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| NWS Form E-5 (04-2006) (PRES. BY NWS Instruction 10-924) | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE | HYDROLOGIC SERVICE AREA (HSA) |
| | | WFO Caribou, Maine REPORT FOR: MONTH YEAR October 2021 |
| MONTHLY REPORT OF HYDROLOGIC CONDITIONS | | SIGNATURE Joseph Hewitt, HPM |
| TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283 | | DATE November 20th, 2021 |
| <hr/> <i>When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).</i> | | |

An X inside this box indicates that no flooding occurred within this hydrologic service area.

October 2021

There was a flooding event that occurred during the month of October. This event occurred in coastal Hancock County, on the 31st, with rainfall of 3 to 4 inches in less than 12 hrs. Some roads were closed due to high water.

The rollercoaster ride continued as precipitation for the month of October was below normal for the most part with the exception of the Millinocket region, this area was slightly above normal. Quite a shift from September where precipitation was well above normal. At Bangor, 4.45 inches of rain was recorded for the month, which was 0.13 inches below normal. In Caribou, 2.48 inches of rain was recorded, which was 1.51 inches below normal. Houlton came in with 2.43 inches, which was 1.61 inches below normal. Surprisingly, Millinocket recorded 4.62 inches of rain, which was 0.07 inches above normal. There were two big rain events during the month of October. The events occurred on the 16th and 17th, and on the 30th into the 31st. The rain event on the 30th into the 31st produced the “lion’s share” of the monthly precipitation. The heaviest rainfall occurred from Houlton down to the coast with amounts of anywhere from 2.50 inches to 4 inches. Millinocket recorded a daily rainfall record on the 31st with 2.77 inches, which broke the previous record of 2.41 inches set in 1939. Bangor set a daily rainfall record on the 31st with 2.88 inches, which broke the previous record of 1.72 inches set in 1962.

October came in above normal for average monthly temperatures ranging about 5 degrees above normal. Caribou recorded an average monthly temperature of 49.9 degrees, which was the 2nd warmest October on record. The warmest October was 51.4 degrees in 2017. Bangor recorded an average monthly temperature of 53.1 degrees, which was the 4th warmest October on record. The warmest October for Bangor was 55.5 degrees set back in 1925. Houlton recorded an average monthly temperature of 49.9 degrees, which was 2nd warmest October. The warmest October in Houlton was back in 2017 with 51.3 degrees. It was the 3rd warmest October on record in Millinocket, with an average monthly temperature 51.3 degrees. The warmest October in Millinocket was back in 2017 with an average monthly temperature of 52.9 degrees. The warmest part of the month occurred between the 11th and 23rd. Caribou set a record high temperature of 77 degrees on the 13th. This broke the previous record of 73 degrees set in 1943. Houlton recorded a record high temperature of 76 degrees on the 13th. This broke the previous record of 75 degrees set in 1962.

Streamflows for October did drop off across much the region, with the St. John River Basin seeing the most dramatic decrease flows with the St. John River at Nine Mile Bridge and Fort Kent coming in with **below normal** flows. In September, the flows at Nine Mile Bridge and Fort Kent were at **normal** flows. The rest of the region saw near to **above normal** flows, with the Mattawamkeag River at Mattawamkeag **above normal**.

Groundwater levels did show some decline October, but most sites were near **normal** levels. The exception to this was Clayton Lake which came in **near record low** groundwater levels.

In regards to Drought monitoring, despite the low monthly precipitation and above normal temperatures, things remained status quo with 2/3rd of the region in the normal range, while NW Maine continue to see **Abnormally Dry** conditions. A contributing factor to this was partially due to the lack of significant evaporation during the month.

October Precipitation Totals for Select Locations with all units in inches

| Location | Total Precip | Normal Precipitation | Departure from Normal | Snowfall | Normal Snowfall | Departure from Normal Snowfall | Greatest Snow Depth |
|--------------|--------------|----------------------|-----------------------|----------|-----------------|--------------------------------|---------------------|
| Frenchville | 2.77 | 3.46 | -0.69 | NA | NA | NA | NA |
| Caribou | 2.48 | 3.99 | -1.51 | 0.0 | 1.7 | -1.7 | 0 |
| *Millinocket | 4.62 | 4.55 | +0.07 | NA | NA | NA | NA |
| Bangor | 4.45 | 4.58 | -0.13 | 0.0 | 0.6 | -0.6 | 0 |
| Houlton | 2.43 | 4.04 | -1.61 | NA | NA | NA | NA |

*Millinocket snowfall measured at wastewater treatment plant, not the ASOS site. Data might not be available every month.

