

State of Maine Drought Task Force Report on Current Hydrologic Conditions October 7, 2021

Overview:

- Drought has been gradually declining in Maine: 17.96% of the state is Abnormally Dry (5 counties), 10.65% in Moderate Drought (5 counties), 4.85% in severe drought (3 counties).
- Though 33.46% of the state is experiencing abnormally dry or drought conditions by area, approximately only 5.6% of Maine's population resides in the impacted area.
- The Androscoggin River basin has many mainstem and tributary gages and basin storage showing below normal conditions. Other basins remain in a normal to above normal condition.
- Year to date precipitation deficits continue for most of the state. Forecast period favors fair weather with near to above normal temperatures, limited opportunities for precipitation.

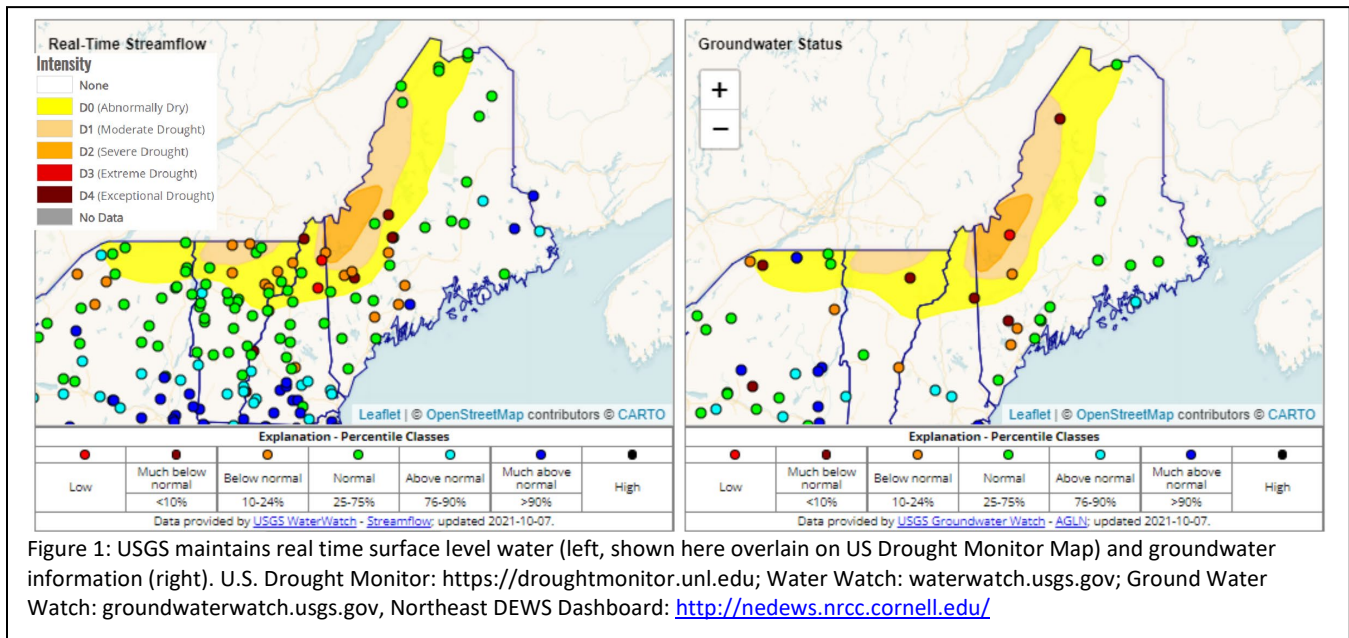


Figure 1: USGS maintains real time surface level water (left, shown here overlain on US Drought Monitor Map) and groundwater information (right). U.S. Drought Monitor: <https://droughtmonitor.unl.edu>; Water Watch: waterwatch.usgs.gov; Ground Water Watch: groundwaterwatch.usgs.gov, Northeast DEWS Dashboard: <http://nedews.nrcr.cornell.edu/>

In response to persistent drought, the Maine Emergency Management Agency publishes these biweekly Drought Reports. 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. **Drought can occur over many different scales and timelines. The Maine Drought Task Force reports primarily on long term dry weather and drought conditions as indicated by the U.S. drought monitor, with the recognition that many drought-related impacts to specific sectors may be more sensitive to shorter-term fluctuations in dry and wet weather. No single measure can adequately address all manifestations and sensitivities to drought, so please refer to our sector-specific monitoring information below.**

Current Hydrologic Conditions:

Stream Flows

The Androscoggin River basin, from the headwaters in New Hampshire to Auburn, has many mainstem and tributary gages showing below normal conditions. The Kennebec River basin is variable, but showing improvement since the last report. Other basins in coastal, eastern and northern Maine remain in a normal to above normal condition. It's important to note that the number of stations in the lowest 10% of all historical data for this time of year (referred to as Much Below Normal) is not growing, it's remaining consistent.

