

State of Maine Drought Task Force Report on Current Hydrologic Conditions June 3, 2021

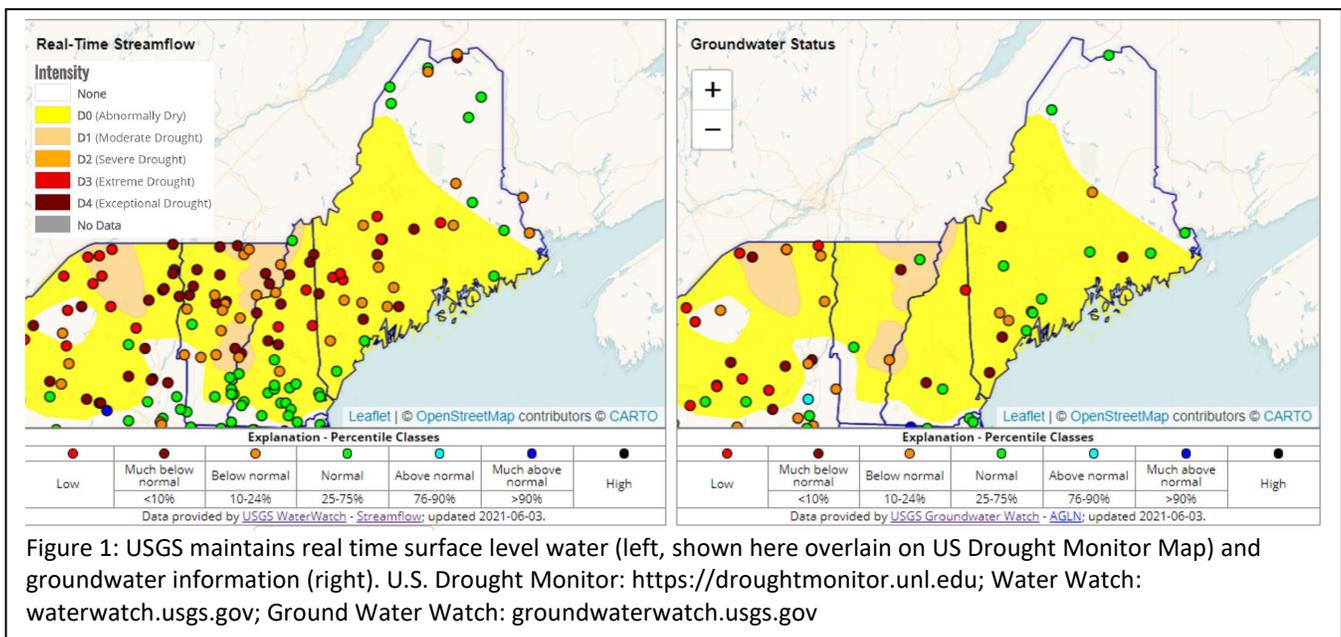
Overview:

- Abnormally dry conditions continue to persist and expand in the State of Maine
- Weather forecast probabilities slightly support less than average rainfall and greater than average temperatures for the next 6-10 days
- The Maine Emergency Management Agency will begin a 2021 Dry Well Survey starting June 17 to document needs for dry well assistance across the state. Homeowners with dry wells are encouraged to notify their County EMA office for their situational awareness until that date.
- Low income homeowners with dry wells may be eligible to apply for assistance through the [USDA Single Housing Repair Program](#) or the [Maine State Housing Authority Home Repair Program](#).

On Thursday, June 3, 2021, the US Drought Monitor classified 65.35% of the State of Maine as D0 (Abnormally Dry) status (Figure 1), an increase of 11.11% 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 year.** These conditions are above 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 information presented by Task Force members 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. **Task Force partners will report any drought-related impacts for which they are notified.**

Current Hydrologic Conditions:



Stream Flows

Real-time stream flows vary statewide from normal to low (Figure 1), with the majority below normal to low. Stream flows in northern Maine are normal to below normal, in eastern Maine stream flows range

from normal to below normal, in western Maine stream flows are below normal to low, and in southern Maine stream flows are normal to much below normal. Streamflow conditions have temporarily stabilized in many of these locations due to precipitation over the weekend and cool, generally moist conditions (Figure 2). Precipitation deficits are greatest on the coast and in southern Maine.

Ground Water

Groundwater recharge has been variable statewide relative to historic springtime averages, but overall conditions continue to worsen. Water levels trend normal to much below normal across the state (Figure 1). Groundwater levels in southern and western Maine range from normal to much below normal. Groundwater levels in northern Maine are normal, levels in eastern Maine range from normal 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.

