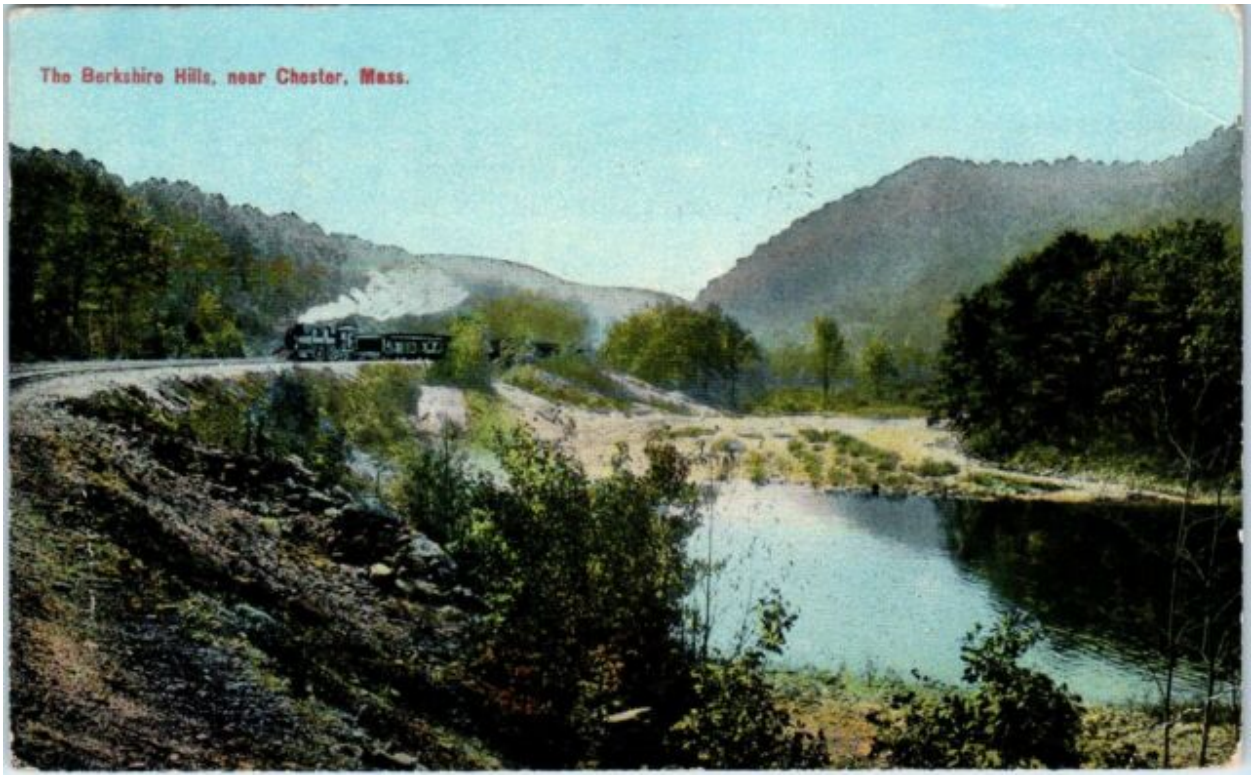
Municipal Vulnerability Preparedness
Community Resilience Building Workshop



Town of Chester, MA

DRAFT SUMMARY OF FINDINGS

DATE, 2021

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This project and the following report were made possible through funding from the Massachusetts Executive Office of Energy and Environmental Affairs' Municipal Vulnerability Preparedness (MVP) Grant Program.

Walker Brook, which feeds the west branch of the Westfield River in downtown Chester, is one of many surface water resources in town.

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Overview

Located in the foothills of the Berkshire mountain range, the Town of Chester is no stranger to harsh weather. Recently, however, climate change has caused more severe weather events, resulting in seasonal weather pattern fluctuations across the Pioneer Valley. The Town of Chester's emergency response team and residents are realizing that events that had been relatively predictable and seasonal, such as riverine flooding, the "mud season" freeze/thaw cycle of unpaved roads, and severe snow or ice storms, are now occurring with much more frequency and unpredictability than in the past. Weather events such as these are at best a nuisance, and at worst cause or contribute to public health, environmental, and/or economic crises. Examples of recent events that disrupted routine activity in the town include:

- A 2008 ice storm, during which one-and-a-half inches of ice accumulated on tree limbs and utility wires. Downed electrical wires resulted in extensive power outages that lasted over a period of four days.
- Tropical Storm Irene (2011), which resulted in heavy flooding that washed out sidewalks, damaged bridges and water lines, and caused considerable damage to a portion of MA Route 20.
- A large rainstorm in February 2016, during which two-and-a-third inches of rain fell overnight. Flooding occurred on many roads, and several unpaved roads were washed out. A state of emergency was declared.