Ground Water

Despite recent rain and overall improvement to drought conditions in Maine, groundwater levels along the New Hampshire border- up to the border with Canada in western/northwestern Maine- remain below normal. The monitoring well in Clayton Lake (northern Maine) is the only well in this below normal region showing recharge from September rains. Other wells in Maine remain in the normal to above normal range.

Weather Outlook:

Forecast period will favor fair weather with near to above normal temperatures, but limited opportunities for measurable precipitation. High pressure will dominate the weather conditions Thursday, with a weak cold front moving into the area Friday. Cooler temperatures will settle in Friday through the weekend. A weak system could support some scattered showers on Monday. Temperatures will gradually warm above normal with an extended period of dry conditions in the long term forecast next week. The rainfall forecast indicates little more than trace amounts of precipitation accumulation over the next 7 days (Figure 2).

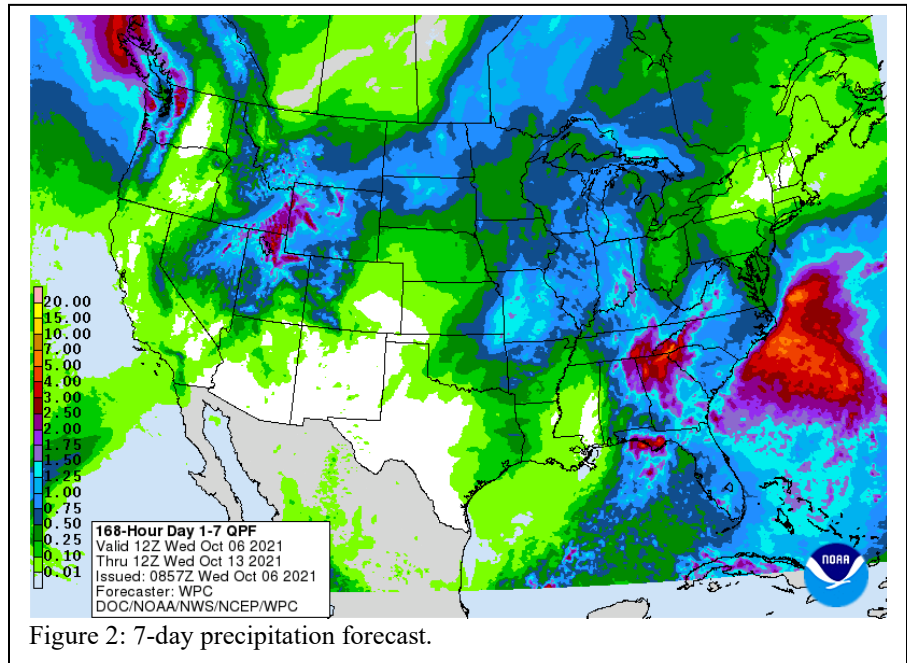


Figure 2: 7-day precipitation forecast.

The 6-10 day outlooks slightly favors below normal rainfall for the state through the third week of October (Figure 3). The temperature outlook shows moderate confidence for above normal temperatures across most of the state as strong ridging is forecast over the central and eastern U.S. The trend favors below normal rainfall. Looking further out in time, La Niña is returning faster than previously thought, and is expected to continue through the winter. What does that mean? A weak La Niña usually means it's a little snowier than normal; but a strong La Niña can mean it's less snowy than normal. Currently a weak La Niña is projected which slightly favors a snowier winter.

