



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

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**Meeting Minutes for January 10, 2019**

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

*Minutes approved March 14, 2019*

**Members in Attendance:**

Vandana Rao, Chair	Designee, Executive Office of Energy and Environmental Affairs (EEA)
Michele Drury	Designee, Department of Conservation and Recreation (DCR)
Duane LeVangie	Designee, Department of Environmental Protection (MassDEP)
Hotze Wijnja	Designee, Department of Agricultural Resources (DAR)
Michelle Craddock	Designee, Department of Fish and Game (DFG)
Thomas Cambareri	Public Member
Marcela Molina	Public Member
Kenneth Weismantel	Public Member

**Members Absent**

Linda Balzotti	Designee, Department of Housing and Community Development (DHCD)
Vincent Ragucci	Public Member
Todd Callaghan	Designee, Mass. Office of Coastal Zone Management (CZM)

**Others in Attendance:**

Michele Drury	DCR
Jen Pederson	Massachusetts Water Works Association
Erin Graham	DCR
Rob Lowell	DCR
Beth Card	Massachusetts Water Resources Authority
Gabby Queenan	Massachusetts Rivers Alliance
Michelle Craddock	DFG/Div. of Ecological Restoration
Kate Bentsen	DFG/Div. of Ecological Restoration
Sara Cohen	DCR
Viki Zoltay	DCR
Vanessa Curran	DCR
Emily Norton	Charles River Watershed Association
Marilyn McCrory	DCR
Karen Pelto	MassDEP
John Scannell	DCR
Liz Walk	Rep. Carolyn Dykema
Ariela Lovett	Mass. Municipal Assoc.
Martin Pillsbury	MAPC
Derek Etkin	CDM Smith
Parnian Baniahmad	CDM Smith

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

**Agenda Item #1: Executive Director’s Report**

Rao reported it has been wet for several months, which bodes well for no impending drought, although there is some concern that more of the precipitation is not snowfall, as snowpack is an important contributor to early spring flows. Rao also congratulated Tom Cambareri on his upcoming retirement from the Cape Cod Commission after 32 years of service. She also thanked him for his many years of service on the Water Resources Commission, which he plans to continue serving on for the foreseeable future.

**Agenda Item #2: Hydrologic Conditions and Drought Update**

Zoltay provided an update on the hydrologic conditions for December 2018.

- Temperatures were 2-3 degrees higher than average, and there’s very little snow cover.
- Precipitation was about average, with some regions just above average and some just below. December was the first month since July with fewer than half the days receiving precipitation.
- Streamflow was still significantly above average overall, however no gages were at record highs anymore and a few had returned to normal.
- Groundwater shows a few wells still at record high, and general wet conditions across the state, although many wells are returning to more normal conditions.
- Reservoir index shows all reservoirs full, with some spilling. The reservoir in the city of Lynn reports a close to below normal condition, but still normal, and we are waiting for additional information.
- The US Drought Monitor is not showing any drought or forecasting drought in the near future
- Outlook for January shows slight chance of temperatures below normal and about normal precipitation.
- We are several inches behind in snowpack, but it is too early in the winter to be concerned.

Comments:

Rob Lowell shared that Lynn has reported two water main breaks in the last two weeks. If those were ongoing for some length of time, they may be related to the lower reservoir levels there.

**Agenda Item #3: Vote on the Minutes of October 2018**

V O T E	A motion was made by Weismantel with a second by Wijnja to approve the meeting minutes for October 11, 2018. The vote to approve was unanimous of those present.
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**Agenda Item #4: DCR Best Management Practices and the New EPA Stormwater Permit**

Presentation by Rob Lowell from DCR (see slides at <https://www.mass.gov/service-details/review-our-meetings>)

- DCR is regulated under the Clean Water Act’s Phase II Stormwater Permit as a “non-traditional municipality”. While only its properties within urbanized areas are subject to the strictest permit requirements, DCR tries to adhere to similar stormwater management principles on all its properties.
- After some initial negotiations with EPA on the number of DCR facilities subject to the permit, DCR has worked cooperatively with EPA on compliance since 2005. The revised EPA

Phase II permit came into effect in summer 2017; DCR submitted a revised Notice of Intent in September 2017, which updates its existing best management practices.

