THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION

100 CAMBRIDGE STREET, BOSTON MA 02114

Meeting Minutes for August 10, 2023

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

Minutes approved November 9, 2023

Members in Attendance:

Vandana Rao	Designee, Executive Office of Energy and Environmental Affairs (EEA)
Kathleen Baskin	Designee, Department of Environmental Protection (MassDEP)
Anne Carroll	Designee, Department of Conservation and Recreation (DCR)
Chris Kluchman	Designee, Executive Office of Housing and Livable Communities (EOHLC) until 2:30 p.m. then Becca George
Todd Richards	Designee, Department of Fish and Game (DFG)
Hotze Wijnja	Designee, Department of Agricultural Resources (DAR)
Thomas Cambareri	Public Member (joined 1:14 p.m.)
Christine Hatch	Public Member
Vincent Ragucci	Public Member
Kenneth Weismantel	Public Member
Samantha Woods	Public Member

Members Absent:

Tyler Soleau	Designee, Massachusetts Office of Coastal Zone Management

Others in Attendance:

Kate Bentsen	MA Division of Ecological Restoration (DER)/DFG
Nadia Madden	DCR Flood Hazard Management Program (FHMP)
Kara Sliwoski	Massachusetts Office of Water Resources (OWR)
Becca George	DHCD
Jason Duff	OWR
Erin Graham	OWR
Vanessa Curran	OWR
Viki Zoltay	OWR
Katie Ronan	Massachusetts Water Resources Authority (MWRA)
Katharine Lange	Mass Rivers Alliance
Jen Pederson	Massachusetts Water Works Association (MWWA)
Andreae Downs	Wastewater Advisory Committee (WAC)
Robert Worthley	Town of Foxborough
Albelee Haque`	MassDEP
Alex Strysky	Massachusetts Environmental Policy Act (MEPA) Office
Alex White	MassDEP
Alice Smith	MassDEP
Amita Naik	MassDEP
Amy Finch	MassDEP
Amy LaPusata	MassDEP

Ash Desmond	MassDEP
Becky Zawalski	Merrimack River Watershed Council (MRWC)
Brett Rowe	MassDEP
Caitlin Riddick	MassDEP
Caitlin Spence	EEA Office of Climate Science
Caleb Slater	MassWildlife
Caroline Adamson	MassDEP
Chris Delaney	DCR
Chris Gallagher	Town of Foxborough
Christos Saledas	MassDEP
Damon Guterman	MassDEP
Daniel Crocker	DCR Office Watershed Management (OWM)
David Vigeant	Townsend Water
Duane LeVangie	MassDEP
Edwin Sumargo	EEA Climate Team
Elisabeth Cianciola	DFG
Elizabeth Callahan	MassDEP
Elizabeth Liu	MassDEP
Emily Bisbee	MassDEP
Emily Williams	MassDEP
Francesca Bagangan	MassDEP
Frank Niles	MassDEP
Gregory Stewart	United States Geological Survey (USGS) New England
Heidi Zisch	MassDEP
Ian Jarvis	MassDEP
Isabel McCauley	MassDEP
Ivy Powers	EEA
Jason Brown	MassDEP
Jimmy Gibbs	MassDEP
Julie Hutcheson	MassDEP
Kaley Towns	Massachusetts Division Marine Fisheries
Karen Wong	MassDEP
Kelley Freda	DCR
Kelly Whitmore	DMF
Ken Marra	MassDEP
Kevin Daoust	MassDEP
Kimberly Cordwell	MassDEP
Linda Tims	MassDEP
Lisa Jordan	MassDEP
Liz Gorrill	DFG- DER
Madhuri Tummalapalli	MassDEP
Malika Tafawa	MassDEP
Margaret Leary	Mass Division Marine Fisheries

