

EXECUTIVE SUMMARY OF ATTACHED 4 DEC 2023 PRESENTATION TO SHELBURNE SELECTBOARD

Shelburne's MVP Action project will help address key components of the 2023 MVP Plan by:

- Assessing town-owned culverts within highly vulnerable areas; and,
- Identifying Nature-Based Solutions for improvement.

The primary objectives of this project include:

- Completing a risk-based assessment
- Undertaking the first steps of an action-oriented resiliency plan for municipal roads and culverts with known flooding that will be negatively impacted by climate change

The community engagement goal of this project is to:

Improve preparedness for vulnerable populations and develop an associated public outreach program that will serve to educate the general community of Shelburne about vulnerabilities and improve emergency preparedness.

This project will advance next steps for the actions identified as priorities in Shelburne's Community Resilience Building workshop:

- **Create a resilient roadway improvement plan**
 - Identify and assess priority roads, bottlenecks / choke points, and protect evacuation routes
- **Improve community connections and emergency communications with vulnerable populations**
 - Improve the list of isolated and vulnerable populations
 - Promote Reverse 911 system and expand awareness about shelter locations.
- **Create a resilient drainage plan**
 - Complete hydrologic and hydraulic modeling to identify areas of concern and locations for upgrades
 - Leverage the FRCOG inventory of high priority culverts and the Resilient MA Design Standards Tool to prioritize and quantify upgrades



MVP Expression of Interest

Resilient Risk Assessment of Critical Culverts

Town of Shelburne, Massachusetts

December 4, 2023



TOP HAZARDS IN SHELBURNE



Extreme Weather/
Wind Events



Flooding



Extreme
Temperatures



Drought

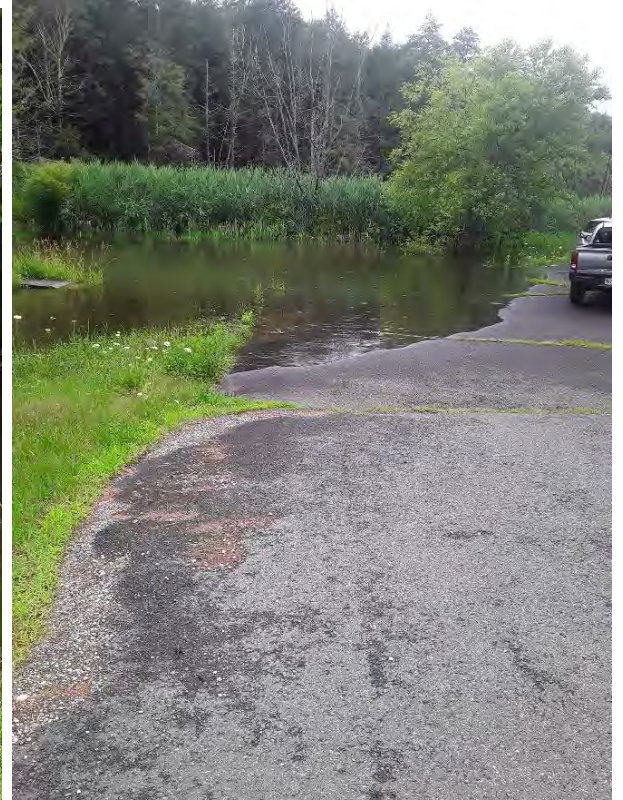
STORM IMPACTS / ROAD WASHOUTS

- Road stream crossings with repeated failures and overtopping
 - Irene, 2011
 - July 2023 Storm - Road Washouts
 - August 2023/multiple:
 - Brook Road (left)
 - Bardwell's Ferry & South Shelburne Roads (right)
 - Landslides
-



