



Town of Whately



Municipal Vulnerability Preparedness (MVP) Program

MVP Resiliency Plan

June 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
January 2021

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Town of Whately

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,¹ the major climate change drivers in Franklin County and Whately 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;
- Stronger storms with higher winds, due to an overall warmer climate with more moisture in the atmosphere.

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

With funding from the Massachusetts Executive Office of Energy and Environmental Affairs’ Municipal Vulnerability Preparedness (MVP) program, the Town of Whately hired the Franklin Regional Council of Governments (FRCOG) to assist the Town in completing the planning process to achieve designation as a Municipal Vulnerability Preparedness Community or “MVP” Community. As a State-certified MVP Provider, the FRCOG helped Whately engage in a community-driven process that brought together climate change information and local knowledge to conduct community outreach and the Community Resilience Building (CRB) workshop, whose central objectives were to:

- Define top local natural and climate-related hazards of concern;

¹ <http://www.resilientma.org/map/>

- Identify existing and future strengths and vulnerabilities;
- Develop prioritized actions for the Town;
- Identify immediate opportunities to collaboratively advance actions to increase resilience.

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

Community Resilience Building Workshops

Summary of Findings

The Town of Whately, population 1,497, has conducted a number of planning projects in previous years, including its 2020 Hazard Mitigation Plan, which enabled the Town to identify high priority hazards as well as areas, infrastructure and populations vulnerable to a variety of hazards, and action items to address hazards. Other recent Whately plans include: Whately Community Food Assessment (2015); Whately Center Study (2016); and the Economic Development Vision for Whately (2018). The Town recently completed an update to their Open Space and Recreation Plan.

In spite of Whately's diligence in completing these planning efforts, there was still 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.

The Town of Whately planned to hold their Community Resilience Building Workshop in late April 2020, but the meeting was ultimately cancelled due to the ongoing COVID-19 pandemic. In place of an in-person workshop, the Committee devised a plan to remotely complete the objectives of the MVP Planning process. The Town was committed to gathering input from community members in order to build the recommendations presented in the plan.

Whately and FRCOG staff prepared an interactive StoryMap² and distributed it to local farmers and publicized the map on the Town's website. The StoryMap provided context for the MVP planning process, highlighted how Whately's infrastructure, society, and environment are already being impacted by climate change, explained how the Town may be impacted in the future, and provided several opportunities for public input. The Town then hosted a series of two public workshops in early January 2021.

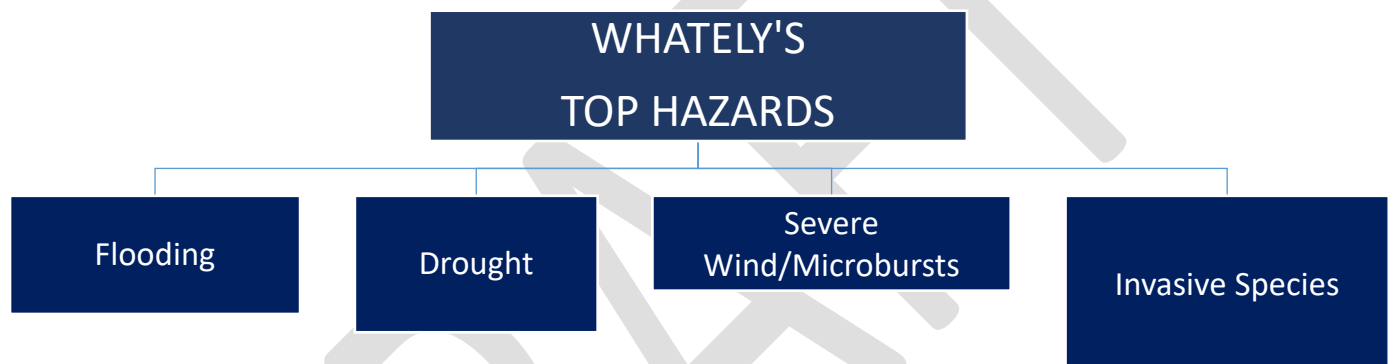
During the first workshop, participants considered climate change impacts most likely to affect Whately, including rising and extreme temperatures, extreme weather events and increased precipitation, both in quantity and intensity. The second workshop allowed participants to develop resiliency actions Whately can take to build on identified strengths and vulnerabilities.

² <https://storymaps.arcgis.com/stories/739ef93e90064edd98ca8b0fd3c3b3a2>

The workshops were critical to enabling participants to think about and engage with people from different sectors. Representatives from emergency management, highway, administration, agricultural commission, water supply, conservation commission, energy committee, board of health, local conservation organizations, and interested residents came together to discuss the most threatening hazards to the Town of Whately and to agree upon high priorities and actions to address them.

Top Hazards

Workshop participants discussed a number of hazards that impact Whately, 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, ice jams, 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:

Limited backup water supply; lack of backup power at the Town's pump house; lack of connections to the water supply for firefighting in West Whately; prolonged power outages; aboveground power lines and utilities are vulnerable to all hazards; unmapped and/or failing culverts; stormwater drainage on emergency access/evacuation routes; washouts and erosion on unpaved roads; flooding of the Mill River; stormwater drainage at the Town's primary sheltering location; cooling shelters without reliable sources of backup power; risk of dam failure following heavy precipitation events.

Facilities and businesses: Economic impacts of flooding, extreme heat, and drought on farms, unseasonably warm weather disrupting freeze/thaw cycles and impacting maple syrup production; vulnerability of historically significant sites in East Whately to flooding.

Public health: Increase of insect-borne diseases; respiratory illness associated with higher temperatures; impact of extreme temperatures on vulnerable populations, farmworkers, highway crews, and other outdoor workers; private wells running dry during drought or are not operable during power outages.

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; homes in the floodplain and/or wildland urban interface; effective emergency communications with residents.

Ecosystems and natural resources: Increase of invasive species on private and public property choking out native plants and stressing critical infrastructure; northern hardwood forest species are vulnerable to climate change and pests such as the emerald ash borer and hemlock wooly adelgid; health of coldwater streams throughout Town; the need for improving connectivity to ensure fish can access coldwater streams in the summer; wildfire potential throughout Town; impact of flooding, drought, and high wind to farmland and



A microburst in June 2020 downed crops and pine trees on one farm in Whately, and damaged a tobacco barn and farm equipment on another farm. Concerns about the increasing intensity of wind events was discussed during the CRB workshop. Photos courtesy of the Greenfield Recorder.



An example of oriental bittersweet vine choking a tree. The Highway Superintendent mentioned there have been several instances of downed trees in Whately due to stress from bittersweet vines. Photo courtesy of UCONN Agricultural Extension Program

crops; changing growing seasons limiting the use of cover crops in the winter; riparian buffers along the Mill River may be vulnerable to erosion.

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, 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.

Participants in the workshop expressed concern about flooding issues throughout Town. The workshop took place following a series of heavy rainstorms in December that caused the water levels in the Mill River to significantly rise and flood in some areas. Additionally, approximately a third of Whately's land is made up of cultivated farmland. Heavy rains can cause nutrient leaching on farm fields, which was a concern for some participants.

Drought was another top hazard identified by workshop participants. The drought that lasted through much of 2020 reached Level 3 (Critical) status by September 2020 and was highlighted during workshop discussions. Concerns were also raised with regard to heavy rains after long periods of drought, which can increase the severity of issues with stormwater runoff. Prolonged droughts can also increase the Town's vulnerability to a wildfire outbreak. Nearby Towns in Franklin County such as Leverett and Orange experienced wildfires during the July and August 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 increase the threat of wildfires.

Severe windstorms were also identified as a top hazard. Community members recalled recent events, such as the microburst in June 2020 that toppled tobacco barns and fields of crops. Workshop participants noted that the increased frequency and intensity of windstorm events poses threats to the safety of residents, and the structural integrity of critical infrastructure.

Invasive species and the increase in pests on farms due to extreme temperatures were also amongst the top concerns discussed by workshop participants. A later first frost will allow for pests such as mosquitoes and deer ticks to pose health risks to residents later into the year. Additionally, invasive species encroaching on farm fields may affect crops, and the Town's infrastructure has been affected by invasives such as oriental bittersweet and Japanese knotweed.

Specific Categories of Concerns and Challenges

Water Resiliency: More prolonged and frequent droughts were of great concern to workshop participants. The workshop was held following the drought that took place from June – November of 2020, and Town Officials reflected on how they needed to impose water conservation restrictions over the summer. Whately's municipal water supply comes from the same aquifer (both wells are located close together), so another concern for Town officials was being able to meet the demands of the water department when there's an increased need for household use, yet less water being recharged into their system. Whately's water system is connected to the Towns of Hatfield and Deerfield, and can pull from these sources during emergencies, but utilizing this connection is not a long term solution. Another issue to consider is that these interconnections would not serve residents in West Whately.

During the Town's recently completed Hazard Mitigation Plan update, representatives from the Water Department suggested developing a Drought Management Plan that includes an evaluation of how long the water supply can serve residents during a drought and recommendations for demand management and emergency supplies. Workshop participants were additionally interested in securing funding for installing rain barrels at municipal buildings, and for the numerous greenhouses on farms in East Whately.

Farmers do not use groundwater for their irrigation systems, as most draw from the Mill River, and some farms in East Whately draw water from the Connecticut system. However, greenhouse operations require the use of Town water, and more farmers may begin to rely on them to manage the risks associated with more frequent droughts or boggy fields after heavy precipitation events. Farmers are entitled to certain exemptions from Zoning, so the Town cannot require water reuse and recapture.

Vulnerabilities related to wildfire: When considering the numerous wildfire outbreaks across Massachusetts in 2020, workshop participants raised concerns about the Town's lack of infrastructure for firefighting. Currently, there are no hydrants in West Whately on side roads, which is also an area of Town that is heavily forested and more vulnerable to a wildfire outbreak.

Impacts of Drought, Heavy Precipitation, Extreme Temperatures and Severe Wind on Farms:

Farmers in Whately are well acquainted with disruptions to their operations caused by storms, but this project identified many farmers are concerned about the impacts of climate change. As reported by a representative from CISA³, many farmers in Whately are dealing with challenges related to climate change such as wet fields following heavy rains, increased disease pressure, and increased labor costs due to the increased need for more frequent irrigation. Workshop participants noted they would like to support the Town's farmers, especially as they continue to face increased pressure by the impacts of climate change. One suggestion that grew out of workshop conversations is for the Town to host a municipal database for

³ Communities Involved in Sustaining Agriculture, a local non-profit that works with farmers and community members to strengthen the local food economy. <https://www.buylocalfood.org/about/>

farmers, which would provide information about the different grants farmers have received to help manage ongoing issues.

Workshop participants also mentioned concerns about farmers less frequently using cover crops during the winter months on their fields, which means with an increase in high wind events a significant amount of soil/dust is picked up and blown into surrounding residential areas. Participants noted that there could be mixed reasons for this, such as a later growing season. Communication between CISA and the Natural Resources Conservation Services (NRCS) helped to identify some potential solutions to minimize the amount of soil blown off the fields; these are documented in the action plan.

Extreme Heat: With the increased severity of recent heat waves in mind, workshop participants addressed the need for outdoor workers (such as farmers and highway crews) to be adequately protected from extreme heat. Farmers often have to carry drinking water across fields, and there were questions raised about access to potable water for farmers. Workshop participants suggested that the Town work with local farms to determine if access to potable water is an issue and to identify potential solutions.

Vulnerable populations: Elderly residents, isolated residents, and residents who are dependent on medical devices were also of concern to workshop participants. These residents may not have reliable access to information concerning emergencies or access to regular, reliable public transportation. Further, the Town may not have up to date information on where vulnerable populations are located or what their needs are during a hazard event, which may limit emergency evacuation or response efforts.

Road Drainage: Approximately 15% of the roadways in Whately are gravel, which are more vulnerable to washouts during heavy precipitation events. The majority of the Town's gravel roads are located in West Whately. 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.

In general, dirt roads in Whately 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.

The Highway Department Superintendent routinely repairs/replaces small culverts to provide increased drainage for stormwater, but cannot keep up with the need for upgrades and replacements. Culvert maintenance and replacements are needed in several locations

throughout Whately, such as: Westbrook Road, Williamsburg Road, State Road, North Street (at the north end). The Town does not yet have their culverts mapped; developing and implementing a culvert management plan could help to keep track of the state of all culverts and prioritize repairs and replacements as needed. The final prioritization should consider which culverts are in need of repair in order to strengthen coldwater critical linkages.

Northern Hardwood Forests: Workshop participants also discussed the ways in which climate change is impacting forests. A longer growing season and increasing temperatures are shifting habitat conditions for trees northward and to higher elevations. Over time, the birch-beech-maple forests typical of New England will decline while oak-hickory forests more typical in areas south of New England will thrive. An expected increase in periods of drought between intense precipitation events may weaken some trees, leaving them more susceptible to insects and diseases, while it may improve conditions for other trees.

