

Measuring the Impact of Investing in Regional Capacity on Securing State Climate Resilience Funding in the Mystic and Neponset River Watersheds



(Source: Environmental Protection Agency; <https://wbur.fm/3FPnXG>)

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1. Study Purpose

The goal of comparing municipal actions to advance climate resilience in the Mystic River and Neponset River Watersheds is to understand the impact of significant Barr Foundation funding to the Mystic River Watershed Association (MyRWA) to create the Resilient Mystic Collaborative (RMC) beginning in 2018.

MyRWA and the Neponset River Watershed Association (NepRWA) are similar regional non-profit organizations that work closely with Greater Boston municipalities on stormwater quality, habitat restoration, and climate resilience. Each organization was founded approximately 50 years ago and has similar staff sizes and operating budgets. Each organization has developed lasting, high-trust working relationships with municipalities and other stakeholders in their respective regions. Each organization has led successful efforts to address stormwater quality and habitat restoration.

For the purposes of this study, the most significant difference between the two organizations is the contribution of Barr Foundation funding to MyRWA beginning in mid-2018. This funding enabled MyRWA to launch and staff the Resilient Mystic Collaborative to help their communities pursue climate resilience projects across municipal boundaries. In comparison, NepRWA received its first regional climate resilience grant in FY 2023 from the MVP program for a project called the [Neponset River Watershed Regional Adaptation Strategy and Flood Model](#).

The motivating question for this study is the following:

What is the impact of Barr-funded regional capacity on communities' ability to access local and regional resources through the Massachusetts Municipal Vulnerability Preparedness Program?

2. Comparison of the Mystic and Neponset River Watersheds and Associated Nonprofits



Figure 1. Watersheds draining into Boston Harbor
(Source: US EPA)

Locations. The Mystic River Watershed drains into the north side of Boston Harbor. It covers 76 square miles and includes whole or parts of 21 municipalities, all of which are served by the Metropolitan Area Planning Commission (Table 1). Approximately 600,000 people live within the watershed, including the highest density of environmental justice populations in New England, as defined by the Commonwealth of Massachusetts (Figure 2). The watershed makes up about 0.7% of Massachusetts by area and 9% by population.

The Neponset River Watershed is located south and west of Boston and drains into Boston Harbor (Figure 4). It covers 130 square miles and includes whole or parts of 14 municipalities, all of which are served by the Metropolitan Area Planning Commission (Table 2). Approximately 524,000 people live within the Neponset River Watershed, including sizeable environmental justice populations, as defined by the Commonwealth of Massachusetts (Figure 2). The watershed makes up about 1.2% of Massachusetts by area and 8% by population.

Table 1. Municipalities in the Mystic River Watershed

Arlington	Chelsea	Reading	Wilmington
Belmont	Everett	Revere	Winchester
Boston (Charlestown, East Boston)	Lexington	Somerville	Winthrop
Burlington	Malden	Stoneham	Woburn
Cambridge	Medford	Wakefield	
	Melrose	Watertown	

Table 2. Municipalities within the Neponset River Watershed

Boston (Hyde Park, Mattapan, Dorchester) Canton	Dedham Dover Foxborough Medfield	Milton Norwood Quincy Randolph	Sharon Stoughton Walpole Westwood
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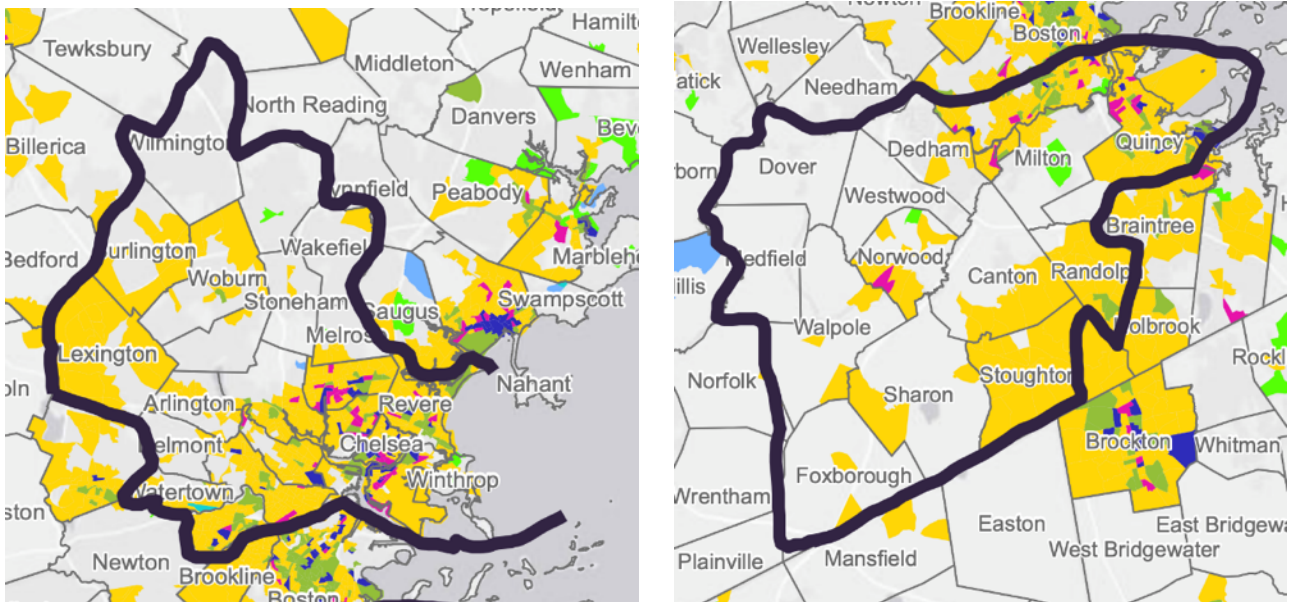


Figure 2. (L-R) Environmental justice populations in the Mystic River and Neponset River Watersheds (Source: <https://bit.ly/3hM5CQv>).

