Q & A from Statewide Drought Informational Sessions for Municipalities, Public Water Suppliers, Conservation Commissions, and Environmental Organizations

December 23, 2024

PRIVATE WELLS

Question:
Our community has all private wells, and we get major pushback from some residents on not feeling the suggestions apply to them. Any suggestions on how to combat that?
Answer:
A helpful resource is available here: Private Well Owners Should Conserve Too. This graphic explains the relationship between private wells and public water supply, emphasizing that conservation is important for all. There is additional information and resources to inform private well owners during drought available here.

Question:
How would we advise people who are on private artesian wells? Is there a determination on the impact the drought has on groundwater?
Answer:
Drought can significantly impact groundwater levels, affecting private wells, including artesian wells. Sharing resources on water conservation and the importance of conserving groundwater can be beneficial. There is additional information and resources to inform private well owners during drought available here.

Question:
Are there any suggestions for residents whose private wells have already run dry? From a Board of Health standpoint?
Answer:
Residents can contact the Water Department/DPW to inquire about options of connecting to town water (if available), as well as contact the Board of Health to inquire if they have heard of other private wells running dry. Municipalities may enact local bylaws/ordinances or health regulations for municipal water use restrictions that are also applicable to private wells. Lastly, residents can access information about their wells (i.e., records at the Board of Health, Well Database, etc.) and contact a Massachusetts-registered well driller to assess the well, pump, etc. to determine if improvements can be made.

Question:
Can communities require private well owners to follow conservation guidelines/water use restrictions?
Answer:
Municipalities may enact local bylaws/ordinances or health regulations for municipal water use restrictions that are applicable to private wells as well.

The Massachusetts Department of Environmental Protection (MassDEP) has a Model Outdoor Water Use Bylaw/Ordinance available on its website that, with the appropriate adoption, gives a

PWS/Town/District the authority to limit non-essential outdoor water use through the declaration of a local "State of Water Supply Conservation", “State of Drought” or "State of Water Supply Emergency" and includes civil fines. It also includes language that PWS/towns can choose to incorporate into their outdoor water use by-law if they want the ability to regulate outdoor water use from private wells, or if they want to regulate the installation of in-ground irrigation systems. Model Bylaw/Ordinance posted here: Model Water Use Restriction Bylaw/Ordinance Update | Mass.gov

FIRE

Question:
What do the colors denote on the 7-Day Fire Location map?
Answer:
The colors indicate the status of the reporting information. The 7-Day Fire Location Map contains a legend that specifies the meaning of each color. For example, gray means there are some required fields still needed to certify the report.

Question:
Is there any information on how these fires are starting? Is there the potential for spontaneous combustion in a large leaf or compost pile?
Answer:
All fires are considered human-caused, as there has been no lightning. Causes may include unattended campfires, discarded cigarettes, or other human activities.

Question:
Is there any guidance for communities that have enacted local outside fire bans? Should they hold for now?
Answer:
Local burn bans are generally left to the discretion of communities. If temperatures remain average and precipitation occurs, communities may reassess their decisions.

Question:
Public Water Systems are very dynamic, they may be fine from a capacity standpoint one day and then one fire could drain their tanks. Is the Department of Fire Services (DFS) considering this in your emergency response planning?
Answer:
Maribel Fournier (DFS) responded on the informational session that this was a local decision/planning process.

WETLANDS PROTECTION

Question:
Where do Conservation Commissions come in?
Answer:
Conservation Commissions confirm resource area boundaries (including, but not limited to, Pond, Lake, River, and Riverfront Area) when an Applicant submits an Abbreviated Notice of

Resource Area Delineation or Notice of Intent to alter a resource area. Field observations made during an extended drought that a Pond is less than 10,000 square feet or that a River has ceased flow are not allowed pursuant to 310 CMR 10.04, definition of a Pond, and 310 CMR 10.58(2)(a)1.f., River/Riverfront Area.

