



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

Meeting Minutes for September 9, 2021

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

Minutes approved December 9, 2021

Members in Attendance:

Vandana Rao	Designee, Executive Office of Energy and Environmental Affairs (EEA)
Linda Balzotti	Designee, Department of Housing and Community Development (DHCD)
Kathleen Baskin	Designee, Department of Environmental Protection (MassDEP)
Anne Carroll	Designee, Department of Conservation and Recreation (DCR)
Todd Richards	Designee, Department of Fish and Game (DFG)
Hotze Wijnja	Designee, Department of Agricultural Resources (DAR)
Thomas Cambareri	Public Member
Vincent Ragucci	Public Member
Kenneth Weismantel	Public Member
Samantha Woods	Public Member

Members Absent

Todd Callaghan	Designee, Massachusetts Office of Coastal Zone Management (CZM)
Marcela Molina	Public Member

Others in Attendance:

Marilyn McCrory	DCR, Office of Water Resources
Duane LeVangie	MassDEP
Lexi Dewey	Water Supply Citizen's Advisory Committee
Gerald Clarke	Dover Board of Health
Jacob Greene	MassDEP
Sara Cohen	DCR, Office of Water Resources (OWR)
Sarah Bower	Mass Rivers Alliance
Kara Sliwoski	DCR, Office of Water Resources
Read Porter	EEA
Jennifer Pederson	Massachusetts Water Works Association
Veronica Wancho O'Donnell	MassDEP
Katie Ronan	Massachusetts Water Resources Authority (MWRA)
Andreae Downs	Wastewater Advisory Committee to the MWRA
Viki Zoltay	DCR, Office of Water Resources
Erin Graham	DCR, Office of Water Resources
Maura Callahan	Consultant Town of Foxborough

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

Agenda Item #1: Welcome and Introductions

Rao welcomed the attendees and announced that the meeting was being recorded for the purpose of the minutes and that all votes would be taken by roll call. Meetings will continue to be virtual at least to the end of the year. She invited those who wish to speak during the meeting to indicate this in the chat window.

McCrary took attendance of Commission members and confirmed that a quorum was present.

Agenda Item #2: Executive Director's Report

Rao announced that the drought dashboard is almost ready for release. The dashboard is helping to automate data collection and analysis for hydrologic conditions. Recently EEA signed a five-year contract with the Northeast Regional Climate Center at Cornell University for continued dashboard maintenance and for further work on hydrologic matters including collaboration with other New England states.

Rao welcomed Read Porter, who serves as Deputy General Counsel at EEA.

Richards had a comment about the ponds on Cape Cod. MassWildlife staff have reported that the kettle hole ponds are a lot drier than usual. He has asked Adam Kautza to help with monitoring the situation. Rao agreed that it would be good to collaborate. Cambareri said the ponds are as low as he has ever seen and that he has been meaning to check Mary Dunn Pond, which he was able to walk across during the 1991 drought.

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

Graham summarized hydrologic conditions for July 2021 since the August WRC meeting was cancelled. July was a cool and very rainy month. Only the Cape and Islands did not receive above normal rainfall. There was flooding from several systems including Tropical Storm Elsa.

Graham summarized hydrologic conditions for August 2021. August was on the warm side. Precipitation was mostly normal to above normal. An exception was the Cape where the mid Cape continues to receive below normal rainfall. There were remnants of two tropical storms- Fred and Henri. Streamflow was mostly above normal except for Cape Cod. Groundwater was above normal in all regions except Cape Cod, where the Drought Index Severity is still at Level 1. Lakes and impoundments levels were high, except on Cape Cod where Ashumet Pond is still low. The Keetch-Byram Drought Index was at Level 1 or 2 in some regions, but this was not of concern as the elevated values are not unusual for late summer when temperatures are above normal and there are a few consecutive days without rain. At the end of August, the U.S. Drought Monitor showed Levels D0, D1, and D2 on Cape Cod, a very unusual situation in such a small area.

The Drought Management Task Force met on Wednesday, September 8th, 2021. The Massachusetts Drought Status will be updated when Massachusetts Energy and Environmental Affairs (EEA) Secretary Kathleen Theoharides releases the latest declaration.

Weismantel asked if anyone has been tracking the Bermuda High location during the last two months? Staff that they have not been, but that they rely on weather analysis from the National Weather Service (NWS) staff.

Woods asked when will this be online? Staff answered that the report will be finalized once the Secretary issues the August drought declaration and the flooding information is received from the NWS.