Organizations. The Mystic River Watershed Association was founded in 1972 and operates with 15 staff and 14 trustees. Its mission is to:

Protect and restore the Mystic River, its tributaries and watershed lands for the benefit of present and future generations and to celebrate the value, importance and great beauty of these natural resources. Our vision is a vibrant, healthy and resilient Mystic River watershed for the benefit of all our community members.

To achieve this, the Mystic River Watershed Association is focused on protecting water quality, restoring important habitat, building climate resilience, transforming parks and paths, and inspiring youth and community members.

The Neponset River Watershed Association was founded in 1967 and operates with 10 staff and 18 trustees. Its mission is expressed in this way:

The Neponset River Watershed Association is a grassroots, member-supported conservation group working since 1967 to clean up and protect the Neponset River, its tributaries and surrounding watershed lands. Our goal is a clean, healthy, accessible river and watershed, from the smallest headwater stream to the wide-open brackish water of the estuary.

Key programs of NepRWA are managing stormwater, ensuring healthy ecosystems, protecting drinking water, and preventing water pollution.

Water Quality. The EPA water quality report cards for the two watersheds are shown in Figure 3. Water quality in the Neponset is significantly higher than in the Mystic, based on levels of E.coli bacteria.

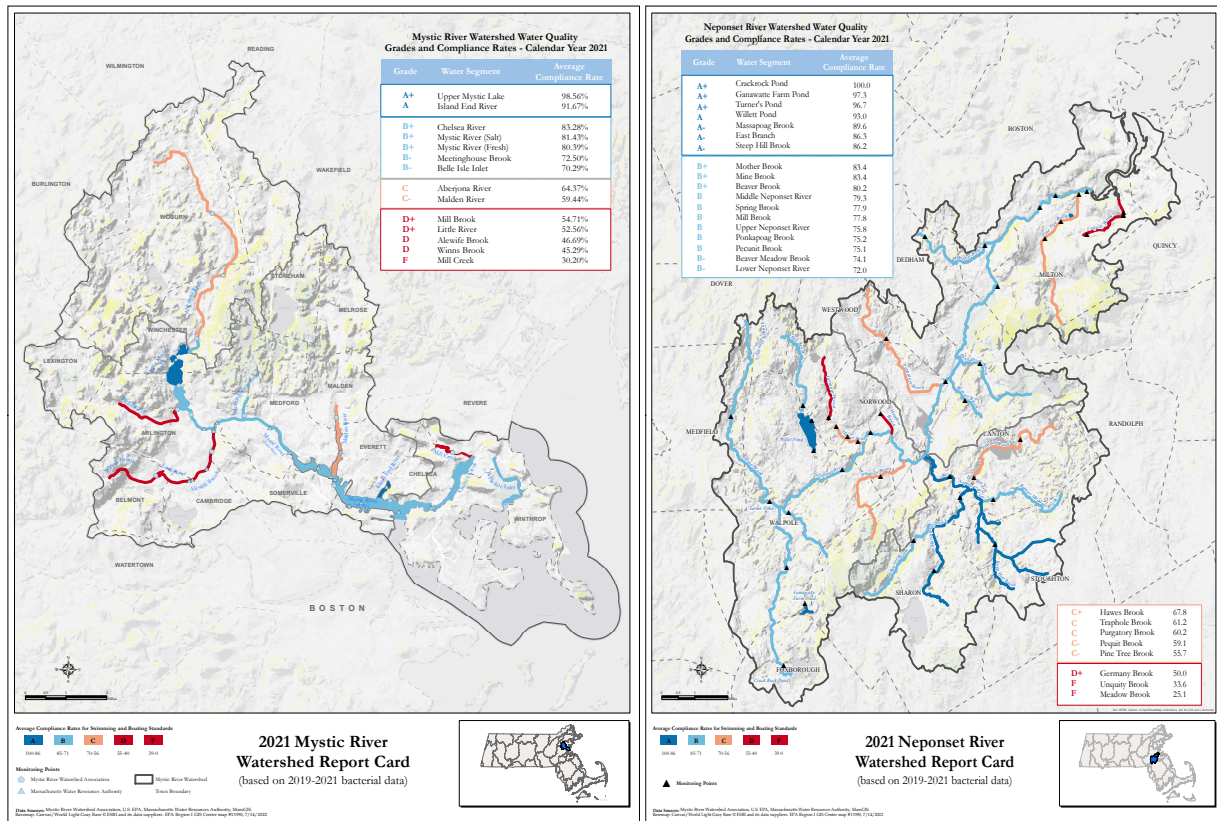


Figure 3. (L-R) 2021 EPA Watershed Water Quality Grades and Compliance Rates for the Mystic River Watershed and the Neponset River Watershed (Source: <https://bit.ly/3Gdka4S>) and Neponset Watershed (Source: <https://bit.ly/3GHOTxy>)

Climate Funding. To advance work on climate resilience, MyRWA, ten Mystic municipalities and the Consensus Building Institute launched the [Resilient Mystic Collaborative \(RMC\)](#) in September 2018. Now led by senior staff from 20 cities and towns (all but Wilmington, Table 1) and non-governmental partners, the Resilient Mystic Collaborative (RMC) focuses on managing flooding and extreme heat on a regional scale and increasing the resilience of the most vulnerable residents and workers to extreme weather. As of the end of 2022, the RMC had secured over \$51 million in foundation grants, state grants and bonding authority, and federal grants. This funding includes \$1.82 million in capacity funding from the Barr Foundation to staff the RMC.

