



THE COMMONWEALTH OF MASSACHUSETTS
WATER RESOURCES COMMISSION
100 CAMBRIDGE STREET, BOSTON MA 02114

Meeting Minutes for October 10, 2024

Meeting conducted remotely via Zoom meeting platform, 1:00 p.m.

Minutes approved January 9, 2025

Members in Attendance:

Purvi Patel	Designee, Executive Office of Energy and Environmental Affairs (EEA)
Chris Kluchman	Designee, Executive Office of Housing and Livable Communities (EOHLC) (Becca George filled in for 1 st hour of meeting)
Duane LeVangie	Designee, Department of Environmental Protection (MassDEP)
Tyler Soleau	Designee, Massachusetts Office of Coastal Zone Management (CZM)
Anne Carroll	Designee, Department of Conservation and Recreation (DCR)
Kate Bentsen	Designee, Department of Fish and Game (DFG)
Hotze Wijnja	Designee, Department of Agricultural Resources (DAR)
Thomas Cambareri	Public Member
Christine Hatch	Public Member
Vincent Ragucci	Public Member
Kenneth Weismantel	Public Member
Samantha Woods	Public Member

Members Absent:

Others in Attendance:

Albelee Haque	MassDEP	Jessica November	DCR-DWSP
Andreae Downs	WAC	John Scannell	DCR
Becca George	EOHLC	Katie Liming	City of Worcester
Brad Chase	MA DMF	Lydia Olson	Mass Rivers Alliance
Brian Loving	USGS	Marcel Belaval	USGS
Caitlin Spence	EEA	Michael Burgess	MA DMF
Cayla Paulding	MassDEP	Michelle Regon	MassDEP
Dan Crocker	DCR-DWSP	Moussa Siri	WSCAC
Debra Berger	DCR	Nadia Madden	MA DCR
Dominique Pahlavan	EEA	Nishaila Porter	MassDEP
Edwin Sumargo	EEA	Peter Richards	MassDEP
Ellen Douglas	AECOM	Robert Smith	MassDEP
Emily Wilcox	MassDEP	Sara Cohen	DCR OWR
Erin Graham	DCR OWR	Tara Manno	MassDEP
Gardner Bent	USGS	Timothy Gardner	MassDEP
Hillary Monahan	MWRA	Travis Drury	MA DCR
Jason Duff	DCR OWR	Vanessa Curran	DCR OWR
Jennifer Durso	MassDEP	Viki Zoltay	DCR OWR
Jennifer Pederson	MWWA	Wyatt Fayne	Emerson College

Patel called the meeting to order at 1:05 pm.

Agenda Item #1: Welcome and Introductions

Patel introduced herself as Assistant Director of Water Policy for EEA and explained she was sitting in for Vandana Rao, Director of Water Policy, who was away on travel. She reminded people that the meeting was being recorded for the purposes of minutes and reviewed the agenda, the contents of the meeting exhibit packet, and meeting logistics.

Patel drew attention to the fact that the Single Environmental Impact Report (SEIR) for the Lynnfield Center Water District's Supplemental Interconnection to connect to MWRA was withdrawn without prejudice and it is expected that they will be resubmitting soon. She also reviewed the projects listed in the quarterly WRC projects update document. Carroll pointed out that the climate hydro project was not described in the WRC Annual Report but the staff would be happy to present to the WRC on this project at future meetings.

Agenda Item #2: Executive Director's Report

Patel announced that the North Shore Water Resiliency Task Force met yesterday and asked Cohen to provide an update. Cohen explained that the task force is pivoting from an information gathering phase to a decision-making phase. The meeting yesterday included votes to establish two new subcommittees and new allocation of funds to expand the facilitation team and to develop a decision-support tool.

Carroll provided an update on the MA Native Plant Palette launch event which was recently hosted at Ipswich Utilities. The event included showcasing a demonstration plant palette garden, a monarch butterfly release, and various speakers such as Undersecretary Cooper and Rep. Kristin Kassner, among others. The web app is now available at www.mass.gov/plantpalette. Another event closer to the spring when people will begin to plan their landscaping projects is also being considered.

Patel gave an update on the most recent Drought Management Task Force (DMTF) meeting, which resulted in the recommendation for a Level 1-Mild Drought for both the Central and Northeast Regions. A localized Level 1-Mild Drought was also recommended for the Boston Harbor and Hudson Basins. Lastly, it was recommended that the localized Level 1-Mild Drought be continued for the Parker River Basin.