Additionally, while not weather-related, the systems disruption caused by the novel coronavirus disease (COVID-19) pandemic further revealed global and local vulnerabilities to emergency response to widespread disasters. As once-routine visits to common areas and public spaces, such as the town hall, have become rare over the past year due to social distancing recommendations, so too have traditional communication methods employed by this small town. With in-person meetings of boards and commissions and public gatherings discouraged or canceled, the town has been forced to rely more on virtual and telecommunication strategies. In many western Massachusetts communities without reliable access to high speed internet, reliance on virtual meetings alone has had a chilling effect on public participation and the dissemination of information.

These and other recent events in nearby communities have reinforced urgency for the planning and implementation of climate resilience and adaptation activities while simultaneously ensuring coordinated and prioritized response. Pioneer Valley communities such as Chester are leading the way to reduce the exposure and vulnerability of its citizens, infrastructure, and ecosystems to future severe weather events, which ultimately contributes to the greater climate resilience of the entire Pioneer Valley region.

Recognizing the importance of both mitigation and adaptation strategies to deal with the challenges of climate change, the Town of Chester used the Municipal Vulnerability Preparedness (MVP) Planning grant as an opportunity to integrate these

objectives into existing programs. In 2020, the Town successfully pursued and received funding from the Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA) to advance a Community Resilience Building workshop under the MVP program.

The core directive of the MVP program is to engage community stakeholders to facilitate the education, planning, and ultimate implementation of priority climate change adaptation actions. Completion of the MVP process will enable the Town to achieve MVP certified community status from EOEEA by June of 2021 and receive preference for future state grants.

This report provides an overview of the top hazards, current concerns and challenges, strengths, and proposed actions to improve the Town of Chester's resilience to natural and climate-related hazards today and in the future.

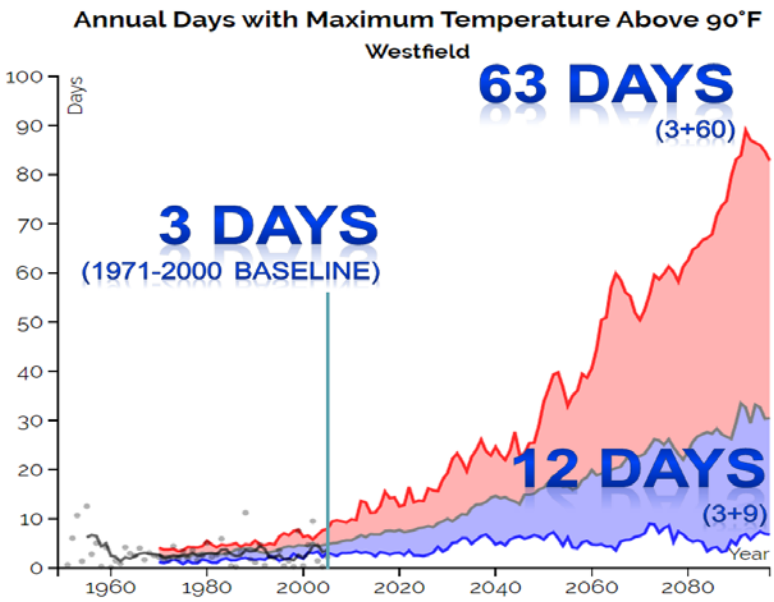
Community Resilience Building Workshop

The Town of Chester employed a unique "anywhere at any scale" community-driven process known as the Community Resilience Building (CRB) framework to host two two-hour virtual workshops (March 30 and April 6, 2021) and one three-hour virtual workshop (April 10, 2021). While the CRB would normally be held in-person during either two four-hour workshops or one eight-hour workshop, the stay-at-home guidance ordered by the Massachusetts Department of Public Health required the MVP planning team to develop innovative methods to bring stakeholders together while maintaining social distancing practices. The list of workshop invitees and workshop content was guided by input from the core MVP planning team, and comprised Town elected officials, community members, and business stakeholders, and consultants from the Pioneer Valley Planning Commission. The CRB's central objectives were to:

- Affirm community consensus of the local meaning of extreme weather and local natural and climate-related hazards;
- Identify existing and future vulnerabilities and strengths;
- Develop and prioritize actions for the Town and a broad stakeholder network;
- Identify opportunities for the community to advance actions to reduce risk and increase resilience.

Approximately 15 participants from Town boards and committees, land-holding organizations, community organizations, and other interest groups attended each of the three CRBs, which included a combination of topical presentations and large group activities. Pioneer Valley Planning Commission staff began the workshops with a presentation outlining the workshop process and goals, updating participants on past and ongoing local planning efforts relevant to the specific topic of that workshop, and presenting new state-provided climate projection data to enable both decision-support and risk visualization. Participants then engaged in a rich dialogue and shared ideas and experiences around topical features and possible strategies to shore up resilience to climate threats.

Each of the three CRB workshops was recorded and posted to PVPC's YouTube channel so that members of the public could review the proceedings at their own availability. Add number of views



Climate modelling from the Northeast Climate Science Center shows that Chester may experience up to 63 days per year over 90°F by the end of the century.

