



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

Meeting Minutes for September 12, 2019

100 Cambridge Street, Boston, MA, 1:00 p.m.

Minutes approved January 9, 2020

Members in Attendance:

Vandana Rao	Designee, Executive Office of Energy and Environmental Affairs (EEA)
Linda Balzotti	Designee, Department of Housing and Community Development (DHCD)
Anne Carroll	Designee, Department of Conservation and Recreation (DCR)
Kathleen Baskin	Designee, Department of Environmental Protection (DEP)
Hotze Wijnja	Designee, Department of Agricultural Resources (DAR)
Michelle Craddock	Designee, Department of Fish and Game (DFG)
Todd Callaghan	Designee, Massachusetts Office of Coastal Zone Management (CZM)
Thomas Cambareri	Public Member
Marcela Molina	Public Member
Vincent Ragucci	Public Member
Kenneth Weismantel	Public Member

Others in Attendance:

Michele Drury	DCR, Office of Water Resources (OWR)
Erin Graham	DCR, OWR
Alan Dunham	National Weather Service
Peter Weiskel	U.S. Geological Survey
Julia Blatt	Massachusetts Rivers Alliance
Marcos Pareto	DPU
Kate Bentsen	DFG/Div. of Ecological Restoration
Jennifer Pederson	MWWA
Lexi Dewey	Water Supply Citizens Advisory Committee
Thomas Maguire	MassDEP, Wetlands
Viki Zoltay	DCR, OWR
Sara Zalieckas	MEMA
Marilyn McCrory	DCR, OWR
Katie Ronan	MWRA
Beth Card	MWRA
Jennifer Sulla	EEA
Jessica Hunt	Stantec on behalf of Aquaria
David Melly	Office of Representative Dykema
Kurt Gaertner	EEA
Eva Murray	EEA
Elizabeth McCann	MassDEP
Duane LeVangie	MassDEP
Sara Cohen	DCR, OWR
Bryan Mills	Next Generation Strategies
Derek Etkin	CDM Smith

Rao called the meeting to order at 1:11 p.m.

Agenda Item #1: Executive Director's Report

- Rao congratulated Craddock on the 10th anniversary of the reorganization and renaming of the Division of Ecological Restoration.
- Rao congratulated Ragucci on his promotion at work.
- Baskin and Wijnja gave an update on the aerial spraying in response to the Eastern Equine Encephalitis outbreak. Another round of aerial spraying of the five zones started this past Monday. There has been extremely low residual and most samples are below detection limits. Callaghan asked if the sampling data from water bodies are available publicly. Baskin responded that staff started putting a report together, but then had to start another round of spraying. The data will be made public. Until then, requests can be directed to her.

Agenda Item #2: Hydrologic Conditions and Drought Update

Zoltay provided an update on the hydrologic conditions for August. Conditions are still normal. Temperatures were average to slightly above average for August. According to the Northeast Regional Climate Center, this summer was the 10th warmest on record for Massachusetts. Precipitation ranged across the state, but both indices are normal. Streamflow and groundwater also ranged widely, but both indices are normal. Most reservoir levels were above average. The Crop Moisture Index is Normal. At the end of the month, the Keetch-Byram Drought Index was at elevated levels for all regions except the Cape & Islands. However, the Chief Fire Warden reported that fire danger and fire activity remain below average at low to medium due to the 3-4 day frequency of these precipitation events keeping surface fuel moistures at acceptable levels to minimize ignition potential. No droughts are forecast. The outlook for next month shows equal chances for temperatures to be below normal, normal or above normal and a 33-50% chance of above normal precipitation. There was a short discussion about streamflow. Dewey noted that the rivers in the central to western region of the state have been low, including the Connecticut River and the Montague gage so the MWRA had to increase minimum releases from the Quabbin. Zoltay answered that the information provided is the average for the month, so there may have been times of high flow in response to thunderstorms. The revised drought plan will use the median. Weiskel suggested looking at the USGS Water Watch webpage that has daily departure from flows.

Agenda Item #3: Vote on the Minutes of April 2019; May 2019; and June 2019

Rao invited a motion to approve the meeting minutes for April 2019, as amended to correct the spelling of Acton.

V O T E	A motion was made by Weismantel with a second by Ragucci to approve the meeting minutes for April 11, 2019 with amendments. The vote to approve was unanimous of those present.
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Rao invited a motion to approve the meeting minutes for May 9, 2019, as amended to complete the sentence on page 2.

