



The Massachusetts Water Resources Commission

# FY2025 Annual Report

The Commonwealth of Massachusetts

Maura T. Healey, Governor | Rebecca L. Tepper, Secretary, Executive Office of Energy and Environmental Affairs



# Meet the Water Resources Commission

## Role and Structure

The Massachusetts Water Resources Commission (WRC), established in 1956 by the Massachusetts Legislature, was set up to address flood prevention and water conservation among other goals. It is responsible for developing, coordinating, and overseeing the Commonwealth's water policy and planning activities to ensure that Massachusetts will have plentiful water to support health, safety, economic development, and ecological vitality for generations to come.

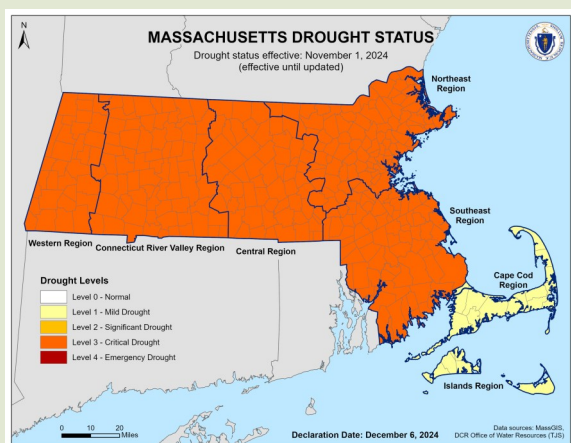
The eleven-seat commission includes five public members and appointees from six state agencies or offices.

The WRC's Executive Director, based at the Executive Office of Energy and Environmental Affairs (EEA), and its technical staff, based at the Department of Conservation and Recreation's (DCR) Office of Water Resources, work with state and federal agencies and members of the public to support the WRC's work.

## Responsibilities of the WRC

The responsibilities of the WRC, highlighted below and described in this report, establish the scientific and policy foundation for the sustainability of Massachusetts' water resources.

- Establish statewide Water Conservation Standards and policies to encourage efficient use of water
- Administer the Interbasin Transfer Act
- Cooperate with the United States Geological Survey (USGS) and manage the statewide precipitation network to provide real-time water data for monitoring and research
- Approve the Massachusetts Drought Management Plan, monitor hydrologic conditions, and advise the state Drought Management Task Force during drought
- Provide water needs forecasts for communities' long-range planning and permits
- Develop and provide a forum for public input, coordination, and diverse viewpoints on current and long-term water policies and issues
- Act as the state coordinating agency to assist in the implementation of the National Flood Insurance Program (NFIP)

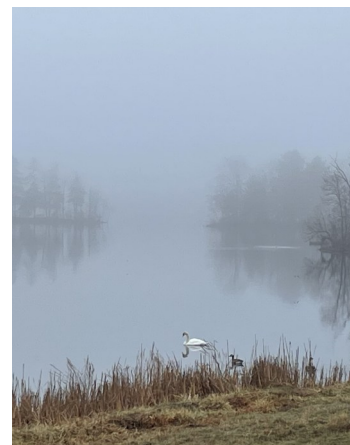


## Program Descriptions and FY2025 Work

### Tracking Hydrologic Conditions and Advising on Drought

WRC staff (Staff) monitors and analyzes hydrologic conditions monthly and produces a report covering precipitation trends, streamflows, groundwater levels, lakes and impoundments levels, and other hydrologic data. Staff uses these data to monitor for droughts, inform the WRC at its monthly meetings, and, as needed, advise the state's Drought Management Task Force (DMTF).

Of the hydrologic monitoring networks, Staff manages the precipitation network, which provides data from 50 active stations in Massachusetts and has been in operation since 1956. Other networks are operated cooperatively with the USGS.



