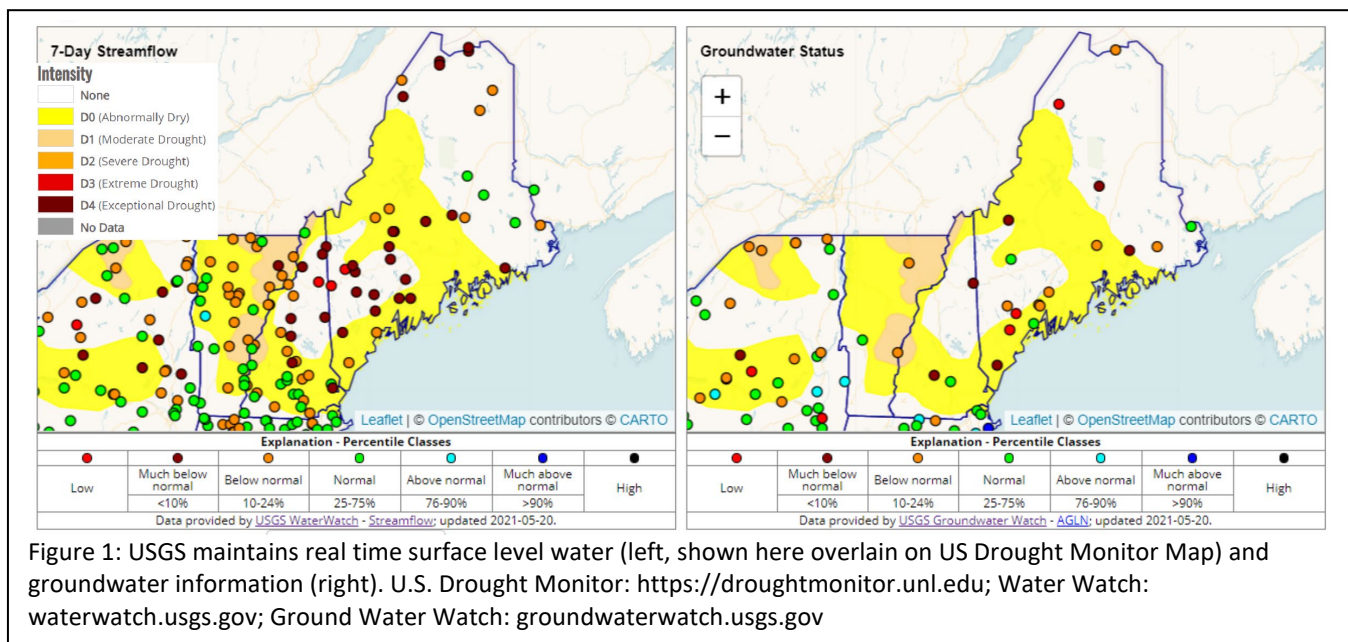


State of Maine Drought Task Force Report on Current Hydrologic Conditions May 20, 2021

Overview:

On Thursday, May 20, 2021, the US Drought Monitor classified 41.02% of the State of Maine as D0 (Abnormally Dry) status (Figure 1), a reduction of 13.7% from two weeks ago. **Recent rainfall has temporarily reduced abnormally dry conditions in regions of the state, however there remains overall a substantial deficit in precipitation for this time of the year.** These conditions are below the threshold required for activating the Drought Task Force (Task Force), as stated in MEMA's Emergency Operations Plan Drought Annex. We will continue with biweekly Drought Task Force updates until there is persistent evidence that drought is not a risk. Previous reports are available from this website: <https://www.maine.gov/mema/hazards/drought-task-force>.

This report summarizes the information presented on current hydrologic and drought conditions as of this date. Factors such as stream flow, groundwater levels, reservoir levels, soil moisture, and weather forecasts are being monitored closely. We are proceeding with weekly communication between MEMA, USGS, NWS, DWP, and other drought monitoring partners to compile a weekly report on the status of drought in Maine. **Task Force partners will report any drought-related impacts for which they are notified.** This preliminary approach will continue until a more comprehensive activation is needed in response to specific drought-related impacts around the state.