Hatch announced that Brian Yellen was officially hired as the new state geologist. He started the position on September 3rd, 2024. She provided a link to the press release with this announcement: <https://www.umass.edu/news/article/umass-amherst-hydrologist-brian-yellen-appointed-director-massachusetts-geological>.

Agenda Item #3: Update: Hydrologic Conditions

Patel introduced Graham to present the Hydrologic Conditions Report for September 2024.

- *Temperature*: Monthly average temperatures were mostly normal.
- *Precipitation*: Precipitation was below normal in much of the state except the Cape Cod Region, Islands Region, and the southern part of the Southeast Region. According to the Northeast Regional Climate Center, the Worcester Climate Site had its 6th driest September on record. From mid-August to mid-September the Boston area experienced

its longest dry stretch in the past 25 years with 29 days of no measurable rainfall. Cape Cod and Nantucket received 5-10" of rain from a slow-moving coastal storm September 19th-22nd while other parts of the state received much less from the same system. Multiple Regions are at elevated Index Severity Levels for various look-back periods.

- *Evapotranspiration*: At the end of September both the 1-mos and 2-mos Evaporative Demand Drought Index percentiles were normal in all Regions.
- *Keetch-Byram Drought Index (KBDI)*: At the end of September the KBDI was elevated in all Regions except the Cape Cod and Islands Region.
- *Streamflow*: All Regions had a mix of below-normal and normal gages. The Western, Central, and Southeast Regions are at Index Severity Level (ISL) 2, and the Northeast Region is at ISL 1.
- *Flooding*: There was no flooding reported.
- *Groundwater*: Regional medians were in the normal range. However, multiple wells in the Northeast Region were below normal.
- *Lakes & Impoundments*: Regional medians were in the normal range although some levels were below the 30th percentile.
- *MA Drought status*: The DMTF met Tuesday and recommended Level 1 for the Northeast and Central Regions, Level 1 for the Hudson River Basin in the Western Region, and Level 1 for the Boston Harbor Basin in order to include the northern portion of the Southeast Region.
- *US Drought Monitor (USDM)*: At the start of September the USDM had D0 in the northern part of the Northeast Region. Over the course of the month D0 was introduced to Nantucket and Cape Cod and then removed. By the end of the month D0 expanded across the state except for the southern part of the Southeast Region, and D1 was introduced in the northern part of the Northeast Region. The map issued October 10th expanded the D1 farther into the Northeast Region.
- *NOAA Climate Prediction Center outlooks*: NOAA's October outlook shows chances leaning toward above-normal temperatures and no strong signal for precipitation. NOAA's 3-month outlook shows chances leaning toward above-normal temperatures in the western half of the state, chances likely for above-normal temperatures in the eastern half, and chances leaning toward above-normal precipitation for the entire state. The monthly drought outlook shows drought persisting in the northeastern part of the Northeast Region, and the seasonal drought outlook shows drought removal likely for the same area.

Agenda Item #4: Vote on Meeting Minutes, July 2024

Patel invited a motion to accept the meeting minutes for July 11, 2024.

Wijnja requested a correction to remove his name and replace it with his alternate who participated for the July 11th meeting.

V O T E	<p>A motion was made by Carroll with a second by Hatch to approve the meeting minutes for July 11, 2024, as amended by Wijnja's correction.</p> <p>The motion was approved with all but one voting in favor and one abstention.</p>
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Agenda Item #5: Presentation: Draft WRC Annual Report, FY2024

Carroll introduced her presentation on the Draft FY24 WRC Annual Report (the Report), which will provide a quick tour through the document, with questions welcomed at any point.

The first page of the Report highlights the Commission's role, structure and responsibilities. Carroll noted that this is the longest running active commission in the Commonwealth and has been meeting (to the best of our knowledge) at least monthly since 1956. The Commission will be coming up on our 70th anniversary in a few years, which is pretty amazing.

Carroll highlighted the major responsibilities which include developing, guiding, coordinating, and overseeing the Commonwealth's water policy and planning activities, as well as establishing the scientific and policy foundation for the sustainability of our water resources. Carroll noted that in the last few years we have begun noting that climate change is water change. While we have always looked at water, our lens has broadened to examine more directly the impacts of climate on water resources.

Carroll noted that the Report reflects that we are working on both ends of the hydrograph and everywhere in between. It covers the following areas which she will introduce and quickly highlight: 1) hydrologic monitoring, 2) the Flood Hazard Management Program, 3) facilitation and consensus work, 4) Interbasin Transfer Act (ITA) work, 5) water needs forecast work, 6) our role providing oversight of state water programs, 7) Special Projects, and 8) our water efficiency and conservation outreach efforts.

