



SHELburne, MA

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

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

Features				EXTREME WEATHER/ WIND EVENTS	IN LAND FLOODING	EXTREME TEMP (HEAT/ COLD)	DROUGHT	Priority H - M - L	Time Short Long Ongoing
Infrastructurel									
Farms			S/V				1) Alternative water sources/hydro study to site farm ponds		
Generators	limited dist.		S/V						
Local Roads / Evac. Rtes.	Rural parts Hwy 2 - V/S)	not state	V	Drainage plan / inventory of high prior culverts	Leverage the county along w/ RMAAT design tool	Connect to MA DOT to protect evac routes	1) High priorities	H	S
Culverts / Aging Infra			V		WL friendly culvert upgrades Surface water modeling				
Electric / Telecom / Cell Network			S/V	Expand cell tower access + increase public support	develop diff comm channels (eg fire whistle)			H	
Water + WW (bridge of flowers)			V						
Societal									
Agricult. Community			S	Public educ re-farming	Diversify ag practices	Develop community gardens			
Older Adults / Mobility / Health + Low Income Families			S/V	Diversify comm channels + improve list of isolated popns	+ vulnerable + system of emergency comm thru partnerships	community (learning from older adults)		H	
Medical Facilities / Health Ctr.			S/V		Encourage neighbor checkins + comm bldg w/ a school for intergenerational activity, eg cafe	Assess cooling / heating / dehumid. / flooding needs of vul pop + obtain grant \$ to address needs, beyond infra, \$ grants for individuals			
Shelters	Council Gym BSE		S/V	* Energy resilience + HS energy indep					
Libraries			S						
Cult Facil. / Senior Ctr.	Memorial Hall		S						
Local Business			V						
Demographics / Youth (lack of)			V						
Environmental									
Forested Land - protected rec L private			S/V		Identify means to protect intact NR existing watershed	Resilient LU planning for forestry (inc. w/ OSEP) eg. restoration, comm LT + Forest Clim Planning	aff housing +	H	L
Foxbrook Reservoir	Colrain / Sh.		S/V						
Brooks + Streams	localised fld.		V						
Deerfield River 3 sp native trout			S		Increase activity at river + improve access (to expand support for its protection) using volunteers; Deerfield River Party + better communication			H	
Train / Haz Mat			V						
Riparian buffers			S/V						
				Better communication for these efforts				H	

9
6
8
12
1
6
9
7

Priority	Time
H - M - L	Short Long Ongoing

None of both



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Features				EXTREME WEATHER/ WIND EVENTS	INLAND FLOODING	EXTREME TEMP (HEAT/ COLD)	DROUGHT (increased fire risk)	Priority	Time
Location								H-M-L	Short Long Ongoing
Ownership									
V or S									
Infrastructure				prepare/respond	prepare/respond	prepare/respond	prepare/respond		
Town Hall / Town Buildings									
Water and Wastewater Systems									
Electric / Gas / Telecom Utilities									
Dams / Bridges									
Farms									
Local Roads / Intersections									
Evacuation Routes (Roads)									
Public Safety Facilities (Police, Fire)									
Schools (shelter)									
Senior Center (heating, cooling, shelter, disseminate info)									
Societal									
Elderly Citizens / Elderly Care Facilities / Nursing Homes									
Faith-based organizations / Religious facilities									
Homeless Population / Displacement									
Climate Vulnerable Populations / Environmental Justice Communities									
Agricultural Community									
Youth / Schools / Daycares									
Medical Facilities (Clinics, Pharmacies)									
Local Businesses									
Inter-group Communication									
Tourist population									
Environmental									
Parks and Recreation Areas									
Public Drinking Water Supply									
Protected Open Space / Wildlife Sanctuary									
Forested Land									
Deerfield River									
Brooks and Streams									
Riparian Buffers									
Train / Haz Mat									



