



Buttery Brook, South Hadley



Bachelor Brook, South Hadley

Climate Change Preparedness Public Listening Session Town of South Hadley January 15, 2019

Agenda

- **Introductions**
- **Brief overview: Municipal Vulnerability Preparedness Program**
- **Community Resilience Building Workshop Summary of Findings**
- **Water Resources in South Hadley**
- **Community Feedback**

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)**
- **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

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

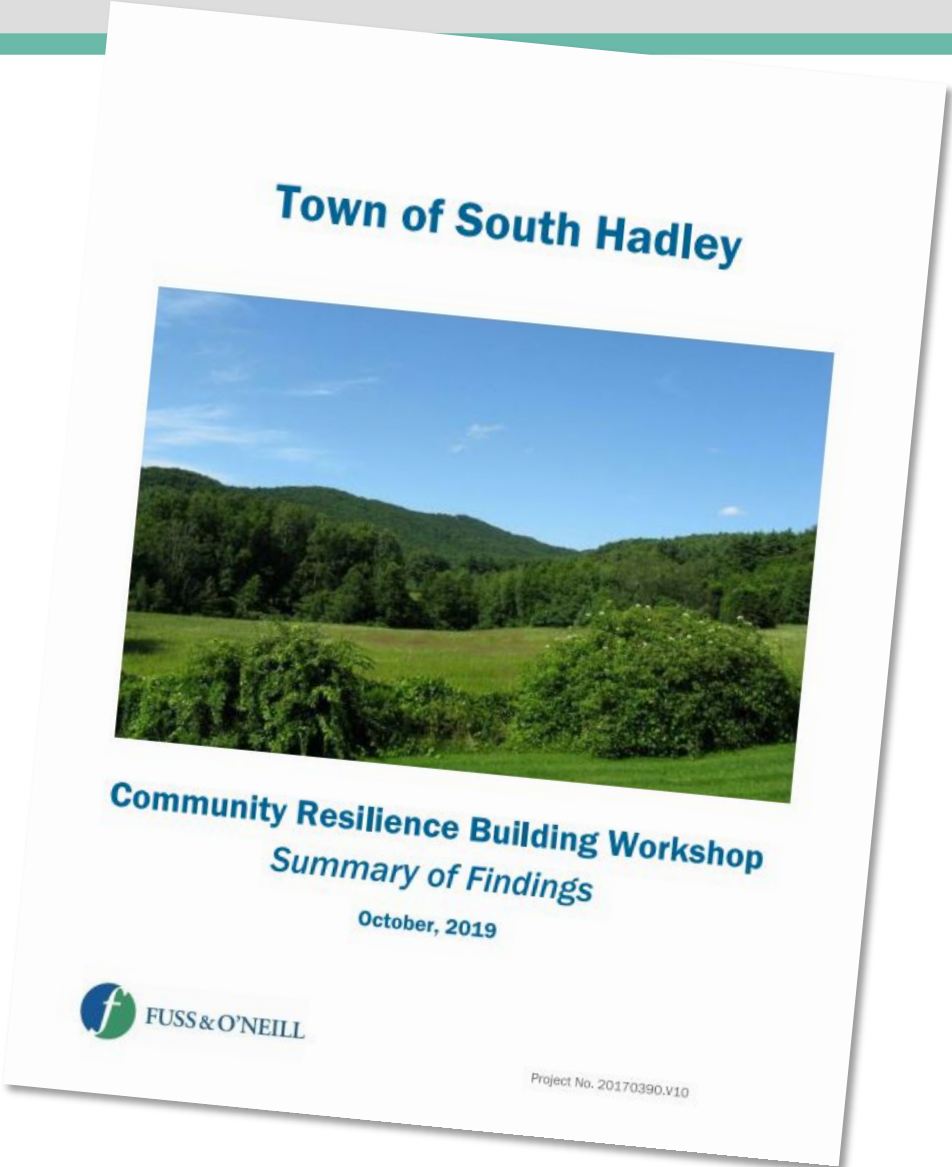
Connecticut Basin	Observed Baseline 1971-2000	Projected Change in 2030s	Projected Change in 2050s	Projected Change in 2070s	Projected Change in 2090s
Average Annual Temperature (°F)	46.98	2.18 to 4.46	3.00 to 6.43	3.57 to 9.00	4.04 to 10.94
Annual Days with Maximum Temperature over 90°F (Days)	6.41	6.36 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

