
THE MASSACHUSETTS WATER RESOURCES COMMISSION



ANNUAL REPORT, FISCAL YEAR 2014



Commonwealth of Massachusetts

DEVAL L. PATRICK
Governor

MAEVE VALLELY BARTLETT
Secretary
Executive Office of Energy and Environmental Affairs

MEET THE WATER RESOURCES COMMISSION

THE COMMISSION'S ROLE

Established in 1956, the Water Resources Commission (the Commission) 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. By cooperating with the United States Geological Survey (USGS) on interpretive studies and monitoring the state's rivers, reservoirs, and groundwater levels; regulating transfers of water and wastewater across watershed boundaries; helping communities assess their long-range water needs; and promoting strategic and efficient use of water, the Commission establishes the scientific and policy foundation for the sustainability of the state's water resources.

RESPONSIBILITIES OF THE COMMISSION

- 1) Develop **Water Policy** for Massachusetts
- 2) Administer the **Interbasin Transfer Act** to ensure environmental protection when it is necessary to transfer water or wastewater between the major river basins of the state
- 3) Cooperate with the USGS to provide timely **scientific research, real-time streamflow readings, and ground water levels statewide**
- 4) Provide **Water Needs Forecasts** for approximately 180 communities for their long-range planning and for use in applying for water withdrawal permits
- 5) Maintain a **Statewide Rainfall Network** to track water conditions and monitor for drought
- 6) Provide technical advice to the state **Drought Management Task Force** in response to drought conditions
- 7) Establish statewide **Water Conservation Standards** to encourage efficient use of water
- 8) Provide a **forum** for public input, coordination, and diverse viewpoints on current and long-term water policies and issues at monthly meetings

ADVANCING SCIENCE, AND PROTECTING LIVES AND PROPERTY USING RAINFALL AND STREAMFLOW DATA

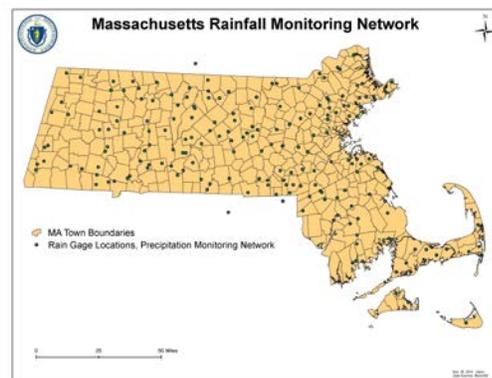
The Commission coordinates two critical data collection networks: the Massachusetts Rainfall Monitoring Network and the USGS Hydrologic Monitoring Network. Real-time and historic data from these networks are used by communities, scientists, emergency responders, and health and safety professionals to protect lives, property, and the environment, and to better understand and plan for future water conditions including droughts, floods, and climate change. Additionally, interpretive studies coordinated by the Commission through the USGS Cooperative Program advance the state of knowledge on impacts to critical water resources and emerging water issues.

MASSACHUSETTS RAINFALL MONITORING NETWORK

The Commission had the foresight to establish a rainfall monitoring network for Massachusetts in 1956, and it has been operating continuously ever since. The network and data maintained by Commission staff and collected largely by trained volunteers include:

- historical precipitation records for more than 200 stations,
- 110 active stations, and
- a precipitation database available to the public and updated monthly.

The data are used to calculate rainfall frequency estimates, which planners, engineers and scientists use to properly size and design roadways, bridges, and drainage structures. They are also currently being used by the National Oceanic and Atmospheric Administration (NOAA) to update the Precipitation Atlas for the Northeast, which will become the new design standard for major construction projects in 2015.