Wijnja asked if flooding situations captured with these data. Staff answered that reports from the NWS are used to summarize the flooding events. Otherwise, the data in the report show that the streams are running very high and groundwater is very high; in some regions the median of the individual well percentiles is 100. Most of the state is very saturated right now and any upcoming storms can lead to flooding.

Agenda Item #4: Vote on the Minutes of May and June 2021

Rao invited motions to approve the meeting minutes for May and June of 2021. There were no comments.

V O T E	A motion was made by Weismantel with a second by Cambareri to approve the meeting minutes of May 13, 2021. The roll call vote to approve was unanimous of those present.
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V O T E	A motion was made by Weismantel with a second by Balzotti to approve the meeting minutes of June 10, 2021. The roll call vote to approve was unanimous of those present.
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Agenda Item #5: Presentation: Draft Staff Recommendation, Town of Foxborough's Request to Reduce Monitoring Required Under its Interbasin Transfer Act (ITA) Decision

Rao introduced Zoltay. Zoltay acknowledged Maura Callahan in attendance, consultant for the Town of Foxborough, and Bob Worthley of the Town of Foxborough. They both have been working with Zoltay on this request.

Zoltay presented about the Witch Pond water supply wells in Foxborough including some background, the ITA timeline, the monitoring reduction request, the existing impacts, the potential new impacts, and recommendations. The presentation can be found on the state website at <https://www.mass.gov/doc/presentation-wrc-draft-staff-recommendation/download>

Witch Pond is in the Bungay Brook subbasin, which is the headwaters of the Ten Mile River Basin. Typically in New England, watershed and groundwater divides align, however, in the area around Witch Pond they do not; there is groundwater seepage from Lake Mirimichi in the Taunton Basin to areas around Witch Pond in the Ten Mile Basin. Wells 14 and 15 are near the shoreline of Witch Pond in an Atlantic white cedar swamp and are a part of Foxborough's water supply. The wells are jurisdictional under the ITA because Foxborough discharges wastewater to a wastewater treatment plant in the Taunton River Basin. Attleboro has prior rights to releases of water from Lake Mirimichi to the Wading River. Plainville has wells near the shore of Mirimichi. The Plainville wells have restrictions to make sure that Attleboro has enough water. In addition, the Town of Mansfield's Well 10 in the Witch Pond area was approved under ITA and shared ambient monitoring locations and data with Foxborough.

The Atlantic white cedar swamp near Witch Pond is habitat for Hessel's hairstreak butterfly, which is on the Rare and Endangered Species list. A shrub layer of berry bushes in the swamp are the butterfly's nectar source. At the time of the original ITA approval, another species found in the area, the spotted turtle, was state listed. Witch Pond is habitat for warm water fish species.

The 2000 ITA application was for 1.44 MGD. The application stated that the swamp is hydrologically isolated from the aquifer due to peat layers. Additional pump tests were suggested by WRC but were not performed. In 2001, the decision was approved for 1.44 MGD with conditions. Included in the conditions were: water conservation requirements; establishment of replicated wetlands for wetlands taken by a new water treatment plant; a requirement that the groundwater level be no more than one foot below the peat surface; additional water elevation thresholds in the aquifer, deep peat, and surface water to trigger reduced and no pumping until recovery of the groundwater above thresholds; maintenance of native vegetation; and requirements for hydrologic and vegetation monitoring for the operational life of the wells. In 2009, the baseline monitoring was completed and pumping of the wells was initiated.

Monitoring in 2010 showed that impacts propagate up from the aquifer to the surface over the summer season. The original theory was that the sand and gravel aquifer could be tapped for the well as the peat layer would isolate the surficial layer from pumping impacts. However, groundwater monitoring showed that the deep peat layer was partially recharging the sand and gravel aquifer, and the shallow peat layer was recharging the deep peat layer. The biggest concern was that this could lead to a long-term dewatering trend and permanent hydrologic compaction. The wetland monitoring was put in place particularly for vegetative species that provide sources of nectar for the Hessel's Hairstreak butterfly, and in 2011 rapid changes were seen in species composition to more dry tolerant species.

In 2013, due to these impacts, there was an amendment to the conditions that added a threshold to a deep peat monitoring location to trigger reduced and no pumping earlier and to prevent dewatering of the surficial peat. In 2016, the monitoring plan was revised to reflect the new threshold for the deep peat layer and eliminated monitoring at site F-4A because the replicated wetland did not function as an Atlantic white cedar swamp.

Regarding current monitoring, Mansfield used to provide data for shared ambient wells. Foxborough did not start measuring these wells once Mansfield was no longer required to monitor. While surveying was done to adjust for shifting of monitoring points in peat or well replacements, there are multiple adjustments that are not documented or justified.