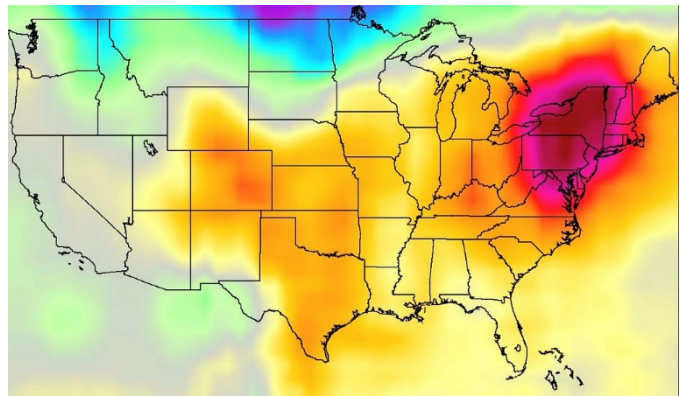
MVP Planning Process: Summary of Findings



MVP Planning Process: Summary of Findings

Top Four Hazards

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



Findings: Water Resources-Related Concerns

- **Culverts and Bridges, Stormwater Systems**
 - Designed for historic precipitation
- **Dams** (especially Queensville Dam)
- **Water Quality** (e.g. algal blooms)
- **Trees and Forests**
- **Invasive Species**
- **Titus Pond & Black Stevens Pond**
(Stormwater management, water quality)
- **Beavers** (Cedar Ridge, Stony Brook, scattered areas)
- **Parks and Open Space**
- **Pest and Disease Control** (EEE, West Nile, Lyme)
- **Economic Revitalization** (The Falls, floodplain areas)
- **Neighborhood Conflicts** (e.g. sump pumps)



Top Watershed-Related Resiliency Actions

Infrastructure Priorities

- **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/LID opportunities for stormwater management**
- **Address flooding on Route 47/Pearl Street near Bachelor Brook**



Top Watershed-Related Resiliency Actions

Environmental Priorities

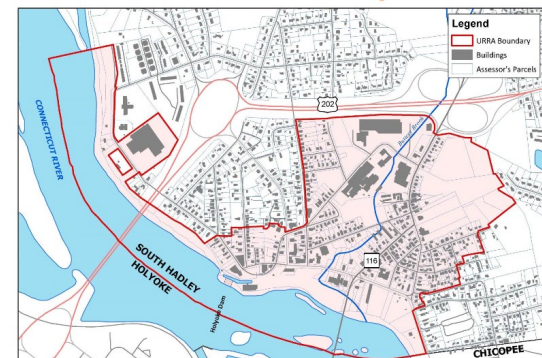
- **Develop a tree and forest management program**
- **Explore stormwater management at Titus Pond and Black Stevens Pond**
- **Pursue open space acquisition**
- **Develop a beaver management plan**
- **Long-term solutions for floodplain management**

