

OFFICE OF WATER RESOURCES ANNUAL REPORT, FY2014



MASSACHUSETTS DEPARTMENT OF
CONSERVATION AND RECREATION

DIVISION OF WATER SUPPLY PROTECTION

OFFICE OF WATER RESOURCES

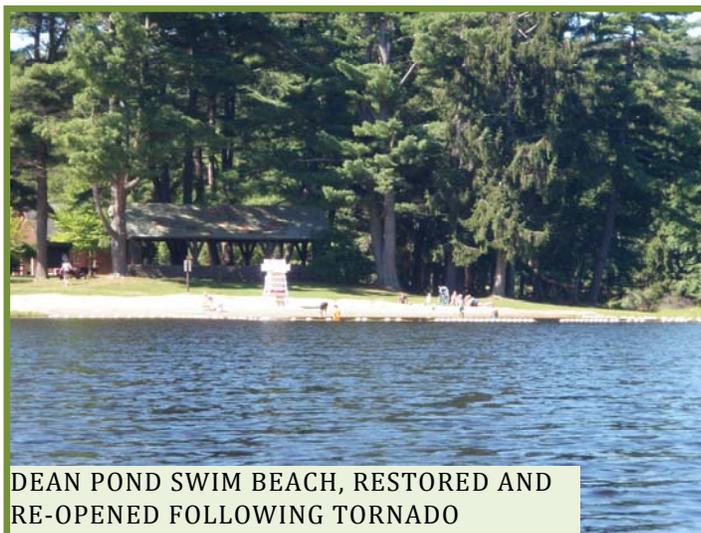
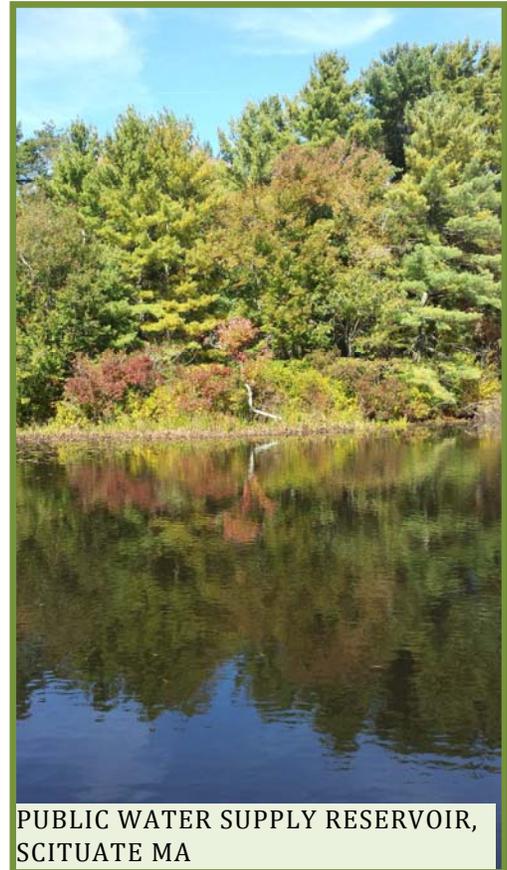


OFFICE OF WATER RESOURCES MISSION

The DCR Office of Water Resources (OWR) works on behalf of people and the environment to protect the water resources we all depend on. By providing science, policy guidance, technical assistance and resource management, our four program areas help to ensure Massachusetts will have plentiful water to support health, safety, and economic development for generations to come; and that those generations will be better prepared to face extreme weather and have greater opportunities to access lakes, ponds, and rivers that are healthy and free of invasive plants and animals.