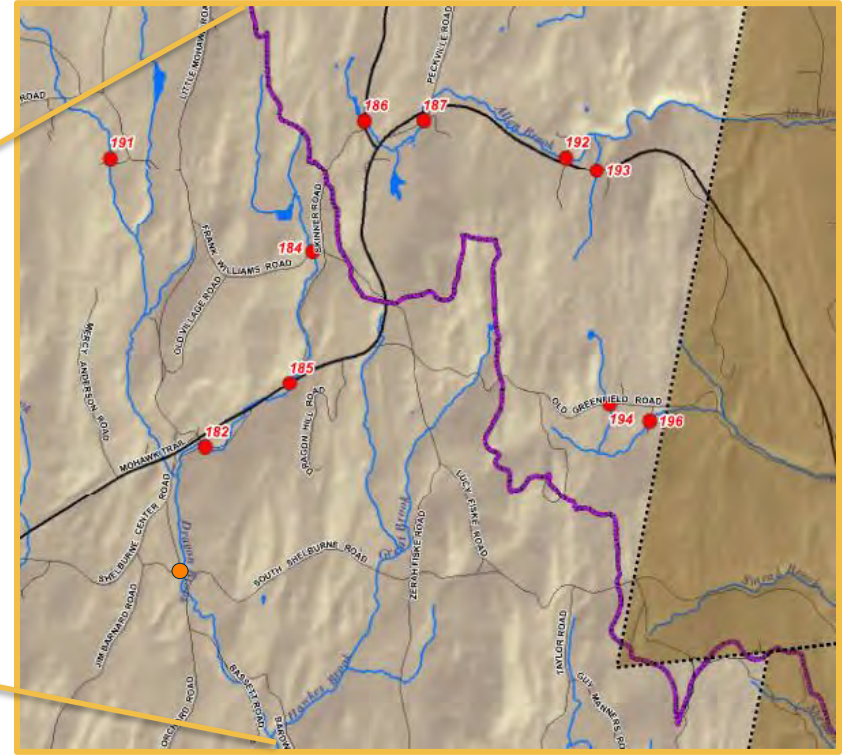
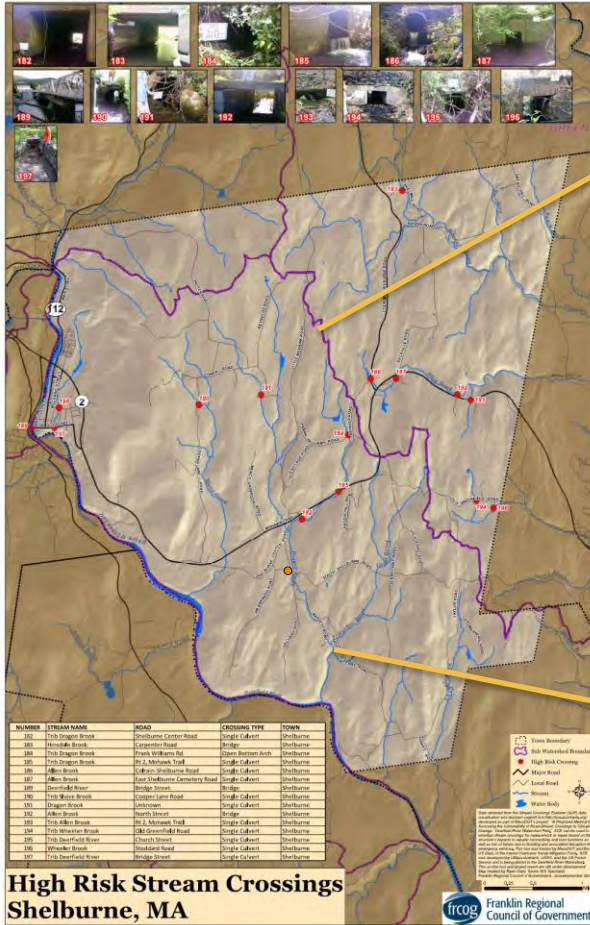
STORM IMPACTS / FLOODING

- Flooding from extreme precipitation events disrupts roadways and other infrastructure
- Disrupted access to Town garage



