

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  
**June            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  
**July 31st , 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.

**June 2020**

Some minor flooding occurred during the month of June. Mainly culverts and ditches filling up with ponding of water in the streets of Bangor in southern Penobscot County due to heavy rain from thunderstorms. This occurred on June 26<sup>th</sup>. An Urban and Small Stream Advisory was issued for that event.

The month of June started out quite cool and then transitioned to a very hot second half of the month with the month finishing out much above normal. Temperatures for the month of June came in 1 to 2 degrees above normal across the Downeast region, while Northern Maine was 4 degrees above normal. The first half of the month came in with below normal temperatures, but finished well above normal after the 15<sup>th</sup> with a major heat wave similar to what took place in May. Near all-time record June heat occurred from the 18<sup>th</sup> through the 20<sup>th</sup> and continued with above normal temperatures for the remainder of the month. Caribou had a monthly average temperature of 64.4 degrees which exceeded the prior record warm June of 64 degrees recorded in 2006 and 1976. Houlton recorded an average monthly temperature of 62.8 degree and Millinocket came in with a monthly average temperature of 65.2 degrees which was the 8<sup>th</sup> warmest June on record for both sites. Bangor recorded a monthly average temperature of 65.2 degrees. After recording a low temperature of 31 degrees on the 2<sup>nd</sup>, temperatures soared to daily record highs of 95 degrees on the 18<sup>th</sup>, and 96 degrees on the 19<sup>th</sup>. The record high temperature of 96 degrees on the 19<sup>th</sup> tied the all-time high that was set back on May 22<sup>nd</sup>, 1977. There was also a total of 14 days with a high temperature of 80 degrees or warmer, which was most on record for June. The previous record was 13 set in 1976. There were 4 days with high temperature of 90 degrees or warmer. In Houlton, a new record low for the month of 26 degrees occurred on the 2<sup>nd</sup>. Houlton had high temperatures of 93, 95 and 94 degrees covering a 3 day stretch from the 18<sup>th</sup> to the 20<sup>th</sup>. There were a total of 14 days with a high of 80 degrees or warmer. Houlton had a total of 3 days with 90 degrees. A few sites did reach around 100 degrees in June. These sites were non-climate sites. The towns of Etna and Mattawamkeag recorded 101 degrees on the 20<sup>th</sup> and Shin Pond recorded 100 degrees on the same day. The last time any of the climate sites reached 100 degrees was back on August 2<sup>nd</sup> and 3<sup>rd</sup> of 1975, when Millinocket reached 100 degrees and Bangor recorded 102 degrees

Precipitation was well below normal across the region. The biggest deficits were across Northern Maine. Caribou recorded only 0.88 inches of precipitation, which was 2.60 inches below normal. This tied the driest June on record in Caribou, which was last set in 1983. Houlton came in with only 1.18 inches, which was 2.47 inches below normal. Frenchville, in NW Maine, recoded only 1.16 inches, which was 2.69 inches below normal. Bangor came in with 2.08 inches. This was 1.68 inches below normal.

Streamflows across the HSA were much below normal for June. Some river gages such as Nine Mile Bridge on the St. John and Dover-Foxcroft on the Piscataquis recorded near Record Low flows. Nine Mile Bridge saw its daily stage drop below a foot toward the end of the month due to the heat and dry conditions.

Groundwater levels did drop during the month of June, especially across the northern and central areas, where some wells recorded below normal ground water levels. Clayton Lake in NW Aroostook County came in w/much below normal groundwater levels. Kenduskeag in S Penobscot County recorded below normal levels. Groundwater levels across the Downeast region and toward the coast remained near normal.

In regards to Drought monitoring, the HSA saw conditions hit the Abnormally Dry to Moderate Drought category. Northern Maine saw the driest conditions, especially Aroostook County. Evaporation measurements taken at Caribou showed a monthly evaporation of 5.29 inches for the month.

#### 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	1.16	3.85	-2.69	NA	NA	NA	NA
Caribou	0.88	3.48	-2.60	0.0	0.0	0.0	0
Houlton	1.18	3.65	-2.47	NA	NA	NA	NA
*Millinocket	1.88	4.07	-2.19	NA	NA	NA	NA
Bangor	208	3.74	-1.68	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 <sup>2</sup> )	Years of Record
St. John River at Ninemile Bridge	1300 - 2810	545	0.45	Much Below Normal	1341	69
St. John River at Fort Kent	7610 - 12400	4140	0.78	Much Below Normal	5929	93

Aroostook River at Washburn	1420 - 3120	927	0.63	Much Below Normal	1654	89
Narraguagus River at Cherryfield	210 - 495	148	0.73	Much Below Normal	227	72
E Br Penobscot River at Grindstone	1310 - 2820	959	1.28	Much Below Normal	837	117
Mattawamkeag nr Mattawamkeag	1080 - 2580	502	0.39	Much Below Normal	1418	85
Piscataquis River nr Dover-Foxcroft	240 - 636	65	0.24	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	20.30 – 18.80	20.14	0.54	Normal	30
Crooked Road	NA	NA	NA	NA	15
Hadley Lakes	5.03 – 4.28	4.86	0.22	Normal	34
Kenduskeag	22.10 – 20.40	22.29	0.99	Below Normal	42
Calais	2.26 – 0.83	1.64	-0.12	Normal	20
Millinocket	9.05 – 7.90	8.82	0.49	Normal	26
Clayton Lake	15.40 – 14.00	15.79	1.19	Much Below Normal	41
Fort Kent	7.77 – 5.75	6.40	-0.25	Normal	42