On the following pages, we invite you to learn more about our:

- *Flood Hazard Management Program,*
- *Lakes and Ponds Program,*
- *Water Resources Assessment and Planning Program, and*
- *USGS Cooperative Program.*



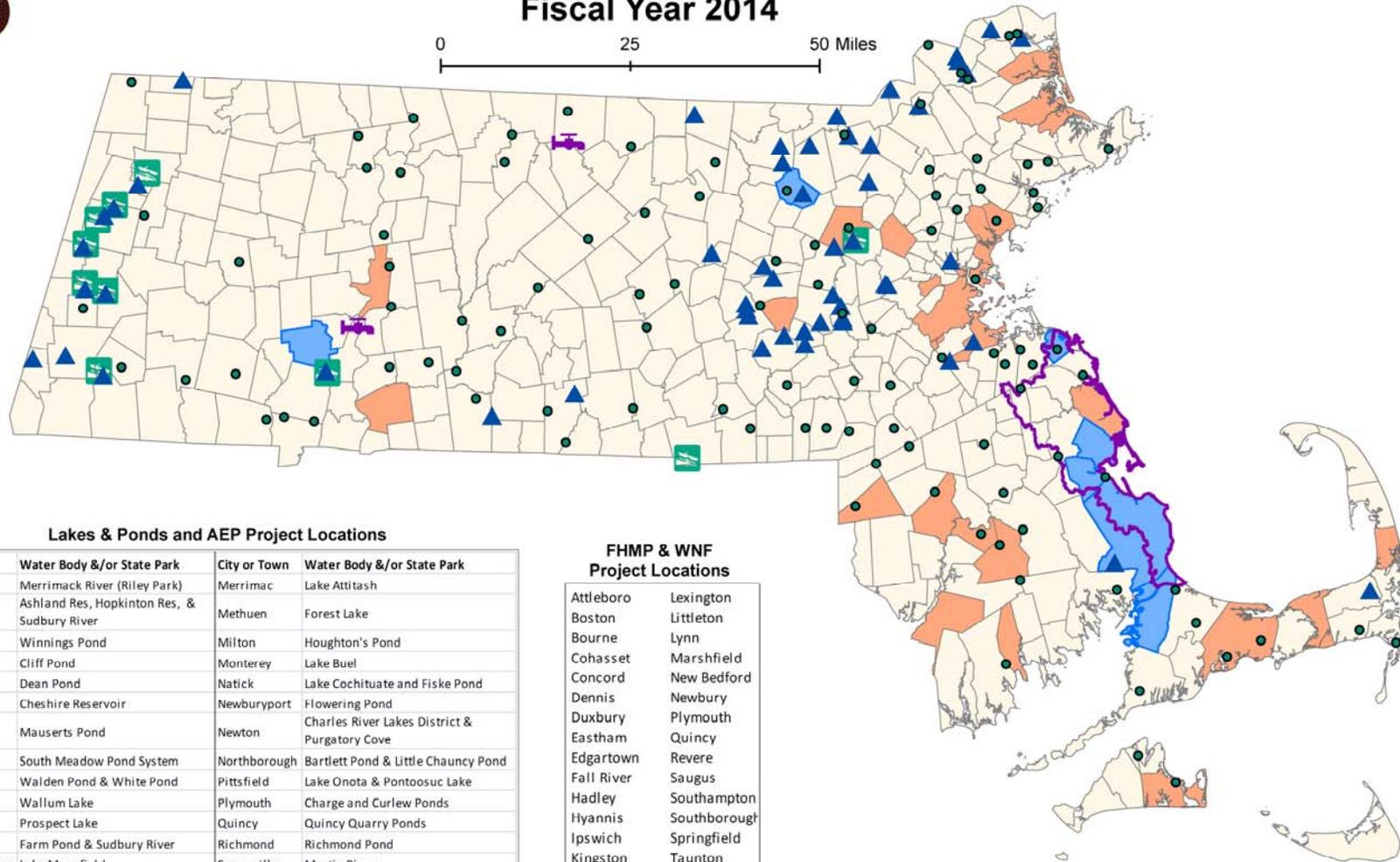
Where We Work

Office of Water Resources

Fiscal Year 2014



0 25 50 Miles



Lakes & Ponds and AEP Project Locations

City or Town	Water Body &/or State Park	City or Town	Water Body &/or State Park
Andover	Merrimack River (Riley Park)	Merrimac	Lake Attitash
Ashland	Ashland Res, Hopkinton Res, & Sudbury River	Methuen	Forest Lake
Billerica	Winnings Pond	Milton	Houghton's Pond
Brewster	Cliff Pond	Monterey	Lake Buel
Brimfield	Dean Pond	Natick	Lake Cochituate and Fiske Pond
Cheshire	Cheshire Reservoir	Newburyport	Flowering Pond
Clarksburg	Mauserts Pond	Newton	Charles River Lakes District & Purgatory Cove
Clinton	South Meadow Pond System	Northborough	Bartlett Pond & Little Chauncy Pond
Concord	Walden Pond & White Pond	Pittsfield	Lake Onota & Pontoosuc Lake
Douglas	Wallum Lake	Plymouth	Charge and Curlew Ponds
Egremont	Prospect Lake	Quincy	Quincy Quarry Ponds
Framingham	Farm Pond & Sudbury River	Richmond	Richmond Pond
Great Barrington	Lake Mansfield	Somerville	Mystic River
Groton	Baddacook Pond & Knopps Pond	Stockbridge	Stockbridge Bowl
Haverhill	Lake Pentucket, Lake Saltonstall, & Merrimack River	Sturbridge	Walker Pond
Holyoke	Mt. Tom State Reservation	Templeton	Otter River State Forest
Hopkinton	Whitehall Reservoir	Townsend	Willard Brook
Hudson	Assabet River	Tyngsborough	Mascupp Lake
Lee	Laurel Lake	Westborough	Lake Chauncy
Littleton	Long Pond	Westfield	Pequot Pond
Lowell	Concord River & Merrimack River	Westford	Long Sought-for Pond
