

State of Maine Drought Task Force Report on Current Hydrologic Conditions September 9, 2021

Overview:

- Drought persists in Maine: 61.49% of the state is Abnormally Dry (10 counties), 53.43% in Moderate Drought (6 counties), 9.15% in severe drought (4 counties). Though a large area of the state is experiencing abnormally dry or drought conditions, 82% of Maine's population resides outside of the impacted area.
- Streamflows in southern and coastal areas are in the normal range or above, and the upper parts of the Androscoggin, Kennebec, Penobscot, and Aroostook basins are below normal.
- Precipitation deficits continue across much of central and northern Maine. Outlooks suggest a pattern favoring above normal rainfall through the third week of September.
- The USDA Farm Service Agency has received a Secretarial Disaster Designation dated 8/13/2021 due to the drought situation, which opens [a number of farm assistance and loan programs](#) for agricultural producers in Franklin and Somerset counties.
- Please direct private well owners facing drought-related issues to the [Dry Well Survey](#)

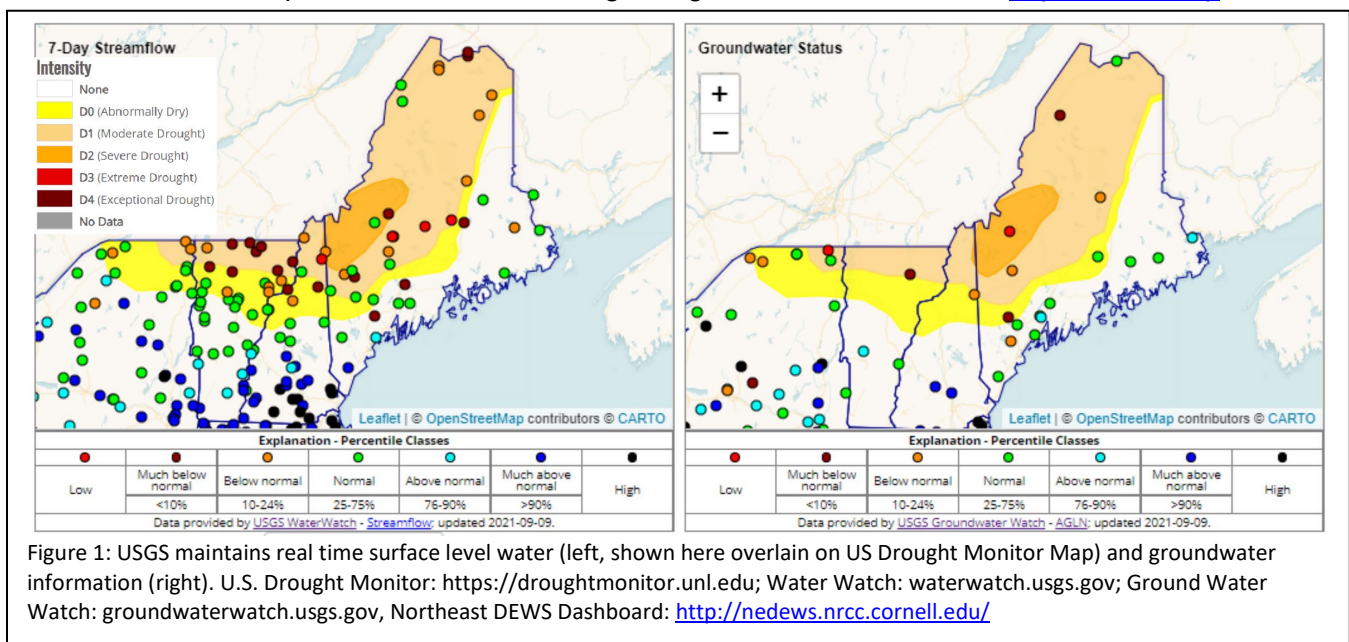


Figure 1: USGS maintains real time surface level water (left, shown here overlain on US Drought Monitor Map) and groundwater information (right). U.S. Drought Monitor: <https://droughtmonitor.unl.edu/>; Water Watch: waterwatch.usgs.gov; Ground Water Watch: groundwaterwatch.usgs.gov, Northeast DEWS Dashboard: <http://nedews.nrc.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, Kennebec and Penobscot River basins are showing below normal streamflow conditions overall, similar to previous briefings. This includes the Piscataquis River basin, which is consistently in the much below normal range (in the lowest 10% of all data collected for this day). The lower St. John River basin is below normal, but it appears recent rain in the headwaters may bring minor improvement. Southern, coastal and eastern basins have continued to benefit from recent storms, and are in the normal range.