On hydrologic monitoring there are two major areas. The first is the tracking of conditions, and also our role as staff to the DMTF and our Director, Vandana Rao as co-chair of that task force. Carroll reminded everyone that in FY24 the DMTF was convened to track drought in the Islands Region, which lasted from November 2023, through March 2024 and reached a Level 2.

Additionally, some very important work culminated in revisions to the Evapotranspiration Index. Carroll acknowledged that it was painstaking work, and highlighted staff efforts to bring this to the Commission to update the index and start using the evaporative demand drought index (EDDI). With the Commission's vote, EDDI was approved and incorporated on our drought dashboard. It can be viewed at weekly and monthly timescales, and it's a national data product.

Carroll continued that there has also been tremendous work on hydrologic monitoring under the cooperative program with USGS, including analyzing the groundwater and streamflow networks to determine what else could be done to meet our state needs, and an evaluation on expanding the network, both of which will be covered in more detailed presentations at today's meeting.

Hatch requested that the new State Geologist (Brian Yellen) be named in the Report. While he was not officially hired in FY24 he was officially identified and chosen during that time.

Carroll next covered the Flood Hazard Management Program which is overseen by Joy Duperault on behalf of the WRC. She noted the incredible amount of work done by this team as well, highlighting some of the accomplishments such as technical assistance to 326 communities, reviews for MEPA conducted in over 100 communities, 26 training events, 36 one-on-one meetings, and numerous other special projects including several already highlighted today or at

previous presentations. Lastly, this team completed their first ever strategic plan this year, which was another excellent accomplishment, and is available if anybody is interested in seeing it.

Carroll noted that the full Report includes a lot more detail, and this high-level summary does not do justice to the amount of work involved. She encouraged everyone to review the full report to get more detail on all items, such as the types of trainings that were given.

Carroll then moved to the WRC's work in facilitation and consensus building to support regional water efforts. She noted that we have been mostly involved in the north shore and have also tried to provide some assistance to other regional efforts around water planning in the southeast. Cohen has been working with Woods and others to try to bring support to how the process could be set up, and they were able to contract with the Consensus Building Institute, which was an excellent step to move this regional effort forward. Finally, Carroll noted that there was a huge step taken by the North Shore Task Force with the adoption of the joint narrative (details of which were highlighted at the February 2024 WRC meeting), which is included in the Report.

Next, Carroll highlighted several accomplishments under the ITA Program, including the approval of the Town of Westport's Request for Determination of Insignificance. WRC staff also brought the revised ITA Performance Standards to the Commission which represented a tremendous amount of work on the part of the entire team.

She reminded the Commission that we commemorated the 40th anniversary of the ITA at our December 2023 WRC meeting. Additionally, Carroll noted that monitoring compliance from previously approved projects and providing consultation on a steady basis with project proponents for potential new transfers are additional tasks associated with the ITA. This behind-the-scenes work can be painstaking and time intensive, but it is critical.

For the WRC's water needs forecasting efforts this year, Carroll noted that staff worked in consultation with MassDEP with four different public water suppliers in three basins (the Concord, South Coastal, and Buzzards Bay) to review, revise, and update water needs forecasts.

Under the WRC's role of providing oversight of state water programs, while there were not any votes taken this past year, the Commission heard presentations from MassDEP on proposed resilience updates to the Wetlands Protection Act, as well as Chapter 91 Regulations and the Water Quality Certification Program. We also heard an update from MassDEP on EPA's new drinking water regulations for PFAS.

Carroll moved on to cover Special Projects and noted that she would provide highlights, while the Report includes details on all projects, as do the Quarterly Updates provided to the WRC. There are several projects focused on studying low flow. The first project is attempting to improve low flow statistics that would be included in stream stats in the future. The second project is looking at the drivers of low flow with USGS evaluating factors other than precipitation that could influence extreme low flows when precipitation alone is not at a level of extremity expected to result in the extreme low flow level.

Groundwater flood vulnerability mapping is another project we are working on with UMass; the Commission has been briefed on this effort at previous meetings and that work is ongoing.

Another special project is the evaluation of the Lakes and Impoundments Index in our MA Drought Management Plan. We contracted with USGS on this project and expect to have the final report available soon, likely in FY25.

Similarly, the Local Drought Management Plan Guidance was largely completed during FY24. There is a little bit more to be done on that, and then we look forward to releasing it and making it available likely as an appendix to the State drought plan sometime during FY25.