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Table 3

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

Features				EXTREME WEATHER / WIND EVENTS	INLAND FLOODING	EXTREME TEMP (HEAT / COLD)	DROUGHT	Priority	Time
								H - M - L	Short Long Ongoing
Infrastructural									
Town Hall / Town Buildings			S						
Water and Wastewater Systems	✓	bridge - FD.	V/S	• expand cell tower access + increase comm support. • Develop alt comm channels (radio) • Contact dam owner to get preparedness plan.	• Rebuild bridge w/ protection of water main (Fire Dist)				S
Electric / Gas / Telecom Utilities	✓ cell network apps		V/S		• Generate renewable energy locally (wind, hydro, solar) • Explore energy grid redesign for W P. Co control.	• Bury power lines • Increase generators			M/L
Dams / Bridges	✓ + Hamiman Res.		V		• Develop mitigation + preparedness plan (e.g. Mohawk HS would be flooded, making it an unsafe shelter)				S
Farms	✓		V						
Local Roads / Intersections	Rte 2 Bridges = Aging Infra structure culverts, erosion		V/S			• Educate residents for shelter in place / preparedness • Develop road assessment	• Fund hardened infrastructure		S M/L
Evacuation Routes (Roads)	Rte 2		V/S						
Public Safety Facilities (Police, Fire)	✓		V/S						
Waste water	✓	2 Towns	V		• Backup WW lines / pump sta • Eval vuln of		• ?		S
Societal									
Elderly Citizens / Elderly Care Facilities / Nursing Homes									
Faith-based organizations / Religious facilities	Trinity Fellow ship Hall		S/V		• promote Reverse 911 system / expand awareness				S
Homeless Population									
Climate Vulnerable Populations / Environmental Justice Communities	Seniors / low-income farm + kids		V	• Diversify comm channels for emergencies response (eg horn) • Community access kitchen / sites for preserving food.	• improve system / EMDir have one / EAC • List of Seniors + farm (exists) • Food system plan - food needs + poss solns	• Installing comm channels - DSL, computers • more local food system from local producers ; educate to grow food. community garden. (S)	• Sr ctr partnership w/ schools to get (irt • [regional solutions]		S m
Agricultural Community	Food insecurity / costs		V/S						
Youth / Schools / Daycares	Sheltered groups when school in session								
Medical Facilities (Clinics, Pharmacies)	NRHS Comm Health Ctr BFNC		S/V	Action: Comm AC development	• resilient design	[Develop Hc on hill (L)]			S
Local Businesses	Kourist Based		S/V						
Shelters	2 Cowell / Fellowship Hall		V/S		Public educ + awareness abt shelters Electronic barriers				
Community Support / Network	BSE		S						
Environmental									
Parks and Recreation Areas	✓		S						
Public Drinking Water Supply	✓ Private wells	Colrain + Buckland	S/V		• evaluate opps. • preserve farmland (Ch 61)				
Protected Open Space / Wildlife Sanctuary	✓		S/V						
Forested Land			V						
Deerfield River	✓		S/V						
Brooks and Streams	Dragon Brook, etc.	✓	S		• ID lands to protect to maintain resilience in OSRP • Increase awareness abt land preservation opps of critical resilient landscapes.				
Riparian Buffers	river side	✓	V						
train / Hazardous mat'ls	✓		V						
dirt roads	✓ (gravel) s=absorption v=erosion		V/S						

Priority	Time
H - M - L	Short Long Ongoing

[illegible]

Shelburne CRB Workshop Notes

Hazards:

- July 10-11, 2023 – got 5” rain
- July total = 18” rain
- Q: Why are western MA #s for future max precipitation higher than other parts of the state?
- Experience here is related to S VT; what happens there affects us.
- Banks are not the only thing flooding – **flooding occurs frequently in basements from inadequate drainage.**
- **Fire/smoke in the air is a big health impact**
- Q: Is increasing precipitation projection due to hurricanes? Both flashy storms and hurricanes make up precip estimates.
- We see temp and precip fluctuations leading to flowing: frozen ground melting and snowmelt runoff – “rain on snow”
- **Invasive species list can include others of concern, like the jumping worms** that are here, impacting Shelburne (& S VT). They decimate forest plants, change soil stability, lead to landslides. Like knotweed.
- Q: How should we prioritize hazards? What impacts humans? Barriers to adaptation? Disrupting natural ecosystems.
- ““It is valuable to shift from a recovery and response mindset to prevention and mitigation. It’s helping us think beyond just people, to other species. The whole concept of climate adaptation opens up a much bigger window [perspective] than what we’ve done before.”
- **We didn’t include the Highway Department.**
- **Baystate Medical is accessed via Rte 2 – this is a vulnerability.**

