

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 2019
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 16, 2019

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.

No major flooding was reported in September. There were two Urban and Small Stream Flood Advisories issued during the month for some minor issues with poor drainage and ditches filling up. The dates are listed in the table provided.

September came in with slightly below normal temperatures for the region. Temperatures ranged from 0.5 degrees to 1.5 degrees below normal. Frenchville came in at 1.7 degrees below normal for the month of September. The first widespread frost/freeze occurred on the mornings of the 18th and 19th affecting northern Maine. Many sites recorded lows in the upper 20s and lower 30s. A warmup followed rather quickly between the 20th and the 23rd where high temperatures for the month reached near 80 degrees in many locations. Houlton and Bangor came in with 80 degrees on the 22nd, while Caribou and Millinocket recorded 81 degrees for the same date.

Precipitation varied widely across the HSA with the northeastern and Downeast areas seeing amounts above normal, while from Bangor to Millinocket and across Northwest areas, rainfall was below normal for the month of September. Bangor recorded 2.81 inches for the month, which was 1.02 inches below normal for September. This is quite a contrast from Bangor's August precipitation of 7.54 inches. Caribou came in with 4.87 inches of rainfall, which was 1.55 inches **above** normal. Tropical Storm Dorian brought some heavy rainfall to portions of the region with up to 3 inches in Washington County. A heavy rain event occurred on September 23rd and the 24th with the HSA receiving at or above one inch of rainfall.

Streamflows across the HSA were near normal across much of HSA for September. The St. John River and Fish River in NW Maine had monthly streamflows below normal as did the Grand Lake Stream in Washington County.

Groundwater conditions were near normal levels across Northern Maine and the Maine Central Highlands. Groundwater levels across the Downeast region were reported to be from above to much above normal. Calais, in Washington County came in with very high water levels.

In regards to Drought Monitoring, conditions for the entire HSA continued in the normal range. Due to shorter daylight hours and a stretch of freezing temperatures during the mornings of the 3rd week in September, evaporation rates started dropping off. The program was ended on September 18th.

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	3.09	3.52	-0.43	NA	NA	NA	NA
Caribou	4.87	3.32	+1.55	NA	NA	NA	NA
Houlton	3.51	3.40	+0.11	NA	NA	NA	NA
*Millinocket	3.26	3.72	-0.46	NA	NA	NA	NA
Bangor	2.81	3.93	-1.02	NA	NA	NA	NA

*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	415 – 1880	1120	0.93	Normal	1341	68
St. John River below Fish River at Fort Kent	2310 – 6070	3400	0.64	Normal	5929	92
Aroostook River at Washburn	418 - 1360	626	0.42	Normal	1654	89
Narraguagus River at Cherryfield	59.1 - 209	159	0.78	Normal	227	71
E Br Penobscot River at Grindstone	542 – 1100	548	0.73	Normal	837	116
Mattawamkeag River near Mattawamkeag	204 – 922	790	0.62	Normal	1418	84
Piscataquis River nr Dover-Foxcroft	57 – 220	85.8	0.32	Normal	298	116

Groundwater Levels

Station	Normal Range (ft)	Mean Water Level Below	Departure from Month-end Median (ft)	Percentile Class	Years of Record
---------	-------------------	------------------------	--------------------------------------	------------------	-----------------

		Land-sfc Datum (ft)			
McFarland Hill	NA	NA	NA	NA	15
Amherst	26.10-22.60	18.37	-6.63	Much Above Normal	29
Hadley Lakes	6.34 – 5.64	5.47	-0.55	Above Normal	33
Kenduskeag	25.40 – 23.70	22.10	-2.41	Much Above Normal	41
Calais	3.91 – 2.52	0.31	-2.72	High	19
Millinocket	11.00 – 10.00	10.85	0.34	Normal	25
Clayton Lake	16.30 – 14.90	15.84	-0.27	Normal	40
Fort Kent	11.80 – 9.46	9.72	-0.88	Normal	41

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
September 2019
WFO Caribou, ME**

PIL	TIME (UTC)	Date	Description
PWMFLSCAR	1605	9/7/19	Urban and Small Stream Flood Advisory