Riverbank Erosion: Erosion is occurring along the banks of the Mill River and is increasing due to heavier precipitation events. Several farms are located along the Mill River, which provides an opportunity for the Town to partner with local conservation organizations such as CISA to identify riparian buffers along the river that are most vulnerable to erosion and where the vegetated buffers could help to limit erosion and sedimentation.

Invasive Species: Workshop participants explained that a variety of landscapes in Whately - from home gardens and roadsides, to forests, farm fields, and wetlands - have become increasingly susceptible to invasive species, and in some cases, aggressively degraded by them. These non-native plants pose an ecological risk by actively 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. The Highway Superintendent has observed that trees with bittersweet growth will fall first during high wind events and confirmed Japanese knotweed growth is growing and plugging the Town's drainage systems. Uncontrolled invasive plants on town property and roadways are expanding onto adjacent properties and produce seeds that establish new infestations.

Vector-borne Diseases: 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. Tick-borne diseases experienced by residents and identified in lab tests of ticks have increased in number and in kind across Franklin County due to climate change over the last ten years. Franklin County's rate of emergency department visits for tick-borne diseases is among the highest in the state.

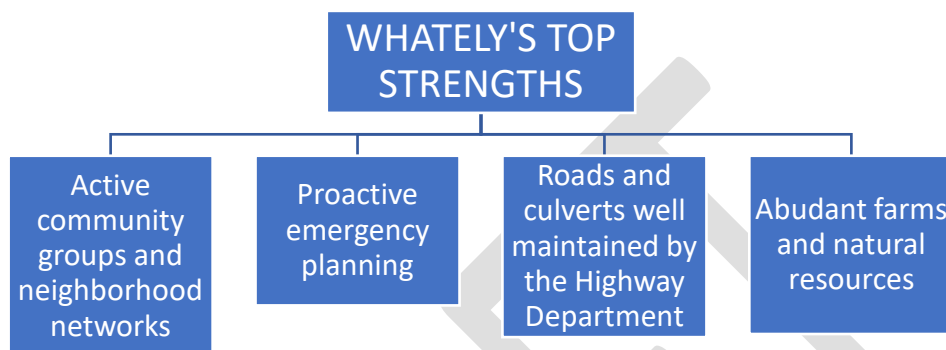
Energy Resilience: Whately's power grid was considered by MVP workshop participants to be vulnerable to natural hazard impacts, such as severe storms that topple trees and bring broken branches down on power lines. Snow has been less of an issue compared to ice storms causing power outages in recent years. The Town's electrical infrastructure is aboveground and repairs are becoming more expensive.

The Town has backup power available at the school (which is used as Whately's primary shelter) and is working on obtaining generators for multiple town buildings, including the pump house and Town Offices. Obtaining generators for the Town Library and Senior center are also of interest to the Town, as they serve as community cooling shelters during heat waves.

Dam Failure: Dams located in Whately that could affect the Town if they failed include the Upper and Lower Northampton dams on the Ryan Reservoir and the South Deerfield Water District Dam in Deerfield/Conway that is upstream from Whately on the Roaring Brook. Heavier and more frequent precipitation events could stress the dams and lead to failure. In the past, Whately has notified residents downstream of the South Deerfield Water District Dam that their homes are in the inundation zone and provided informational packets.

Current Strengths and Assets

Whately's emergency planning and response procedures are regularly reviewed and updated. The Town has taken a proactive approach to emergency preparedness, which was evident at the workshop as participants readily provided known vulnerabilities, but also 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:



Infrastructural Strengths: The Whately Highway department is proactive and continually works to make repairs and upgrades before the issue becomes critical. Additionally, road drainage improvement projects have recently been completed throughout Town, which help to limit localized flooding issues from stormwater runoff. The Town's bylaws also encourage Low Impact Development techniques in the Aquifer Protection Overlay District in order to protect the quality of the municipal water supply.

The Town and water department are working on formalizing emergency water sharing agreements with surrounding communities.

Societal Strengths: Residents in West Whately are beginning to use a listserv that can be used to communicate during an emergency. Additionally, "Valley Neighbors" is getting off the ground, which will help with providing services to seniors, and will be a shared service with other Towns.

Whately's main sheltering location is the elementary school, which has a backup generator and is not in the floodplain/high risk area. The Town also works with the regional sheltering program. Whately also opens up cooling shelters for residents to use during heat waves.

Whately uses ConnectCTY for reverse 911 to reach residents during an emergency; this is a service that is utilized well by the Town's Emergency Management Director. The Town would like to ensure as many residents as possible receive these messages, so outreach efforts are ongoing. The Fire Department and Police Department also work on programming with residents to make sure people have proper equipment for use during an emergency.

Environmental Strengths: The floodplain & wetlands in the northern part of Whately along the Mill River have not been ditched or diked, which decreases the risk for flood damage.

Whately is home to over 25 farms. Agriculture plays an important role in the culture and economy of the town, providing local food, jobs, and cultural activities and tourism.

The Town is a designated Green Community, signifying that energy efficiency and renewable energy is important to Whately officials and residents.

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Top Recommendations to Improve Resilience

Prior to the Whately MVP Listening Session, workshop participants voted on the resiliency actions brainstormed during the meeting via a Survey Monkey poll. Full results from the survey are shown in the Appendix. Poll results were consolidated as appropriate to develop Whately's top priority recommendations as shown below. Recommendations address key vulnerabilities while building upon current strengths. Relevant recommendations from the Town's recently completed Hazard Mitigation Plan were incorporated into the vulnerability matrix as appropriate.

WHATELY'S TOP PRIORITY RECOMMENDATIONS

Obtain funding to address stormwater management & drainage issues throughout Town

Hire a consultant to identify additional locations where a municipal well could be installed

Hire a consultant to conduct a geomorphic assessment of the Mill River Watershed to identify flooding and fluvial erosion threats to public water supply wells

Conduct an assessment of vulnerable populations & drinking water needs for farm workers

Identify locations in need of vegetated buffers along the Mill River and identify riparian areas in need of restoration

Obtaining funding to address stormwater management & drainage issues topped the list of highest priority recommendations. This action item includes obtaining funding to complete an assessment of all culverts and drainage system in Town.

Hiring a consultant to conduct an assessment to identify additional locations where a municipal well could be installed is another high priority for the Town. The Town's wells are located close together and pull from the same aquifer, and there is no backup water supply. This was of great concern to workshop participants, especially as droughts become more prevalent in New England due to climate change.

Hiring a consultant to conduct a geomorphic assessment of the Mill River Watershed to identify flooding and fluvial erosion threats to municipal wells is also a high priority due to the need to protect the local water supply.

Assessing drinking water needs for farm workers and gathering information about vulnerable populations is a high priority recommendation, as workshop participants were concerned about the likelihood of increased heat waves due to climate change. This action item would entail working with local farmers to determine if access to potable water is an issue, and to identify alternative sources of drinking water for farm workers if necessary. Additionally,

the Town would like to have better information about needs for communication, evacuation, and sheltering for the Town's vulnerable populations.

Identifying locations in need of vegetated buffers along the Mill River is important for the Town. This would require working with farmers and CISA to evaluate riparian buffers along the Mill River that are vulnerable to erosion. The Town is also interested in identifying riparian areas in need of restoration along West Brook, Roaring Brook, and other tributaries.

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Community Resilience Building Risk Matrix				 Top Priority Hazardswww.CommunityResilienceBuilding.org						
H-M-L priority for action over the S hort or L ong term (and O ngoing) V = Vulnerability S = Strength				Recommendations	Flooding	Severe Wind/ Microbursts	Drought	Invasive Species	Priority	Time
									H - M - L	S hort L ong O ngoing
Features	Location	Ownership	V/S							
Infrastructural										
Culverts	Chestnut Plain Road, Haydenville Road	Public	S	Road drainage improvement projects have recently been completed throughout Town.	X				N/A	N/A
	Town-wide		V	Hire a consultant to complete an assessment of all culverts and drainage systems in Town. The assessment should include an evaluation of the physical state of the culverts and GIS data to have record of where culverts are located. Based on the results of the inventory, prioritize repairs and replacements. Prioritization should consider which culverts are in need of repair to strengthen coldwater critical linkages.	X				H	S
Highway Maintenance	Town-wide	Public	S	The Whately Highway Department is proactive; the department works to make repairs/upgrades before the issue becomes critical.	X	X		X	N/A	N/A
Bridges	Mitchell Brook, Mill River Bridge	Public	S	Bridges in Town have recently been repaired/replaced, which allowed for the removal of weight limit restrictions – this improves evacuation/emergency response operations.	X	X			N/A	N/A
		Public	V	The Town’s major bridge still has weight restrictions and will need to be replaced.	X	X			M	L
Industrial Park	Route 116	Private	S/V	Whately’s industrial park is well drained, but has a lot of impervious surfaces. Identify opportunities for implementing LID/stormwater management projects and solar PV projects; form partnerships with businesses in the industrial park to design and implement projects.	X				L	O
Whately Park and Ride	Route 5&10	MassDOT	S	MassDOT recently installed EV charging stations at the Whately Park and Ride.					N/A	N/A
			V	Advocate for MassDOT to clean out the pores in the pervious pavement at the Whately Park and Ride to ensure proper stormwater drainage, and identify additional opportunities for stormwater filtration.	X				M	O



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

<u>H</u> - <u>M</u> - <u>L</u> priority for action over the <u>S</u> hort or <u>L</u> ong term (and <u>O</u> ngoing) <u>V</u> = Vulnerability <u>S</u> = Strength				Recommendations	Flooding	Severe Wind/ Microbursts	Drought	Invasive Species	Priority	Time
Features	Location	Ownership	V/S						<u>H</u> - <u>M</u> - <u>L</u>	<u>S</u> hort <u>L</u> ong <u>O</u> ngoing
Water Resiliency	Chestnut Plain Road	Town	S/V	The Town's wells are located close together and pull from the same aquifer, and there is no backup water supply. Whately's system is connected to the Towns of Hatfield and Deerfield and can pull from these sources during emergencies, but these connections would not serve West Whately. Additionally, this is only a temporary solution as Hatfield's municipal supply well is located close to Whately's wells. Hire a consultant to conduct an assessment in order to identify additional locations where a municipal well could be installed.			X		H	L
	Municipal buildings	Town	S/V	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.			X		M	O
	East Whately	Private	S/V	There are a significant number of greenhouses on the farms in East Whately. Seek funding to install rainwater harvesting systems on local farms to assist with irrigation needs.	X		X		M	O
	Pump House	Town	V	Equip the Water Department pump houses with backup power (generator). Assess whether solar battery storage is feasible for backup power.	X	X	X		M	L
Infrastructure for firefighting	West Whately	Town/Private	V	The Town may not have adequate infrastructure to handle a forest fire. There are no hydrants in West Whately on the side roads. Promote construction of fire ponds, underground storage tanks, and dry hydrants in areas not served by public water supply, especially when new construction is proposed.			X		M	O
Power grid	Town-Wide	Utility	V	Aboveground power lines are vulnerable to natural hazards; burying all power lines in the Town is a cost prohibitive measure. Advocate to the Franklin County legislative delegation about these issues and request they communicate with utility companies (Eversource/DPU) about these issues.		X			L	S
Low Impact Development	Town-wide	Town	S/V	The Town's zoning bylaws currently encourage LID techniques for new development in the Aquifer Protection Overlay District. Evaluate the Town's zoning bylaws to determine how best to encourage LID techniques Town-wide.	X				M	S

Community Resilience Building Risk Matrix					  			www.CommunityResilienceBuilding.org			
<u>H-M-L</u> priority for action over the <u>S</u> hort or <u>L</u> ong term (and <u>O</u> ngoing) <u>V</u> = Vulnerability <u>S</u> = Strength				Recommendations	Flooding	Severe Wind/ Microbursts	Drought	Invasive Species	Priority	Time	
									<u>H</u> - <u>M</u> - <u>L</u>	<u>S</u> hort <u>L</u> ong <u>O</u> ngoing	
									Features	Location	Ownership
Societal											
Shelters	Whately Elementary School	Town	S	Whately’s main sheltering location is the elementary school, which has a backup generator and is not in the floodplain/high risk area. The Town also works with the regional sheltering program.	X	X			N/A	N/A	
			V	Hire a consultant to assess options for rainwater harvesting and implementing stormwater BMPs to reduce flooding risks at the school. As a part of the assessment, determine if the roads leading to the shelter would benefit from stormwater BMPs to aid with access.	X				L	O	
	Library, Senior Center	Town	V	Both the Town Library and Senior Center can be used as cooling stations, but need reliable backup power. Equip with generator and/or assess whether solar battery storage is a feasible alternative for backup power.			X		L	O	
Highway Crews & Farmworkers	Town-wide	N/A	V	More frequent heat waves stress workers who spend the majority of their time outside. Develop and implement a training program for supervisors to ensure workers are getting enough breaks and water, as there is frequent turnover in these positions.			X		H	S	
			V	Work with local farmers to determine if access to potable water is an issue, and identify alternative sources of drinking water for farm workers if necessary.			X		H	S	
Isolated residents	West Whately/Area of Town along the CT River	Private	V	West Whately has poor cell phone service, which may cut off communications. There is a high risk of isolation in the event of a dam failure for residents/workers in the Harriman Dam inundation zone.	X	X			L	L	
		Public	S/V	Seek funding to improve stormwater drainage on gravel roads to aid with evacuation efforts. 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.	X				H	O	



