



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

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**Meeting Minutes for May 8, 2025**

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

*Minutes approved August 14, 2025*

**Members in Attendance:**

Vandana Rao	Designee, Executive Office of Energy and Environmental Affairs (EEA)
Becca George	Designee, Executive Office of Housing and Livable Communities (EOHLC)
Duane LeVangie	Designee, Department of Environmental Protection (MassDEP)
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)
	<i>(Replaced by Sarah Miller starting at 2:00 pm)</i>
Thomas Cambareri	Public Member
Christine Hatch	Public Member
Kenneth Weismantel	Public Member
Samantha Woods	Public Member
Vincent Ragucci	Public Member

**Members Absent**

Tyler Soleau	Designee, Massachusetts Office of Coastal Zone Management (CZM)
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**Others in Attendance:**

Aimee Graeber	DCR	Jen Keegan	UMass Amherst
Andreae Downs	Wastewater Advisory Committee	Jennifer Durso	MassDEP
		Jennifer Pederson	MWWA
Bailey Mullins	DCR OWR	Julianna Huba	UMass Amherst
Belkis Roman	EEA	Kate England	MassDEP
Branden Costa	MassDEP	Kerry Reed	Hopkinton DPW
Caroline Anderson	DCR	Leslie Gabrilksa	MassWildlife
Cayla Paulding	MassDEP	Lydia Olson	Mass Rivers Alliance
Charlotte Kafka-Gibbons	DCR	Maura Callahan	Callahan Consulting, Inc.
Colleen Rizzi	MWRA	Michael Virgilio	DCR DWSP
Dan Crocker	DCR DWSP	Patty Gambarini	Pioneer Valley Planning Commission
David Boutt	Umass Amherst		
Erin Graham	DCR OWR	Rebecca Faucher	MassDEP
Gabriel Olland	UMass Amherst	Richard Bradley	Superscape Landscape LLC
Ginny Dautreuil	DCR DWSP	Sara Cohen	DCR OWR
Hillary Monahan	MWRA	Sara Northrup	DCR
Jason Duff	DCR OWR	Sarah Miller	MDAR

Tara Manno	MassDEP	Vanessa Curran	DCR OWR
Tay Evans	MassDEP	Viktoria Zoltay	DCR OWR
Todd Melanson	Billerica Water Division		
Toni Stewart	DCR OWR		

Rao called the meeting to order at 1:01 p.m.

**Agenda Item #1: Welcome and Introductions**

Rao announced that the meeting was being recorded for the purpose of meeting minutes. All votes would be taken by roll call. She invited those who wish to speak during the meeting to indicate this in the chat window. Members and attendees introduced themselves and a roll call vote of commissioners was taken.

**Agenda Item #2: Executive Director's Report**

Rao noted that a good amount of rain has fallen over the last month, which is helping toward getting out of the drought, but all regions are not in the clear yet. The Drought Management Task Force made the recommendation the day prior to pull the Central Region out of a drought but all other regions are still in some level of drought. Rao stated the Task Force is considering whether there should be a mid-month meeting if conditions continue to improve and will keep Commissioners updated.

Rao pointed out that a lot of thought had gone into drought messaging. Although there has been a good amount of rain, drought conditions have remained. Questions were raised by the public regarding why, despite recent rainfall, there is still a drought. Rao added that precipitation is not the only driver and that a few rain events might not be sufficient to pull a region out of drought when there has been a significant deficit. It was further noted that groundwater levels also need to be replenished for Regions to come out of drought. Consideration is being given to how this messaging should happen, and collaboration is underway with the Massachusetts Water Works Association to pull together a group of water suppliers for feedback. Additionally, the online FAQ is being updated and Rao acknowledged that the frustrations from the public had been heard.

Rao asked the Commissioners for feedback and any suggestions. Hatch, who has experience as an educator and works with many communities, was asked whether any thoughts come to mind about messaging and communication strategies. Hatch said she and Boutt were recently interviewed by local media and were asked about groundwater flooding and long-term trends of groundwater levels going up, and Hatch also mentioned the recent drought conditions. Hatch noted a project in Puerto Rico studying the groundwater table and is working to create some materials that are both clear to the public and accurate even when topics are confusing. It can be difficult to explain things that are not visible to the public so it can be challenging to find ways to connect the information or find helpful analogies. Hatch also finds it helps to talk about the timing of the different systems (precipitation vs. groundwater).