Climate Projections for the Westfield River Basin

Climate change is impacting communities around the world, and residents of Chester and elsewhere in the Westfield River Basin see these changes and their impacts almost every day. New climate projections from the Northeast Climate Science Center at the University of Massachusetts show with more certainty than ever that these changes can be expected to continue. Projections are based on simulations from the latest generation of climate models from the International Panel on Climate Change and scenarios of future GHG emissions, and are downscaled to the watershed and county level across the Commonwealth of Massachusetts.

Chester lies within the Westfield River Basin, where projections show that by the end of this century, communities could see more than 9 inches of additional rainfall annually over a 1971-2000 baseline of 50.7 inches per year. The winter season is expected to experience the greatest seasonal increase both in total precipitation and the frequency of heavy downpours, or days receiving precipitation over one inch. Projections also suggest that summers may be drier and with an increase in series of days without any rain at all.

With regards to temperatures, projections show that annual average and maximum temperatures will continue to rise. Even a very small rise in average temperatures can cause major changes in other factors, including impacts on species and ecosystem health and the relative proportion of precipitation that falls as rain or snow. Beyond this general warming trend, the change that may impact Chester and neighboring communities the most is the increase in very hot days. Projections indicate a 2,000% (60 day) increase in 90-degree days per year by the end of the century from a baseline average of three days per year. Generally, extreme heat is considered to be over 90°F, because at temperatures above that threshold, heat-related illnesses and mortality show a marked increase. Heat waves can lead to illness and death, particularly among individuals with existing health risk factors.

Finally, projections indicate an increase in the frequency and magnitude of extreme weather. This could come in the form of tropical storms, or other high intensity wind and rain events. Here, too, the greatest changes will occur in the spring and winter.

Top Hazards & Vulnerable Areas

Leading up to the workshop, PVPC worked with input from Town officials to identify some of the top ongoing concerns and challenges for Chester. In order to ensure a streamlined and efficient use of time during the virtual meeting, the core Town planning team made the decision to pre-identify the top four hazards to be addressed within the CRB matrix. In the first CRB workshop, PVPC presented a variety of past and current weather- and infrastructure-related challenges the town faces and described these four hazards in order to assure agreement among the stakeholder participants that these were in fact the most pressing hazards facing the town presently and in the future. These challenges were identified based on findings from previous planning processes such as Chester's 2016 Hazard Mitigation Plan, stakeholder input, and new climate change projections.

Top Hazards

The top four hazards for the workshop as agreed upon by the CRB participants were:

- Extreme Heat (including temp fluctuation)
- Intense Rainfall and Flooding (Localized & Riverine)
- Winter Weather
- Wind

Areas of Concern

Transportation Infrastructure: the age and condition of culverts; riverine and stormwater flooding of MA Route 20 and other roadways; passability of roads in times of emergency, generally; the repair and seasonal passability of dirt roads, specifically; and the repair and effects of the CSX railway

Electrical Infrastructure: maintenance and vulnerability of the municipally-owned electric distribution system, especially along MA Route 20; the functionality of the homes located outside of the municipal electrical distribution system

Natural Resources: loss of farmland to development; the impact of solar development specifically on natural resources; the impact of vegetative and insect invasive species on street trees, forested areas, riparian corridors, and agricultural lands; water quality and erosion in river and stream systems

Drinking Water Infrastructure: Age and condition of the water treatment plant; age and condition of pipe conduit connecting Horn Pond to Austin Brook Reservoir; maintaining reservoir levels and groundwater well functionality during drought; water quality within Horn Pond and Austin Brook Reservoir

Social Vulnerabilities: small tax base and very few businesses; aging population; lack of readiness in land use and development regulations to support any potential increase in development demand from new families and residents

Current Concerns & Challenges by Hazard

The Town of Chester faces multiple challenges related to the impacts of climate change and natural hazard-related weather events. In particular, workshop participants expressed concern over the effect of extreme weather on aging infrastructure; and that all residents' needs be met after an extreme event.

Chester's MVP workshop participants were generally in agreement that the town and region are experiencing more intense and frequent storm events, the impacts of which affect the daily activities of all residents. There was also common concern about the challenges of being prepared for future severe weather events, including the ability to shelter residents close to home; the resilience of the transportation network to changing weather and temperature fluctuations and the need for the system to remain operational for emergency travel, at a minimum; and the desire to protect the high quality of Chester's natural resources. Finally, participants expressed apprehension about protecting drinking water quality for the roughly 50% of town residents who rely on public water supply. The conversation included the need to better understand adjacent land use impacts on the water quality of the town's two drinking water supply reservoirs, Horn Pond and Austin Brook Reservoir, and the need to assess the condition of the associated infrastructure.

