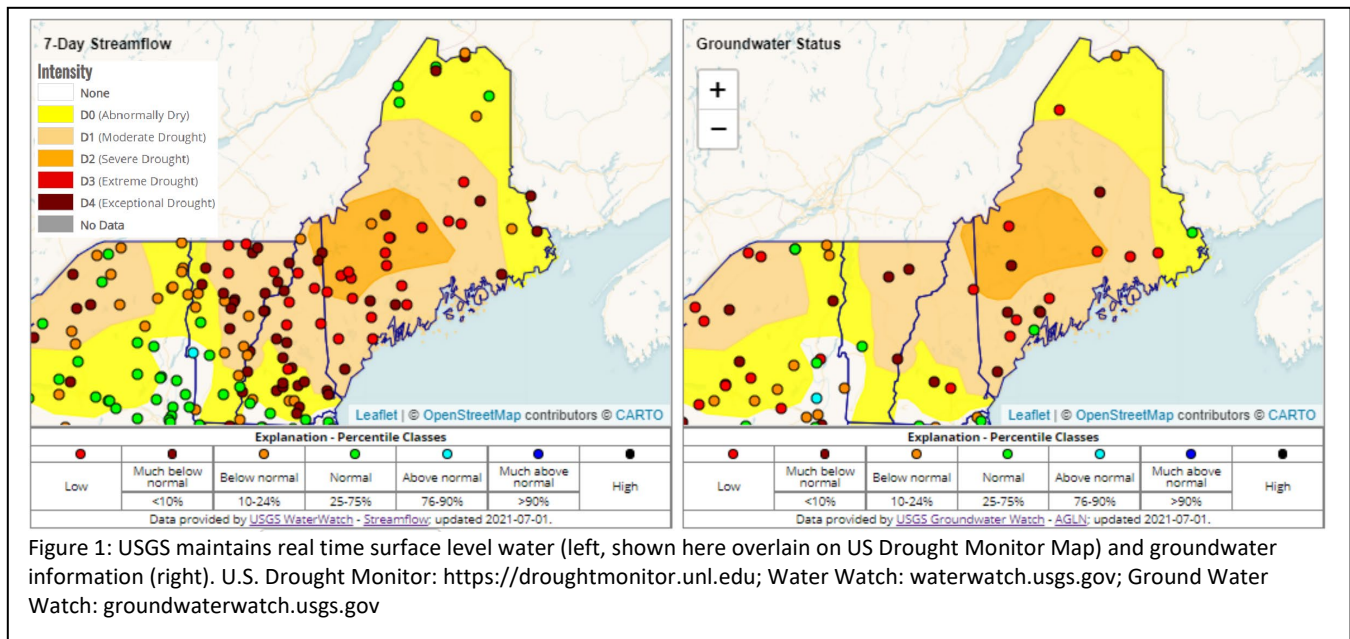


State of Maine Drought Task Force Report on Current Hydrologic Conditions July 1, 2021

Overview:

- Conditions in Maine have degraded substantially, 100% of the state is Abnormally Dry with 70.44% in Moderate Drought and 20.85% in severe drought.
- Maine CDC Drinking Water Program is receiving requests for assistance from public water systems statewide on drought preparedness and response including bulk water delivery. Most of the reported water quantity issues are from southern and coastal areas.
- Most streamflow stations in central and western Maine with 30+ years of record are the lowest they have ever been for this time of year, including the 2020 drought.
- Please direct private well owners facing drought-related issues to the Dry Well Survey: <https://maine-dry-well-survey-maine.hub.arcgis.com/>. Mainers can either dial 211 or 1-877-463-6207, or they can text a Maine zip code to 898-211 for assistance with filling out the survey.
- Low income homeowners with dry wells may be eligible to apply for assistance through the [USDA Single Housing Repair Program](#) or the [MaineHousing Home Repair Program](#).



The US Drought Monitor has classified 100% of the State of Maine as D0 (Abnormally Dry) status (Figure 1), with 70.44% of this area elevated to Moderate Drought (D1) status and 20.85% of this area in severe drought. **Drought conditions have rapidly intensified in the last two weeks and this trend is expected to continue into summer. In response to escalated drought, the Maine Emergency Management Agency has published an online survey for home owners to report private wells running dry and opportunities for assistance:** <https://maine-dry-well-survey-maine.hub.arcgis.com/>.

The Maine Drought Task Force convened with a virtual meeting on June 30 and will continue meeting on a monthly schedule until there is persistent evidence that drought is no longer a risk. Previous reports are available here: <https://www.maine.gov/mema/hazards/drought-task-force>.

