

# Massachusetts Drought Management Task Force – Meeting Summary

September 8 2016, 100 Cambridge Street, 2<sup>nd</sup> floor, Room B

## Attendees:

Julia Blatt, Mass Rivers Alliance	Secretary Beaton	Alisha Bouchard, MDAR
Shraddha Gupta, BU State House	Jennifer Pederson, MWWA	Christine Packard, MEMA
Alison Field-Juma, OARS	Gardner Bent, USGS	Erin Graham, DCR
John Gregoire, MWRA	Peter Lorenz, EEA	Mike Celona, DPH
Richard Verdi, USGS	Anne Carroll, DCR	Bob Zimmerman, CRWA
Gardner Bent, USGS	Vandana Rao, EEA	Lexi Dewey, WSCAC
Trevor Battle, MDAR	Daniel Sieger, EEA	Trevor Battle, MDAR
Becky Weidman, MassDEP	Todd Richards, DFW	Kate Adams, DPH
Robert Lowell, DCR	Wayne Castonguay, IRWA	Michelle Craddock, DFG
Craig Lemoult, WGBH	John LeBeaux	Marilyn McCrory, DCR
George Comiskey, Parker River Clean Water Association	Gabrielle Queenan, Mass Rivers Alliance	Christie Getto Young, Office of Sen Sal Di Domenico
Katie Gronendyke, EEA	Michael Illiano, BU State House	Duane LeVangie, MassDEP
Alexandra Ash, CRWA	Marty Suuberg, MassDEP	Jonathan Yeo, DCR
Alan Dunham, NOAA/NWA/Taunton Forecast Office	Paul Schmid, State Representative	Michael Sol Warren, BU State House
Shira Schohberg, Springfield Republican	Catherine DeRonde, MDAR	Veronica Eady, CLF
Devon Bracher, OARS, Northeastern University	Sorakina Zeringo, Office of Representative Schmid	Stephanie McCarthy, Office of Representative Schmid
Kaitlin Junod, BU State House		David Celino, DCR

## Introductions

- Secretary Beaton welcomed everybody and acknowledged the seriousness of the drought and the effort
- Representative Schmidt gave remarks and stated drought conditions in Bristol County are the worst he has seen.

## Adoption of August 11, 2016 Meeting Minutes

- There was a motion made and seconded to adopt the minutes of August 11, 2016.

## Update on Drought Response Actions- EOEAA

- The Administration announced yesterday the institution of the Massachusetts Drought Emergency Loan Fund through the Massachusetts Grown Capital Corporation (MGCC) for family farms and small businesses. MGCC will make up to \$1 million in loan funds available to provide micro-loans of \$5,000 to \$10,000 to family farms and related businesses located in communities impacted by the drought.
- EEA has developed water conservation tips for both indoor and outdoor water use according to drought level.
- Governor Baker held a press conference at Smolak Farm on August 18 to highlight drought conditions, discuss impacts to farmers, and encourage support of farms by buying local.
- EEA, MEMA and DPH held a conference call with over 400 municipal officials.

- EEA has been coordinating closely with all its agencies as well as with MEMA and DPH and has established a state-level interagency coordination group to share up-to-date assessments about the drought conditions, assess current and projected impacts on municipalities, users, other stakeholders, and the environment, and identify potential water supply resources and strategies should they be needed.

### **Updates on Current Conditions and Impacts- DMTF member reports**

#### Current Hydrologic Conditions- DCR Office Water Resources, Jonathan Yeo and Anne Carroll

- Much of the state has been at some level of drought for four to six months.
- Precipitation close to normal in Central and West regions, while other areas were well below and worsened.
- Reservoirs were normal in the CT and Cape regions. Very low in Central, Northeast, and Southeast. Several reservoirs are at historic lows.
- Streamflow was below normal in all regions except the West.
- Groundwater varied across the state. Very low in Northeast, Southeast, Central, and West. Levels varied on the Cape and Martha's Vineyard, but levels ok on Nantucket. Groundwater has been below normal for 4-6 months for most of the state.
- Crop Moisture Index- As of the September 3<sup>rd</sup> map, each section was bumped up one level.
- Keetch-Byram Index has been high across the state for much of August; it has increased in Central and West, and decreased on the Cape.
- Drought Monitor released today is essentially unchanged from last week's.