Current Hydrologic Conditions:

Stream Flows

Seven-day average stream flows vary statewide from normal to low (Figure 1), with the majority much below normal. Stream flows in central and northern Maine are below to much below normal, flows in eastern Maine range from normal to below normal, and flows in western and southern Maine are below normal to low. Streamflow conditions have deteriorated in many of these locations due to an overall expanding precipitation deficit over the last week (Figure 2) and warming temperatures, as spring gives way to a summer climate. Precipitation deficits are greatest on the coast and in southern Maine.

Ground Water

Groundwater levels vary statewide relative to historic springtime averages, from normal to low. Groundwater levels in southern Maine trend below normal to low, while western midcoast wells trend normal. Groundwater levels for the rest of the state are highly variable but the majority are below to much below normal.

There are currently no water quantity issues reported to the Drinking Water Program from Maine public water suppliers. There are, however, reports of increased drought preparedness activities in the southern part of the state.

Headwater Storage Levels:

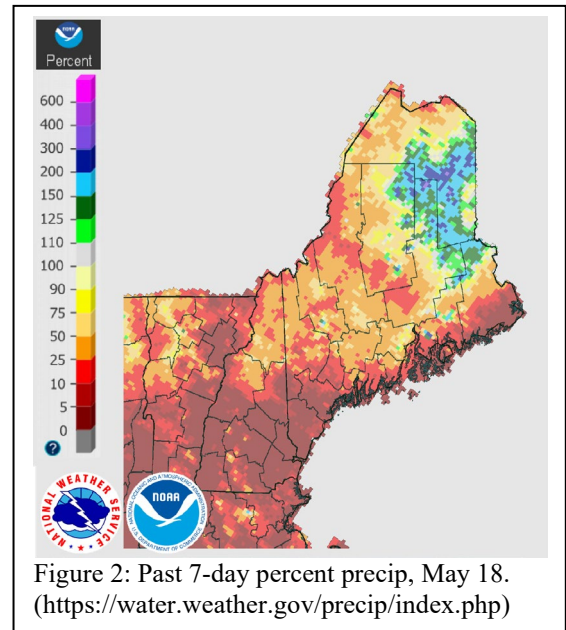
At present, hydro operators are aware of continued dry conditions and the upper storage impoundments are holding a little more water than the average for this time of the year where they can:

- **Androscoggin River Storage** – Storage reservoirs are 78.7% full, which is 9.3% below the long-term average for this time of the year. Storage in the Androscoggin River basin appears to be flattening, with water levels in all five storage impoundments falling below their long-term average.
- **Presumpscot River Storage** – The water level at Sebago Lake is 265.41 feet, an increase of 1 inch for the week. The water level is currently 1 foot 3 inches below the spillway crest, or approximately 7 inches below the target full pond water level. Flow from the Eel Weir dam was increased last week from 200 cfs to 270 cfs in support of fish migration at the Cumberland Mills and Saccarappa fishways.
- **Union River Storage** – The water level at Graham Lake is 102.8 feet, 1.26 feet below the long-term average water level for this time of the year.
- **West Branch Penobscot Storage** - Water Storage at Ripogenus remains within the low end of the normal range, and total storage in the West Branch remains less than the long-term average for this time of the year.
- **Kennebec River Storage** – Storage reservoirs in the Kennebec River basin are 92% full, which is 1.1% below the long-term average for this time of the year. Storage conditions in the Kennebec River basin show an upward trend.
- **St. Croix River Storage** – The West Branch storage reservoirs are 83.5% full and the east side storage reservoirs are 86.6% full. Flow in the St. Croix at Woodland is 1260 cfs, but will be reduced this week to manage water level fluctuations in support of loon nesting in the storage reservoirs.