V O T E	A motion was made by Ragucci with a second by Hotze to approve the meeting minutes for May 9, 2019 with amendments. The vote to approve was unanimous of those present.
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Rao invited a motion to approve the meeting minutes for June 13, 2019, as amended to change the header to the correct month of June.

V O T E	A motion was made by Hotze with a second by Cambareri to approve the meeting minutes for June 13, 2019 as amended. The vote to approve was unanimous of those present.
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Agenda Item #4: Aquaria Proposal to Reduce Withdrawals During Certain Times of the Year in Order to Discontinue Use of the Gunderboom Fisheries Exclusion Netting

Rao gave some background about the Aquaria plant. It is the only desalination plant to have gone through the Water Resources Commission (WRC) Interbasin Transfer Act approval process. It was approved in 2003 with conditions. In the years since its approval, the conditions have been fine tuned. Today an update will be given on a proposal to modify the conditions, and at the next WRC meeting a vote will be requested on the proposal. Drury gave some more background. Brockton is the only customer of Aquaria's Dighton plant and the parties are working on some changes to the contract, which should be finalized by next month. Drury acknowledged Callaghan who has provided technical review, and Jack Schwartz, retired, and John Logan from DFG who have provided their expertise in fisheries. Drury also acknowledged Hunt from Stantec representing Aquaria.

The plant withdraws water from the Massachusetts Coastal Basin, which is anything below the mean high tide. Norton has gone through the approval process to become a customer of Aquaria but has never purchased water. Drury explained the prior conditions placed on the project. One of them was to operate in a manner such that fish would not be impacted, including protecting marine life and that would include fisheries at all life stages. Aquaria installed Johnson screens, wedge wire screens, and a Gunderboom fish exclusion barrier that lets water through but not fish. The Taunton River is a very dynamic environment and the Gunderboom, a heavy filter fabric, has been subjected to overtopping and scouring. Over the past 10-15 years Aquaria staff have found fish behind the Gunderboom. Alternative fishery exclusion devices have been investigated, but either were not approved or did not work. The Gunderboom is supposed to be in place March 1 through mid-November. State staff recommended reducing the withdrawal and looked at the data. They determined a 6-week period critical to the fisheries. Aquaria proposed withdrawing during that time period only a minimum amount of water to maintain the plant filters. Brockton would not buy water during that time unless there was a DEP emergency declaration. Water quality monitoring was part of the original conditions because this was the first desalination plant in Massachusetts and the Commission was not sure of the impacts to the salt wedge or to water quality. After several years of monitoring no change was observed so those monitoring requirements were discontinued. There were also other fishery monitoring requirements. Over the years, this monitoring did not provide reviewers with enough useful information, and the monitoring requirements have been discontinued. If the WRC votes favorably on this request, in addition to minimal environmental impacts, Aquaria will save time and resources and WRC staff will save time. Monitoring will still be required, because this is a dynamic and biological system and the Commission is charged with protecting the resources under the ITA.

Blatt asked about Brockton's source of water during the decreased times of withdrawal, specifically, would the water come from Silver Lake? Drury responded yes, Brockton's other sources are Silver Lake and the Brockton Reservoir, and those are not subject to the ITA. Rao added that staff looked at Brockton's historical use during that 6-week period and it was minimal. It is not the peak season. The six weeks are the last week of April through June 8. Callaghan added that this proposal was not arrived at quickly. Monitoring has been taking place since 2007, and the data have been analyzed to look for the peak of ichthyoplankton, which are the fish larvae. The reason they are taking a close look at this plant is because if the plant were to operate at full capacity, it would have a significant impact on the species in the Taunton River. Because this is the saltwater and freshwater interface, it is where white perch spawn. This species could be hit really hard at this site if the plant were operated at full capacity. There were some negotiations with Aquaria and the 6-week period was agreed upon. This will protect 90% of the white perch. Other systems were considered, but they would probably only protect the larger fish, and not the larvae. This is a good proposal and serves the interests of Aquaria, Marine Fisheries, Coastal Zone Management, and the Department of Conservation and Recreation.