October Stream Flows for Selected Rivers

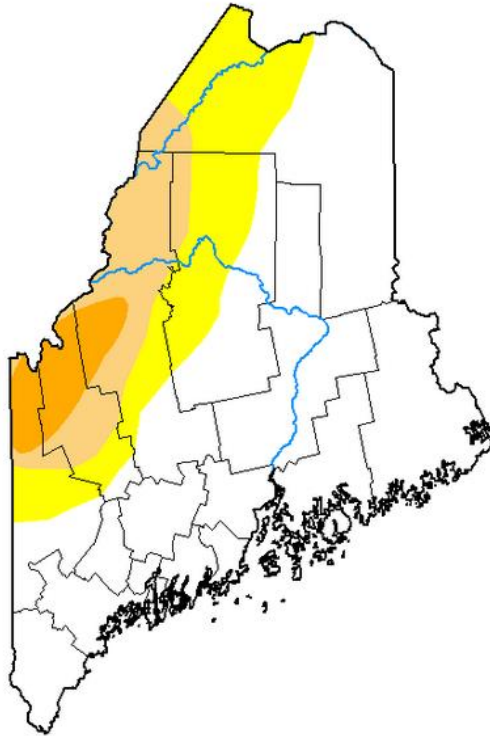
| River | Normal Flow (cfs) | Monthly Mean Flow (cfs) | Monthly Mean (in) | Percentile Class | Drainage (mi²) | Years of Record |
|-------------------------------------|--------------------------|--------------------------------|--------------------------|-------------------------|----------------------------------|------------------------|
| St. John River at Ninemile Bridge | 1040 – 2900 | 548 | 0.47 | Below Normal | 1341 | 71 |
| St. John River at Fort Kent | 3440 – 9160 | 2670 | 0.52 | Below Normal | 5929 | 95 |
| Aroostook River at Washburn | 684 - 2310 | 1580 | 1.10 | Normal | 1654 | 91 |
| Narraguagus River at Cherryfield | 136- 418 | 248 | 1.26 | Normal | 227 | 73 |
| E Br Penobscot River at Grindstone | 629 – 1860 | 1150 | 1.58 | Normal | 837 | 119 |
| Mattawamkeag nr Mattawamkeag | 517 - 2090 | 2960 | 2.10 | Above Normal | 1418 | 87 |
| Piscataquis River nr Dover-Foxcroft | 112 - 589 | 194 | 0.75 | Normal | 298 | 119 |

Groundwater Levels

| Station | Normal Range (ft) | Mean Water Level Below Land-sfc Datum (ft) | Departure from Month-end Median (ft) | Percentile Class | Years of Record |
|----------------|--------------------------|---|---|-------------------------|------------------------|
| Amherst | NA | NA | NA | NA | NA |
| Crooked Road | NA | NA | NA | NA | NA |
| Hadley Lakes | 6.64 – 5.44 | 5.63 | -0.37 | Normal | 36 |
| Kenduskeag | 25.80 – 22.90 | 23.55 | -1.25 | Normal | 43 |
| Calais | 3.71 – 1.46 | 2.43 | 0.04 | Normal | 22 |
| Millinocket | 11.20 – 9.83 | 10.80 | 0.10 | Normal | 27 |
| Clayton Lake | 15.70 – 14.50 | 16.62 | 1.42 | Low | 43 |
| Fort Kent | 12.00 – 9.72 | 11.69 | 0.59 | Normal | 43 |

Drought Conditions for October 2021

U.S. Drought Monitor Maine



October 5, 2021

(Released Thursday, Oct. 7, 2021)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|-------|--------|--------|-------|-------|------|
| Current | 66.54 | 33.46 | 15.50 | 4.85 | 0.00 | 0.00 |
| Last Week <small>09-28-2021</small> | 66.54 | 33.46 | 15.50 | 4.85 | 0.00 | 0.00 |
| 3 Months Ago <small>07-06-2021</small> | 0.00 | 100.00 | 70.44 | 20.85 | 0.00 | 0.00 |
| Start of Calendar Year <small>12-29-2020</small> | 91.54 | 8.46 | 0.00 | 0.00 | 0.00 | 0.00 |
| Start of Water Year <small>09-28-2021</small> | 66.54 | 33.46 | 15.50 | 4.85 | 0.00 | 0.00 |
| One Year Ago <small>10-06-2020</small> | 0.00 | 100.00 | 100.00 | 82.59 | 11.94 | 0.00 |

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

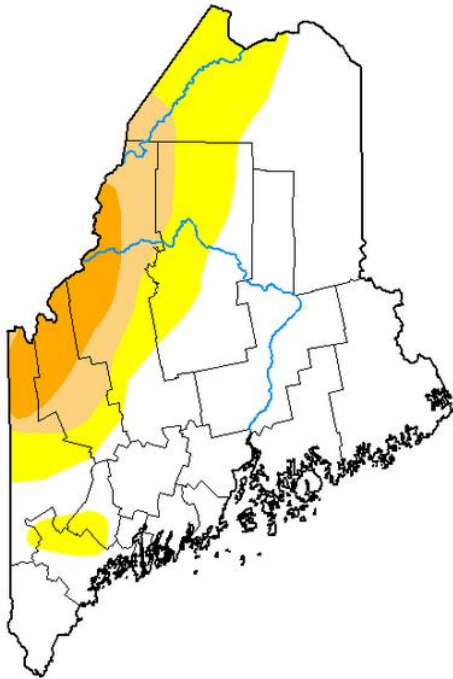
Author:

Brian Fuchs
National Drought Mitigation Center



droughtmonitor.unl.edu

U.S. Drought Monitor
Maine



October 26, 2021
(Released Thursday, Oct. 28, 2021)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|---|-------|--------|-------|-------|-------|------|
| Current | 64.76 | 35.24 | 15.50 | 6.56 | 0.00 | 0.00 |
| Last Week 10-19-2021 | 64.76 | 35.24 | 15.50 | 6.56 | 0.00 | 0.00 |
| 3 Months Ago 07-27-2021 | 28.33 | 71.67 | 32.72 | 8.42 | 0.00 | 0.00 |
| Start of Calendar Year 12-29-2020 | 91.54 | 8.46 | 0.00 | 0.00 | 0.00 | 0.00 |
| Start of Water Year 09-28-2021 | 66.54 | 33.46 | 15.50 | 4.85 | 0.00 | 0.00 |
| One Year Ago 10-27-2020 | 0.00 | 100.00 | 86.20 | 15.05 | 2.20 | 0.00 |

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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