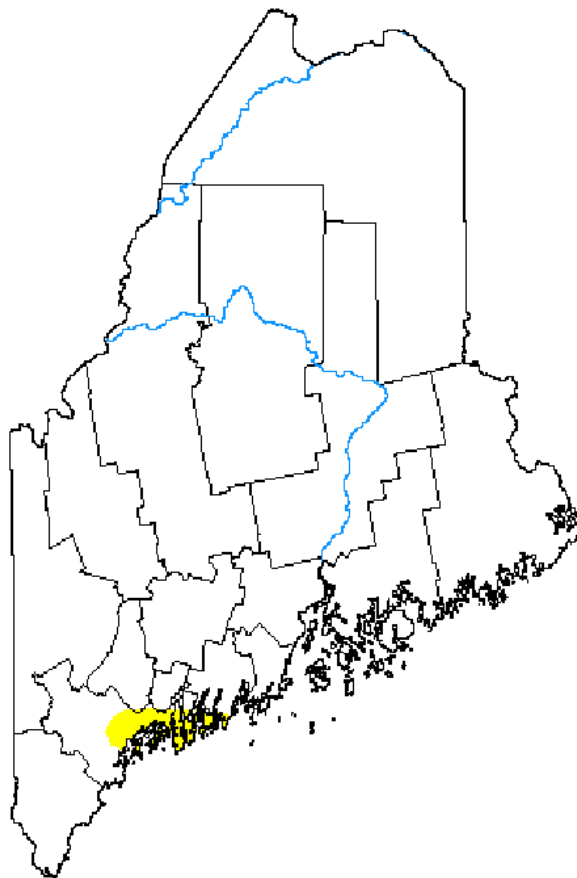
Drought Conditions for September 2019

U.S. Drought Monitor Maine

September 3, 2019
(Released Thursday, Sep. 5, 2019)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	99.01	0.99	0.00	0.00	0.00	0.00
Last Week <i>05-27-2019</i>	92.76	7.24	0.00	0.00	0.00	0.00
3 Months Ago <i>06-04-2019</i>	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year <i>01-01-2019</i>	94.48	5.52	0.00	0.00	0.00	0.00
Start of Water Year <i>09-26-2018</i>	41.90	58.10	4.89	0.00	0.00	0.00
One Year Ago <i>09-04-2018</i>	46.45	53.55	9.75	1.88	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. See accompanying text summary for forecast statements.

Author:

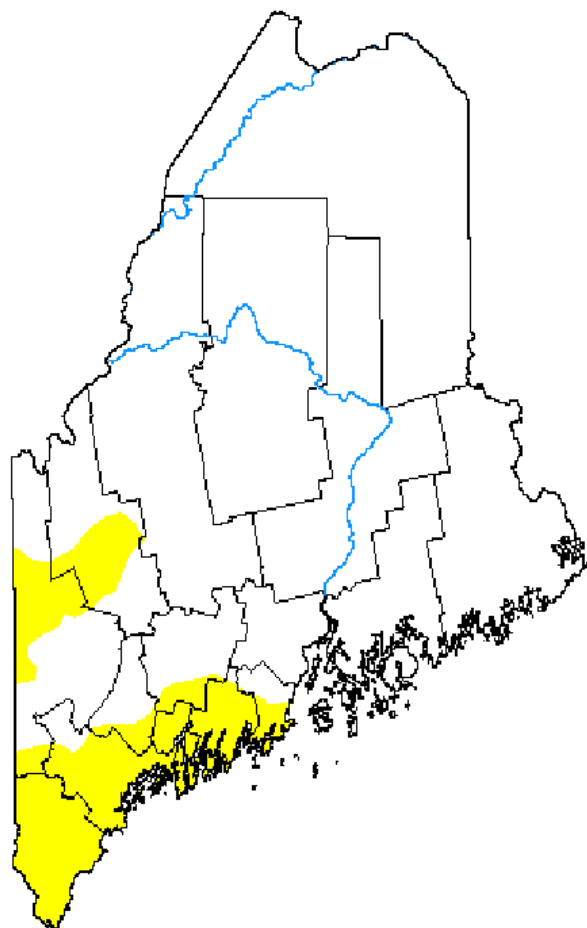
David Miskus
NOAA/NWS/NCEP/CPC



droughtmonitor.unl.edu

U.S. Drought Monitor Maine

September 24, 2019
(Released Thursday, Sep. 26, 2019)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	87.53	12.47	0.00	0.00	0.00	0.00
Last Week <small>09-17-2019</small>	89.85	10.15	0.00	0.00	0.00	0.00
3 Months Ago <small>06-25-2019</small>	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year <small>01-01-2019</small>	94.48	5.52	0.00	0.00	0.00	0.00
Start of Water Year <small>09-25-2018</small>	41.90	58.10	4.89	0.00	0.00	0.00
One Year Ago <small>09-25-2018</small>	41.90	58.10	4.89	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. See accompanying text summary for forecast statements.

Author:

Eric Luebehusen
U.S. Department of Agriculture



droughtmonitor.unl.edu

