

Massachusetts Drought Management Task Force – Meeting Summary
October 8, 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)
Benjamin Hiltunen, 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
Dalene LaPointe, 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)
Monica Driggers, Mass Rivers Alliance (MRA)
Dave Celino, DCR Fire
John Gregoire, Massachusetts Water Resources Authority (MWRA)

Other Attendees:

Aisha Revolus	EEA	Jason Duff	DCR OWR
Adam Kautza	DER	Marcus Pareto	DPU
	Charles River Watershed	Michael Botelho	MDAR
Amber Siegel	Association	Michael Souza	MEMA
Ben Gahagan	DMF	Neal Strauss	NOAA
Britt Westergard	NOAA	Purvi Patel	EEA
Brittany Segill	MassDEP	Sylvia Reeves	NOAA
Deanna Marks	NOAA	Tim Pasakarnis	Cape Cod Commission
Elizabeth McCann	MassDEP	Toni Stewart	DCR OWR
Erin Graham	DCR OWR	Vanessa Curran	DCR OWR

1. Introductions: EEA, MEMA & Announcements

Rao called the meeting to order at 10:00am and introduced herself and her co-chair from MEMA, Ben Hiltunen. She asked everyone to put their name and affiliation in the chat window for attendance purposes.

2. Approval of August and September 2024 DMTF Meeting Notes

Rao asked for votes to accept the meeting notes for both the August and September task force meetings. Pederson made the motion to accept the August notes, which was seconded by Celino. Pederson made the motion to accept the September notes, which was seconded by LeVangie. Both motions passed unanimously.

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

Rao explained that since everyone attending the meeting was familiar with the MA DMP, the overview

would be skipped at this meeting to save time for the important discussions on the regional drought level recommendations.

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

September rainfall was below normal with the exception of above normal in southeast MA including Cape Cod and the Islands, and much below normal from the CT River Valley into central MA. Three-month departures are below normal in central and eastern MA, and much below normal on Cape Ann. Six-month departures are on the lower end of normal in northeast MA and Nantucket. So far in October, rainfall has been minimal across the Commonwealth. Dry weather pattern continues for at least the next week, with the possibility of another 1/4-3/4 inch of rain next Sunday-Monday after yesterday's light rain. Near normal temperatures through next week should trend warmer for late October and November.

Gregoire asked if we can expect to see any precipitation from hurricane Milton. Delicarpini said right now it is not projected to reach MA.

Hydrologic: Brian Loving - USGS

Streamflow conditions were seasonally much lower in September than August in all drought regions across Massachusetts except the Cape. September conditions ranged from above normal in the Cape Region to below normal in the northern part of the Southeast Region and were generally below to much below normal across the rest of the Commonwealth. Groundwater condition trends were similar to streamflow, with conditions generally getting worse and becoming below to much below normal everywhere except the Cape and Islands.

Hydrologic: Neal Strauss, Northeast River Forecasting Center

During September, river flows across most of the Commonwealth have decreased. Below normal to some near normal stream flows have been observed across the state. Pockets of well below normal flows less than 10 percent of normal for late September were observed. The lowest stream flows were found over portions of Essex, Middlesex, and Norfolk counties in eastern Massachusetts, as well as in portions of Worcester County in central Massachusetts and portions of western Massachusetts, especially Berkshire County. The weather pattern looks generally quiet over the next several days. Ensemble data indicates the possibility for some rainfall mainly next week but with some significant spread. As a result, the NERFC river forecast ensembles call for some brief rises but with the general trend for nearly steady or receding rivers and streams over the next 10 days.

Water Supply: Duane LeVangie – MassDEP

LeVangie reported that he has not been made aware of any significant condition changes since the last task force meeting.

Maguire asked if there have been any reports about Sandra Pond in Westborough. The inlet stream has apparently been observed not flowing. LeVangie replied that he is not aware of any reported issues. He added that most of Westborough's water comes from wells. Pederson said she also has not heard of any issues. Kautza said he noticed there is work being done on their dam.