Under Special Projects, Carroll noted that several drought retrospectives were completed, largely completed, or are at the point where they will be finalized this fiscal year.

Lastly under Special Projects, Carroll noted that WRC staff kicked off a new project in collaboration with MassDEP, USGS, and the Internet of Water, which we are very excited about. The project is focusing on better storage and retrieval of water data by consolidating all the data across various programs including the ITA, water needs forecasting, and MassDEP's Water Management Act program in one location, and then being able to better visualize, query, and access the data. It is an ongoing project and we look forward to providing updates on its progress.

Carroll next summarized the Commission's water efficiency program efforts. We continue to support the Growing Wild for Pollinators, which is a complementary program that started before the MA Native Plant Palette. Additionally, we continue to be a partner with EPA's WaterSense program and try to participate in their campaigns, such as Fix-a-Leak Week.

We also convened a Water Efficiency Advisory Committee. Carroll noted that new members are always welcome if interested and should contact Duff to get involved. This group was initially meeting monthly but took a little break over the summer. They provided very helpful advice on the MA Native Plant Palette and on things like the Fix-a-Leak Week campaign and other priorities for the State.

WRC staff also try to stay very active with the Alliance for Water Efficiency (AWE) to maintain our understanding of what is happening nationally and learn from other states. We participate in several working groups, including both the Education and Outreach and Research Committees, and were able to attend the annual AWE symposium this past year.

Carroll concluded by acknowledging how grateful she was to work with this team. The team's devotion is remarkable, as is their perseverance and expertise. All the great work reflected in the Report is the result of a fabulous team, and we very much appreciate the Commission's support of our work, and their guidance as we move forward.

Agenda Item #6: Presentation: Annual Update on the DCR-USGS Cooperative Hydrologic Monitoring Program

Patel introduced Loving, who gave an annual update on the cooperative hydrologic monitoring program. The full presentation is available at: <https://www.mass.gov/info-details/review-the-meetings-of-the-water-resources-commission>. Highlights of the presentation are below.

Loving began by outlining the history of the monitoring partnership between USGS and DCR, which has existed for over 100 years. Stream gages are as old as 100 years, with an average of 60 years of data. Groundwater monitoring wells are as old as 80 years, with an average of 47 years of data. He shared a map of the data types and locations of monitoring stations which include the following characteristics:

- Streamflow and level – 51 Stations
- Stream level only – 5 Stations
- Tide level – 3 Stations
- Atmospheric – 7 Stations
- Stream chemistry – 1 Station
- Groundwater level – 66 Stations
- Groundwater level (monthly) – 57

In the last year, six of the monthly groundwater monitoring stations have been converted to real-time digital monitoring.

The monitoring network is used for both drought and flood hazard management, with the information being shared with the DCR MA Drought Dashboard and the National Weather Service Flood Forecasting models. USGS also shares this data as part of the National Water Dashboard, as part of the Water Data for the Nation (WDFN) station pages, WaterWatch, and the New England Groundwater Levels App. Multiple agencies provide this data on their websites for different purposes.

Funding appropriations for USGS for the cooperative network monitoring program have been flat for many years. Inflationary increases in the monitoring budget are covered by DCR, along with increases in wells and improvements in monitoring frequency. FY24 costs were \$1.35 million and FY25 costs rose to \$1.5 million. The FY26 scope and budget have not been finalized, but a table of the costs per record type was shared.

Upcoming work includes surveying all stations to NAVD88. Surface water stations are almost complete, and groundwater wells will be surveyed in the 2025 calendar year.

Hatch asked if there is a cost savings in converting monthly monitoring of wells to automated monitoring. Loving said there is an operational decrease in travel and labor costs, but an increase in overall costs for equipment and maintenance.

Cambareri commented that the cooperative was a great program, and that the data is useful for many different applications on the Cape and elsewhere. He expressed thanks that the OWR has been able to fund this work as a public service, and that the Cape Cod Commission would be willing to help advocate for continued funding.

