



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

Meeting Minutes for January 11, 2024

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

Minutes approved April 11, 2024

Members in Attendance:

Vandana Rao	Designee, Executive Office of Energy and Environmental Affairs (EEA)
Duane LeVangie	Designee, Department of Environmental Protection (MassDEP)
Anne Carroll	Designee, Department of Conservation and Recreation (DCR), Replaced by Vanessa Curran at 3 pm
Chris Kluchman	Designee, Executive Office of Housing and Livable Communities (EOHLC) Replaced by Becca George at 3 pm
Kate Bentsen	Designee, Department of Fish and Game (DFG), left at 2 pm
Christine Hatch	Public Member, Absent 2-3 pm
Kenneth Weismantel	Public Member
Samantha Woods	Public Member
Vincent Ragucci	Public Member, Left at 3 pm
Thomas Cambareri	Public Member, Joined at 2:02 pm

Members Absent

Hotze Wijnja	Designee, Department of Agricultural Resources (DAR)
Tyler Soleau	Designee, Massachusetts Office of Coastal Zone Management (CZM)

Others in Attendance:

Andreae Downs	Water Supply Citizens Advisory Committee (WSCAC)
Becca George	EOHLC
Zeus Smith	Charles River Watershed Association
Chris Bruet	U.S. Geological Survey (USGS)
Erin Graham	DCR/OWR
Sara Cohen	DCR/OWR
Jason Duff	DCR/OWR
William Chapman	Edgartown Water Department
Jennifer Pederson	Mass Water Works
Alex White	MassDEP
Moussa Siri	WSCAC
Sefatia Romeo Theken	DFG
Paul Barlow	USGS
Kerry Read	Hopkinton DPW
Jennifer D'Urso	MassDEP
Sarah Bower	Mass Rivers Alliance
Vanessa Curran	DCR/OWR
Viki Zoltay	DCR/OWR
Nadia Madden	DCR/OWR
Ellen Douglas	AECOM
Travis Drury	DCR/DWSP

Andrew Brolovski	Boston/BWR/EaIV
Elizabeth McCann	MassDEP
Caitlin Spence	Office of Climate Science (OCS)
Daniel Crocker	DCR DWSP
Linjun Yao	MassDEP
Elizabeth Gorda	DCR
Katelyn Kelly	MassDEP
Albelee Haque	MassDEP
Jaclyn Sidman	MassDEP
Alexander Surreira	MassDEP
Sean Gonsalves	MassDEP
Fabienne Alexis	MassDEP
Brett Hubbard	MassDEP
John Sheppard	FWE
Purvi Patel	Massachusetts Environmental Policy Act
Stephanie Berkman	FWE
Sofia Savoca	MassDEP
Richard Rondeau	MassDEP
Shi Chen	MassDEP
Kyle Tronerud	CDM Smith
Fabienne Alexis	MassDEP
Brandon Cannata	Chelmsford Water
Julie Butler	MassDEP
Heidi Zisch	MassDEP

Rao called the meeting to order at 1:05 p.m.

Agenda Item #1: Welcome and Introductions

Rao introduced herself, welcomed attendees, reminded all to put their name and affiliation in the chat for the meeting minutes, to use the chat for any questions and to keep microphones on mute until called upon. She also mentioned that the meeting was being recorded for the purpose of the meeting minutes. A roll call of members in attendance was taken by Cohen; a quorum was present.

Agenda Item #2: Executive Director's Report

Rao called attention to contents of the meeting packet. First, the Quarterly Report on Special Projects was included. She highlighted a few projects and thanked the staff for managing these projects. Many of them address some aspect of climate change. Hatch commented on how swimming resources are increasingly affected by E. Coli and whether there is a statewide effort to address this issue. Carroll offered to present to the WRC on the Office of Water Resource's Lakes and Ponds Program that focuses on DCR's 51 freshwater beaches. There has been an effort underway to reduce these impacts including working with engineers on stormwater management and bacterial source tracking. The program is also engaging with the new research office. In addition, the office is in the process of hiring a lead for the Lakes and Pond Program so that more work can be done. Suggestions for initiatives for the program are welcome even looking beyond DCR.