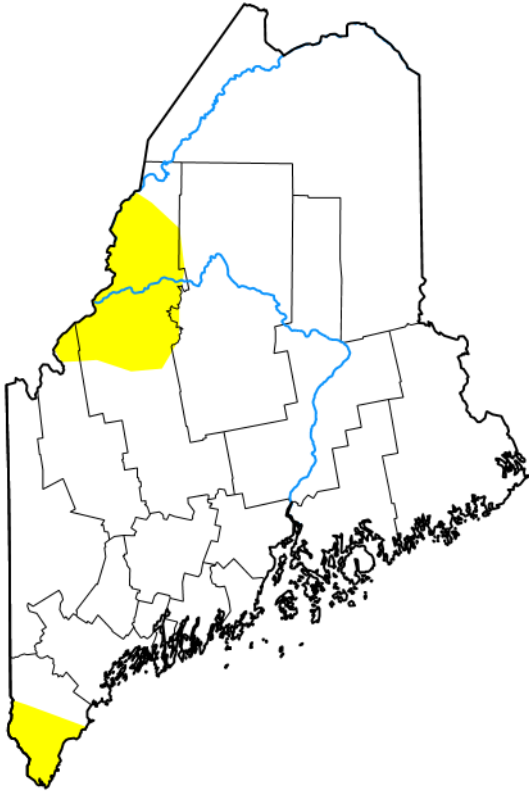
Flow or Water Level	Percentile Range	Explanation
Record Low	0 <sup>th</sup>	The monthly mean streamflow or median water level during this month is the lowest ever recorded during the period of record for this site.
Very Low	0 <sup>th</sup> to 10 <sup>th</sup>	The monthly mean streamflow or median water 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 June**

**U.S. Drought Monitor**  
**Maine**

**June 2, 2020**  
(Released Thursday, Jun. 4, 2020)  
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	92.26	7.74	0.00	0.00	0.00	0.00
<b>Last Week</b> <i>05-26-2020</i>	93.80	6.20	0.00	0.00	0.00	0.00
<b>3 Months Ago</b> <i>03-03-2020</i>	100.00	0.00	0.00	0.00	0.00	0.00
<b>Start of Calendar Year</b> <i>12-31-2019</i>	100.00	0.00	0.00	0.00	0.00	0.00
<b>Start of Water Year</b> <i>10-01-2019</i>	87.45	12.55	0.00	0.00	0.00	0.00
<b>One Year Ago</b> <i>06-04-2019</i>	100.00	0.00	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:

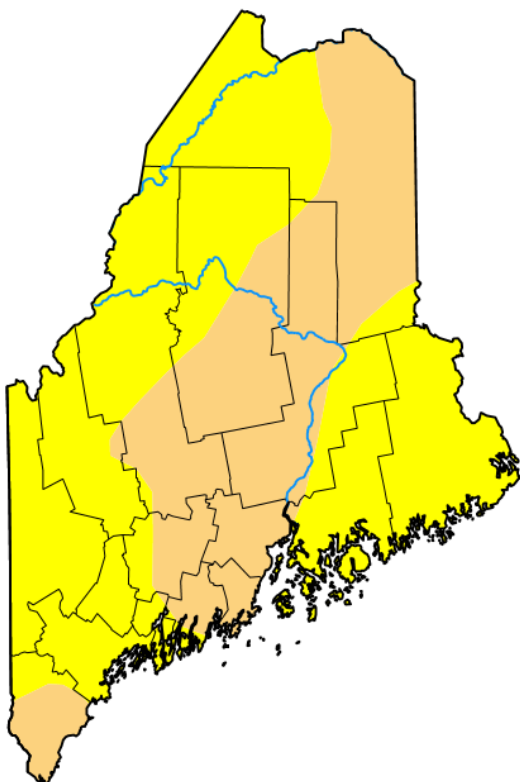
Curtis Riganti  
National Drought Mitigation Center



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

# U.S. Drought Monitor Maine

**June 30, 2020**  
(Released Thursday, Jul. 2, 2020)  
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	0.00	100.00	39.07	0.00	0.00	0.00
<b>Last Week</b> <i>06-23-2020</i>	0.00	100.00	47.36	0.00	0.00	0.00
<b>3 Months Ago</b> <i>03-31-2020</i>	100.00	0.00	0.00	0.00	0.00	0.00
<b>Start of Calendar Year</b> <i>12-31-2019</i>	100.00	0.00	0.00	0.00	0.00	0.00
<b>Start of Water Year</b> <i>10-01-2019</i>	87.45	12.55	0.00	0.00	0.00	0.00
<b>One Year Ago</b> <i>07-02-2019</i>	100.00	0.00	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>*

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