A-1 Reservoir in Westborough, March 2025

In FY25, the DMTF met to track a drought which developed in the fall. By mid-October all regions reached Level 3—Critical Drought except the Cape Cod and Islands Regions, which remained normal. The Cape Cod and Islands regions reached Level 1—Mild Drought in November and Level 2—Significant Drought in January. By the end of May all regions returned to normal except Cape Cod and Islands, which remained elevated at Level 1—Mild Drought through June.

### The USGS Cooperative Program

The USGS and the state have had a cooperative, hydrologic monitoring partnership since 1904. The program currently maintains and provides data from the following stations: 55 real-time streamflow, 57 manual and 56 automated groundwater, 7 precipitation, 4 tidal and 1 lake. Staff from MassDEP and UMass Amherst perform monthly manual measurements at groundwater wells. Staff from DCR take monthly readings at the lake site.

In FY25, Staff worked with USGS to expand the streamflow and groundwater network based on the results of the network analyses completed in FY24. The expansion in FY25 included the installation of 12 new streamflow gages and the upgrade of seven wells from manual to real-time data provision. The expansion will continue in FY26 with the installation of six streamflow gages and the drilling of four groundwater wells.



Southborough, MA real-time monitoring well

## Flood Hazard Management Program

Through the WRC's Flood Hazard Management Program (FHMP), Staff provides technical assistance to NFIP communities on a wide range of matters, including floodplain management best practices, flood-resistant standards for construction, floodplain mapping issues, flood insurance questions, and mitigation options to reduce flood losses.

### Highlights of the FHMP in FY25 include:

- Support and technical assistance directly to 306 MA communities through workshops, bylaw review and almost 1,000 assistance information points
- Review of 194 MEPA projects for floodplain regulatory and advisory comments
- 28 training workshops on floodplain management topics; began a new "Floodplain Basics" training series
- Assistance to 157 communities with their local floodplain bylaw compliance
- Work on numerous special projects including Flooding & Environmental Justice Communities in MA, the statewide floodplain management Framework, flood disclosure regulation, the state's Local Action Guide for higher floodplain management standards, and planning for the 11th edition state building code process
- Implementing year two of the FHMP Strategic Plan including robust communications and outreach strategies, improved training calendar and improved coordination with regional planning agencies



Millers River flood marker in Erving

## Facilitation and Consensus Building

Staff provided facilitation and process design support for collaboration and consensus-building on water-related matters across the state. **In FY25**, Staff continued co-facilitating and providing technical support to the North Shore Water Resilience Task Force, a multi-sector group chaired by State Sen. Bruce Tarr, working to develop collaborative solutions to water supply and ecosystem challenges in the Ipswich River Watershed. In FY25, the Task Force:

- Concluded 3 studies to lay groundwork for regional action
- Engaged 2 new contractors to develop a web-based decision support tool and expand mediation and facilitation capacity
- Continued subcommittee efforts to explore the role of water conservation and demand management in regional resilience
- Launched 2 new subcommittees to develop water supply recommendations for the Lower Basin and address PFAS

Staff also continued providing facilitation services for a multi-stakeholder group exploring ways to strengthen regional collaboration on water resource sustainability and ecosystem health in Southeastern MA. In FY25, the group completed an Assessment of Collaborative Potential, involving interviews with 10 municipalities, which led to recommendations to help chart a path toward regional engagement on water among these towns.

## The Interbasin Transfer Act (ITA)

To protect Massachusetts' water resources and the communities that rely on them, the ITA requires WRC review of proposals to transfer water or wastewater between river basins and ensures:

- Hydrology and environmental resources in the donor basin are protected
- The receiving basin is using water as efficiently as possible
- The process is transparent and promotes robust public input

**In FY25**, the WRC voted to approve the following projects:

- Littleton's Water Supply Connection with Boxborough
- Town of Groton Amendment to Lost Lake Decision
- Town of Groton Request for Determination of Insignificance
- Lynnfield Center Water District's Supplemental Connection to MWRA
- Sunrise Senior Living Request for Determination of Insignificance
- Town of Plainville Amendment to Mirimichi Wells Decision

The WRC finalized and published updated Interbasin Transfer Act Performance Standards.

