

## **Massachusetts Drought Management Task Force – Meeting Summary** **September 9, 2024, 10:00 am – 11:30 am conducted remotely via Zoom**

### **Attendees, Drought Management Task Force Members:**

Vandana Rao, Executive Office of Energy and Environmental Affairs (EEA)  
Richard LaTour, Massachusetts Emergency Management Agency (MEMA)  
Joe Dellicarpini, National Weather Service (NWS), Northeast River Forecast Center  
Brian Loving, United States Geological Survey (USGS)  
Viki Zoltay, Department of Conservation and Recreation (DCR) Office Water Resources (OWR)  
Duane LeVangie, Department of Environmental Protection (MassDEP), Water Management Act  
Tom Maguire, MassDEP, Wetlands  
Irena Draksic, Department of Public Health (DPH)  
Anne Carroll, Department of Conservation & Recreation (DCR)  
Kate Bentsen, Department of Fish and Game (DFG)  
Jennifer Pederson, Massachusetts Water Works Association (MWWA)  
Moussa Siri, Water Supply Citizens Advisory Committee (WSCAC)  
Katharine Lange, Mass Rivers Alliance (MRA)  
Dave Celino, DCR Fire  
John Gregoire, Massachusetts Water Resources Authority (MWRA)

### **Other Attendees:**

Aisha Revolus	EEA	Marcus Pareto	DPU
Adam Kautza	DER	Michael Souza	MEMA
Britt Westergard	NOAA	Neal Strauss	NOAA
Brittany Segill	MassDEP	Pine duBois	Jones River Watershed Association
Caitlin Spence	EEA		
Chris Bruet	USGS	Purvi Patel	EEA
Deanna Marks	NOAA	Ron Horwood	NWS
Edwin Sumargo	EEA	Sara Cohen	DCR OWR
Elizabeth McCann	MassDEP	Stephen Olson	Wellesley Water Dept
Erin Graham	DCR OWR	Sylvia Reeves	NOAA
Jason Duff	DCR OWR	Toni Stewart	DCR OWR
Jason Pollender	USGS	Vanessa Curran	DCR OWR
Kara Sliwoski	DCR OWR	William Paulitz	

### **1. Introductions: EEA, MEMA & Announcements**

Rao called the meeting to order at 10:00am and introduced herself. No one from MEMA was initially present, so she said she would introduce them if they joined. She asked everyone to put their name and affiliation in the chat window for attendance purposes. Rich LaTour joined to represent MEMA and said he would only be present for the first 30-45 minutes of the meeting. Rao announced that Mike Souza was also present on behalf of MEMA.

## **2. Approval of August 6, 2024 DMTF Meeting Notes**

Rao apologized for sending meeting notes later than normal and asked for a show of hands on who was comfortable taking the vote. Many people did not have a chance to read them, so Rao said she would either take the vote at the next meeting, or she would send out a poll for the vote.

## **3. Brief Overview of MA Drought Management Plan (MA DMP): OWR Staff**

Zoltay provided a quick review of the six MA drought indices, the number of stations that report, the index severity levels, the drought regions, the task force deliberation and recommendation process, as well as early indicators, late recovering indices, and the occasional use of subregions for declarations.

## **4. Updates on Current Conditions and Impacts**

Presentations for the updates below can be found on the mass.gov website [here](#); a summary of each presentation is below.

### **Weather & Forecast: Joe Dellicarpini - National Weather Service**

August rainfall was near normal except for above normal rainfall in western and northern MA and below to much below normal rainfall on Cape Cod, Nantucket, and near Edgartown. The three-month departures have shown a decline in eastern MA. The six-month departures are on the lower end of normal on Cape Cod and Nantucket. So far in September, rainfall has been minimal and is well below average. Dry weather patterns are expected to continue for at least the next two weeks, with the possibility of up to 0.25 inches of rainfall through next Monday, mainly in western MA. Above normal temperatures should continue through the fall. There is the potential for a wetter pattern to emerge later in the fall (October/November). There was a brief discussion on the recent dry conditions and the fact that September was already looking dry. Dellicarpini explained that it is not uncommon for this time of year to be relatively dry.