Specific Categories of Concerns & Challenges

Transportation Infrastructure: The specific issues identified within Chester's roadway network were two-fold: infrastructure maintenance and culvert functionality. Road passability is important for residents who may need to evacuate or travel in case of emergency, and it was noted that MA Route 20, an evacuation route and the major roadway passing through Chester's population center, experiences flooding in several locations. Stakeholders additionally recognized that undersized culverts, breached by runoff from more frequent and more intense rain, are impacting local residential roads as well. In some instances, transportation barriers caused by failing culverts are exacerbated by poor conditions on dirt roads, leaving residents of areas such as Abbot Hill and Taft Hill stranded during "mud season" rain events. In fact, dirt roads themselves comprised a large portion of the conversation given their vulnerability to fluctuating temperatures, rainfall and snow melt events, and wash outs.

Some workshop participants also expressed concern that the three bridges that connect downtown Chester to the northern part of town are vulnerable to riverbank erosion, sedimentation, and ice-damming around their footings. There was concern that this could impact the condition and safety of the bridges. Additionally, the need for redesign was identified as high waters come close to breaching the bridges' surface.

The CSX railway, which winds alongside the Westfield River and MA Route 20 throughout town, also poses a few unique concerns. Used to ship cargo through the region, the CSX railway is an active line. The railroad company's maintenance of the right-of-way around the tracks has been lax, and the Town has had to respond to several small brush fires causes by sparks from rail

use hitting dry brush. Additionally, CSX's management has been notoriously difficult to reach, and the town staff feel they have little ability to collaborate with the railroad on issues such as land use and management.

Drinking Water Infrastructure: Approximately half of Chester's households are serviced by the public drinking water system fed by Austin Brook Reservoir, with Horn Pond as a backup supply. The town's water treatment plant and drinking water transmission mains are known to be aging. Workshop participants questioned what would happen to their access to clean drinking water should a catastrophic event take the Town's system offline, or should the water become contaminated. One participant noted that as Horn Pond is located in the neighboring Town of Becket, the Town of Chester has little ability to protect the pond's water quality via land use and land management regulations around its shores.

The remaining half of Chester's residents does not have access to public drinking water supply and instead rely on private drinking water wells. To buffer against the threat of drought, workshop participants noted the need to prepare and implement a Water Conservation Plan, including plan for targeted public outreach to well owners.

Regulatory Infrastructure: Anticipating Chester to be an attractive location for potential climate migrants, workshop residents talked seriously about how to ensure that their land use and development regulations were ready to guide new development in a way that is harmonious with low impact development and natural resource protection. At the same time, stakeholders prioritized strategies to make sure that the town was welcoming to newcomers of all types, whether individuals, young families, working or retired, and of any race or ethnicity. Participants envisioned that a revitalized Chester could simultaneously be one of inclusion and innovation, while still retaining its traditional New England small town charm and open spaces.

Natural Resources: A common theme throughout the workshop was the loss of farmland, forested lands, and other open space to residential development and development of lands for energy production, such as solar and wind power. Stakeholders identified the need to review and update zoning and development code to ensure the protection of ecosystem services and habitat while at the same time allowing for the generation of important services such as housing and renewable energy.

Given Chester's prevalence of surface water resources, including the west branch of the Westfield River and numerous brooks and streams, workshop participants paid special attention to both water quality and locations experiencing chronic flooding. Participants identified the need to model flood storage capacity across the Westfield River watershed, and identify locations within town boundaries and in upstream communities where storage capacity could be improved.

The stakeholders also conversed about the prevalence of forested land in Chester, and the opportunity to work with landowners to ensure that forestry best practices were implemented to control the spread of invasive species. Additionally, participants discussed exploring the ability to manage resources in accordance with climate change induced habitat shift, and to educate landowners and residents about the value that open space, including forested lands, provides in mitigating climate change.

Outreach around this subject seemed especially important to the group, given that Chester has many permanently protected lands that do not contribute to tax revenues. The group also championed support of Senator Hinds' efforts to revise the formula for payment-in-lieu-of-taxes (PILOT) made for state-owned land. A revised formula would not be based solely on real estate values, but rather the range of important values provided by large tracts of forested land in western Massachusetts, including sequestration of carbon, improved air and water quality, and recreational enjoyment, all of which provide for greater resilience across Massachusetts.

Significantly, workshop participants were eager to develop creative strategies to capitalize on the pristine, and sometimes unique, natural resources abundant in the town. Rather than identifying extractive strategies, participants developed ideas for promoting commercial activity centered on protection of natural resources, such as nature-based experiential programming for grade school and university-aged students, active and passive outdoor recreation, and wilderness expeditions.

Social Vulnerabilities: As with many Western Massachusetts communities, Chester has an aging population. The group identified a growing concern that residents may be less able to meet their own needs as independently as they used to, and so explored ideas for increasing access to public transit to the region and for establishing buddy systems checking in on one another. Workshop participants also discussed the need to ensure that new public developments and redevelopments followed best practices for accessible design and for pedestrian comfort, with ideas including the installation of public benches, preferably located in shady and sheltered areas, and other public gathering spaces.

Because seniors may be more at risk for health issues related to extreme heat and cold, participants also wanted to ensure that local heating and cooling shelters were stocked with necessary amenities and that information was available regarding their locations and open hours.