Weather Outlook:

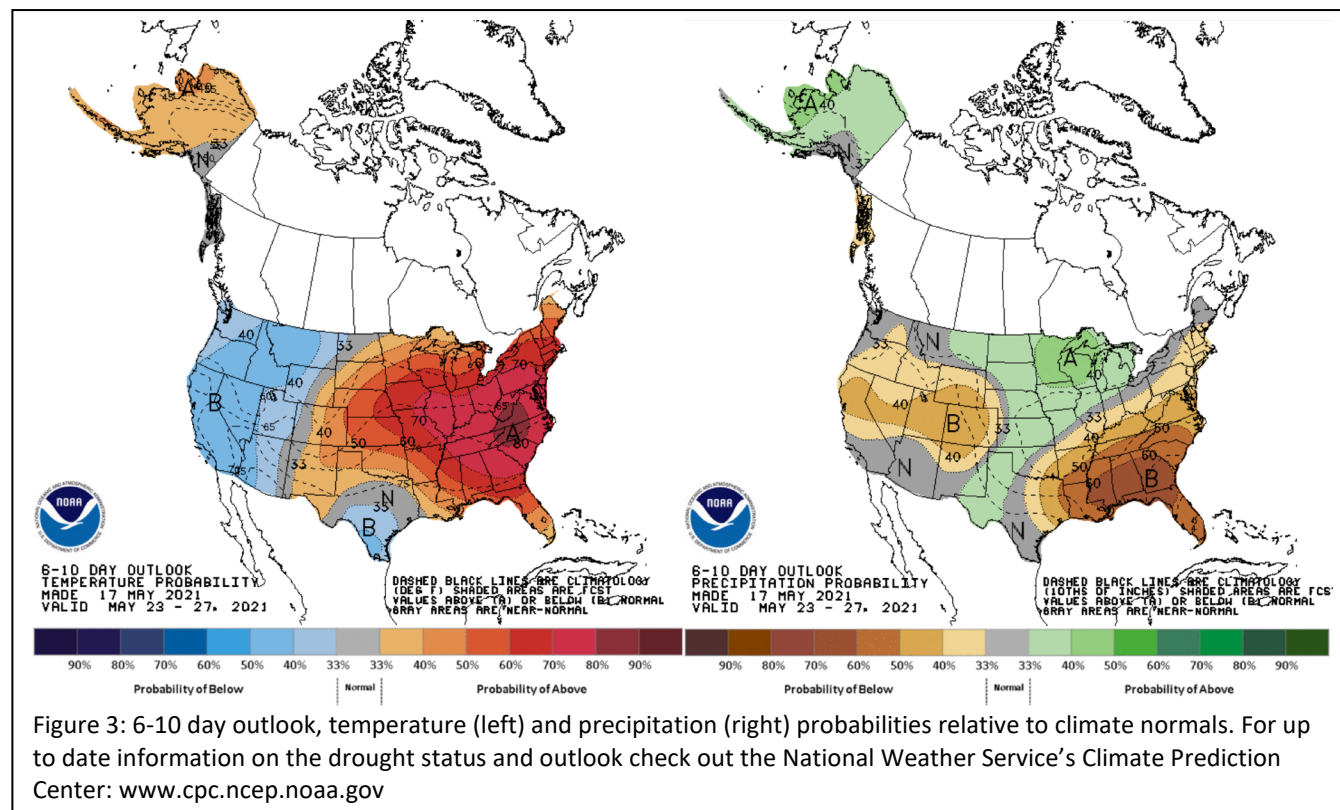
According to the National Weather Service's Climate Prediction Center, probabilities slightly favor normal precipitation in northern Maine and below normal precipitation in southern Maine over the next 6-10 days (Figure 3). In addition, probabilities favor seasonally warmer temperatures over the next 6-10 days, potentially increasing evapotranspiration and subsequent drying.

Showers and thunderstorms are expected across northern and central Maine through Saturday, as a cold front from Canada crosses the area. 0.25 to 0.5 inches of precipitation is expected across the area, with the greatest potential for larger amounts in the north. Since rain is expected in the form of showers and thunderstorms, the amount received across the forecast area may be spotty in nature. Temperatures will also cool in the wake of the front, dropping to below normal Sunday morning. By early next week, high pressure will return and temperatures will rise to above normal again with sunny skies. The next chance for precipitation comes at the end of next week, with another potential cold front on Thursday and Friday.



As of May 17, yearly precipitation departure is -5.55 inches in Portland, -3.51 inches in Augusta, -4.51 inches in Rangeley, -4.61 inches in Bangor, -1.36 inches in Caribou, -3.07 inches in Houlton, and -2.47 inches in Millinocket.

There are no strong indicators of weather trends beyond this time frame. All interests should monitor both weather forecasts and hydrologic factors as conditions progress.