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

<u>H</u> - <u>M</u> - <u>L</u> priority for action over the <u>S</u> hort or <u>L</u> ong term (and <u>O</u> ngoing) <u>V</u> = Vulnerability <u>S</u> = Strength				Recommendations	Flooding	Severe Wind/ Microbursts	Drought	Invasive Species	Priority	Time
Features	Location	Ownership	V/S						<u>H</u> - <u>M</u> - <u>L</u>	<u>S</u> hort <u>L</u> ong <u>O</u> ngoing
	Town-wide	Private	S/V	Send out a new survey to residents in order to update the list of residents who may need assistance during a hazard/emergency event. This survey was completed a few years ago but it could be redone.	X	X			H	O
			V	Complete an assessment of vulnerable population needs for communication, evacuation, and sheltering during hazard events.	X	X			H	S
Neighborhood Networks	Town-wide	Private	S	West Whately is using a listserv that can be used to communicate during an emergency. Additionally, "Valley Neighbors" is getting off the ground, which will help with providing services to seniors, and will be a shared service with other Towns.	X	X			N/A	N/A
			S	Reactivate the Whately Citizens Corps, which was historically a group of volunteer residents who worked to support Town services. Having a formal group provides a mechanism for residents to assist in an organized manner.	X	X	X	X	N/A	N/A
Household emergency preparedness	Town-wide	Private	S	South County Ambulance Service provides 24/7 services to all residents. The Fire Department and Police Department work on some programming with residents to make sure people have proper equipment - education and outreach is ongoing.	X	X			N/A	N/A
			S/V	Develop and implement a new education and outreach program that covers household emergency preparedness. The program should encourage residents to sign up for Connect CTY, promote services that are already available from the Town, and include “welcome packets” for new residents that would provide sheltering options.	X	X			M	O

Community Resilience Building Risk Matrix				  			Top Priority Hazards					www.CommunityResilienceBuilding.org	
H-M-L priority for action over the S hort or L ong term (and O ngoing) V = Vulnerability S = Strength				Recommendations	Flooding	Severe Wind/ Microbursts	Drought	Invasive Species	Priority	Time			
									H - M - L	S hort L ong O ngoing			
Features	Location	Ownership	V/S										
Emergency Communication	Town-wide	Public	S	Whately uses ConnectCTY for reverse 911. The contact list is outdated, many phone numbers are not active as residents have switched from landlines to cell phones and have not updated their information. Continue efforts to publicize the ConnectCTY service to ensure the majority of residents are signed up with their correct number.	X	X	X		N/A	N/A			
Emergency Communication between the Town & Farmers	Town-wide	Public/Private	S/V	Partner with CISA to open a line of communication with local farmers, which could be especially useful after an event to document damage.	X	X	X	X	H	O			
Historically significant sites	East Whately	Public	S/V	Native American sites are located throughout town but are left unmarked to limit vandalism. Some of these sites are in East Whately, which are at high risk to flood damage. Prepare an assessment to determine which sites are at the highest risk to flood damage and develop nature based solutions that could be implemented to mitigate flood damage.	X				L	O			
Environmental													
Farms	East Whately	Private	S	CISA works with local farmers to increase their resiliency to climate change. Partner with CISA to identify opportunities to support farms at the municipal level.	X	X	X	X	N/A	N/A			
			S/V	Seek funding to create a municipal database to show how local farmers are adapting to climate change. The database could provide information about any grant funding received and opportunities for other funding to support adaptation efforts.	X	X	X	X	M	S			
Connecticut River	Eastern border of Whately	Public	S	The Town works with third party organizations and nonprofits to keep the river clean.	X		X	X	N/A	N/A			
Floodplains	Mill River	Public/Private	S	The floodplain & wetlands in the northern part of Whately along the Mill River have not been ditched or diked.	X				N/A	N/A			

Community Resilience Building Risk Matrix				 Top Priority Hazards							www.CommunityResilienceBuilding.org	
H-M-L priority for action over the S hort or L ong term (and O ngoing) V = Vulnerability S = Strength				Recommendations	Flooding	Severe Wind/ Microbursts	Drought	Invasive Species	Priority	Time		
									H - M - L	S hort L ong O ngoing		
Features	Location	Ownership	V/S									
Riparian and Wetland Buffers	Mill River	Private	V	Partner with CISA and local farmers to evaluate riparian buffers along the Mill River that are vulnerable to erosion. Identify interested farmers to develop vegetated buffers using funding through the USDA Conservation Reserve program or the NRCS Environmental Quality Incentives Program. The Mill River and West Brook are already threatened by invasive plants and are experiencing erosion.	X				H	O		
	West Brook, Roaring Brook, other tributaries	Public	V	Hire a consultant to identify riparian areas in the greatest need of restoration along West Brook, Roaring Brook, and other tributaries and develop/implement restoration projects to improve the health of coldwater streams.	X				H	S		
Vector-borne diseases	Town-wide	Public	V	Deer tick and mosquito populations have noticeably increased over the last 10-15 years. Whately could consider joining the Mosquito Control District, which provides trapping and testing services and educational programming.				X	L	S		
			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 needs.				X	M	S		
			V	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.				X	M	O		
Northern hardwood forests	Town-wide	Private	S/V	Whately is 71% forested, and the overall composition is expected to change due to increasing temperatures. Seek funding and technical assistance to develop educational materials and conduct outreach to landowners to encourage climate resilient forest stewardship practices. Encourage forest owners to use the USFS Adaptation Workbook to determine adaptation efforts would be right for their property.			X	X	L	L		

Community Resilience Building Risk Matrix				 Top Priority Hazards							www.CommunityResilienceBuilding.org	
H-M-L priority for action over the S hort or L ong term (and O ngoing) V = Vulnerability S = Strength				Recommendations	Flooding	Severe Wind/ Microbursts	Drought	Invasive Species	Priority	Time		
Features	Location	Ownership	V/S						H - M - L	Short Long Ongoing		
Invasive Species	Town-wide	Public/Private	V	Invasive species are choking out native plants, encroaching on farm fields, and plugging drainage systems. Bittersweet is noted to grow on trees, which stresses them and increases the likelihood they will fall during a storm. Secure funding for invasive plant management to control invasive plants along Whately's roads. Additionally, develop a comprehensive list of invasive plant species in the Town, and develop a public education & town staff training program to manage invasives and control spread using resources available from the Massachusetts Invasive Plants Advisory Group. ⁴				X	H	S		
Cover crops on farms	East Whately	Private	V	Work with CISA/UMass Agricultural Extension to identify cover crops that could be used with changing growing seasons to limit dirt blowing off farm fields in the winter.		X			L	O		
			V	Work with the NRCS to identify techniques that could help to minimize the amount of dust/soil blowing off of fields such as inter-seeding between rows after crops are established, flail mowing instead of disking, etc. Techniques will need to be tailored to the farms' needs.		X			H	O		
Mill River Watershed	East Whately	Public/Private	V	Hire a consultant to conduct a geomorphic assessment of the Mill River Watershed and identify flooding and fluvial erosion threats to Whately's public water supply wells and other critical infrastructure (culverts, roads, utilities) within the watershed. Identify priority Nature-Based Solutions to mitigate these threats. Prepare conceptual designs and cost estimates for projects that increase climate resiliency and mitigate flood and fluvial erosion hazards. Project designs should address existing invasive plant problems.	X				H	O		

⁴ <https://www.massnrc.org/mipag/publications.htm>

High Priority Recommendations

Hire a consultant to complete an assessment of all culverts and drainage systems in Town. The assessment should include an evaluation of the physical state of the culverts and GIS data to have record of where culverts are located. Based on the results of the inventory, prioritize repairs and replacements. Prioritization should consider which culverts are in need of repair to strengthen coldwater critical linkages.

The Town's wells are located close together and pull from the same aquifer, and there is no backup water supply. Whately's system is connected to the Towns of Hatfield and Deerfield and can pull from these sources during emergencies, but these connections would not serve West Whately. Additionally, this is only a temporary solution as Hatfield's municipal supply well is located close to Whately's wells. Hire a consultant to conduct an assessment in order to identify additional locations where a municipal well could be installed.

Seek funding to improve stormwater drainage on gravel roads to aid with evacuation efforts. 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.

More frequent heat waves stress workers who spend the majority of their time outside. Develop and implement a training program for supervisors to ensure workers are getting enough breaks and water, as there is frequent turnover in these positions.

Work with local farmers to determine if access to potable water is an issue, and identify alternative sources of drinking water for farm workers if necessary.

Send out a new survey to residents in order to update the list of residents who may need assistance during a hazard/emergency event. This survey was completed a few years ago but it could be redone.

Complete an assessment of vulnerable population needs for communication, evacuation, and sheltering during hazard events.

Partner with CISA to open a line of communication with local farmers, which could be especially useful after an event to document damage.

Partner with CISA and local farmers to evaluate riparian buffers along the Mill River that are vulnerable to erosion. Identify interested farmers to develop vegetated buffers using funding through the USDA Conservation Reserve program or the NRCS Environmental Quality Incentives Program.

Hire a consultant to identify riparian areas in the greatest need of restoration along West Brook, Roaring Brook, and other tributaries and develop/implement restoration projects to improve the health of coldwater streams.

Invasive species are choking out native plants, encroaching on farm fields, and plugging drainage systems. Bittersweet is noted to grow on trees, which stresses them and increases the likelihood they will fall during a storm. Secure funding for invasive plant management to control invasive plants along Whately's roads. Additionally, develop a comprehensive list of invasive plant species in the Town, and develop a public education & town staff training program to manage invasives and control spread using resources available from the Massachusetts Invasive Plants Advisory Group.⁵

Work with the NRCS to identify techniques that could help to minimize the amount of dust/soil blowing off of fields such as inter-seeding between rows after crops are established, flail mowing instead of disking, etc. Techniques will need to be tailored to the farms' needs.

Hire a consultant to conduct a geomorphic assessment of the Mill River Watershed and identify flooding and fluvial erosion threats to Whately's public water supply wells and other critical infrastructure (culverts, roads, utilities) within the watershed. Identify priority Nature-Based Solutions to mitigate these threats. Prepare conceptual designs and cost estimates for projects that increase climate resiliency and mitigate flood and fluvial erosion hazards.

Medium Priority Recommendations

The Town's major bridge still has weight restrictions and will need to be replaced.

Advocate for MassDOT to clean out the pores in the pervious pavement at the Whately Park and Ride to ensure proper stormwater drainage, and identify additional opportunities for stormwater filtration.

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.

There are a significant number of greenhouses on the farms in East Whately. Seek funding to install rainwater harvesting systems on local farms to assist with irrigation needs.

Equip the Water Department pump houses with backup power (generator). Assess whether solar battery storage is feasible for backup power.

The Town may not have adequate infrastructure to handle a forest fire. There are no hydrants in West Whately on the side roads. Promote construction of fire ponds, underground storage tanks, and dry hydrants in areas not served by public water supply, especially when new construction is proposed.

The Town's zoning bylaws currently encourage LID techniques for new development in the Aquifer Protection Overlay District. Evaluate the Town's zoning bylaws to determine how best to encourage LID techniques Town-wide.

⁵ <https://www.massnrc.org/mipag/publications.htm>

Develop and implement a new education and outreach program that covers household emergency preparedness. The program should encourage residents to sign up for Connect CTY, promote services that are already available from the Town, and include "welcome packets" for new residents that would provide sheltering options.

Seek funding to create a municipal database to show how local farmers are adapting to climate change. The database could provide information about any grant funding received and opportunities for other funding to support adaptation efforts.

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 needs.

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.

Low Priority Recommendations

Whately's industrial park is well drained, but has a lot of impervious surfaces. Identify opportunities for implementing LID/stormwater management projects and solar PV projects; form partnerships with businesses in the industrial park to design and implement projects.

Aboveground power lines are vulnerable to natural hazards; burying all power lines in the Town is a cost prohibitive measure. Advocate to the Franklin County legislative delegation about these issues and request they communicate with utility companies (Eversource/DPU) about these issues.

Hire a consultant to assess options for rainwater harvesting and implementing stormwater BMPs to reduce flooding risks at the school. As a part of the assessment, determine if the roads leading to the shelter would benefit from stormwater BMPs to aid with access.

Both the Town Library and Senior Center can be used as cooling stations, but need reliable backup power. Equip with generator and/or assess whether solar battery storage is a feasible alternative for backup power.