In 2022, NepRWA joined with 11 municipalities on a successful \$389,457 Municipal Vulnerability Preparedness (MVP) grant. The project will “bring together the communities of the Neponset River Watershed to 1) prepare a strategic framework for regional collaboration on adaptation implementation priorities 2) develop a regional flooding model for the freshwater portion of the Neponset River Watershed and evaluate regional scale flood impact reduction options, 3) demonstrate the use of the model to conduct a more detailed analysis of local flood mitigation strategies for a targeted neighborhood in Dedham 4) provide communities with technical assistance on deploying the MAPC municipal adaptation toolkit and 5) conduct public outreach and engagement activities in support of the other project objectives.” To date NepRWA has not received significant Barr grant funding to support regional collaboration around climate resilience.

Participation in MVP planning, the Green Communities program, and climate action plans. For the most part, communities in both the Mystic and Neponset Watersheds completed their initial MVP plans around the same time. All but three communities in each watershed completed their plans by 2019, two more in each watershed finished in 2020, and all were participating in the program by 2021. In both cases, the communities slowest to complete their plans were those furthest from the coast (Note: 2018 saw record coastal flooding in January and March).

Municipalities within the Mystic River Watershed appear overall to have been somewhat more proactive in going beyond the MVP program requirements. First, Mystic communities have received grants from the Green Communities Program—a total of 94 grants across 17 of 20 communities (excluding Boston). Neponset communities secured 40 grants across 11 of 13 communities (excluding Boston).

Second, more Mystic communities have or are developing climate action plans beyond the requirements of the MVP program. Thirteen of 21 (62%) Mystic communities have or are completing climate action plans. Four of 14 (29%) in the Neponset have done the same. To the extent that Mystic communities were already more proactive than Neponset communities, it weakens the hypothesis that regional capacity funding has increased municipal climate action.

3. Success in Securing MVP Climate Action Grants

The major difference in outcomes between Mystic and Neponset communities is in the number of individual and regional MVP action grants they were each able to secure. Appendix A lists the Action Grants awarded to municipalities within the Mystic River and Neponset Watersheds.

The MVP Program has awarded 306 Action Grants through FY 2023 for a total value of \$87,665,308.

- Municipalities in the Mystic River Watershed have obtained 15.36% of all awards and approximately 18.45% of their total value.
- Municipalities in the Neponset River Watershed have obtained 2.29% of all awards and approximately 2.39% of their total value.

The RMC was not in existence during the first year of the MVP program. Over the next four years, RMC municipalities secured 31 action grants for a total of \$13.1 million (An additional 16 grants totaling \$3 million funded projects in Mystic watershed independent of the RMC, indicating that Mystic communities are already proactive.) In FY2023 alone \$8,527,747 in action grant funding went to 13 projects in the Mystic, representing 25% of all available funding. In comparison, Neponset municipalities have secured a total of seven action grants over five years totaling \$2,092,078.

Notably, Mystic Watershed communities secured 16 MVP action grants totaling \$9,321,598 to pursue regional projects. Just over 71% of all MVP action grant funding secured by RMC communities were in regional vs. individual grants. In contrast, Neponset Watershed communities just received their first regional MVP grant in 2022 (FY 2023) for \$389,457.

4. Conclusion

The goal of this study is to understand the impact of significant Barr Foundation investments in the Resilient Mystic Collaborative (RMC) in 2018 by comparing municipal actions to advance climate resilience across the Mystic and Neponset River Watersheds.

Comparison of the two watersheds and watershed associations show that they were not strikingly different across multiple measures. The watersheds are of similar size, population, and proximity to Boston. They both drain into Boston Harbor. The Neponset has better water quality, as measured by E.coli levels. The watershed associations are of similar longevity, staff and board size, and organizational character. Municipalities in the Mystic have been somewhat more proactive in doing climate action plans and Green Community grants.

The most significant difference between the Mystic and Neponset has been in their success in securing climate resilience funding, especially for regional, collaborative projects. Municipalities participating in the Resilient Mystic Collaborative have received substantially more funding for MVP Action Grants than those within the Neponset River Watershed. They are also participating in more MVP regional action grants that require collaboration across multiple municipalities.