Rao asked for a pause in the presentation so Commissioners can ask questions or wanted to request clarifications. Woods asked about the monitoring at the replicated wetland that was eliminated in 2016 because it didn't function as a white cedar swamp; was it supposed to? Zoltay replied that the replicated wetland to replace the wetland area lost to the treatment plant was supposed to function as white cedar swamp.

Zoltay continued with the presentation and discussed Foxborough's request in March 2020 to reduce monitoring at some non-threshold monitoring locations (i.e. those that don't necessitate a reduction of pumping), to eliminate winter monitoring at remaining non-threshold locations because of wear and tear on the equipment, to reduce frequency for vegetation monitoring, and to reduce the scope for annual reporting.

Zoltay discussed the hydrologic data analysis that show existing impacts. Water levels are measured every six hours. The number of times measurements were below a threshold for the

specified time period (either for reduced pumping or no pumping) were counted. The total time spent below a threshold was calculated. Analysis of the data from January 2011 to December 2020 show that a significant amount of time was spent below thresholds in most years, mainly in the months of June through November. Of these years, there have been four Emergency Declarations (EDs) since 2013 approved by MassDEP under which ITA conditions are exempt. Zoltay highlighted 2019 when there was no drought or ED to show that reduced pumping when a threshold is hit is not happening early enough - the recovery is taking too long and too much time is spent below the thresholds. In 2020 water levels were 2-feet below the peat surface, exceeding the target threshold of 1-foot below the peat surface. Although the 2020 ED ended 9/29/2020, Witch Pond still had not recovered as of 9/3/2021. There is concern that permanent compaction may have occurred as feared back as 2010.

Pederson asked if the EDs were because of Per- and polyfluoroalkyl substances (PFAS) issues and the subsequent shifting of sources. Zoltay replied that it was not due to PFAS but infrastructure issues that have been going on before the EDs, and that Foxborough has been working on replacing treatment plants, pumps, and transmission mains that are in poor condition. Rao said regardless of the reason EDs are happening, the ITA conditions do not apply during that time and additional water was being pumped and there are impacts.

Zoltay explained about the wetlands monitoring. After the 2014 amendment to the ITA conditions and observed impacts to the wetland, a new wetlands consultant became involved and new monitoring methods were used. Monitoring was performed on less than an annual basis (2016 none, 2017 limited, 2018 none, 2019 limited, 2020 none) since the new methods damaged the wetlands. The baseline report from 2009 states no invasive species while the report from 2011 states there are more dry-tolerant species. More recent reports (2017, 2019) state no change from previous years and that native species remain dominant. The limited reporting on the vegetation in these subsequent years does not compare to the 2009 baseline and it is unclear how to interpret the current conditions. In addition, while each wetland monitoring site has a corresponding well, water level trends are not analyzed in conjunction with the vegetation trends in the wetland. In 2021 there is the expectation that a full round of monitoring will be conducted.

Zoltay presented about the water conservation ITA conditions. Foxborough has been meeting its residential gallons per capita day (rgpcd) requirements, but not unaccounted for water (uaw). The uaw has been very high, above 30%, exceeding the 10% standard. Foxborough is in the process of applying for a MassDEP grant to do an American Water Works Association M36 audit. OWR has written a letter of support for that grant application.

Weismantel commented he would like to see a push to do a system audit and to catch these problems earlier. Rao agreed and added that there is a need to understand the losses and to determine what are paper losses versus real losses. Woods asked about catching the uaw situation earlier and whether there is a way to flag Annual Statistical Reports (ASRs) as they are submitted to MassDEP. Zoltay responded that as part of the recommendations, she would like to see the overall reporting streamlined with tables upfront in the report that summarize compliance status on all conditions with timeline to correct any deviations to make it easier to track compliance. Rao suggested working with MassDEP to flag certain ASRs that involve ITAs when the ASRs are submitted. LeVangie responded that in the case of Foxborough it is

complicated- there are three basins, so there are three permits, and right now Foxborough is in the permit review process. Also, MassDEP currently does not track who has ITA approvals and maybe there is a way to work on that. Zoltay said there aren't metrics that are tracked closely like what exactly is being done to address uaw. Weismantel commented that given the low rgpcd and the high uaw there is most likely metering problems. Zoltay responded that staff are aware of this possibility and that it will be looked at closely. LeVangie added that the audit might give an answer right away. The first thing the audit will most likely do is look at the validity of Foxborough's data and it might take some time and multiple audits to answer some of the questions. MassDEP will also be looking at performance standards and continual audits in the permits.