#### Streamflow and Groundwater Conditions in Massachusetts- USGS, Richard Verdi

- Streamflow has gotten worse from June to August except for the West, but it is still very dry there.
- Looking at several representative streams in Massachusetts: The Ipswich River has the lowest August mean since the gage was started in 1930. The Wading River has the lowest August mean since the gage started in 1925. The Charles River has the 2<sup>nd</sup> lowest August mean since the gage was started in 1938, and the lowest since 1957.
- Groundwater conditions at the monitoring well in Wilmington are low, the Winchendon well has slightly recovered, the Pittsfield well is slightly below the period-of-record average.

#### Weather- National Weather Service Update, Alan Dunham

- Tropical Storm Hermine did not bring as much rainfall as had been hoped. Areas impacted by the storm (southeast MA, Cape and Islands) received approximately .10 - .25 inch of rain.
- The Climate Prediction Center (CPC) one month and three month outlooks find above normal temperatures and equal chances for precipitation.
- The Seasonal Drought Outlook shows that drought conditions in Massachusetts will persist.
- The Global Tropics Hazard doesn't show tropical systems affecting this region.
- The US Drought Monitor as of 08/03/16 shows Essex, most of Middlesex and Norfolk, and some of Bristol and Plymouths counties in Extreme Drought.
- Palmer Drought Index as of 9/3/16 has most of the state in Severe Drought, except for the far West, which is in Moderate Drought.
- The August 2016 rainfall using radar and real-time rain gage data show low precipitation on the Cape & Islands and southeastern Massachusetts.

- The forecast for the next 7 days is for a few cold fronts moving through bringing isolated showers and then a high pressure system brings dry conditions. No wide-spread and slow moving systems that would deliver a much needed nice steady rain for a few days are forecast.

### Water Supply

Massachusetts Department Environmental Protection- Commissioner Marty Suuberg; Water Management Act (WMA), Duane LeVangie

- 178 systems have some form of restriction; 84 systems allow for 1 day or less of watering
- There has been a mailing to all public water suppliers (even if there is no permit) suggesting that the systems implement restrictions according the drought level.
- Water restrictions have been more positively received because of consistent messaging from the state and media about drought conditions.
- There are three systems that have requested emergency declarations- Ipswich, Foxborough, and Plymouth.
- There was a question about whether the Drought Management Task Force keeps track of private wells failing. Generally, these are reported to DEP, EEA or local boards of health. To date, only a handful of reports have been received. A FAQ document is being developed that will have information for private well owners whose wells have gone dry.

Massachusetts Water Resources Authority, John Gregoire

- Although the Quabbin is down 9 feet, the reservoir is still within the normal operating band hovering just above normal according to the MWRA's drought plan.
- There is enough storage to meet demands for 4.9 years.
- If the next 3 months are the driest on record, the reservoir would still be normal. However, if the next 6 months were to be the driest on record, the reservoir would be below normal. All statutory releases are continuing.
- There was a question about communities coming onto the MWRA system. MWRA noted that they were working with several communities for partial and emergency connections. Worcester may be coming onto MWRA water this month.

Massachusetts Water Works Association, Jen Pederson

- Many suppliers have gone above and beyond compliance with DEP permit requirements and restrictions, and suppliers are enforcing restrictions. Some suppliers have reported that the restrictions have helped with extending supplies.
- The outdoor watering season typically ends late Fall, and this will also help with water supplies.
- The message the organization would like to get out to the public is to heed suppliers' restrictions.
- Because use of stored water is decreasing, we may see issues with age of water stored in tanks.

### Environmental

Department of Fish and Game- Fisheries, Todd Richards

- Staff have been sampling on larger rivers because the smaller rivers and streams no longer have water; smaller streams have been hit very hard.

- Fish with typical habitats in small streams/rivers have been taking refuge in larger streams/rivers. Once the smaller streams/rivers return, the fish may find their way back but it will take a long time.
- Are not receiving a lot of reports of fish kills on lakes and streams, and communities in lakes and ponds seem to be ok.
- Many streams have large swaths that are completely dry. Any rain received has soaked into the ground.
- Need to continue strong message about water conservation to **all** users, as there are still users who continue to water outdoors which has impacts to groundwater levels.

Department of Fish and Game- Division of Ecological Restoration, Michelle Craddock

- The streams that DER monitors have gone completely dry.