Grantee	Region	Award Year	Project Status	Award Amount	Project Continuation?	Climate Impacts Addressed	Project Title	Project Description	Project Type	Regional Partnership	Regional Partners
Mystic River Watershed											
Arlington	Mystic	FY 2018	Completed	\$399,420	N/A	Multiple Hazards	Mill Brook Corridor Flood Management Demonstration Project: Pilot Study & Implementation	The Town of Arlington will expand upon an existing project supported by Community Preservation Act funds to survey the Mill Brook corridor, design public access improvements between Wellington Park and the Brook, and enhance the natural resources of the Brook and surrounding areas. Improvements include invasive plant removal, flood storage capacity, bank stabilization, and revegetation.	Construction and On-the-Ground Implementation	No	N/A
Arlington & Resilient Mystic Collaborative	Mystic	FY 2021	In-progress	\$186,200	N/A	Extreme Heat	Wicked Hot Mystic	This project will provide the Resilient Mystic Collaborative with high-resolution, watershed-wide, baseline data on ground-level air temperatures, humidity, wind, and particulate matter. These data will drive social resilience work in the region. The project includes recruiting, training, and supporting youth and adults from the local community in conducting this local STEM learning opportunity and data gathering initiative.	Planning, Assessment, Capacity Building, and Regulatory Updates	Yes	Arlington, Belmont, Boston, Burlington, Cambridge, Chelsea, Everett, Lexington, Malden, Medford, Melrose, Reading, Revere, Somerville, Stoneham, Wakefield, Watertown, Wilmington, Winchester, Winthrop, Woburn & Resilient Mystic Collaborative
Belmont	Mystic	FY 2022	In-progress	\$195,000	N/A	Multiple Hazards	Stormwater Flood Reduction and Climate Resilience Capital Improvement Plan	The primary goal of this project is to identify the current and future stormwater flooding risks through Belmont in the context of climate change. The Town will develop a 2-D stormwater model to assist in the confirmation of flood issues and the evaluation of resilience alternatives. Ultimately, the project will coalesce into an infrastructure improvement plan that prioritizes nature-based solutions in environmental justice neighborhoods that would offer multiple co-benefits like open space improvement, air quality improvements, water pollution load reduction, pollution control, or urban heat island reduction.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Burlington	Mystic	FY 2022	In-progress	\$108,500	N/A	Multiple Hazards	Vine Brook Watershed and Urban Heat Island Assessment	The project is intended to address urban flood impacts from extreme precipitation and urban heat island effects from anticipated extreme climate events. This project will evaluate this highly developed watershed for opportunities to implement nature-based solutions to address any anticipated impacts due to climate change.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Cambridge	Mystic	FY 2023	In-progress	\$150,000		Multiple Hazards	Cambridge Community Corps Climate Readiness Initiative	Under the proposed project, the Cambridge Community Corps will expand its scope to include climate change resilience and preparedness practices through the lens of public health. The project will further develop the Community Corp model, identify ways for the program to continue to be sustained long-term, and explore how such a model could be replicated and expanded in other jurisdictions in Massachusetts.		No	
Cambridge	Mystic	FY 2018	Completed	\$118,000	N/A	Multiple Hazards	Cambridge Climate Preparedness & Resilience Catalyst Project	The City of Cambridge will develop four resilience toolkits for renters, small residential owners, small businesses, and large businesses. Each toolkit will be presented in a workshop targeting the relevant audience. The City will also start a planning process for neighborhood resilience hubs, and evaluate the adaptive capacity of community emergency response centers.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Cambridge & Metro Mayors	Mystic	FY 2021	In-progress	\$268,820	N/A	Extreme Heat	Building Resilience to Climate Driven Heat in Metro Boston	The project aims to bring together municipal staff from the Metro Mayors Coalition Climate Preparedness Taskforce to collaborate regionally on heat response and preparedness efforts in the urban core. The goals of the project include establishing a heat preparedness group as a Subcommittee of the Climate Preparedness Taskforce to coordinate regional planning and implementation; developing a science-based, regional heat preparedness and adaptation plan that incorporates best available climate projections, heat, social vulnerability, and public health data.	Planning, Assessment, Capacity Building, and Regulatory Updates	Yes	Arlington, Boston, Brookline, Braintree, Cambridge, Chelsea, Everett, Malden, Medford, Melrose, Newton, Quincy, Revere, Somerville, Winthrop & Metropolitan Area Planning Council
Cambridge & Resilient Mystic Collaborative	Mystic	FY 2019	Completed	\$350,000	Phase 1 of 3	Inland Flooding	Completing a watershed-wide analysis to optimize & coordinate regional stormwater management in the Mystic River Watershed	The Resilient Mystic Collaborative (RMC) will identify and pursue site-specific green infrastructure opportunities for regional stormwater management and local co-benefits. The project will include ranked, mapped, and characterized descriptions of each of the regional opportunities for green infrastructure, and an understanding of the remaining need for other flood management strategies.	Planning, Assessment, Capacity Building, and Regulatory Updates	Yes	Arlington, Boston, Cambridge, Chelsea, Everett, Lexington, Malden, Medford, Somerville, Stoneham, Wakefield, Winchester, Winthrop & Woburn