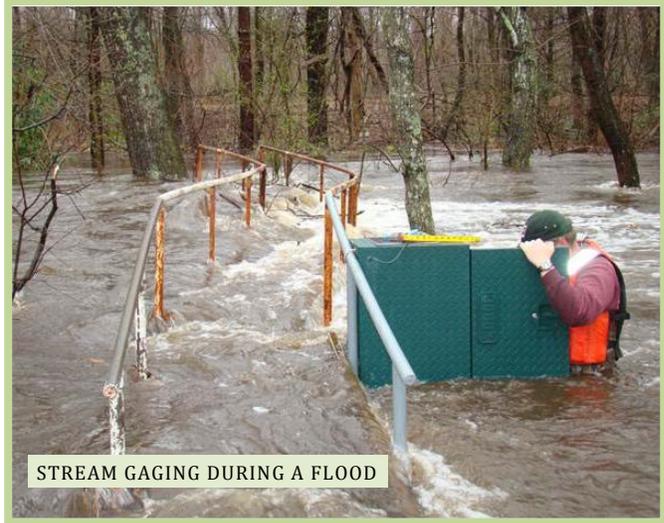


OVERVIEW OF OUR PROGRAMS

THE USGS COOPERATIVE PROGRAM

The U.S. Geological Survey and the Commonwealth of Massachusetts have engaged in a cooperative water resources partnership **since 1904**, when the first modern stream gaging station in Massachusetts was established on the Connecticut River. Currently, the Cooperative Program maintains 85 streamflow gages and 89 groundwater observation wells.

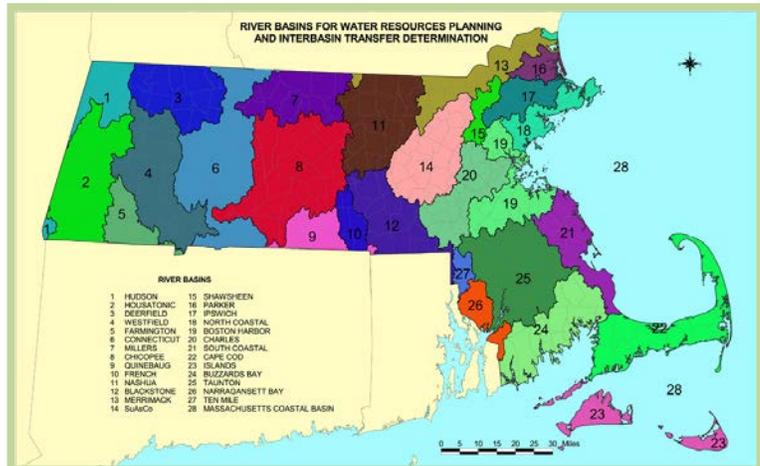
One critical use of stream gages is to provide real-time data during extreme weather events. **When these events strike, Commission staff members are activated to the Massachusetts Emergency Management Agency Command Center to project when, where and how much peak flooding will occur.** Staff monitor stream gages and are available by phone 24 hours a day to advise communities and answer questions about flooding.



PROTECTING OUR RIVERS THROUGH THE INTERBASIN TRANSFER ACT

In 2014, the Interbasin Transfer Act (ITA) reached an important milestone – thirty years of protecting the water resources in the Commonwealth.

This important statute was passed to protect the environmental resources of the Commonwealth's river basins and the communities that rely on them. The ITA ensures that communities transferring water or wastewater to or from another basin have taken necessary steps to conserve and manage water wisely. The Act also ensures protection of the donor river basin hydrology. The Act requires a transparent process, with careful consideration of the issues by the



"Our Center could not provide well-calibrated and verified flood forecasts for Massachusetts rivers without the stream gage data provided by the USGS Cooperative Program. We rely on both the historic data and continuous observations from the network to provide forecasts that are meaningful to the public."

*-Ed Capone
Northeast River Forecast Center*

Commission, input from the public and environmentally protective approval criteria. All of these serve to protect Massachusetts' vital and finite water resources and the communities that rely on these resources.