### **Hydrologic: Brian Loving - USGS**

Streamflow conditions improved from July to August in all drought regions across Massachusetts except the Cape, where one of the two index monitoring stations trended down from normal to below normal. All but one of the groundwater stations monitored by USGS for climate response in Massachusetts were in the normal to above normal range during August, which is a slight improvement from the July conditions.

Pederson asked if anyone has heard of agricultural activity that might be impacting the Parker River Basin. Rao answered that she was not aware of any, but that staff are investigating the situation. LeVangie added that there are no registered or permitted users above Georgetown – if there are farms there, they are below DEP's threshold. Maguire asked why one of the Nantucket wells was so low, to which Loving explained that well has shown a similar trend throughout the summer and is going down slightly faster than normal.

DuBois commented that statewide averages are not a good way to make local management decisions and used the current issues with herring not being able to out-migrate in the Jones River as an example. Rao agreed that statewide averages might not be the best way to evaluate highly localized management decisions.

### **Hydrologic: Neal Strauss, Northeast River Forecasting Center**

Over the past month, river flows across most of the Commonwealth decreased especially across the

eastern part of the state. Below normal to some near normal stream flows have also been observed in the eastern portion of the state. Near normal stream flows have been observed across most of the western portion of the state. The lowest stream flows are currently found over portions of Essex, Middlesex, and Norfolk counties. The weather pattern looks quiet over the next 10 days. Ensemble data indicates the possibility for some rainfall heading into next week but with significant spread. As a result, the NERFC forecast ensembles call for receding rivers and streams over the next 10 days.

Pederson asked about the discrepancy between Dellicarpini's and Strauss' presentations because one seemed to indicate conditions are improving, and the other indicated conditions worsening. Strauss responded that it could be due to a slight difference in the timeframe they were looking at.

**Water Supply: Duane LeVangie – MassDEP**

LeVangie reviewed the Water Management Act program, including the system for registrations and permits. He also reviewed the triggers for restrictions for PWS permits. As of September 1<sup>st</sup>, PWS reported water use restrictions included 6 voluntary, 79 mandatory of 2 days or more, and 13 mandatory of 1 day or less. Additionally, there is one emergency declaration that is not climate related, but water quality driven by *E. coli*.

**Water Supply: John Gregoire – MWRA**

The Quabbin dropped about 2 feet since the last DMTF meeting but is currently still at over 92% full. MWRA is in the middle of their transfer season and they are transferring water to Wachusett, which will continue through mid-October. Their precipitation monitoring is showing well below long-term averages. The Sudbury is about two feet below the normal band because of recent lowering of the reservoir for construction. The Foss is also below the normal band because of recent lowering for inspection work.

**Water Supply: Jen Pederson– MWWA**

Pederson reported that she has no issues to report among her members.

**Private Water Supply: Marcos Pareto- DPU**

Not present at meeting to give updates.

**Wetlands: Tom Maguire- DEP**

No commissions from the Northeast have contacted them. They did receive contact from Nantucket, but it was not regarding a wetlands issue.

**Fish and Game: Kate Bentsen- DER**

Bentsen did not have any updates. Kautza said he has been out in the western part of the state and things seem normal, but they haven't had anyone out in the Parker or Northeast region.

**Massachusetts Rivers Alliance: Katharine Lange and Viki Zoltay**

Zoltay gave the overview on behalf of Mass Rivers due to their staff not being able to make the meeting. She showed photos of very low stream flow in several streams in the Parker River watershed. Pederson recommended photos of streams get taken at the same spot each month for consistency. Lange and Rao agreed that location consistency is important.

**Water Supply Citizens Advisory Committee: Moussa Siri**

No updates.

**Agricultural: Michael Botelho - DAR**

Botelho was not present at the meeting, but he notified Rao that he had no updates prior to the meeting.

**Fire Danger: Dave Celino - DCR**

There has been an increase in fire activity since the last task force meeting. However, current numbers are still well below the five- and ten-year averages. KBDI is typical for later summer/early fall. Celino also described an ongoing fire at the Blue Hills that is representative of the types of fires they have been seeing this time of year. He recommended adding language explaining the increasing fire danger to the messaging that gets sent out after this meeting.

**Engineering: John Scannell- DCR**

Not present at meeting to give updates.