Question:
What about bank delineations of perennial streams? Do drought conditions make delineating Mean Annual High Water and breaks in slope more difficult to delineate?
Answer:
Extended drought does not impact the delineation of the Bank or the Mean Annual High-Water Line. Extended drought should not make it more difficult to delineate Bank or the Mean Annual High-Water Line. "The upper boundary of a Bank is the first observable break in the slope or the mean annual flood level, whichever is lower. The lower boundary of a Bank is the mean annual low flow level" (310 CMR 10.54(2)). The extent of water must never be used to delineate the first observable break in slope. The mean annual flood and mean annual low flow level are long term averages, and not conditions observed in a River or Stream at any one time. The thalweg (the lower portion of the channel) within a River or Stream is not the first break of slope. Extended drought does not change the Bank location.

Mean Annual High-Water Line of a River is "the line that is apparent from visible markings or changes in the character of soils or vegetation due to the prolonged presence of water and that distinguishes between predominantly aquatic and predominantly terrestrial land. Field indicators of bankfull conditions shall be used to determine the mean annual high-water line" (310 CMR 10.58(2)(a)2). Extended drought does not change the location of the Mean Annual High-Water Line.

Question:
Can stream petitioning evidence submitted at the cusp of the drought for the Western Region be considered? What if the drought impacted the stream status?
Answer:
Field observations made during an extended drought are not allowed (310 CMR 10.04, definition of a Pond, and 310 CMR 10.58(2)(a)1.f., River/Riverfront Area). Verify whether a Level 1 or more severe drought was declared in the geographic area during the time period of interest. The Secretary's drought declarations are available on the web at: https://www.mass.gov/info-details/drought-status. Documented field observations made by a competent source during a non-drought period are allowed. MassDEP staff, conservation commissioners, and conservation commission staff are competent sources; issuing authorities may consider evidence from other sources that are determined to be competent (310 CMR 10.58(2)(a)1.d.). To obtain confirmation of resource area boundaries, including but not limited to Pond and Riverfront Area, a Notice of Intent (NOI) or Abbreviated Notice of Resource Area Delineation (ANRAD) would need to be filed (310 CMR 10.05(3)(a)1.).

Question:
Is MassDEP planning on additional guidance for conservation commissions and Riverfront/Pond protections?
Answer:
MassDEP does not plan to provide additional written guidance at this time.

Question:
We have projects in our community where applicants have overcome the presumption that a stream is perennial through the use of photos [4-days consecutive] in the absence of a drought. The photos were taken prior to the declaration of the drought [photos are from August and September] - is there any implication for these projects from the declaration of drought? Another related question: do the WPA/Regs include any provision requiring applicants to have the Conservation Agent present when photos are taken for this type of purpose?
Answer:
The Massachusetts Wetlands Protection regulations do not contain any provision requiring the issuing authority to be present when documented field observations are conducted during a non-drought period. However, 310 CMR 10.58(2)(a)1.d. contains a provision requiring the documented field observations to be made by a competent source. MassDEP, conservation commissioners, and their staff are competent sources. Issuing authorities may consider evidence from other sources that are determined to be competent. See 310 CMR 10.58(2)(a)1.d.: "Notwithstanding 310 CMR 10.58(2)(a)1.a. through c., the issuing authority shall find that any stream is intermittent based upon a documented field observation that the stream is not flowing. A documented field observation shall be made by a competent source and shall be based upon an observation made at least once per day, over four days in any consecutive 12 month period, during a non-drought period on a stream not significantly affected by drawdown from withdrawals of water supply wells, direct withdrawals, impoundments, or other human-made flow reductions or diversions. Field observations made after December 20, 2002 shall be documented by field notes and by dated photographs or video. Field observations made prior to December 20, 2002, shall be documented by credible evidence. All field observations shall be submitted to the issuing authority with a statement signed under the penalties of perjury attesting to the authenticity and veracity of the field notes, photographs or video and other credible evidence. Department staff, conservation commissioners, and conservation commission staff are competent sources; issuing authorities may consider evidence from other sources that are determined to be competent."