Stakeholders acknowledged that the weather now is different than residents of Chester have traditionally experienced, and so many homes and other buildings are unequipped with systems such as air conditioning. As the town is projected to experience more weather and temperature extremes in the future, energy retrofits will be increasingly important in safeguarding the comfort and livability of existing building stock.

Current Strengths & Assets

As a result of both Chester's broad experience with extreme weather and residents' pride of place, workshop participants were quick to point out their communities' strengths in responding to the challenges identified above. Reinforcing and expanding upon these strengths and community assets to increase resiliency against the impacts of climate change is a common theme to the proposed actions within this report.

Some of the key strengths discussed included:

- Scenic areas and natural attractions for outdoor recreation, such as the Highlands Footpath network, the Keystone Arches trail, Gobble

Mountain, and the Chester-Blandford State Forest
- Forested land cover, open space, and other natural resources which contribute to a healthy environment
- Proximity to the Westfield River and other surface waters
- The historic Chester Railroad Museum, which is a tourist attraction, and the existing railroad infrastructure, which currently serves freight traffic but could feasibly return to passenger use should the Commonwealth invest in east-west rail
- Location along MA Route 20, a state-designated scenic byway, known as the Jacob's Ladder Scenic Trail Byway
- Farmland in Agricultural Preservation Restriction
- Horn Pond and Austin Brook Reservoir
- Chester Theater Company and proximity to Jacob's Pillow Dance School and Festival in Becket, MA, both of which attract tourists to the area

Top Recommendations to Improve Resilience

Workshop participants identified 48 actions that the Town of Chester, in collaboration with neighboring municipalities, regional partners, and state agencies, should take to improve resilience to climate change impacts.

After the virtual workshops, participants were asked to respond to a survey and indicate their top three priority strategies from each of the infrastructure, environment, and social categories. The strategies presented in the survey were assembled from combining like actions from within the matrix developed at the CRB workshops. PVPC staff then identified the top three survey strategies from each category which had the most votes. The social category had a three-way tie for second place, and so there were a resulting total of 10 top priority strategies that emerged from this survey process.

These ten priority actions are listed in the table below in no specific order. The highest priority actions, as subsequently voted on by the Chester community at large (see section on the Public Listening Session), are shown with star bullets, and those which include a nature-based solution are indicated with "(NB)."

- (NB) Address concerns regarding the flooding of the three downtown bridges by developing redesigns that consider the stability of the bridge in addition to the preservation and/or enhancement of the local riverine habitat. The redesigns should address best management practices for infrastructure maintenance and maintenance of the stream beds around the bridges. Submit a written request to the MA Department of Ecological Restoration (DER) for technical assistance in making river crossings more efficient for vehicular traffic and water passage, etc., and to determine the causes of sediment build-up and blockage. Additionally, consult with the MA Department of Transportation (MDOT) to ensure that Town can take advantage of all relevant programming and grant opportunities for roadway infrastructure improvements.

- Improve and ensure evacuation readiness by:
    - determining whether plans exist for evacuating via MA Route 20 when the bridges are impassible;
    - conducting a feasibility study for improving Cooper Road enough that it can be passable by All Terrain Vehicles (ATVs)/Emergency Response vehicles for transportation during emergencies; and
    - reviewing and assessing evacuation plans for all residents, and include a public engagement component.

- (NB) Address undersized and/or blocked culverts and road-stream crossings and ensure passability during emergencies.
    - Institutionalize surveillance of culverts and associated waterways to locate and remove debris and downed trees, etc., to allow water to move more freely though the system and prevent roadway washout and damage associated with blocked culverts. Work with DER to learn more about the culvert replacement grant and the components of a competitive application. Ensure that when replacing culverts, to Town uses design standards to allow for wildlife passage and improved flow passage, which would lead to less flooding.
    - Around those road-stream crossings and culverts known to be prone to disrepair, flooding, and/or washouts (e.g., Abbot Brook Culvert, Abbot Hill Road, Taft Hill Road, Middlefield Road), the Town should assess existing trails and determine the feasibility of using and/or creating new trails for passage by ATV, horseback, by foot, etc. for alternative evacuation. Determine the Town's emergency response capacity with ATVs, and consider acquiring some if there are none currently.

- (NB) Conduct a multi-town watershed-wide assessment of flood storage capacity to reduce flood damage along the west branch of the Westfield River.

- (NB) Work with DER and other agencies to inventory potential invasive plant species in Town. Initiate a local volunteer program, including students to implement potential control measures.

- (NB) Conduct a regulatory review of all bylaws and regulations regulating development in Town to ensure protection of natural resource and ecosystem services, and develop recommendations to curb any undesirable impacts of development such as from residential, commercial, and infrastructural (cell towers, windmills, solar arrays, etc.) development, on open space and natural resources.

- Renovate and preserve the old Chester Elementary School as a community building with shared use agreements for education, meetings, gatherings, and town offices, etc.