Rao continued that there is also an interbasin transfer status report in the packet which is important to review in order to understand the stage that each project is at because ultimately they will come before the WRC. The table does not include informal conversations with communities because it can take years from that stage until coming before the WRC.

The DMTF met and made a recommendation to the Secretary to declare the Islands at a Level 2 Drought which is a continuation of last month's status. There have been a few storms by the time of the meeting and more forecasted but groundwater continued to decline on the Islands. Since some improvement is expected from those storms and there is little water use on the Islands, status quo was kept to prevent changing back and forth between months. Close monitoring continues.

Hatch asked about the Westport pre-application status and the potential effect of proposed transfers on local estuaries and saltwater intrusion. Curran explained that the water will be transferred from Fall River's two-reservoir system which has sufficient capacity and the amount planned is likely to be insignificant at less than 1 million gallons per day.

Rao proposed the idea of the WRC giving out an annual award to exemplary entities with respect to water conservation that may be in the private or public sector. Some of the good work take years to implement and it could be helpful to recognize such efforts. LeVangie advised to define the criteria thoroughly given his experience with MassDEP's public water suppliers' water conservation awards and consider a nomination or application process. Kluchman seconded LeVangie's comments and asked who is eligible and whether it's a grant or if there are some financial incentives with it. Outreach to consultants who might be helping entities with water conservation may be helpful because they have a broad network and may drive nominations. Hatch liked the idea but cautioned about providing financial incentives so that it isn't seen as favoritism. Woods recommended making sure it is for activities that went above and beyond so that it is a meaningful award. Rao appreciated the input and mentioned giving out the award on a national water-related day such as World Water Day. She also invited anyone who wanted to work on this in the next several months to join. LeVangie offered that either he or his staff would like to participate.

LeVangie announced that the Wetlands and Waterways Program recently published draft regulations available for public comment until March 1st - Wetlands Resilience 1.0 and Waterways Resilience 1.0 (<https://www.mass.gov/info-details/massdep-public-hearings-comment-opportunities>). Both are expected to help protect against extreme weather-related stormwater flooding and sea level rise. In February they will present to the WRC. Rao underlined the significant advancement in these regulations for protections from changing climate and extreme rain events and encouraged folks to look at them and comment.

LeVangie continued with a second item about new regulations that were adopted but then challenged in court regarding requirements for non-essential outdoor watering restrictions during droughts by registered users. MassDEP was the defendant, with CRWA an intervenor and 18 water and sewer entities and one industry association as co-filers. The judge found that under the Water Management Act MassDEP had the authority to restrict nonessential outside water uses during times of drought for the protection of the Commonwealth's resources because it doesn't limit their total registered annual withdrawal volumes. Rao added that the decision also confirmed the

Secretary’s authority to declare droughts and affirmed the WRC’s ability to set related water use policy.

Bentsen reminded folks that there are multiple openings in DER including a new one for a grant management position (<https://massanf.taleo.net/careersection/ex/jobdetail.ftl?job=24000027>).

Kluchman announced that the Community One Stop for Growth Consolidated grant program will launch next Friday. Some, such as MassWorks, fund infrastructure programs. This effort encompasses 13 programs from 3 different agencies under one application. The website will be live on January 19th at <https://www.mass.gov/guides/community-one-stop-for-growth>.

Agenda Item #3: Update: Hydrologic Conditions

Rao introduced Graham to present the Hydrologic Conditions Report for December 2023.