Weismantel asked what does “level of incremental withdrawal” mean? Drury and Callaghan explained that it has to do with the fact that the withdrawal is not continuous. Water is withdrawn on the outgoing tide to capture as much freshwater as possible, and brine is discharged on the incoming tide. Drury will check with Stantec to see if there is a better term to use. Craddock asked about the timeline for developing the monitoring plan and will the WRC approve that? Drury responded that after the proposal is approved by the WRC the monitoring plan will be revised. It will be approved by the WRC before the proposal goes into effect. Callaghan furthered explained that there is already a monitoring plan. Some sections will be taken out, and maybe others added. Even though the Gunderboom will be removed, there are several other rack systems that will remain. There are three fine screens. However, they are still finding relatively small fish beyond these screens. Callaghan proposes monitoring the screens- the Johnson screens, the wedgewire screens to make sure they are still holding up. They should be checked to make sure the gaskets aren’t loose or there isn’t some missing grout that is allowing the fish through.

Craddock asked what the process is if Brockton wants to take more water or if Norton wants water. Drury responded it depends. Brockton is approved under the ITA for a certain amount, even though they have not been taking what they are approved for. If they want to start taking above that amount, then the ITA is triggered. Norton is approved for a certain amount, even though they have not been taking any water. If Norton wants to start taking above that amount, then the ITA is triggered. Craddock asked if other towns would be allowed to take water during the 6-week period. Michele answered no, and that Brockton is in the process of formalizing an agreement with Aquaria. Callaghan asked about the Water Management Act permit and if this could be incorporated. LeVangie answered that the permit was up for renewal and so now was the time to incorporate language. Drury added if another community wanted to receive water, they would have to file a MEPA NPC and go through the receiving basin portion of the ITA. Zoltay asked about climate change and shifting seasons and the monitoring. Callaghan said the spawning season has shifted later, which was surprising. Usually there is language in permits that allows for shifts based on the monitoring. Cambareri asked about impingement monitoring. Callaghan explained that they use a pool vacuum to clear out the screens and count the number of ichthyoplankton that had been stuck.

Agenda Item #5: Presentation and Discussion: Final Drought Management Plan, Approval by the Drought Management Task Force

Drought Management Task Force members present:

Tom Maguire, MassDEP Wetlands Program; Peter Weiskel, USGS; Alan Dunham, NWS; Beth Card, MWRA; Lexi Dewey, WSCAC; Jen Pederson, MWRA; Sara Zalieckas, MEMA; Marcos Pareto, DPU; Duane LeVangie, MassDEP WMA; Vandana Rao, EEA

Rao opened the meeting for the Drought Management Task Force at 1:56 PM and invited members not already at the table to join. Members of the Drought Management Task Force introduced themselves. Rao recognized Zalieckas as a co-chair of the Drought Management Task Force. Rao gave some history of droughts in the late 1990s and early 2000s and the development of earlier drought plans, including the 2013 version. It was important to test the latest version against data from earlier droughts. Rao explained that she was going to take members through the final version of the newest drought plan. The drought in 2016-2017 tested the 2013 drought plan and a lot was learned, in particular how quickly the 2016-2017 drought developed. The methods used to calculate the indices did not catch the drought early enough. For this drought plan, a lot of thought went into how the data are analyzed to be responsive to actual conditions. In addition, during the 2016-2017 drought, interagency coordination and collaboration was not specifically codified and things were done on an ad-hoc basis. This plan includes not only coordination between state and federal agencies but also assistance to communities. More actions both at the state and local levels were also included.

Zaliekas gave an overview of MEMA's role in the drought plan update. MEMA focused on coordination and communication, including alerting key partners, public communication, and what platforms to use; better defining roles and responsibilities; and better defining response and preparedness actions. Overall the coordination piece of the plan is improved with this new version of the drought plan. The plan also dovetails with the State's Comprehensive Emergency Plan.

Rao explained to the WRC that she would be asking for approval from the Drought Management Task Force (DMTF), and once that meeting was closed, she would ask for a vote of approval from the WRC. Pederson questioned this because she claimed no vote was taken in 2013. Rao pointed out that she reviewed past meeting minutes and found that the commission voted to approve the Plan in May 2013 after it had been accepted by the DMTF. Baskin, who was the executive director at the time, further elaborated on the reasoning behind the decision to bring the 2013 drought plan to the commission for a vote. It was important to get the commission's endorsement as a water policy document.

Rao gave some background and history of the drought plan. The original drought plan came about because of the late 1990s drought, when there was no real way to look at the indices and make drought declarations. The 2001 plan was developed through the input of a task force. There were some minor updates in the 2013, including the addition of the KBDI. The most significant changes now are a result of the 2016-2017 drought. Rao explained the public comment process and described the new drought plan. The plan has ten sections. Some sections are the same with new language, and some sections are new. The redline/strike-out version provided to the commission was generated from the January 2019 public review draft, not the 2013 version plan. So much has changed and been moved that a redline/strike-out version from the 2013 plan would be too busy.