Additionally in FY25, Staff:

- Monitored continued compliance with Conditions for previously approved ITA projects
- Provided consultations to project proponents with potential new interbasin transfers

## Water Needs Forecasts

Staff works with public water suppliers to develop 15- to 20-year water needs forecasts, using a methodology approved by the WRC. The forecasts are used by suppliers in applying for Water Management Act (WMA) permits and in long-range planning. **In FY25**, Staff consulted with MassDEP and five public water suppliers in four river basins (Boston Harbor, Connecticut, Merrimack, and Nashua) to review, revise, or prepare new water needs forecasts.

## Oversight of State Water Programs

By statute, the WRC reviews certain water regulations promulgated by the Department of Environmental Protection (MassDEP), and other water resource-related programs, providing a forum for public comment.

**In FY25**, the WRC heard an update from MassDEP staff on its work on PFAS. MassDEP's schedule includes promulgating new regulations at least as stringent as EPA within two years of the promulgation of the federal regulations, which are expected to be revised in 2026. MassDEP is also working on a two-part Sludge Capacity Master Plan.

## PL566 Small Watershed Protection Program

This program continues to oversee the operation, maintenance, and repair of state-owned PL566 flood control lands across the Commonwealth.





## FY2025 Special Projects

### Low Flow Statistics at Gaged and Ungaged Sites

In cooperation with WRC Staff, USGS calculated low flow statistics at least impacted gages across the Commonwealth. To determine these statistics at other locations in the state, regression equations were developed on the low flow statistics at least impacted gages considering a wide range of characteristics such as basin area, aquifer characteristics, land use, precipitation, and water use. These regression equations are used in the USGS StreamStats application to allow users to get low flow statistics for any point on a stream in MA. **In FY25**, USGS worked through their internal review process. In the fall of 2025, the report and data releases will be published (entire state) and StreamStats will be updated with the revised statistics (majority of the state). Newly developed equations and a separate, new application for Southeastern MA and Cape Cod will be released in early 2026.

### Drivers of Low Flow

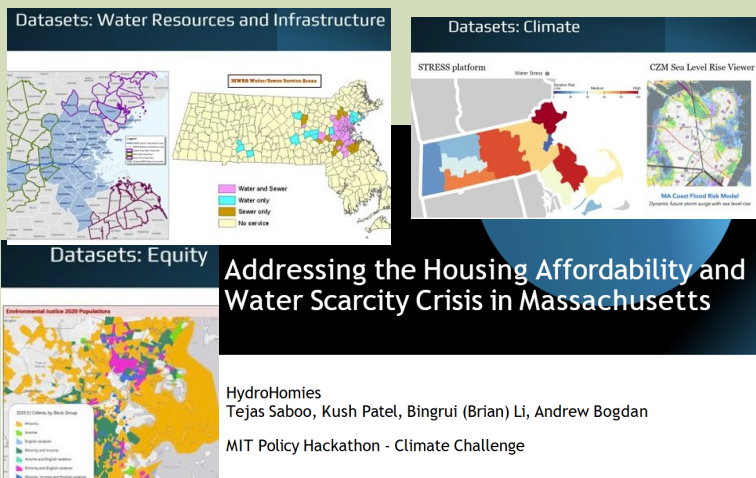
Recently, new record low flows are being set with each drought even as annual precipitation increases. USGS in collaboration with Staff continued to explore spatial and temporal regression techniques to determine the factors contributing to this trend, which include climate variables, contributing area characteristics, land use, and water use. **In FY25**, Staff reviewed the final report and public release is anticipated by the end of 2025.

### Groundwater Flooding Vulnerability Mapping

Working with WRC Staff, the University of Massachusetts at Amherst created the first statewide, steady-state groundwater model that estimates average groundwater table depth. Groundwater flooding risk was categorized based on these current depths with respect to its ability to reach underground utilities, basements, septic systems, and stormwater controls. To determine future risk under climate change and based on projected precipitation increases and sea level rise, recharge rates and sea levels were increased and their impact on groundwater levels and flooding risk were assessed. Results were analyzed for impact by land use and environmental justice areas. The first public release of products on MassGIS and the report are expected by the end of 2025.