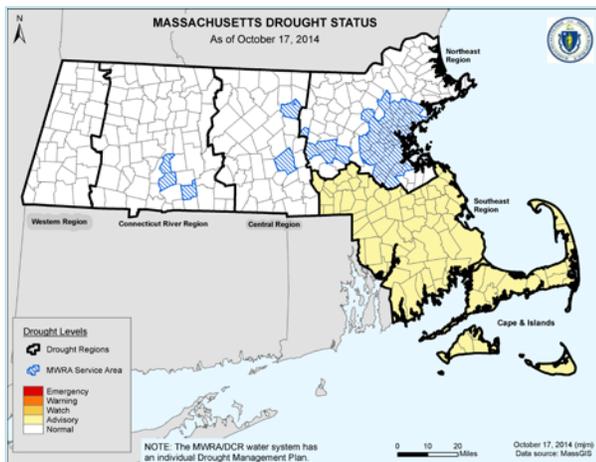
Since the Act's inception in 1984, the Commission has approved 21 transfer requests, denied three, found 13 transfers to be insignificant, and approved offsets (quantifiable actions that eliminate or minimize the net interbasin transfer) in five cases.

For information on Fiscal Year 2014 accomplishments related to the Act see page 5. For additional ITA resources see our website:

<http://www.mass.gov/eea/agencies/dcr/water-res-protection/interbasin-transfer-act/>.

OVERVIEW OF OUR PROGRAMS

PREPARING THE COMMONWEALTH FOR DROUGHT



Commission staff provide monthly updates on current water conditions to the Commission. These reports and data on precipitation and current drought conditions are also available to the public through the Drought Management Task Force page on the Commission's web site: www.mass.gov/eea/wrc-dmtf.

The Water Data Tracking pages on DCR/OWR's web site provide a wealth of information on rainfall amounts, precipitation trends, high or low river flow conditions, groundwater levels, and drought status: www.mass.gov/dcr/water-data-tracking.

OVERSIGHT OF STATE WATER PROGRAMS

The Commission is responsible for reviewing and approving water resources regulations promulgated by the Department of Environmental Protection (DEP), providing an important public forum for review and comment on regulations. In 2014, the Commission approved revisions to:

- **The State Environmental Code, Title 5 (310 CMR 15.000)**, which provide for the proper siting, construction, upgrade, and maintenance of on-site sewage disposal systems.
- **Land Application of Sludge and Septage (310 CMR 32.00)** – revisions streamline the permitting process, while maintaining environmental protection.
- **Surface Water Quality Standards (314 CMR 4.00)**, which prescribe water quality criteria required to sustain the designated uses of the Commonwealth's waters.
- **Permit Procedures (314 CMR 2.00)** – revisions make public notice requirements consistent for certain state and federal permits, streamlining the process for both applicants and agencies.
- **Sewer Extension and Connection Permit Program (314 CMR 7.00)** – revisions streamline the requirements, eliminate duplication of effort, and ensure high focus on critical environmental issues.
- **Operation, Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Discharges (314 CMR 12.00)**, which relate to infiltration and inflow, capacity, combined sewer overflows, and sanitary sewer overflows. Revisions were also made to related regulations for certified operators at 257 CMR 2.00.
- **Water Management Act (310 CMR 36.00)**, implementing EEA's Sustainable Water Management Initiative (SWMI) for water withdrawals by balancing the economic need for water consumption, public health, and safety with the need to protect natural resources for both human enjoyment and ecological health. WRC staff provided support during development of the technical aspects of SWMI.



FY 2014 ACCOMPLISHMENTS

UPDATING THE INTERBASIN TRANSFER ACT REGULATIONS

Commission staff convened an interagency work group to develop recommendations to revise and update the ITA regulations. The updates are intended to provide greater clarity and flexibility, while maintaining the same high level of environmental protection. Targeted outreach to stakeholder groups was also conducted to receive preliminary input on revising the regulations. The revision process will continue in FY2015.

UPDATING THE WATER CONSERVATION STANDARDS

The Massachusetts Water Conservation Standards establish statewide goals for water conservation and water-use efficiency and provide guidance on effective conservation measures.