Margaret Shaw	MassDEP
Marie Tennant	MassDEP
Mark Matys	MassDEP
Meghan Hertel	MassDEP
Michelle Region	MassDEP
Narcedalia Garcia	MassDEP
Nicolina Fraietta	MassDEP
Paul Osborne	Massachusetts Department Public Utilities
Randi Augustine	MassDEP
Rebecca Faucher	MassDEP
Rebecca Haney	MA Coastal Zone Management
Robert Lucci	MassDEP
Rose Knox	MassDEP
Sage Clark	MassDEP
Sandra Baird	MassDEP
Sean Griffin	MassDEP
Seema Ravandale	MassDEP
Stephen Humphrey	MassWildlife
Suzanna Sullivan	Neponset River Watershed Association
Ted Saad	MassDEP
Tenzin Lama	MassDEP
Travis Drury	DCR Division Water Supply Protection

Rao called the meeting to order at 1:03 p.m.

Agenda Item #1: Welcome and Introductions

Rao announced that the meeting was being recorded and 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. A roll call of members in attendance was taken. Rao welcomed attendees from agencies under EEA who had been invited.

Agenda Item #2: Executive Director's Report

Rao reported that in the WRC meeting package are several letters to Massachusetts Environmental Protection Act Office (MEPA) on behalf of the Water Resources Commission. Rao announced that EEA Office of Climate Science is fully staffed with a Director of Climate Science and two Assistant Directors. She expects that WRC staff will work closely with them on water resources issues, data, climate trends, and analysis in addition to projects that staff do with other collaborators including USGS, University of Massachusetts, and consultants. On-going studies include impacts from climate change to low-flow statistics and the climate hydro project. Rao invited Edwin Sumargo, the state climate scientist and Caitlin Spence, the assistant climate scientist/hydrology specialist introduce themselves.

Rao highlighted some outreach activities. World Water Week is later in August, and she plans to use recently developed social media campaign products. Rao shared the three-minute drought

video that staff had developed with the consultant Shields SGF. It was received positively, and some members of the public offered to share the video on other websites once it was officially launched. Bentsen noted that Third Herring Brook is in Norwell not Scituate. Lange suggested that closed caption be added.

Rao opened the meeting to staff and Commissioners for announcements.

Wijnja reported on the storms and heavy flooding in July that affected agriculture. DAR has been very active is assisting farmers. The timing of the rainfall and flooding was very unfortunate as many crops were close to harvest.

Kluchman reported on the emergency declaration earlier in the week by Governor Healey regarding homeless and emergency assistance shelters. EOHLC hopes to obtain federal emergency assistance. The EOHLC is also continuing to work on the housing crisis.

Agenda Item #3: Update: Hydrologic Conditions

Rao introduced Erin Graham of DCR to provide an update on hydrologic conditions for July 2023.
Temperature: Monthly average temperatures were mostly above normal.

Precipitation: Precipitation was much above normal except for Cape Cod where it was normal. The Islands and Cape Cod are still showing dryness at the 6-mos lookback period.

Crop Moisture Index (CMI): The CMI at the end of July showed wet, abnormally moist, and normal conditions across the state.

Evaporative Demand Drought Index (EDDI): The 1-month and 2-month EDDI maps showed normal to below normal except for the Cape Cod and Islands Regions which were above to much above normal.

Keetch Byram Drought Index (KBDI): KBDI values at the end of the month were normal for much of the state except for the Southeast, Cape Cod, and Islands Regions, which are at Index Severity Level (ISL) 1.

Streamflow: Streamflow was much above normal except for the Cape Cod Region where it was normal.

Flooding: July was active month. A search of the Local Storm Report App database on the Iowa State University Iowa Environmental Mesonet website produced 142 reports of urban floods or flash floods. The reports clustered around certain days including the July 9-10th event when there was also river/stream flooding mostly in the western part of the state especially along the Connecticut River.

Groundwater: Groundwater ranged from below normal to above normal. Regional medians of individual well percentiles were in the above-normal range except for Cape Cod, which is normal, and the Islands, which is at ISL 2.