Marlborough	Fort Meadow Reservoir		

FHMP & WNF Project Locations

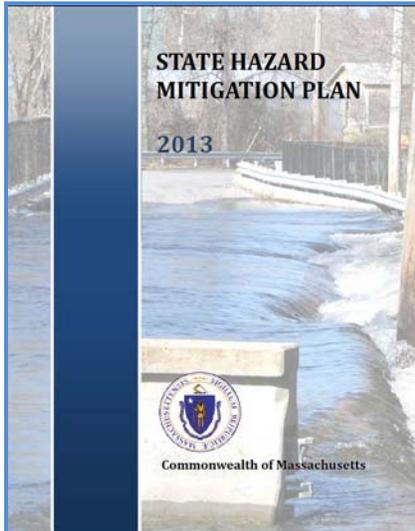
Attleboro	Lexington
Boston	Littleton
Bourne	Lynn
Cohasset	Marshfield
Concord	New Bedford
Dennis	Newbury
Duxbury	Plymouth
Eastham	Quincy
Edgartown	Revere
Fall River	Saugus
Hadley	Southampton
Hyannis	Southborough
Ipswich	Springfield
Kingston	Taunton
Lakeville	

-  Gage Locations, Precipitation Monitoring Network
-  Lakes & Ponds Projects, including zebra mussel dive inspections
-  Lakes & Ponds, Boat Ramp Monitoring
-  Accelerated Energy Program (AEP), water conservation measures
-  South Coastal Basin
-  Water Needs Forecasts (WNF)
-  Flood Hazard Management Program - Mapping & Technical Assistance

Jan. 2, 2015 (mjm)
 Data Sources: MassGIS
 DCR Office of Water Resources

FLOOD HAZARD MANAGEMENT PROGRAM (FHMP)

The Flood Hazard Management Program (FHMP), the State Coordinating Office for the National Flood Insurance Program (NFIP), provides technical assistance to communities that participate in the NFIP, including providing assistance with program requirements and floodplain management.



The FHMP was established in 1980 as the State Coordinating Agency for the NFIP. Working closely with the Federal Emergency Management Agency (FEMA), it provides a range of technical assistance services to the **336 Massachusetts communities** that participate in the NFIP. These services include:

- help in understanding the requirements for participation in the NFIP,
- interpreting flood insurance maps and other technical products,
- assistance in the review of proposed projects, and
- co-administering federal grants programs, with the Massachusetts Emergency Management Agency, for hazard mitigation.