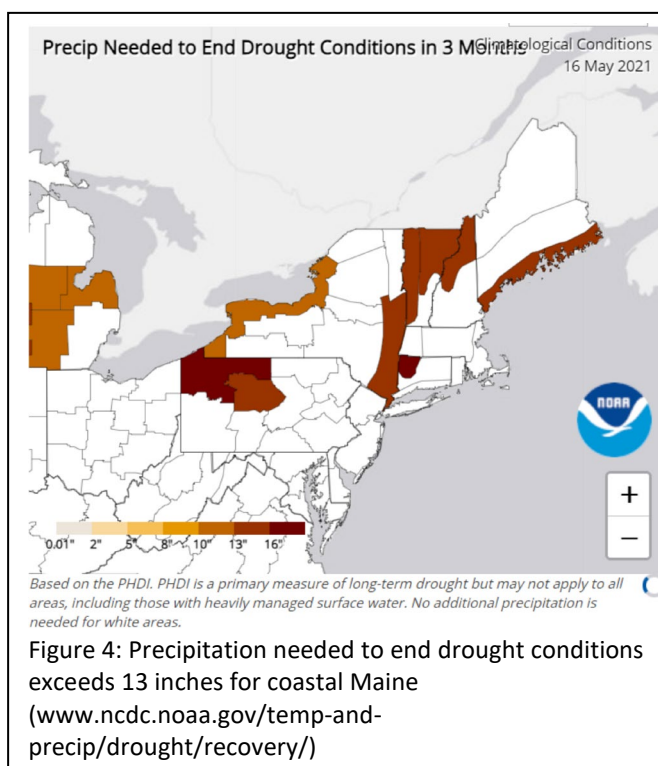


Drought Outlook:

Currently 15 counties in Maine are partially or completely classified as abnormally dry. A substantial amount of precipitation is needed to end current dry conditions (Figure 4). Along coastal Maine, greater than 13 inches of rainfall, or 128% of normal spring/summer precipitation, is required within the next three months to return to normal conditions. Dry conditions are expected to linger given long-term normal to below normal precipitation probabilities generated by NOAA for the next 6-10 days. **The Task Force will continue to monitor abnormally dry conditions in the state until conditions broadly improve across Maine.**

Conclusion:

Current information represents a “snapshot” of conditions throughout the state for the date of reporting. This report provides information on the preliminary effects of the drought and more monitoring must be done to assess potential



impacts if the situation worsens. Many new factors will influence drought potential in Maine as the season progresses. These factors will be monitored, and the Drought Task Force will monitor the situation until warning indicators subside.

The Maine Drought Task Force is composed of representatives from major river basin management operations, utility operators as well as state agencies and federal agencies. The Task Force is convened when necessary based on drought threat.

Drought Task Force members will stay in close communication until the dry conditions subside. The United States Geological Survey (USGS) provides real time ground and surface water level data and the U.S. Drought Monitor Program provides weekly drought outlooks.

Information Resources:

Please refer to these sources for more information on current water conditions:

- Maine Drought Task Force website, with links to other reports and drought monitoring resources: <https://www.maine.gov/mema/hazards/drought-task-force>
- Drought.gov site for the State of Maine: <https://www.drought.gov/states/maine>
- National Integrated Drought Information System: <https://www.drought.gov/current-conditions>
- U.S. Drought Monitor: <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?ME>
- Well monitor data: <https://groundwaterwatch.usgs.gov/StateMap.asp?sa=ME&sc=23>
- Streamflow data: <https://waterwatch.usgs.gov/?m=real&r=me>
- Streamflow data aggregated by watershed: <https://waterwatch.usgs.gov/index.php?m=dryw&r=me>
- Maine Cooperative Snow Survey: https://www.maine.gov/dacf/mgs/hazards/snow_survey/
- NWS Gray short- and long-term forecasts: <https://forecast.weather.gov/product.php?site=NWS&issuedby=GYX&product=AFD&format=CI&version=1&glossary=1&highlight=off>
- NWS Caribou short- and long-term forecasts: <https://forecast.weather.gov/product.php?site=NWS&issuedby=CAR&product=AFD&format=CI&version=1&glossary=1&highlight=off>

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