

<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> <b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b> <b>NATIONAL WEATHER SERVICE</b>	HYDROLOGIC SERVICE AREA (HSA)
		<b>WFO Caribou, Maine</b> REPORT FOR: MONTH                      YEAR <b>August                      2021</b>
<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>		SIGNATURE <b>Joseph Hewitt, HPM</b>
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		DATE <b>October 7th, 2021</b>

*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.

### August 2021

There was no flooding. However there were a couple of thunderstorm events during the month led to some high water and culverts filling up. There were a couple of events in August where heavy rainfall caused some ponding of water in poor drainage areas, but nothing significant. Flood Advisories were issued for these rain events which included some thunderstorms. The bigger story for August continued to be below normal precipitation and expanding drought conditions. More on this below.

Precipitation for the month of August was below normal for the entire region. At Bangor, 1.78 inches of rain was recorded for the month, which was 1.28 inches below normal. A big difference from 7.67" recorded in July. Caribou came in 2.46 inches of rain for the month, which was 1.15 inches below normal. Houlton recorded 3.49 inches of rain, which was 0.03 inches below normal. Millinocket recorded 2.77 inches of rain, which was 1.03 inches below normal. The biggest rain event occurred on August 23<sup>rd</sup> and 24<sup>th</sup> due to the remnants of Tropical Storm Henri, which brought anywhere from 0.77 inches in Bangor to around 2 inches in the Millinocket and Houlton areas. Houlton recorded 2.24 inches of rain in 48 hrs.

August came in above normal for average monthly temperatures with sites across the northern region seeing close to 5 degrees above normal, while Downeast areas came in around 2 degrees above normal. It was warmest August on record for Caribou and Houlton, the 2<sup>nd</sup> warmest August on record for Millinocket, and the 7<sup>th</sup> warmest August for Bangor. The warmest Augusts on record for Caribou and Houlton, prior to this August, were 2018 with 68.9 degrees, and 1973 with 67.9 degrees respectively. Another item of note is that Caribou recorded 17 days with 80 degrees or warmer during the month, which included 3 days of 90+ degrees. The 90+ degree temperatures across many parts of the region occurred on the 12<sup>th</sup>, 19<sup>th</sup>, and 26<sup>th</sup>.

There was not much improvement in regard to the streamflows, especially across the northern and western river basins where flows range from **below normal** to **much below normal**. The St. John River at Nine Mile Bridge dropped from normal to **below normal** for August. Otherwise, streamflows remained near **normal** for Narraguagus River at Cherryfield, and the Mattawamkeag River at Mattawamkeag.

Groundwater levels were pretty much changed from where they were in July with the Downeast region including the lower Penobscot Valley, which remained at **normal** levels. The caveat to this was Calais with groundwater levels **above normal**. Groundwater levels were below normal to record low levels across northern and western areas. Millinocket improved to **below normal levels**. Clayton Lake had **record low levels**. Fort Kent remained at near **normal** levels for August.

In regards to Drought monitoring, the drought expanded across the region during the first week August with **Moderate Drought** expanding into portions of Northern and Northwest Maine, and all of Piscataquis County. Improvements were made for Hancock County to bring that region into **normal** conditions. The rest of the region remained the same.

However, by the last week of August, conditions did deteriorate with **Moderate Drought** expanding into NE Aroostook County and N Penobscot County. **Abnormally Dry** conditions was shifted further east inot SE Aroostook County and Central Penobscot County.

#### August 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	1.57	3.77	-2.20	NA	NA	NA	NA
Caribou	2.46	3.61	-1.15	0.0	0.0	0	0
*Millinocket	2.77	3.80	-1.03	NA	NA	NA	NA
**Bangor	1.78	3.06	-1.28	0.0	0	0.0	0
Houlton	3.49	3.52	-0.03	NA	NA	NA	NA

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

### August Stream Flows for Selected Rivers

<b>River</b>	<b>Normal Flow (cfs)</b>	<b>Monthly Mean Flow (cfs)</b>	<b>Monthly Mean (in)</b>	<b>Percentile Class</b>	<b>Drainage (mi<sup>2</sup>)</b>	<b>Years of Record</b>
St. John River at Ninemile Bridge	420 – 2020	316	0.27	Below Normal	1341	70
St. John River at Fort Kent	2250 – 5920	1320	0.26	Much Below Normal	5929	94
Aroostook River at Washburn	427 - 1240	320	0.22	Below Normal	1654	91
Narraguagus River at Cherryfield	61.8 – 182	98	0.50	Normal	227	73
E Br Penobscot River at Grindstone	551 - 1040	401	0.55	Much Below Normal	837	118
Mattawamkeag nr Mattawamkeag	258 – 961	416	0.34	Normal	1418	86
Piscataquis River nr Dover-Foxcroft	60.4 – 199	15.5	0.06	Much Below Normal	298	118