This report summarizes information presented by Task Force members on current hydrologic and drought conditions as of this date. **Task Force partners will report any drought-related impacts for which they are notified.**

Current Hydrologic Conditions:

Stream Flows

With the exception of the St. John River, all long term streamflow stations in Maine are reporting below normal levels. Most are in the lowest 10% of all data collected for this time of year. Most stations in central and western Maine with 30+ years of record are the lowest they have ever been for June 29. Compared with June 2020, stations in central and western Maine are lower now than they were during the 2020 drought.

Below normal rainfall and snowpack conditions in the spring led to below normal peaks at many gaging stations throughout Maine. Additionally, these peaks occurred approximately a month earlier than would be expected. This combination of a below normal peak discharge and a peak discharge occurring earlier in the spring has led to a recession of flows faster than would be expected.

Ground Water

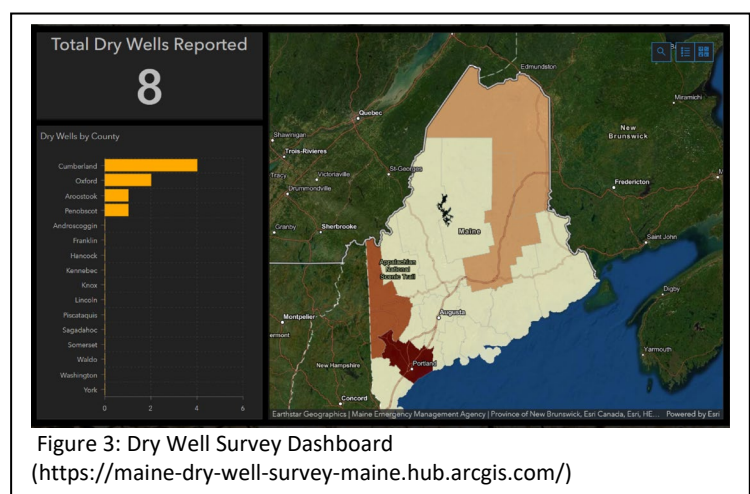
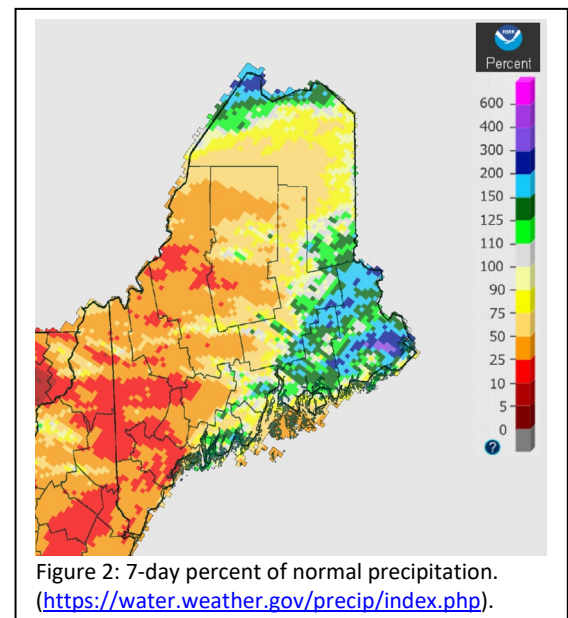
Groundwater recharge has been variable statewide relative to historic springtime averages, but overall conditions continue to degrade. Water levels across the state are much below normal to low, with several stations showing a rapid decline in levels over the last month. (Figure 1).

Public Water Systems

The Maine CDC Drinking Water Program (DWP) is receiving requests for assistance from public water systems (PWSs) statewide on drought preparedness and response including bulk water delivery. Some PWSs have issued voluntary water conservation orders. The South Berwick Water District has issued emergency mandatory water use restrictions. Most of the reported water quantity issues are from southern and coastal areas.

Dry Wells

Eight dry private wells have been reported in Aroostook (1), Cumberland (4), Oxford (2), and Penobscot (1) counties (Figure 3). At this time, Maine homeowners with dry wells are encouraged to report this information to the Dry Well Survey: <https://maine-dry-well-survey-maine.hub.arcgis.com/>. For low income homeowners requiring assistance with dry private wells (including drilling a well deeper, drilling a new well, laying pipes to the home, associated labor costs, etc.) please refer to the [USDA Single Family Housing Repair Program](#) or the [Maine State Housing Authority Home Repair Program](#).



Headwater Storage Levels:

At present, hydro operators are aware of continued dry conditions:

- **Androscoggin River** – Storage conditions in the upper Androscoggin River basin are reported to be 91.3% full this week, which is 19.1% below the long-term average. Flow reductions at the

upper reservoirs remain in place for the duration of the loon nesting season and overall flows remain stable down river.

