

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  
**March            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  
**April 30th, 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.

**March 2019**

No flooding occurred during the month of March.

March came in colder than normal with one significant snow events during the month. This event came on the 4th with most of Northern Maine seeing 2 to 6 inches of snow, while 10 to 16 inches of snow fell across coastal Hancock and Washington Counties.

Ice remained in place on the central and northern Maine basins, while the Penobscot Basin had seen ice breaking up south of West Eenfield down to the Penobscot Bay. Ice thickness on Piscataquis River was measured to be 8 to 12 inches thick, with some open spots east of Dover-Foxcroft. The East Branch of the Penobscot River near Grindstone had ice thickness holding at 18 inches, with some openings downstream from the river gauge. Ice thicknesses varied across the northern rivers such as the Aroostook and St. John Rivers due to the deep snow cover helping to act as an insulator. Ice was thickest on the Aroostook River with measurements of 2 feet. The St. John River ice thickness varied from 8 to 14 inches. The Allagash River had ice thicknesses around 18 inches. Ice thicknesses were near normal.

Ice jams remained in place on the Aroostook River from Washburn to Crouseville and near the Caribou-Fort Fairfield town line. Ice jams remained in place on the St. John River from the town of St. John to St. Francis, and near Fort Kent down to the Madawaska-Grand Isle line. Ice jams remained in place on the Piscataqujs River in Dover-Foxcroft and on the Pleasant River near Milo.

Temperatures for the month of March were below normal across the HSA. Bangor came in 2.1 degrees below normal for the month, while Caribou averaged 1.5 degrees below normal. The first half of the month started out cold with temperatures across the region running below normal. The second half of the saw a variation in temperatures with the start of the second of the month running above normal, but then dropping back below normal heading toward the first day Spring. The last few days in March ended up averaging above normal. The warmest temperatures of the month came on the last day on the month, as Caribou recorded a high temperature of 56 degrees on the 31<sup>st</sup>. Bangor and Millinocket both recorded high temperatures of 60 degrees on the 31<sup>st</sup>.

Precipitation was well below normal across the HSA for the month of March. Caribou recorded 1.72 inches of precipitation which was 0.79 inches below normal, while Bangor came in with 1.94 inches of precipitation, which was 1.44 inches below normal.

March came in well below normal for snowfall across the region. Caribou recorded only 7 inches of snow for the month, which was 11.3 inches below normal. This ranked as the 6<sup>th</sup> least snowiest March on record in Caribou. Bangor came in with 6.7 inches, which was 5.0 inches below normal for March. This is sharp contrast to March 2018, when 33 inches of snow was observed. The mean snow depth at Caribou was 38.9 inches, which was well above the 30 year average of 15.8 inches. It ranked as the 2<sup>nd</sup> highest mean snow depth for the month of March, behind 1955, when there was a mean snow depth of 39.6 inches. The maximum snow depth in Caribou during the month of March was 45 inches. By the end of March, a total of 154 inches of snow was observed. This ranked at the 4<sup>th</sup> snowiest winter on record at Caribou.

Streamflows across much of the HSA were near normal for March.

Groundwater conditions remained at near to slightly above normal levels for March.

In regards to Drought Monitoring, condition for the entire HSA remained in normal range.

#### 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	1.50	1.52	+0.02	NA	NA	NA	NA
Caribou	1.72	2.51	-0.79	7.0	18.3	-11.3	45
Houlton	1.89	2.59	-0.70	NA	NA	NA	NA
*Millinocket	2.46	3.06	-0.60	NA	NA	NA	NA
Bangor	1.94	3.38	-1.44	6.7	11.7	-5.0	11

\*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 <sup>2</sup> )	Years of Record
St. John River at Ninemile Bridge	NA	NA	NA	NA	1341	68
St. John River at Fort Kent	1650 - 4730	3740	0.73	Normal	5929	92
Aroostook River at Washburn	NA	NA	NA	NA	1654	88

Narraguagus River at Cherryfield	479 - 989	650	3.30	Normal	227	70
E Br Penobscot River at Grindstone	NA	NA	NA	NA	837	116
Mattawamkeag nr Mattawamkeag	1010 – 2960	2020	1.64	Normal	1418	84
Piscataquis River nr Dover-Foxcroft	269 – 776	342	1.32	Normal	298	116

