

Massachusetts Municipal Vulnerability Preparedness (MVP) Program

In 2017, Massachusetts [created the Municipal Vulnerability Preparedness \(MVP\)](#) program to provide technical assistance to help communities assess their climate and natural hazard vulnerabilities and develop strategies to address those risks. Since its creation, the program has rapidly expanded to cover 97% of Massachusetts municipalities and is frequently used as a template for other states, including Rhode Island.

The Challenge

Massachusetts communities have long been concerned about flooding and sea level rise. Over 50% of the state's residents [live along the coast](#) and are at potential risk of the projected [one to three feet](#) of sea level rise by 2050. Inland flooding — which includes extreme precipitation, ice jams, and dam failure — [is also one of the most common hazards](#) faced by Massachusetts communities. In the face of these hazards, state leaders recognized the need for better data and an actionable state plan to build community resilience. In 2016, then-Governor Charlie Baker issued [Executive Order 569](#), which, among other things, created the MVP Program, providing technical assistance and frameworks to help communities identify climate hazards, assess vulnerabilities, and develop strategies for improving resilience through community engagement.

MVP program goals

- Improve communities' resilience and their adaptation to climate change.
- Provide funding for vulnerability assessments and action-oriented resilience plans.
- Deliver technical support, climate change data, and planning tools to identify hazards to infrastructure, public safety and health, and other critical resources.
- Develop resilience strategies.

Policy Design

The MVP Program consists of two parts: planning grants and action grants. This structure ensures communities have the resources to identify projects and make them a reality.

1. **Planning grants:** Communities first apply for and receive planning grants to conduct workshops that assess vulnerabilities, encourage community input, and identify adaptation strategies.
2. **Action grants:** After conducting these workshops funded by planning grants, communities are designated "MVP Communities" and can apply for [action grants](#) to fund their adaptation strategies. Action grants cover a range of proactive adaptation projects, such as infrastructure redesign and retrofits or local bylaw updates to utilize nature-based solutions like stormwater parks that reduce flooding. Action grant projects are typically one to two years. These projects spotlight equity, use the best available, forward-looking data, and are often rooted in natural systems.

State Role

The state's Executive Office of Energy and Environmental Affairs (EEA) oversees the MVP program and employs six regional coordinators around the state — in addition to an overall program manager — who promote and expand MVP with local governments. The regional coordinators are the points of contact for communities, their regions, and the state; they conduct resilience training, host regional workshops, and help with overall program improvements.

Cost and Funding

MVP started in 2017 with [\\$1 million awarded for planning costs](#), funded through the state's five-year capital plan. In 2018, an Environmental Bond Bill codified MVP and attached its funding to the bond. Funding awarded through the program has been growing ever since — from \$7 million in 2018 to \$33 million in 2022. In FY 2023, communities could [apply](#) for planning grants of approximately \$15,000 to \$30,000 from a \$1 million pool. Once an MVP-designated community, they could [request](#) up to \$3 million in action grants — with regional proposals allowed to apply for \$5 million — from over \$30 million available.

Program eligibility

The [program is open](#) to any Massachusetts municipality or group of municipalities that wishes to assess their vulnerability and prepare for climate change impacts, build community resilience, and receive designation from EEA as an MVP Community.

Planning grant process

The MVP Planning Grant process is rooted in the [Community Resilience Building](#) (CRB) workshop, which was developed by The Nature Conservancy.

The Planning Grant also provides access to the following resources:

- **[State-trained MVP providers, along with funding to retain their services.](#)** MVP providers are planners, engineers, academics, and other professionals who are trained by the state to work with municipalities to complete program requirements and guide them through the CRB workshops and plan development.
- **Statewide climate projections and data.** EEA provides municipalities with downscaled climate projections, which must be incorporated into planning.
- **Standardized toolkit for assessing climate vulnerability and developing strategies.** One critical tool is the [CRB workshop guide](#), which includes step-by-step instructions for running the workshops, as well as a risk matrix to identify and prioritize at-risk infrastructure and societal and environmental features.