- DCR developed an accelerated compliance schedule relative to EPA's compliance deadlines.
- Selected highlights of the presentation:
  - DCR has unique outreach and public engagement capabilities through interpretive services functions, ranger services, park friends' groups, municipal partners, Water Supply Protection communications, etc.
  - The compliance plan has a strong focus on pollution prevention and good housekeeping, such as street sweeping, drain cleaning, proper disposal of materials, prompt removal of material illegally dumped by others, etc.
  - Many DCR properties or roadways drain to waterbodies with known impairments, including some with TMDLs. The Emphasis in these cases is on reduction of identified pollutants causing the impairment.
  - ArcGIS drainage and catchment area mapping have been very successful in helping manage the program across DCR's broad geographic spread and diverse property types.
  - Due to extremely close and overlapping stormwater infrastructure with the City of Boston, DCR works very cooperatively with Boston on infrastructure management.
  - DCR has also worked hard to more precisely delineate its borders with abutting properties both in order to ensure DCR doesn't accidentally work outside its property boundaries and to better enforce pretreatment requirements on the part of abutters who discharge onto DCR property. DCR requires these abutters to use the same BMPs DCR uses on its own properties, within any catchment areas that drain to DCR property.
  - DCR expenditures on catch basin cleaning and repair have increased substantially since the program began, in some cases leading to areas experiencing proper drainage for the first time in over 30 years.
  - The agency extensively tracks its efforts on all fronts and reports these metrics to EPA.
  - It is also involved in several research studies on specific stormwater impact questions.

Comments/Discussion:

- Rao observed that DCR has really come far since they started with this work and that it's especially complicated given the geographic spread of properties and the interspersed nature of these properties with other municipalities and property owners.
- Rao asked what the next challenges are:
  - The nutrient management plan for the Charles River will be very challenging. Most DCR properties abutting the Charles are parkland, making it a challenge to reduce phosphorous loading. May consider using slower growing grass that only needs to be cut once a year or removing leaves and vegetative waste more quickly. May also use land use mapping to document where natural features are already neutral or net positive for stormwater treatment.
- Cambareri asked how stormwater is managed on DCR's more rural properties, where trail construction and trail use represent the key uses.
  - Many new trails are rail trails, which generally have vegetated swales running along them. Infiltration is a good treatment for phosphorous, which bonds with particles filtered during soil filtration.

**Agenda Item #5: Brief Update on Drought Management Plan**

Rao provided a brief update on DMP

- Timeline: she is hopeful we can release the draft plan in the next month and provide at least a month of time for public review and comment.
- Much will not be new, as we have presented to various audiences over the last two years.
- The new plan will be a substantial change from previous plan.
  - There is a longer introduction that includes climate information; history of drought in MA; history of the DMP itself.
  - The plan outlines various authorities, roles and responsibilities, and processes.
  - It includes a revision to the drought indices, which went through an in-depth review by a technical work group. The emphasis was on the ability to capture drought early.
  - The plan outlines the process of drought determination, including the variety of information considered, such as the indices, forecasts, and known impacts.
  - There is a section on communication that identifies use of both traditional and newer communication channels.
  - The plan outlines responsibilities of each agency and the DMTF members.
  - There are new sections on preparedness and response actions at the state and local level.
  - The plan specifies authorities triggered by an emergency drought declaration.
  - It includes a collection of useful appendices (model outdoor water use restriction bylaws, history of MA droughts, guidance on developing drought triggers for local supplies, the process of review and revision of the drought indices, and others).
- The DMP will be a working document, even after this round of revisions, so updates can be made as needed.

#### Discussion/Comments

- Weismantel encouraged staff not to let the perfect get in the way of the good.
- Pederson asked if the DMTF will be convened to review the document before it goes public. Response: Yes.
- Queenan asked whether there is a plan for regular updates of the DMP. Response: We need to check if the plan mentions a specific regular timeframe. It might be best to allow some flexibility, based on whether circumstances warrant update.
- Pillsbury encouraged us to connect drought planning to local Hazard Mitigation Planning.
- Cambareri asked what is the connection between the DMP and the permits under the new WMA regulations? LeVangie responded: the SWMI process somewhat divorced watering restrictions from drought declarations, recognizing drought declarations can be slow to come. Now permits are connected to 7-day low flow triggers. On the Cape, groundwater triggers are still used and are still connected to drought declarations.

#### **Agenda Item #6: Status Report: Drought of 2016/2017 Retrospective**

Rao explained that staff felt it was important to record, organize, and institutionalize the trajectory, impacts, and responses of the 2016/17 drought, to help ensure that collective memory isn't lost and that lessons might be effectively learned. The resultant document which we'll hear about today will be available for comment when it is finalized within a few months.

Vanessa Curran presented on the 2016/2017 Drought Retrospective (see slides at <https://www.mass.gov/service-details/review-our-meetings>).

- DCR received input from DMTF members, a few additional agencies, and Cambridge and Worcester, as well as made use of the DMTF meeting records, data, and documentation.

- Report includes analysis of the progression of each of the indices through the drought.
- It also documents all the DMTF meetings and declarations.
- It provides an overview of state response actions.
- It records the drought impacts to various sectors represented on the task force.