Lakes & Impoundments: At the end of July, levels were above the 30th percentile and/or near

100% full.

Massachusetts Drought Plan Status: The MA drought status is Level 0 across the state. Staff is keeping a close watch on the Islands Region.

United States Drought Monitor (USDM) Drought Status: The map at the end of the month for data through July 25th shows no drought conditions. The month started out with D0 in the lower to outer Cape and the Islands. The July 11th map was clear of DO, but it was reintroduced on the August 8th map on the Islands.

National Oceanic Atmospheric Administration (NOAA) Temperature and Precipitation Outlook: The outlook issued 7/31 for August shows a 33 -40% chance of below -normal temperatures, and a 40 -50% chance for above -normal precipitation. The seasonal outlook for August through October issued 7/20 shows a 50 -60% chance of above -normal temperatures and equal chances for above -normal, normal, or below -normal precipitation.

NOAA Monthly and Seasonal Drought Outlook: Neither the monthly nor the seasonal outlook showed drought development.

Accumulated Precipitation Departure Graph: The accumulated precipitation departure over the past 12-months shows the monitored stations above zero except for the Edgartown station, which is down about two inches.

Graham showed some slides comparing July 2021 to July 2023 as requested by a Commissioner at the previous meeting. The months were both very rainy and had similar conditions in the preceding months.

There was a discussion of how to include flooding, precipitation extremes, the number of precipitation events, and precipitation intensity in the Hydrologic Conditions Report.

Agenda Item #4: Vote: Meeting Minutes, May 11, 2023

Rao said the minutes will be sent soon for Commission review; they were not included in the meeting package. The vote did not take place.

Agenda Item #5: Vote: Foxborough's Updated Drought Plan and Water Conservation Plan

Curran acknowledged the Town of Foxborough staff Bob Worthley and Chris Gallagher, and Neponset River Watershed Association staff Susanna Sullivan. Foxborough has revised and updated their Drought Management Plan. It now aligns with the State's Drought Management Plan outdoor watering restrictions with additional actions such as postponing non-essential flushing. Foxborough's Drought Management Plan has met the requirements of the 2022 Amendment to their 2001 Interbasin Transfer Act (ITA) decision.

Curran discussed Foxborough's Water Conservation Plan. Foxborough has been working on reducing their unaccounted-for water (UAW). Foxborough has completed two system audits, one in 2021 and another in 2022. The UAW reported in 2022 was 14.8%, down from about 41%. Worthley explained the graph showing daily pumping from 2021-2023. A large leak was

discovered in March 2022 through leak detection. The leak was on a 4-inch line that supplied the laundry building and the old state hospital. The leak was in an area of sand and gravel parallel to the train tracks with ballast in the headwaters of the Neponset River, so the leak never surfaced. Foxborough had been searching for this leak for seven years. One valve was closed to isolate the leak, and the next day system pumping went down by 750,000 gpd. The decreased pumping as compared to 2021 pumping continued through 2022 and into 2023.

Foxborough is on track this year to pump 300 million gallons less than previous years. Curran further outlined Foxborough's water conservation requirements. The town has been working with industrial, commercial, and institution (ICI) users with the help of Neponset Watershed Association. They have also been continuing existing residential conservation measures to keep their residential gallons per capita day (rgpcd) below 65. Foxborough has done work to improve the resiliency of their system to minimize emergency declarations, so it has been several years since one has been declared.

Rao opened the floor to Commissioners to ask questions. Seeing none, she commended Foxborough on the work they have done and entertained a motion.

V O T E	A motion was made by Cambareri with a second by Baskin to approve a) the Town of Foxborough's revised water conservation plan and b) the Town of Foxborough's revised drought management plan, as required in the 2022 Amendment to Foxborough's Interbasin Transfer Act approval. The roll-call vote to approve was unanimous of those present.