The standards were first developed by the Commission in 1986 as guidelines outlining minimum components of a water conservation plan. The Commission later expanded these guidelines and formally adopted standards in 1992. A major revision and update of the standards was completed in 2006, followed in 2012 by a “housekeeping” update and identification of focus areas for further review.

In FY2014, Commission staff initiated an in-depth review of the Water Conservation Standards, focusing on current best practices in five topic areas: water audits and water loss control, metering, pricing, residential water use, and outdoor water use. A work group consisting of water suppliers, consultants, environmental advocates and a variety of subject matter experts was convened to provide additional expertise and advice on proposed changes to the standards. Work on this update is anticipated to be completed in FY2015.

“The Water Resources Commission plays a unique role in state government, developing water policy by bringing together the state's ecological and human needs for discussion and analysis in a monthly public forum. Tools developed by staff, in consultation with stakeholders, are invaluable in guiding the state's water policy and in helping citizens protect local rivers and streams.”

-Julia Blatt

Massachusetts Rivers Alliance



REPRESENTING MASSACHUSETTS' WATER CONCERNS

Commission staff represented the Commission on many statewide and regional committees and boards:

- **Drought Management Task Force** – assists in monitoring, coordinating, and managing responses to droughts and recommends actions
- **State Hazard Mitigation Interagency Committee** – reviews Federal Emergency Management Agency (FEMA) mitigation grant applications
- **Massachusetts Emergency Management Agency (MEMA) Emergency Support Function** – monitors flood danger during storms
- **Association of State Floodplain Managers** – raises awareness about changes and challenges with flood insurance policy
- **Connecticut River Valley Flood Control Commission** – coordinates flood control among the Connecticut River states
- **New England Water Works Association (NEWWA) Ground Water Resources Initiative** – discusses emerging water issues with other New England state regulators
- **State Geologist Mapping Advisory Committee** – reviews federal grant proposals for state mapping

MASSACHUSETTS WATER RESOURCES COMMISSION MEMBERS

AGENCY MEMBERS:

Executive Office of Energy and Environmental Affairs

Chair & Member – **Maeve Valley Bartlett**, Secretary

Designee - **Kathleen Baskin**,

Commission Executive Director

Department of Housing and Community Development

Member - **Aaron Gornstein**, Undersecretary

Designee - **Marilyn Contreas**

Department of Conservation and Recreation

Member – **Jack Murray**, Commissioner

Designee - **Jonathan Yeo**

Department of Environmental Protection

Member - **David Cash**, Commissioner

Designee - **Bethany Card**

Department of Agricultural Resources

Member - **Gregory C. Watson**, Commissioner

Designee – **Catherine de Ronde**

Department of Fish and Game

Member - **Mary B. Griffin**, Commissioner

Designee - **Mark Tisa**

Office of Coastal Zone Management

(non-voting member)

Member - **Bruce Carlisle**, Director

Designee - **Todd Callaghan**



PUBLIC MEMBERS:

John Lebeaux, Town of Shrewsbury Selectman and
Town of Princeton Town Administrator

Robert Zimmerman, Charles River Watershed Association

Thomas Cambareri, Cape Cod Commission

Raymond Jack, Department of Public Works, Town of Falmouth

Paul Matthews, 495/MetroWest Partnership

MASSACHUSETTS WATER RESOURCES COMMISSION KEY CONTACTS

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Commission Staff

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Sara Cohen, Water Resources Specialist

Erin Graham, Environmental Engineer

Bruce Hansen, Geologist

Linda Hutchins, Hydrologist

Marilyn McCrory, Regional Planner

RAISING AWARENESS OF WATER ISSUES

Guest Speaker and Commission staff presentations are posted on the Commission's website: www.mass.gov/eea/wrc

Photo above: Quabbin Reservoir, Looking North

Cover Photo: Charles River, July 2014