### Groundwater Levels

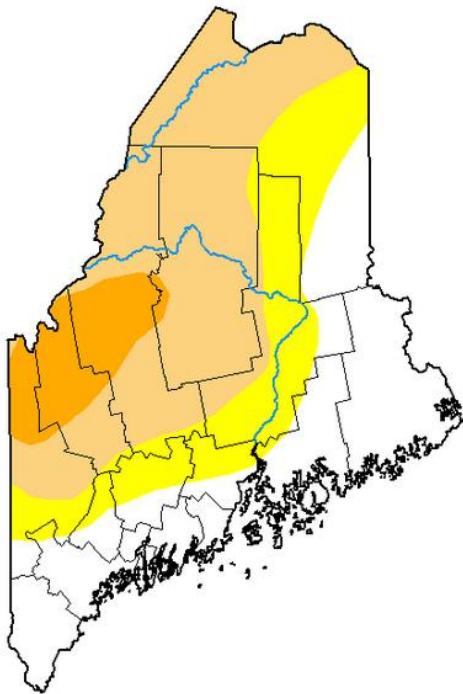
<b>Station</b>	<b>Normal Range (ft)</b>	<b>Mean Water Level Below Land-sfc Datum (ft)</b>	<b>Departure from Month-end Median (ft)</b>	<b>Percentile Class</b>	<b>Years of Record</b>
Amherst	25.20 – 22.10	23.71	0.41	Normal	31
Crooked Road	NA	NA	NA	NA	NA
Hadley Lakes	5.89 – 5.46	5.71	-0.02	Normal	35
Kenduskeag	24.30 – 23.20	23.52	-0.28	Normal	43
Calais	3.64 – 2.26	1.94	-0.89	Above Normal	21
Millinocket	10.50 – 9.49	10.78	0.78	Below Normal	27
Clayton Lake	16.40 – 15.30	16.81	1.01	Low	42
Fort Kent	11.10 – 8.51	10.77	0.98	Normal	43





# Drought Conditions for August 2021

## U.S. Drought Monitor Maine



**August 3, 2021**  
(Released Thursday, Aug. 5, 2021)  
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	32.12	67.88	47.03	9.15	0.00	0.00
<b>Last Week</b> 07-27-2021	28.33	71.67	32.72	8.42	0.00	0.00
<b>3 Months Ago</b> 05-04-2021	45.31	54.69	0.00	0.00	0.00	0.00
<b>Start of Calendar Year</b> 12-29-2020	91.54	8.46	0.00	0.00	0.00	0.00
<b>Start of Water Year</b> 09-29-2020	0.00	100.00	100.00	83.86	7.28	0.00
<b>One Year Ago</b> 08-04-2020	10.78	89.22	77.76	6.33	0.00	0.00

Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate 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:

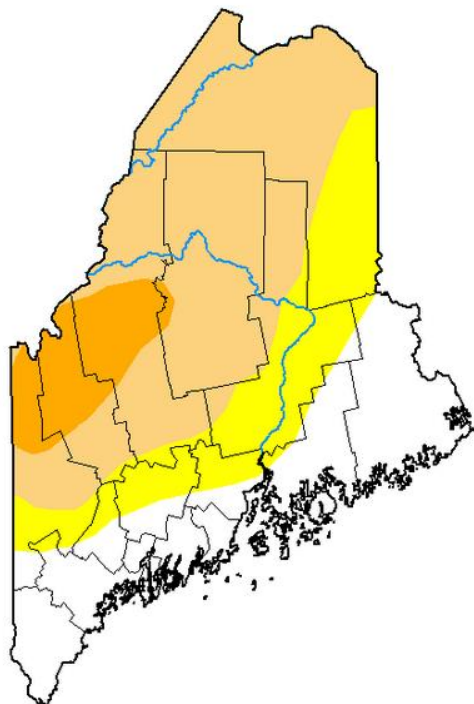
Richard Tinker  
CPC/NOAA/NWS/NCEP



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

# U.S. Drought Monitor Maine

**August 31, 2021**  
(Released Thursday, Sep. 2, 2021)  
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	26.17	73.83	53.43	9.15	0.00	0.00
<b>Last Week</b> <small>08-24-2021</small>	26.17	73.83	43.77	9.15	0.00	0.00
<b>3 Months Ago</b> <small>06-01-2021</small>	34.65	65.35	0.00	0.00	0.00	0.00
<b>Start of Calendar Year</b> <small>12-29-2020</small>	91.54	8.46	0.00	0.00	0.00	0.00
<b>Start of Water Year</b> <small>09-29-2020</small>	0.00	100.00	100.00	83.86	7.28	0.00
<b>One Year Ago</b> <small>09-01-2020</small>	0.00	100.00	79.48	32.70	0.00	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>

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