Agenda Item #7: Presentation: Hydrologic Monitoring Network Expansion Update

Zoltay gave an update on the hydrologic monitoring network expansion. The full presentation is available at: <https://www.mass.gov/info-details/review-the-meetings-of-the-water-resources-commission>. Highlights of the presentation include:

- An overview of the number of sites in the monitoring network which collect data on streamflow, groundwater, tides, precipitation, and lakes/impoundments.
- An explanation of how the monitoring data gets used by various organizations, including state and federal agencies.
- The monitoring network expansion was given a large boost with a historic funding opportunity to expand the network (75% increase to \$1.93 million for FY25)
- Network analyses were also completed prior to expansion to recommend and prioritize stations for expansion. The process involved evaluating active sites to determine if they should be discontinued, assessing gaps in remaining sites, reactivating certain discontinued sites, evaluating remaining gaps, and finally establishing new sites. The analyses began in 2021 and were completed in September 2024.
- New sites were prioritized with a focus on streamflow because there is no federal funding for installing new streamflow gages, whereas there is federal funding for drilling new groundwater wells. Prioritization was also given to sites that would fill large spatial gaps and to headwater streams. For groundwater, the priority was for more till wells and more coastal wells.
- By the end of FY25, the monitoring network characteristics will include an additional 19 streamflow gages (73 total), five more groundwater wells (118 total), and one new precipitation gage (58 total).
- The FY25 expansion cost \$620,000, which brought the total network spending to \$1.84 million. The remaining \$50,000 in the budget will cover UMass manual measurements and completion of the USGS drivers of low flow study.

Carroll thanked Zoltay for her vision and perseverance throughout this project. She also thanked all the partners that were mentioned during the presentation, as well as Rao for securing the funding for the project.

Pederson asked Zoltay to explain the lakes and impoundments expansion in more detail. Zoltay replied that there was a separate USGS study to evaluate lakes and impoundments. Zoltay and Graham will likely come to the WRC with recommendations on how to move forward with that expansion based on the USGS findings.

Cambareri thanked Zoltay and the other staff involved for the work on the project. He asked about the impact analysis for the well in Truro (MA-TSW 89). Zoltay explained that an infiltration trench was installed right next to the well, which causes an inaccurate representation of groundwater levels. Cambareri also asked if Cape Cod staff were involved in the decision making, to which Zoltay replied that they were involved in the meetings. He added that the Truro well is used for dictating septic system installations across a lot of the Cape. Zoltay commented that they will need to update their processes because the Truro well will no longer be available.

Hatch thanked Zoltay for all the work that went into the project. She also commented that she recently saw a webinar on a decision support tool for calculating high flows and low flows with the incorporation of climate change information, called “CAFÉ” (Calculation Assistant for Flow Extremes Decision Support Tool). She noted that it might be a good tool for the WRC and staff to be aware of. Hatch provided the following links for additional information:

- <https://necasc.umass.edu/webinars/introducing-cafe-calculation-assistant-flow-extremes-decision-support-tool>

- <https://andrewdelsanto.shinyapps.io/HighFlowDSS/>

There were no other questions or comments. Patel asked for a motion to adjourn the meeting.

V O T E	A motion was made by Hatch with a second by LeVangie to adjourn the meeting. The motion was approved in a unanimous vote by those present.
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Meeting adjourned at 3:00 pm

Documents or Exhibits Used at Meeting:

1. WRC Meeting Minutes: July 11, 2024
2. Quarterly Update on WRC Special Projects
3. FY2024 Draft WRC Annual Report
4. WRC FY2024 Workplan
5. Report of the Findings, Justifications, and Decision of the Water Resources Commission Relating to the Approval of the Littleton Electric Light and Water Department's Request for an Interbasin Transfer Pursuant to M.G.L. Chapter 21 § 8C
6. Correspondence documents from the WRC to MEPA, including letters with the following dates and content:
 - a. September 6, 2024, regarding the Final Environmental Impact Report (FEIR) for the A1/B2 Asset Condition Refurbishment (ACR) Project in Fitchburg, Gardner, Winchendon, Leominster, Sterling, Royalston, Warwick, Athol and Westminster.
 - b. September 12, 2024, regarding the Environmental Notification Form (ENF) for the Hingham Waterfront Resiliency Project in the Town of Hingham.
 - c. September 23, 2024, regarding the Single Environmental Impact Report (SEIR) for the Lynnfield Center Water District's Supplemental Water Interconnection with Wakefield to connect with the Massachusetts Water Resources Authority (MWRA) system.
 - d. September 24, 2024, regarding the Notice of Project Change (NPC) for Haverhill Landfill Closure in the City of Haverhill.
7. Interbasin Transfer Act project status report, September 30, 2024

Compiled by: WRC staff

Agendas, minutes, and other documents are available on the web site of the Water Resources Commission at <https://www.mass.gov/water-resources-commission-meetings>. All other meeting documents are available by request to WRC staff at 10 Park Plaza, Suite 6620, Boston, MA 02116.