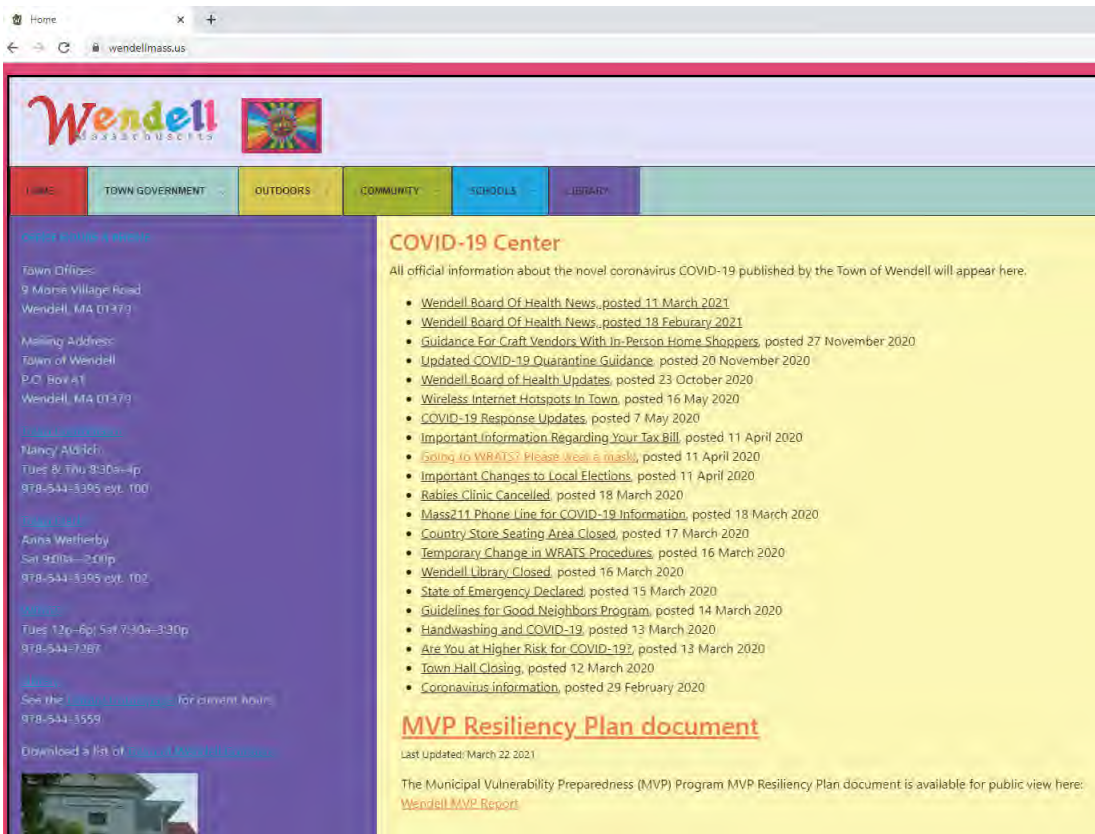
#### 4. Upgrade undersized/failing culverts

A discussion was also held regarding the appropriate prioritization of a number of action items.

The public comment period was held from March 25<sup>th</sup> through April 8, 2021, during which the public was invited to submit comments via email. No comments were received.

The public listening session and public comment period were advertised on the Town of Wendell's website. The event was advertised via a flyer posted on the Town website and sent to all town committees.

#### Posting of Draft Wendell MVP Report on Town Website for Public Comment:



# Community MVP\* Virtual Listening Session

\*Municipal Vulnerability Preparedness

**March 25, 2021, 10:00 to 11:00 AM**

- ✓ Your Input is Important!
- ✓ Last Step for Town Certification
- ✓ Major Funding for Climate Change Preparedness



**Register** in advance for this Zoom session: <https://tinyurl.com/dvbwdb7y>

**After registering**, you will receive a confirmation email containing information about joining the session.

**Questions?** Contact Megan Rhodes, [mrhodes@frcog.org](mailto:mrhodes@frcog.org)

*Hosted by the Town of Wendell and the Franklin Regional Council of Governments (FRCOG)*