West Whately has poor cell phone service, which may cut off communications. There is a high risk of isolation in the event of a dam failure for residents/workers in the Harriman Dam inundation zone.

Native American sites are located throughout town but are left unmarked to limit vandalism. Some of these sites are in East Whately, which are at high risk to flood damage. Prepare an assessment to determine which sites are at the highest risk to flood damage and develop nature based solutions that could be implemented to mitigate flood damage.

Deer tick and mosquito populations have noticeably increased over the last 10-15 years. Whately could consider joining the Mosquito Control District, which provides trapping and testing services and educational programming.

Whately is 71% forested, and the overall composition is expected to change due to increasing temperatures. Seek funding and technical assistance to develop educational materials and conduct outreach to landowners to encourage climate resilient forest stewardship practices. Encourage forest owners to use the USFS Adaptation Workbook to determine adaptation efforts would be right for their property.

Work with CISA/UMass Agricultural Extension to identify cover crops that could be used with changing growing seasons to limit dirt blowing off farm fields in the winter.

DRAFT

CRB Workshop Participants -- Department/Commission/Representative:

Mary Stuart, Whately Water District
Jonathan Edwards, Whately Selectboard
Ann Lomeli, Resident
Fred Orloski, Whately Selectboard
Scott Jackson, Whately Conservation Commission
Lynn Sibley, Emergency Management Director
Keith Bardwell, Highway Superintendent
Donna Wiley, Community Preservation Committee
Joyce Palmer Fortune, Whately Selectboard
Nate Fortune, Town Moderator
Helena Farrell, FRCOG & Whately Resident
Richard Korpiewski, Whately Cultural Commission
Neal Abraham, Cemetery Commission
Margaret Christie, CISA
Pete Westover, Whately Open Space Committee
Rebecca, Whately Board of Health
Montserrat Archbald, Whately Conservation Commission
Andrew Smith, MVP Program Regional Coordinator - EoEEA

CRB Workshop Project Team: Organization and Role

Town of Whately

Brian Domina, Whately Town Administrator
Amy Schrader, Whately Administrative Assistant

Franklin Regional Council of Governments:

Kimberly Noake MacPhee, Land Use & Natural Resources Program Manager
Allison Gage, Land Use & Natural Resource Planner
Alyssa Larose, Senior Land Use & Natural Resource Planner
Helena Farrell, Land Use & Natural Resource Planner
Megan Rhodes, Senior Land Use & Transportation Planner
Ryan Clary, Senior GIS Specialist

Recommended Citation

Noake MacPhee K. Gage A. (2021) Town of Whately Community Resilience Building Workshop Summary of Findings. Franklin Regional Council of Governments.

Appendices

Maps

Workshop #1 Presentation

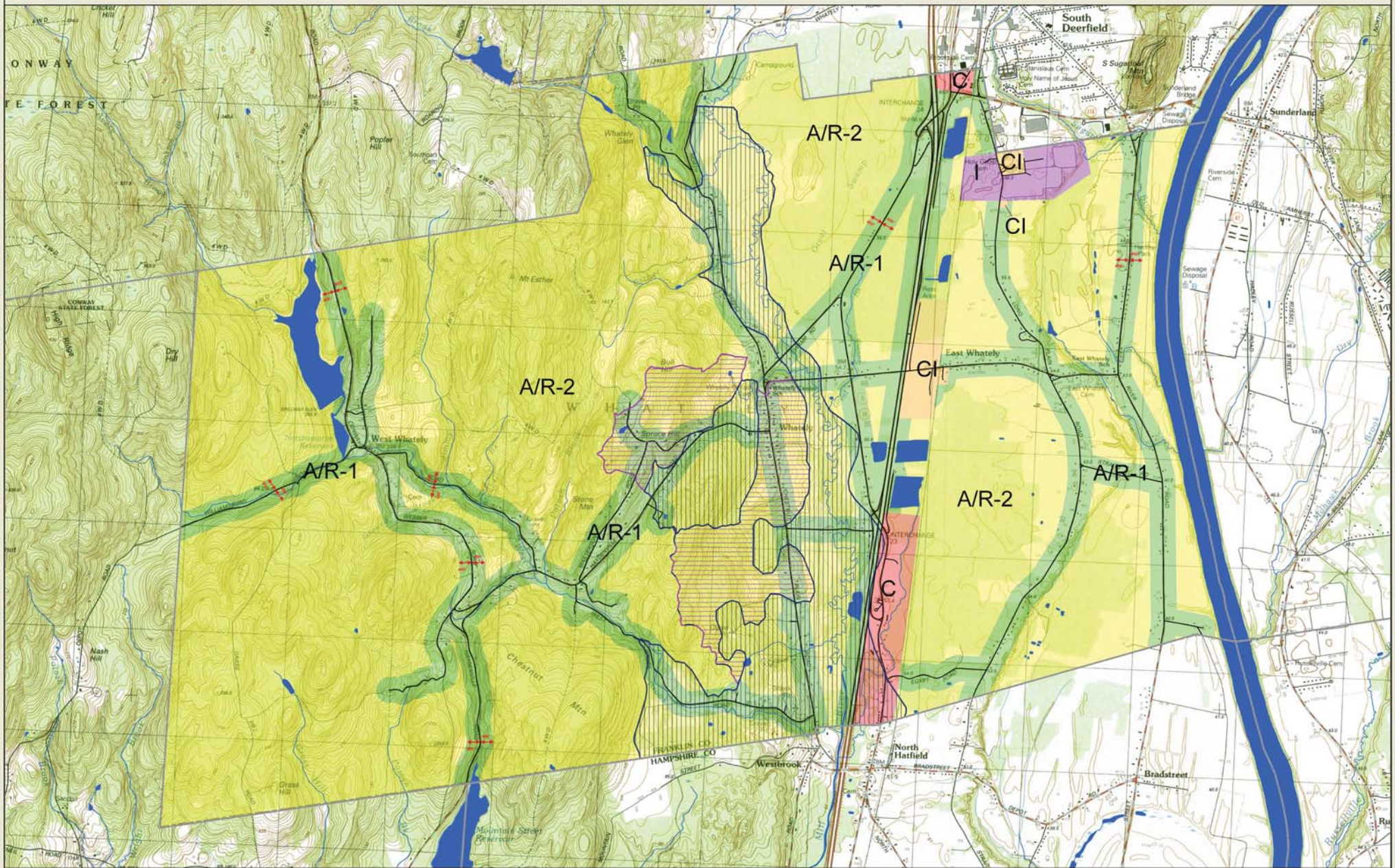
Workshop #2 Presentation

StoryMap Survey Responses

Public Comment Period Documentation

DRAFT

Town of Whately Zoning Map, March 31, 2010



**FRANKLIN REGIONAL
COUNCIL OF
GOVERNMENTS**
Main Office: 413-774-3167
425 Main Street
Greenfield, Massachusetts 01301

Zoning

- Agricultural / Residential 1 (A/R-1)
- Agricultural / Residential 2 (A/R-2)
- Commercial/Industrial (CI)

Industrial (I)

- Commercial (C)

Overlay District

- Zone II Aquifer Protection Overlay District
- Zone III Aquifer Protection Overlay District



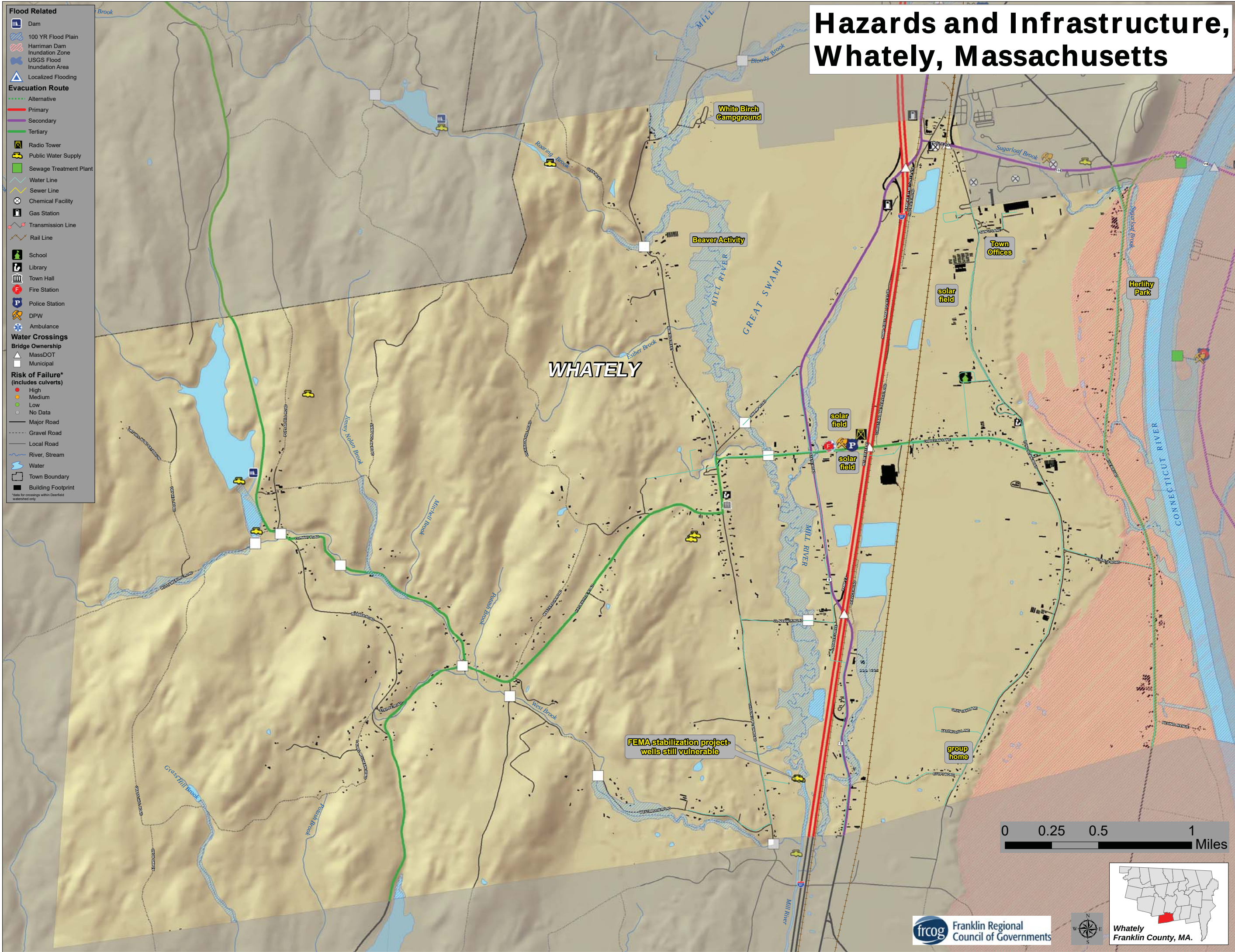
0 0.5 1 1.5 Miles

Map Sources:

Map produced by the Franklin Regional Council of Governments Planning Department. GIS data sources include the FRCOG Planning Department, the Massachusetts Highway Department and MassGIS. Digital data obtained from MassGIS is provided by the Office of the Massachusetts Executive Office of Environmental Affairs and is subject to the Massachusetts State Map Act. The map is provided as a reference only and is not intended to be used for legal purposes. The map is provided as a reference only and is not intended to be used for legal purposes. The map is provided as a reference only and is not intended to be used for legal purposes.