Ground Water

With the change in statistics from August to September, some wells have shown apparent improvement, which is due to the fact that September typically has lower groundwater level conditions than August. This improvement in drought impacted areas is not due to recharge, which has been slow to respond to recent rain. Monitoring wells in Maine show normal conditions along the I-95 corridor into eastern Maine, with wells west of I-95 into the mountains and northern Maine showing below normal conditions.

Weather Outlook:

An active, more fall-like pattern will continue this week. On Thursday, another cold front will move through the region, bringing precipitation for most of the state. Over the weekend, dry conditions will return but temperatures are expected to be cooler than normal. Another chance for rainfall occurs around Tuesday or Wednesday, but this is unlikely to produce significant widespread precipitation.

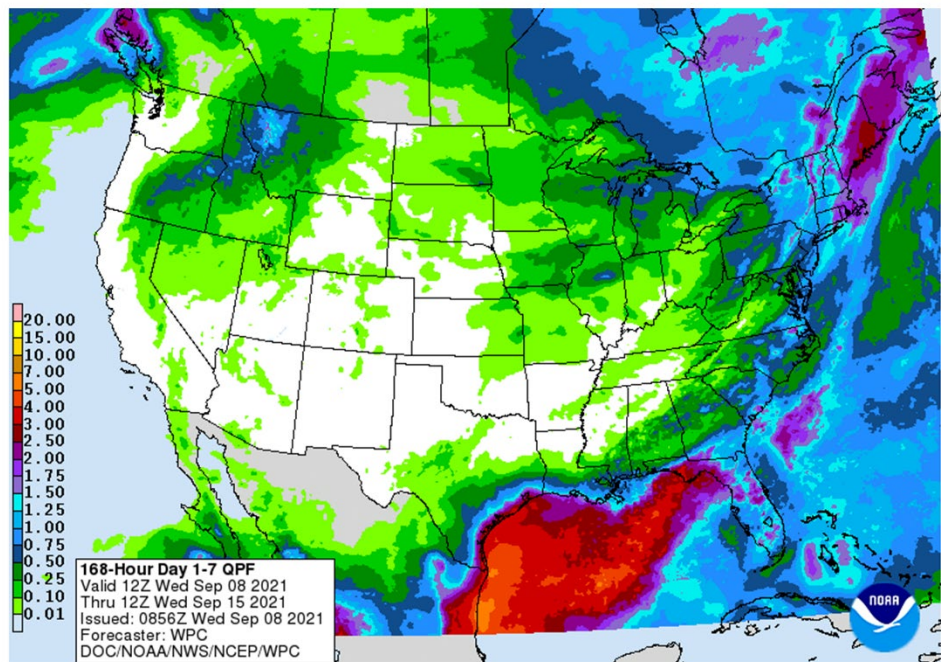


Figure 2: WPC 7-day Rainfall Forecast

The current 7 day rainfall forecast shows 0.75” to 2.5” for the state (Figure 2), with heavier rainfall expected in the eastern portion of the state. Although July was wetter than normal for several locations, August returned to a drier than normal pattern for most of the state, increasing precipitation deficits.

The 6-10 day outlook slightly favors above normal rainfall for the state through the third week of September (Figure 3). The temperature outlook shows no clear temperature trend for northern Maine, but slightly favors above normal temperatures for southern Maine. The current tropical outlook does not indicate any storms affecting the eastern U.S. for the next two weeks. However, the influence of tropical activity is a low confidence forecast and adds more uncertainty to the outlook forecast in general. Attention should continue to be paid to the tropical Atlantic where storms are currently developing and conditions favor above normal activity through the season.