- **Presumpscot River** – The water level in Sebago Lake is 264.71 feet and continues to drop, reportedly by 2 inches this week. Flow remains at 270 cfs in support of anadromous fish migration.
- **Penobscot River** – Total storage in the West Branch Penobscot remain below the long-term average for this time of the year but is currently stable, with North Twin storage steady and Ripogenus storage below the long-term average but stable, and the four small storage reservoirs continuing a downward trend. Water level requirements in the small storage reservoirs are not being met, but resource managers determined that, for now, flow will be reduced somewhat in order to protect downstream river habitats to the extent possible.
- **Union River** – Storage in the Union River is 1.69 feet below the long-term average for this time of the year but appears to be following the long-term trend, albeit a lower total water level.
- **Kennebec River** – Storage conditions in the upper Kennebec River basin are reported to be 85.2% full, which is 9.6% below the long-term average for this time of the year. Water levels are down over a foot in the three major reservoirs for this drainage and some scheduled boating flows are being curtailed.
- **St. Croix River** – The East Branch St. Croix is reportedly 82% full and the West is 76.5% full, with total river flow below Woodland at 815 cfs. Water levels continue to drop as a result of lack of rain.

Many of the state's hydropower reservoirs support loon nesting through license requirements to hold water levels steady during nesting season, which continues in most areas for two more weeks. Loons require a steady water level, not increasing more than ½ foot or decreasing more than 1 foot, to avoid nest abandonment; loon productivity may be impacted this year as a result of early drought conditions, despite the best efforts of the river managers to hold water steady in the reservoirs.

Weather Outlook:

According to the National Weather Service's Climate Prediction Center, probabilities slightly favor normal precipitation across Maine over the next 6-10 days (Figure 4). In addition, probabilities slightly favor seasonally warmer temperatures over the next 6-10 days, potentially increasing evapotranspiration and subsequent drying.

June 30th and July 1st are expected to bring up to 0.5 inches for northern and central Maine and Downeast. However, precipitation will be showery in nature further south, so the heaviest amounts will be localized and this will not be a widespread wetting rain event. For the first week of July, drier conditions will return, although temperatures will be closer to normal (cooler than the past week). An active pattern is expected to return later in the week, bringing the possibility of some quick-moving weather systems. Although some precipitation is expected, this pattern is not conducive to a widespread saturating rain event.

As of this week, yearly precipitation departure is –8.67 inches in Portland, -7.08 inches in Augusta, -7.85 inches in Rangeley, -7.79 inches in Bangor, -1.51 inches in Caribou, -4.56 inches in Houlton, and –6.03 inches in Millinocket.

The precipitation outlook can change rapidly during late summer, especially during an active tropical season. All interests should monitor both weather forecasts and hydrologic factors as conditions progress.