Chelsea	Mystic	FY 2023	In-progress	\$333,492		Multiple Hazards	Eastern Ave. Alternatives Analysis + Conceptual Design	The project will create a long-term resilience vision for an active, changing waterfront neighborhood abutting Chelsea Creek along Eastern Avenue. The project will perform an existing conditions assessment, complete a resilient visioning process with stakeholders, and develop design alternatives for three work zones. This will provide the basis for subsequent design phases for construction in each work zone.		No	
Chelsea	Mystic	FY 2023	In-progress	\$556,000		Coastal Flooding	Equitable Coastal Resilience and Redevelopment in Lower Mystic	The lower Mystic River portion of Boston Harbor is in the beginning stages of transformational waterfront redevelopment. At the same time, sea level rise and stronger storms require substantial public and private investments into coastal flood management. We will be hosting a voluntary, professionally designed and mediated regional visioning process to bring together host municipalities, major landowners, community stakeholders, and philanthropists to develop a Memorandum of Agreement for waterfront redevelopment involving rigorous coastal resilience; connected, coordinated waterfront open space; equitable economic development; and other local and regional public benefits.		Yes	Somerville, Everett, Malden, Revere, Winthrop
Chelsea	Mystic	FY 2021	In-progress	\$262,996	N/A	Extreme Heat	Urban Heat Island Mitigation Project	The City of Chelsea will advance a citywide urban heat island mitigation initiative. This project will complement ongoing regional efforts by analyzing ambient air and land surface temperatures; performing a social vulnerability assessment; prioritizing corridors for public and private heat mitigation interventions; and devising and carrying out five pilot heat mitigation projects on public properties.	Construction and On-the-Ground Implementation	No	N/A
Chelsea	Mystic	FY 2022	In-progress	\$624,000	N/A	Multiple Hazards	Battery Storage System and Solar at Chelsea City Hall	The objectives of the project are (1) to increase resiliency in the face of climate-change-induced vulnerability to storms and flooding; (2) to eliminate fossil fuel use and reduce environmental impacts of both on-site and grid-based generation; and (3) to complete the municipal-buildings phase of the Chelsea Community Microgrid. Grant funds will be used for a battery energy storage system (BESS), solar power, energy efficiency, and green-fueling installations at the city hall and the 911 building.	Construction and On-the-Ground Implementation	No	N/A
Chelsea	Mystic	FY 2023	In-progress	\$87,500		Multiple Hazards	Envisioning Resilience in the North Suffolk Region through Community Preparedness	The North Suffolk Office of Resilience and Sustainability hopes to explore models of community-based resilience to better support the broader community during climate emergencies and beyond. Through research both within and beyond the North Suffolk communities of Chelsea, Revere, and Winthrop, this project will identify gaps in preparedness and communication and the needs and interests of local community-based organizations, and would ultimately result in the creation of a plan for building a community-based resilience network in the region.		Yes	Revere, Winthrop
Chelsea & Everett	Mystic	FY 2020	Completed	\$454,555	Phase 2 of 3	Coastal Flooding	Island End River Flood Resilience Project	Chelsea and Everett seek to develop a final design plan consisting of a coastal barrier, salt marsh restoration and expansion of public waterfront space for permitting and land acquisition along Island End River. This final design phase will continue outreach to the environmental justice communities, key stakeholders and the broader community.	Design and Permitting	Yes	Chelsea & Everett
Everett	Mystic	FY 2023	In-progress	\$2,998,600		Coastal Flooding	Island End River Flood Resilience Project	The City of Everett will continue its efforts to promote flood resilience, with the support of City of Chelsea, in the Island End River (IER) corridor. This joint application for a FY23 MVP Action Grant with a two-year duration will focus on continued federal, state, and local permitting activities, stakeholder coordination, continued legal, environmental compliance, and other project support activities, and initial work on preparing project construction documents. Continued collaboration with Mystic River Watershed Association, the Resilient Mystic Collaborative's Lower Mystic Working Group, and GreenRoots will inform this work and assist in public outreach to affected Environmental Justice populations that include Chelsea and Everett residents, employees in the wholesale produce, petroleum and other fuels, and materials processing industries, and other vulnerable and burdened populations.		Yes	Chelsea
Everett	Mystic	FY 2023	In-progress	\$339,915		Extreme Heat	Beat the Heat: Wicked Cool Outdoors / Venza el Calor: Súper Fresco Afuera	Wicked Cool Mystic is a two-year effort to cool priority heat islands identified during a prior MVP action grant (Wicked Hot Mystic). This is a regional effort to engage vulnerable residents and workers and other community stakeholders to envision and design cost-effective, enticing pilot projects to help people stay cool and healthy during heat waves. The project will pilot smaller, near-term projects near public transit in Chelsea and Everett in Year 2		Yes	Malden, Chelsea, Arlington