Location	Departure for September	Departure, year-to-date
Caribou	+2.69	-1.23
Bangor	+5.65	+0.85
Millinocket	+3.67	-2.86
Portland	+0.51	-3.59
Rangeley	-0.30	-11.06

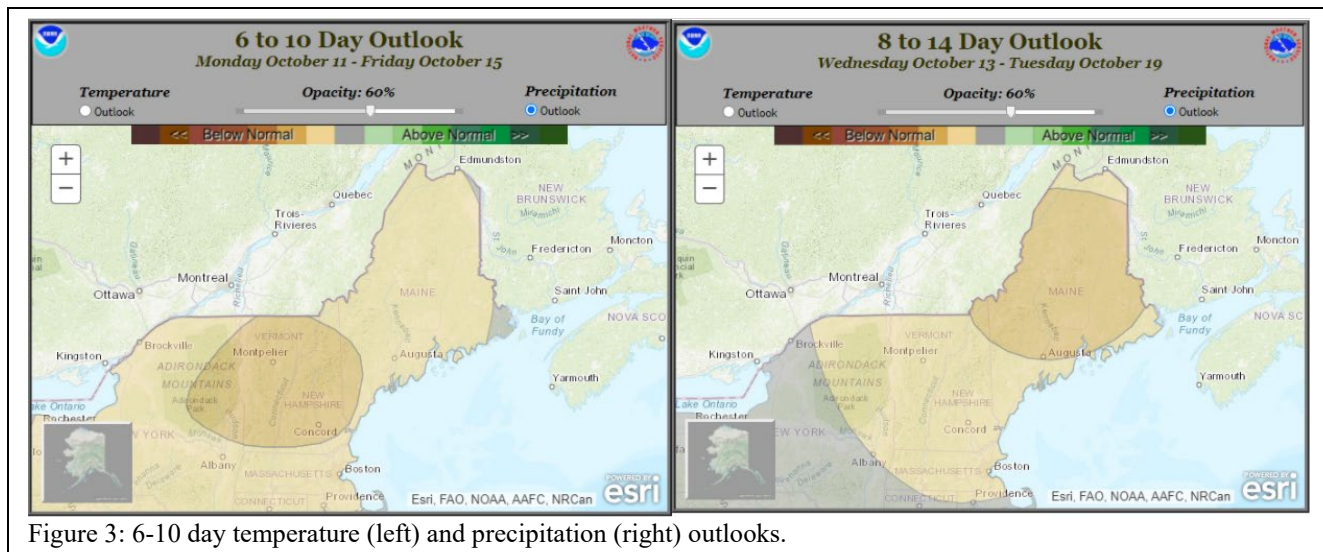


Figure 3: 6-10 day temperature (left) and precipitation (right) outlooks.

Headwater Storage Levels

Storage conditions in the major river basins as reported by the hydropower companies this week are as follows:

- **Presumpscot River** – The water level at Sebago Lake is currently 263.4 feet, a decrease of 0.5” for the last two weeks. Flow from Sebago Lake is 408 cfs and improvement from previous flows at 270 cfs. Sappi continues to closely monitor conditions. Flows have been increased to meet minimum flows for this time of year.
- **Androscoggin River** – The Androscoggin River basin is 54.6% full which is 9.6% below the long term average which is a result of continued dry conditions. Rangely Lake is down 1.18 feet, Mooselookmeguntic is down 5.98 feet, Richardson Lake is down 7.18 feet, Aziscohos is down 16.24 feet and Errol is down 3.98 feet. Discharge is stable on the Lower Kennebec.
- **Kennebec River** – The Kennebec River basin is 66% full, 2.3% above the long term average for this time of the year. However, lake storage continues to decrease, Brassua is down 12.35 ft, Moosehead Lake is down 2.05 feet and Flagstaff Lake is down 4.98 feet. On the Lower Kennebec flows are stable, Solon is discharging 1500 cfs, Madison is discharging 1880 cfs and Weston is discharging 1755 cfs.
- **Penobscot River** – Total storage in the west branch of the Penobscot River remains 20% below the long-term average for this time of the year and natural inflows remain below average. Storage conditions at Ripogenus remain well below the long-term average and continue to drop as water stored there is flowed downstream to North Twin, where water levels remain stable. Water levels in the four small storage reservoirs continue to decline.
- **Union River** – Storage conditions continue to improve in the Union River basin (at Graham Lake) and are 3.77 feet higher than the long term average for this time of the year as a result of changed operating conditions.
- **St. Croix River** –River managers are working to flow water out of the impoundments to achieve minimum lake elevations at East Grand Lake and West Grand Lake in order to protect Lake Trout spawning habitat and egg incubation. East Grand is at 432.6 feet, Spednic is at 383.1 and West Grand is at 298.7 feet.