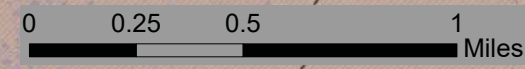
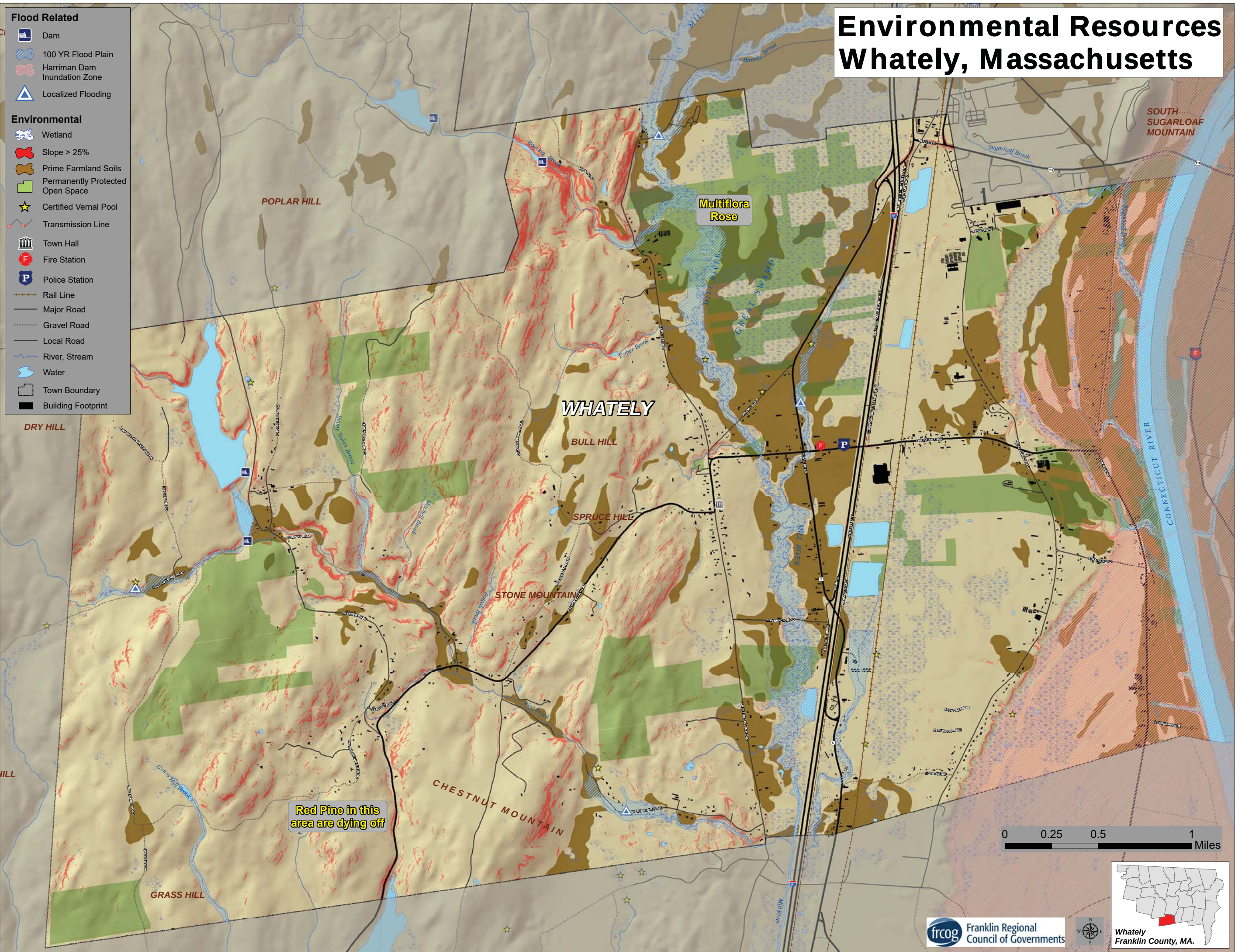
10/03/10 7:10 PM. The map is provided as a reference only and is not intended to be used for legal purposes. The map is provided as a reference only and is not intended to be used for legal purposes. The map is provided as a reference only and is not intended to be used for legal purposes.

Hazards and Infrastructure, Whately, Massachusetts



Environmental Resources Whately, Massachusetts

- Flood Related**
- Dam
 - 100 YR Flood Plain
 - Harriman Dam Inundation Zone
 - Localized Flooding
- Environmental**
- Wetland
 - Slope > 25%
 - Prime Farmland Soils
 - Permanently Protected Open Space
 - Certified Vernal Pool
 - Transmission Line
 - Town Hall
 - Fire Station
 - Police Station
 - Rail Line
 - Major Road
 - Gravel Road
 - Local Road
 - River, Stream
 - Water
 - Town Boundary
 - Building Footprint



GREENFIELD RECORDER

(<https://www.recorder.com>)

News > Local (/News/Local/)

South County Notebook: Jan. 4, 2020



(/byline?byline=)

Published: 1/1/2021 5:54:04 PM

Modified: 1/1/2021 5:53:51 PM

Union 38 accepting preschool applications

The Union 38 Regional School District is accepting applications for the 2021 to 2022 school year for full-day integrated preschool programs in Conway, Deerfield, Sunderland and Whately.

Program hours are Monday through Friday, 8:30 a.m. to 3 p.m. The Extended Day option continues through 5:30 p.m. Extended Day options will be contingent on interest, COVID-19 health safety guidelines and state restrictions.

Children must be 3 or 4 years old by Sept. 1, 2021 to participate (or 2 years, 9 months old for the Deerfield full-day program).

For an application, call Sarah at the Superintendent's Office at 413-665-1155. Applications will be sent out beginning Jan. 4 and are due no later than Feb. 15. Tuition will be established by the School Committee, though tuition assistance may be available.

All preschool programming is subject to change based on COVID-19 guidelines.

Outreach meeting planned for pot growing facility

WHATELY — Debilitating Medical Condition Treatment Centers Inc. plans to hold a remote community outreach meeting on Monday to discuss the proposed creation of a marijuana cultivation facility (<https://www.recorder.com/Whately-Selectboard-OKs-remote-pot-forum-34321397>), on River Road.

The meeting, which is scheduled to begin at 6 p.m., will discuss the type of facility proposed, plans for maintaining a secure site and plans to positively impact the community, among other topics. According to the Whately town website, a question and answer session will follow a presentation by the applicants.

The meeting can be attended via Zoom at bit.ly/2Km5I00 (<https://bit.ly/2Km5I00>) using the Meeting ID 869 4913 5560.

Whately holds Municipal Vulnerability Preparedness workshops

WHATELY — The town is encouraging residents to participate in two upcoming Municipal Vulnerability Preparedness (MVP) workshops.

The workshops, both of which will be held remotely, are scheduled for Mondays, Jan. 4 and Jan. 11, at 6 p.m.

According to the Whately town website, attendees can expect to review the natural hazards impacting Whately and how climate change is interacting with these hazards; to discuss the responses gathered from stakeholder outreach; and to brainstorm actions to increase climate change resiliency.

Advance registration is required at bit.ly/2WXFofO (<https://bit.ly/2WXFofO>).



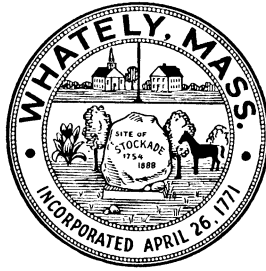
Top Articles

READ
MORE

(https://www.recorder.com/Funeral-Consumers-Alliance--paying-it-forward--by-crafting-donating-infant-coffins-40779447?traffic_source=Connatix)

Funeral Consumers Alliance 'paying it forward' by

crafting, donating infant coffins



TOWN OF WHATELY MASSACHUSETTS

OFFICE OF THE SELECTBOARD

December 8th, 2020

Dear Whately Community Member:

Increasingly, we find ourselves working to respond to more unpredictable and severe weather events that damage Whately's infrastructure, natural resources, and local economy and threaten the health and welfare of our residents. The costs and impacts to our town remind us that we need to continue working to reduce our risk and increase our resilience – being able to effectively deal with and quickly bounce back from - these extreme storm events.

In order to be as proactive as we can in preparing and protecting our residents, the Town of Whately is partnering with the Franklin Regional Council of Governments to prepare a Municipal Vulnerability Preparedness (MVP) Plan. This Plan will help us to:

- 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, and later qualify us for funding to implement these important actions.

We previously planned on holding an in person workshop to gather critical stakeholder feedback, but due to the ongoing COVID-19 pandemic we are now gathering information virtually through a series of Zoom workshops. We want the Plan to reflect the real needs and experiences of Whately residents, and your input is critical. We hope you can join us for one or both sessions; please see the attached flyer for registration information.

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 Whately 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,

Brian Domina, Town of Whately

Amy Schrader, Town of Whately

Kimberly Noake MacPhee, FRCOG

Allison Gage, FRCOG

Please save the date and come to our

MVP COMMUNITY RESILIENCE BUILDING WORKSHOPS

Join us on Monday, January 4th and Monday, January 11th 2021

6:00pm – 8:00pm

Please join us for a series of public workshops 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.

This workshop is a part of Whately's effort to become a designated MVP Community. During the workshops, we will:

- ✓ Review the natural hazards impacting Whately 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



Find out more about the project here:

<https://www.whately.org/home/news/whately's-municipal-vulnerability-planning-process-underway>

WE NEED YOUR INPUT!

The workshops will be held via Zoom. Advance registration is required; please register for both if you can.

Registration Link for January 4th:

<https://us02web.zoom.us/join/register/tZIVdeqqrzguGNGYKfofUqZbiseIhjKFUclc>

Registration Link for January 11th:

<https://us02web.zoom.us/join/register/tZUodO-urTgsHdVFADWcguNTeytjGD17ZBpq>

Workshop #1 Presentation

Community Resilience Building Workshop

Town of Whately

January 2021

Zoom Housekeeping

Unmute/mute yourself – please stay muted if not speaking

Ask questions/report issues

Turn on/off video function

Prevents videos from blocking presentation

WHATELY, MASS.

Agenda

MVP

Municipal Vulnerability Preparedness

- Overview of the Municipal Vulnerability Preparedness (MVP) Program
- Review Massachusetts’ changing climate
- Identify Top Hazards
- Identify Strengths and Vulnerabilities
- Discuss Workshop #2 Agenda and Next Steps

Municipal Vulnerability Preparedness (MVP) Program

\$44 Million to cities and towns since 2017

BERKSHIRES & HILLTOWNS

GREATER CT RIVER VALLEY

CENTRAL

NORTHEAST

GREATER BOSTON

SOUTHEAST

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)

\$44 Million to cities and towns since 2017

Montague

Montague City Road Flooding Protection Project: Design and Permitting

MVP Grant: \$33,750

Match Amount: \$11,250

Total Project Cost: \$45,000

Deerfield

Culvert Redesign and Retrofit and Bylaw Update

MVP Grant: \$47,325

Match Amount: \$19,611

Total Project Cost: \$66,936

Why the MVP Program?

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

Infrastructure Resilience

Social Resilience

Environmental Resilience

COMMUNITY RESILIENCE

Source: NJ Climate Change Resiliency Study

31

Changing Climate Variables



Changing precipitation



Higher temperatures



More frequent & intense storms

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

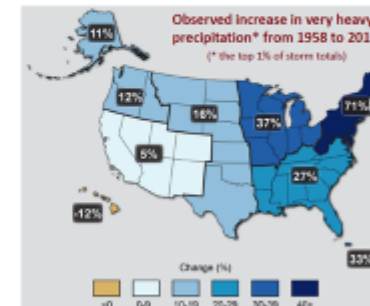


Changing Precipitation

Observed Annual Precipitation



Observed Increase in Heavy Precipitation

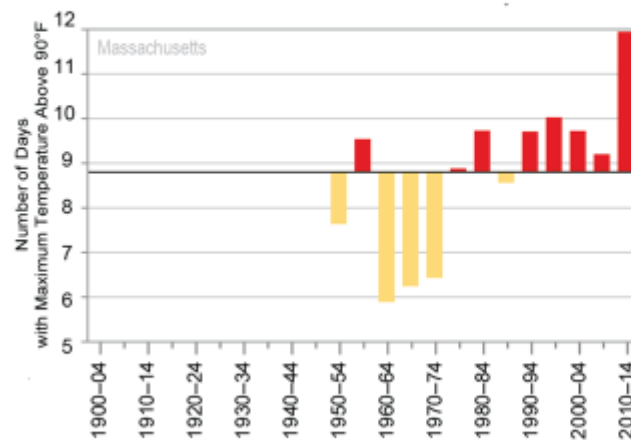


Impacts from Changing Precipitation

- Increased total rainfall
 - Impact on the frequency of minor but disruptive flooding events
 - Impact agriculture, forestry, and natural ecosystems
- More intense downpours
 - Increased risk of flooding
 - Increased damage to property and critical infrastructure
 - Impacts to water quality
- Changes to rainfall and snowfall patterns
 - Impacts to certain habitats and species with specific physiological requirements
 - Reduced snow cover for recreation and tourism
 - Potential increase in frequency of episodic droughts



Higher Temperatures



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



Impacts from Increasing Temperatures

- Public health
 - Increase in heat-related illnesses and mortality
 - Urban residents face greater risks
- Health of plants, animals, and ecosystems
 - Increased pests
 - Changes to growing seasons
- Economic sectors
 - More sick days due to heat-related illnesses
 - Reduced crop production and impacts to livestock and fisheries
- Infrastructure
 - Larger demands on energy systems
 - Stress on train tracks, roads and bridges, and other critical infrastructure



