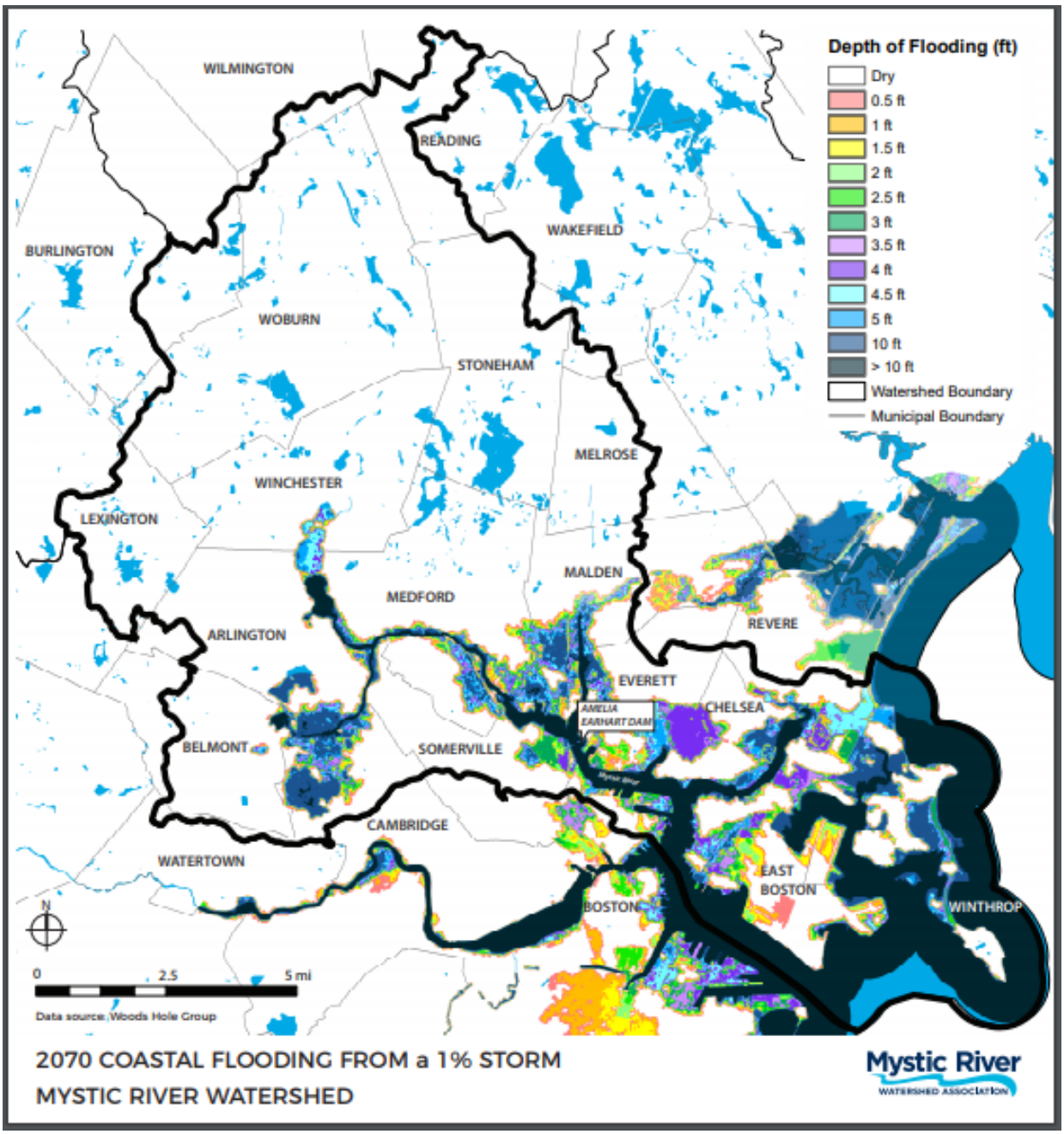
Resilient Mystic Collaborative

May 2019

In September 2018, ten municipalities, facilitated by the Mystic River Watershed Association (MyRWA) and Consensus Building Institute (CBI) launched the Resilient Mystic Collaborative (RMC). The partnership has now grown to 14 communities focused on increasing social and physical resiliency to climate change; all watershed communities are welcome to join. Steering committee members are comprised of voting municipal planners and engineers and non-voting thought leaders in resilient architecture and landscape architecture, land use regulations and environmental justice. Working groups include a broader range of local stakeholders.