Societal Priorities

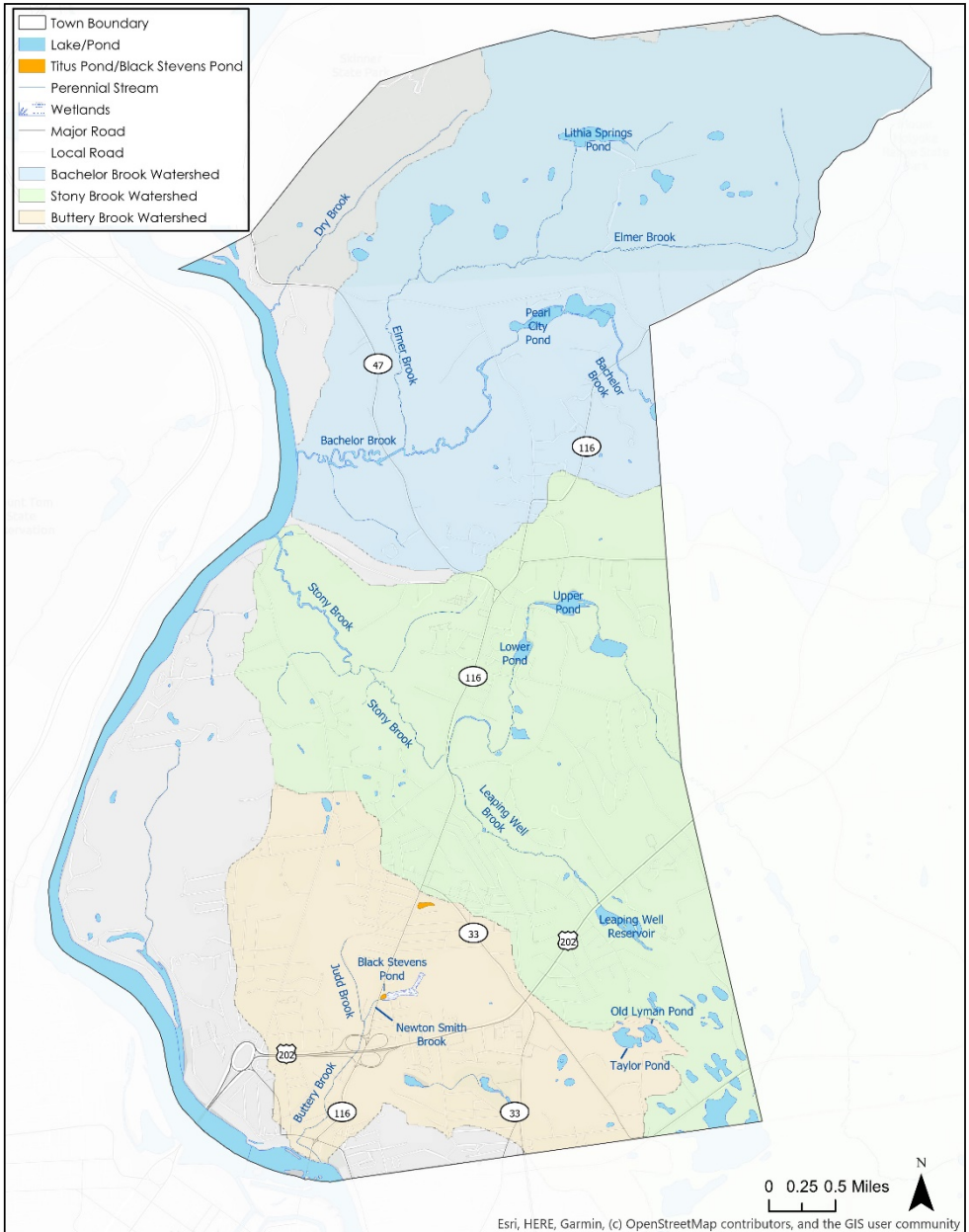
- **Incorporate resiliency into the Falls economic development**
- **Promote bio-blitzes and citizen science**