Group conversation:

- Flooding in Dragon Brook
- **Communication issues between departments have occurred, including around COVID.**
- Forestry Foundation owns properties.
- Emergency Assistance from the Mary Lyon Foundation – students as community service
- W. County Arts and Culture – Michelle
- **Buckland – working through MVP too.**
- Carmela – they do volunteer deployment via MPC form online

Table 3 notes

Schools are a place for shelter. Mohawk, Buck-Shelburne – regional school district. Schools in flood zones, or needing to be used as school and shelter simultaneously would be a problem.

Add Fellowship Hall as a shelter– that’s where people were evacuated for Irene.

Gym – cooled and heated. No showers, no kitchen.

How do people know where to go? Lack of designated shelters – and info.

Roads and bridges – Route 2. Strength, in extreme temps and drought. Some **hazards on bridges – Iron Bridge; Bridge of Flowers**. Aging infrastructure is an existing vulnerability. Also the spread out pattern of development with one road in and out to some places.

Dirt roads – many miles of dirt roads in the town, of concern. Permeable vs. erosion. Costs less to maintain (?). Cost of repair and maintenance is better than paved, and once paved, can't go back. Plowing damage and repair. May not be able to keep up with maintenance (now/future). Need people? Equipment? Hiring outside firms? Staff is hard to keep employed. Some older roads may need redesign.

Culverts – undersized/capacity is a vulnerability. **Road failures recently have been from culverts** during 100 yr flood.

Electric infrastructure – wind storms can cause trees down. Route 2 – from the grid.

Water/Wastewater – community water system is strength, esp because it's gravity fed (delivery from storage not V to power outage, but pumping is), and wells provide redundancy. But people along the river can have contamination in their systems. Power outage cuts off private wells. Drought is a hazard for water. Water pipe from groundwater goes over the Bridge of Flowers, owned by the FD.

Q: Table wonders if WW system is vulnerable to drought?

Regional Hospital.

Community Health Center of Franklin County is expanding at the high school. Resilient design may be needed, including resilient to dam failure.

Public health mobile clinic was expanded for COVID outreach. FRCOG pays for BOH services.

Vulnerability – Police Dept – Buckland requires bridge access. Does village get separate if the iron bridge goes out? Dam could wipe them out.

Vulnerable populations – age and disability. Climate migration?

People have generators more widely now than before. Not a clean power source though...

Ag community throughout – Strength: local food access. V: one road in and out to most places. Declining. Shelburne Farm and Garden, local business, can help support with equipment for rescue at times. Food system plan might be useful, to identify what we eat and what is already grown nearby. How can we scale up a sustainable food system?

Cell service – **dead zones, emergency alerts could not be delivered bc of lack of service.**

Businesses – Tourism is major industry. Would people stop coming here? Could they support more people migrating? Limited small scale timber harvesting. Agriculture. Lots of self-employed people working from home – **loss of cell/internet connection would disrupt work. If clear weather, good. Water dependent.**

Trains with haz materials – can derail in extreme weather, heat, fire. CSX has taken over rail way from Pan Am and replacing ties, addressing some vulnerabilities.

Dragon Brook doesn't flood b/c it's a natural watershed. It would be a vulnerability if it's not protected and cared for.

River/drought did not affect Deerfield recreation businesses (Zoar) and fishermen.

Brook going to Fall River -> **assess culverts and redesign**

Fire is an issue – and if area above the town is affected.

General reportout:

Where people have interest in partnering with the Town on these projects, contact Tricia. MVP funds can be used for public-private partnerships.

Not much new building happening in Shelburne, but lots of opportunities for retrofits!

Rural funding – does exposure/risk relate to density? W/o redundancies it can be more critical. MVP coordinator will help you get funding. Regional partnerships make applications more competitive.