- (NB) Build the local economy and protect natural resources simultaneously by investing in environmental education for both grade school students and at the community at large.
    - Work with the high school administration to explore potential for collaboration with nearby school districts and developing a more robust cultural and environmental curriculum that capitalizes on Chester's / the Gateway Region's natural assets to retain and attract students. Develop the school district as an attractive alternative educational experience, such as including exchange student programming and outward-bound/ expeditionary learning curriculum for experiential learning. Engage with local and reginal schools to ensure local environmental education around west branch of Westfield River and other wildlife areas. Celebrate unique geology and take advantage of unique conditions in town.
    - Develop inter-generational, community-based experiential learning and expeditionary style programming and place-based, natural environment learning in town for both residents and tourists. Consider creating a public, inter-generational hostel and developing programming such as Worldwide Opportunities on Organic Farms (WWOOF) which would attract international and national students to come participate in Chester's agricultural economy.

- Ensure the town website is updated and that all departments and committees keep it updated with relevant news and information. Ensure residents know about and sign up for Code Red alerts. Outreach can including hosting a booth at Chester on Track (annual event) to ensure information about Code Red, elected officials, and events/initiatives is dispersed; using the Watt's Up in the Hilltowns newsletter that is included in energy bills to share information; and working the fifth grade classes to demonstrate how students can access information about their town.

A full list of the final recommendations from the CRB Workshop, organized by high, medium, and low priority, follows on the next few pages. The actions shown in bold were selected by the workshop participants as either a top priority, or as part of an expanded top priority project design.

Please note that within each category, the actions are not in any specific order.

Infrastructure	Society	Environment		Feature	High Priority Actions[1]
X			1	Culverts	Implement strategies in the Chester Open Space and Recreation Plan in regards to the protection of forests and floodplains in order to reduce flashiness in stream and drainage systems piped through culverts, alleviate flooding risks downstream, and protect infrastructure and roads vulnerable to flooding.
X			2	Dirt road network	Partner with neighboring MVP certified hilltowns and develop a regional dirt road condition assessment and prioritized maintenance plan, with emphasis on nature-based stormwater solutions.
X			3	Drinking water wells	Prepare and implement a Water Conservation Plan, including a plan for targeted public outreach.
X			4		Work with the Chester Highway Department and MDOT to identify potential areas for reduced or substitute road-salt use.
X			5	Municipal water system	Implement the proposed Water Supply Protection District to regulate land use activities and set performance standards for activities on privately owned land within the watersheds, and other actions from the Chester Source Water Protection Plan.
X			6		Investigate water system for leaks.
X			7	Electric grid/minor substations; municipal utility (Chester Municipal Electric Light)	Develop a program similar to MassSave in order to incentivize energy efficiency upgrades in homes (find out if Chester Municipal can participate in the program, or if they will have to develop their own).
X			8	Dams	Identify dam owners and contact regarding inspection and maintenance requirements. Develop an analysis of impacts during high rainfall events.
X			9	Bridges (sedimentation)	During redesign, consider the effects of quality of the habitat and environment in addition to the stability of the bridge itself, including the problematic "center island" under Main Street bridge. The bridge should better allow for natural transport of sediment and environmental debris down the river, and not restrict water passage or water storage in the river. Conduct an environmental review of best management and maintenance around all three bridges.

[1] Actions in **BOLD** were identified by MVP workshop participants as top priorities

Infrastructure	Society	Environment		Feature	High Priority Actions[1]
X			10		Submit written request to DER for technical assistance in making crossings more efficient for traffic and water, etc., discover why it is blocking up. DER can conduct that study and help develop a plan.
X			11		Consult with MDOT to ensure Town can take advantage of all relevant programming and grant opportunities.
X			12	Temporary/local emergency shelters	Ensure local/informal shelters are well provisioned: i.e., chargers for cell phones, etc.; food and water; blankets, etc. Ensure generators are well maintained, adequate generator fuel is stored.
X			13	MA Route 20	Look into whether plans exist for evacuating when bridges are impassible.
X			14		Look into improving Cooper Rd enough that it can be used by ATVs/ER vehicles for transportation during emergencies.
X			15		Review and assess evacuation plan for all residents, and include a public engagement component.
X			16	Roadways and systems prone to disrepair / flooding / washouts (Abbot Brook Culvert, Abbot Hill Road, Taft Hill Road, Middlefield Road)	Assess existing trails and determine feasibility of using and/or creating new trails for use by ATV, horseback, by foot, etc. for alternative evacuation.
X			17		Look into emergency response capacity with ATVs. Consider acquiring some if none currently.
X			18		Institutionalize surveillance of waterways to locate and remove debris and downed trees, etc., to allow water to move more freely though the system.
X			19		Work with DER to learn more about culvert replacement grant. The culvert would be upgraded to allow for wildlife passage and improved hydrologic passage. This would lead to less flooding.
		X	20	Waterbodies & Rivers	Conduct a multi-town watershed-wide assessment of flood storage capacity to reduce flood damage along the west branch of the Westfield River.
		X	21		Engage with schools (local/regional) to ensure local environmental education around west branch of Westfield River and other wildlife areas. Celebrate unique geology and take advantage of unique conditions in town.
		X	22	Invasive species	Work with Department of Ecological Restoration and other agencies to inventory potential invasive plant species in Town. Initiate a local volunteer program, including students to implement potential control measures.