The program also provides expertise on floodplain management and hazard mitigation to other state agencies, engineers, architects, and property owners. The program administers the Commonwealth's hazard mitigation planning and grants programs through close cooperation with the Massachusetts Emergency Management Agency.

FY 2014 FHMP HIGHLIGHTS

Our Flood Hazard Management Program staff provided assistance to more than 1,500 Massachusetts residents and public officials at public technical assistance and mapping meetings in 23 communities across the state.

The Program also assisted 80 communities with the adoption of new flood maps issued by FEMA in FY14. Each community scheduled to receive new maps must adopt the maps, at Town Meeting or by the Town or City Council, prior to the issuance of the maps in order to avoid being suspended from the National Flood Insurance Program. If a community is suspended from the NFIP, federal flood insurance and disaster assistance are no longer available to the community. **With FHMP's help, all 80 communities adopted the new FEMA flood maps on time, and none of the communities were suspended from the NFIP.**



PUBLIC TECHNICAL ASSISTANCE MEETING,
NEW BEDFORD, MA

LAKES AND PONDS PROGRAM

The mission of the Lakes and Ponds Program is to protect, restore, and enhance the ecological integrity and recreational opportunities of the Commonwealth's lakes and ponds, including DCR's 300 lakes and 51 freshwater swimming beaches.

Massachusetts has over 3,500 lakes, approximately 300 of which are on DCR property. The Lakes and Ponds Program works on behalf of park visitors and all who use lakes and ponds, as well as municipalities, communities, and lake advocate groups.

The Lanesborough Board of Selectmen would like to thank you for your help in protecting Pontoosuc Lake from zebra mussels during the July jet ski race.

This is a good example of how municipalities and the DCR cooperate to protect our precious lake resources from the many threats in today's environment while keeping access open and convenient to the public.

Lanesborough Town Administrator

The program implements its mission through protection and restoration projects; public education, outreach and technical assistance; monitoring and assessment of lakes and their watersheds; and partnerships with lake and pond stakeholders at the local, regional, state and federal levels.

FY 2014 HIGHLIGHTS

PREVENTING THE SPREAD OF INVASIVE SPECIES

Working with the Charles and Mystic River Watershed Associations and other local partners, we removed almost 2,000 tons and cleared over 100 acres of water chestnut from the Charles and Mystic Rivers, helping to restore channels and passage for recreational use, and allowing native plants a fighting chance against this dominating invasive.

SHORELINE AND SWIM BEACH RESTORATION

We designed and constructed erosion control projects using green infrastructure on Charge and Curlew Ponds at Myles Standish State Forest in Plymouth, and on Flowering Pond at Maudsley State Park in Newburyport.



WATER CHESTNUT
CHOKING THE MYSTIC
RIVER



WATER CHESTNUT HARVESTING MACHINES ON THE CHARLES RIVER

WATER RESOURCES ASSESSMENT AND PLANNING PROGRAM

The WRAP Program mission is to provide science, policy guidance, and technical assistance to decision-makers and the public to ensure that the long-term water needs of the Commonwealth's residents, communities, and environment can be met.

We work on policies and programs to preserve and protect water resources statewide, in partnership with:

- The Executive Office of Energy and Environmental Affairs (EOEEA),
- The Massachusetts Department of Environmental Protection,
- The Massachusetts Department of Fish and Game, and
- Our many diverse and dedicated stakeholders.



WRAP also provides technical and administrative staff to the Massachusetts Water Resources Commission (the Commission). Established in 1956, the Commission is responsible for developing, coordinating and overseeing the Commonwealth's water policy and planning activities. To learn more about our work on Commission Programs see FY 2014 WRAP Highlights below and in the [WRC annual report](#).