Woods suggested that when explaining to the public the lag time of groundwater and the water table most people could relate to a savings account analogy. An older demographic, which understands living on savings, can equate a message about groundwater recharge and drought with something relatable in their lives.

Cambareri remarked that the messaging is good overall but expressed concern that announcing a drought during winter can be confusing to the public. The actions required during drought largely relate to outdoor watering and conserving water. Cambareri emphasized the need to work on the winter messaging for drought.

Rao mentioned that messaging had been tailored over the last couple of months to address the winter drought, including what actions the public should take and how they can be more efficient with indoor use. Rao added that although the drought is slowly improving and it has been raining, questions remain about why conditions have not yet returned to normal. She noted the challenge of communicating this and encouraged everyone to share suggestions for messaging.

Weismantel thanked Baskin and MassDEP for discussing PFAS. Weismantel mentioned that five people from Hopkinton took a tour of the Littleton water treatment plant which is treating for iron, manganese, and PFAS. Weismantel thanked Paul Denaro and the Littleton water team for a great tour. He also expressed excitement about the new plant and noted its efficiency. The plant and process could make more contaminated sources viable, and it is less costly than some estimates Hopkinton has gotten. Weismantel explained that the local TV station spent an hour with him to record and air his PFAS presentation on local cable TV and YouTube. Rao added that it is good to hear about cost-effective ways to manage those contaminants and encouraged sending the link to the YouTube video.

Wijnja put a link in the chat to an announcement from MDAR about the Climate Smart Agriculture Grant Program that is open for applications. The grant program supports farmers adapting to climate change challenges, including practices related to improving water efficiency and quality. Applications are due on June 18. Wijnja had the opportunity to join a meeting at a UMass extension event at a farm that had received a grant to acquire equipment supporting the expanded use of cover crops, which is just one practice that improves water management on farms.

Rao mentioned that environmental license plates are available as part of the Massachusetts Environmental Trust, and that April 24 marked Right Whale Day. The importance of protecting this highly endangered species was emphasized, with only 372 individuals remaining in the world. The MET program has five license plates, and funding generated through license plate sales goes towards aquatic resource projects. A new grant round will be announced soon and is open to watershed organizations, other non-profits, regional planning agencies, and state agencies, filling a niche in grassroots level environmental conservation. Rao encouraged everyone to check out the MET page and spread the word about the license plates.

Rao thanked Pederson for bringing up Drinking Water Week in the meeting chat and recognized the water suppliers across the state who do a tremendous job of providing clean drinking water, despite the challenges involved.

**Agenda Item #3: Update: Hydrologic Conditions and Drought Status**

Rao introduced Graham to present the Hydrologic Conditions for April 2025.

- *Temperature*: Monthly average temperatures were near to above normal.

- *Precipitation*: Precipitation was mostly normal. A few sites were in the above normal and below normal ranges. The 6-month lookback is still showing deficits in the Connecticut River Valley and Cape Cod Regions, and there are still deficits in all drought regions since the beginning of the drought.
- *Snow Cover*: At the end of April there was no snow cover, although there was a snowstorm on April 12<sup>th</sup> that brought up to 9-inches of snow in higher areas of the central part of the state. The season-to-date snowfall departure ranged from 10 to 40 inches.
- *Evapotranspiration*: As of April 30<sup>th</sup>, 2025, the 1-month and 2-month Evaporative Demand Drought Index percentiles were at elevated drought index severity levels for all drought regions. However, given it is early in the season, the estimated values of evapotranspiration were only a few tenths of an inch.
- *Keetch-Byram Drought Index*: At the end of April, the Keetch Byram Drought Index values were all in the normal range.
- *Streamflow*: April streamflow ranged from below normal to normal.
- *Flooding*: The Boston/Norton and Albany NWS E-5 Monthly Reports of Hydrologic Conditions did not indicate river flooding at forecast points. There were no National Weather Service flood warnings or local storm flooding reports.
- *Groundwater*: April groundwater levels ranged from below normal to above normal.
- *Lakes and Impoundments*: While water levels have increased and some systems are 100% full, at the end of April, 9 of the 15 reporting lake and impoundment sites were below their 30<sup>th</sup> percentile.
- *MA Drought status*: The latest declaration shows one or two level improvements in all Regions except for the Cape and Islands, which stayed the same.
- *U.S. Drought Monitor (USDM)*: From the end of March to end of April, there were improvements in the western part of the state, and Cape Cod went from D0 (Abnormally Dry) to D1 (Moderate Drought).
- *NOAA Climate Prediction Center outlooks*: NOAA's April outlook shows chances leaning toward above normal temperatures and no strong signal for precipitation. NOAA's 3-month outlook shows chances likely for above normal temperatures and chances leaning for above normal precipitation. The monthly and seasonal drought outlook shows drought removal in central parts of the state, Cape Cod, and Nantucket.

