

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 September 2020
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE Joseph Hewitt, HPM DATE October 29th, 2020

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.

September 2020

The very warm conditions continued into September with temperatures averaging from 1 to 2 degrees above normal and very dry.

Rainfall was well below normal across the region with a few sites reporting over 3 inches below normal for the month of September. Caribou came in with 1.15 inches for the month, which was 2.17 inches below normal. This made it the second driest September on record, with September 1968 being the driest September with only 0.86 inches of rainfall. Houlton came in with only 0.50 inches, which was 2.90 inches below normal, which made it the driest September on record. The previous record was 0.66 inches set in 1950. Bangor recorded only 0.28 inches of rainfall which broke the record of 0.64 inches for September, set back in 1929. Millinocket recorded 0.88 inches of rainfall for the month, which was second driest September. The driest September on record was 0.68 inches set back in 1968.

Temperatures for the month of September finished 1 to 2 degrees above normal with Caribou recording an average temperature for the month of 57.1 degrees. This was the 14th warmest September on record. The warmest September was back in 1999, with an average temperature of 67.1 degrees. Temperatures turned cooler by mid to late September, which had 4 to 5 consecutive days of temperatures near to below freezing. This ended the growing season for most of the region with the exception of Downeast Maine. Interesting enough, the last 5 days of the month end above normal with Caribou seeing a record high temperature of 83 degrees on the 29th. Caribou also recorded a 66 degree low temperature on the same date. The 66 degree low temperature was the warmest such low late in the season.

Streamflows across the region were much below normal for September. Just about all of river gages across the region continued to record near Record or Record Low flows. Washburn(WSHM1) and Dover-Foxcroft(DOVM1) recorded Record Low flows in September, with a few sites such as Washburn reporting an All Time Record Low flow.

Many wells across the region recorded below to much below normal levels, with a couple of sites such as Kenduskeag recorded much below normal groundwater levels. Some wells across parts of Northern

Maine reported near normal levels such as Calais and Fort Kent. Millinocket came in with levels in the Low category, which is the lowest recorded for this time period. This is a big concern, especially if the region does not receive some much needed rainfall as some of the shallower wells could dry up.

In regards to Drought monitoring, the region saw conditions at **Moderate Drought(D1)** to **Severe Drought(D2)** across the region with the severe conditions across Northern Maine and the Central Highlands. By the end of the month, the **Severe Drought(D2)** extended further south and west. Northeast Aroostook County saw conditions worsen to **Extreme Drought(D3)**.

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	1.25	3.52	-2.27	NA	NA	NA	NA
Caribou	1.15	3.32	-2.17	0.0	0.0	0.0	0
Houlton	0.50	3.40	-2.90	NA	NA	NA	NA
*Millinocket	0.88	3.72	-2.84	NA	NA	NA	NA
Bangor	0.28	3.83	-3.55	0.0	0.0	0.0	0

*Millinocket snowfall measured at wastewater treatment plant, not the ASOS site. Data was not available at this time.

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	421 – 1871	294	0.24	Below Normal	1341	69
St. John River at Fort Kent	2340 - 6060	1270	0.24	Much Below Normal	5929	93
Aroostook River at Washburn	418 - 1350	96.1	0.06	Low	1654	90
Narraguagus River at Cherryfield	59.3 – 208	39.8	0.20	Much Below Normal	227	72
E Br Penobscot River at Grindstone	543 – 1090	443	0.59	Below Normal	837	117
Mattawamkeag nr Mattawamkeag	205 - 922	47.2	0.04	Much Below Normal	1418	85
Piscataquis River nr Dover-Foxcroft	57.2 - 217	12.9	0.05	Low	298	117

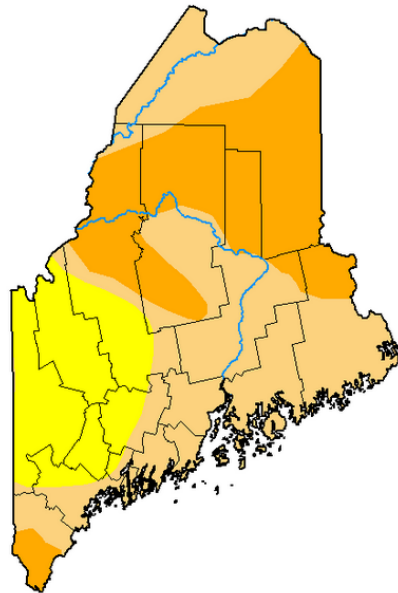
Groundwater Levels

Station	Normal Range (ft)	Mean Water Level Below Land-sfc Datum (ft)	Departure from Month-end Median (ft)	Percentile Class	Years of Record
Amherst	26.00 – 22.30	26.79	1.99	Below Normal	30
Crooked Road	NA	NA	NA	NA	15
Hadley Lakes	6.34 – 5.61	6.55	0.58	Below Normal	34
Kenduskeag	25.40 – 23.40	25.86	1.36	Much Below Normal	42
Calais	3.86 – 2.33	3.12	0.17	Normal	20
Millinocket	11.00 – 10.00	11.38	0.88	Low	26
Clayton Lake	16.30 – 15.00	16.82	0.72	Much Below Low	41
Fort Kent	11.80 – 9.48	11.30	0.70	Normal	42

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.

Drought Conditions for September

U.S. Drought Monitor Maine



September 1, 2020
(Released Thursday, Sep. 3, 2020)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	79.48	32.70	0.00	0.00
Last Week 08-25-2020	0.00	100.00	79.48	42.23	0.00	0.00
3 Months Ago 06-02-2020	92.26	7.74	0.00	0.00	0.00	0.00
Start of Calendar Year 12-31-2019	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year 10-01-2019	87.45	12.55	0.00	0.00	0.00	0.00
One Year Ago 09-02-2019	99.01	0.99	0.00	0.00	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>

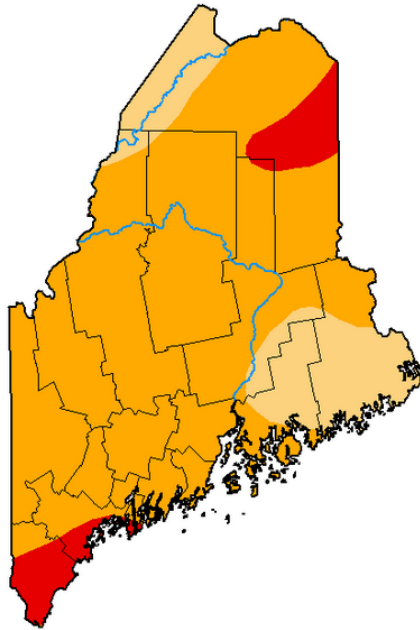
Author:

Richard Tinker
CPC/NOAA/NWS/NCEP



droughtmonitor.unl.edu

**U.S. Drought Monitor
Maine**



September 29, 2020

(Released Thursday, Oct. 1, 2020)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	83.86	7.28	0.00
Last Week 09-22-2020	0.00	100.00	100.00	76.76	6.52	0.00
3 Months Ago 06-30-2020	0.00	100.00	39.07	0.00	0.00	0.00
Start of Calendar Year 12-31-2019	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year 10-01-2019	87.45	12.55	0.00	0.00	0.00	0.00
One Year Ago 10-01-2019	87.45	12.55	0.00	0.00	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>

Author:

Brad Rippey
U. S. Department of Agriculture



droughtmonitor.unl.edu