### Massachusetts Institute of Technology (MIT) Policy Hackathon

**In FY25**, Staff participated in the Hackathon and provided a Climate Challenge Brief on “Integrating Climate Resilience into Massachusetts Infrastructure and Land Use: A Water-Smart Approach to Equitable Growth.” The winners of the challenge, HydroHomies, presented at the January 2025 WRC meeting.



### Evaluation of Lakes and Impoundments Drought Index for the MA Drought Management Plan

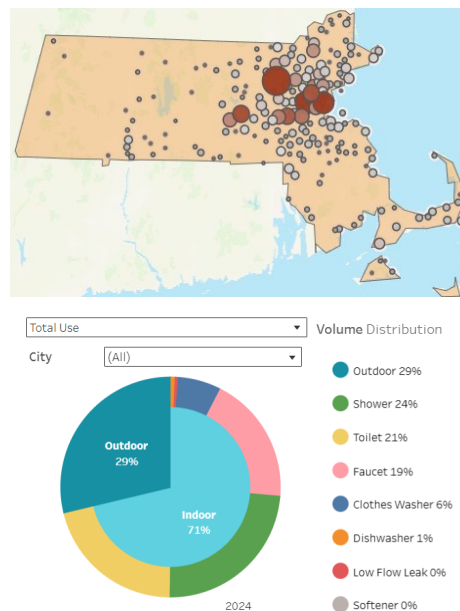
Staff contracted with USGS to evaluate the MA Drought Management Plan Lakes and Impoundments Drought Index. USGS evaluated a subset of the currently monitored water bodies to test the index and document the methodology. A data release and report were published in September 2024.

### Guidance for Local Water Suppliers on Developing Local Drought Management Plans

WRC Staff worked with the consultant Comprehensive Environmental, Inc. along with a steering committee comprised of MassDEP staff and representatives from the water supply community to develop guidance to assist public water suppliers in the creation of Local Drought Management Plans. **In FY25**, the WRC voted to approve the guidance as a working document. Staff are incorporating comments received for a revised version to be available in FY26.

### Acquisition of Extensive Water End Use Dataset

Through a contract with FLUME, Staff acquired three years of highly granular water use data from approximately 1,400 homes across 200 MA cities and towns. The data are derived from secondary water meters (density of meters increases with size of circles on map below) and a machine learning algorithm capable of identifying water use from fixtures and appliances. The contract also included acquisition of a dashboard that allows deep exploration and visualizations of water use patterns. This information will help deepen the WRC's understanding of MA water use patterns to help guide policy and development of resources to continue to improve water efficiency.



### Integrated Water Data Access and Visualization

WRC Staff continued collaborating with MassDEP on a contract launched in FY24 with USGS to evaluate and improve the state of water data storage, access, sharing, and analysis capabilities within the Water Management Act program and under the ITA regulatory review and water needs forecasting processes. **In FY25**, USGS completed extensive assessments of current data structures and management processes, met with EEA IT, and developed a roadmap for more centralized data warehousing and internal and public-facing data access and visualization tools.

## Water Conservation

### Outreach

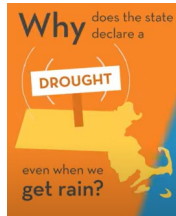
In FY25, Staff and partner organizations held two events to continue promoting the MA Native Plant Palette (NPP), an interactive web application designed to help people of all skill levels explore native plants. The first event, held in partnership with Ipswich Utilities, included the first NPP demonstration garden at its water department building. The second event, held in partnership with the Town of Danvers, included a demonstration garden at Endicott Park.



Staff continued to support the Growing Wild for Pollinators program, another effort helping to build drought resiliency through native plant landscaping.

Staff maintained the promotional partnership with EPA's WaterSense program through water efficiency education and outreach for WaterSense campaigns.