- **Develop resources/programs for residents to make resiliency improvements**



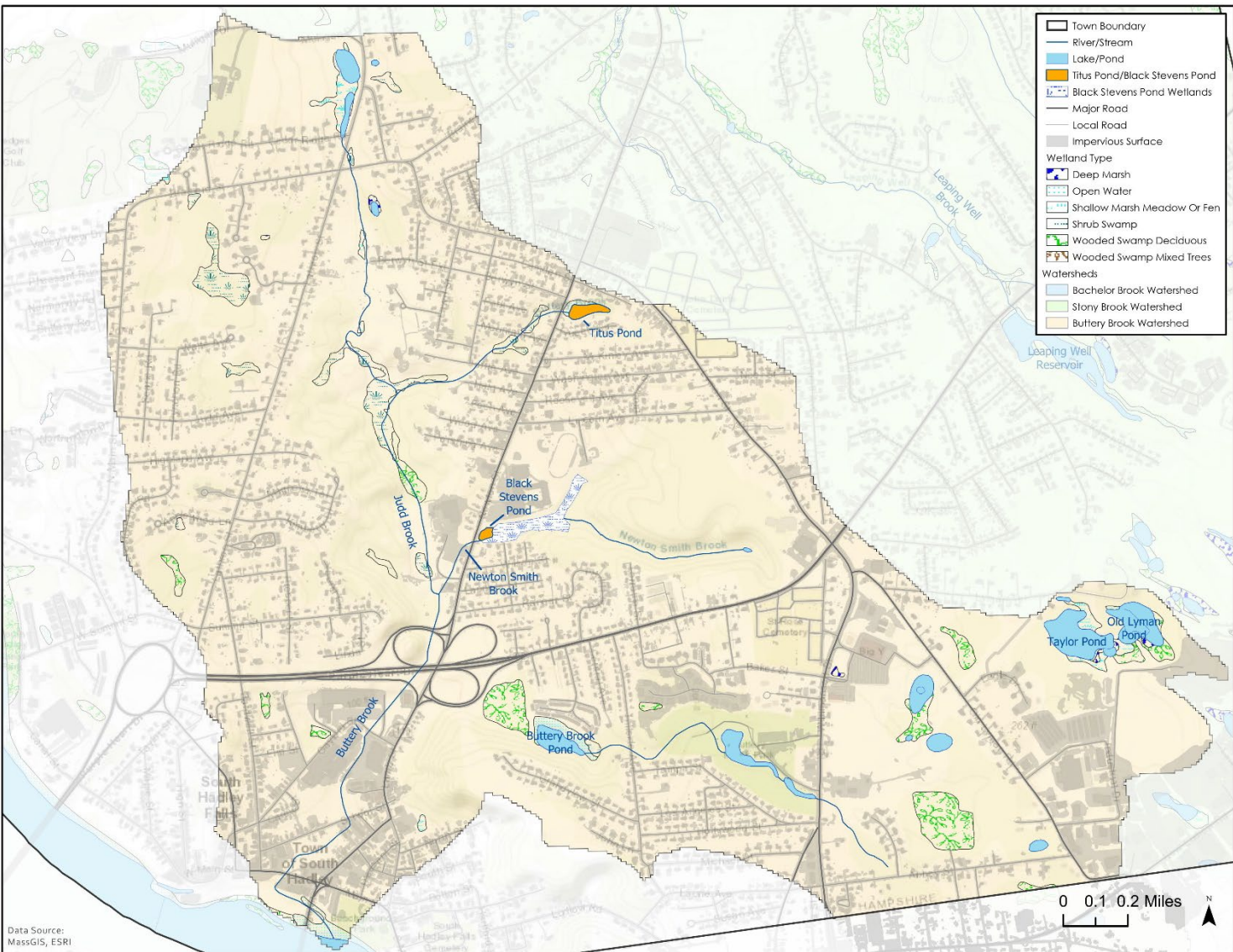
**South Hadley Falls
Urban Renewal & Redevelopment Area**