Agenda Item #6: Presentation: EPA Proposed National Primary Drinking Water Regulations for PFAS

Baskin introduced Damon Guterman, Senior Analyst, in the Drinking Water Program at MassDEP and a key person working on Safe Drinking Act compliance. The presentation can be found on the state website at the link: https://www.mass.gov/doc/epa-proposed-national-primary-drinking-water-regulations-for-pfas/download

Guterman's presentation focused on considering the proposed Environmental Protection Agency (EPA) Per- and Polyfluorinated Substances (PFAS) regulations with respect to MassDEP's PFAS drinking water regulations for Public Water Systems. The EPA's draft regulations were released March 14, 2023. Once they are final, EPA sets a compliance date, usually in three years. The regulations are applicable to Community and Non-Transient Non-Community public water systems (NTNCs), but not to Transient Non-Community systems (TNCs). EPA expects to finalize the regulations later this year. There were 122,000 comments, but EPA only shared 1,600 because some of them were repetitive.

The draft regulations set maximum contaminant level goals (MCLGs), and maximum contaminant levels (MCLs). A "goal" is the level at which the EPA believes that health is protected, and a "level" is the numeric standard that public water systems must meet. The EPA is proposing to regulate six PFAS compounds of which concentrations of four PFAS will be grouped and compared to a Hazard Index. This is the first time EPA is proposing adopting a Hazard Index as a

drinking water standard. A Hazard Index is a tool used to evaluate health risks of simultaneous exposure to mixtures of related compounds.

After the rule is finalized and before three years, public water suppliers will do Initial Monitoring. After three years, Compliance Monitoring will start. If the levels are exceeded, installation of treatment or other actions will be required. EPA has published Best Available Technology that includes ion exchange, reverse osmosis, granular activated carbon (GAC), and nanofiltration. GAC is most often used in Massachusetts, with a few systems using ion exchange.

Guterman compared the proposed EPA MCLs to the MassDEP PFAS MCL. Of the six that MassDEP regulates, EPA does not regulate two of the PFAS and vice versa. There will be some challenges for MA to figure out what to do about the two PFAS that MA regulates that aren't included in EPA's draft regulations and for MA to adopt the two PFAS that EPA is proposing to regulate that MA doesn't currently regulate.

Massachusetts considers the six PFAS currently regulated under state statute to be more of a short-term exposure concern than EPA considers them to be. EPA proposed a running annual average while Massachusetts uses a quarterly average of monthly samples. MassDEP considers PFAS to be sub-chronic, which is middle ground between acute and chronic. Annual averages are used for chronic contaminants. While MassDEP doesn't presently regulate two of the PFAS that EPA is proposing, Massachusetts water suppliers have been testing for these two particular PFAS because MassDEP requires testing of the full suite of PFAS.

MassDEP has a provision in their regulations to review the science every three years starting with three years after promulgation; the first review is due in December 2023. EPA's proposed regulations will be considered in that review. To retain MassDEP primacy over the Safe Drinking Water Act Program, MassDEP cannot be less stringent than EPA. States have up to two years to develop regulations once the EPA rule is finalized.

Approximately 6% of public water supplies currently are over the Massachusetts MCL. Approximately 29% of public water supplies exceed the draft EPA MCL.

MassDEP has been having TNCs do sampling even though neither the Massachusetts MCL nor the proposed EPA MCL applies to TNCs. Health Assessments by the MassDEP toxicologist were used to assess the risk to consumers at the TNCs. MassDEP closely looked at the type of consumers at TNCs and the frequency with which they consumed the water.

MassDEP offered testing to selected homeowners on private wells in towns where homeowners are principally on private wells. MassDEP doesn't regulate private wells; local boards of health do. Of the wells tested, 15% detected PFAS above the proposed EPA MCLs. MassDEP has contacted the participating private well owners to discuss their results.

MassDEP commented on the EPA proposal. One common theme was how the PFAS problem needs a holistic approach and the problem addressed at the source. There are also concerns about having enough lab capacity for testing and the disposal and regeneration of spent media used to remove PFAS from water supplies.

