

Massachusetts Drought Management Task Force – Meeting Summary

March 7, 2017 100 Cambridge Street, 2nd floor, Room A

Attendees:

Vandana Rao, EEA	Jonathan Yeo, DCR	Paul Holloway, MEMA
Alan Dunhan, NWS	Anne Carroll, DCR	John Lebeaux, DAR
Kate Adams, DPH	Michael Celona, DPH	Priscilla Geigis, DCR
Gabby Queenan, Mass Rivers Alliance	Viki Zoltay, DCR	Peter Weiskel, USGS
Adam Kautz, DFW	Stephen Estes-Smargiassi, MWRA	Joey St. John, CWC
Margaret Van Deusen, CRWA	Jennifer Pederson, MWWA	Duane Levangie, DEP
Steve Brown, WBUR	Lexi Dewey, WSCAC	Gardner Bent, USGS
Kathy Bell, Green Industry Alliance		Sara Cohen, DCR

Introductions

- Rao called the meeting to order at 10:05 pm.
- Meeting attendees were asked to introduce themselves.

Updates on Current Conditions and Impacts from Members of the Task Force

Current Hydrologic Conditions - DCR Office of Water Resources, Viki Zoltay

Precipitation was below average in all regions for the month. The 12-month precipitation deficit remains below normal in all regions except in the West.

- Average monthly streamflows continue to maintain normal or near normal conditions in all regions.
- Groundwater levels continue to recover. West and Northeast region are closest to normal levels with other regions lagging.
- Reservoir levels have mostly recovered with some impacts remaining in the Northeast and Cape & Islands.
- NOAA projects normal precipitation and temperatures for February.
- Drought effects continue to show in all regions. Appendix I provides values of indices not presented in the main report. Appendix II provides a description of the indices from the Drought Management Plan.

Streamflow and Groundwater Conditions in Massachusetts - USGS

- Streamflows are at normal or above normal for much of the state except for a few areas west of Boston, southern Connecticut Valley region, and the Southeast region.
- Groundwater levels (primarily in the Plymouth Carver Aquifer, Cape Cod portions of the Southeast, and in the Connecticut Valley region) continue to be lower than normal for February

Weather- National Weather Service Update, Alan Dunham

While January and the first half of February produced above normal precipitation for Massachusetts the lack of precipitation since mid-February has reduced that surplus. In fact by March 6th most all of Massachusetts is below normal precipitation for the current calendar year. Also, despite generally normal snowfall, the snow pack was completely gone by March 6th with the exception being the northern

Berkshires. If we take a look over the past 12 to 24 months, Massachusetts is showing precipitation deficits of 8 to 16 inches for the 12 month period and 12 to 20+ for the 24 month period.

Looking ahead, the indications are that there will be equal chances of above or below normal precipitation. However, what is concerning is that above normal temperatures are expected into the upcoming summer months.

Water Supply

Massachusetts Department of Environmental Protection, Duane Levangie

- No updates

Massachusetts Water Resources Authority, John Gregoire

Quabbin Reservoir was at 81.2% full and still sitting just Below Normal based on MWRA's Drought Plan. However, this is well above the next level, Drought Warning, which followed by three Drought Emergency Stages. Updated MWRA forecast modeling shows the following: Under Median conditions would see a return to Normal reservoir conditions in 3 months. Under Dry (75th percentile) Quabbin would remain Below Normal for the next 3 months but climb into Normal at the 6 month range. For Driest of Record show Quabbin to remain in Below Normal for at least the next 12 months. Wachusett Reservoir, which is augmented by Quabbin, remains in normal operating band. Despite the Below Normal condition, at current capacity, Quabbin Reservoir can supply the MWRA system's current demand for 4.6 years.

Massachusetts Water Works Association

No drought impact updates. They have a membership meeting scheduled in March where drought will be discussed.

There was no representative from the Department of Public Utilities.

Environmental

Wetlands- Massachusetts Department of Environmental Protection –Duane Levangie

- Nothing new to report.

Department of Fish and Game- Division of Fisheries and Wildlife, Adam Kautza

- No update. Field work will resume in the spring.

Agricultural- Department of Agricultural Resources, John Lebeaux

- There is not much Agricultural activity going on now. We hope to hear concerns at the stakeholder meeting organized by EEA.

DCR Fire

Yeo reported that a combination of dry conditions and low humidity could give rise to source fires.

There was no representative from DCR Infrastructure.

Public Health- Department of Public Health, Michael Celona

- Nothing new to report.

Discussion of Drought Level Recommendations

- West: Conditions in this region have further recovered and all indices were at Normal for February. Recommendation was to move from Watch to Advisory Level.
- Connecticut: One precipitation index (the long-term index) is at Watch and the other at Normal. Conditions have worsened slightly for Streamflow with now two gages below normal condition; although the overall Streamflow index is at Normal. Groundwater on the other hand has improved only a little; however with less than a majority of wells at below normal this index remains at Normal. Reservoirs are all back to Normal including the Quabbin reservoir. Move from Warning to Watch Level.
- Central: The long-term precipitation index is still at Advisory while the other at Normal. Streamflow is back to Normal and Groundwater also at Normal with 3 out of 10 wells below normal (similar to last month). Reservoirs are back to Normal. Because of the improvements task force felt that the region should be upgraded by one level and move from a Watch to an Advisory.
- Northeast: This region has by far improved the most since last summer-fall. The long-term Precipitation index was at Advisory while the other at Normal. Streamflow which had fully recovered last month with all gages in the normal range is now showing two of the eighteen gages below normal between the 10-25th percentile; overall Streamflow is at Normal. Groundwater was also at Normal with now only 2 out of the 16 wells below normal and between the 10-25th percentile. Reservoirs were at Watch (down from Normal last month) mainly because of the Cambridge reservoir system which is still below normal. The task force felt that after seeing improvements last month, hydrological conditions are starting to get worse and go below normal. It is appropriate to continue to take a conservative approach and keep this region at Advisory.
- Southeast: Conditions in the Southeast Region have recovered only slightly but the task force continues to be concerned about this region. Precipitation was at Advisory for one and Normal for the other index. Streamflow was at Normal, with only one out of six wells below normal. For groundwater, although technically at Normal down from an Emergency last month, five out of 12 wells are still below normal with one at record low level. Reservoirs are back to Normal. Recommendation was to move from Warning to Watch Level.
- Cape & Islands: Conditions in this region are slightly worse than the last month. Groundwater is now at Normal, although some wells (5 out of 13) still remain at below normal. One Precipitation index is at Advisory while the other at Normal; and reservoir levels are at Advisory; there is no streamflow parameter in this region as the Cape is a groundwater driven region. Nantucket is at Normal. Recommendation was to continue at Advisory Level.

Next Steps

- Rao gave an update of the Drought Management Plan indices workgroup. Will present a summary when the task is completed.

The meeting was adjourned at 12:00 pm.