Water Resources in South Hadley



Water Resources –Buttery Brook Watershed



Data Source: MassGIS, ESRI

Alvord Street Pond





Alvord Street Pond - Alvord Street, January 2018

During Eversource utility pole replacement project

Cedar Ridge culvert repair, 2019



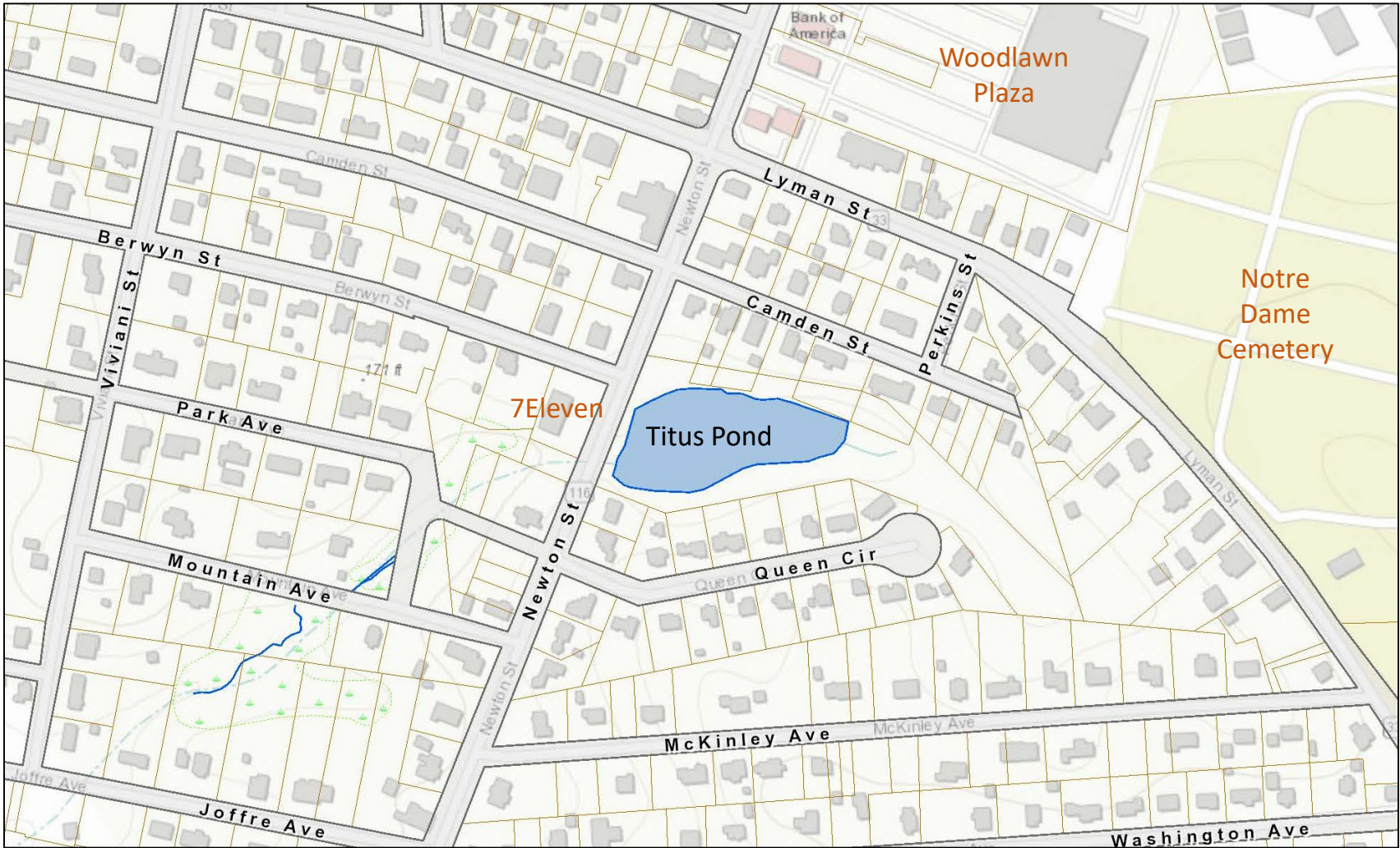
Judd Brook – view to the south from Brainerd Street





