

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
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		REPORT FOR: MONTH YEAR November 2021
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE James Sinko, HPM DATE December 12, 2021

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).

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

November 2021

Precipitation for the month of November ranged from 65-90% of average across the region as some areas across the northern basins such as Millinocket came in with 1.41 inches below normal for the month, while Bangor recorded 0.40 inches below normal. Bangor came 2.38 inches for the month, while Millinocket had 2.69 inches. Caribou came in with 0.70 inches below normal with a monthly total of 2.65 inches. There were no significant rain events, we did see rain events on the 11-12th, 14-15th, 18th, 22nd and 26-27th. Millinocket and Bangor had their heaviest precipitation days on Nov 12th with 0.93-0.97 inches falling while northern basins were below 0.5 inches. The more widespread heavier precipitation for most sites occurred on Nov 22nd with totals ranging from 0.68 inches in Millinocket to 0.84 inches in Houlton. Frenchville on both Nov 12th and Nov 22nd struggled to get rainfall with 0.40 and 0.26 inches, respectively.

The first significant measurable event occurred across the North on the 15-16th with greatest totals of 3 to 4 inches over the far Northeast portion of the region. The heaviest snowfall of the month occurred on the 26-27th with upwards to 7 inches across the far North, but also included lighter amounts over Central and Downeast areas. Caribou first measurable snow on 15th with 3.0 inches and the largest event occurring on the 26th with 5.7 inches. Caribou finished the month with 9.4 inches which was 1 inch below average. Bangor's only measurable event occurred on the 27th with 2.2 inches which means they finished 2.1 inches below monthly average.

The month finished 0.5-1.5° above average with the warmer departures across the North. This was a very linear month, with frequent cold frontal passages gradually lowering temps across the region through the month. The warmest temps in the upper 50s to lower 60s was recorded on the 9th, while the coldest in the upper single digits to upper teens recorded on the 29th. Caribou's average monthly temperature was 37.8°, which was 0.5° above normal. Houlton's average monthly temperature was 34.5°, which was 1.4° above normal. Millinocket average monthly temperature was 35.7°, which was 1.1° above average. Bangor's average monthly temperature was 37.8°. This was 0.5° above normal for the month.

Streamflows across the region continued to show improvements across the region with readings at near normal levels. Improvement from October on the northern streams to normal levels while southern rivers into the Downeast region were holding at normal such as the Narraguagus River at Cherryfield in Washington County. Frazil ice and some border ice began developing on the St. John & Aroostook Rivers towards the end of the month. Data for the Aroostook River at Washburn is unavailable due to icing.

Wells across eastern and northern Maine reported normal levels with Clayton Lake the only exception running low. Generally, similar to October but noticeable improvement this month was Kenduskeag with mean water level below land-sfc

In regards to Drought monitoring, we continued to hold status quo from the beginning of the month to the end of the month. Towards the end of the month the ground begin to freeze across northern areas with not much water making it into the soils. Much of Eastern & Northeastern Maine remained out of drought conditions. Moosehead Lakes region into the North Woods and headwaters of the St. John River remained at Abnormally Dry (D0) / **Moderate Drought (D1)**, there remains a very small **Severe (D2)** area in Northern Somerset count along the Quebec border.

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	1.68	2.58	-0.90	NA	NA	NA	NA
Caribou	2.65	3.35	-0.70	9.4	10.4	-1.0	6
Houlton	2.38	3.61	-1.23	NA	NA	NA	NA
*Millinocket	2.69	4.10	-1.41	1.0	NA	NA	0
Bangor	3.44	3.84	-0.40	2.2	4.3	-2.1	2

*Millinocket snowfall measured at wastewater treatment plant, not the ASOS site. No departure data is available.

November Stream Flows for Selected Rivers

River	Normal Flow (cfs)	Monthly Mean Flow (cfs)	Monthly Mean (in)	Percentile Class	Drainage (mi ²)	Years of Record
St. John River at Ninemile Bridge	NA	NA	NA	NA	1341	70
St. John River at Fort Kent	5440 – 12200	7130	1.34	Normal	5929	95
Aroostook River at Washburn	NA	NA	NA	NA	1654	90
Narraguagus River at Cherryfield	322 – 846	825	4.05	Normal	227	73
E Br Penobscot River at Grindstone	NA	NA	NA	NA	837	118

Mattawamkeag nr Mattawamkeag	1550 – 4190	3090	2.43	Normal	1418	87
Piscataquis River nr Dover- Foxcroft	342 – 903	708	2.65	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	30
Crooked Road	NA	NA	NA	NA	15
Hadley Lakes	6.01 – 4.51	5.27	0.10	Normal	36
Kenduskeag	25.80 – 20.90	21.47	-1.83	Normal	43
Calais	2.03 – 0.48	0.56	-0.46	Normal	22
Millinocket	10.90 – 9.38	10.10	-0.30	Normal	27
Clayton Lake	15.00 – 13.80	15.77	1.27	Low	43
Fort Kent	11.60 – 9.27	11.42	1.02	Normal	43

