



# THE MASSACHUSETTS WATER RESOURCES COMMISSION

# 2020 ANNUAL REPORT

The Commonwealth of Massachusetts

Charles D. Baker, Governor | Kathleen A. Theoharides, Secretary, Executive Office of Energy and Environmental Affairs



# MEET THE WATER RESOURCES COMMISSION

## THE COMMISSION'S ROLE AND STRUCTURE

The Water Resources Commission (Commission or WRC) was established in 1956 by the Massachusetts Legislature and 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.

The Commission'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 Commission's work.

## RESPONSIBILITIES OF THE COMMISSION

The responsibilities of the Commission, 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 and advise the state Drought Management Task Force during drought
- Provide water needs forecasts for communities' long-range planning and permits
- Provide a forum for public input, coordination, and diverse viewpoints on current and long-term water policies and issues at monthly meetings

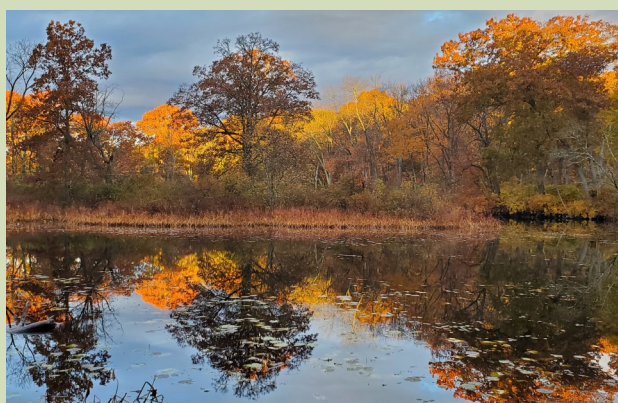


Photo by Anne Carroll

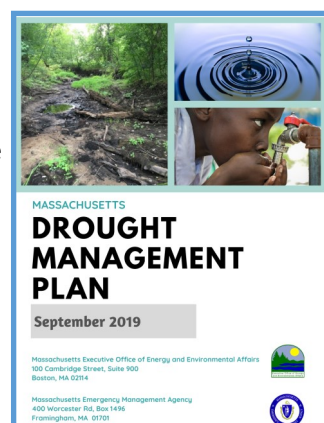
# PROGRAM DESCRIPTIONS AND FY 2020 WORK

## TRACKING HYDROLOGIC CONDITIONS AND ADVISING ON DROUGHT

WRC staff monitors and analyzes water conditions monthly and produces a report covering precipitation trends, river conditions, groundwater levels, levels at lakes and impoundments, 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.

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.

In FY2020, WRC staff, working with other agencies, completed a comprehensive review and update of the [\*Massachusetts Drought Management Plan\*](#), including the drought indices, methods used to determine drought, communication, and state and local actions to prepare for and respond to drought. The updated plan was released in September 2019.



The Drought Management Task Force met in response to two droughts in FY2020. A Level 1 drought was declared for the Connecticut River Valley Region in October 2019 and lasted approximately one month. In June 2020, a Level 2 drought was declared for the Western, Connecticut River Valley, Central, and Northeast Regions and persisted into FY2021.

Also in FY2020, WRC staff began work with the Northeast Regional Climate Center at Cornell University to develop a [\*Drought Dashboard\*](#) – a web-based tool to provide data and maps of drought indices, hydrologic conditions, and drought monitoring. This tool will enhance data processing capabilities and analyses for Drought Management Task Force meetings.

## THE USGS COOPERATIVE PROGRAM

The U.S. Geological Survey and the state have had a water resources partnership since 1904, when the state's first modern stream gage was installed in the Connecticut River. The program currently maintains 148 monitoring stations providing data on:

- Streamflow— 58 real-time gages
- Groundwater— 37 manual and 44 automated gages
- Precipitation— 5 gages
- Tidal—3 gages
- Soil moisture—1 gage

In FY2020, in coordination with USGS and the State Geologist, staff completed the last phase of a 3-year USGS grant to replace 34 groundwater monitoring wells. USGS and staff also started to adjust and transfer historical data from original to replacement wells, allowing for the continuation of records.



Eric Carlson, FHMP staff member,  
training local officials on the building  
code (Photo: pre-COVID-19)

## FLOOD HAZARD MANAGEMENT PROGRAM

Executive Order 149 designated the Commission as the state coordinating agency to implement the National Flood Insurance Program (NFIP). Through the Commission's Flood Hazard Management Program (FHMP), staff provide 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 FY2020 include:

- 22 community assistance visits and 16 training events
- More than 500 general technical assistance contacts to help Massachusetts' 341 NFIP communities
- Development of an updated MA Model Floodplain Bylaw to assist NFIP communities with federal compliance
- Involvement at the national level with the development and implementation of FEMA's new mitigation grant program, "Building Resilient Infrastructure & Communities" (BRIC)
- Coordination with state, national, federal and local partners to monitor and review floodplain development, mitigation projects, and local and regional resiliency efforts
- Coordination with other DCR leaders on agency-wide climate adaptation measures.