Table 1: Precipitation departures		
Location	Departure, August 2021	Departure, year-to-date
Caribou	-1.15”	-2.71”
Bangor	-1.28”	-4.31”
Millinocket	-1.03”	-6.10”
Portland	-1.38”	-2.72”
Rangeley	-2.45”	-11.52”

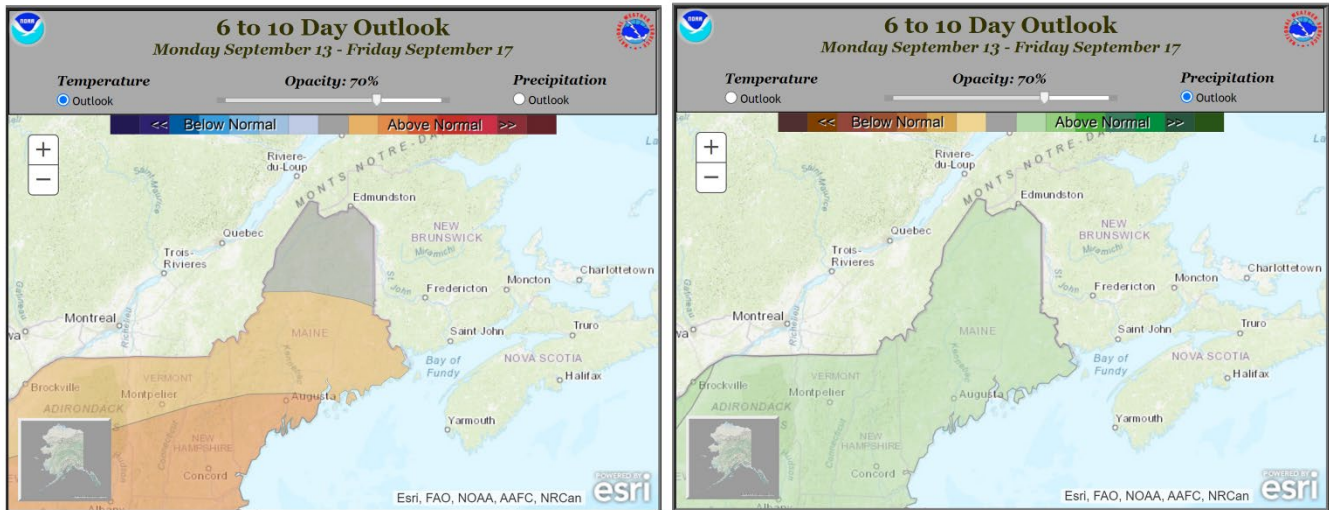


Figure 3: Climate Prediction Center 6 to 10 day temperature and precipitation outlooks
www.cpc.noaa.gov

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 264.13 feet, a decrease of 1” for the week. Flow from Sebago Lake remains at 270 cfs as Sappi continues to closely monitor conditions and consult with the resource agencies regarding increase in flow to maintain good dissolved oxygen concentrations downstream of the dam. As the days grow shorter it is increasingly unlikely that flows will need to increase.
- **Androscoggin River** – Storage conditions in the upper Androscoggin River basin are reported to be 57.2% full this week, which is 14.3% below the long-term average for this time of the year and stable since last reporting. Flows in the upper drainage remain stable.
- **Kennebec River** – Storage conditions in the upper Kennebec River basin are reported to be 69.2% full, just 6.1% below the long-term average for this time of the year and stable since storage conditions were last reported, two weeks ago.
- **Penobscot River** – As reported two weeks ago, total storage in the west branch of the Penobscot River remains below the long-term average for this time of the year and natural inflows remain below average and below the lowest inflows recorded. 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 in the Union River basin (at Graham Lake) are 0.83 feet higher than the long term average for this time of the year as a result of changed operating conditions.
- **St. Croix River** – The west branch of the St. Croix River is reported to be 69.7% full and flowing 234 cfs at West Grand Lake, and (representing flow from the east branch) is reportedly 74.7% full and flowing 678 cfs. The combined river flow at Grand Falls is 1,336 cfs and 1350 cfs at Baring.

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. Some PWSs have standing voluntary water conservation orders. The South Berwick Water District and the Stonington Water Company have issued emergency mandatory water use restrictions that are in effect into the fall.

Dry Wells

Eighteen dry private wells have been reported in eight counties (Figure 4). At this time most reports are for dug wells, and 89% 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](#).