Water Supply: John Gregoire – MWRA

The Quabbin is at about 89.4% full. It has dropped about 1.67 feet, which is not a concern. They are still maintaining the operating band at Wachusett. Precipitation through September is extremely low for their watershed. The Sudbury and Foss are still below their operating bands due to construction at Sudbury and drought conditions for Foss.

Water Supply: Jen Pederson– MWWA

Pederson explained that Attleboro reported being concerned about levels in the Ten Mile system.

Private Water Supply: Marcos Pareto- DPU

Nothing new to report except that Aquarion lifted their restrictions starting October 1st.

Wetlands: Tom Maguire- DEP

Maguire explained that he is limited with what he can present because of a public records request from a developer who wants information on streams with no flow. He showed several photos of river reaches that have been observed with no flow, reiterating how the dry conditions have led to very low streamflows across the state. Maguire also described the concern over requests to overturn designations based on observations of no flow.

Gregoire commented that MWRA has a requirement to release water into the Sudbury River system, which adds 1.5 mgd. Maguire commented that the main stems of the Sudbury and Blackstone Rivers are perennial with Riverfront Area regardless of flow due to their status as major Rivers, so the concerns over designations getting overturned are for non-major Rivers.

Fish and Game: Kate Bentsen- DER

Kautza explained that their biologists wind down field work toward the middle of September. He has been out in the field recently and has noted low flows in general. Bentsen added that she went out to two gauges in Worcester County and that levels were looking low. She also observed a dry stream in Chelmsford. She asked Kautza to comment on how the low flows might affect the fall trout stocking. Kautza responded that they usually limit fall stocking to larger rivers, so there is no concern yet.

Gahagan from DMF gave a presentation also. He explained that they are also seeing very low flows. Alewife Brook (a tributary to the Essex River) has been low, which is a concern for river herring emigration. They are concerned with multiple river systems in coastal MA for this same reason due to the lower than normal precipitation and resulting low streamflows.

Massachusetts Rivers Alliance: Monica Driggers

Driggers presented on stream and river flow conditions from around the state. They received photos from many river systems, all of which were showing lower than normal conditions for this time of year. Watersheds that they received observations on included the Deerfield, Chicopee, Blackstone, SuAsCo, Charles, Taunton, Ipswich, and Merrimack.

Water Supply Citizens Advisory Committee: Moussa Siri

Not present at meeting.

Agricultural: Michael Botelho- DAR

No reports of impacts so far this year.

Fire Danger: Dave Celino

Celino gave an update on fire activity. There has not been a lot of fire activity statewide, despite relative dryness. He explained that there have been high dew points and a lot of fog, so burn periods are short. The KBDI values are fairly high, but because of colder temperatures and the moisture from the dew and fog the fire activity is low. He explained that as the leaf drop continues and the canopy opens, the drying out of the potential fuels could be an issue.

Engineering: John Scannell- DCR

Not present at meeting to give updates.

Public Health: Dalene LaPointe

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. In July, the Northeast Region started getting dry, especially in the Parker River Basin. In August, some indices eased in the Parker River, but streamflow remained significantly low. Drying conditions also began in the Cape and Islands, but in September there was some significant rainfall that eased the dry conditions in those regions. More recently there has been lower than normal precipitation in the Northeast, Central, CTRV, and Western Regions causing drying conditions, including streamflow impacts ranging from mild to significant. The US Drought Monitor has expanded their D0 (MA Level 1) designation across the state, and the Northeast Region is now showing some D1 levels (MA Level 2).

Precipitation: Standard precipitation index 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. Precipitation was below to much below normal in much of the state in September. Accumulated precipitation departure has shown a steady decline in August and September. All regions except the Cape and Islands are below normal.

Evapotranspiration: ET has been consistently close to normal for both the one- and two-month lookback periods. The intense heatwaves early in the summer led to some departure from normal which has persisted.

Streamflow: There are no longer any gages showing above normal streamflow. Streamflows are lowest in the Western, Central, Northeast, and the top part of the Southeast Regions, reaching the highest index severity levels at some gages. At the regional scale, the Western, Central, and Southeast Regions are showing index severity level 2, while the Northeast is showing a level 1.