### 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
McFarland Hill	NA	NA	NA	NA	15
Crooked Road	NA	NA	NA	NA	15
Hadley Lakes	4.92 – 4.14	4.35	-0.23	Normal	33
Kenduskeag	22.40 – 19.30	21.92	1.12	Normal	41
Calais	1.60 – 0.53	0.78	-0.42	Normal	19
Millinocket	10.40 – 9.46	9.93	0.01	Normal	24
Clayton Lake	15.20 – 13.60	14.44	0.34	Normal	40
Fort Kent	12.70 – 10.00	9.59	-1.51	Above Normal	40

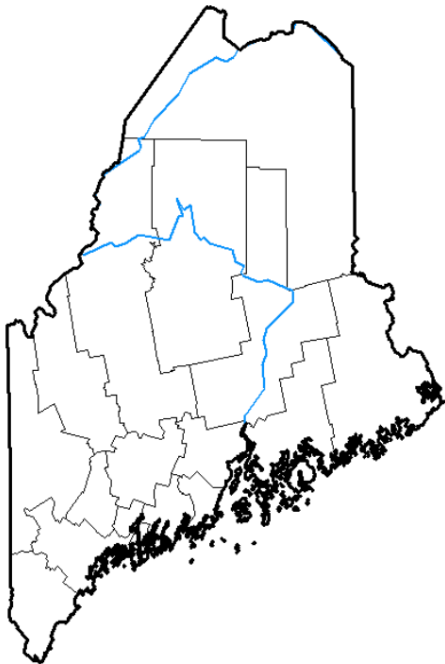
Flow or Water Level	Percentile Range	Explanation
Record Low	0 <sup>th</sup>	The monthly mean streamflow or median water level during this month is the lowest ever recorded during the period of record for this site.
Very Low	0 <sup>th</sup> to 10 <sup>th</sup>	The monthly mean streamflow or median water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

March 5th, 2019

### U.S. Drought Monitor Maine



**March 5, 2019**  
(Released Thursday, Mar. 7, 2019)  
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	100.00	0.00	0.00	0.00	0.00	0.00
<b>Last Week</b> 02-26-2019	100.00	0.00	0.00	0.00	0.00	0.00
<b>3 Months Ago</b> 12-04-2018	91.32	8.68	0.00	0.00	0.00	0.00
<b>Start of Calendar Year</b> 01-01-2019	94.48	5.52	0.00	0.00	0.00	0.00
<b>Start of Water Year</b> 09-25-2018	41.90	58.10	4.89	0.00	0.00	0.00
<b>One Year Ago</b> 03-06-2018	100.00	0.00	0.00	0.00	0.00	0.00

Intensity:

- 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:

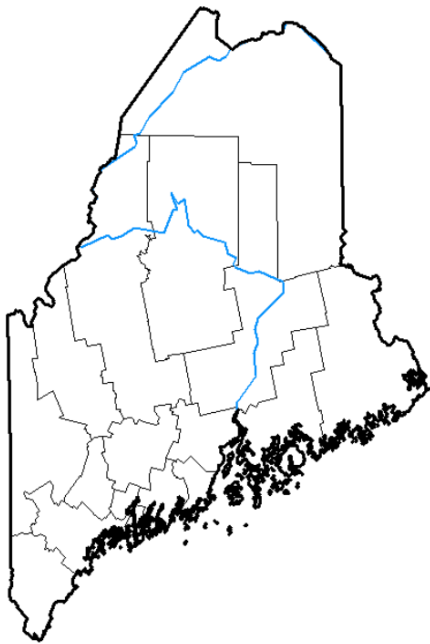
Eric Luebehusen  
U.S. Department of Agriculture



<http://droughtmonitor.unl.edu/>

March 26<sup>th</sup>, 2019

**U.S. Drought Monitor  
Maine**



**March 26, 2019**  
(Released Thursday, Mar. 28, 2019)  
Valid 8 a.m. EDT

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	100.00	0.00	0.00	0.00	0.00	0.00
<b>Last Week</b> 03-19-2019	100.00	0.00	0.00	0.00	0.00	0.00
<b>3 Months Ago</b> 12-25-2018	91.32	8.68	0.00	0.00	0.00	0.00
<b>Start of Calendar Year</b> 01-01-2019	94.48	5.52	0.00	0.00	0.00	0.00
<b>Start of Water Year</b> 09-25-2018	41.90	58.10	4.89	0.00	0.00	0.00
<b>One Year Ago</b> 03-27-2018	100.00	0.00	0.00	0.00	0.00	0.00

Intensity:

- 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.*

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