Context

The Mystic River Watershed is the most densely populated and urbanized watershed in New England. The Mystic and its tributaries flow southeast from Reading to Revere and form the northern shore of Boston Harbor. Home to 21 municipalities and 600,000 residents over 76 square miles, it contains the highest concentration of critical regional infrastructure in New England, including transportation, energy storage and generation, food distribution and wastewater treatment.

Mystic Watershed communities are already experiencing the effects of climate change: hotter, drier summers; freshwater and coastal flooding; higher winds; and unpredictable seasons. With nearly fifty percent of the watershed developed and paved, heavier rain events mean more widespread stormwater flooding. Once filled-in tidal rivers and marshes now represent growing risks of chronic flooding. We need to make more room for the river.

Post-Superstorm Sandy, Boston and Cambridge spent millions of dollars on research, planning and initial investments into climate resiliency at the building and community scale. The RMC is enabling these larger communities to pool greater resources and expertise with those of neighboring Arlington, Chelsea, Everett, Lexington, Malden, Medford, Somerville, Stoneham, Wakefield, Winchester, Winthrop, and Woburn, to help manage climate risks at a regional scale.

We have collectively learned a great deal about physical resiliency, or the ability of buildings and structures to withstand and recover from extreme weather. We are still learning how to help protect the health end economic well-being of our most vulnerable residents during and after extreme weather.

RMC Working Groups

The RMC is focused on measurable, on-the-ground projects and policies that will benefit our most vulnerable people and places. All policies and projects proposed will focus on multiple-benefit solutions that increase climate resiliency on a watershed scale. This regional partnership works both ways: regional projects are better infused with community values, and municipal projects are better informed by regional best practices.

The RMC has created four working groups to pursue measurable, on-the-ground projects and policies. First, the **Upper Mystic Stormwater Management** working group is using a sophisticated stormwater flood model developed by the City of Cambridge to identify and pursue opportunities for watershed-level stormwater management. Our first year of work involves analyzing, ranking and choosing viable stormwater retention projects (e.g., stormwater wetlands, active reservoir management). Our second year of work will involve community-led designs of between two and five priority projects.

The working group is also partnering with the Massachusetts Department of Conservation and Recreation to enhance the resiliency of the Amelia Earhart Dam. DCR and Cambridge engineers are sharing information and modeling results to ensure that future investments best protect the structural integrity of the dam itself while helping upstream communities manage flooding.

Second, the **Lower Mystic Regional Infrastructure** working group is partnering with the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency (CISA) and the RAND Corporation to identify and prioritize investments needed to storm-harden key regional infrastructure in the Boston Harbor region of the watershed. Our first year of work involves two vulnerability assessments. The first identifies the conditions under which components of our regional infrastructure would fail. The second identifies health and financial damage to vulnerable residents if specific components of our infrastructure did fail short- and longer-term. These outcomes will help identify priority capital projects, continuity plans and other strategies beginning in year two.

Third, the **Social Resiliency** working group is working to develop and support a watershed-wide practitioners' network of service providers working with vulnerable residents such as people with fragile health, people lacking adequate income and/or housing, communities of color, people living near toxic hazards and others who are disproportionately affected during and after extreme weather events.

Finally, our **Advocacy and Outreach** working group is focused on engaging influential private sector partners based in the Mystic Watershed to engage with their municipal governments. The goal is to coordinate and amplify individual and governmental efforts to protect businesses and employees from climate-related harm.

Why Watershed-level Resilience

Climate mitigation focuses on energy. Climate preparedness in large part focuses on water--too much and too little. In the absence of county governments, non-profit watershed associations such as MyRWA can help lower the bar to regional collaboration around multi-benefit climate resiliency. Long term, however, we would expect such a voluntary partnership to be replaced by a more formal state-level climate resiliency agency organized around watersheds.

For more information:

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