

A Watershed Coalition to Advance Climate Goals

*Accelerating Climate Resiliency
MAPC Municipal Grant*



Lead Municipality
Town of Stow



Lead Organizational Partner
OARS – For The Assabet, Sudbury
and Concord Rivers

Getting from Plans to Action

Anticipated Municipal Benefits

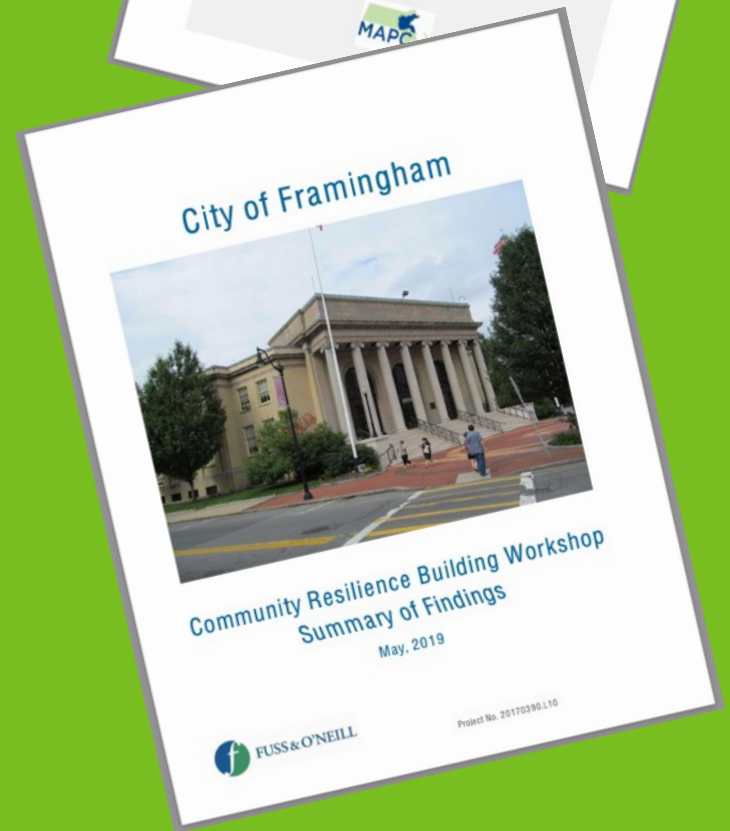
- Support for MVP Plan implementation
- Technical training opportunities
- Identification of shared priorities and needs within the watershed
- Joint action and research proposals, (e.g., advanced flooding modeling and mapping, culverts and continuity projects, green infrastructure)
- Projects identified and coordinated with neighboring communities



MAGIC Climate Change Resilience Plan

Vulnerability Assessment
and Response Strategies
2017

Metropolitan Area
Planning Council



Anticipated Impacts

- ▶ Higher average summer temperatures (70-72°F)
- ▶ More heatwaves (days > 90°F; 20-40 days)
- ▶ Warmer winters (avg. 30-33°F), increased risk of frost and ice damage
- ▶ Additional heavy rainstorms with 5 inches or more in a single event
- ▶ Less annual snow accumulations despite more intense snowstorms
- ▶ Increased likelihood of flooding of rivers and in neighborhoods
- ▶ More frequent droughts, both short (1-3 month) and long (3+ months)

Key Vulnerabilities

- ▶ Natural habitats
- ▶ Water resources
- ▶ Older and aging residents
- ▶ Transportation networks

Top Hazards that are Water-Related in MAGIC MVP Plans

Acton: Flooding (streams, drainage, dams); severe storms (tree limbs and snow); drought (habitat, drinking water); extreme heat

Bolton: Flooding; extreme ice events, invasive species/pests/pathogens, drought.

Concord: Flooding (property, roads, water quality); drought (drinking water, water quality, farms); extreme heat (seniors, infirm, ecosystems, crop production, energy demand); intense storms (trees/power, roads, infra damage)

Hudson: Riverine flooding; extreme temps/snow/ice; drought.

Lexington: Stormwater flooding; precipitation; extreme temperatures, heatwaves; wind (trees/power).

Littleton: heavy precipitation (snow/rain/intensity and frequency), drought, extreme heat, cold (intensity/duration/changes in seasonal timing), wind (high gusts).

Maynard: Extreme Precipitation/Flooding (flash and prolonged flooding); Severe Storms (frequency/severity of rain; high winds); Extreme Heat/Heatwaves; Wildfires (due to drought and warmer temperatures)

Sudbury: Winter storms/extreme cold; wind/hurricanes/tornadoes/microbursts; flooding/intense rain; and drought/extreme heat.

WATERSHED-BASED APPROACH

**Sudbury, Assabet and Concord Watershed
Massachusetts**



- **Start small and build up**
- **Exploratory**
- **Facilitated**
- **Build towards watershed-wide collaboration**

MAGIC Region: Acton, Bedford, Bolton, Boxborough, Carlisle, Concord, Hudson, (Lexington,) Lincoln, Littleton, Maynard, Stow, and Sudbury

MWRC Region: Ashland, Framingham, Marlborough, Natick, Southborough, Wayland

Outside MAPC: Berlin, Billerica, Chelmsford, Lowell, Northborough, Shrewsbury, Westborough, Westford

Watershed-Scale Climate Collaboratives in Massachusetts

Resilient Mystic Collaborative

Founded 2018

resilient.mysticriver.org



**RESILIENT
MYSTIC**
COLLABORATIVE

Goal

- A partnership among neighboring communities in Greater Boston's Mystic River Watershed working to protect our people and places from climate-intensified risks.