Selected highlights of the presentation:

- First meeting of DMTF was in early July 2016, leading to several declarations of Drought Watch and Advisory levels; worst overall conditions peaked in Oct 2016; by May 2017, all indices were back to normal.
- The 2016 water year (Oct. 2015 – Sept. 2016) was the 13<sup>th</sup> driest and 2<sup>nd</sup> warmest on record for MA. The 2016 calendar year ran a one-foot precipitation deficit. Interestingly, the Western region never actually saw the precipitation index trip into drought.
- A review of all indices over the course of the drought showed all peaking sometime between Sept. and Dec. 2016.
- Governor and Secretary Beaton held a press conference at Smolak Farms, N. Andover in Aug. 2016 to raise awareness of the drought and encourage conservation and support of local agriculture. Also in Aug. 2016, EEA and MEMA held a conference call with agencies and municipalities to open communication channels and coordinate response actions.
- EEA and agencies developed a website for various forms of information and assistance.
- MEMA issued situational awareness communications and provided one-on-one assistance to communities who reached out to them seeking guidance.
- DEP communicated with regulated water suppliers regarding conditions and the process for declaring a water emergency.
- The state coordinated various programs for financial assistance. The total agricultural impact of the drought was estimated at \$18M.
- Water use restrictions at the local level peaked in Sept. 2016. The Quabbin reservoir never triggered the drought warning stage according to its own drought plan, although levels were below normal from Nov. 2016 – mid June 2017.
- Post-drought, DCR worked with DPH to survey local health departments about private well impacts. They received 87 responses (~25%); 52% said private wells in their community were impacted by drought. The survey identified a need for more education and resources for private well owners, better information for local health departments on private well regulation, and online means to report private well drought impacts.

Comments/Discussion

- Rao invited any additional content or commentary to be sent to her.
- Pederson noted that increased water use restrictions will continue to be seen, as a result of new WMA permits, even without drought.
- Beth Card recalled from her time at DEP during the drought that there seemed to be a lot of conversation between MEMA and DPH on where to send people who needed help with their private wells. She also recalled a lot of calls from small farmers about whether they are permitted to use public water to water their animals.
- Weismantel recalled seeing a chart showing long-term drought cycles, and thinks that should be part of the retrospective report.
- LeVangie pointed out that it would be worth highlighting in the report that the June, July, August 2016 was the driest 3-month period on record.

- Zoltay mentioned that an increased focus on temperature is important, as it affects both evapotranspiration and snowpack. Rao confirmed that they would check that temperature is sufficiently discussed in the retrospective.
- Zoltay also requested the report include information on defoliation as related to drought. John Scannell confirmed that DCR is seeing significant increases in gypsy moths, and tree mortality is even higher due to compounded stress of drought. Experts thought gypsy moths would have decreased again in the last year, but they are not seeing that.
- Queenan requested that a section in the retrospective cover impacts to the natural environment and wildlife. Rao confirmed that is the intention, but some of these data take a few years to compile.
- Pederson cautioned not to extrapolate too generally from local water supply emergency declarations, without understanding those individual circumstances.
- Cambareri noted that the Groundwater index was never tripped for the Cape and Islands, despite severe impacts to kettle ponds and other known groundwater stressors. This suggests a reexamination of the Groundwater index. Rao explained that we have revised the indices in the new plan, and they should be more reflective of actual conditions. Zoltay added that a grant application to NOAA has been submitted to automate some of the analyses, which would allow analysis on a sub-regional or watershed level, which can also help if impacts are quite variable across a drought region.
- Pillsbury suggested we look at economic impacts beyond agricultural losses, such as to recreation, industry and large commercial uses. Lowell added that impacts to ski resorts or golf courses could also be surveyed. Rao pointed out these data are lacking, but we would like to improve this tracking in the future.
- Weismantel commented he really liked the data-driven approach to this analysis. As a Commission, we might be able to develop similar metrics to track other areas under our purview to help determine if we're having a positive impact. Much discussion ensued about the availability or lack thereof of data and the timeframes of impacts. Zoltay commented that it would be great for the state to hire an environmental economist to track the impact value of many state agency efforts.

Meeting adjourned at 3:13pm

**Documents or Exhibits Used at Meeting: ATTACHMENTS:**

1. WRC Meeting Minutes: October 11, 2018
2. MEPA Comment Letter: North Reading Notice of Project Change
3. Interbasin Transfer Act project status report: 19 December 2018
4. Hydrologic Conditions in Massachusetts, December 2018 (available at <https://www.mass.gov/water-data-tracking>)
5. Presentation by Rob Lowell: DCR Best Management Practices and the New EPA Stormwater Permit (<https://www.mass.gov/service-details/review-our-meetings>)
6. Presentation by Vanessa Curran: Drought of 2016/2017 Retrospective (<https://www.mass.gov/service-details/review-our-meetings>)

Compiled by: SC

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, 8<sup>th</sup> floor, Boston, MA 02114.