Infrastructure	Society	Environment		Feature	High Priority Actions[1]
		X	23	Impacts of development such as from residential, commercial, and infrastructural: cell towers, windmills, solar arrays, etc.	Conduct a regulatory review to protect natural resource and ecosystem services. Ensure solar bylaw and zoning prioritizes using already cleared land for solar instead of cutting down forest; Consider alternatives such as floating solar installations on water bodies; Add specific impacts to address in the Special Permit process including topographic change, removal of cover vegetation, risk of erosion or siltation and increased stormwater runoff; Ensure known habitat areas are mapped and discouraged from development; Ensure scenic "sustainability" for viewsheds; Amend the Special Permit and Site Plan Approval Provisions in Zoning Bylaw; Add flood prevention and mitigation to the purpose section of the Subdivision Rules and Regulations; Ensure that the Development Impact Statement identifies impacts of the proposed development could have on the potential for flooding, and include mitigation measures, if deemed necessary by the Planning Board.
		X	24	Wind, Hydro, & Solar Power (Renewables)	Conduct a feasibility study of Chester Municipal Electric Light Company generating renewable power with solar, wind, and/or hydro-electric (from drop in grade from Horn Pond as piped to Water Treatment Facility at Austin Brook Reservoir) with battery technology to increase local energy resilience, reduce GHG, and include environmental impact study to ensure that increased development of renewable energy installations have a net positive impact on local ecology.
	X		25	Communications – alerts and technology	Ensure website is updated and that all departments and committees keep the website updated with relevant news and information and strive to optimize its potential. Ensure residents know about and sign up for Code Red alerts -- have booth at Chester on Track (annual event) to ensure information about Code Red, names of elected officials, and listings of events/initiatives is dispersed. Also use this event to recruit volunteers to help distribute information, update website etc. Consider using the "Watts News in the Hilltowns" newsletter that is included in energy bills to share information. Work with elementary school to teach fifth graders how to access information about their town.
	X		26	Climate-vulnerable residents with barriers to building resilience (income, youth, seniors)	Establish a buddy system for houses that are vulnerable to flooding to have a buddy on the hill, not vulnerable to flooding, who might check in to see if help is needed.

Infrastructure	Society	Environment		Feature	High Priority Actions[1]
	X		27	Emergency services and volunteers	Host a community day with evacuation route demonstrations, gathering and food, and educational handouts on what to do during different types of emergencies.
	X		28	Historical buildings – Vulnerable to the river channel and flooding	Create public outreach material about understanding the past and planning for the future - How did people live before electricity and water in the taps - should some of this be taught or reclaimed?
	X		29	Land value/tax rates	Continue working with Senator Hinds to revise PILOT formula to ensure large tracts of forested land in western part of the state are fully valued for contribution to statewide resilience.
	X		30	Significant decline in enrollment at High School	Work with high school administration to explore potential for collaboration with nearby school districts and developing more robust cultural and environmental curriculum, including exchange student programming, outward-bound/validating expeditionary learning curriculum for experiential learning, and capitalize on Chester's / Gateway's natural assets to retain and attract students. Develop school district as an attractive alternative educational experience.
	X		31	Potential for climate migration	Partner with other communities in the region to conduct an analysis and model potential climate migration, especially in light of advent of high speed internet availability and pandemic migration, with goal of understanding potential population increase and what needs new residents may have. Include visioning, specific to each community, of what current residents may want to preserve and where they may want to concentrate new development and density.
	X		32		Use the results of this analysis and visioning to conduct local regulatory review of zoning and development code to ensure Chester is ready to welcome new residents and provide for their needs, amplify economic benefits, while preserving natural resources, ensuring climate resilient development.
	X		33	Opportunity for greater cultural inclusion via outreach, programming, recreational activities, business development, etc. for both visitors and potential/prospective	Hold intergenerational, community-based experiential learning and expeditionary style programming and place-based, natural environment learning. Also consider a public, inter-generational hostel and developing programming such as Worldwide Opportunities on Organic Farms (WWOOF) which attracts international and national students to come participate in Chester ag and economy.

Infrastructure	Society	Environment		Feature	High Priority Actions[1]
				residents of Chester (translation, events, etc.)	
	X		34	Franklin Regional Transit Authority and lack of other public transit	Advocate for increased public transit to assist aging population and connectivity generally to Chester: Reach out to BRTA to arrange for cross-county access (already approved by legislature) via public transit AND by continuing to advocate for E-W rail restoration, with emphasis on Chester stop.
	X		35	Outdoor Recreation / Quality of Life	Continue to assess, design, and implement pedestrian and cycling amenities in especially town center, and especially as connect to trailheads, train station, and businesses (see Alta Planning and Design's Urban, Rural and Suburban Complete Streets Design Manual for the City of Northampton and Communities in Hampshire County)
	X		36	Old Chester Elementary School	Renovate and preserve old school to be community building with shared use agreements for education, meetings, gatherings, and town offices, etc.