OVERVIEW OF WRAP PROGRAMS

1. Operate the **statewide rainfall network** in partnership with our volunteer observers at 150 stations since 1956 to provide critical data and track trends over time.
2. Analyze and report monthly on **statewide hydrologic conditions and drought status** and lead the state's **drought management planning** effort to help the Commonwealth effectively prepare in the event of prolonged drought.
3. Cooperate with the United States Geological Survey (USGS) to provide timely **scientific research, real-time streamflow readings, and groundwater levels statewide**
4. Ensure environmental protection when water transfers are needed by providing technical review for the Commission on all **Interbasin Transfer** applications.
5. Provide **water needs forecasts** for approximately 180 communities to help with their long-range planning and for use in applying for water withdrawal permits
6. Develop statewide **Water Conservation Standards** on behalf of the Commission and update them every five years to ensure efficient use of water.
7. Provide policy and technical guidance on the **Sustainable Water Management Initiative**
8. Provide **technical assistance** to DCR's forests and parks managers and the general public on water issues as needed.

FY 2014 WRAP HIGHLIGHTS

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 Water Resources Commission in 1986 as guidelines outlining minimum components of a water conservation plan.

In FY2014, OWR, as staff to the Commission, initiated an in-depth review of the Water Conservation Standards, focusing on current best practices. A work group consisting of water suppliers, environmental advocates, consultants, and a variety of subject matter experts was convened to provide additional expertise and advice on proposed changes to the standards.

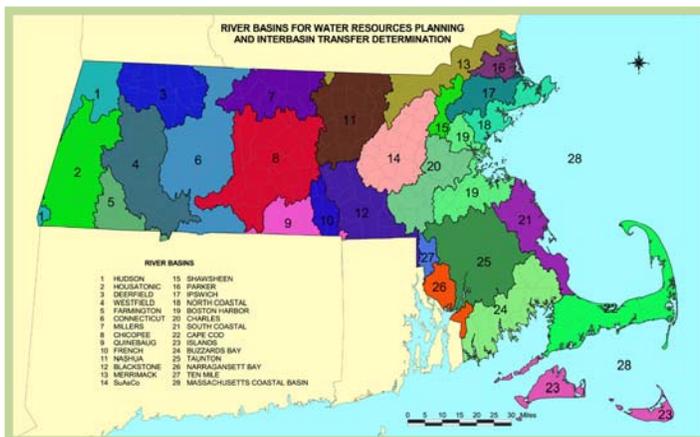
RESUMING OUR WATER NEEDS FORECASTING PROGRAM

With the expiration of the statewide Permit Extension Act (PEA), which had been in effect for four years, OWR resumed its Water Needs Forecasting Program in FY14. Forecasts are prepared using a methodology, adopted by the Water Resources Commission, which reflects a community's water-use patterns and incorporates information on population, employment, and the commonwealth's standards for efficient water use. Staff provided forecasts for communities in the South Coastal basin, along with one community each in the Connecticut and Concord River basins.

The Office of Water Resources staff quietly and efficiently develop tools that are essential for responsible water management in our state, including the water needs forecasts and water conservation standards.

If you stop and think for a moment about all the towns, cities, and waterbodies crammed into our small state, you begin to get an appreciation of the enormity of the task confronting this small staff.

*Julia Blatt, Executive Director
Mass Rivers Alliance*



UPDATING THE INTERBASIN TRANSFER ACT REGULATIONS

Staff convened an interagency work group to update the ITA regulations in order to provide greater clarity and flexibility, while maintaining the high level of environmental protection required by the Act. Targeted outreach to stakeholder groups was also conducted to obtain preliminary input on revising the regulations.

SUPPORTING THE SUSTAINABLE WATER MANAGEMENT INITIATIVE

OWR staff provided extensive analysis, technical assistance, and advisory guidance in support of EEA's Sustainable Water Management Initiative (SWMI). This initiative, whose primary implementation vehicle is the Water Management Act, balances the economic need for water consumption, public health, and safety with the need to protect natural resources for both human enjoyment and ecological health.

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[www.mass.gov/eea/agencies/dcr/
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Cover photo: Mausert's Pond, Clarksburg