- *Temperature*: above normal across the state; 2th warmest December on record.
- *Precipitation*: above normal except for parts of the Southeast, Cape and Islands regions which were closer to normal; minor snow cover in the Berkshires with snow deficits in most of the state for this time of the year
- *Evapotranspiration*: not reported during the winter season
- *Keetch-Byram Drought Index*: not reported during the winter season
- *Streamflow*: well above normal except for one gage on the Cape was below normal
- *Flooding*: two events in December, starting on the 10th and 18th, produced flooding at in the Connecticut, Merrimack, Charles, Neponset, and Shawsheen basins.
- *Groundwater*: below normal to above normal with the Islands at index severity level 3
- *Lakes & Impoundments*: above their 30th percentile and/or were at or near 100% full
- *Drought status*: all regions are in Level 0 Normal Conditions except for the Islands which is at Level 2 Drought.
- *US Drought Monitor*: shows the Islands as D1 and eastern half of Cape Cod as D0
- *NOAA Climate Prediction Center outlooks*: For January, 50-60% chance of above-normal temperatures and 40-50% chance of above-normal precipitation. The seasonal outlook through March shows a 40-50% chance of above-normal temperatures and 33-40% chance of above-normal precipitation in the southeastern part of the state, and equal chances for above-normal, normal, or below-normal precipitation for the remainder of the state. The monthly and seasonal drought outlooks both show no drought development.

Agenda Item #5: Vote: Meeting Minutes, October 2023

V O T E	A motion was made by Hatch with a second by Weismantel to approve the meeting minutes from the October, 2023 WRC meeting. The roll-call vote to approve was unanimous of those present with one abstention by Bentsen.
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Agenda Item #6: Presentation: Water Needs Forecasting and Water Management Act Permit Updates/Use Analysis

Duff started with a background on the role and purpose of water needs forecasts (WNFs). A WNF indicates system water volume needs for a town at 5, 10, 15, and 20 years into the future. The WMA uses the 20-year forecast for new or renewal permits. They may also be requested by suppliers as part of comprehensive planning efforts. Forecasts are specific to each water supplier,

and they are conducted following WRC-approved methods. Duff reviewed the history of methods development and approvals including a revision specific to the Cape and Islands. The last revision was done in 2017.

The steps in forecasting are: 1) compile Annual Statistical Report data and identify gaps, 2) gather additional needed data such as population and employment projections, 3) develop the forecast using a spreadsheet model, 4) share draft forecast with MassDEP, 5) discuss draft with stakeholders, and 6) develop final forecast. Two scenarios are run: 1) current residential gallons per capita per day (rgpcd) and unaccounted-for-water (UWA) and 2) 65 rgpcd and 10% UAW as required by regulation. A five percent buffer is added to the final volumes. Data used are from the most current 3 to 5 years. Forecasts are not performed for less than 3 years of data.

Duff continued by showing the highly variable number of forecasts done each year over the decades. Currently there are seven forecasts that are either in process or have recently been completed. Considerations for the future include upgrading the data storage and management system from Excel, updating the methods, and updating the Water Conservation Standards (WCS) which was last done in 2018.

Woods commented that most of the state is below the regulatory 65 rgpcd and therefore the current method is potentially over-allocating water. Duff responded that such concerns are the reason for considering revising the WCS. Woods asked if there is a buffer within the forecasts given it is just one number and whether there is a number at which water suppliers can push back against additional request for new services. LeVangie stated that there is a 5% buffer for most of the state except that given the high variability on the Cape and Islands a 10% buffer is provided there. Carroll added that multiple towns are looking into mitigation programs to offset new development requests. Woods also mentioned that many towns meet the 65 rgpcd but have such high summer use that they are still water insecure. It would be different if 65 rgpcd had to be met even in the summer. Therefore, many towns are feeling like they don't have additional water for new development and don't know where to draw the line to start denying additional requests. Rao stated that these are important considerations to take into account when the methods are revised in the future.

Kluchman asked if there is a distinction between single and multifamily development when considering residential water use. Duff answered that currently there is not, but he has been thinking about it. Kluchman offered working with her and the EOHLC to further the methods. In their area, the water allocations are used as a reason to deny further development and they tend to be the wealthier communities. LeVangie stated that MassDEP publishes the rgpcd data on its website each year. Multifamily communities tend to have lower rgpcd values.