#### **Agenda Item #4:**

Rao invited motions to approve the meeting minutes for February 2025.

V O T E	A motion was made by Hatch with a second by Weismantel to approve the meeting minutes for February 13, 2025.
	The vote to approve was unanimous of those present.

#### **Agenda Item #5: Presentation: Draft WRC FY26 Work Plan**

Rao reminded Commissioners that Staff bring the next year's work plan each spring for a vote and approval. She introduced Carroll to provide an overview of the FY26 work plan. Carroll referred Commissioners to the four-page word document included with their meeting packets as the draft work plan that will be voted on. Today's presentation includes highlights from the draft work plan. The document has an introduction with background on the WRC followed by a

description of the work that Staff will be involved in organized by topic. Each topic includes a list of on-going activities plus special projects. Finally, at the end of the document there are topics which are not specific actions in the work plan for the upcoming year, but represent ideas for future work that staff are considering and looking for feedback on. Rao added that despite the work plan, there are regulatory timelines such as for the Interbasin Transfer Act that must take priority at times to meet certain deadlines. The presentation can be found online at: <https://www.mass.gov/info-details/review-the-meetings-of-the-water-resources-commission>. Highlights from the presentation are below.

Carroll started the presentation with an introduction that included a brief history of the WRC and noted that we are approaching 70 years since the Commission was created. WRC members include those from agencies as well as the public. The leadership team and staff members to the Commission are also listed.

Carroll noted that a new requirement for accessibility across work products will take time across all activities with special challenges faced by the many presentations that are created by staff. In the short term, some items may need to be taken down from the website, but they will remain available by request.

Under the drought plan implementation there are multiple items that are on-going from last year including the groundwater record extension and lake and impoundments index projects. An intern is coming on-board to help staff complete drought retrospectives. Finally, the local drought management plan is getting final touches before being made more widely available. Carroll pointed out that throughout the presentation it is noted where work is completed in cooperation with the EEA Climate and ResilientMass teams as denoted by the green C on certain slides. The remaining items in this section are regular, on-going work with the Drought Management Task Force, U.S. Drought Monitor input, and improving the drought dashboard.

Under hydrologic conditions monitoring and analysis, there are multiple studies on-going including drivers of low flow in Massachusetts, climate and streamflow projections and risk, riverine pluvial flood mapping, and groundwater flooding vulnerability. For ongoing activities there is the precipitation program, monthly reporting of conditions to the WRC and DMTF, and the cooperative program with USGS and the State Geologist's Office.

On water efficiency, it is mostly continuing the ongoing work focused on messaging with adding to the existing social media products. Staff are also continuing relationships with the Alliance for Water Efficiency and the ad-hoc Water Efficiency Advisory Group in MA as needed. Of note is that multiple products advocated for by the Advisory Group, like the MA Native Plant Pallet, are now completed. The Drought Resiliency and Water Efficiency Grant program which started last year will continue in FY26. In April, 13 applicants received a total of \$500,000 towards projects. This will be led by Patel and Duff who will be using lessons learned from the first grant round to improve the program. Awardees from the first grant round will be coming to the Commission to present results.