**Municipal Vulnerability Preparedness (MVP) Listening Session**

**Town of Wendell**

March 25<sup>th</sup>, 2021

**Agenda**

- Overview of the Municipal Vulnerability Preparedness (MVP) Program
- Overview of Wendell's MVP Planning Process
- Summary of Outreach & Workshop Findings
- Discuss Your Concerns & Brainstorm Potential Projects

**Municipal Vulnerability Preparedness (MVP)**

- ✓ Provides support for MA municipalities to plan for climate change resiliency and implement priority projects
- ✓ Provides a simple, straightforward process
- ✓ Certifies municipalities as MVP communities
- ✓ Provides funding to complete design & implementation of resiliency projects

**Massachusetts Municipal Vulnerability Preparedness (MVP) Program Launched 2017**

\$44 Million awarded for Planning & Action Grants

**MVP Program Status - February 2020**

- MVP Designated Communities
- Ongoing Planning Grant (FY19)
- New Planning Grant (FY20)
- Regional Partnerships
- Completed Action Grant (FY18)
- Ongoing Action Grant (FY19)
- New Action Grant (FY20)

**Changing Climate Variables**

- Increased precipitation
- More frequent droughts
- Higher temperatures
- More frequent & intense storms

Climate change **increases** existing risks Wendell is already facing

Visit <https://resilientma.org/> for detailed info on projected climate change impacts on our region!

**Municipal Vulnerability Preparedness (MVP)**

**Wendell Community Outreach February – September 2020**

- Local farmers, town departments, conservation organizations
- Asked how they have been impacted by natural hazards and what their concerns are for the future

### Municipal Vulnerability Preparedness (MVP)

**Wendell Community Resilience Building Workshop – September 24<sup>th</sup>, 2020**

**Community Components**

- Infrastructure**
  - ✓ Identify top local natural and climate-related hazards of concern
  - ✓ Identify existing and future strengths and vulnerabilities
  - ✓ Develop a list of prioritized actions for the Community
- Society**
- Environmental**

### Public Outreach and Participants

**Benefits of having participants from different sectors/departments:**

- > Local knowledge and experience
- > Working across departments / sectors
- > Reaching consensus

### Workshop Outcomes

A climate resilient town will be able to **maintain** functions, **protect** its residents and emerge stronger and **better prepared** for a changing climate.

**RESILIENCE**

### Your Input

- Name
- Position/Role
- What concerns do you have about *climate change and natural hazards* and their impact on Wendell?
  - ✓ Infrastructure
  - ✓ Residents
  - ✓ Environment

### Wendell's TOP HAZARDS


- Drought
- Severe Storms
- Pandemics & Vector-borne disease
- Wildfire

### Wendell's Vulnerabilities

- Infrastructure**
  - Dirt roads and failing culverts
  - Prolonged power outages
  - Water supply for fire prevention
- Society**
  - Emergency notification
  - Public water supply in droughts
  - Prolonged power outages
- Environment**
  - Invasive species
  - Forest fires
  - Flooding from beavers

**What do you think is most vulnerable to climate change?**

Type the corresponding # in the chat box




**Critical Facilities / Infrastructure:**

1. Roads and bridges
2. Power grid
3. Drinking Water
4. Wastewater/Sewer
5. Communications
6. Housing
7. Emergency Shelters
8. Critical Town Facilities
9. Schools
10. Access to Hospitals / Medical Facilities
11. Other (Please specify)

**What do you think is most vulnerable to climate change?**

Type the corresponding # in the chat box




**Population / Society:**

1. Public health
2. Access to emergency supplies
3. Vulnerable populations
4. Public services
5. Economic Impacts
6. Other (Please specify)

**What do you think is most vulnerable to climate change?**

Type the corresponding # in the chat box




**Environment:**

1. Loss of natural habitat to invasive species
2. Forest degradation
3. Local food security
4. Water quality & water supply
5. Other (Please specify)

**Wendell's TOP STRENGTHS**

- Residents are self-reliant and help one another.
- Community is actively engaged in environmental stewardship.
- Roads and culverts well maintained by DPW.
- Backup generators at town offices and library. Kitchen at town Hall.
- Fire Dept and Good Neighbors ensure safety and food security for the community.