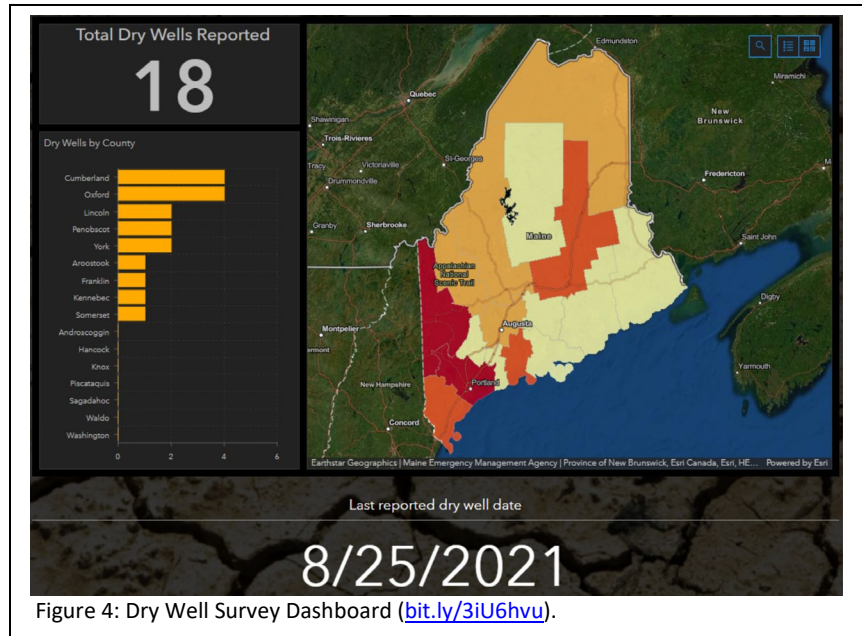


Figure 4: Dry Well Survey Dashboard (bit.ly/3iU6hvu).

Wildfire conditions

Since January 1st, we have had 612 wildfires in Maine (Figure 5). That number drops to 10 fires in the last two weeks. Recent rains have raised our fuel moisture which has mitigated our fire danger for the time being. All of our 12 fire weather zones continue to calculate fire indices in the low range with a very

