

Massachusetts Drought Management Task Force – Meeting Summary

December 7, 2016, 100 Cambridge Street, 2nd floor, Room B + C

Attendees:

Vandana Rao, EEA	Kurt Schwartz, MEMA	Jennifer Pederson, MWWA
Alan Dunham, NWS	Gardner Bent, USGS	Adam Kautza, DFW
Mary Clark, DPH	Michael Celona, DPH	John Gregoire, MWRA
Chris Besse, MEMA	Michelle Craddock, DFG/DER	Vanessa Curran, DCR
Alison Field-Juma, OARS	Catherine deRonde, MDAR	Kathy Bell, SFBCMA
Wayne Castonguay, IRWA	John Lebeaux, MDAR	Margaret Van Deusen, CRWA
Lexi Dewey, WSCAC	Liz Walk, Office of Rep. Dykema	Beth Card, MassDEP
Jonathan Yeo, DCR	Viki Zoltay, DCR	Richard Verdi, USGS
Duane Levangie, MassDEP	Becky Weidman, MassDEP	Christopher Bruet, USGS

Introductions

- Rao and Schwartz called the meeting to order at 12:35 pm.
- Meeting attendees were asked to introduce themselves.
- The minutes of November 8, 2016 were adopted.

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

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

- November experienced a mix of precipitation. It was below normal although the last few days of the month helped rainfall totals. Areas ranged from 0.5-2 inches below normal. November is usually the month when conditions start to change and when groundwater and reservoirs rebound. This happened in some places but not others.
- Precipitation Percent of Normal and SPI: The SPI is at Watch for the Connecticut River Region and at Advisory for the Central, Northeast, Southeast, and Cape & Islands regions. The Percent of Normal Index is in the Normal range for all regions except the Connecticut River and Cape & Islands regions which are at Watch.
- Reservoirs: all are below normal. The Western, Central, Northeast, and Southeast regions are at the Watch level. The Quabbin dipped slightly below normal. Since it is a large reservoir, it triggered Warning status for the Connecticut River Valley Region. Cape & Islands are at Advisory.
- Streamflow: Many are still below the 25th percentile but there are just two record lows. All regions are in Warning except for the CT River and Central regions which are both at Emergency.
- Groundwater: The Western, Connecticut River, and Central regions are at Emergency. The Southeast region is at Warning. The Northeast and Cape & Islands regions are at Normal. For the Northeast region, there are 8 wells below the 25th percentile but since 17 wells are monitored, this is not a majority. As the Drought Plan looks at consecutive months where the majority of wells are below normal, this criterion is not met for November, hence the Normal categorization.
- Crop Moisture Index and Keetch-Byram Drought Index: both Normal in all regions.
- The U.S. Drought Monitor did not change from 11/22/16 to 11/29/16 and change is not anticipated for the update on 12/8/16.

Streamflow and Groundwater Conditions in Massachusetts- USGS, Richard Verdi

- Streamflow overall for the state is below normal; some streams in the east are at normal.
- Representative rivers in Massachusetts
 - Wading River near Norton – still near record lows (below 5th percentile)
 - Charles River @ Dover – some improvement but still below normal
 - Ipswich River – some improvement but still below normal
 - West Branch – still near record lows (below 5th percentile)
- Groundwater conditions: November conditions were below normal. In the extreme Northeast conditions were near normal. The monitoring well in Wenham is above the 90th percentile.
- Dunham noted that in the Southeast the well in Plymouth was still going down.

Weather- National Weather Service Update, Alan Dunham

- Over the past few weeks (late November and early December) there has been decent rainfall. Some of the daily stream flows have been normal. However November still ended with below normal precipitation.
- The departure from normal rainfall approached 3 inches below normal in the Southeast region.
- Percent of normal: the 7 day look-back shows the Southeast below normal. The 14 day lookback showed good conditions in the Central and Western regions but the Southeast was 50% below normal. The 60 day percent of normal looked the worst in the West.
- The 3-month SPI puts the state in drought category D0/D1. Longer time periods show worse conditions. The 12 and 24 month SPIs show poor conditions.
- US Drought Monitor: no change is anticipated.
- The outlook for 12/10-12/14 shows below normal temperatures and above normal precipitation. The 8-14 day outlook shows the same. The December outlook shows above normal temperatures and slightly above normal precipitation. The winter outlook shows equal chances for above or below normal precipitation December looks like the best chance for precipitation.
- The Drought outlook for December shows the drought possibly easing in the Southeast but Dunham doesn't foresee that actually happening
- The three month outlook shows the drought persisting. There could be problems in March/April if things don't turn around. Forest fires could be an issue.

Water Supply

Massachusetts Department of Environmental Protection – Beth Card

- Not much is different from last month.
- There are three systems with emergency declarations.
 - Ipswich is making good progress
 - Burlington no longer needs to purchase water from MWRA
 - Cherry Valley is still buying water from Worcester but there are issues beyond quantity
- Water Management Act permits that have water use restrictions: requirements are over for the year.
- DEP sent out a letter to public water suppliers, continuing to offer suggestions regarding the drought.

