


TOWN OF TOLLAND
MUNICIPAL VULNERABILITY
PREPAREDNESS PLANNING AND
HAZARD MITIGATION PLAN UPDATE

Committee Meeting 3 / Public Meeting
February 23, 2022

Logos: Town of Tolland, MVP, pvpc

1

Welcome & Introductions



A photograph showing a road or path heavily covered in ice, with bare trees and evergreens also heavily laden with ice, illustrating a winter hazard.

2

Agenda



MVP/HMP planning grant – purpose & process



Climate change – national, statewide, & local trends



Natural hazards in Tolland – past, present, & future



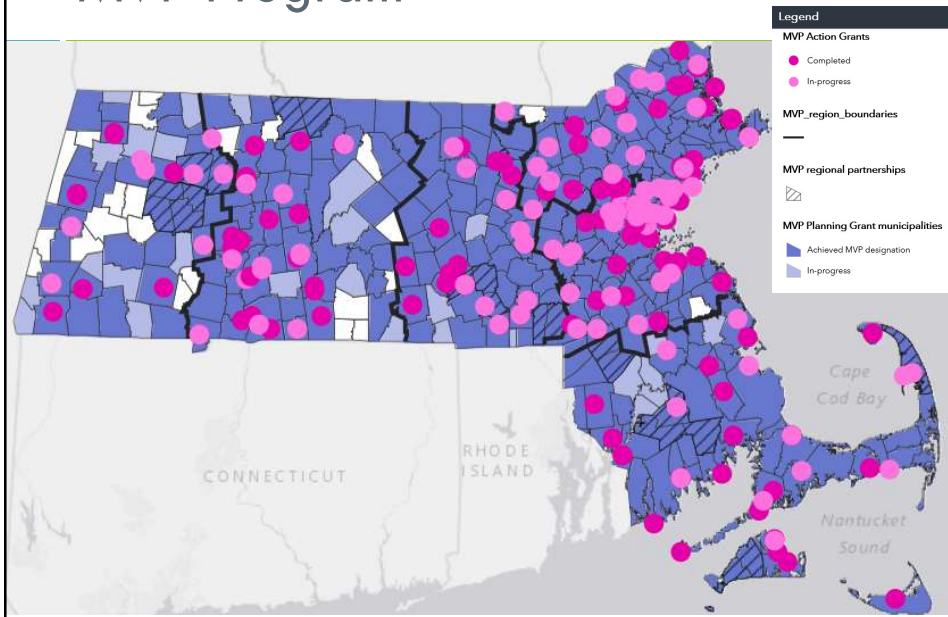
2016 HMP review – critical facilities & mitigation actions



Next steps – public engagement & CRB workshops

3

MVP Program



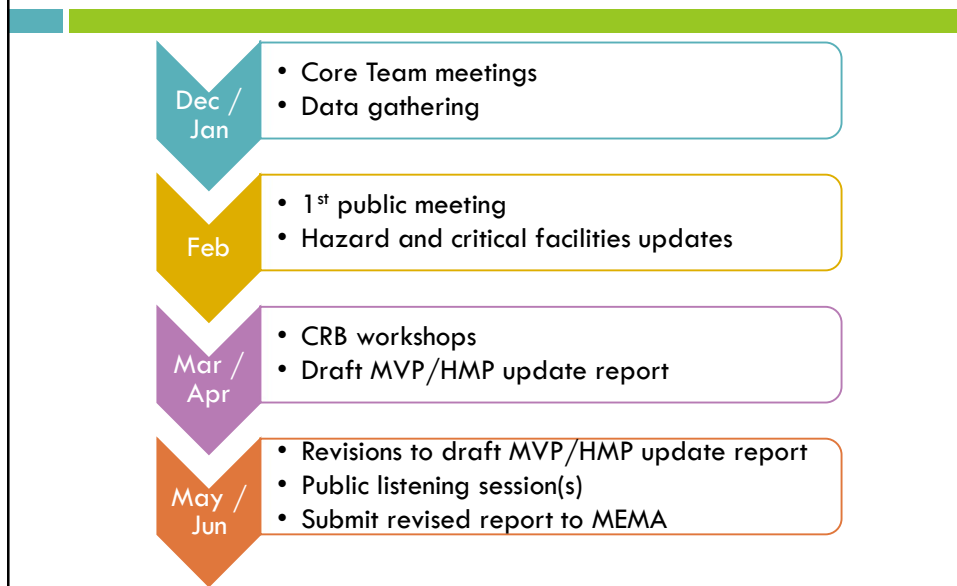
4

MVP Process



5

Tolland MVP/HMP Planning Grant



6

Community Resilience Building (CRB) Process



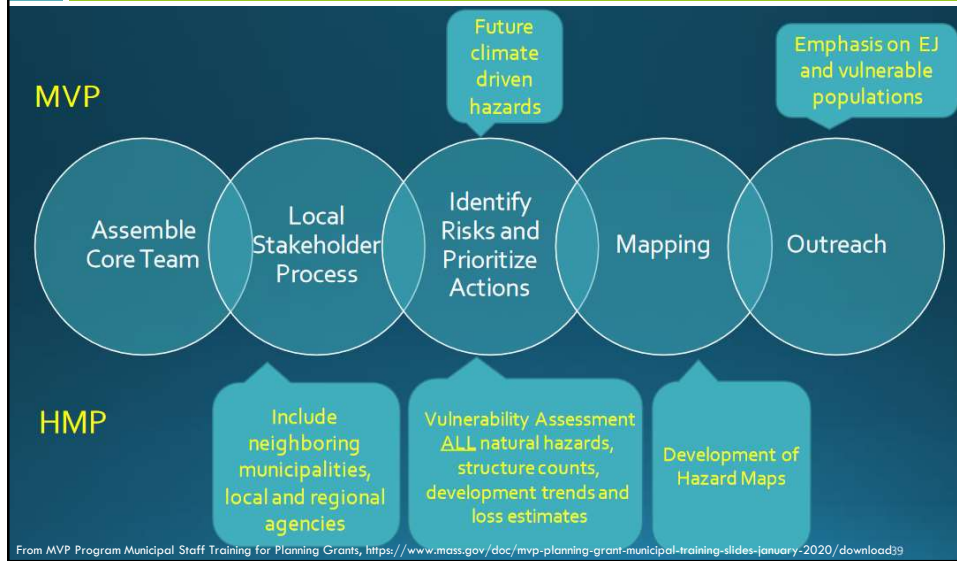
7

Virtual Workshop Strategy

- 3, 2-hour long workshops over the course of 3 weeks
 - ▣ Stakeholders will be invited by email, phone calls
 - ▣ Each workshop will focus on a type of asset
 - ▣ Workshops will take place via Zoom and will be recorded
- Materials will be posted on Town website
 - ▣ Background presentation on climate change, MVP program
 - ▣ Map(s)
 - ▣ Recorded webinars
 - ▣ Links to MVP and ResilientMA websites
- Mitigation actions ranked by online survey post-workshop

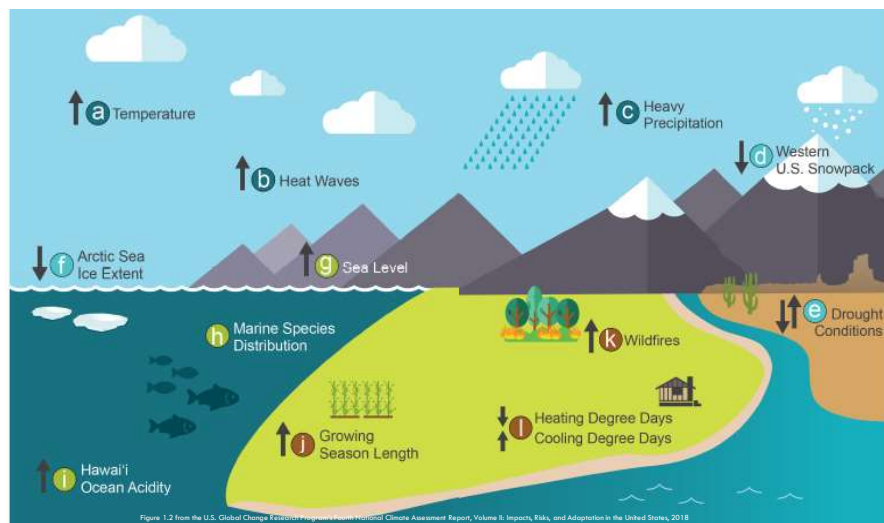
8

HMP Update Process






9

Climate Change – National Trends



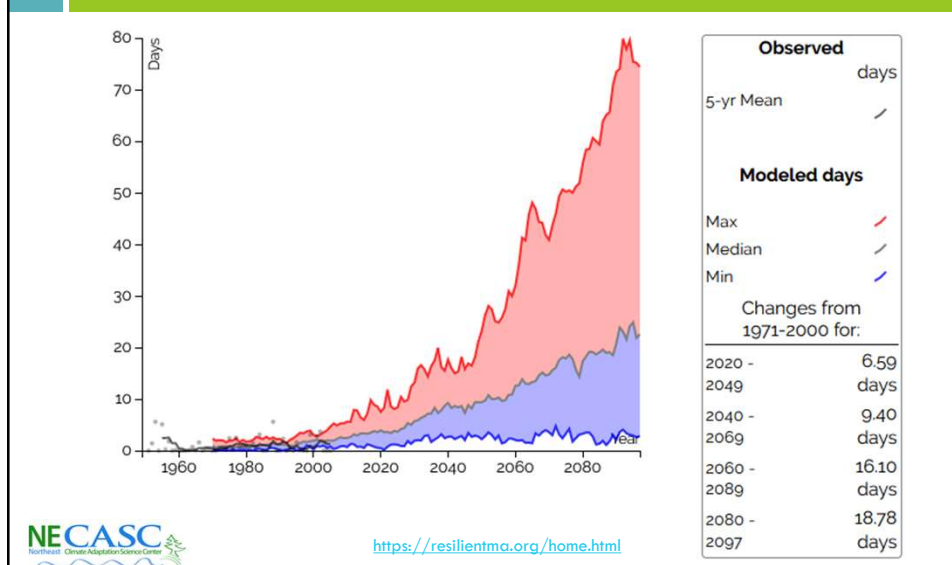
10

Climate Change – Statewide Trends

CLIMATE CHANGES	RELATED NATURAL HAZARDS	PROJECTIONS BY THE END OF THIS CENTURY
Changes in precipitation 	<ul style="list-style-type: none"> - Inland flooding - Drought - Landslide 	<ul style="list-style-type: none"> - Annual precipitation: Increase up to 16% (+7.3 inches) - Days with rainfall accumulation 1+ inch: Increase up to 57% (+4 days) - Consecutive dry days: Increase 18% (+3 days) - Summer precipitation: Decrease
Rising temperatures 	<ul style="list-style-type: none"> - Average/extreme temperatures - Wildfires - Invasive species 	<ul style="list-style-type: none"> - Average annual temperature: Increase up to 23% (+10.8 degrees Fahrenheit) - Days/year with daily minimum temperatures below freezing: Decrease up to 42% (-62 days) - Winter temperatures: Increase at a greater rate than spring, summer, or fall - Long-term average minimum winter temperature: Increase up to 66% (+11.4 degrees Fahrenheit) - Days/year with daily maximum temperatures over 90 degrees Fahrenheit: Increase by up to 1,280% (+64 days) - Growing degree days: Increase by 23% to 52%
Extreme weather 	<ul style="list-style-type: none"> - Hurricanes/tropical storms - Severe winter storms/nor'easters - Tornadoes - Other severe weather 	<ul style="list-style-type: none"> - Frequency and magnitude: Increase

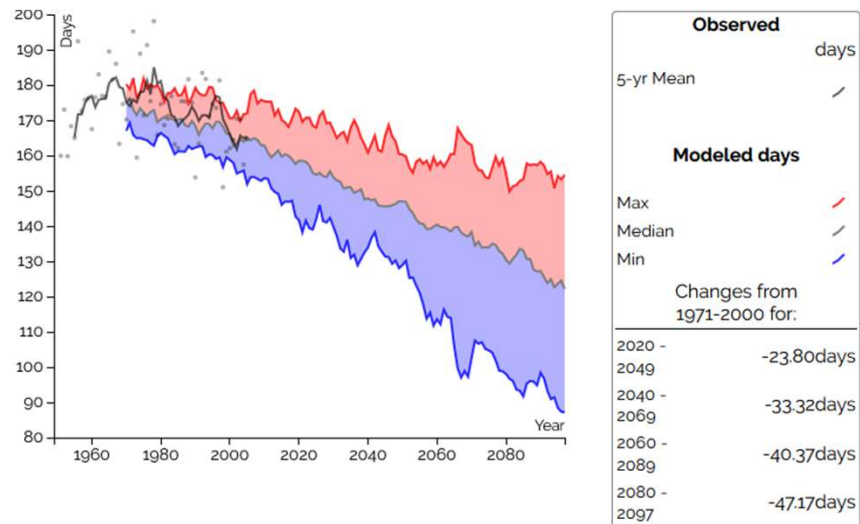
11

Climate Change – Farmington River Basin, Annual Days Over 90° F



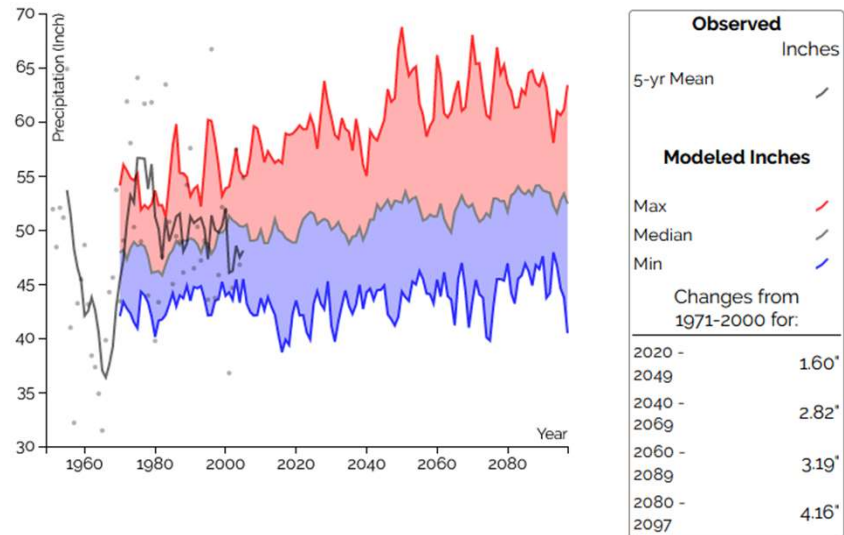
12

Climate Change – Farmington River Basin, Annual Days Below 32° F



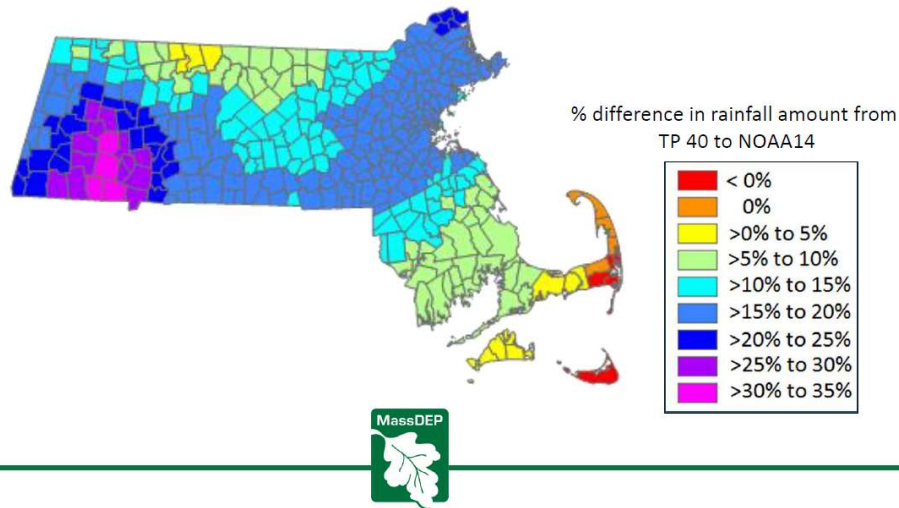
13

Climate Change – Farmington River Basin, Annual Rainfall Amounts



14

100-Year Storm Model Changes



15

Natural Hazards in Tolland

Hazard Identification for Tolland Based on the 2016 HMP and MVP/HMP Committee Review

Type of Hazard	Location of Occurrence ¹	Probability of Future Events ²	Impact ³	Vulnerability ⁴
Snowstorms / Ice Storms	Large	High	Critical	1
Severe Thunderstorms / Winds / Tornadoes	Small	Moderate	Limited	2
Flooding	Medium	High	Limited	2
Wildfire / Brushfire	Large	Moderate	Limited	3
Hurricanes	Large	Moderate	Limited	3
Drought	Large	Low	Minor	5
Earthquakes	Large	Very low	Critical	4
Dam Failure	Medium	Very low	Critical	4
Natural Gas Pipeline Breakage ⁵	Medium	Low	Minor	5

16

Critical Facilities

- **Critical Facilities:** Structures and institutions necessary for a community's response to and recovery from emergencies

- ▣ **Essential Facilities**
- ▣ **Transportation Systems**
- ▣ **Lifeline Utility Systems**
- ▣ **High Potential Loss Facilities**
- ▣ **Hazardous Material Facilities**



17

2016 HMP Review - Critical Facilities

- **Emergency Response Facilities and Services**
 - ▣ **Public Safety Complex**
 - ▣ **DPW Highway Garage**
 - ▣ **Emergency Fuel Station - L&M Auto in East Otis**
 - ▣ **Emergency Electrical Power Facilities (Generators)**
 - Girl Scouts Camp
 - Wildwood Clubhouse
 - Camp Kinderland
 - Tunxis Clubhouse
 - Fire Dept Mobile Generators



18

2016 HMP Review - Critical Facilities

□ Primary Evacuation Routes

- ▣ State Route 57
- ▣ East Otis Rd
- ▣ Clubhouse Rd
- ▣ Schoolhouse Rd
- ▣ Hartland Rd
- ▣ Burt Hill Rd
- ▣ Colebrook River Rd



19

2016 HMP Review - Critical Facilities Non-Essential for Emergency Response

□ Problem Culverts

- ▣ 514 New Boston Rd
- ▣ 1304 & 1418 New Boston Rd (2 separate culverts)
- ▣ 441 West Granville Rd
- ▣ 1064 Colebrook River Rd
- ▣ Colebrook River Rd and Rivers Rd
- ▣ 365 Jeff Miller Rd
- ▣ East Otis Rd (2) - Entrance to Twining Pond, Girl Scout Camp
- ▣ Schoolhouse Rd - Noyes Pond Brook Crossing
- ▣ 2541 Schoolhouse Rd (Blandford)
- ▣ 228 Rivers Rd

20

2016 HMP Review – Critical Facilities Special /At-Risk Populations

- ☐ No Hospitals or Health Facilities
- ☐ No Special Needs Populations
- ☐ No Schools, Churches, Employment Centers
- ☐ Historic properties / locations?
- ☐ Campgrounds?
- ☐ Senior populations?
- ☐ Hazardous or solid waste?

21

2016 HMP Review – Mitigation Actions

High Priority Mitigation Action	Responsible Dept / Board	Anticipated Timeline as of 2016 HMP	Mitigation Action Status	Keep in 2022 Plan Update?
Develop a voluntary program for inspection of fire detectors in all public and private buildings	Fire Dept	7 months		
Replacement of box culvert at 1064 Colebrook River Road	DPW	1.5 years		
Replacement of existing fire pumper equipment	Fire Dept	9 months		
Regularly test back-up electrical generators	EMD	3 months for plan development, then annual implementation		

22

2016 HMP Review – Mitigation Actions

High Priority Mitigation Action	Responsible Dept / Board	Anticipated Timeline as of 2016 HMP	Mitigation Action Status	Keep in 2022 Plan Update?
Evaluate all bridges and culverts situated along Route 57 and produce an engineering report of prioritized culverts to be replaced/repared	DPW	1.5 years		
Incorporate Tolland into Berkshire County Sherriff's Office Reverse 911 system automatic notification of emergency situations	DPW / Police Dept / Fire Dept / Select Board	1.5 years		
Recruit residents to serve as voluntary emergency personnel and first responders	Fire Dept / EMD	6 months, repeat as needed		

23

2016 HMP Review – Mitigation Actions

Medium Priority Mitigation Action	Responsible Dept / Board	Anticipated Timeline as of 2016 HMP	Mitigation Action Status	Keep in 2022 Plan Update?
Develop an Emergency Action Plan for Twining Pond Southern Dam and Noyes Pond Dam	DPW / Fire Dept	2 years		
Implement top priority improvements identified in the "Evaluation of bridges and culverts" report	DPW	1.5 years each		
Publish an article in the Tolland Tattler discussing flood maps, and an explanation of potential insurance requirements	Council on Aging	1.5 months		
Make improvements to the snow load capacity of the Town library	DPW / Select Board	9 months		

24

2016 HMP Review – Capabilities Assessment

Capability Assessment Worksheet: Town of Tolland
Prepared by PVPC, February 2022

Planning and Regulatory					
Plans	Yes/no	Year	Does the plan address hazards?	Does the plan identify projects to include in the mitigation strategy?	Can the plan be used to implement mitigation actions?
Comprehensive / Master Plan	No				
Comprehensive Emergency Management Plan	Yes	??	Yes	No	Yes
Continuity of Operations Plan	Yes, as part of the CEMP	N/A	N/A	N/A	N/A

Building Code, Permitting, and Inspections		
Plans	Yes/No	Are codes Adequately enforced?
Building Code	Yes	Yes, as identified by the 2016 HMP, Tolland has adopted the Massachusetts State Building Code, which promotes construction of buildings that can withstand hazards to a certain degree.
Building Code Effectiveness Grading Schedule (BCEGS) Score	Unknown	Requires community inputs – ask the Building Inspector
Fire department ISO rating	Unknown	Requires community inputs – ask the Fire Chief

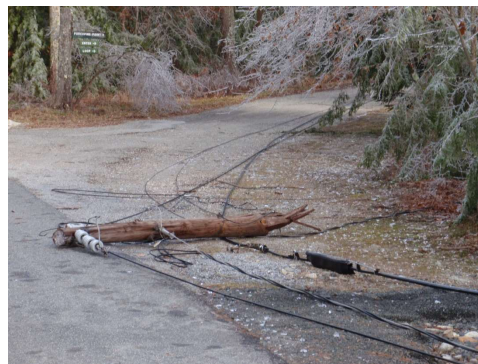
Land Use Planning and Ordinances			
By-Laws / Ordinances	Yes/No	Is the ordinance an effective measure for reducing hazard impacts?	Is the ordinance adequately administered and enforced?
Zoning ordinance	Yes	Yes, as identified by the 2016 HMP	Yes, as identified by the 2016 HMP
Subdivision Ordinance	Yes	Establishes land use regulations	Requires community input
Natural hazard specific ordinance (stormwater, steep slope, wildfire)	Yes	Burn Permits - Residents must obtain burn permits from town and Fire Department is notified of days on which burns will occur.	Yes, as identified by the 2016 HMP

How can these capabilities be expanded and improved to reduce risk?

25

Next Steps

- ☐ Public engagement
 - ☐ Public survey on MVP page on Town website?
 - ☐ Stakeholder outreach
- ☐ Prepare for workshop
 - ☐ Post materials online
 - ☐ Schedule dates/times
 - ☐ Send invitations



26



27