MassDEP is continuing to provide technical assistance and funding through the Clean Water Trust to address PFAS contamination. Public Water Systems (PWS) should continue to work with MassDEP to reduce and remove PFAS and contact MassDEP if there are concerns. If a PWS has not detected PFAS, there is no recommended action, but the PWS should keep up to date on PFAS information from MassDEP. Guterman provided contact information for PWSs as well as EPA Fact Sheet links for guidance on what to tell consumers in addition to links to other EPA and MassDEP PFAS resources.

Rao opened the meeting for questions and comments.

Weismantel stated that the WRC should set some policy before there are many interbasin transfer requests because of PFAS contamination. The WRC should understand the tradeoff between treating the water versus Interbasin Transfers (IBTs) from, for example, the Massachusetts Water Resources Authority. Some communities have no source of water, some communities that are contaminated could treat or request an IBT, but is an IBT the best way? The policy should be decided before there are many requests. It is hard to set policy in the moment with an applicant already in the process, particularly if the costs are similar. Weismantel would like more information on the efficacy of treatment.

Rao commented on the WRC's responsibility to look at viability of local sources and weighing the costs. As per our current regulations, applications have to analyze the viability of all existing in-basin sources first. Staff is looking into the latest and best guidance on this type of analysis to be included as part of a proposed update of the ITA Performance Standards. In the coming months staff will come to the WRC with what they have found. There is also the question of priority versus need. Is it first come first served basis, or does the WRC need to have some kind of additional criteria about approvals. One community may be more needy in five years than another community is currently.

Worthley commented in the Zoom chat that Foxborough is looking at $50 million to build three plants to remove PFAS. Guterman added that is approximately what he has seen for cost of treatment in other communities that have already done installations.

Guterman discussed the effectiveness of treatment. It has been three years since the state standard was promulgated and there has been treatment installed in some communities. GAC achieves non-detect. The challenge is if the standard drops to 4 parts per trillion as EPA has proposed, communities will need to replace media more often and thus operation and maintenance costs will increase. The same issue applies to ion exchange treatment. Many systems look to that treatment because the footprint is smaller.

Carroll provided some more context and asked if there were any thoughts about policy needs given what's in the ITA regulations? The place where this comes up is under the viability of local sources criterion. One way to evaluate viability is by cost; there is a strict criterion already, and staff have been looking at ways of measuring cost as part of that.

Cambareri has been involved with PFAS issues on Cape Cod since 2009 when it was first discovered in 11 of Hyannis's public water supply wells. MassDEP was very helpful in helping the town understand the situation better and providing different incentive programs including

investing $230 million in infrastructure costs. Cambareri expressed concern about the pervasiveness of PFAS and the level and length of exposure already experienced. While he lauded legislative initiatives to remove the chemicals form the marketplace, he expressed concerns about the public health impacts. He would like to see more health studies.

Baskin responded that she cannot speak on behalf of the MA Department of Public Health (DPH). But she did highlight aspects of MassDEP programs that address public health. The Drinking Water Program is a program aimed at protecting public health of public drinking water supplies. MassDEP doesn't regulate private wells and bottled water; private wells are regulated by local Boards of Health. MassDEP coordinates very closely with DPH regarding PFAS. DPH has done health studies; it regulates bottled water and has issued fish advisories.

Guterman said there are some studies taking place in Massachusetts and provided the following links to health studies in the chat. A national PFAS health exposure study at CDC/ATSDR: https://www.atsdr.cdc.gov/pfas/activities/index.html
Westfield study information:
https://www.atsdr.cdc.gov/pfas/activities/assessments/sites/hampden-county-ma.html
Hyannis is part of a study: https://silentspring.org/project/cdcatsdr-multi-site-health-study-pfas
Hyannis residents can still participate: https://silentspring.org/project/cdcatsdr-multi-site-health-study-pfas/massachusetts-pfas-and-your-health-study

Guterman discussed the participation challenge in studies and testing, especially with private wells. Homeowners were hesitant because of fear of potential impact to their home value and being subject to additional Massachusetts cleanup regulations. Guterman added that in March his analysis of the PFAS state monitoring data showed that about 40% of the community and non-transient non-community systems had not detected the six PFAS MassDEP regulates.