Massachusetts Water Resources Authority, John Gregoire

- As of 12/5 the Quabbin was 79.4% full which is just below normal. There is a 4.9 year supply.
- It has been 14 years since the Quabbin was below normal. It has not reached its first drought level and there is ample water.
- There have been 19 times when the Quabbin was lower than it is now, many of which occurred during the drought of the 1960's. There was higher water demand at that time.
- There are no restrictions triggered by the Quabbin dipping below 80%.
- Wachusett Reservoir is kept in its operating range by transferring water from the Quabbin.
- The Sudbury and Foss reservoirs had been responding more to the drought but the last bit of rain brought them back into normal range.
- Winter drawdowns for control of invasive plants will not be occurring this year.
- DCR will be drawing down Framingham Reservoirs 1 and 2 for dam repair; should be able to refill naturally.

There was no representative from the Department of Public Utilities.

Environmental

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

- In mid-November they were seeing dry rivers but many picked up by the end of the month.
- Some have rebounded and are not as dry as in the summer, while some have gone dry in November.

Department of Fish and Game- Fisheries, Adam Kautza

- It will not be known how the drought has impacted fish populations until the spring.

Agricultural- Department of Agricultural Resources, Commissioner Lebeaux

- The growing season is coming to an end. Produce farmers' demands have ended/minimized.
- The overall trend is increased costs and reduced revenues.
- The cranberry harvest concluded successfully. Growers need to use water for frost protection for the bogs – there are concerns if there will be enough water and the cost.
- Livestock – farmers are using up feed much earlier than usual and will have to buy feed over the winter.
- There are concerns about the 2017 growing season. Decisions will need to be made regarding what and how much to grow.
- Christmas tree farms are having a good selling season so far. However seedlings planted this year were wiped out. Effects will be seen 7-10 years later.
- DAR has established a new emergency drought grant program for water conservation technologies. The RFR is out and there is a total of \$250,000 available. Many responses are expected.
- Question – when does irrigation begin in the spring? Generally June, depending on conditions. Perhaps late May if it is dry. There may be one round of irrigation when crops are first planted.
- Question – is there a federal program to provide materials for installing drip irrigation? Possibly. Drip irrigation could be under one of several USDA programs.
- Farmers are reluctant to take on loans available via an emergency loan program. This year's program ended in November. It may be necessary to bring the emergency loans back in the spring.

DCR Fire Danger and Infrastructure, Jonathan Yeo

- Nothing new, conditions are unchanged.

Public Health- Department of Public Health, Mary Clark

- DPH is not getting many calls from local boards of health about private wells. There has been one request for additional information from western MA. The regional staff have no specific concerns.
- There may be dry wells in some locations but there are no specific requests for assistance.
- The MA Associated Health Boards (MAHB) has put together information on the authority of local boards of health to regulate private wells.
- DPH will provide updates via list serve after this meeting.

Discussion of Drought Level Recommendations

- West Region: Current level is Warning. Conditions are the same. Groundwater remains at Emergency based on the majority of wells below normal for consecutive months. Precipitation remains normal, Streamflow remains at Warning, and Reservoirs remain at Watch. Recommendation: Remain at Warning.
- Connecticut River Region: Current level is Warning. Streamflow and groundwater advanced to Emergency based on the number of months, not severity. Precipitation is at Watch, and Reservoirs advanced to Warning. Recommendation: Remain at Warning.
- Central Region: Current level is Warning. Streamflow and groundwater are at Emergency based on duration. Recommendation: Remain at Warning.
- Northeast: Current level is Warning. Streamflow remained at Warning based on number of consecutive months. Groundwater changed to Normal because the majority of wells were at/above normal levels. Recommendation: Remain at Warning.
- Comment - it is hard to understand why the Northeast should be kept at Warning if things improved a bit. Response – though groundwater was technically at normal, if just one additional well had been low the region would have remained at a below normal condition, and continue at Emergency for the groundwater index. Something to address in drought plan revisions.
- Southeast Region: Current level is Warning. Conditions remained essentially the same, although SPI advanced to Advisory. Recommendation: Remain at Warning.
- Cape Cod & Islands Region: Current level is Advisory. Conditions slightly worsened as Precipitation percent of normal advanced to Watch and Reservoirs advanced to Advisory. Groundwater remains Normal. Recommendation: Remain at Advisory.
- Overall recommendation is to hold last months' levels in all regions. Secretary Beaton will be presented with the information and discussion.
- Suggestion – edit drought messaging to acknowledge that outdoor watering has ceased and change message to focus on indoor water conservation.

Discussion on Drought Response Actions

- Regarding the upcoming update to the Drought Management Plan, EEA has received two letters, one from Mass Rivers Alliance and one from the Ipswich River Watershed Association.
- EEA has started to gather a small group of technical experts on the data and will have conversations with the US Drought Monitor experts.
- Still figuring out the stakeholder process for state agency coordination and response actions.

- Question – how do you plan to solicit public input beyond the Drought Task Force? Response – by having more focused meetings with user groups, e.g., cranberry growers, farmers, nursery owners, etc.
- Suggestion – avoid the term “public” and use “stakeholder” instead.
- Suggestion – need a better way to explain the plan and drought levels to public stakeholders.
- There are economic impacts to a declaration of drought. Expand the discussion to include those who experience these economic impacts.
- In terms of timing, the growing season is about five months away. It would be ideal to have revisions completed prior to the growing season.
- Would there be issues with changing the plan mid-drought?

The meeting was adjourned at 2:20 pm.