Extreme Weather Events



Photo credit: John Lapore

Flash flooding,
tropical storms



Photo credit for bottom two photos: The Greenfield Recorder

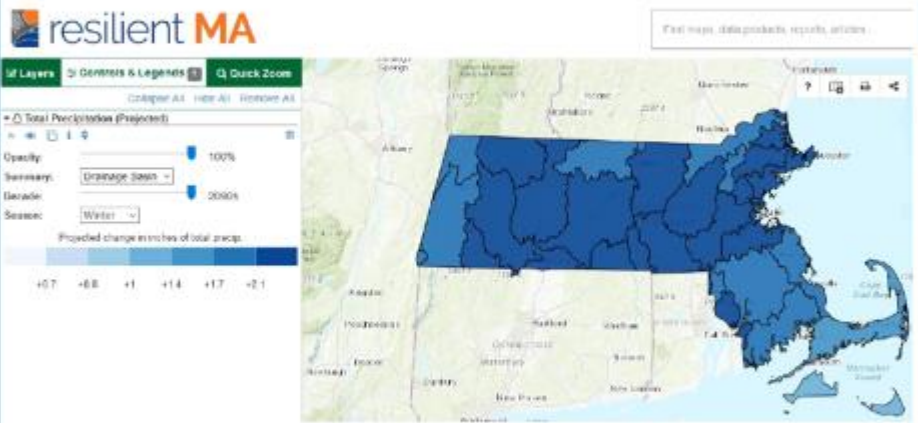
Severe wind,
thunderstorms

Tornadoes



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

ResilientMA Climate Change Clearinghouse www.resilientma.org



Participant Input



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

Hazard Characterization

Past & Recent Events

2011 – Tropical Storm Irene



Past & Recent Events

2011 Nor'easter



Past & Recent Events

Microburst in Whately – June 2020



Crops & pine trees downed on a local farm

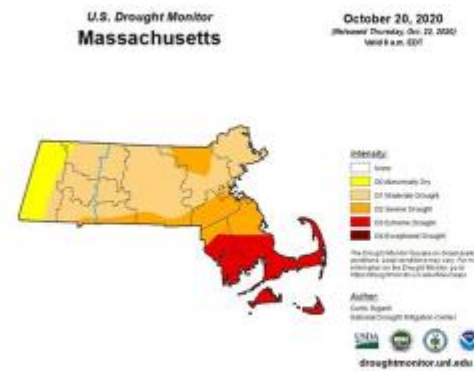
Tobacco barn near Long Plain Road/Straits Road



Photos: Paul Franz/Greenfield Recorder

Past & Recent Events

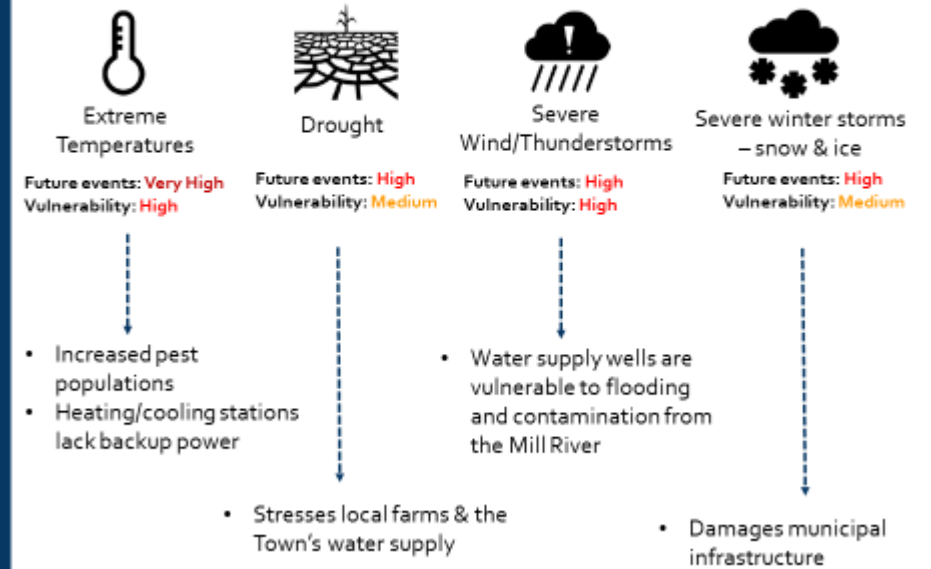
Statewide Drought – June to November 2020



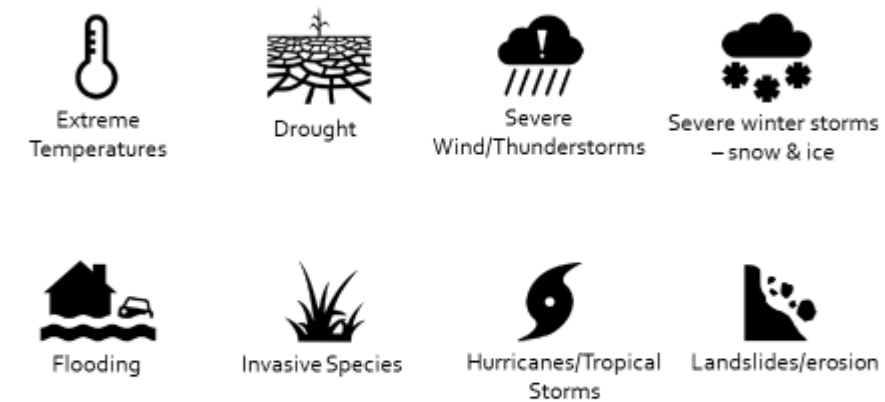
Greenfield Recorder/KEVIN GUTTING

Farm managers at Quonquot Farm manually watering young apple trees in September 2020 due to the drought

Hazard Identification



Hazard Identification



- ✓ Pose the greatest threat to the community currently
- ✓ Pose the greatest threat to the town over the next decade or longer
- ✓ The community should take action to improve their resiliency

Vote on your Top Hazard

Workshop #1 Agenda

- Overview of the Municipal Vulnerability Preparedness (MVP) Program ★
- Review Massachusetts' changing climate ★
- Identify Top Hazards ★
- Identify Strengths and Vulnerabilities ←
- Discuss next steps

Workshop Outcomes

Main goal: build resilience!

1. Understand strengths and vulnerabilities in three sectors



2. Brainstorm actions to build on strengths and address vulnerabilities

Identify strengths and vulnerabilities

What is it?

 Infrastructure	- Roads and bridges - Power grid - Drinking Water - Wastewater Treatment	- Communications - Housing - Emergency Response - Schools
 Environment	- Coldwater streams - Forests - Farmland - Floodplains	- Habitat - Wetlands - Aquifers
 Society	- Availability of health care services - Access to lifelines (food/water, emergency response personnel, etc.)	Support networks that connect and maintain the supply of goods and services to vulnerable populations

Identify strengths and vulnerabilities

Examples

	Strength	Vulnerability
 Infrastructure	Trees near powerlines are routinely cut	Undersized culverts or bridges
 Environment	Large parcels of conserved land	Eroded riverbanks
 Society	Residential emergency preparedness	Sheltering facility lacks backup power

Workshop Activity


Infrastructure


Strengths


Vulnerabilities

water supply wells are vulnerable to contamination

- Extreme Temperatures - Drought - Severe Wind/Microbursts - Severe Winter Storms -

Community Resilience Building Matrix

Information collected will be transposed into the matrix for the final MVP Plan

Community Resilience Building Risk Matrix									
www.CommunityResilienceBuilding.com									
H-M-L: Priority for action over the Short or Long term (and ongoing)									
V = Vulnerability, S = Strength									
Features	Location	Ownership	V or S					Priority	Time
Infrastructure									
Societal									

Project Tasks

- Complete MVP Workshop #1
 - ❖Review Massachusetts' changing climate
 - ❖Identify top hazards
 - ❖Identify strengths and vulnerabilities
- Meet next Monday to review tonight's findings and brainstorm resiliency actions
- Listening Session with Town Residents and Stakeholders
- Finalize MVP Report and Request MVP Designation

Whately's Virtual MVP Planning Process



Community Discussion Sessions

- TONIGHT: Workshop #1
- Monday, January 11th 6:00 – 8:00pm: Workshop #2
- Late February: Public Listening Session

Ongoing Outreach

Learn more about the project & respond to surveys



Building a Resilient Whately

Take a tour to learn more about Whately's Municipal Vulnerability Preparedness planning efforts, and find out how you can provide input.

Whately, MA: The Town of Whately | November 25, 2021

Find up to date information about the planning process



Whately's Municipal Vulnerability Planning Process is Underway - MVP Community Resilience Building Workshops Invitation

Whately has received a grant from the State to create a Municipal Vulnerability Preparedness Plan and become an MVP community. This MVP status will allow Whately to apply for implementation grants to build projects and address work that helps the Town be more resilient and prepared for the lasting effects of climate change. The Plan will examine risks for strengths and vulnerabilities in town, particularly looking from the perspective of infrastructure, people, and natural resources. The Town of Whately and the Franklin Regional Council of Governments will be holding a series of workshops in early 2022 to determine Whately's top hazards, strengths, & vulnerabilities, and develop an action plan. Ahead of the workshops, we are hoping to hear from residents about how Whately has been impacted by a changing climate. You can learn more about the MVP program and provide input to the plan by exploring the Building a Resilient Whately website.

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

Join us on Monday, January 4th and Monday, January 10th 2022 6:00pm - 8:00pm

Please join us for a series of public workshops to discuss your experiences with climate-related threats, such as flooding, severe winter storms, and extreme heat.

Community Resilience Building Workshop – Part 2

Town of Whately

January 2021

Zoom Housekeeping

Unmute/mute yourself – please stay muted if not speaking

Ask questions/report issues

Prevents videos from blocking presentation



Agenda



Municipal Vulnerability Preparedness

- Review discussion topics from Workshop #1
- Review MVP Action Grant Criteria
- Finish Strength and Vulnerability Assessment
- Brainstorm Resiliency Actions

Why the MVP Program?

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

Infrastructure Resilience

Social Resilience

Environmental Resilience

COMMUNITY RESILIENCE

Changing Climate Variables



Changing precipitation



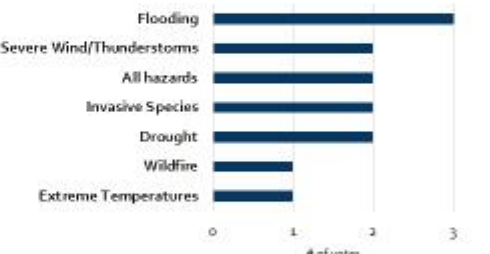
Higher temperatures



More frequent & intense storms

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

Top Hazards



Hazard	# of votes
Flooding	3
Severe Wind/Thunderstorms	2
All hazards	2
Invasive Species	2
Drought	2
Wildfire	1
Extreme Temperatures	1

Participant Input



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

Overview of MVP Action Grants



Types of 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

Projects that restore, protect, and/or manage natural systems and/or mimic natural processes to address hazards like flooding, erosion, drought, and heat islands in ways that are cost-effective, low maintenance, and multibeneficial for public health, safety, and well-being.



Riverbank restoration on the North River, Colrain MA



Low impact development project, Greenfield MA

Why Nature Based Solutions?



Enhanced public safety by reducing risks from flooding, erosion, drought, and heat risks to vulnerable populations and community assets.



Avoided infrastructure costs of short- and long-term maintenance, unplanned repairs and safety improvements due to flooding and failure from intense rain events.



Promotes biodiversity, important for environmental health and safeguarding natural resources like water, food, and shelter.

And other **ecosystem services**, such as improving air and water quality, flood protection, groundwater recharge, carbon sequestration, human health and well-being

Projects that are MVP Competitive

Montague



MVP Grant: \$33,750
Match Amount: \$11,250
Total Project Cost: \$45,000

Montague City Road Flooding Protection Project: Design and Permitting



Deerfield



MVP Grant: \$47,325
Match Amount: \$19,611
Total Project Cost: \$66,936

Culvert Redesign and Retrofit and Bylaw Update



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



Questions about Action Grants?



Agenda



- Review discussion topics from Workshop #1
- Review MVP Action Grant Criteria
- Finish Strength and Vulnerability Assessment
- Brainstorm Resiliency Actions

Discussion Overview

1. Understand strengths and vulnerabilities in three sectors



Infrastructure Society Environment

2. Brainstorm actions to build on strengths and address vulnerabilities

Identify strengths and vulnerabilities

What is it?



Infrastructure

- Roads and bridges
- Power grid
- Drinking Water
- Wastewater Treatment
- Communications
- Housing
- Emergency Response
- Schools



Environment

- Coldwater streams
- Forests
- Farmland
- Floodplains
- Habitat
- Wetlands
- Aquifers



Society

- Availability of health care services
- Access to lifelines (food/water, emergency response personnel, etc.)
- Support networks that connect and maintain the supply of goods and services to vulnerable populations

Identify strengths and vulnerabilities

Examples



Infrastructure

Strength

- Road drainage improvements

Vulnerability

- Undersized/aging culverts



Environment

- Extensive floodplain & wetlands along the Mill River

- Invasive species: Japanese knotweed, bittersweet



Society

- Residential emergency preparedness

- Sheltering facility lacks backup power

Workshop Activity

Community Resilience Building Risk Matrix  www.CommunityResilienceBuilding.org

ALL HAZARDS: severe winter storms, flooding, tornadoes, hurricanes/tropical storms, thunderstorms/lightning, wildfires, earthquakes, landslides, drought, extreme temperatures, invasive species

H = High priority for action over the short or long term (and ongoing)
V = Vulnerability **S** = Strength

Features	Location	V or S	Identified Strength or Vulnerability	Resiliency Action
Infrastructure				
Road Drainage	Chauncey Place Road, Haydenville Road	S	Road drainage improvement projects have recently been completed throughout Town	
Highway Maintenance	Town-wide	S	Highway maintenance is proactive - department works to frequently address key issues.	
Bridges	Mitchell Brook Mill River Bridge	S	Bridges in Town have recently been repaired/replaced, which allowed for the removal of weight limit restrictions.	
Industrial Park		S/V	Industrial park is well drained, but has a lot of impervious surfaces.	Look for opportunities for partnerships with businesses in the industrial park, such as implementing LID/stormwater management projects and solar PV projects.
Whately Park and Ride	Route 5/10	S	Whately's park and ride helps to reduce traffic congestion on I-95 and Routes 5&10	Seek funding to install EV charging stations and implement stormwater management BMPs. Explore opportunities for expansion of transit services.