FRCOG can help with financial administration barriers.

Are state agencies using design standards?

Can you help us initiate conversations w/ DOT for implementing actions? They need improvements to Rte 2.

MVP Planning Grant Update

The Community Resilience Building Workshop took place on Wednesday 13 September 2023 at Fellowship Hall. Twenty-five stakeholders attended, representing Shelburne town officials, non-governmental organizations, Buckland town officials, MTRSD, business, and the farming and faith communities. At least four participants left early for other engagements and did not participate in the voting. Three staff from Weston & Sampson, Inc., the consultants hired for the MVP Planning Grant, led the workshop.

Attendees

Representatives from these Shelburne town boards, committees, or divisions participated:

- Planning Board
- Emergency Management
- Fire (Shelburne Center and Shelburne Falls)
- Agricultural Commission
- Board of Health
- Finance
- Recreation

Non-governmental organizations present included:

- Environmental groups (Mass Audubon, Deerfield River Watershed Association, Trout Unlimited, Franklin County Land Trust)
- Health and well-being organizations (Medical Reserve Corps, Council on Aging)
- Education-oriented non-profits (Mary Lyon Foundation, Library)

The diversity of the group at the meeting served as a model of resilience planning and allowed for the vital exchange of ideas and perspectives necessary to understand the complex network of systems impacted by the climate emergency.

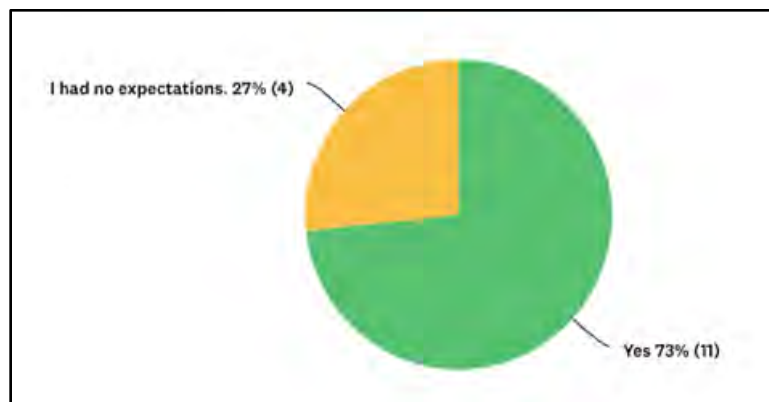
Workshop format

The workshop followed the Nature Conservancy's Community Resilience Building matrix which provides a structured format to sort through and prioritize the town's infrastructural, societal, and environmental strengths and vulnerabilities. The last part of the all-day meeting culminated in

the prioritization of items voted to be the most critical for action. The long list ranged from the sizing of culverts and integrity of dams, to concerns about incomplete communications networks and loss of evacuation routes, to the presence of detrimental invasive species in our forests and along our riversides, to the area's overall energy resilience and the vulnerability of older structures housing our elders.

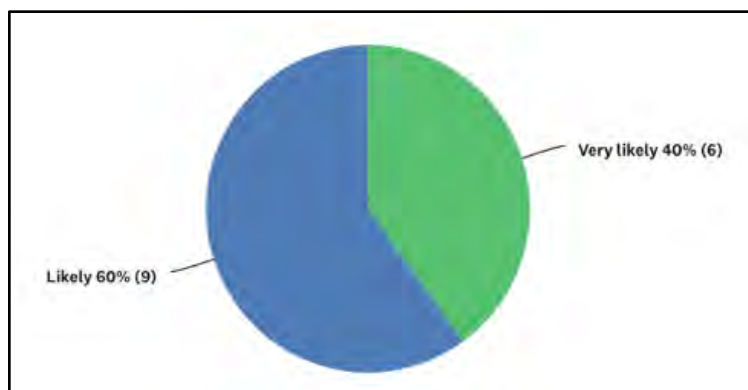
Post-workshop survey

After the workshop, participants received a link to a 9-question survey about their experience and impressions. Fifteen people completed the survey. The results were overwhelmingly positive. When asked if the **workshop met their expectations**, four people said they had no expectations for the workshop. The remaining 11 (73%) said their expectations were met:

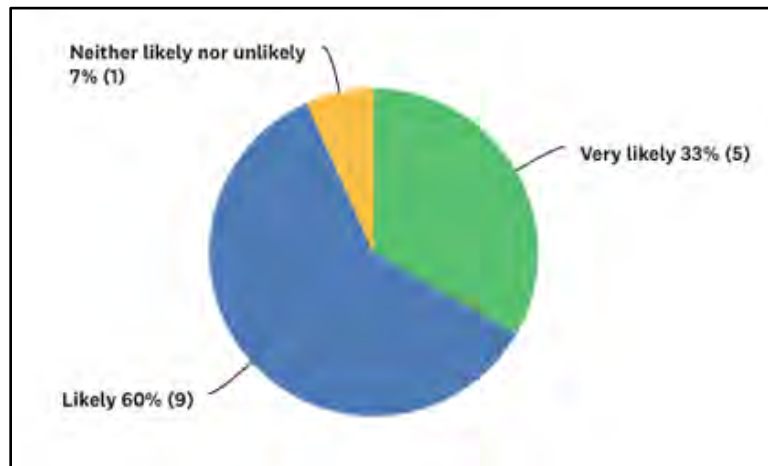


All 15 respondents (100%) agreed that the workshop provided them with **valuable information about climate and community resilience**.

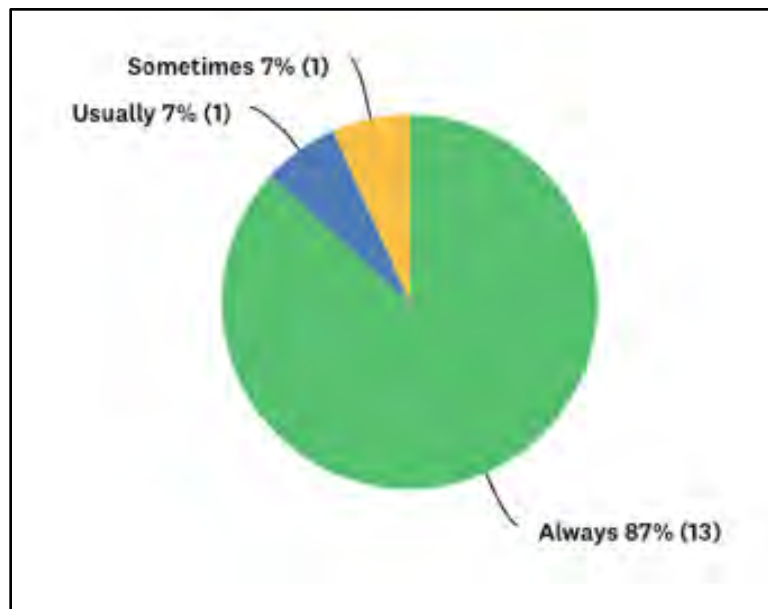
All 15 indicated that they were **likely** (9) or **very likely** (6) to use information from the **workshop** in their own committee or organization:



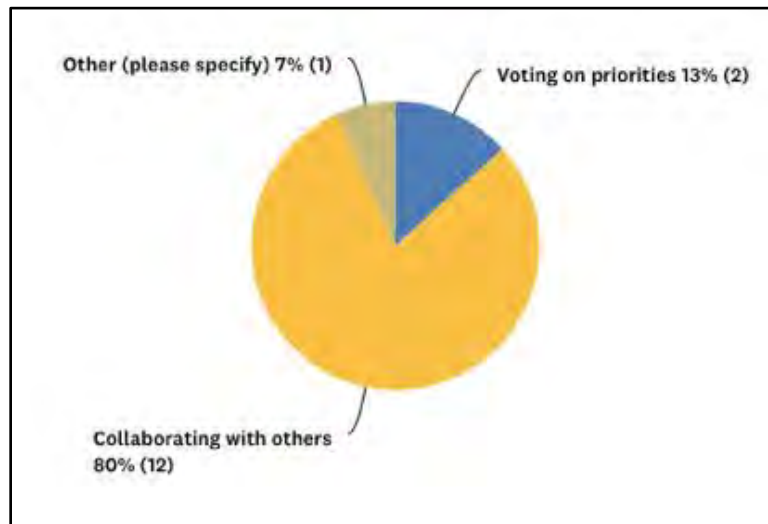
Similarly, 14 of the 15 people who completed the survey said they were **likely** (9) **or very likely** (5) **to become involved in future resilience-building efforts** in the community. One said they were neither likely nor unlikely to do so:



While most participants (13) felt their opinions were always **valued and respected by others** at the workshop, one said their opinions were usually valued and respected and another said theirs were sometimes valued and respected:



The vast majority (12) said that ***collaborating with others*** was the **MOST** valuable aspect of the meeting, while two said *voting on priorities* was of most value to them, and one chose the option for *Other* to report having a tie between *collaborating with others* and *presentations*:



Opinions about **what was of LEAST value** varied greatly among the participants, with the most (5) choosing the option for *None of the above*, followed by *Food* (4) and three choosing *Other*, which allowed them to make suggestions for improvements, such as:

- Calling this 'community resilience,' doesn't really address the work that we did - municipal vulnerability preparedness is much more meaningful.
- It would have been good to have some kind of physical/mental break (other than more snacks) a couple of times during the day. ... The presentations were too full of info. Editing the slides down to a few of the most important points and shortening the time we had to spend looking at them would be, for me, better.
- Might have been able to accomplish the goals in 4 hours rather than 6?

The survey asked **what things participants would change for future workshops**. About half (8) said they wouldn't change anything about the workshop. The other seven comments broke almost evenly into these groups:

- Two suggested improvements for the speakers: Speak more slowly; repeat for everyone the questions that are asked.
- Two shared that they would have preferred to better understand the 'process' or 'intent' of the workshop ahead of time.

- Two suggested having more participants who were ‘municipal officials’ or ‘at-large community members.’
- One hoped that the consultants would provide solutions that are based on “the many great MVP plans already out there” rather than one “based on our small group’s limited views.”

Finally, the attendees had an opportunity to provide **open-ended feedback** about the workshop. Ten people provided comments and five people had none. The ten responses fall broadly in these categories.

- The workshop was well run.
 - Presenters and materials were great/Great presenters
 - Happy with how well you kept to the agenda and time.
 - Great workshop/day
 - Good food
- Some parts of the workshop fell short.
 - More explanation on grant opportunities and partnering with other agencies would be very useful.
 - (A reason) people don’t evacuate from weather events...(is) care of their animals. We did not talk about animals at all.
 - The voting categories got muddy, especially towards the end.
 - Vulnerable populations...are already suffering now due to climate change ...and their plight is foreign to (the participants).
- Specific areas for improvement were noted.
 - Have the slides with all the stats available on the table to refer to.
 - Label the brooks and streams on the map.
 - Maybe put a bigger map ... on a wall so we could stand around it instead of hunching over the table.
- Six of the ten respondents specifically mentioned something about the group’s composition.
 - Wide spectrum of people with influence.
 - Good mix of attendees.
 - I enjoyed meeting everyone.
 - Really good to sit in the room with so many engaged people.

- Having a selectperson there would have been very good ... (and) also glad that Mary Lyon Foundation was there.
- I am a bit uncomfortable that...town officials might have resistance to the process and the plans put forth. Hopefully the listening session ... (and) future educational opportunities will have a positive impact on buy-in.

What's next

In the coming weeks, Weston & Sampson, Inc., will prepare a summary of the workshop to present at a public listening session and receive input from the community. We will be advertising the event broadly, and welcome your support in getting the word out. The community's feedback will be incorporated into the plan for submission to the Commonwealth's Executive Office of Energy and Environmental Affairs as the final step in the MVP Planning Grant. The consultants are keeping the project on track so Shelburne will be able to submit letters of interest and applications for MVP Action Grants in the coming cycle.

Photos

Here are a few photos from the event, courtesy of Weston & Sampson, Inc.:





