



Boston Firefighters, January 4, 2018 (Reuters)



Holyoke Dam between South Hadley and Holyoke, MA

Municipal Vulnerability Preparedness Program Public Listening Session Town of South Hadley

November 6, 2019

Fuss & O'Neill Overview



Fuss & O'Neill is a leading MVP consultant in assisting Massachusetts communities secure grant assistance, achieve designation as a Massachusetts Municipal Vulnerability Preparedness (MVP) community, and execute their MVP priority projects.

The MVP team is experienced in local government, environmental services, civil site engineering, stormwater management, and emergency management.

Fuss & O'Neill assisted new MVP communities secure more than \$3.15 in MVP Action Grants in the program's first and second funding rounds.

MVP Listening Session Agenda

- **Introduction to Massachusetts Municipal Vulnerability Preparedness Program (MVP)**
- **Introduction to Upcoming Action Grant Opportunity**
- **Introduction to Climate Change and the Town of South Hadley**
- **Discussion on Summary of Findings Report**
- **Public Discussion**



South Hadley's MVP Program - \$25,000

- **Grant Supports Climate Change Vulnerability Assessments and Resiliency Planning**
- **MVP Comprehensive Approach**
 - Infrastructure**
 - Society**
 - Environment**
- **Expanded Scope**
 - Extra listening sessions focused around stormwater management at Titus Pond and Black Stevens Pond**

MVP designation leads to enhanced standing in future funding opportunities

MVP Action Grant

- **Grant supports priority actions identified at Community Resilience Building Workshop**
- **\$25,000 - \$2M available (up to \$5M for regional projects)**
- **Up to \$8M available statewide**
- **Local match of 25% - can be in-kind**
- **New funding round expected in April 2020**

Only those communities which have completed the CRB workshop are eligible to apply

MVP Project Core Team



Name	Position/Organization
Anne Capra	Conservation Administrator/Planner
Jim Reidy	Superintendent, Department of Public Works
Viv Price	Operations Manager, Department of Public Works
Bill Simard	Parks Supervisor, Department of Public Works
Richard Harris	Director, Planning and Conservation Department
Andy Rogers	Director, Department of Recreation
Sharon Hart	Emergency Management/Public Health Director

Terminology

Climate Change

The Change in Usual Climate Conditions

- Rising Temperature
- Changing Precipitation/ Rainfall Amount and Intensity
- Sea Level Rise

Town of South Hadley – Connecticut Basin

Rising Temperature

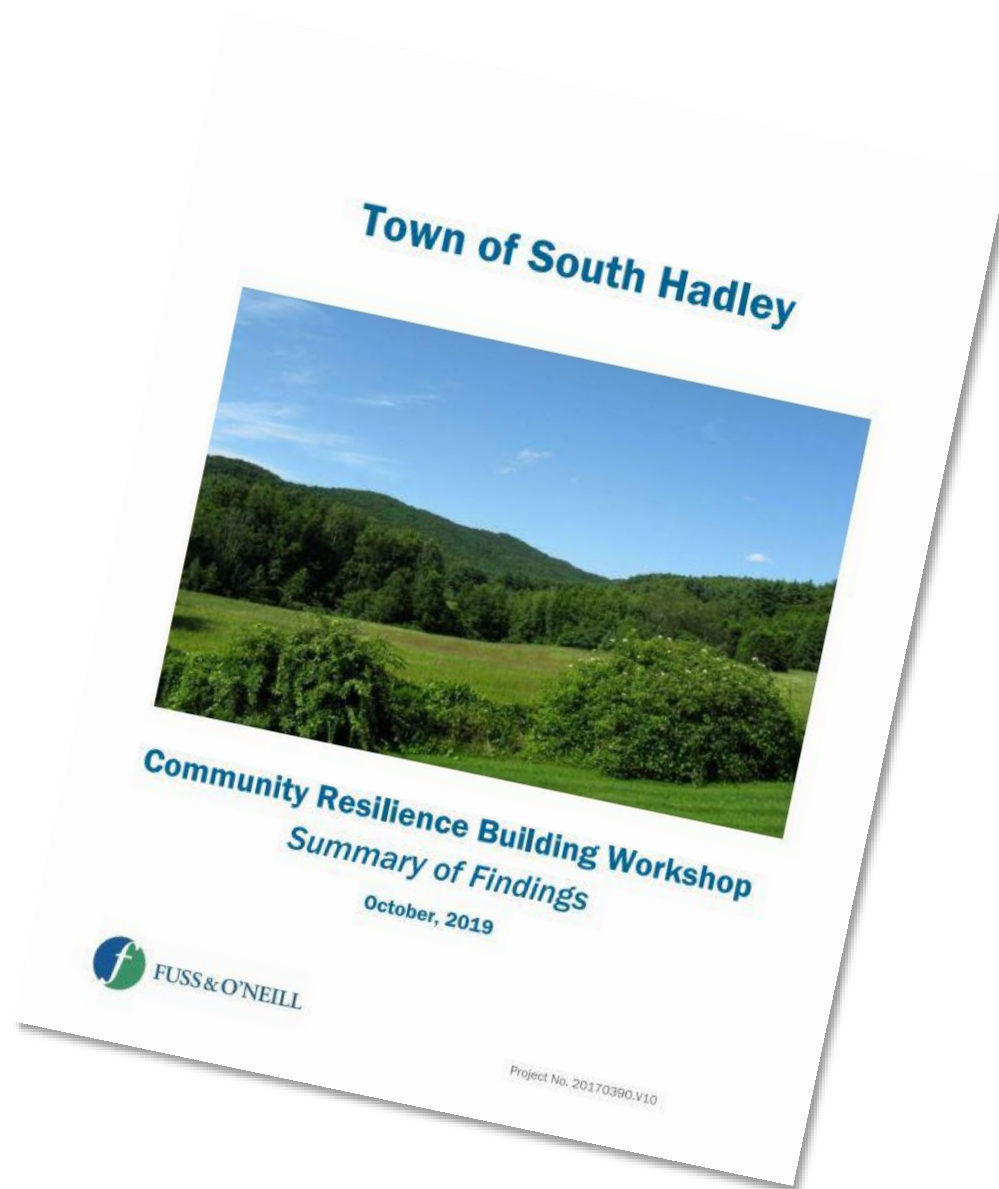
Connecticut Basin	Observed Baseline 1971-2000	Projected Change in 2030s	Projected Change in 2050s	Projected Change in 2070s	Projected Change in 2090s
Average Annual Temperature (°F)	46.98	2.18 to 4.46	3.00 to 6.43	3.57 to 9.00	4.04 to 10.94
Annual Days with Maximum Temperature over 90°F (Days)	6.41	6.36 to 19.72	9.87 to 35.35	11.98 to 57.07	14.50 to 76.01
Annual Days with Minimum Temperature below 32°F (Days)	158.63	-10.58 to -28.13	-18.57 to -37.28	-22.18 to -50.76	-22.88 to -59.79

Town of South Hadley – Connecticut Basin

Changing Precipitation

Connecticut Basin	Observed Baseline 1971-2000	Projected Change in 2030s	Projected Change in 2050s	Projected Change in 2070s	Projected Change in 2090s
Total Annual Precipitation (Inches)	46.39	-0.40 to 4.99	1.25 to 6.22	1.95 to 7.26	1.68 to 8.30
Annual Consecutive Dry Days (Days)	16.41	-0.18 to 1.34	-0.42 to 1.75	-0.73 to 2.26	-0.35 to 2.44

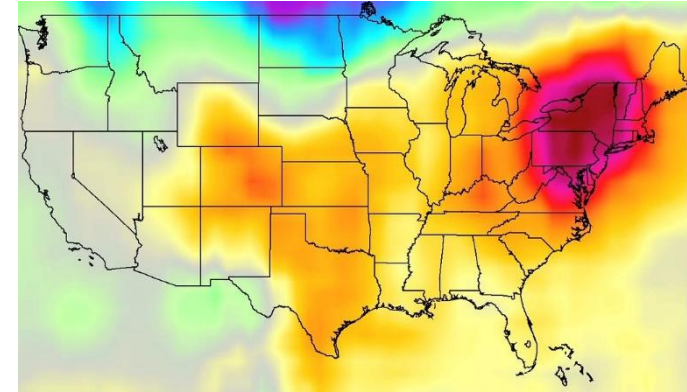
MVP Planning Process: Summary of Findings



MVP Planning Process: Summary of Findings

Top Four Hazards

- Flooding
- Ice and Snow
- Drought and Extreme Precipitation
- Extreme Weather Events



Summary of Findings: Infrastructure Concerns

- **Culverts and Bridges, Stormwater Systems**
 - Town-wide concern
 - Designed for historic precipitation
- **Roads**
 - Vulnerable to flooding
- **Dams**
 - Town-wide, Queensville
- **Water Supply and Water Infrastructure**
 - Aging system
- **Wastewater Infrastructure**
- **Electrical Infrastructure (SHELD)**
 - Downed lines, damage from fallen trees
- **Buildings and Facilities**
 - AC, flooding, efficiency upgrades
- **Septic Systems**
 - Aging