Groundwater: The prolonged dryness is now showing in the groundwater levels in the Northeast. There is also a well with an ISL 2 on Nantucket. At a regional scale, no drought regions are below the 30th percentile, although the Northeast is getting close at the 36th percentile.

KBDI: Most of the state is still dried out at ISL 1 or 2 for KBDI, with the exception of the Cape and Islands which are normal.

Lakes & Impoundments: All regions are normal.

Pederson asked LeVangie if he knew what was driving Lynn's watering restrictions. LeVangie said they are registered, so their decisions to implement restrictions must be based on their own system concerns.

6. Discussion of Drought Level Recommendations

No indices were below normal in the Cape and Islands Regions and therefore the recommendation was to keep those at Level 0. At least two indices were below normal in the remaining regions. For the Western Region, the staff recommendation was for Level 0 because only two indices were below normal, one of which was KBDI. Gregoire suggested not considering KBDI because of the conditions that Celino explained earlier in the meeting. Rao reminded that Celino noted the possibility of fire danger increasing in the near future as leaf drop continues. Several task force members indicated in the chat they would prefer Level 1 for the Western Region because of the significantly low streamflows and precipitation getting close to tripping. Pederson recommended looking at specific basins before looking at regions.

Within the Western Region, the Hudson River Basin in particular is showing index severity level 3 for precipitation, severity level 2 for streamflow, and severity level 1 for KBDI. The possibility of keeping the Western Region normal except the Hudson River Basin was discussed. Several factors were considered, including the number of precipitation stations in this region and overlap between the Wetlands Protection regulations and the drought management process. Rao commented that at the regional scale, the Western Region does not seem to indicate a drought region-wide, but that she would be comfortable with a separate recommendation for the Hudson basin. Bentsen stated a concern regarding the likelihood of having to jump two levels at the next task force meeting based on how the 2-month lookback for precipitation was trending. Zoltay and Rao suggested the possibility of meeting again in two weeks instead of a month if more drastic changes start being observed. The recommendations from task force members for the Hudson Basin were a mix of Level 1 by some members and Level 2 by others.

There was agreement among the task force to recommend Level 0 for the CTRV and Southeast Regions, and a Level 1-Mild Drought for the Central and Northeast Regions. There was some discussion on recommending a higher level for the Quinebaug Basin. Since a large part of this basin is in the Central Region which already was getting a Level 1 recommendation, there was agreement to not call out the Quinebaug separately.

There was also discussion on calling out the Boston Harbor Basin because there have been some significant impacts in that part of the Southeast Region. It was decided to not consider groundwater for this basin because the wells that were below normal are not in the Southeast Region but located in the Northeast Region. However, even without considering groundwater, because of several other indices below normal, the recommendation was Level 1-Mild Drought for the Boston Harbor Basin, with agreement by the majority of task force members.

Lastly, there was discussion on the Ten Mile Basin. Rao asked why streamflow was not included in the data, and Zoltay explained that there are no streamflow gages in the Ten Mile. LeVangie noted that Attleboro's concern with their sources was in the Taunton, not in the Ten Mile. Pederson requested that impoundments be included in the tables for any watersheds that are getting considered separately. After discussion, there was agreement that the Ten Mile did not need to be called out separately.

Summary of Recommendations:

Cape Cod, Islands, Southeast, Connecticut River Valley, Western: Level 0 – Normal

Northeast, Central: Level 1 – Mild Drought

Boston Harbor Basin, Hudson Basin: Level 1 – Mild Drought

7. Recommendations for Drought Level Response Actions

The recommendation on the regional and basin-specific drought levels will be given to the Secretary.

8. Next Steps

The task force will meet again on in early November and will update recommendations accordingly. Staff will continue to investigate conditions in the Parker to try to figure out what is driving the critical low flows in that basin.

Meeting Ended

The meeting adjourned at 12:10 pm.