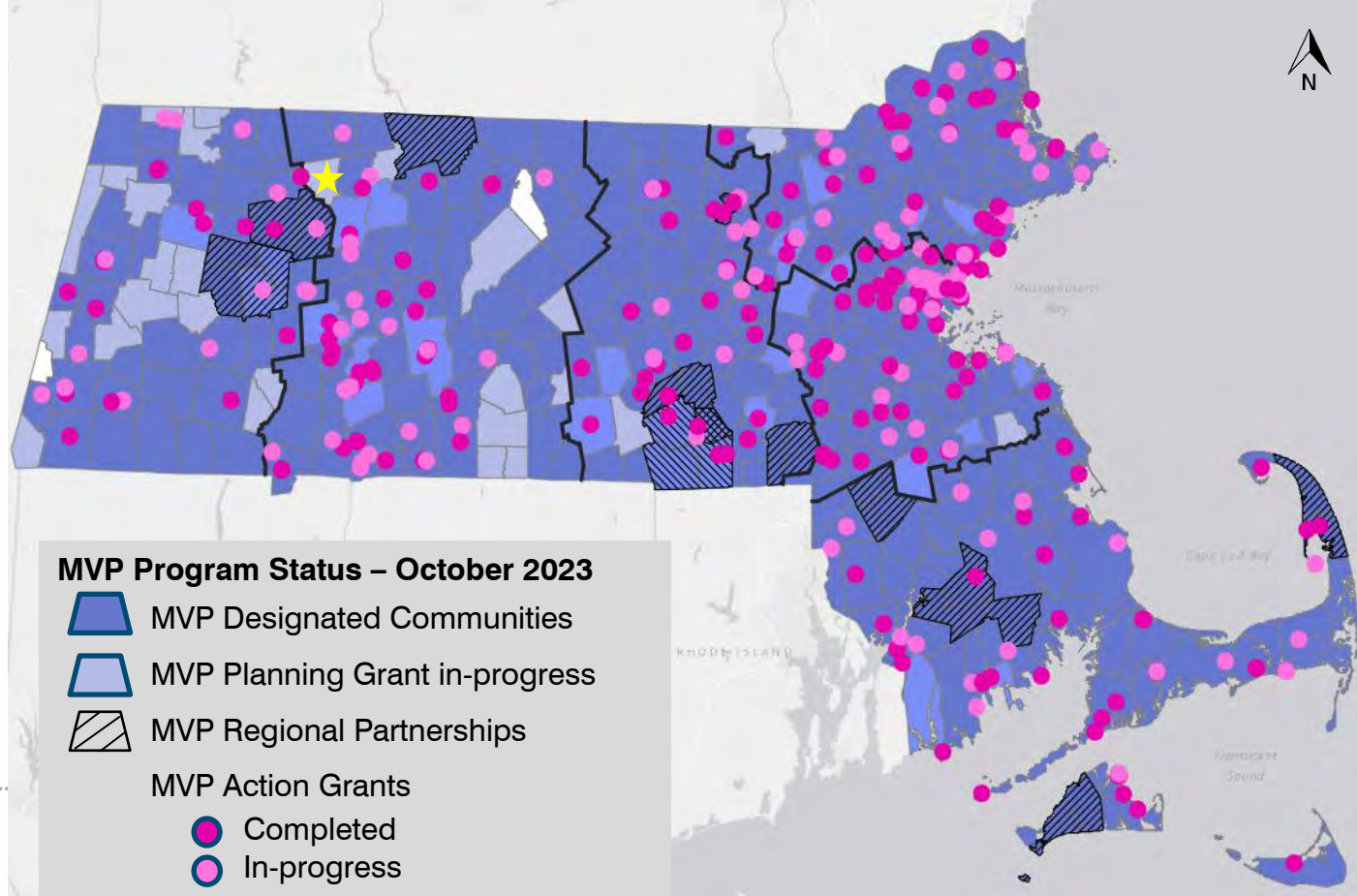
STORM IMPACTS / ROAD WASHOUTS

- FRCOG stream crossing report
- Identified high priority culverts for further study and safety improvements (red)
- Additional high priority culvert to be considered on Bardwell's Ferry Road (orange)



WHAT IS MVP?

- Funding for resilience-related actions
- Improved resilience and preparedness
- Collaboration with stakeholders
- Education, planning, and implementation



WHAT IS MVP?

1. MVP Planning Grant

- Define climate hazards
- Identify community vulnerabilities, strengths, and priority mitigation actions
- Receive MVP designation

2. MVP Action Grant

- Implement priority adaptation actions identified during the planning process



MVP ACTION GRANT TIMELINE



**DECEMBER
2023**

**MARCH
2024**

**MAY
2024**

**AUGUST
2024**

**SEPTEMBER
2024**

**JUNE
2025**

MVP Expressions
of Interest Due

MVP Action
Grant Opens

MVP Action Grant
Applications Due

MVP Action Grant
Awards Announced

MVP Grants -
Projects Start

MVP Projects
Completed

COMMUNITY RESILIENCE BUILDING

September 13, 2023

- 25 participants
- 6 hours
- 28 Priority Action ideas generated to make Shelburne more resilient



PRIORITY ACTIONS

1. Improve community connections and emergency communications with vulnerable populations
3.85
2. Improve townwide emergency communication infrastructure
3.65
3. Create a resilient roadway improvement plan
2.65
4. Create a resilient land use plan
2.45
5. Create a resilient drainage plan
2.40

Community Resilience Building Risk Matrix

www.CommunityResilienceBuilding.org

SHELburne, MA

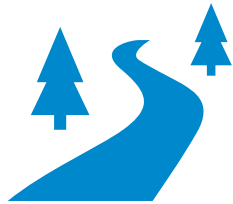
www.PlanetBeats.com (Health, safety, services, activities, events, see how you feel about it)

100% Funding for action over the short or long term (not defined)

10% Community Support

Location	Priority	1 or 2	EXTREME WEATHER / WIND EVENTS	IN LAND FLOODING	EXTREME TEMP (HEAT / COOL)	DROUGHT	Notes
Infrastructure							
Farms	Painted ditch	S/V					
Generators							
Local Roads / Evac. Routes	Painted ditches (2x2-1/2)	V	Drainage plan / inventory of high prior culverts along w/ road	Improve the county high prior culverts along w/ road	Connect to MADOT to improve local roads		
Culvert / Aging Infra		V		Improve the county high prior culverts along w/ road			
Electric / Telecom / Cell Network		S/V	Expand cell tower access + increase power support	Improve the county high prior culverts along w/ road			
Water + W (bridge of stream)		V		Improve the county high prior culverts along w/ road			
Social							
Agricult. Community		S	Public educ re-farming	Diversify ag practices			
Older Adults / Mobility / Health + Low Income Families		S/V	Diversify comm channels + improve list of isolated people	System of emergency comm thru partnerships	Develop community gardens		
Medical Facilities / Health Ctr.		S/V	Encourage neighbor check-ins + common blog	W/ a school for intergenerational activity (e.g. Cafe)	Assess cooling / heating / dehumidification needs of vul pop + obtain grant to address needs; beyond TRCA, @ Lyman for individuals		
Shelters	Consult w/ gov	S/V					
Libraries		S					
Cult. Facil. / Senior Ctr.	Improve w/ bill	S					
Local Business		V					
Demographics / Youth (leaving)		V					
Environmental							
Forested Land - protected rec L private		S/V		Identify means to protect intact NR existing watershed	Resilient land planning (fire w/ use) esp. restoration, summit + forest clim. planning		
Foxbrook Reservoir	Learn / do	S/V					
Brooks + Streams	Paint line plan	V					
Deerfield River	3/20 water group	S		Increase activity at river + improve access (to expand support for its protection) using volunteers + Deerfield River Party + better communication			
Train / Haz Mat		V					
Riparian buffers		S/V					
Better communication for these efforts							

CONSENSUS ON PRIORITY ACTIONS



Infrastructural
Town wide
Shared
Both

Create a resilient roadway improvement plan

CONSENSUS ON PRIORITY ACTIONS



Societal
Town wide
Town
Vulnerability

Improve community connections and emergency communications with vulnerable populations

- ✓ Improve the list of isolated and vulnerable populations
- ✓ Promote Reverse 911 system and expand awareness about shelter locations.

CONSENSUS ON PRIORITY ACTIONS



Infrastructural/
Environmental

Town wide

Town

Vulnerability

Create a resilient drainage plan

- ✓ Complete hydrologic and hydraulic modeling to identify areas of concern and locations for upgrades
- ✓ Leverage the FRCOG inventory of high priority culverts and the Resilient MA Design Standards Tool to prioritize and quantify upgrades
- ✓ Leverage funding such as MassDEP Culvert Upgrades.



Infrastructure
and Societal
Town wide
Town
Vulnerability

Resilient Risk Assessment of Critical Culverts within Flood-Prone Areas

- Assess up to 10 town-owned crossings/culverts within highly vulnerable areas and identify solutions for improvement (including Nature-Based Solutions).
- Improve preparedness for vulnerable populations and to develop an emergency preparedness public outreach program

thank you

westonandsampson.com