Summary of Findings: Environmental Concerns

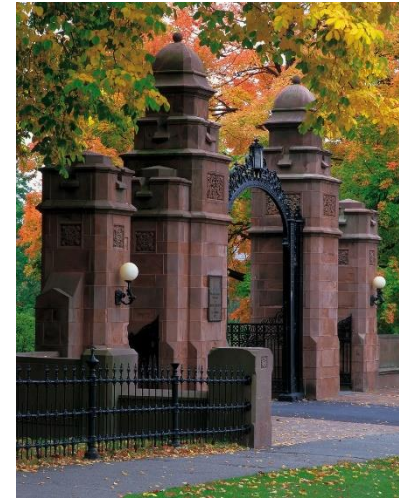
- **Water Quality**
 - Algal blooms
- **Trees and Forests**
 - Overgrowth
 - Invasives
- **Invasive Species**
- **Titus Pond & Black Stevens**
 - Stormwater management, water quality
- **Beavers**
 - Cedar Ridge, Stony Brook, scattered areas
- **Local Agriculture**
- **FEMA Flood Mapping**
 - 40 years old
- **Parks and Open Space**



Summary of Findings: Societal Concerns

- **Vulnerable Populations**
 - Seniors, students
- **Vulnerable Neighborhoods**
 - Cove Island
- **Emergency Alert System (CivicReady)**
- **Emergency Shelters**
 - Mount Holyoke College
 - Heating/cooling shelters
- **Schools**
- **Pest and Disease Control**
 - EEE, West Nile, Lyme Disease
- **Access to Provisions/Fuel/Medicine**
- **Stress on Emergency Services**
- **Economic Revitalization**
 - The Falls, flood zone

- **Neighborhood Conflicts**
 - Sump pumps



Current Strengths in South Hadley

- **CivicReady system for emergency alerts**
- **Two water and fire districts**
- **2:1 tree replacement: removal policy in Wetland Protection Act areas**
- **Currently updating Master Plan and Open Space and Recreation Plan**
- **17 conservation areas in Town, mostly forested**
- **Exploring energy efficiency improvements in municipal buildings**
- **SHELD proactively trims/removes hazard trees**
- **Conservation Commission developing a Forest Management plan**
- **MHC carbon neutral by 2037 plan**
- **Emergency shelters in Town**
- **Member of a Mosquito Control District**



Top Recommendations to Improve Resilience

Infrastructure—Highest Priority

- **Conduct field inventory/assessment and repair culverts and bridges**
- **Replace the Route 116/Newton Smith Brook culvert**
- **Conduct dam assessments, study feasibility of dam removals/repair**
- **Assess green infrastructure opportunities for stormwater management**
- **Address flooding on Route 47/Pearl Street near Bachelor Brook**
- **Pursue microgrid/back-up power for facilities**
- **Infrastructure improvements at critical facilities**
- **Accelerate upgrades for sewer/water infrastructure**
- **Explore options to relocate SHELD**
- **Conduct feasibility study to relocate the Emergency Operations Center outside of flood plain (Town Hall)**



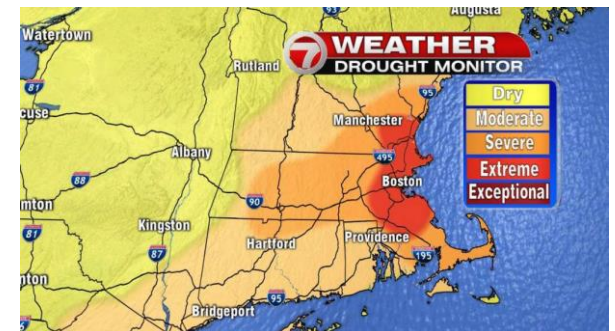
Top Recommendations to Improve Resilience

Environment– Highest Priority

- **Develop a tree and forest management program**
- **Fill Tree Warden position**
- **Explore stormwater management approaches for Titus Pond and Black Stevens Pond**

Society– Highest Priority

- **Coordinate across departments/organization to develop an emergency plan**
- **Education/outreach to residents in flood-prone areas**
- **Incorporate resiliency into the Falls economic development**
- **Increase awareness of vector-borne diseases**
- **Build a Citizen Response Team**
- **Develop transportation planning for vulnerable populations during hazard events**



Moderate and Lower Priority Actions

- Pursue open space acquisition
- Develop a beaver management plan
- Continue exploring regional dispatch options
- Long-term solutions for floodplain management and flood resiliency
- Rebuild/refit Mosier Elementary School
- Develop an Alternate Emergency Staffing Plan
- Communicate with St. Theresa's Parish about emergency sheltering
- Support regional agriculture
- Promote bio-blitzes and citizen science
- Educate private septic system owners/explore 0% interest loan options
- Develop a neighbor-to-neighbor program
- Assess old industrial and automobile sites
- Provide more resilient storage facilities for vital information (Town Hall flooding)



Upcoming Listening Sessions

- **Titus Pond**
- **Black Stevens Pond**

Public Discussion and Q&A

Please also provide written
comments on handout