Titus Pond - Newton Street





Woodlawn Plaza

Notre Dame Cemetery

7Eleven

Titus Pond

Bank of America

121 ft



Titus Pond – July 2019



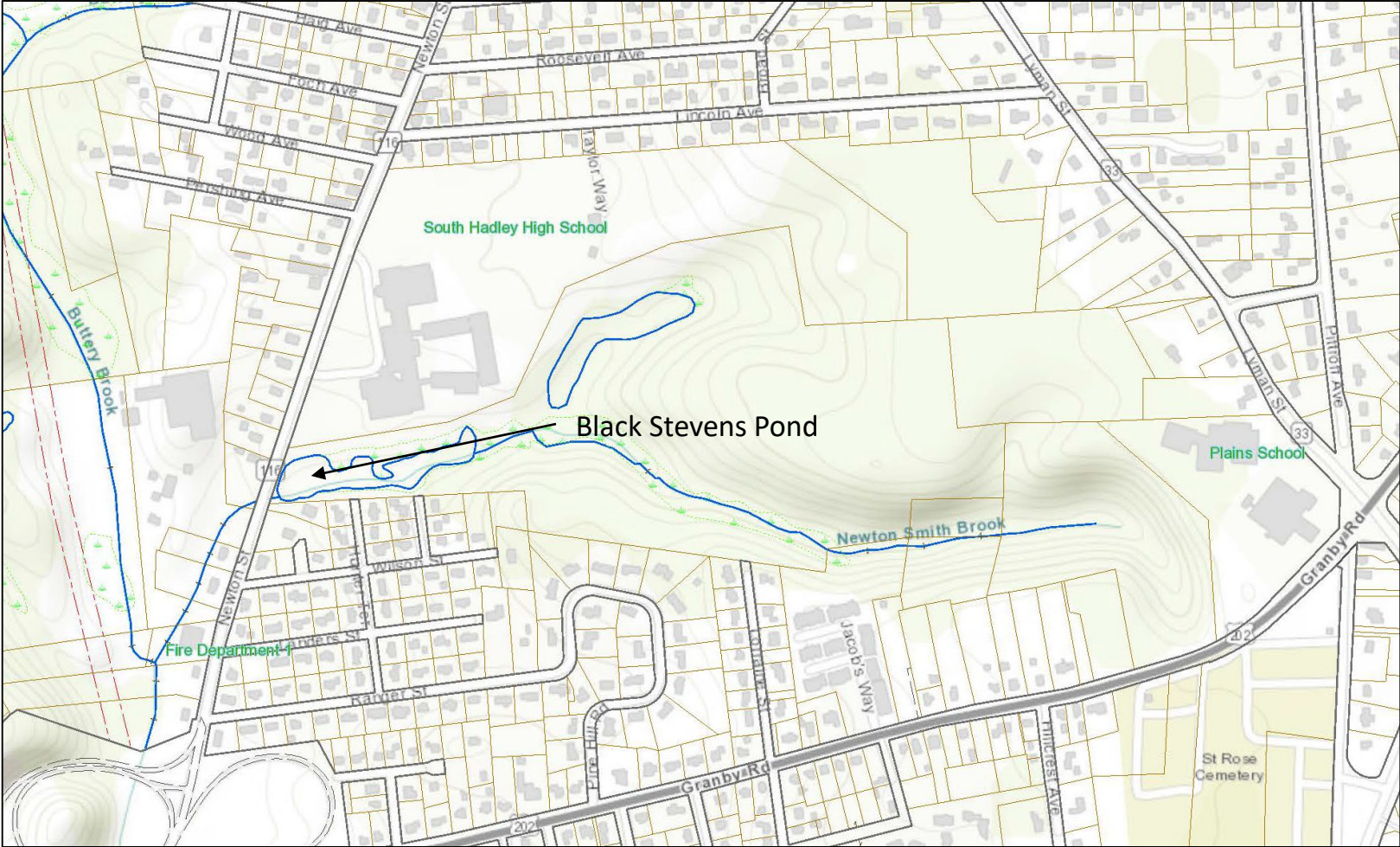
Queensville Dam at Titus Pond – December 2019