Dry private wells have been reported in Aroostook and Cumberland Counties. At this time, Maine homeowners with dry wells are encouraged to notify their County EMA for situational awareness until the Dry Well Survey becomes available for use on June 17. A link to the survey will be provided in the next Task Force report on June 17.

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](#).

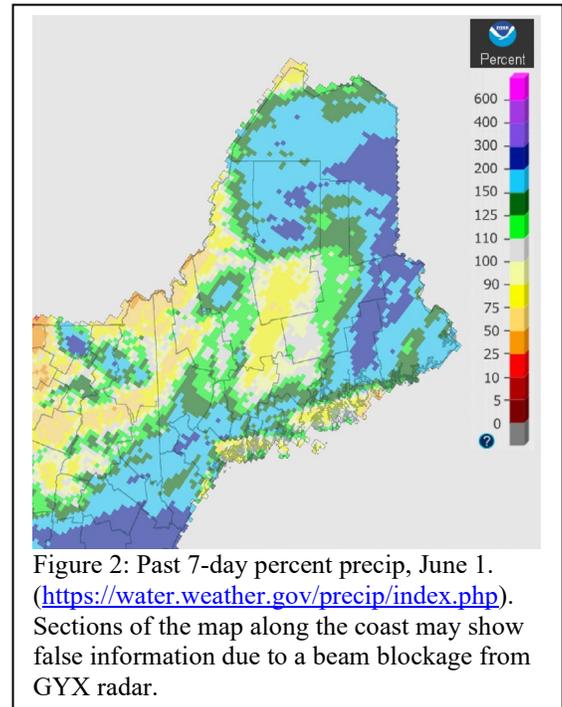


Figure 2: Past 7-day percent precip, June 1. (<https://water.weather.gov/precip/index.php>). Sections of the map along the coast may show false information due to a beam blockage from GYX radar.

Headwater Storage Levels:

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

- **Androscoggin River Storage** – The Androscoggin River basin is currently 77.3% full, which is 15.4% below the long-term average for this time of the year. Water managers are preparing plans to reduce flows from the storage reservoirs below licensed minimums and do not expect to meet minimum target water levels in the upper reservoirs.
- **Presumpscot River Storage** – Water levels in Sebago Lake are currently 265.33 feet, 1 foot 4 inches below the spillway crest; this is a loss of 0.8 inches since Sunday. Downstream flow was increased to the licensed minimum flow (270 cfs) on May 12 in support of fish passage at the Cumberland Mill and Saccarappa facilities.
- **Union River Storage** – Storage in the Union River reservoir at Graham Lake is 1.95 feet below the long term average for this time of year and appears to be continuing a downward trend.
- **Penobscot River Storage** - Storage conditions in the West Branch Penobscot continue to be lower than the long-term average for this time of the year. Flow at Seboomook dam was reduced from its minimum 400 cfs to 200 cfs to preserve water levels in support of loon nesting; storage conditions at Ripogenus have fallen below the low-normal range into the dry range for this time of the year and continue to trend downward. Overall, water storage in the West Branch Penobscot is below storage conditions in 2020.
- **Kennebec River Storage** – The Kennebec River basin is currently 91% full, which is 5.0% below the long-term average for this time of the year. Water levels in the storage reservoirs are beginning to trend downward.
- **St. Croix River Storage** – Storage conditions in the St. Croix River basin are below normal for this time of the year; River Basin Managers report a rainfall deficit of approximately 5 inches so far this year. Last week, at the request of station operators, the Department approved a short-term

reduction in minimum flow from 850 cfs to 750 cfs in support of preserving reservoir water levels- as much as possible during the loon nesting and bass spawning seasons.