Agricultural- Department of Agricultural Resources, John LeBeaux

- Encourage the use of farms stands. Despite challenging conditions in February, May, and now the drought, Massachusetts farmers have good products, albeit are under hard circumstances.
- Issues change from farm to farm based upon soil conditions and irrigation capabilities. However, livestock farmers and beekeepers are facing significant drought-related challenges.
- Actions DAR is taking includes state-provided drought emergency loans, advisories for livestock farmers, information about water tanker supplies, and contacting individual sectors for information about winter feed, and specific information for bee keepers.
- In addition, USDA Farm Service Agency emergency loans are available to farmers in several counties, and Small Business Administration emergency loans are also available to businesses.
- Long-term programs DAR is continuing to implement include technical assistance, for example, for better irrigation methods.
- The message that needs to get out is to support the agricultural businesses in Massachusetts by buying local.

Fire Danger- Department of Conservation and Recreation Bureau of Forest Fire Control, Dave Celino

- The Keetch-Byram index has been very high.
- Fires have been burning into the top 8" of soil creating safety and capacity issues for fire fighters as fires are becoming 2, 3, and 4 day events.
- Drought conditions have increased fuel loading three to four weeks earlier than typical.
- Fire danger is dynamic and the drought conditions will vary depending upon daily weather conditions (temperature, humidity, etc.).

Engineering/Infrastructure- Department of Conservation and Recreation- Engineering, Robert Lowell

- Both the Charles and the Mystic River Basins are within normal operating ranges.
- There were conditions of still water in the upper Charles because of lack of base flow. Water has just started coming over the boards at the Moody Street Dam. DCR made modifications for the fish ladder.
- There have been some impacts to DCR wells, mostly at headquarters, not at parks. An emergency water supply was needed at one location.

Public Health- Department of Public Health- Mike Celona

- Nothing to add at this point.

## Discussion of Drought Level Recommendations

The State Drought Management Plan calls for the Task Force to evaluate several criteria/indicators for each designated region of the Commonwealth and formulate a recommendation about drought level classification for each region.

- Connecticut Region: Current level is Watch. Every indicator except reservoir is at the Watch level. Recommendation: Remain at Watch level.
- West: Current level is Watch. Two indicators have changed since last month; Groundwater has changed from Watch to Warning, and Fire Danger has gone from Advisory to Watch. However, precipitation numbers are ok and two reservoirs are normal. There was some discussion about Streamflow and Groundwater levels and how low they are. However, enough hasn't changed. Recommendation: Remain at Watch level.
- Southeast: Current level is Watch. Worsening conditions. Crop Moisture Index and Fire Danger have gone from Watch to Warning. Precipitation and Streamflow have gone from Advisory to Watch. There are two reservoirs that are two standard deviations below normal. The August precipitation numbers were low. There is concern about availability of water to support cranberry harvesting operations. Recommendation: Increase level to Warning.
- Cape Cod: Current level is Advisory. Conditions have worsened because there was so little precipitation, only 20% of normal. Groundwater levels vary - some parts of the Cape are below, and other parts of the Cape are at almost 50% normal. Nantucket received decent precipitation, so groundwater is ok, and the fire danger is lower. There is some differing of opinion because the Cape Cod water suppliers say they are doing ok. There was a suggestion to separate the Islands from Cape Cod. Recommendation: Increase level from Advisory to Watch.
- Central: Current level is Watch. Conditions have improved slightly. If more precipitation is received next month, could consider moving to Advisory. Recommendation: Remain at Watch level.
- Northeast: Current level is Warning. Conditions have worsened. Last month two indicators were at Warning, now four are. There was some discussion on how bad conditions are. Some reservoirs are very low. However, many communities receive water or supplemental water from MWRA. There was some discussion of what would constitute an Emergency level at which point mandatory water restrictions can be implemented. There is concern that outdoor watering is still occurring by private well users despite drought conditions. There needs to be strong and effective messaging relaying the severity of the situation to all water users. Recommendation: Remain at Warning level.

During discussions, the task Force was urged to consult locals who are also monitoring drought conditions for additional drought information. In addition, the Task Force was urged to re-evaluate the criteria for drought classifications levels contained in the drought management plan. It was noted that this is the first time the plan has been used to this extent. There may be a need to add expand the data, add additional indicators, or to weight the indicators (as all indicators currently have equal value). The Task Force agreed to evaluate the criteria in the plan once the Commonwealth gets out of drought conditions, as the Task Force was not inclined to change the plan while actively responding to the drought.

The next meeting will be the first week of October.

The meeting was adjourned at 11:45 AM.