**MVP Action Grants**

- Planning, Assessments, and Regulatory Updates
- Nature-based Solutions for Ecological and Public Health
- Resilient Redesigns and Retrofits for Critical Facilities and Infrastructure

**Nature Based Solutions – Local Examples**



Rain garden at the Girls Club, Greenfield MA

Low impact development project, Greenfield MA

### Projects that are not MVP Competitive

- Diesel generators
- Tree removal
- Emergency preparedness projects that don't incorporate climate projections/planning
- Projects that repair to previous conditions without consideration of climate projections



### Draft Recommendations (High Priorities)

- Upgrade bridges and culverts that are undersized and/or failing.**
  - ✓ Target culverts the DPW cannot replace, such as those on Jenkinson Rd and Cooleyville Rd.
  - ✓ Assess the falling bridge over Wheelstone Brook.
- Address stormwater management & drainage issues, particularly on gravel roads.**
  - ✓ Implement nature-based BMPs on gravel roads.
  - ✓ Develop a right-sizing protocol for culverts.
- Evaluate public buildings for onsite power generation & battery storage.**
  - ✓ Investigate battery storage of on-site renewable energy power sources.
  - ✓ Investigate feasibility of and seek funding for ground-mounted solar generation on town property.
- Investigate the feasibility of a Reverse 911 system.**
  - ✓ Develop a project proposal and cost estimates.
- Retrofit the town well to accommodate bottle stations for the public.**
  - ✓ Assess retrofitting options and seek installation funding.
- Mitigate drought impacts on town water supply.**
  - ✓ Create rain water harvesting systems on municipal buildings and land and provide residents with water barrels.
  - ✓ Investigate the feasibility of using the community garden for back-up water supply.
- Ensure that the Board of Health has the capacity to meet current and future pandemic preparedness best practices**
  - ✓ Create or join a cross-jurisdictional sharing program for local boards of health.

### Draft Recommendations (Medium Priorities)

- Establish an MOU with Swift River School as a potential back-up shelter.**
  - ✓ Explore back-up power options and renewable energy generation combined with battery storage.
- Assist homeowners in rehabilitation of existing homes.**
  - ✓ Use CDGB funds and explore other funding sources such as MassSaves.
- Increase water supplies for fire prevention.**
  - ✓ Identify new water sources and water storage opportunities.
- Support the self-reliance of Wendell residents.**
  - ✓ Utilize the town newsletter, email lists, and website to improve emergency information outreach.
  - ✓ Refer residents to FEMA guidance on home survival kits and how to prepare for drought, wildfires, and severe storms.
- Establish backup power at Wendell Fire Dept.**
  - ✓ Replace the backup generator.
  - ✓ Seek funding for installation of ground-mounted solar power generation combined with battery storage.




### Which resiliency action should Wendell pursue first?

### Incorporating feedback into the MVP Report

Comments to Resilience Building Block Matrix	The Project's Goals				The Project's Risks			
	Resilience	Equity	Health	Cost	Climate Change	Public Health	Equity	Cost
Establish a Resilience Building Block Matrix	High	High	High	High	Low	Low	Low	Low
Establish a Resilience Building Block Matrix	High	High	High	High	Low	Low	Low	Low
Establish a Resilience Building Block Matrix	High	High	High	High	Low	Low	Low	Low
Establish a Resilience Building Block Matrix	High	High	High	High	Low	Low	Low	Low

### We need your input!

- 2 Week Public Comment Period through April 9th
- The full draft is available at: <https://www.wendellmass.us/>
- Submit comments to Megan Rhodes, [mrhodes@trcog.org](mailto:mrhodes@trcog.org)

**MVP Resiliency Plan**  
Draft: March 2021

**[Placeholder for Certificate of Adoption]**