Staff worked with a marketing company to create [3 new videos about drought](#)\* (#1—what does drought mean in MA?; #2—why does the state declare a drought even when we get rain; and #3—public water suppliers & outdoor watering restrictions).



### Drought Resiliency and Water Efficiency (DRWE) Grant Program

In FY25, this inaugural grant program was launched to help MA communities become more climate resilient by reducing water use, improving water loss control, and increasing drought management/planning. Almost \$500,000 was awarded to 13 projects; the program will continue in FY26.

### Alliance for Water Efficiency (AWE)

In FY25, Staff continued efforts to keep MA water efficiency priorities on the national stage by serving on AWE's education & outreach and research committees, multiple sub-committees and working groups, and presenting at AWE's 2nd annual Water Efficiency and Conservation Symposium.



### Web Links

- [Interbasin Transfer Act](http://www.mass.gov/interbasin-transfer-act): ([www.mass.gov/interbasin-transfer-act](http://www.mass.gov/interbasin-transfer-act))
- [Precipitation Data](http://www.mass.gov/info-details/precipitation-data): ([www.mass.gov/info-details/precipitation-data](http://www.mass.gov/info-details/precipitation-data))
- [\\*Drought Management](http://www.mass.gov/drought): ([www.mass.gov/drought](http://www.mass.gov/drought))
- [Flood Hazard Management Program](http://www.mass.gov/guides/floodplain-management): ([www.mass.gov/guides/floodplain-management](http://www.mass.gov/guides/floodplain-management))
- [Water Needs Forecasts](http://www.mass.gov/doc/water-needs-forecast-policy-and-methodology/download): ([www.mass.gov/doc/water-needs-forecast-policy-and-methodology/download](http://www.mass.gov/doc/water-needs-forecast-policy-and-methodology/download))
- [Water Conservation Standards](http://www.mass.gov/service-details/details-on-the-2018-massachusetts-water-conservation-standards): ([www.mass.gov/service-details/details-on-the-2018-massachusetts-water-conservation-standards](http://www.mass.gov/service-details/details-on-the-2018-massachusetts-water-conservation-standards))
- [Massachusetts Water Conservation Toolkit](http://www.mass.gov/conservemawater): ([www.mass.gov/conservemawater](http://www.mass.gov/conservemawater))
- [USGS](http://www.mass.gov/cooperative-water-resource-planning-program): ([www.mass.gov/cooperative-water-resource-planning-program](http://www.mass.gov/cooperative-water-resource-planning-program))
- [Drought Tips, Tools & Resources](https://www.mass.gov/info-details/drought-tips-tools-resources): (<https://www.mass.gov/info-details/drought-tips-tools-resources>)

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**Toni Stewart**, Water Resources Scientist

**Viki Zoltay**, State Hydrologist

## Current WRC Members and Designees

### Agency Members:

#### Executive Office of Energy and Environmental Affairs

Chair & Member - Rebecca L. Tepper, Secretary

Designee - Vandana Rao,

WRC Executive Director

#### Executive Office of Housing and Livable Communities

Member - Edward M. Augustus Jr., Secretary

Designee - Chris Kluchman

#### Department of Conservation and Recreation

Member - Nicole LaChapelle, Commissioner

Designee - Anne Carroll

#### Department of Environmental Protection

Member - Bonnie Heiple, Commissioner

Designee - Kathleen Baskin

#### Department of Agricultural Resources

Member - Ashley Randle, Commissioner

Designee - Hotze Wijnja

#### Department of Fish and Game

Member - Tom O'Shea, Commissioner

Designee - Todd Richards

#### Office of Coastal Zone Management (non-voting member)

Member - Alison Brizius, Director

Designee - Tyler Soleau

### Public Members:

Thomas Cambareri, Centerville, MA

Christine Hatch, Belchertown, MA

Vincent J. Ragucci III, North Reading, MA

Kenneth Weismantel, Hopkinton, MA

Samantha Woods, Norwell, MA