Interbasin transfers are multiple and busy as usual. At the request of the Unlocking Housing Commission, a review will be conducted to make any changes that would streamline the application and approval process. Results of that will be brought back to the Commission.

Under water data management and needs forecasting, staff are working with USGS to create a database for all water related data that will allow for better access and visualization from across databases.

The flood program has numerous activities, most of which are in cooperation with the Climate Team and some of which are funded through ResilientMass. Phase 1 of the Statewide Flood Framework is wrapping up as well as the Flood Vulnerability Assessment for Environmental Justice Communities. Significant work continues to develop higher standards for the Massachusetts Building Code. An incredible amount of work continues to be done as part of the National Flood Insurance Program as listed. This year even more training and outreach is being conducted.

Although regional collaboration and stakeholder engagement is called out as a new section, these activities have been going on since the 1980s, providing support and leadership on complex water resources challenges. Cohen, Duff, Carroll and others including staff at DEP have been supporting various efforts including on the North Shore, in the Southeast, and in the Old Colony Planning Council region.

There are multiple boards and committees that staff serve on as listed. Finally, Carroll reviewed some potential future projects that could be taken on in FY26 or beyond, depending on staff capacity.

Comments, questions, and responses:

George appreciated that staff will consider how to streamline the Interbasin Transfer Act application and approval process and EOHLC looks forward to collaborating. In addition, EOHLC also appreciates being included in the regional stakeholder collaboration and looks forward to cooperating on that as well. One consideration is adding the Executive Office of Economic Development to explore opportunities for water efficiency for industrial, commercial and industrial sectors. Finally, EOHLC looks forward to collaborating on the next generation of water supply policy as well. Rao will follow up with EOHLC to determine the appropriate people at the Executive Office of Economic Development for collaboration.

Weismantel asked whether changing federal priorities and funding are affecting any of the work plan. Rao stated that state funding is not necessarily affected but USGS, for example, has experienced a reduction in staff and potentially their ability to complete all the activities needed by the state. Impacts are not yet clear but staff are preparing alternate options.

Hatch mentioned the nutrient management zones around the Cape and Islands and whether any activities might happen around that. Rao mentioned that that would mostly be DEP-related and she can follow up with them to get back to Hatch. Cambareri recalled that significant legislation was passed recently regarding nitrogen sensitive areas that are now being used as one of the main drivers in Cape Cod town meetings to appropriate funding for wastewater treatment.

Discussion was stopped and postponed until after Dr. David Boutt's presentation and then resumed afterwards. Rao solicited additional input after that presentation. Woods commended Cohen's work on the South Shore facilitated collaboration work and supports her continued

efforts in the next year. In the chat, Pederson indicated the potential impact to the State Revolving Fund program and the public water suppliers that rely on it. Pederson supported the water needs forecasts and the need for new, updated forecasts. Rao acknowledged this need and that staff work closely with DEP based on their needs with permitting. Carroll confirmed the collaboration with DEP and that initial conversations with experts have taken place regarding population projections and other topics. LeVangie added that permitting is still catching up and they provide DCR with a heads up when new ones are needed.

There have been questions about the housing initiatives and how that might affect projections. These questions have been referred to DCR for consideration as needed by and applicable to individual towns. Pederson pointed out that some of the permittees currently in renewal have forecasts that are 9 years old or older. LeVangie noted that some of the issues are around towns using and needing less water than previously allocated. The second big topic is how to mitigate new needs. About half of permittees are planning to work with their baseline volumes and are not planning to mitigate.

**Agenda Item #6: Presentation: Using satellite-derived groundwater data to understand droughts and inter-annual water storage patterns**

Zoltay introduced Boutt from UMASS Amherst. Boutt began by emphasizing the importance of the federal monitoring network and collaboration with state partners. This presentation is part of a new project examining how changes in the water cycle affect groundwater storage and recharge. The project, a cooperative effort between the USGS and several academic institutions in New England, involves analyzing historical water storage trends, using isotopic tracers to better understand residence times, and developing an integrated hydrologic model. The presentation can be found online at: <https://www.mass.gov/info-details/review-the-meetings-of-the-water-resources-commission>.