Carroll gave a general overview and then highlighted the comments received and the changes made. There were 26 sets of comments received that were consolidated in the 10-page Summary of Comments by section. Carroll reminded the Task Force and Commission that in March a presentation was made providing an overview of the comments received. Overall, there was support for the plan. Most of the comments were requests for clarification. The most comments received were on Section 3, "Drought Assessment & Determination," and Section 7, "Drought Preparedness & Response: State Agencies."

Carroll highlighted the following comments; there was: appreciation for the discussion of climate change; request for impervious impact; request for clarification for drought mission and roles and responsibilities; request for clarification about nomenclature; Brookline's drought region versus county; concern expressed for declaring a drought in an area smaller than a drought region (which was already in the 2013 plan); clarification about indices and a request to weight indices and the beginning and end of a drought; support and suggestions for the communications section; request for a section compiling bylaws and keeping track of outdoor watering; clarification regarding proposed outdoor watering schedules; request for state support in developing new water supplies for system reliability during drought; positive feedback on the new Section 8 "Drought Preparedness & Response: Local Guidance"; request to address downstream releases during drought; request for more guidance regarding MWRA customers; more data about indices, in particular lakes & impoundments and groundwater wells.

Rao explained how the response to some of the comments was to provide greater clarity. Carroll gave an example of how "assesses" was changed to "monitors." In addition, there were changes made in response to specific comments that Carroll had highlighted.

Carroll continued with a summary of proposed changes. In response to requests for more environmental representation and hydrologic expertise, Massachusetts Rivers Alliance and the Northeast River Forecast Center were added to the Drought Management Task Force. Rao noted that Massachusetts Rivers Alliance was added in the Appendix, but inadvertently left out of Section 2; the change will be made.

There was a request to change “mild” to “moderate.” Carroll explained that a lot of thought and discussion went into the nomenclature of the drought levels. Rao also explained how “moderate” is used by the US Drought Monitor, and there was a goal to keep the nomenclature different to avoid confusion.

Carroll explained that Brookline was put back with its drought region rather than its county, although other changes were made with boundaries to align drought regions with county boundaries. The ability to make a drought declaration at a scale smaller than a drought region was kept in the plan. Clarification was provided regarding calculation of an index severity level; it will not be adjusted. Best professional judgement comes in when rolling up all the indices to determine a drought level. There was request for clarification about weighing of the indices. The deliberation considers which phase of the drought is occurring, the most relevant indices, and severity. The declaration is not based solely on the majority of indices. For the end of a drought, precipitation and groundwater will be looked at most closely. Under “Drought Communication,” a section was added on communicating with the media. This was a big part of the drought response in 2016. Zalieckas provided further detail on what is typically done. Carroll continued with the proposed changes. Some state agencies will have additional responsibilities including MassDEP, DFW, and DPH. MassDEP has committed to tracking outdoor watering restrictions, which they already do. Also added was language that all agencies will work to establish emergency water supply connections during drought level 4. Section 8 added language acknowledging local or regional supplier drought plans. The plan does not address downstream releases because it was decided this should be decided on a case by case basis.

Rao discussed the next steps. Once the plan is approved, calculations of the new indices will need to be done. Staff will be automating this as much as possible. A Drought Dashboard to better communicate with the public will be developed. It is also the intent to have an “impact reporter” to gather information from the public, water suppliers, and other stakeholders. Rao invited questions from members of the Drought Management Task Force.

Dunham commented that the new drought plan may not be perfect, but it is an improvement. It will take a test like the next drought to see how the new plan works and how it could be improved again. He urged task force members to avoid nitpicking and to approve the plan so next steps can be started.

Rao mentioned as part of the next steps there will be more guidance for local drought plans. Work has begun with the help of MWWA, state agencies, USGS, consultants, and water suppliers, but the guidance was not ready to put in the plan yet.

Pederson had some questions. How will severity be assessed? Rao responded it is hard to go by just majority, but the early warning indices will be looked at closely. Zoltay added that a quantitative way to consolidate the indices does not exist and there is a federal precedent that convenes a group to look at drought conditions. The phase of the drought needs to be considered and there are things missing from the indices such as forecasts and actual reported conditions. There is not a formula that will generate an answer.

Pederson expressed concerned about subjectivity in the drought assessment. Rao acknowledged it is not clear cut, but there is a deliberative process. Zoltay responded that new plan will be more responsive both going into and coming out of a drought.