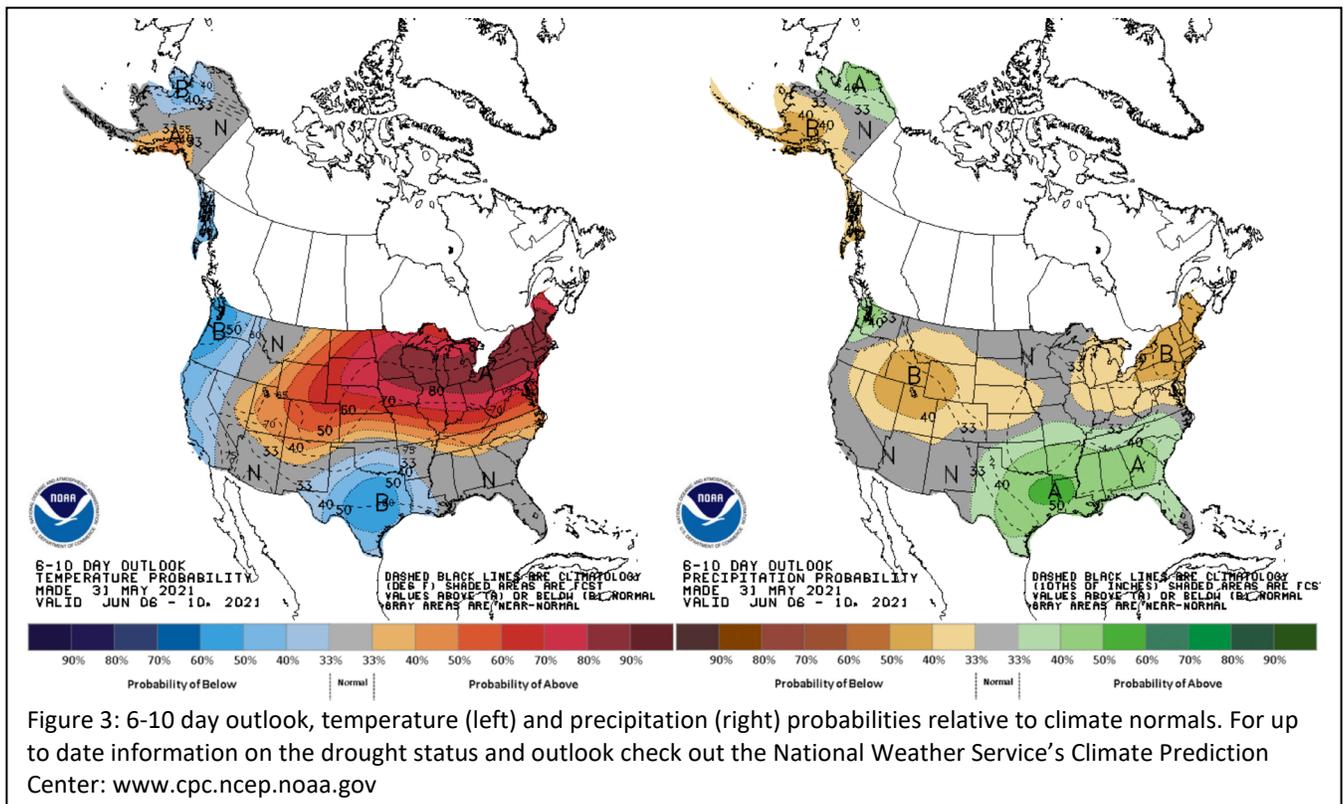
Weather Outlook:

According to the National Weather Service’s Climate Prediction Center, probabilities slightly favor below normal precipitation across 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.

High pressure will build across the state this weekend through the beginning of next week with hot and humid conditions expected to develop. The potential exists for reaching or breaking daily high temperature records across northern Maine early in the week. It will remain mostly dry except for a few isolated showers across the Western Mountains. The potential exists for a backdoor cold front along with scattered showers towards mid-week before a return to hot conditions later next week. No widespread soaking rains are expected over the next week.

As of this week, yearly precipitation departure is -5.53 inches in Portland, -4.01 inches in Augusta, -4.52 inches in Rangeley, -5.24 inches in Bangor, -1.10 inches in Caribou, -2.44 inches in Houlton, and -3.36 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.

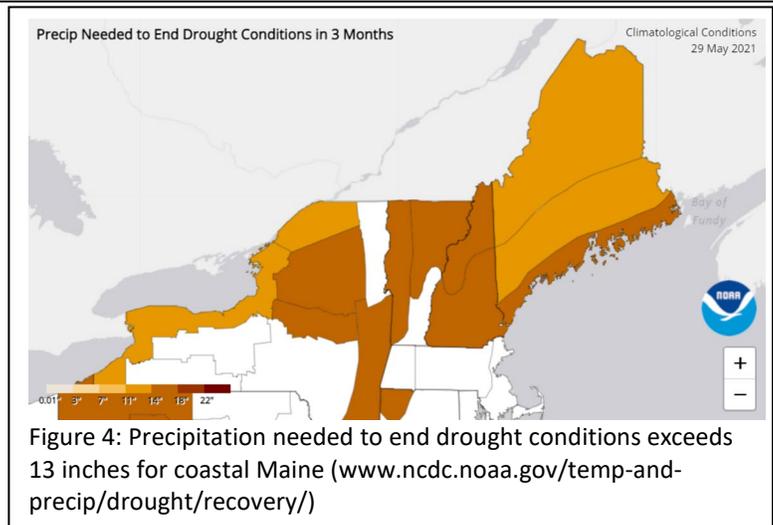


Drought Outlook:

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, nearly 15 inches of rainfall, or 139% 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 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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