Drought Impact Sectors

Public Water Systems

The Maine CDC Drinking Water Program (DWP) has not received any new reports of water quantity issues from public water systems (PWS) since mid-August. The South Berwick Water District has issued emergency mandatory water use restrictions that are in effect until late fall.

Dry Wells

Twenty dry private wells have been reported in ten counties (Figure 4). At this time most reports are for dug wells, and the majority of all reported wells are for residential use. Maine homeowners with dry wells are encouraged to report this information to the Dry Well Survey: bit.ly/3iU6hvu.

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](#).

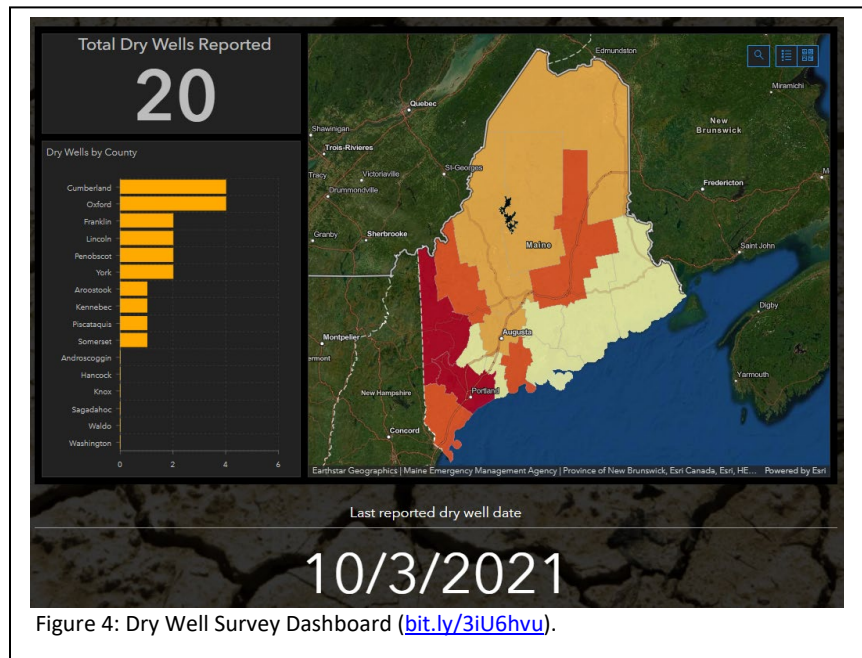


Figure 4: Dry Well Survey Dashboard (bit.ly/3iU6hvu).

Wildfire conditions

Since January 1st, we have had 625 wildfires in Maine covering 372.4 acres. In the last 30 days, 11 fires have burned 1.2 acres. We have not reported any fires in the last 7 days. The largest fire cause in the last 30 days has been equipment, accounting for 36% of our fires. As we move through early fall, it is important to understand that fires, and sometimes large damaging fires, are still a threat. Fall brings leaf litter, reopened canopies for solar heating, drier fuels through lower relative humidity, as well as higher winds. When viewing our [Daily Wildfire Danger Report](#), remember that it is a one day forecast which is calculated using minimal data from the previous weather. As always, we should expect a rise in fire activity when we progress through another prolonged drying trend and the fuels become more available for ignition.

Agricultural and Forest Conditions

Agricultural conditions are reasonably good as we approach the end of the growing season. Potato harvest looks good for quality and quantity, with no major water use conflicts noted. Other crops are looking good, with the diminishing drought reducing the irrigation workload on producers

A report by Joe Dembeck with the Somerset County Soil & Water Conservation District notes that “The heavy rain the other weekend saturated the soils and greatly raised stream levels in southern Somerset County but once above Bingham completely different story as little to none of that rain was received. Was in the woods above the Forks last Monday and unbelievably dry and very low stream levels.” This location of northern Somerset County overlaps the D2 “Severe Drought” designated area from the U.S. Drought Monitor.

The USDA Farm Service Agency has received a Secretarial Disaster Designation dated 8/13/2021 due to the drought situation. This designation opens up the Livestock Forage Disaster Program (LFP) and Emergency Assistance for Livestock, Honeybees, and Farm-Raised Fish Program (ELAP) for the

designated counties of Oxford, Franklin, Somerset, and Piscataquis. Additionally, Aroostook, Penobscot, Androscoggin, Cumberland, York, Kennebec, and Waldo Counties are included under the disaster designation as “contiguous counties.” Secretarial Disaster Designations immediately trigger the availability of low-interest FSA Emergency (EM) loans to eligible producers in all primary and contiguous counties. Applications for an EM loan will be accepted for 8 months from the date of the disaster designation. In addition the Emergency Loan Program and

Disaster Set-Aside Loan Program are now available for the designated counties as well as the contiguous counties. Refer to www.farmers.gov/protection-recovery/drought for more information.