Titus Pond – July 2018





Black Stevens Pond - Newton Street



Black Stevens Pond - Granby Road



Newton Smith Brook





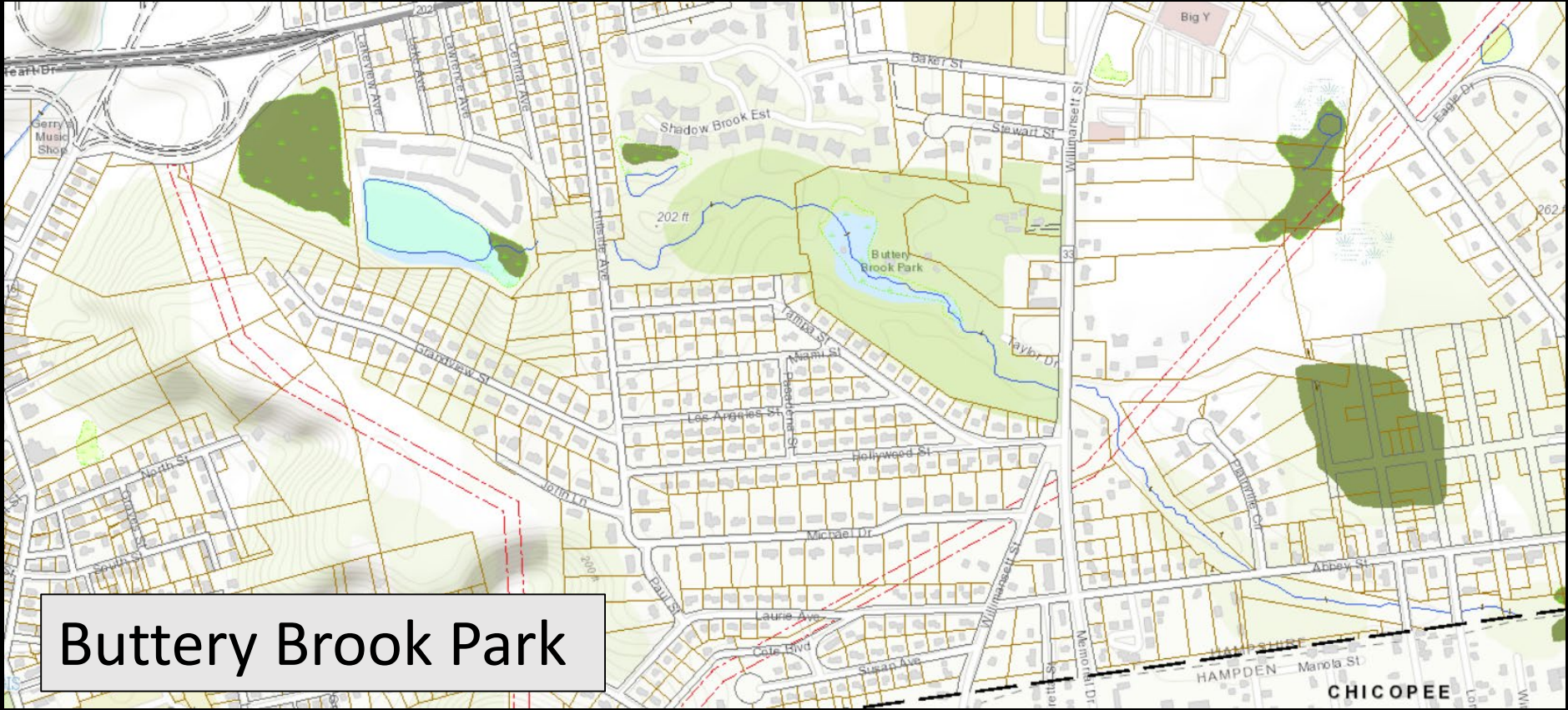




Black Stevens Pond







Buttery Brook Park

Buttery Brook – Ann Street



Buttery Brook – Abbey Street



Buttery Brook Park