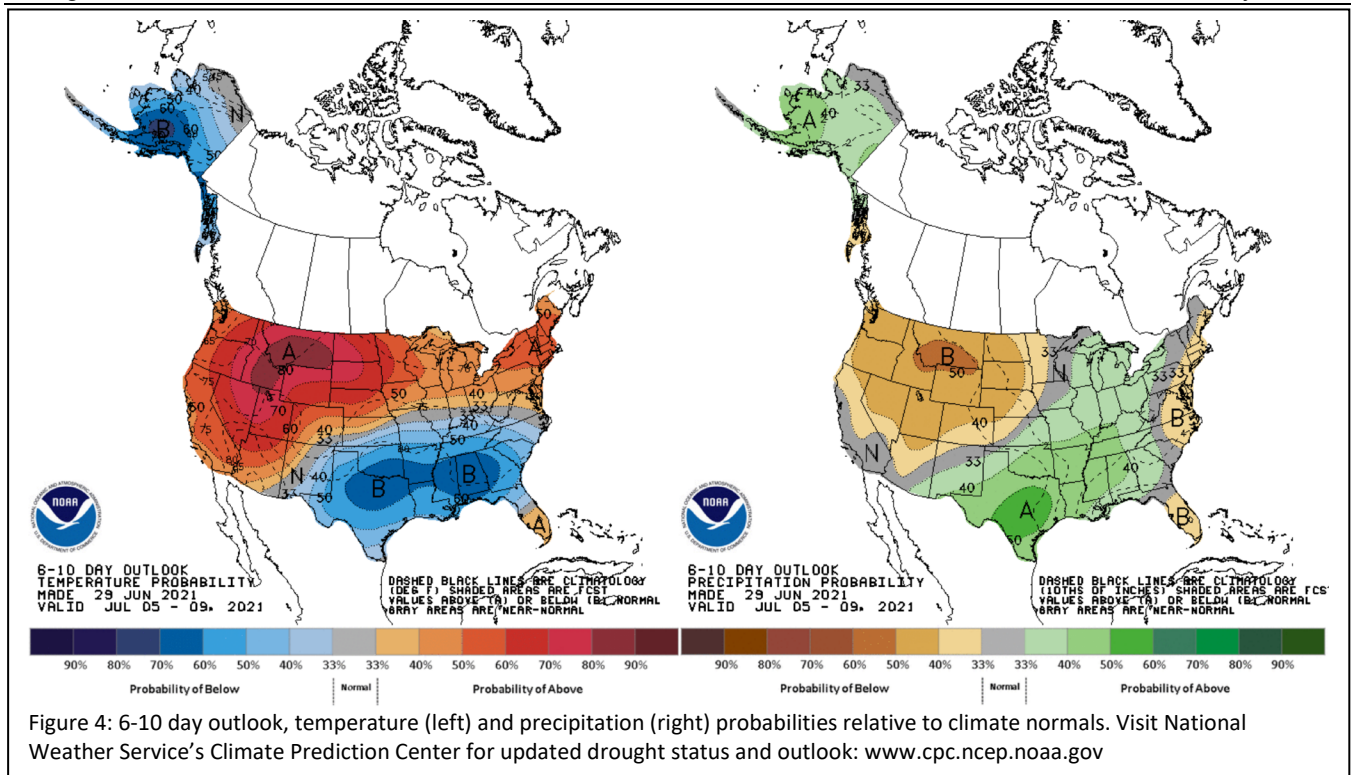


Figure 4: 6-10 day outlook, temperature (left) and precipitation (right) probabilities relative to climate normals. Visit National Weather Service’s Climate Prediction Center for updated drought status and outlook: www.cpc.ncep.noaa.gov

**Drought Outlook:
Wildfire conditions**

Trends in wildfires are currently paralleling events during last year’s drought. Yesterday the Kingfield Fire Department and Maine Forest Service responded to a wildfire started by a lightning strike along ledges on Ira Mountain in Kingfield. The fire burned about a quarter of an acre and was contained later that day. June is typically a quiet time for wildfires, but dry conditions have led to a relatively higher occurrence of events for this year. Maine Forest Service will continue to watch for lightning strikes in preparation for any further events during this season.

Agricultural Conditions

Farmers who have irrigation are using it heavily in most areas of the state. First-cut hay crop has been good, but subsequent hay growth has been slow. The University of Maine Cooperative Extension provides an on-line Hay Exchange resource at: <https://extension.umaine.edu/livestock/hay/> . The Maine Agricultural Water Management Board meets July 12th to develop dialogue among agricultural producers and water resource agencies.

Currently all 16 counties in Maine are partially or completely classified as Abnormally Dry (D0), 12 of these are experiencing Moderate Drought (D1), and 6 are experiencing Severe Drought (D2). A substantial amount of precipitation is needed to end current dry conditions (Figure 5). In northern Maine, more than 16 inches of rainfall, or 135% of normal spring/summer precipitation, is required within the next three months to return to normal conditions. Dry conditions are expected to linger given relatively dry conditions projected 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.**

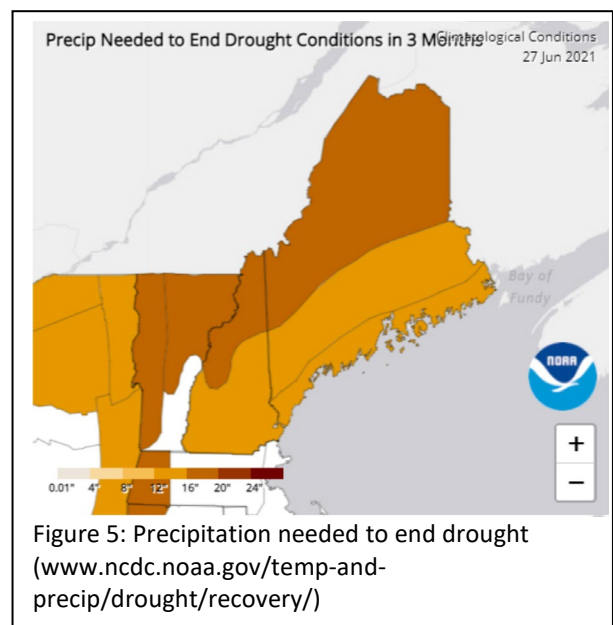


Figure 5: Precipitation needed to end drought (www.ncdc.noaa.gov/temp-and-precip/drought/recovery/)

About this Report:

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, and members will stay in close communication until the dry conditions subside.

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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