Zoltay discussed potential new impacts if the replacement wells increase their pumping over historical rates. Well 14 and 15 did not provide the expected yields. Pumping has been averaging only 0.47 MGD, which is about half of the permitted average annual volume of 0.48 MGD for each well and half of the permitted annual volume of 0.96 MGD total. In January 2021 MassDEP approved a well replacement, Well 14R, at the same yield as Well 14, which is standard for replacement wells. Future cumulative pumping from both wells can now increase by 51% to 0.71 MGD with the replacement well. This increase causes more concerns since historical pumping at lesser rates have already impacted the wetland.

Zoltay discussed recommendations. Regarding hydrologic recommendations, Zoltay recommended additional analyses to potentially change the reduced pumping and no pumping rates and/or adjust the thresholds to minimize time spent beyond thresholds. Pumping may increase in comparison to historical pumping with the installation of replacement well 14R; so Zoltay recommended keeping all monitoring locations. For non-threshold wells, the monitoring equipment could be removed from December 1st to May 31st as requested by Foxborough. In addition, the ambient monitoring should be restarted. This is the monitoring that Mansfield had been doing.

Regarding wetland monitoring, Zoltay recommended reporting that compares conditions over time starting with baseline, reporting that ties water levels to wetland conditions over time, and re-evaluating available vegetation monitoring methods that provide necessary data with minimal damage to the wetland in consultation with state staff. Rao added that the state staff includes agencies with wetlands expertise. Zoltay recommended invasive species removal to correct damage that has been done in consultation with state staff. In addition, the survey of measuring points should be conducted immediately after thaw or well replacement, and the adjustments should be submitted for staff approval immediately rather than just once a year in the report.

Regarding Water Conservation, Zoltay recommended developing a comprehensive water conservation plan with verifiable and quantitative metrics to track progress and compliance. The plan should include a water audit and a robust look at industrial, commercial, and institutional users. Some of these recommendations were original conditions outlined in the 2001 decision.

Regarding compliance and reporting, Zoltay recommended organizing the reporting so that potential non-compliance is tracked early and conditions are known sooner instead of relying on one report at the end of the year. In addition, WRC staff will provide an outline as to what the reporting should look like.

There were no questions from Commissioners.

Callahan provided some comments. She clarified that only one threshold site has not recovered. Foxborough has not pumped Wells 14 or 15 since last year. What she is seeing in the data is drawdown that she suspects is from Mansfield because they have connected their Wells 6 and 10 to a treatment plant. In years past they did not pump as much from Wells 6 and 10 because of water quality concerns and they were very dependent on other wells that are now contaminated with PFAs. Callahan said that she has not seen evidence of compaction of peat looking at the survey data, so Foxborough should investigate that. She thinks there has been an overstatement of impacts to the wetland. The original wetland monitoring showed a slight change. It was not a good methodology, so Foxborough changed methodologies. The pumping does not dramatically change the vegetation, so that is why they decided to monitor every other year. Maura stated she is a hydrogeologist and not a wetland scientist, but she has been told by wetland scientists that the white cedar swamp is in good condition. The wetland scientist will be out on site very soon and they have been asked to do a thorough evaluation. She questioned the definition of impacts and monitoring: if there aren't impacts to the vegetation, are changes in the water level below the peat considered impacts and should there still be monitoring?

Rao thanked Callahan for her comments in addition to her continued coordination with staff. Rao asked Zoltay if there was anything she wanted to respond to although the staff summary already lays out a lot of the details and substantiates what Zoltay had presented. Zoltay responded that any analyses Callahan wants to put forth will be reviewed if they are submitted along with the data. Most years staff receive only raw data submission and some of the wetland monitoring has not been up to par. In 2010 and 2011 there were demonstrated impacts and a 2011 amendment was approved because of these demonstrated impacts, which confirms that state staff at the time also were confident there were impacts. Staff will look at data if it is analyzed in a different way. Zoltay will work with Foxborough on how to quantitatively define what has happened since baseline in 2009, not just over the past few years.

Rao added that the way the recommendations are written there is still room for further conversation and tightening and clarification of requirements.

Richards thanked Viki for the presentation and commented that this is a long-term and complex project. He asked if in evaluating if any climate change concepts were included. Zoltay responded that some things are still to be developed and that current conditions and recommendations need to get under control. For example, staff have already worked with MassDEP to implement notifications regarding Lake Mirimichi in Water Management Act permit conditions. Zoltay will try to incorporate climate change into conditions, but it might be revisited. Regardless of what is causing impacts, the bottom line is that this ecosystem needs to have water within one foot of the wetland surface.