Question:
Does this include determining whether a Pond has riverine characteristics? The Pond in question has a perennial stream inlet and outlet.
Answer:
This question pertains to whether there is Riverfront Area adjoining a Pond. 310 CMR 10.58(2)(a)1.h. provides that "Where rivers flow through lakes or ponds, the Riverfront Area stops at the inlet and begins again at the outlet. A water body identified as a lake, pond, or reservoir on the current USGS map or more recent map provided by the Department, is a lake or pond, unless the issuing authority determines that the water body has primarily riverine characteristics." Riverine characteristics specified at 310 CMR 10.58(2)(a)1.f. include unidirectional flow. Dye introduced at the inlet is one method to establish unidirectional flow. Any documented field observations by a competent source to determine whether a water body is a Pond, River, or a Pond contains that primarily riverine characteristics must be conducted during a non-drought period pursuant to 310 CMR 10.04 (definition of Pond) and 310 CMR 10.58(2)(a)1.d. (River/Riverfront Area).

Question:
Given the current drought conditions, what is the best method for accurately distinguishing between an intermittent and a perennial stream?
Answer:
Follow the Massachusetts Wetlands Protection regulations at 310 CMR 10.58(2)(a)1. and 10.58(2)(a)1.a.-f.

Question:
If photos were taken (of a river) prior to drought status, but the Commission is looking for a peer review, does the peer review have to wait until after the drought is over?
Answer:
No, the peer review does not need to wait until the extended drought ends. However, the documented field observations made by a competent source that a River has ceased flow may only be made during a non-drought period (310 CMR 10.58(2)(a)1.d.).

Question:
Is there guidance for conservation commissioners to help them evaluate the onset of drought conditions prior to an official drought being declared?
Answer:
While Drought Management Task Force (DMTF) meeting minutes and monthly hydrologic reports available through EEA may be helpful to Conservation Commissions in understanding the onset of drought, extended drought only exists for purposes of the Massachusetts Wetlands Protection regulations when the Secretary makes a declaration that a Level 1 (Mild/Advisory) or more severe drought exists (310 CMR 10.04, definition of Pond and 310 CMR 10.58(2)(a)1.f., River/Riverfront Area). Meeting minutes from the EEA DMTF meetings are posted to the Commonwealth's drought website: https://www.mass.gov/info-details/drought-management-task-force-meetings. The monthly hydrologic reports are available at: https://www.mass.gov/info-details/monthly-hydrologic-conditions. The U.S. Drought Monitor provides weekly reports that may be helpful: https://droughtmonitor.unl.edu/CurrentMap.aspx.

SEPTIC SYSTEMS

Question:
Is there any consideration or review occurring at MassDEP regarding the impact of these dry conditions on the soil absorption rates for onsite septic systems? Is there any guidance for communities regarding the impact of dry conditions on percolation tests for septic systems?
Answer:
MassDEP has no plans at this time to review regarding the impact of these dry conditions to the soil absorption rates for onsite septic systems. It would be unusual for percolation rates to shift by that much because of drought conditions. It is important to bear in mind that the long-term acceptance rates for soil absorption systems is a function of both the percolation rate and the soil type. Percolation testing is to be performed in unsaturated conditions and therefore the current drought conditions should have minimal impacts upon the resulting percolation testing results, and consequently, upon the overall system design given that the soil classification will not change.

WATER CONSERVATION AND DROUGHT COMMUNICATION

Question:
Are templates available that can be modified for our use for public notification and conservation tips?
Answer:
Yes, there are resources available:

- **Water Conservation Toolkit:** https://www.mass.gov/conservemawater
- **Library of Outreach Materials:** Water Resources Toolkit: Library of Outreach Materials
- **Drought Tips, Tools & Resources:** Drought Tips, Tools & Resources

Feel free to use Canva, PowerPoint, Adobe, etc. to customize these products for community use. We update/create new outreach materials on an ongoing basis, so if there are specific materials that would be most helpful to your community, please reach out with specific requests.

Question:
How is water conservation being communicated to medical facilities like outpatient dialysis centers in cities and towns?
Answer:
Medical facilities such as outpatient dialysis centers are considered essential services, and it is critical that their operations are not disrupted by water conservation measures. These facilities provide life-sustaining care, so we would not ask them to restrict water use required for patient treatment and safety.

However, there is potential for water efficiency in non-essential areas of their operations. Communication with these facilities could include recommendations such as:

1. **Inspect for Leaks:** Encourage regular inspections for and prompt repair of leaks in plumbing systems to prevent unnecessary water loss.
2. **Evaluate Non-Essential Uses:** Assess non-critical water uses, such as landscaping irrigation, and provide tips on reducing consumption where feasible.
3. **Upgrade Fixtures and Appliances:** Recommend replacing outdated fixtures or appliances (e.g., faucets, toilets, washing machines) with water-efficient models that meet EPA's WaterSense standards.
4. **Engage in Staff Awareness:** Share educational materials with staff about water-saving behaviors in non-clinical operations.