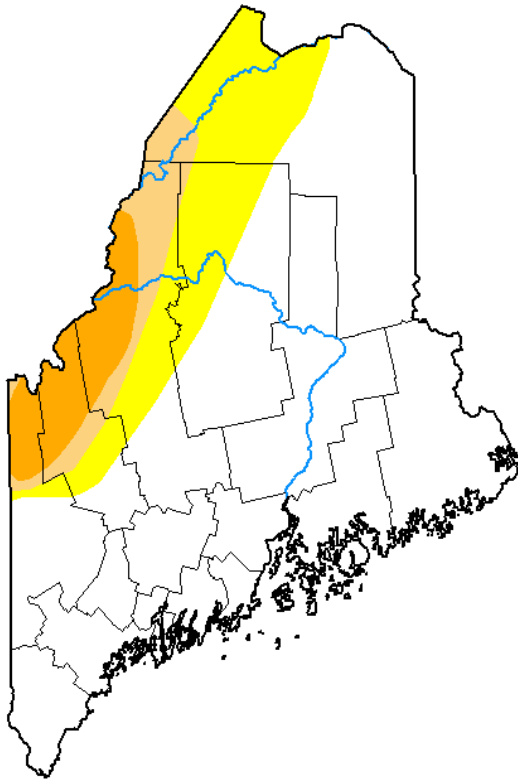
Flow or Water Level	Percentile Range	Explanation
Record Low	0 th	The monthly mean streamflow or median water level during this month is the lowest ever recorded during the period of record for this site.
Very Low	0 th to 10 th	The monthly mean streamflow or median water level during this month is less than the 10 th percentile when compared to all of the months during the period of record for this site.
Low	10 th to 25 th	The monthly mean streamflow or median water level during this month is between the 10 th and 25 th percentiles when compared to all of the months during the period of record for this site.
Normal	25 th to 75 th	The monthly mean streamflow or median water level during this month is between the 25 th and 75 th percentiles when compared to all of the months during the period of record for this site.
High	75 th to 90 th	The monthly mean streamflow or median water level during this month is between the 75 th and 90 th percentiles when compared to all of the months during the period of record for this site.
Very High	90 th to 100 th	The monthly mean streamflow or median water level during this month is greater than the 90 th percentile when compared to all of the months during the period of record for this site.
Record High	100 th	The monthly mean streamflow or median water level during this month is the highest ever recorded during the period of record for this site.

Non-Routine Hydrologic Products November 2021 WFO Caribou, ME

WMO Identifier	Date	Issuance	Name of Product

Drought Conditions for November 2021

U.S. Drought Monitor Maine



November 2, 2021

(Released Thursday, Nov. 4, 2021)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	72.42	27.58	11.82	6.56	0.00	0.00
Last Week 10-26-2021	64.76	35.24	15.50	6.56	0.00	0.00
3 Months Ago 08-03-2021	32.12	67.88	47.03	9.15	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 11-03-2020	0.00	100.00	60.42	10.81	1.55	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>

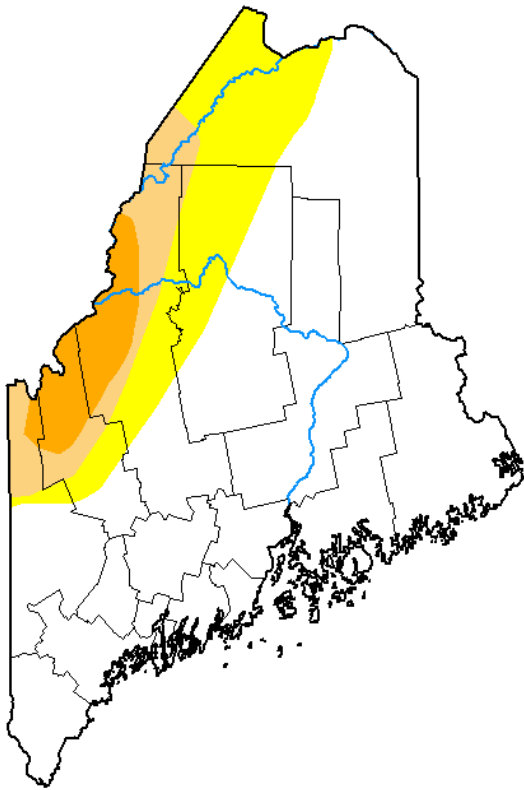
Author:

Adam Hartman
NOAA/NWS/NCEP/CPC



droughtmonitor.unl.edu

U.S. Drought Monitor Maine



November 23, 2021
(Released Wednesday, Nov. 24, 2021)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	72.42	27.58	11.82	5.32	0.00	0.00
Last Week 11-16-2021	72.42	27.58	11.82	5.32	0.00	0.00
3 Months Ago 08-24-2021	26.17	73.83	43.77	9.15	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 11-24-2020	18.53	81.47	60.42	10.81	1.55	0.00

Intensity:

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

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Author:

Richard Heim
NCEI/NOAA



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