Infrastructure	Society	Environment		Feature	Medium Priority Actions
X			37	CSX Railroad & tracks	Set up partnership with CSX and other towns to prevent brush fires along tracks. Consider strategies such as placing rocks or removing leaves and brush along tracks.
		X	38	Wildlife Management Areas	Ensure a strong understanding of value of these lands for wildlife habitat to bolster strength of applications for programs such as culvert replacement, land acquisition, land protection/zoning for development, etc.
		X	39	Open Space - forests, parks, recreation areas	Adopt the Community Preservation Act (CPA) or develop a separate fund in Chester to provide additional funding for farmland and open space protection.
		X	40		Organize educational programs for forest landowners on the benefits to them of conserving, as opposed to developing their land.

Infrastructure	Society	Environment		Feature	Medium Priority Actions
		X	41		Work with private land owners to ensure they know about existing resources for forest management best practices, including managing for a diversity of tree species and ages, reduction of invasive species, etc.
		X	42	Agricultural lands	Work with landowners/farms to enlist with APR program, and map agricultural soils to know where they are for prioritizing protection.
		X	43	Wetlands and vernal pools	Create a pamphlet on the significance of vernal pools and the certification process. Identify potential vernal pools in Chester and add to assessor's maps to advise existing or prospective property owners of their presence. Certify vernal pools on willing properties by using certified volunteers and students.
		X	44		Consider developing an educational program for residents to highlight benefits of Chester's natural resources for mitigation and adaptation to climate change; how to be a good steward.
	X		45	Plans and regulations, designing for multi-modal and accessible connectivity	Explicitly allow for permeable pavement to protect natural resources, reduce urban heat island effect.
	X		46		Implement urban design for accessibility - benches and shaded areas for elderly to sit, rest, be out of the sun.
	X		47		Optimize utility of existing rights-of-way for multi-modal, multi-purpose use context-specific design strategies suitable for rural locations such as Chester. (See Alta Planning and Design's Urban, Rural and Suburban Complete Streets Design Manual for the City of Northampton and Communities in Hampshire County)

Infrastructure	Society	Environment		Feature	Low Priority Actions
X			48	Horn Pond Reservoir (Becket)	Work with Becket to conduct an assessment of current land use and management on the ~17 properties (some are timeshare) surrounding Horn Pond, and how the land use

					may impact the water quality.

Note: In most cases, actions are presented in the table above as written by CRB Workshop participants. Where proposed actions in their original form lacked clarity or detail, the project team expanded upon the action in order to promote project-readiness.

Public Engagement

On March 10, 2020, due to the COVID-19 pandemic, Governor Charlie Baker issued a state of emergency and two weeks later directed the Department of Public Health to issue a stay at home advisory to all Massachusetts residents, encouraging self-isolation and social distancing protocols. Residents were advised to stay home and avoid unnecessary exposure during this time period, which at the time of this report extends from March 24, 2020 through an anticipated end date of May 29, 2021, with the state of emergency anticipated to end on June 15, 2021. Chester's Public Session, scheduled for DATE, occurred just after the social distancing requirements were lifted for vaccinated individuals, but still at a time when personal uncertainty regarding uninhibited reentry into group settings was still high.

Making the best use of the resources and tools available, the team opted to prepare for a virtual session, to be hosted in conjunction with a regularly scheduled Select Board meeting on June 7, 2021. Core team members collaborated on a virtual presentation that introduced the MVP process, reviewed climate change projections, and summarized all actions recommended during the CRB workshop. This virtual PLS presentation was attended by x residents and community members, and was also posted the next day on the Town of Chester website and community forum Facebook page. The Town's Facebook post received x number of unique views of the link.

Residents and stakeholders that viewed the session and/or were interested in providing feedback on the draft Summary of Findings report were encouraged to do so by taking a 3-question survey to vote on the top priority actions, provide their own project ideas, and reaching out directly to project team members whose contact information was distributed at the session. The responses to the online survey prioritized…. The MVP core team will continue to collect community input on priorities, and will utilize voting results and any comments submitted to guide future MVP finding priorities.

Workshop Participants

Approximately 15 participants from Town departments, committees and boards, large land owners, community organizations, and businesses were in attendance at each of the three MVP workshops. The participant check-in list is provided in Appendix C.

Citation

Chester Community Resilience Building Workshop Summary of Findings (2020). Pioneer Valley Planning Commission. Agawam, Massachusetts.

MVP Working Group

Kathe Warden, Town Manager

Richard Holzman, Select Board

Chris Martenson, Resident

Bob Daley, Resident

Meredyth Babcock, Wild & Scenic Westfield River; community liaison

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Appendix A: Workshop Basemap

Appendix B: Participatory Mapping Results

Attendance

CRB Workshop Presentations