Presentation highlights include:

- Grace Satellites are twin satellites launched by NASA measuring change in Earth's gravitational field.
- Wet years have generally offset drought effects on terrestrial water storage.
- The USGS wells used in this research primarily reflect deeper groundwater storage rather than shallow soil moisture or transient aquifers.
- Regionally, trends dating back to the 1960s show a long-term, steady rise in the water table.
- During wet periods, such as 2018, 2021, and 2023, less water appears to percolate into deep groundwater systems.
- Water table anomalies are more pronounced in March, April, and May, and are less significant during the rest of the year.
- After 2018, terrestrial water storage anomaly patterns have diverged from groundwater storage anomalies.
- Surface water and shallow groundwater show an increasing trend in recent years.
- It is hypothesized that deeper water tables may have reached a saturation threshold, limiting further rise and explaining the absence of an upward trend.
- Findings and observations:
  - Grace based TWS captures storage change on three scales (event, annual, interannual).

- Magnitude of TWS is consistent with about 20% of annual precipitation being added/removed from storage.
- TWS shows strong interannual increases in storage.
- Increases in storage of water on the landscape comes in pulses and are holdovers from wet years.
- Deep groundwater storage has been increasing since the 1960's, but the last 25 years has seen a flattening trend.
- Groundwater observation network is capturing deeper groundwater storage and not shallow transient perched systems.
- Storage of water must be at the surface, in soil, and/or in shallow saturated zones.

Comments, questions, and responses:

Rao asked if the storage in the water storage figure is both surface and groundwater. Boutt clarified it is surface, soil, and groundwater. Rao asked what constitutes an anomaly in this situation. Boutt responded that the baseline is 2005 to 2009 and an anomaly is any deviation from the baseline. Rao also asked whether satellite data could be used to analyze a specific surface water body. Boutt responded that the GRACE satellite product operates on a very large scale, making such localized analysis unlikely. However, he noted that a new satellite called SWOT, launched in 2022, is capable of detecting changes in surface water bodies at centimeter to millimeter precision. Hatch commented that some of the surface water storage could potentially be ground-truthed using COSMOS data.

LeVangie asked how the severity of drought conditions might impact the situation. In response, Boutt noted that droughts are becoming increasingly extreme, yet there is also more surface water storage. Boutt emphasized the importance of considering what this reveals about how the hydrologic system is responding to drought. Boutt added that further work is needed to fully understand these dynamics. Rao pointed out that in recent years, many drought events have resulted in record-low precipitation levels.

There were no other questions or comments. Rao invited a motion to adjourn the meeting.

V	A motion was made by Weismantel with a second by LeVangie to adjourn the meeting. The roll-call vote to approve was unanimous of those present.
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Meeting adjourned, 2:53 pm.

**Documents or Exhibits Used at Meeting:**

1. WRC Meeting Minutes: February 13, 2025
2. Draft WRC FY26 Workplan
3. Report of the Findings, Justifications and Decision of the WRC Relating to the Approval of the Lynnfield Center Water District's Request for an Interbasin Transfer
4. WRC Decision on the Request for Determination of Insignificance Under the Interbasin Transfer Act for Sunrise Senior Living
5. Correspondence documents from the WRC to MEPA, including letters with the following dates and content:



- a. April 7, 2025, regarding the Draft Environmental Impact Report (DEIR) for the Revere High School Project in the City of Revere
  - b. April 7, 2025, regarding the Expanded Environmental Notification Form (EENF) for 75 Morrissey in Boston
  - c. April 7, 2025, regarding the DEIR for the Town of Plainville Department of Public Works' proposed Water Treatment Plant in the vicinity of Turnpike Lake in Plainville
  - d. April 25, 2025, regarding the DEIR for One Oceanfront South Development (fka Big Block Development) in the Town of Salisbury
  - e. April 29, 2025, regarding the Environmental Notification Form (ENF) for 108 Tafts Avenue in the Town of Winthrop
6. Interbasin Transfer Act project status report, May 1, 2025
  7. Hydrologic Conditions in Massachusetts, April 2025 (available at <https://www.mass.gov/info-details/monthly-hydrologic-conditions>)

*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.*