Everett & Chelsea	Mystic	FY 2022	In-progress	\$716,500	Phase 3 of 3	Coastal Flooding	Island End River Flood Resilience Project	The City of Chelsea and Everett seek to continue their joint efforts to promote flood resilience in the Island End River (IER) corridor. This project will focus on evaluating flood wall alignments in Everett and initiating design work on a selected alignment while continuing work in Chelsea to address future environmental remediation activities under the Massachusetts Contingency Plan (MCP) and to initiate permitting activities. Community engagement through advisory groups of both residents and private business stakeholders will continue in this phase of the project.	Design and Permitting	Yes	Everett & Chelsea
Lexington & Resilient Mystic Collaborative	Mystic	FY 2021	Completed	\$670,000	Phase 2 of 3	Inland Flooding	Upper Mystic River Watershed Regional Stormwater Wetlands	Furthering a FY20 MVP action grant, the overall goal of this initiative is to develop a multi-community master plan of stormwater wetland projects that help manage regional flooding while providing co-benefits to host communities. Under this grant, the Resilient Mystic Collaborative will select projects to work with willing landowners and community stakeholders to move to forward with design on several of the projects.	Planning, Assessment, Capacity Building, and Regulatory Updates	Yes	Arlington, Belmont, Boston, Burlington, Cambridge, Chelsea, Everett, Lexington, Malden, Medford, Melrose, Revere, Somerville, Wakefield, Watertown, Winchester, Winthrop, Woburn & Resilient Mystic Collaborative
Malden	Mystic	FY 2023	In-progress	\$200,550		Multiple Hazards	Malden River Works for Waterfront Equity and Resilience	The Malden River Works project will turn two acres of land behind the Malden DPW into a climate resilient riverfront park. The park will help protect the DPW from extreme weather events and is located in an Environmental Justice neighborhood. This grant funding will go toward preparation of construction documents.		No	
Malden	Mystic	FY 2021	Completed	\$150,015	Phase 1 of 2	Inland Flooding	Malden River Works	The project goal is to transform the City's Department of Public Works yard on the Malden River for better climate change preparedness (as a key second responder for the city), and to create a vibrant, resilient public riverfront park. Led by a new coalition of community leaders of color, youth, environmental advocates, and government stakeholders as the newly formed Malden River Works Steering Committee, this project has already put in place a community-led design process that will continue into the upcoming phase of design and engineering development.	Design and Permitting	No	N/A
Malden	Mystic	FY 2022	In-progress	\$354,600	Phase 2 of 2	Inland Flooding	Malden River Works for Waterfront Equity and Resilience	The project goal is to transform the City's Department of Public Works (DPW) yard on the Malden River for better climate change preparedness, and to create a vibrant, resilient public riverfront park for all. The main tasks covered within this application include developing the design from a 25% level to 75% Plans and permitting, and the continuation of ongoing community participation in the project under the leadership of Malden residents of color.	Design and Permitting	No	N/A
Medford	Mystic	FY 2023	In-progress	\$416,738		Multiple Hazards	Interconnected Resiliency Network & resilient communications	This project will focus its efforts on our partner and interdepartmental communications in a "virtual resilience hub," centralizing local services, programs, and information. This effort will set the foundation of the "resilient communications" core of a future Resilience Hub. As such, this project's goal is to formalize a network of community partners focused on climate resilience. The major objectives of this Interconnected Resiliency Network will be to continue building capacity for climate resilience by supporting our climate-vulnerable and Environmental Justice residents.		No	
Medford	Mystic	FY 2023	In-progress	\$670,568		Multiple Hazards	Andrews School Resilient Emergency Shelter	The City of Medford has been working on developing projects for energy resilient facilities to serve the community, potentially during grid-disrupting events brought on by climate hazards, such as extreme storms and heat. The MVP grant funding will help to implement an off-grid capable solar plus battery energy storage system at the Andrews Middle School, which is ready for construction. During emergency situations the school would be used as a warming or cooling shelter, a phone charging location, and a central distribution site.		No	
Medford	Mystic	FY 2018	Completed	\$60,830	Phase 1 of 2	Inland Flooding	Drainage Model & Conceptual Strategies to Reduce Future Flooding in South Medford	The City of Medford will refine its city-wide drainage model and create a more detailed 2D map of South Medford, including simulations of future storms and the potential impact of increased water volumes flowing down the Mystic River from the Upper and Lower Mystic Lakes. Additionally, the City will develop both green and grey infrastructure options for flow reduction and flood attenuation to provide protection on a neighborhood scale.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Medford	Mystic	FY 2018	Completed	\$60,000	N/A	Multiple Hazards	Medford Open Space Plan Update	The City of Medford will update its Open Space Plan and incorporate current climate change projections for the City. It will identify open space and recreation resources within the city and identify growth trends that will help project future availability and demand.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A

Medford	Mystic	FY 2019	Completed	\$93,529	Phase 2 of 2	Inland Flooding	Flood Mitigation Strategy Feasibility Analysis and Conceptual Design	This project will include an implementation feasibility analysis of two mitigation alternatives (identified in Medford's previous MVP Action Grant award), and development of the preferred alternative to conceptual design.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Medford	Mystic	FY 2020	Completed	\$36,136	Phase 1 of 3	Multiple Hazards	Equity-Centered Process for Climate Action and Adaptation Planning	The City of Medford will partner with the Medford Family Network to co-host a set of Community Dinners to create new spaces for underrepresented residents to participate in conversations around climate change and resilience that will inform the City's Climate Action and Adaptation Plan. Deliverables include an abstract and slide deck about this process for use in webinars and conferences about engaging underrepresented residents.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Medford	Mystic	FY 2020	Completed	\$65,259	Phase 2 of 3	Multiple Hazards	Suitability Assessment for Equitable, Community-Driven Resilience Hubs	To address community health vulnerabilities, the City of Medford will assess the suitability of establishing a Resiliency Hub in Medford by identifying a priority service area for a pilot Resiliency Hub, exploring potential partner organizations and their resiliency capacity, highlighting community member concerns, interests, and goals relating to community climate resiliency, and prospectively identifying and evaluating potential Resiliency Hub sites.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Medford	Mystic	FY 2021	In-progress	\$202,485	Phase 3 of 3	Multiple Hazards	Conceptualization and community building for equitable, community-driven Resilience Hubs in Medford	This project will further advance the establishment of a community Resilience Hub by first working to foster a foundation of trust between community members and City Hall through intentional relationship building and by a strong commitment from the City of Medford to equity and to actively practice anti-racism. Additionally, the project will further engage community-based organizations in planning Resilience Hub site co-location or acquisition, management, and operations.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Melrose	Mystic	FY 2020	Completed	\$70,313	N/A	Inland Flooding	City Hall Parking Lot Green Infrastructure Project	The City of Melrose proposes to design green infrastructure solutions for the City Hall Parking Lot to alleviate regular flooding and standing water issues and to provide water quality improvements to downstream resource areas.	Design and Permitting	No	N/A
Melrose & Upper Mystic Communities	Mystic	FY 2022	In-progress	\$108,655	Phase 3 of 3	Inland Flooding	Working Across Boundaries to Minimize Stormwater Flood Damage in the Upper Mystic Watershed	This project (an "exposure analysis") will document where flood damage occurs, and create measures of its social, economic, and infrastructure costs, especially to low-income residents of color. The project team will then come up with a toolbox of policy strategies geared toward cost-effective, multiple-benefit solutions for the most vulnerable areas. Year 1 work will include updating the regional stormwater model with the flood exposure analysis. Year 2 work will include reviewing local regulations, hosting regional workshops to discuss reducing directly connected impervious areas (DCIA) and producing recommended regulation changes to coordinate DCIA reduction strategies across the Upper Mystic.	Planning, Assessment, Capacity Building, and Regulatory Updates	Yes	Melrose & Upper Mystic Communities
Melrose, Malden, & Medford	Mystic	FY 2022	In-progress	\$101,108	N/A	Multiple Hazards	Melrose, Malden, and Medford Building Resilience, Efficiency, and Affordability Project	The project will collaboratively develop complimentary sustainable and resilient building design standards for residential and mixed-use developments and retrofits that are co-created in consultation with community members. In particular, the community members will be those from Environmental Justice communities and other populations with high exposure to climate-driven extreme weather.	Planning, Assessment, Capacity Building, and Regulatory Updates	Yes	Melrose, Malden, & Medford
Reading	Mystic	FY 2023	In-progress	\$2,116,578		Inland Flooding	Maillet, Sommes, Morgan Constructed Stormwater Wetland	This project will commence construction of the stormwater wetland system at Maillet, Sommes, and Morgan which will help create additional offline stormwater storage (a regional priority for Mystic River watershed), reduce inland flooding within the local area as well as downstream communities, and improve water quality. The project will also improve stream bank stabilization and ecological stability while improving open space development and trail connectivity.		Yes	Somerville, Malden, Woburn, Arlington, Melrose, Winchester, Stoneham, Cambridge, Lexington, Medford, Watertown, Burlington, Everett
Revere	Mystic	FY 2023	In-progress	\$235,509		Coastal Flooding Extreme heat	Diamond Creek Catchment Improvements Investigation and Assessment	This project will reduce inland and coastal flooding and urban heat island effects in the Diamond Creek catchment area, reduce stormwater discharge from the catchment area into the Rumney Marsh (ACEC), and restore conditions of the Oak Island Salt Marsh. The scope includes community engagement, existing drainage data inventory, field investigations, green infrastructure and nature-based solutions options evaluations, alternatives evaluation for possible tide gate and outfall replacement, and hydrologic and hydraulic modeling of the catchment.		No	