Who participates?

- Steering Committee of 20 of 21 watershed communities, senior municipal planning and engineering staff. Non-governmental experts participate in discussions. Working groups on stormwater flooding, coastal resilience, advocacy, and social resilience are more inclusive.

How is it administered?

- Run by Mystic River Watershed Association staff, with professional facilitation.

How is it funded?

- \$2.5 million in regional funding from MVP, EPA, Barr Foundation.

Charles River Climate Compact

Founded 2020

<https://www.crwa.org/adapt.html>



Goal

- Bring together communities in the Charles River watershed to work on climate adaptation and strategies at a regional scale.

Who Participates?

- 22 municipalities in the Charles River watershed that meet certain requirements to demonstrate climate adaptation commitment, such as MVP community designation, demonstrated commitment to water conservation or green infrastructure.

How is it administered?

- The Charles River Watershed Association manages the convenings of the Climate Compact, spearheaded by Julie Wood, the Deputy Director.

How is it funded?

- The Climate Compact is funded by CRWA with support from Barr and an MVP grant (for a dedicated project).

Resilient Taunton Watershed Network

Founded 2014

www.srpedd.org/RTWN

Goal

- Promote the resiliency of the Taunton Watershed in the face of climate change and development, considering ecological outcomes as well as economic, social, and environmental justice issues.

Who Participates?

- Partnership of 20 local, non-profit, state, regional, and federal groups with a core subset of 4 who work on fundraising: SRPEDD (regional planning agency) and 3 non-profits: Manomet, TNC, Mass Audubon.

How is it administered?

- Two co-chairs responsible for setting meeting agendas. SRPEDD handles grant admin. The group agrees together when to go after grants, write letters of support, give presentations.

How is it funded?

- Started with an EPA grant. Now funded through several collaborative federal, state, and local sources, as well as partner in-kind.

Deerfield River Watershed - Creating Resilient Communities

Founded 2011

<https://extension.umass.edu/riversmart/creating-resilient-communities>

Goal

- The Franklin Conservation District launched this partnership in the wake of Tropical Storm Irene, which devastated large portions of the Deerfield River watershed. The group is committed to making communities more resilient to flooding and the hazards of climate change.

Who Participates?

- Ad hoc association of state and federal agencies, municipal officials, watershed organizations, land trusts, residents, consultants, and researchers. The group, which now includes our Vermont counterparts within the Deerfield River watershed, meets periodically to share information and collaborate on research, grant proposals, and restoration initiatives.

How is it administered?

- The Franklin Conservation District convenes and oversees the partnership and is responsible for recruiting participants, developing meeting agendas, inviting presentations, and sharing informational materials.

This resource was compiled by the Mass ECAN-affiliated expert work group - Slow the Flow subgroup on Watershed-Scale Collaboration.

Accelerating Climate Resiliency Projects

MAPC Municipal Grant Program

OVERVIEW

To deploy actionable resilience interventions through local projects, policies, and strategies. In particular, MAPC seeks to elevate projects that will advance **climate equity, regional coordination, and social cohesion.**

APPROACH

1. Work with municipal partners to **identify stakeholders and hold outreach Conversations**/small group meetings (virtual), with focus on frontline populations.
2. Identify data needs and research documents and request from municipal partners, for planning priorities and identify data gaps. **Compile data and sources.**
3. **Convene 3-4 Coalition meetings** and build consensus on climate resilience priorities.
4. **Identify action-oriented goals and agree upon shared resource(s)** of concern threatened by climate change. Consider also climate change mitigation approaches.
5. Hold a **webinar** on a topic identified by Coalition members for capacity-building within the Coalition as needed.
6. **Identify funding opportunities**, work with interested Coalition members to apply for grants.
7. **Outreach to the public** and municipalities
8. **Participate in MAPC's Resilience Community of Practice (RCOP)**—4 meetings plus webinars.

PROJECT TIMELINE

May 2021-April 2022

[illegible]

PROJECT PARTNERS

MAGIC

MetroWest Conservation Alliance

Sudbury Valley Trustees

Sudbury-Assabet-Concord Wild and Scenic River Stewardship Council

Massachusetts Ecosystem Climate Adaptation Network (Mass ECAN)

Questions:

- Which of your MVP goals extend beyond the boundaries of your community, best approached with other nearby towns?
- Where have you had difficulties implementing your MVP plans?
- What regional data gaps could we help fill with this grant?
- Who are frontline populations in your community and who represents them?
- Who should be at the table for the meetings?

Grant Program Priorities

- *Nature-based solutions* for climate resilience, such as green infrastructure, climate-smart parks, urban forestry, floodplain protection, and restoration of natural systems.
- *Municipal climate resiliency policy, including regulations, zoning, permitting, and inspectional services.*
- *Innovative financing* or infrastructure investment program models.
- *Capacity building through climate coalitions/convenings, such as stormwater partnerships, regional climate networks, or watershed-based climate resilience initiatives.*
- *Contributions to social resiliency or cohesion, such as public space improvements, dialogues, and gatherings, particularly for populations or neighborhoods vulnerable to climate change.*
- *Public outreach, marketing, and artistic, cultural, or creative projects that advance climate change knowledge or action.*
- *And others*

Project contacts:

Alison Field-Juma, OARS Executive Director

afieldjuma@oars3rivers.org

978-369-3956

23 Bradford St., Concord MA 01742

Jesse Steadman, Stow Town Planner

planning@stow-ma.gov

978-897-5098

380 Great Road, Stow MA 01775