During the CRB workshop process, municipalities work with their MVP provider to gather available background information, conduct interviews with municipal staff and volunteers, and plan either two four-hour workshops or one eight-hour workshop. The CRB workshops bring together 20–60 municipal staff, residents, partners, and volunteers to [identify the greatest structural, societal, and environmental vulnerabilities and strengths](#). Participants then develop and prioritize actions to address these vulnerabilities, with an emphasis on nature-based solutions. Finally, participants clearly identify next steps for the municipality and other stakeholders. Municipalities will convert insights from the workshop into personalized planning reports, based on an EEA-provided template.

As the first cohort of CRB workshop plans reached the five-year mark, the MVP program manager and regional coordinators revisited the planning grant process. An updated program is expected to roll out in spring 2023 with goals to advance equity and environmental justice, bridge the gap communities face between planning and action, and review and reset priorities from the original MVP plans.

Action grant process

Communities that complete the planning grant process are designated as MVP communities and may then apply for MVP Action Grants. The program funds efforts that best demonstrate [nine core principles](#) (see MVP Program Core Principles box). The Action Grant program has grown to \$100 million for FY 2023, with the number of Action Grants awarded [nearly doubling](#) since the program began. Action Grants have become increasingly more competitive, but municipalities can create more favorable applications by emphasizing the nine core principles, using quantitative metrics for outcome evaluation, and prioritizing equity (see Competitive Evaluation Criteria box).

MVP program core principles

- Furthering a community identified priority action to address climate change impacts.
- Utilizing climate change data for a proactive solution.
- Employing nature-based solutions.
- Increasing equitable outcomes for and supporting strong partnerships with Environmental Justice (EJ) Populations and Climate Vulnerable Populations.
- Conducting robust community engagement.
- Achieving broad and multiple community benefits.
- Committing to monitoring project success and maintaining the project into the future.
- Utilizing regional solutions toward regional benefit.
- Pursuing innovative, transferable approaches.

Competitive evaluation criteria

- Project Description, Rationale, and Climate Data
- Timeline, Scope, and Budget (including 25% match of total project cost, or 10% if community aligns with FEMA-funded BRIC grant program's criteria)
- Nature-Based Solutions and Environmental Benefits
- Environmental Justice and Public/Regional Benefits
- Public Involvement and Community Engagement
- Project Transferability, Measurement of Success, and Maintenance
- Need for Financial Assistance
- Project Feasibility & Management
- Overall Project Quality

Increasingly, municipalities are pushing for regional action, while preferring projects that benefit multiple communities: Nearly 30% of [awarded](#) FY 2023 grants were multi-community projects. Massachusetts is also making the program accessible for disadvantaged communities: Current action grants require a local match of 25%; however, for communities defined as economically disadvantaged and rural, the match can be [reduced](#) to 10%. To date, MVP has [awarded](#) 306 Action Grants. In 2022, the average Action Grant was [\\$447,000](#).

Impact

Since 2018, the MVP program has awarded \$100 million to 341 communities, jump-starting better climate and hazard planning and breaking ground on projects that reduce risk statewide. Beyond Massachusetts, the MVP program provides lessons for states looking to plan and fund flood resilience plans and projects.

Example Project: City of Lawrence Flood Study and DPW Yard Adaptation Plan:

Through the MVP program, the City of Lawrence identified the Department of Public Works as one of the most vulnerable sites to climate change. Located along the Spicket River, the DPW facility frequently floods. Through an MVP Action Grant, Lawrence created a new 3-dimensional model of the river to understand water flows and help predict flood events; developed a list of strategies to minimize flood events, better manage stormwater, create flood storage, improve drainage and harden facilities to withstand flooding; and engaged the public through community meetings, a public art mural, and vertical flood elevation markers to inform the community and solicit public comments on the adaptation plan.