Prioritization Survey

1. Please rank the action items

Rank by #

- ☐ Culvert mapping
- ☐ Upstream bio-remediation
- ☐ Education and outreach on climate change
- ☐ Obtain a generator for the shelter
- ☐ Distribute tick collars to seniors with pets
- ☐ Streambank stabilization

Done

Whately's Virtual MVP Planning Process



- Next Steps**
- TONIGHT: Workshop #1 ★
 - Monday, January 11th 6:00 – 8:00pm: Workshop #2 ★
 - Draft Report & Send out for review
 - Late February: Public Listening Session

Public Comment Period

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

The public listening session was held as a standalone meeting on April 21, 2021 at 6:00pm via Zoom. FRCOG Staff provided an overview of 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.

Representatives from the Town Administration, Selectboard, Conservation Commission, Board of Health, Emergency Management, and the EoEEA were present at the meeting.

Listening session participants noted that the action item prioritization survey was filled out by a small number of workshop participants, and therefore the results did not provide enough data to accurately prioritize the action plan. Those present at the listening session agreed action items related to the Town's water supply should be top priorities. FRCOG staff revised Whately's top priorities accordingly.

Overall, the meeting attendees were happy with the plan and presentation.

The public comment period was held from April 21, 2021 to May 5, 2021, during which the public was invited to submit comments via email. All comments received during the listening session were incorporated into the plan.

The public listening session and public comment period were advertised on the Town of Whately's website and in the *Greenfield Recorder*. The presentation and outreach materials are provided below.

(<https://www.recorder.com>)

News > Local (</News/Local/>)

South County Notebook: April 17, 2021



([/byline?byline=](#))

Published: 4/16/2021 2:21:38 PM

Town invites public to vulnerability preparedness listening session

WHATELY — Officials are holding a public meeting to review the results of the Municipal Vulnerability Preparedness (MVP) Community Resilience Building Workshop and the draft of the Resiliency Plan.

The meeting is scheduled for Wednesday, April 21, at 6 p.m. via Zoom, according to a notice on the town website.

The meeting follows two workshops held in January, during which participants helped define top local natural and climate-related hazards of concern, and identify and prioritize actions and projects for the town to implement.

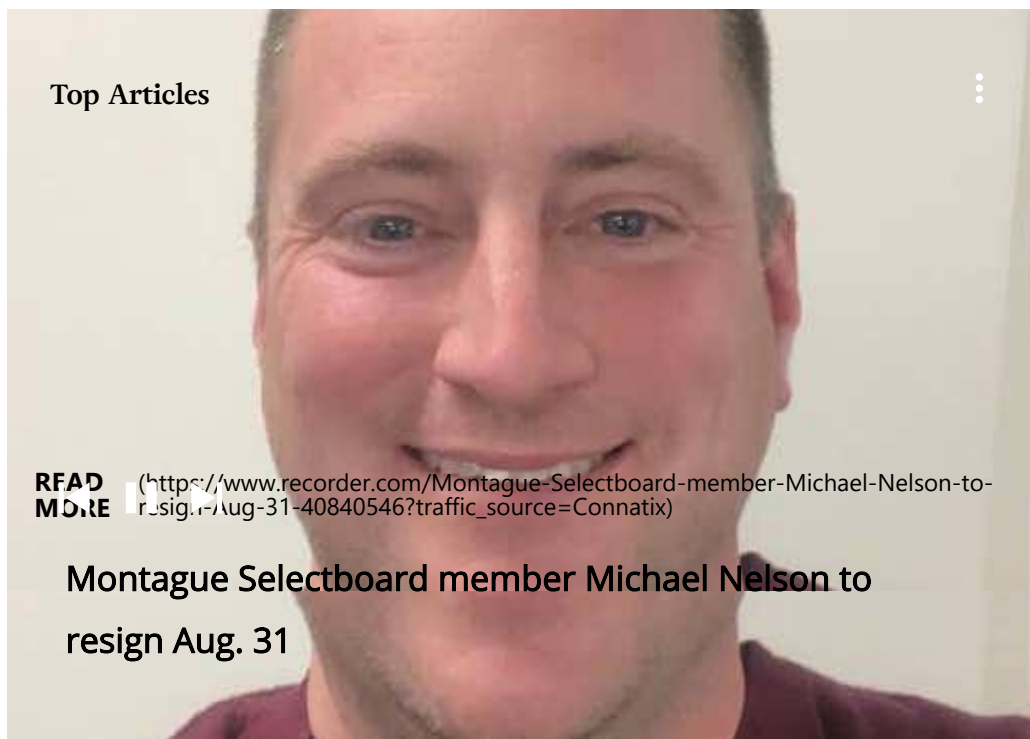
Interested participants can register for the meeting at bit.ly/WhatelyMVP (<https://bit.ly/WhatelyMVP>).

Annual street sweeping planned

SUNDERLAND — The yearly street sweeping is scheduled for Tuesday, April 20 through Thursday, April 22.

Dates may change due to weather conditions, according to a notice on the town website.

Only sand and small debris should be swept into the street, as street sweeping machinery is not designed to accept larger debris.



Whately Municipal Vulnerability Preparedness (MVP) Public Meeting



Photo courtesy of the Greenfield Recorder

The Town of Whately and the Franklin Regional Council of Governments invite Whately residents to hear about and comment on the MVP Plan:

- ✓ **Attend the public meeting: April 21st at 6pm via Zoom**
- ✓ **Provide public comment between April 21 – May 5:**
 - **MVP Plan will be posted at www.whately.org**
 - **Submit a comment via email to Amy Schrader, Whately Administrative Assistant: adminassit@whately.org**

WE WANT YOUR FEEDBACK!

Wednesday, April 21, 2021 6:00 p.m.

Zoom Meeting

Please register in advance of the meeting

<http://bit.ly/WhatelyMVP>

Allison Gage

From: Amy Schrader <adminassist@whately.org>
Sent: Wednesday, April 28, 2021 8:18 AM
To: Kimberly Noake MacPhee; Allison Gage
Subject: FW: Comments on MVP plan

Hi Kimberly and Allison,

MVP draft comments below.

Amy Schrader
Administrative Assistant
Town of Whately
4 Sandy Lane
South Deerfield, MA 01373 (mailing)
413-665-4400x1

adminassist@whately.org

My office hours are Tuesdays, Wednesdays, and Thursdays 8:00am-4:00pm

Please be advised that the Secretary of the Commonwealth has determined that all email messages and attached content sent from and to this email address are public records unless qualified as an exemption under the Massachusetts Public Records Law (MGL c.4 § 7(26)).

From: ALLISON BELL <awbelldesign@comcast.net>
Sent: Wednesday, April 28, 2021 1:52 AM
To: Amy Schrader <adminassist@whately.org>
Subject: Comments on MVP plan

GENERAL COMMENTS —

*** Reference to Massachusetts Invasive Plants Advisory Group website would be useful: <https://www.massnrc.org/mipag/publications.htm>

Check info available for:

- The Evaluation of Non-Native Plant Species for Invasiveness
- Strategic Recommendations for Managing Invasive Plants
- Early Detection Priorities
- Effective Management

*** Invasive plants negatively impact biodiversity, wildlife habitat, rare and threatened species, tree regeneration, water quality, farming operations, and property values.

*** Uncontrolled invasive plants on town property and roadways are physically expanding onto adjacent properties and produce seeds that establish new infestations.

*** The existing list of invasive plant species in Whately is inaccurate and incomplete.

*** In addition to input from an outside consultant, management efforts must include public education, community involvement, and town staff training.

p. 10

*** Landscapes in Whately are not only "increasingly susceptible" to invasive species, they are being aggressively degraded by them.

*** Non-native plants are actively crowding out native plants, decreasing the availability of food, forage, and nesting habitat . . .

pp. 19 & 21

*** Mill River and West Brook should be marked as threatened by invasive plants—both are heavily infested with dozens of species. Other streams should be included— ex. Roaring Brook.

*** Riparian and wetland buffer projects MUST address existing invasive plant problems.

Allison Bell
3 North Street
Whately, MA 01093
413-320-3713

Allison Gage

From: Amy Schrader <adminassist@whately.org>
Sent: Tuesday, April 27, 2021 1:33 PM
To: Allison Gage; Kimberly Noake MacPhee
Subject: FW: MVP draft comment - dam failures

Hi Allison and Kimberly,

Please see the email below from town resident, Judy Markland.

Amy Schrader
Administrative Assistant
Town of Whately
4 Sandy Lane
South Deerfield, MA 01373 (mailing)
413-665-4400x1

adminassist@whately.org

My office hours are Tuesdays, Wednesdays, and Thursdays 8:00am-4:00pm

Please be advised that the Secretary of the Commonwealth has determined that all email messages and attached content sent from and to this email address are public records unless qualified as an exemption under the Massachusetts Public Records Law (MGL c.4 § 7(26)).

From: Judy Markland
Sent: Tuesday, April 27, 2021 1:32 PM
To: Amy Schrader ; Brian Domina
Subject: MVP draft comment - dam failures

My compliments to all those who worked on the MVP plan. It's thoughtful and comprehensive.

There's one major risk that's omitted, however, that of either or both of the water supply dams letting go following extremely heavy rainfall like with hurricane Irene. Our house at 106 North St. is about two tenths of a mile from both the Mill River (under normal conditions) and Roaring Brook, but several years ago we received a letter from the town alerting us to the fact that the house itself is in the flood range should the Roaring Brook dam go. A map was enclosed with the letter (which I wish I'd kept, but didn't). Lynn probably has it. The plan should address this.

Another less important omission is the implications of the trend towards more greenhouses for farming. The pattern of drought periods followed by heavy rains that create boggy fields, rot and blight is making farming increasingly risky. Greenhouses reduce this risk and also that of extremely volatile temperatures and winds. But they also require town water and concentrate runoff. Because of the agricultural exemption from zoning we can't require water reuse and recapture or impose lot coverage limits. Increased use of town water is a significant likelihood. I'm not sure about the implications for the aquifer.

Judy

Allison Gage

From: Margaret Christie <Margaret@buylocalfood.org>
Sent: Thursday, April 15, 2021 11:44 AM
To: Allison Gage
Subject: FW: cover crop question

From: Parsons, Kate - NRCS, Amherst, MA <kate.parsons@usda.gov>
Sent: Tuesday, March 16, 2021 11:13 AM
To: Susan Scheufele <sscheufele@umext.umass.edu>; Margaret Christie <Margaret@buylocalfood.org>; Akin, Thomas - NRCS, Amherst, MA <thomas.akin@usda.gov>
Subject: RE: cover crop question

Hi Sue and Margaret,

I am getting the data on acres of cover crop planned and implemented over the last 5 years. I am not as intimately familiar with the actual practices of the vegetable producers as I am the dairy farmers. My over-all impression is the same- that the valley farmers do tend to plant cover crop without the financial assistance. They may not do it as early as they would if they were trying to meet our required seeding dates. I think much of the land that doesn't have a cover on it was harvested late, as you mentioned. On those crops, I think we need to encourage inter-seeding between the rows after the crop gets established; and then perhaps flail mowing of the crop residue instead of disking. If eliminating the disking pass would pose a disease concern, then maybe they could use a narrower tillage implement to harrow just the row/bed and seed winter rye.

The good news is that there are producers, Umass Extension, AFT, MDAR, conservation districts and probably other groups I'm forgetting working to encourage soil health in the valley and across the state! Hopefully we can work out some soil health systems for our various cropping systems, i.e. early harvested vegetables, late harvested vegetables, late potatoes!

To answer your question though, funding is provided through EQIP and CSP to address a resource concern (sheet and rill erosion, soil quality). Ag producers are eligible for up to 3 years of funding for cover crops or up to 5 years if they are following a soil health management system (including reduced tillage, for example). Many producers have already received the maximum number of years of funding. If they stop doing it for a period of time and a resource concern returns, they are potentially eligible for funding again.