Buttery Brook – South Hadley Falls to Connecticut River

Buttery Brook – School Street



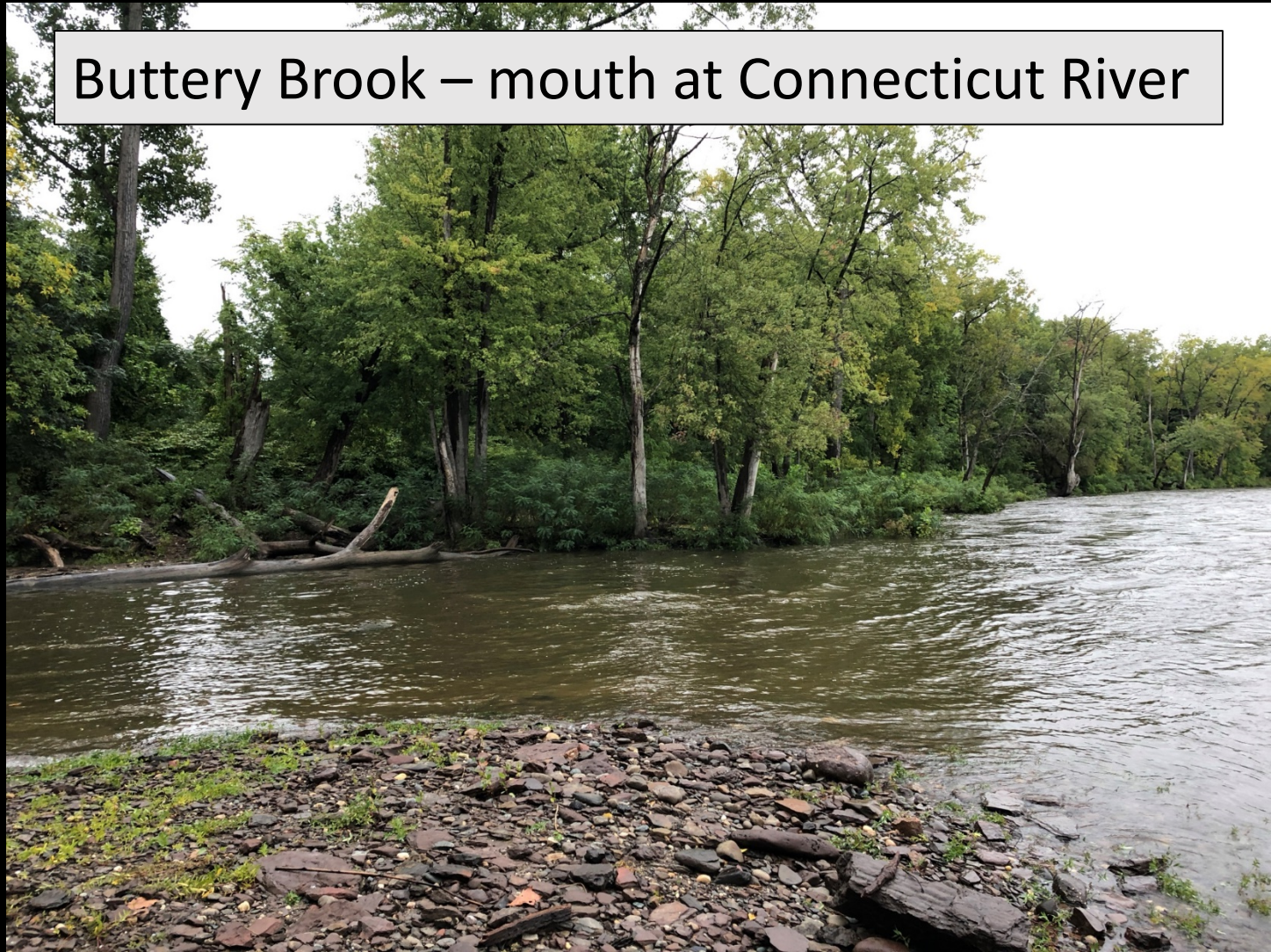


Buttery Brook – south side of Main Street

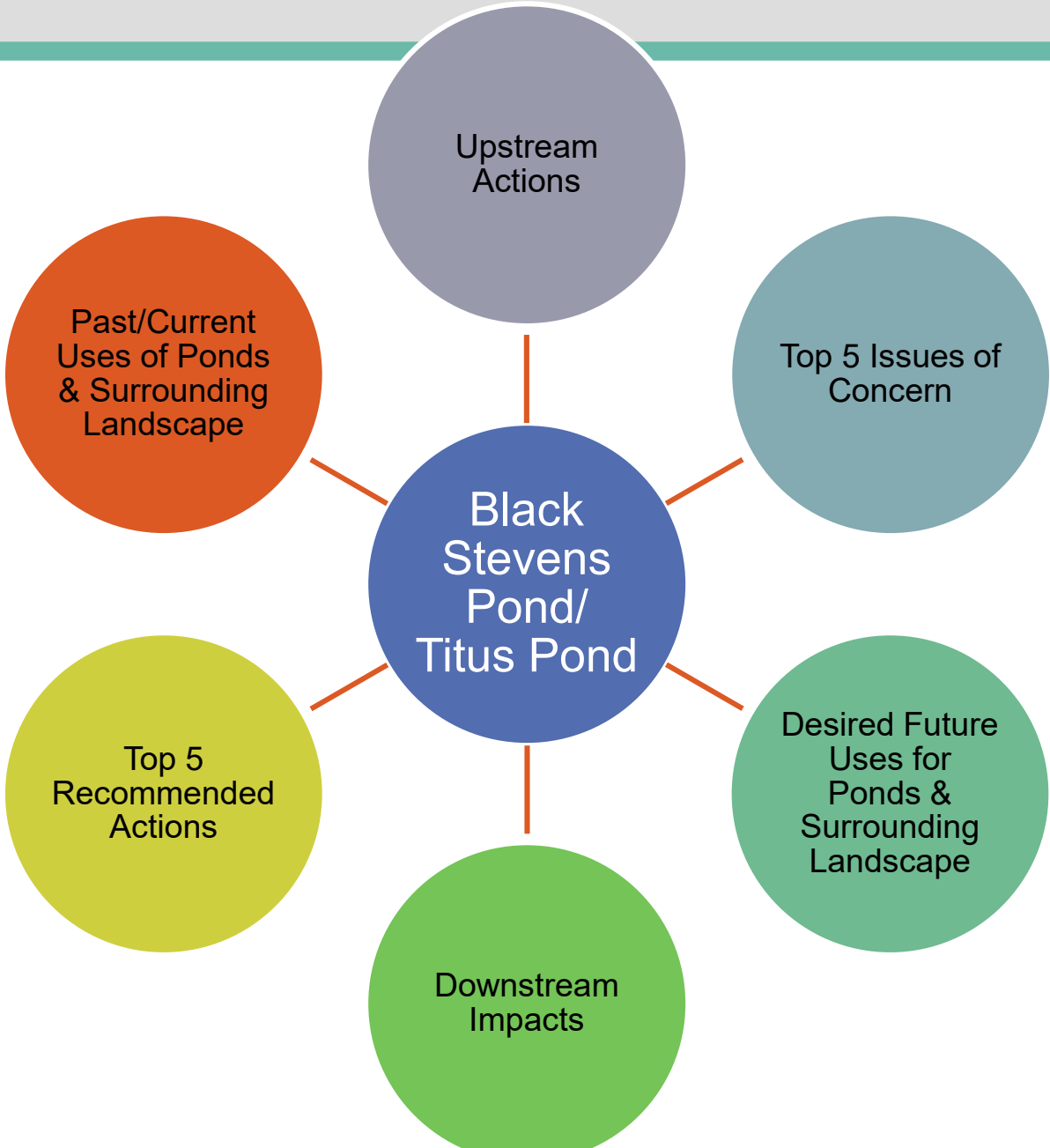
Buttery Brook – mouth at Connecticut River



Buttery Brook – mouth at Connecticut River



Public Discussion



Additional Discussion and Q&A