Weismantel discussed his experience as a water commissioner for Hopkinton where dwellings increased by 40% and when he was on the planning commission dwellings increased by 28% during the last decade ending in 2020. In the 1990s, there was limited water and connection to the public water system was denied, prompting many residents to drill their own wells. Three large, non-residential users in the pharmaceutical industry use lots of water and if a town denies public water, then they will usually go to another town. More recently, two large multifamily dwellings were connected to public water. LeVangie stated that a town's ability to restrict access to public water when a water line goes by their property is difficult unless there is a moratorium

in place. This generally occurs when the supplier has exceeded their allocation and has been denied additional water. Consent orders or emergency declaration can be done by MassDEP to support such a restriction, but communities try to not get to that point. Rao noted that for these reasons suppliers often look internally at maximizing efficiency within current sources.

Douglas asked about the consideration of annual variability given droughts and floods and whether only mean values should be considered. Duff responded that for this reason they look at 5 years of data, but they also keep an eye on potential outliers. Cohen added that she has not yet rejected any data so far because they are looking at 5 years of data which is meant to capture variability.

Bower asked how it is determined when forecasts need revisions. Duff said that some had been redone because new population and employment projections were published close to when forecasts were released. Cohen answered that there are multiple factors such as a delay in permitting during which new data was released by the Census, but this was a one-time event. In general, once forecasts are completed, they are final.

LeVangie continued the presentation by showing the permit renewal schedule for all basins from 2029 through 2035 for 350 permits. Shi continued the presentation showing registrations versus permits across the state excluding cranberry bogs. The graphs showed how numerous decreases in registrations and permits have resulted in net reduced total authorized withdrawals despite some new permits. Five large registered industrial users were not renewed. Shi also showed water use by basins for 2021 and 2022. LeVangie noted that all basins use more water in dry years such as 2022. For permits, all systems are within their authorized volumes when considering normal variation. For registrations, some users exceeded their registered volumes but have permits for the additional water.

For the Ipswich River Basin, LeVangie showed a map of the farthest downstream subbasins. All subbasins have some level of groundwater impact as calculated during the Sustainable Water Management Initiative (SWMI) process¹. Shi continued by showing calculations of water use in the area which has seen reductions in use. These were then entered into the SWMI tool to see if groundwater categories have changed and with the reductions in use, the categories did improve to a less impacted category. A similar example was given for the Neponset River Basin.

Hatch asked how much water is being used by private wells that doesn't get accounted for in these calculations. LeVangie showed the SWMI tool and where estimated private wells are accounted for. These estimates are based on dwellings or population that is not served by public water. However, these values are for 2000-2004. MassDEP did a study in 2018-2019 that showed the proliferation of private wells at existing and new construction sites.

Cambareri asked about the example of Eastham that received a new permit because it was replacing private wells and whether that means anything in a regulatory sense. LeVangie answered that MassDEP took that change into account when factoring in the volumes that needed to be mitigated by demonstrating they were not necessarily permitting new water withdrawals but more replacing existing use.

¹ <https://www.mass.gov/guides/sustainable-water-management-initiative-swmi-technical-resources>

Haque commented in the chat that groundwater is a nice renewable water source as long as it is not over depleted.

Agenda Item #7: Presentation: Low-Flow Statistics at Gaged and Ungaged Locations

Rao consulted the WRC and they decided to reschedule the presentation to another month.

Rao asked for a motion to adjourn the meeting.

V O T E	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, 3:14 pm.

Documents or Exhibits Used at Meeting:

1. WRC Meeting Minutes: October 12, 2023
2. Quarterly Update on WRC Special Projects
3. Interbasin Transfer Act project status report, December 28, 2023

Compiled by: viz

Agendas, minutes, and other documents are available on the website 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.