Flood hazard map, Boston, MA

## THE INTERBASIN TRANSFER ACT (ITA)

The ITA protects Massachusetts' vital water resources and the communities that rely on them. It 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 FY2020, staff reviewed both new and ongoing projects including:

- Reviewed North Reading's request to purchase water from Andover, including holding required public hearings and presenting a draft staff recommendation
- Initiated review of Burlington's request to join the MWRA by accepting its application as complete
- Provided MEPA comments on Auburn's proposal to purchase water from Worcester
- Reviewed proposed changes to Aquaria's monitoring conditions, which were subsequently approved by the WRC
- Initiated review of proposed changes to Foxborough's monitoring conditions
- Reviewed a proposal from the Leicester Water Supply District to purchase water from Worcester and determined, based on documentation establishing prior water rights, that the purchase does not trigger the ITA
- Monitored continued compliance with conditions for 12 previously approved ITA projects



Photo by Anne Carroll

## WATER NEEDS FORECASTS

Commission staff works with public water suppliers to develop 15- to 20-year water needs forecasts, using a methodology approved by the Commission. The forecasts are used by suppliers in applying for Water Management Act (WMA) permits and in long-range planning.

In FY2020, WRC staff consulted with MassDEP and thirteen public water suppliers in seven river basins (Boston Harbor, Buzzards Bay, Charles, Concord, Ipswich, Islands, and Merrimack basins) to review, revise, or prepare new water needs forecasts.



## WATER CONSERVATION STANDARDS

The Commission established the Massachusetts Water Conservation Standards (WCS) in 1992, setting statewide goals for water-use efficiency and providing guidance for effective conservation.

In FY2020, staff continued developing design and content for a user-friendly, web-based water conservation toolkit. The website targets a wide range of water users, including residents, businesses, water suppliers, planners and other municipal officials, institutions, agricultural entities, and educators. Branded “Conserve MA Water” ([www.mass.gov/conservemawater](http://www.mass.gov/conservemawater)), the website features Massachusetts-specific guidance on actions users can take to reduce their water use. It features tools and outreach material that can be easily downloaded and shared.

Also in FY2020, in cooperation with the MA Division of Ecological Restoration and with outreach to water suppliers, staff developed a best management practices guidance document on managing and analyzing water use data for effective rate setting and water conservation program planning.

## OVERSIGHT OF STATE WATER PROGRAMS

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

In FY2020, the Commission was briefed on proposed revisions to the Massachusetts Surface Water Quality Standards (314 CMR 4.00); proposed regulatory changes to Amalgam Wastewater and Recycling Regulations for Dental Facilities (310 CMR 73.00); and proposed changes to the MA Drinking Water regulations (310 CMR 22.00) to establish a Maximum Contaminant Level in drinking water for per- and polyfluoroalkyl substances (PFAS).

## WEBLINKS

Interbasin Transfer Act: [www.mass.gov/interbasin-transfer-act](http://www.mass.gov/interbasin-transfer-act)  
Water Data Tracking: [www.mass.gov/info-details/water-data-tracking](http://www.mass.gov/info-details/water-data-tracking)  
Drought: [www.mass.gov/ma-drought-management](http://www.mass.gov/ma-drought-management)  
Flood Hazard Management Program: [www.mass.gov/guides/floodplain-management](http://www.mass.gov/guides/floodplain-management)  
Water Needs Forecasts: [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: [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: [mass.gov/conservemawater](http://mass.gov/conservemawater)  
USGS: [www.mass.gov/cooperative-water-resource-planning-program](http://www.mass.gov/cooperative-water-resource-planning-program)

## KEY CONTACTS

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### Anne Carroll

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### Michele Drury

Assistant Director  
(retired, Oct. 2019)  
DCR Office of Water Resources

### Sara Cohen

Water Resources Specialist

### Eric Carlson

Environmental Engineer

### Vanessa Curran

Water Resources Scientist

### Joy Duperault

State NFIP Coordinator & Deputy  
Hazard Mitigation Officer

### Erin Graham

Environmental Engineer

### Marilyn McCrory

Water Resources Planner

Viki Zoltay, Hydrologist



## COMMISSION MEMBERS AND KEY CONTACTS

### AGENCY MEMBERS:

#### Executive Office of Energy and Environmental Affairs

Chair & Member

Kathleen Theoharides, Secretary

Designee - Vandana Rao

Commission Executive Director

#### Department of Housing and Community Development

Member - Jennifer Maddox, Undersecretary

(as of February 2020)

Janelle Chan, Undersecretary (through Feb. 2020)

Designee - Linda Balzotti

#### Department of Conservation and Recreation

Member - Jim Montgomery, Commissioner

(as of September 2019)

Leo Roy, Commissioner (through Sept. 2019)

Designee - Anne Carroll

#### Department of Environmental Protection

Member - Martin Suuberg, Commissioner

Designee - Kathleen Baskin

#### Department of Agricultural Resources

Member - John Lebeaux, Commissioner

Designee - Hotze Wijnja

#### Department of Fish and Game

Member - Ron Amidon, Commissioner

Designee - Todd Richards

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

Member - Lisa Berry Engler, Director

Designee - Todd Callaghan

### PUBLIC MEMBERS:

Thomas Cambareri, Centerville, MA

Marcela Molina, Boston, MA

Vincent J. Ragucci, North Reading, MA

Kenneth Weismantel, Hopkinton, MA

Samantha Woods, Norwell, MA



Michele Drury (left) receives a governor's citation upon her retirement as OWR Asst. Director (with Vandana Rao, WRC Exec. Dir.)