Question:
Can you please provide a link to the sample water use restriction bylaw?
Answer:
MassDEP sample water use restriction bylaw

Question:
There has been a little reluctance from City admin to post notices to customers regarding non-essential use because they don't want to upset the public and there are no "requirements", as was mentioned. Other than possible rule changes to permit holders, are there any plans to come up with stronger, more coercive language for systems to do at least some bare minimum communications?
Answer:
We had a call specifically for municipal officials to help explain the implications of the current drought. We are also developing outreach materials to more effectively communicate timely actions that communities can take (i.e. recommendations that are more geared toward indoor water efficiency rather than non-essential outdoor use). Many actions that are currently being recommended represent best practices that should be strongly encouraged regardless of existing regulations and local ordinances.

Water Management Act permits and registrations do not contain specific language PWSs need to use to convey the limits on non-essential water use but do require that customers and MassDEP be informed when restrictions go into effect. A PWS' bylaw/ordinances or regulations laying out their authority to implement such restrictions should document their responsibilities and plan to notify the public when implemented.

Question:
Is there still benefit to implementing outdoor water use restrictions during the fall/winter?
Answer:
After the end of the growing season most non-essential outdoor water use stops, so during the winter months the focus of conservation efforts should shift to indoor water conservation. PWSs can also remind customers that winter is a good time to make sure their irrigation system, if they have one, is in good working order and includes a timer set to the minimum needed for a healthy lawn, and moisture sensors so irrigation stops during wet weather. Steps like these can help ensure we are all ready for the next summer season.

GENERAL DROUGHT QUESTIONS

Question:
How much impact has the recent rainfall had in determining the drought level?
Answer:
Drought level recommendations are based on data collected for six drought indicators – precipitation, evapotranspiration, streamflow, groundwater, soil moisture/fire index and lakes and impoundments. The Drought Management Task Force (DMTF) considers data for these indices and input from federal, state and local partners to make recommendations to the Secretary of EEA on drought levels for each of the seven Drought Regions. These data take time to process and for the meeting to be held. Therefore, rain events may not be reflected in data until the next potential bi-monthly or monthly meeting, depending on the frequency of the DMTF meetings. The frequency of the DMTF meetings are determined by the severity of conditions and the speed at which conditions are worsening. More details on drought monitoring, assessment and declaration process may be found in the Drought Management Plan.

Question:
Can you please post the link to the Drought Resiliency Grant Notice of Intent?
Answer:
The link to the Notice of Intent for the new EEA Drought Resiliency and Water Efficiency Grant Program is available here: EEA funding opportunity for a new grant program.

Question:
What is your advice on doing an all-call on this topic through a "Code Red" system?
Answer:
Emergency alerting systems should only be used to warn the public of imminent threats to safety in their area. Overuse for informational purposes can reduce their effectiveness for actual emergencies. It's recommended to consider alternative communication methods for non-emergency information to avoid alert fatigue.

Question:
It was mentioned that streams and waterways are extremely low; what percentage of capacity is Quabbin Reservoir?
Answer:
As reported at the Drought Management Task Force Meeting on November 18, 2024, Quabbin Reservoir is at 86% full, 6 feet below the lower spillway elevation.

Question:
Discussion about the consumption of fossil fuels? (With climate change exacerbating drought and flooding).
Answer:
The state has a climate office that is working on various aspects of building climate resiliency, including publishing the 2023 ResilientMass Plan (also referred to as the State Hazard Mitigation and Climate Adaptation Plan (SHMCAP). Learn more about the ResilientMass plan at: https://www.mass.gov/info-details/2023-resilientmass-plan.