Linda Balzotti thanked Zoltay for the detailed work and well-done presentation.

Baskin leaves at 2:27PM. LeVangie assumes representation of MassDEP.

Rao said that this presentation was to present the draft recommendation. There is no vote yet.

She asked the Commission if there was anything else that they needed to understand better. If there are comments on the document, please email them to her.

Woods asked if Rao could let the Commission know when the presentation will be on the website? Rao will let the Commission know when it is available online.

Woods asked if the request before the Commission is to lower monitoring, but with the analysis there was a lot then we unearthed? Rao replied yes and summarized the monitoring reduction request.

Cambareri leaves at 2:34 PM.

Rao opened discussion to the public.

Pederson commented that she thinks the heightened focus on PFAS can't be ignored and asked the Commission to have that taken into consideration. Zoltay said that that type of information would need to be submitted by Foxborough and how it affects their water supply needs. Rao noted that the ITA doesn't apply when there is an ED, so there already is consideration and recognition if there is dire need for some limited time. There have been four EDs in the past six or seven years.

Rao outlined the approval process. This will be back in front of the Commission in the next month or so.

Agenda Item #6: Vote on the Approved Regulatory Changes; 310 CMR 73.00; Amalgam Wastewater and Recycling Regulations for Dental Facilities

Rao introduced Greene from MassDEP. The Commission heard about proposed changes in the dental amalgam regulations at a past meeting, and the approved ones are now before the Commission for a vote.

Greene acknowledged Wancho O'Donnell and presented on the approved regulatory changes of 310 CMR 73.00. More information about the presentation can be found on the state website at <https://www.mass.gov/doc/presentation-310-cmr-7300-amalgam-wastewater-and-recycling-regulations-for-dental-facilities/download>.

Greene provided background on the regulations, explaining that MassDEP last changed the regulations in 2016. In 2017, the U.S. Environmental Protection Agency promulgated pretreatment standards to reduce discharges of mercury from dental offices into publicly owned treatment works (POTWS). He outlined the environmental dangers of mercury and described EPA's requirements. Some POTWS have promulgated their own regulations. This is notable because some dental facilities then must certify twice and pay two separate fees. Greene said the changes made to the regulations was a public process and the changes have been approved. He summarized the changes including one change that was made as a result of public comment. The proposed changes to MassDEP regulations eliminate this duplication by exempting certain dental facilities from certifying compliance with MassDEP. He outlined other proposed changes, including to definitions, applicability language, and notifications related to ownership changes.

Rao opened the discussion to questions.

Rao asked who has approved the changes? Greene answered EEA has provided internal approval to the changes. Rao asked if the changes would streamline reporting and eliminate reporting to multiple agencies thus saving the dental facility time and money. Greene replied yes, it is a change to the paperwork and fees. Rao asked if MassDEP will be alerted of any filings made by dental facilities to entities outside of MassDEP. O'Donnell answered that MassDEP is working closely with the existing policies and with MWRA. They are taking a close look at certain towns, but other places like the upper Blackstone are more complicated because an entire town isn't covered by one POTW. There has been a lot of communication and sharing of data to make sure every dental facility is covered.

V O T E	A motion was made by Ragucci with a second by Balzotti to approve changes to 310 CMR 73.00, Amalgam Wastewater and Recycling Regulations for Dental Facilities
	The roll-call vote to approve was unanimous of those present.

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

Meeting adjourned, 2:55 p.m.

Documents or Exhibits Used at Meeting:

1. WRC Meeting Minutes
 - a. May 13, 2021
 - b. June 10, 2021
2. Draft Staff Recommendation dated September 9, 2021; Town of Foxborough's Request to Reduce Monitoring Required Under its Interbasin Transfer Act Decision
3. Documents for revisions to the Amalgam Wastewater and Recycling Regulations for Dental Facilities (310 CMR 73.00)
 - a. Redline draft
 - b. Clean copy
4. Correspondence dated July 6, 2021, from the Water Resources Commission to MEPA Office regarding the Environmental Notification Form (ENF) for the Meadowbrook Commons & Coolidge Crossing residential development in the Town of Sherborn
5. Correspondence dated August 16, 2021 from the Water Resources Commission to Avalon Bay in Sharon regarding compliance with its 2007 Interbasin Transfer Act Decision
6. Interbasin Transfer Act project status report, September 1, 2021
7. Hydrologic Conditions in Massachusetts, July and August 2021 (available at <https://www.mass.gov/info-details/water-data-tracking>)

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 WRC staff at 251 Causeway Street, 8th floor, Boston, MA 02114.