**Public Health: Irena Draksic - DPH**

No updates.

There were no other updates from task force member agencies.

**5. Presentation of Index Severity Levels as per MA DMP**

Zoltay provided an overview of the recent hydrologic history that led to current conditions. Starting in late May/early June, the weekly monitoring began showing below normal conditions for more than one index in the Western Region. However, there's been an intensification of dry conditions in the Northeast Region, especially the Parker River Basin. Streamflow has continued to be significantly low in the Parker, and the Cape and Islands are starting to develop dry conditions as well. The US Drought Monitor is still showing D0 (abnormally dry) conditions for parts of the Northeast, but has eased some since July 30.

Precipitation: Standard precipitation index fluctuated through June, while in July showed drying in the Northeast and Southeast. In August, conditions across the state were mostly normal except some below normal gages in the Southeast, particularly the mid-Cape region. Accumulated precipitation is mostly normal, except for Middleton and North Adams which remain a little behind.

Evapotranspiration: Closer to normal temperatures in August led to more normal evapotranspiration. The 2-month EDDI is in the normal range.

Streamflow: The Parker increased by one index severity level in August. The gage on the elbow of the Cape also is below normal. The rest of the state has normal or above normal streamflow levels. Regionally, streamflow is still normal to above normal.

Groundwater: This is a mixed story and has been all summer. The Western Region recovered during July, with scattered below normal sites elsewhere around the state. The Northeast Region has had quite a few wells that are below normal. More recently there has been some recovery in the Northeast. Regionally, groundwater levels are normal to above normal.

KBDI: Conditions are dry, as described in Celino's presentation. The Central, Northeast, Southeast, and Cape Cod regions are all at ISL 2, while the CTRV and Islands are at ISL 1.

Lakes & Impoundments: Most regions are normal, except for the Northeast which is just below normal at the 29<sup>th</sup> percentile.

## **6. Discussion of Drought Level Recommendations**

All DMTF members agreed on Level 0 for all regions with little discussion. The Parker River Basin situation was discussed in more detail. Rao explained that conditions have not improved much in the Parker and there is no outlook for significant precipitation in the next 8-14 days. Maguire expressed concern over Wheeler Brook and stated that its level of dryness could possibly impact its classification.

Pederson asked why groundwater wells are not matching the abnormally low streamflow conditions in the Parker. Zoltay said this is one of the puzzling parts about this situation. Zoltay also said that she received information about some wells being lower than normal in this area. Pederson recommended investigating agricultural withdrawals, because she has heard from members in the Northeast that they have seen farmers extracting water for irrigation. Zoltay agreed that a field investigation to visit farms would be worthwhile.

LeVangie asked where the monitoring location is for the Parker, to which Zoltay explained one is just over the border in Merrimack and there are several south of the Parker. LeVangie also commented that this is a relatively small area and Beaver Brook and Wheeler Brook are receiving basins, so there is very little withdrawal. He suggested that the lack of rain in this specific area might be the major driver of the dry conditions in these smaller streams.

Lange asked if DEP or USGS are planning to do more investigation as to what is causing the low flows in the Parker basin. Rao replied that both DCR OWR and MassDEP staff will continue to investigate. Maguire commented that there is falling groundwater in some wells in Essex County and provided graphs in the chat.

Loving added that the streamflow percentiles for the Parker River looked better in July because of a brief rain event, but it quickly came back down. Therefore, the monthly averages are a little misleading. He also commented that with flows this low, if people were pumping directly out of the stream they should see a signal in the hydrograph, which has not yet been seen.

All task force members agreed to keep Parker at Level 1.

### **Summary of Recommendations:**

Western, Cape Cod, Islands, Connecticut River Valley, Central, Southeast, and Northeast: Level 0 - Normal  
Parker River Basin: Level 1 – Mild Drought

## **7. Recommendations for Drought Level Response Actions**

The recommendation to the Secretary will be to keep all regions at Level 0 Normal conditions and keep the Parker River Basin at Level 1. The fire danger should also be highlighted in any messaging.

## **8. Next Steps**

The task force will meet again on Tuesday October 8<sup>th</sup> at 10:00 AM and will update recommendations accordingly.

**Meeting Ended** - The meeting adjourned at 11:35 am.