Revere	Mystic	FY 2023	In-progress	\$150,872		Multiple Hazards	Regional Saugus River Watershed Vulnerability and Adaptation Study	The City of Revere with the support of the Saugus River Watershed Council is coordinating a regional study of coastal vulnerability and adaptation recommendations for the Saugus/Pines River Watershed region. Five cities and towns have come together to initiate this study, including Revere, Everett, Malden, Saugus, and Lynn.		Yes	Saugus, Malden, Everett, Lynn
Revere	Mystic	FY 2021	Completed	\$210,689	N/A	Coastal Flooding	Coastal Resilience Feasibility Study for the Point of Pines and Riverside Area	This project will conduct a coastal resilience feasibility study to identify solutions to avoid or minimize damages associated with coastal storms and sea level rise for the Point of Pines and Riverside Area that is comprised of the following main elements: stakeholder outreach and engagement, assessment of current and future conditions, identification of short-term resilience measures, development of a coastal resilience toolkit, assessment of feasibility of coastal resilience options, and preparation of a coastal resilience feasibility report that summarizes the findings from the study and includes an implementation plan.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Revere	Mystic	FY 2022	In-progress	\$161,516	N/A	Multiple Hazards	Gibson Park Resiliency Design and Permitting	The project addresses the impacts of climate change and storm surge caused by extreme weather events and creates a space that is more resilient to withstand the impacts of sea level rise. The project seeks to design for coastal restoration and protection measures, landscape sculpting, bioswales, raingardens, and unique and practical flood water storage capacity to alleviate impact to the park and adjacent areas while simultaneously increasing the recreational potential of the surface area of Gibson Park.	Design and Permitting	No	N/A
Somerville	Mystic	FY 2018	Completed	\$350,000	N/A	Inland Flooding	Somerville Stormwater System Modeling for Improved Communications and Development of Green Infrastructure	The City of Somerville will enhance its basic city-wide storm water and sanitary system model to understand its vulnerability to flooding on a street-by-street basis, and use this data to learn where green infrastructure can best impact flood control and water quality management and to develop a flood risk communications strategy, messaging, and materials targeted towards residents in inundation-prone areas.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Somerville & Resilient Mystic Collaborative	Mystic	FY 2020	In-progress	\$389,995	N/A	Coastal Flooding	Critical Regional Infrastructure and Social Vulnerability in the Lower Mystic Watershed	The Resilient Mystic Collaborative will conduct a two-part vulnerability assessment of the Lower Mystic watershed. The first will identify interdependencies among critical infrastructure and potential cascading failures during and after an extreme coastal storm, while the second will engage with community and public health experts to identify possible impacts to vulnerable residents and workers when critical infrastructure fails.	Planning, Assessment, Capacity Building, and Regulatory Updates	Yes	Boston, Chelsea, Everett, Revere, Somerville, Winthrop & Mystic River Watershed Association
Watertown	Mystic	FY 2022	In-progress	\$94,240	N/A	Multiple Hazards	Equity-Based Community Greening Program	The Town will conduct an equity-based green infrastructure program. This program will utilize data to reveal the most climate-vulnerable areas of Watertown and will result in green infrastructure investments in those target neighborhoods.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Weymouth	Mystic	FY 2018	Completed	\$129,557	Phase 2 of 2	Coastal Flooding	Fort Point Road Coastal Infrastructure Resilience Project	The Town will redesign critical coastal infrastructure within one of the most vulnerable areas for coastal flooding in Weymouth – the Fort Point Road neighborhood. In addition to the redesign, the Town will prepare required permit materials for the Project Area's seawall, revetment, and drainage structures	Design and Permitting	No	N/A
Winthrop	Mystic	FY 2018	Completed	\$156,799	N/A	Coastal Flooding	Ingleside Park Feasibility Study and Permitting	The Town of Winthrop proposes to conduct a feasibility study to mitigate flooding in Ingleside Park. In addition, the coastal processes at the site will be evaluated to determine the water levels, tidal influence, waves and storm surge elevations at the project site for present day, as well as three future out-years (i.e., 2030, 2070, and 2100) incorporating sea level rise. These data will inform the alternatives analysis to select an appropriate nature-based or conventional infrastructure type, examining a broad range of nature-based and conventional flood mitigation techniques to determine the best solution for Ingleside Park.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Winthrop	Mystic	FY 2019	Completed	\$100,740	N/A	Multiple Hazards	Climate Resilient Land Use and Zoning	The Metropolitan Area Planning Council (MAPC) will work with Winthrop to conduct a policy scan and audit, and draft a new resilient zoning policy or land use tool. Winthrop and MAPC will also work to further the development of best practices and resources/templates for the municipalities in the MMC and design and implement a resilient land use planning and zoning training for municipal staff and volunteers.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Winthrop, Boston & Revere	Mystic	FY 2022	In-progress	\$145,307	N/A	Coastal Flooding	Belle Isle Marsh: Evaluating Nature Based Solutions to Protect Abutting Communities and Critical Shorebird Habitat from Coastal Inundation	The project aims to identify the conditions under which a nature-based coastal flood resilience solution can both enhance and prolong the habitat value of 300-acre Belle Isle Marsh and prevent coastal flood damage to Winthrop, East Boston, and Revere and the MBTA Blue Line just inland of the marsh.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A