CSP picks up where EQIP leaves off, as this program provides an annual payment for five years based on the number of resource concerns a producer has met on each land use for their entire operation. The annual payment (minimum \$1500/yr) for their existing level of stewardship can be used for whatever they want – and can be thought of as their funding for cover crop. At the same time, the producer is required to implement at least one activity (practice or enhancement) on one land use and there is an associated payment rate for these.

There are enhancements for cover crop that require the producer improve on their existing practice (i.e. planting winter rye, oats, winter peas instead of just winter rye). There are numerous cover crop enhancements to pick from, but one that targets improved soil health pays \$14.71/ac. These are much lower payment rates than are received under EQIP. The cover crop rates under EQIP are \$51.84/ac for non-organic monoculture or \$63.37/ac for multi-species.

Let me know if you would like additional information. Let's keep the conversation going! I'll forward the data when I get it.

Thanks,

Kate

From: Susan Scheufele <sscheufele@umext.umass.edu>

Sent: Monday, March 15, 2021 3:06 PM

To: Margaret Christie <Margaret@buylocalfood.org>; Parsons, Kate - NRCS, Amherst, MA <kate.parsons@usda.gov>; Akin, Thomas - NRCS, Amherst, MA <thomas.akin@usda.gov>

Subject: RE: cover crop question

Hi Kate and Tom, wondering if either of you could help answer this question about how funding for cover crop seed may have changed in the last several years and impacts on acreage in winter cover?

Thanks,
Sue

From: Margaret Christie <Margaret@buylocalfood.org>

Sent: Tuesday, January 12, 2021 1:52 PM

To: Susan Scheufele <sscheufele@umext.umass.edu>

Subject: cover crop question

Hi Sue,

I was in a Whately meeting last night about climate change resilience and the question of cover crops came up. When people don't get a cover crop in, we sometimes get quite severe dust problems, as I'm sure you know. My take is that most growers in the Valley mostly get cover crops in (thanks largely to lots of good work by UMass Extension in the last couple of decades), but that there are always some fields left uncovered due to particular factors related to weather, what's coming out of the field, and occasionally the grower's organization or management. Someone else suggested that the acreage under winter cover had really dropped when conservation program funding for the use of cover crops was eliminated in Massachusetts. I don't know a lot about EQIP or CSP funding for cover crops. Can you shed any light on this question? Thanks,

Margaret

Margaret Christie, Special Projects Director
Pronouns: she/her/hers

The CISA office is closed and I am working remotely. Email is the best way to reach me.

Community Involved in Sustaining Agriculture (CISA)
One Sugarloaf Street
South Deerfield, MA 01373
(413) 665-7100 , ext. 23
www.buylocalfood.org

Home delivery, curbside pickup, online ordering: [here's where to buy local food](#) and more during COVID-19.



#1

COMPLETE

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Last Modified: Tuesday, December 08, 2020 2:57:46 PM
Time Spent: 00:02:49
IP Address: 24.60.191.101

Page 1

Q1

Moderately

How has Whately and its community been impacted by changes in precipitation?

Q2

What are your top concerns related to changes in precipitation? Please choose 3 from the list below.

Flash floods/erosion/soil loss,
Stresses on forest and ecosystem health,
Localized flooding

Q3

How have you been impacted by changes in precipitation?

We are mainly a greenhouse operation- changes in precipitation affect our aquifers and wells, which in turn affect our irrigation. For our plant material wetter springs bring higher risk of disease, and drier summers require greater watering needs.

#2

COMPLETE

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Last Modified: Monday, January 11, 2021 6:58:09 PM
Time Spent: 00:00:17
IP Address: 75.69.117.225

Page 1

Q1

Frequently

How has Whately and its community been impacted by changes in precipitation?

Q2

**Flash floods/erosion/soil loss,
Stresses on forest and ecosystem health,
Compromises to drinking water supply**

What are your top concerns related to changes in precipitation? Please choose 3 from the list below.

Q3

Respondent skipped this question

How have you been impacted by changes in precipitation?

#1

COMPLETE

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Started: Monday, January 11, 2021 6:59:42 PM
Last Modified: Monday, January 11, 2021 7:00:07 PM
Time Spent: 00:00:24
IP Address: 75.69.117.225

Page 1

Q1

Frequently

How has Whately and its community been impacted by extreme weather?

Q2

What are your top concerns related to extreme weather? Please choose 3 from the list below.

Damage to forests,
Damage to water bodies & wetlands,
Loss of carbon storage

Q3

How have you been impacted by extreme weather?

lost a few trees

#1

COMPLETE

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Last Modified: Monday, January 11, 2021 6:57:06 PM
Time Spent: 00:00:48
IP Address: 75.69.117.225

Page 1

Q1

Frequently

How has Whately and its community been impacted by rising temperatures?

Q2

What are your top concerns related to rising temperatures? Please choose 3 from the list below.

Drying of streams and wetlands,
Stresses on forest & ecosystem health,
Crop loss

Q3

How have you been impacted by rising temperatures?

for about 5 years or so

#1

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Monday, January 11, 2021 7:01:05 PM
Last Modified: Monday, January 11, 2021 7:05:53 PM
Time Spent: 00:04:47
IP Address: 75.69.117.225

Page 1

Q1

Drought

Which hazard has impacted Whately the most in the past?

Q2

Drought

Which hazard are you most concerned about impacting Whately in the future?

Q3

What are some strengths related to Whately's natural resources?

Our preserved land is a good carbon sink, helps the natural world be more resilient (and us too); farmland too.

Q4

What are some vulnerabilities related to Whately's natural resources?

I would say just the same vulnerabilities the earth has--drought, fire, damage from extreme weather

Q5

What are some strengths related to Whately's infrastructure?

there are not too many buildings to have to maintain

Q6

What are some vulnerabilities related to Whately's infrastructure?

We haven't maximized efficiency; we don't have public transportation

Q7

What are some strengths related to Whately's society?

We are developing community connections (especially in my neighborhood) including folks who are farming, and sharing.

Q8

What are some vulnerabilities related to Whately's society?

I would like to see our town be more united and involved in mitigation, and strategy as well as consideration of issues such as social justice and issue of climate refugees.

Q9

Do you have ideas about actions Whately could take to build on some of the strengths or address vulnerabilities you mentioned above?

maybe start with public discussions; maximize community sharing programs (builds community and resilience)

Public Listening Session Presentation



Photos courtesy of the Greenfield Recorder

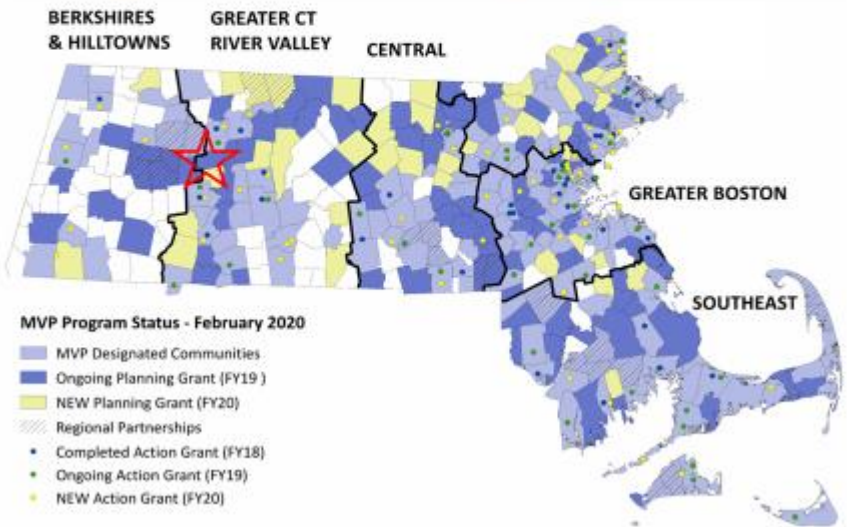
Municipal Vulnerability Preparedness (MVP) Listening Session

Town of Whately

April 21, 2021

Massachusetts Municipal Vulnerability Preparedness (MVP) Program Launched 2017

\$44 Million awarded for Planning & Action Grants



Agenda

- Overview of the Municipal Vulnerability Preparedness (MVP) Program
- Summary of Workshop Findings
- Discuss Your Concerns & Provide Feedback on the Action Plan

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



Changing Climate Variables



Increased precipitation



More frequent droughts



Higher temperatures



More frequent & intense storms

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

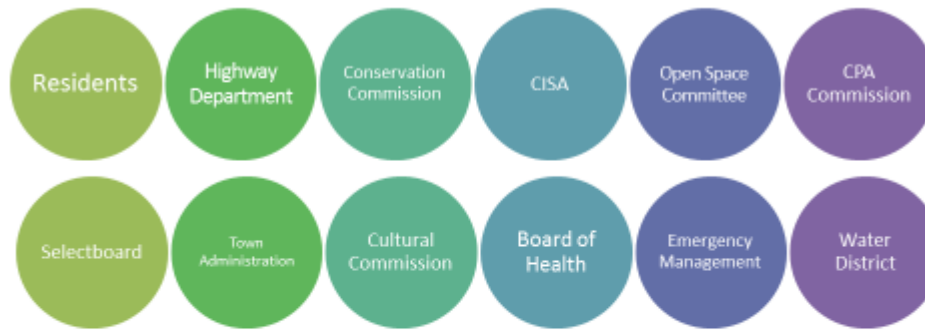
Municipal Vulnerability Preparedness (MVP)



Whately Community Resilience Building Workshops – January 4th & 11th 2021

- ✓ 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

Workshop Participants



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 Whately?
 ✓ Infrastructure
 ✓ Residents
 ✓ Environment

Benefits of having participants from different sectors/departments:

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

WHATELY'S TOP HAZARDS



Photos courtesy of the Greenfield Recorder

Whately's Vulnerabilities



Infrastructure

- Limited backup water supply
- Undersized/failing culverts
- Aboveground power lines



Society

- Increase of insect-borne diseases
- Impact of extreme heat on farm workers & highway crews
- Flooding and drought on local farms



Environment

- Invasive species
- Riverbank erosion on the Mill River
- Vulnerability of northern hardwood forests

WHATELY'S TOP STRENGTHS



Whately's MVP Action Plan



- 1. Discuss MVP Action Grants
- 2. Summarize the Draft Recommendations

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



Riverbank restoration on the North River, Colrain MA



Low impact development project, Greenfield MA

Draft Recommendations

Action	Key Points
Address stormwater management & drainage issues	✓ Hire a consultant to complete an assessment of all culverts and drainage systems in Town ✓ Prioritize repairs that would strengthen coldwater critical linkages
Obtain funding for rain barrels for farms and municipal buildings	✓ Increase resiliency to prolonged drought events
Conduct an assessment of drinking water needs for farm workers	✓ Work with farmers to determine if access to potable water is an issue ✓ Identify alternative sources of drinking water
Conduct an assessment of vulnerable populations and determine needs	✓ Obtain up to date information about needs for communication, evacuation, and sheltering for the Town's vulnerable populations
Identify locations in need of vegetated buffers along the Mill River	✓ Work with farmers & CISA to evaluate riparian buffers along the Mill River that are vulnerable to erosion

Hazard Mitigation Plan
High Priority Action Items

Equip the Water Department pump houses with backup power (generator). Assess whether solar battery storage is feasible for backup power.

Hire a consultant to complete an assessment of all culverts in Town. Based on the results of the inventory, prioritize repairs and replacements.

Hire a consultant to conduct a geomorphic assessment of the Mill River Watershed and identify flooding and fluvial erosion threats to Whately's public water supply wells and other critical infrastructure (culverts, roads, utilities) within the watershed.

Town of Whately Hazard Mitigation Plan



Adopted by the Whately Select Board on November 18, 2020
Approved by FEMA November 27, 2020

Prepared by
Whately Hazard Mitigation Committee
and
Franklin Regional Council of Governments
12 Olive Street, Suite 2
Greenfield, MA 01301
(413) 714-1267
www.frcog.org

This project was funded by a grant received from the Massachusetts Emergency Management Agency (MEMA) and the Federal Emergency Management Agency (FEMA).

Which resiliency action should Whately pursue first?

We need your input!

- 2 Week Public Comment Period through May 5th
- The full draft is posted on the Town Website
- Submit comments to Amy Schrader, adminassist@whately.org



Town of Whately



Municipal Vulnerability Preparedness (MVP) Program

MVP Resiliency Plan

DRAFT: April 2021

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



NEXT STEPS

1. Endorse your MVP Plan
2. Apply for MVP Grants

Montague



MVP Grant: \$32,750
Match Amount: \$11,250
Total Project Cost: \$45,000

Montague City Road Flooding Protection Project: Design and Permitting



Deerfield



MVP Grant: \$47,325
Match Amount: \$19,611
Total Project Cost: \$66,936

Culvert Redesign and Retrofit and Bylaw Update



Whately Municipal Vulnerability Preparedness Plan

Q & A



DRAFT