Pederson also expressed concern about a comment made by Dr. David Boutt regarding aggregating drought indices. She did not see it answered. Zoltay responded that there is no clear scientific method. Pederson asked about the example Dr. Boutt cited in his comment. Zoltay responded the example cited was of a groundwater model for California, not a method of rolling-up drought indices. California has a different groundwater regime from Massachusetts, so what is applicable there, might not be applicable in

this state. USGS is working on a groundwater model for Massachusetts. Rao said that staff is in contact with researchers and aware of the work they are doing so that the latest advancements can be used. Pederson asked about Table 10 and why the language was dropped about drought and drought levels. Rao responded that it was redundant. Pederson said it was clearer with the language. Pederson said that a footnote should be added regarding Water Management permits since they mandate restrictions. Rao responded that there was an effort to stay away from mentioning regulatory constructs. Instead, the focus is on the hydrology during a drought and how the resource is being used. Pederson said that it was an issue during the last drought – which should be followed, the permit or the drought plan? LeVangie responded that the language in the drought plan is more stringent than the language in the permits.

Card acknowledged the work that went into the new plan. Given the focus on communication, Card asked that the MWRA communities understand what a drought declaration means for them. She asked for a drought overlay and mentioned the language about MWRA's drought plan. Is there a way to highlight that information? Rao responded that it would make sense to expand messaging and work with the MWRA. For example, the website FAQs could address MWRA customers.

Weiskel acknowledged the thorough and deliberative process. USGS will continue to work with DCR staff to revise and automate indices.

Weismantel thanked staff and said that changes will be made over time. Weismantel said that Appendix B will need to be updated and someone should be assigned that responsibility to make sure it happens. Rao responded that her position will take the responsibility of updating the Appendix.

Pederson commented on the regional piece, noting that the islands are still grouped in one region. She expressed concern that communication will be difficult. Rao responded that there is not enough data to make separate declarations for each island. This is an issue for the islands as well as indices such as lakes and impoundments. There was a discussion of adding more lakes and impoundments. DCR has made progress in adding some DCR sites to the monitoring network.

Cambareri asked about agency responses and about the role of the Commission? Baskin responded that that question is why the 2013 included the approval of the Commission. The Task Force is an advisory committee, and the Secretary, the chair of the Commission, makes the call, so it was important that the Commission approve the plan. Carroll also said that the Commission's Hydrologic Conditions report is important in monitoring. Baskin also said that this plan is a big improvement.

Dewey expressed appreciation for the work that was done, and in particular for including the regional planning agencies. She said that starting last May, all town administrators and public health officials, excluding MWRA communities, have been receiving the Hydrologic Conditions Report. It has been enthusiastically received and she looks forward to the completion of the drought dashboard.

Rao looked for and received approval from the Drought Management Task Force knowing that it is a working document. There are some minor changes to be made, including typos, adding language back into Table 10, adding the Massachusetts Rivers Alliance in Section 2, and adding an asterisk for updating Appendix B. In addition, there will be continued work with MWRA on FAQs and continued work on local drought management guidance.

The Drought Management Task Force Meeting was adjourned at 3:07.

Agenda Item #6: Final Drought Management Plan, Approval by the Water Resources Commission

Rao invited a motion to approve the 2019 Massachusetts Drought Management Plan: Preparedness and Response.

V O T E	A motion was made by Ragucci with a second by Weismantel to approve the 2019 Massachusetts Drought Management Plan: Preparedness and Response as amended. The vote to approve was unanimous of those present.
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Meeting adjourned at 3:09.

Documents or Exhibits Used at Meeting:

- WRC Meeting Minutes for April 11, 2019, May 9, 2019, and June 13, 2019.
- Hydrologic Conditions in Massachusetts, August 2019 (available at <https://www.mass.gov/water-data-tracking>)
- Staff Recommendation: Amendment to the August 14, 2003 Interbasin Transfer Act Findings on Compliance with the Environmental Criteria of the Interbasin Transfer Act and The 2005 Fisheries, Vegetation and Water Quality Monitoring Plan for the Aquaria Regional Desalinization Project dated September 12, 2019
- 2019 Massachusetts Drought Management Plan: Preparedness and Response (all documents available at <https://www.mass.gov/service-details/drought-management-task-force-meetings>)
 - Red-line version
 - Clean version
 - Summary of Comments received on the Draft Drought Management Plan
 - Public Comments received on the Draft Drought Management Plan

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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.