Question:
In our community, we will be asking our Town Meeting voters to enact a MBTA 3A zoning bylaw that will enable an additional 750 homes. How can we convince our citizens that there will be enough water to supply all the homes after this 24% increase in units? (We've been under a water ban since the spring.)
Answer:
MassDEP requires water use restrictions as a common element of Water Management Act (WMA) Permits. These restrictions do not indicate a lack of water supply but a belief in efficient water use particularly when conditions fall below normal. Regarding the additional demand potentially being added to the system, each WMA permit identifies limits on authorized withdrawal volumes based on Water Needs Forecasts (WNF) developed by the Department of Conservation and Recreation (DCR) in consultation with the PWS/Town. If a community amends their zoning, they should begin consulting with DCR and MassDEP about appropriate changes to their WNF and WMA Permit. WMA Permit withdrawal limits may be raised in response to these changes after careful review by MassDEP that considers a balance to protect the health of Massachusetts' water bodies while meeting the needs of businesses and communities for water.

Question:
We have had many of our PWS clients call asking us questions related to the level of the water table. Is there a database kept by the Drought Management Task Force tracking and trending water table levels?
Answer:
There is a drought dashboard where you can view our monitoring data including monthly and weekly updated groundwater levels across the state at: https://www.mass.gov/info-details/massachusetts-drought-resources. You can also reach out to our State Hydrologist Viki.zoltay@mass.gov for additional information.

Question:
Please share what it would take for us to come out of this drought? Is there a specific amount of precipitation that is necessary?
Answer:
See Section 4.3 in the Drought Management Plan, which discusses how to determine that the drought has ended: https://www.mass.gov/doc/massachusetts-drought-management-plan/download

Question:
Are there any impacts on forest health you are measuring?
Answer:
The following link will bring you to DCR's Forest Health Monitoring Program (see specific discussion of climate impacts on forests at the very bottom of the story map):
https://storymaps.arcgis.com/stories/b60f63199fa14805a8b9f7c82447a25b

Question:
What impact would you anticipate on the overall health of lakes/ponds? Do you recommend that water quality testing taken during this time period be accepted or request the analysis be conducted again once it has been declared the drought has ended?
Answer:
Impacts to water quality will vary. Specific recommendations for water quality testing will largely depend on the type/purpose of the testing. For follow up questions, please contact the DCR Lakes and Ponds Program Manager at kara.sliwoski@mass.gov.

Question:
Is there a lag time between when the drought indicators start showing drought conditions and when a drought is officially declared?
Answer:
There is a lag time between when the drought indicators start showing drought conditions and when a drought declaration is made, but the "effective date" of the drought begins at the time that the indices start showing drought conditions. The "effective date" of the drought is what gets used for Wetlands Protection Act and other regulatory/policy decisions.

Drought indicators are monitored weekly. The Drought Management Task Force (DMTF) meets bimonthly or monthly depending on the severity of conditions and the speed with which conditions are worsening. In general, precipitation and/or evapotranspiration cause a water deficit that leads to reductions in soil moisture, streamflow, groundwater and lakes and impoundments. Therefore, precipitation and evapotranspiration may be the first indications that a

drought is possible. Once impacts are observed, first usually as reductions in soil moisture and streamflow, calling DMTF meetings are considered. As mentioned above, the drought status recommendations by the DMTF will be effective retroactively back to the first date of evidence of drought. Therefore, the declaration may be delayed but it will be effective from the date that the indicators show drought.

Question:
I'm curious about the difference in drought designation between most of the state, which is in a severe drought, and Cape Cod, which until recently was not determined to be in a drought. I wonder if the physically different characteristics of Cape Cod streams and streamflow, as well as the lag time in groundwater levels responding to drought conditions, tend to give the Cape a false indicator of less drought.
Answer:
While there are different hydrogeologic characteristics for Cape Cod, as well as the Islands, that contribute to the groundwater response lag, Cape Cod received more rain at the beginning of this drought compared to other Drought Regions. The various precipitation lookbacks are higher for the Cape than other Drought Regions. In addition to precipitation and groundwater, two streamflow gages, four soil moisture/fire index stations and one lakes and impoundments metric are monitored and taken into account when determining drought level recommendations. All of these indicators together did not indicate dryness on the Cape until recently.

Question:
When is the next time that the state’s Drought Management Plan will be updated?
Answer:
The State's Drought Management Plan is updated every five years or as needed following a post-drought review. Between updates, we compile areas for improvement and potential additions for future versions of the plan to continue to improve drought monitoring and assessment as the science and the climate changes.