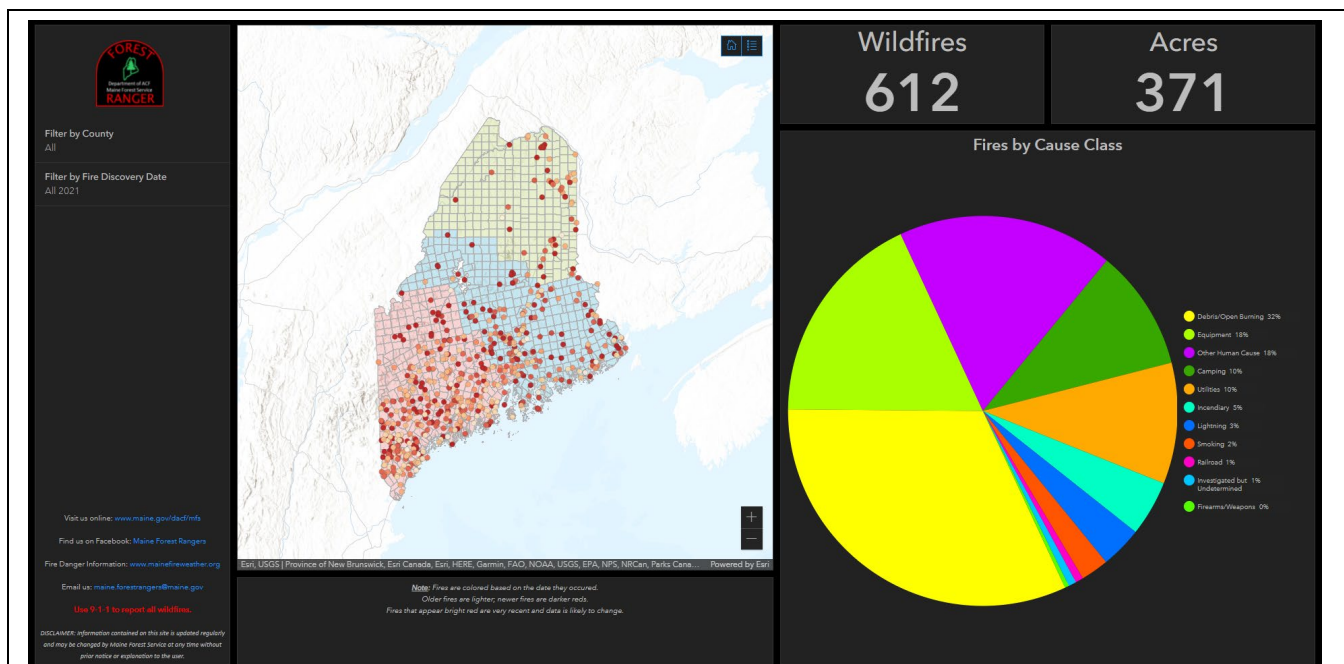


Figure 5: [Wildland Fire Occurrence Dashboard](#) from Maine Forest Service.

occasional moderate. 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

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 Franklin and Somerset. 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.

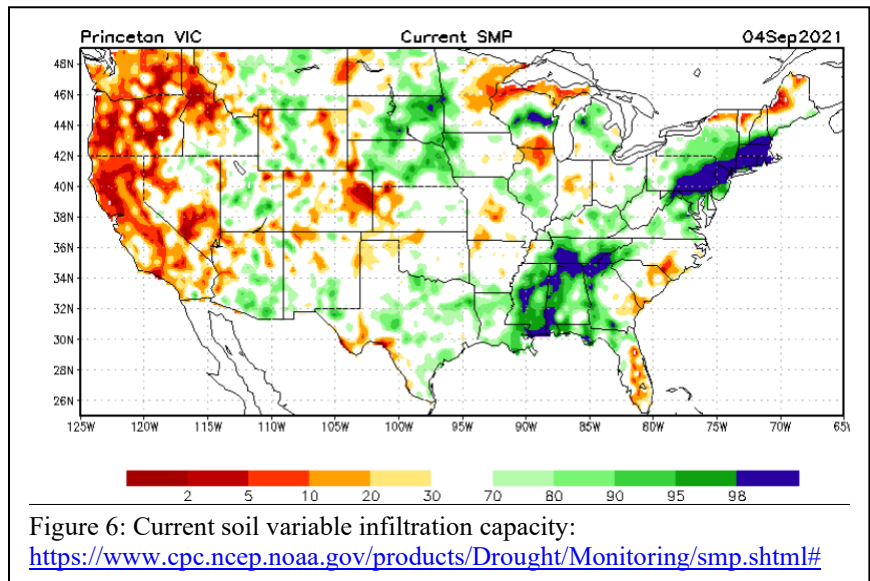


Figure 6: Current soil variable infiltration capacity: <https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp.shtml#>

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.

Producers are reporting excellent crop growth and quality in areas where drought conditions have diminished. Persistent showers have reduced the need for supplemental irrigation of crops in many areas. Severe drought in northwestern Maine continues to affect the growth of hay and corn (Figure 6).

Drought Outlook

A substantial amount of precipitation is needed to end current dry conditions (Figure 6). In northern and western Maine, 15.8 inches of rainfall, or 132.4% of normal summer/fall precipitation, is required within the next three months to return to normal conditions. *These drought conditions are now expected to persist into 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

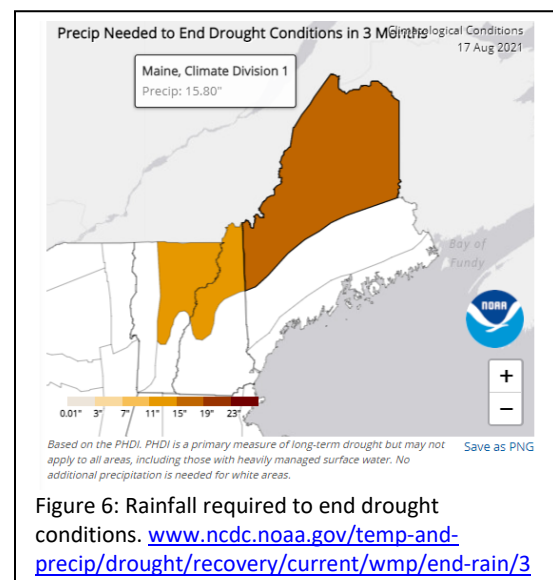


Figure 6: Rainfall required to end drought conditions. www.ncdc.noaa.gov/temp-and-precip/drought/recovery/current/wmp/end-rain/3

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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