Governor Janet Mills is encouraging small businesses in several Maine counties to apply for [newly available Economic Injury Disaster Loans](#) (EIDL) through the U.S. Small Business Administration (SBA). Farm-related entities in Androscoggin, Aroostook, Franklin, Kennebec, Oxford, Penobscot, Piscataquis, Somerset and Waldo counties that have suffered financial losses as a result of the drought that began in Maine on June 22nd are eligible for low-interest loans from the SBA.

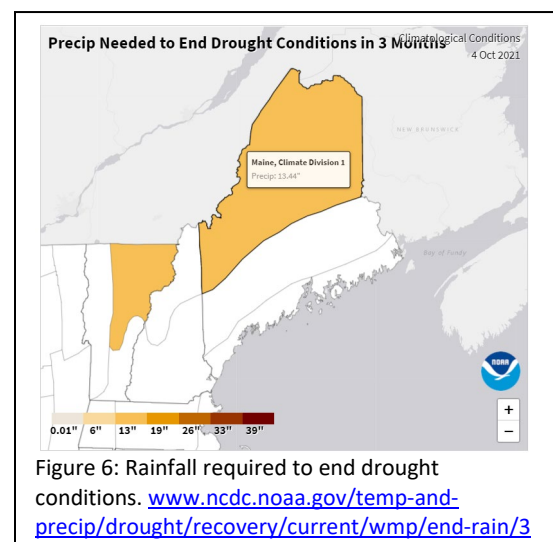
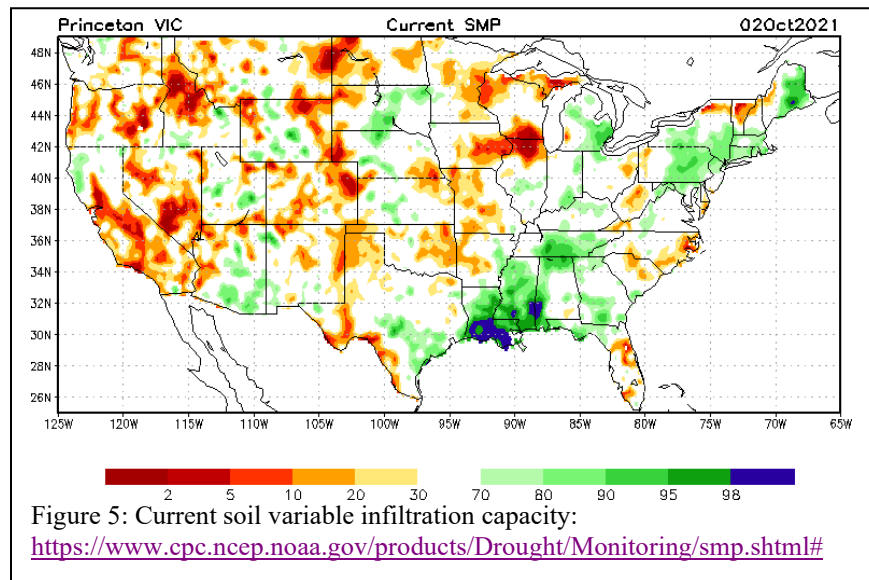
Drought Outlook

A substantial amount of precipitation is needed to end current dry conditions (Figure 6). In northern and western Maine, 13.44 inches of rainfall, or 130.65% of normal fall precipitation, is required within the next three months to return to normal conditions. *These drought conditions are now expected to improve in fall based on NOAA NCEP Climate Prediction Center models (go.usa.gov/3eZ73).* **The Task Force will continue to monitor abnormally dry conditions in the state until conditions broadly improve across Maine.**

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>
- Northeast DEWS: <http://nedews.nrcr.cornell.edu/>
- 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>
- USDA farm assistance and loan programs: <https://www.farmers.gov/protection-recovery/drought>
- CoCoRaHS local volunteer weather condition monitoring: <https://www.cocorahs.org/maps/conditionmonitoring/index.html>

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