Neponset River Watershed											
Canton	Neponset	FY 2020	Completed	\$337,500	N/A	Inland Flooding	Climate Change Vulnerability and Resiliency Assessment Study	The Town will develop a hydrologic/hydraulic drainage model that will illustrate the extent of flooding issues and their relation to community assets and vulnerable populations, as well as assess opportunities for effective nature-based flood mitigation strategies. The model will provide the Town with a foundational tool for climate change planning, engineering design, and public education and outreach.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Dedham	Neponset	FY 2019	Completed	\$185,895	N/A	Multiple Hazards	Dedham Climate Action & Resilience Plan	The Town proposes a Climate Action & Resilience Plan that will include: Updates to the existing hazard mitigation plan, a targeted vulnerability assessment to identify recommendations to improve the resilience of infrastructure, an accounting of, and pathway to reduce, greenhouse gas emissions, the development of a climate resilience framework, and an equitable engagement process.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Foxborough	Neponset	FY 2022	In-progress	\$166,543	N/A	Inland Flooding	Advancing Green Infrastructure in Foxborough for Enhancing Climate Resilience through Planning and Design	This project will site and design green infrastructure to alleviate flooding and protect water quality in an Area of Critical Environmental Concern. The project will also create a master plan to guide future implementation of green infrastructure while simultaneously engaging climate vulnerable populations and portions of the community who are often left out of these conversations.	Design and Permitting	No	N/A
Walpole	Neponset	FY 2019	Completed	\$166,496	N/A	Inland Flooding	Culvert Assessment and Green Infrastructure Survey, Walpole, MA	This assessment will address flooding concerns related to increases in precipitation totals and intensity. Tasks include an inspection and review of major road-stream crossings with consideration for green infrastructure and nature based solutions, and a robust public outreach and education program targeting vulnerable and environmental justice communities in Walpole and neighboring communities.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Quincy	Neponset	FY 2020	Completed	\$164,046	N/A	Coastal Flooding	Coastal Flood Mitigation Storm Drainage Improvements- Phase 1: Engineering & Public Outreach	Quincy seeks to evaluate opportunities to improve resiliency to climate change in the Adams Shore and Houghs Neck neighborhoods. The proposed first phase of this project includes detailed engineering analysis to better understand site-specific flood conditions in low-lying areas now and under various storm and climate change scenarios, refining recommended alternatives for storm mitigation system design, and outreach to the community and permit agencies.	Planning, Assessment, Capacity Building, and Regulatory Updates	No	N/A
Norwood	Neponset	FY 2022	In-progress	\$682,141	N/A	Inland Flooding	Traphole Brook Flood Prevention and Stream Restoration Project	This MVP Grant will be used to pay for the cost of removing the Mill Pond Dam. The dam is obsolete and will fail during intense and prolonged storm events, the type associated with the impacts of climate change.	Construction and On-the-Ground Implementation	No	N/A
Dedham	Neponset	FY 2023	In-progress	\$389,457	N/A	Inland Flooding	Neponset Watershed Regional Adaptation Strategy and Flood Model	This project will bring together the communities of the Neponset River Watershed to 1) prepare a strategic framework for regional collaboration on adaptation implementation priorities 2) develop a regional flooding model for the freshwater portion of the Neponset River Watershed and evaluate regional scale flood impact reduction options, 3) demonstrate the use of the model to conduct a more detailed analysis of local flood mitigation strategies for a targeted neighborhood in Dedham 4) provide communities with technical assistance on deploying the MAPC municipal adaptation toolkit and 5) conduct public outreach and engagement activities in support of the other project objectives.		Yes	Boston, Canton, Dedham, Foxborough, Medfield, Milton, Norwood, Stoughton, Walpole, Westwood