Pederson said PFAS is challenging for MWWA members because of analytical variability between laboratory results. The proposed EPA standards are what they believe is the reliable point of detection. There is a national working group where this issue has been discussed. With the new lower levels there will be more systems that will potentially have to do something. She believes that more systems are impacted than the compliance numbers show because some systems are meeting the MassDEP standard by blending or turning off a source. She clarified that while there is some principal forgiveness through state and federal funding, most of Clean Water Trust loans need to be paid back by ratepayers. She commented on the slow pace and funding of site investigations to find responsible parties.

Guterman responded that he had sat in on the national meeting Pederson had mentioned- the National Drinking Water Advisory Council. The EPA is required to consult with that group of stakeholders. The analytical question comes up a lot. Compared to other chemicals, PFAS is being regulated much closer to the practical quantification limit (PQL), which is the level that EPA thinks participating labs can give an exact concentration. It is very hard to implement and regulate a PQL, or a Minimum Reporting Level (MRL), which is what it is called by MassDEP. Because of the uncertainty in the laboratory analysis, there might be swings from compliance to non-compliance month to month or quarter to quarter putting both the regulator and regulated in awkward positions. There were many comments to EPA regarding this subject. The numeric values of Perfluorooctanoic acid (PFOA) and Perfluorooctane sulfonic acid (PFOS) published in

the 2022 EPA health assessment are below the current analytical capabilities of laboratories. Guterman said the loans from the State Revolving Fund (SRF) are 0% loans, which hopefully helps a bit. He acknowledged the resource issue in the Bureau of Waste Site Cleanup; they aren't only investigating contamination of public water systems, but also at other sites where there might be even higher levels of PFAS detected in the groundwater. Finding the responsible party helps with the financial burden.

Cambareri asked if Baskin could get back to the WRC about the health aspects. Baskin responded that she prefers not to be spokesperson for DPH but can provide contacts. Rao said she could explore with DPH if a presentation is of interest.

Rao invited a motion to adjourn.

V O T E	A motion was made by Weismantel with a second by Hatch to adjourn the meeting. The roll-call vote to approve was unanimous of those present.

The meeting adjourned at 3:13 p.m.

Documents or Exhibits Used at Meeting:

1. Town of Foxborough's updated water conservation questionnaire/plan, which includes its revised drought management plan as Appendix C
2. Correspondence from the Flood Hazard Management Program on behalf of the WRC to the MEPA Office regarding the following projects:
    a. Letter dated April 7, 2023, on the Single Environmental Impact Report for The Exchange in Salem
    b. Letter dated June 13, 2023, on the Environmental Notification Form for the South Reservoir Dam Improvement Project in Medford
    c. Letter dated June 23, 2023, on the Expanded Environmental Notification Form for the Beaver Brook Flood Mitigation Project in Waltham
    d. Letter dated July 7, 2023, on the Supplemental Final Environmental Impact Report for the Neponset Wharf Project in Boston
    e. Letter dated July 13, 2023, on the Environmental Notification Form for an emergency seawall repair for Mission on the Bay Restaurant in Swampscott
    f. Letter dated July 17, 2023, on the Expanded Environmental Notification Form and Proposed Environmental Impact Report for the Gibson Park Resiliency Project in Revere
3. Correspondence dated July 17, 2023 from the WRC to the MEPA Office regarding the Expanded Environmental Notification Form for the Lynnfield Center Water District's Supplemental Water Interconnection with Wakefield/the Massachusetts Water Resources Authority
4. Interbasin Transfer Act project status report, July 31, 2023

Compiled by: eg
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 Office of Water Resources staff at State Transportation Building, 10 Park Plaza, Suite 6620 Boston, MA 02116.*