

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 April 2018
		SIGNATURE Joseph Hewitt, HPM
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		DATE May 18, 2018

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.

April 2018

April 2018 finished with average temperatures below normal. Temperatures across the region ranged from 1 to 3 degrees below average. The first half of April from the 1st to the 15th was the 5th coldest for Caribou and the 7th coldest for Bangor. Caribou recorded a record low temperature of 12 degrees on the 15th. This broke the previous record of 13 degrees set in 1981. The second half of the month was much milder with the first 60 degree temperature observed from Caribou to the coast on the 23rd, while the Crown of Maine was a tad cooler. On the 24th, temperatures hit 70 or higher from Houlton to Bangor. The northern tier had temperatures in the upper 60s with mid to upper 60s for the coast.

In regards to precipitation, precipitation was above average for the entire HSA. Caribou recorded 4.62 inches of precipitation which was 1.96 inches above normal. This made it the 3rd wettest April on record. Bangor came in 4.77 inches which was 1.77 inches above normal. Temperatures surging into the 60s and 70s aided in rapid snowmelt along with a heavy dose of rainfall on the 25th and 26th with over 2 inches of rainfall in some areas. This in turn led to some flooding which will be explained in more detail below.

Interestingly enough, the Groundwater conditions did change as northwestern and portions of the Central Highlands were slightly below normal, while the rest of the region was near or slightly above normal, which included Northeast and Downeast Maine.

Snowfall did occur during the first two weeks of April. A storm system brought a significant snowfall to the region from the 4th through the 6th. This system brought anywhere from 2 inches in Bangor to around 12 inches in the St. John Valley. Caribou recorded 7.8 inches. Caribou recorded 8.8 inches of snow for the month, which was 1.4 inches above normal for April. Bangor came in with 2.3 inches for the month which was 1.4 inches below normal for the month. Snow depths dropped significantly across the region. Caribou started out with 22 inches of snow on the ground and ended with a trace on the ground by the end of the month. The Central Highlands lost most of their snow with exception of the woods with up to 3 inches remaining. The Downeast region including Bangor lost their snow by mid April. The St. John Valley and Allagash region still had anywhere from 10 to 18 inches of snow on the ground by the end of the month.

Rivers started opening up significantly with the only ice remaining on the rivers was across Northern Maine such as the Aroostook and St. John Rivers. Ice thickness was measured at 18 to 24 inches but

showed signs of weakening and rot by mid April. The eastern branch of the Penobscot River at Grindstone still had around 12 to 16 inches of ice, but the ice was breaking up with open channels. From the Mattwamkeag River on south to the Penobscot and Piscataquis River, some ice still was flowing with rivers wide open and good flows. The ice broke up on the Aroostook River by April 21st with a small jam forming near the Washburn bridge. A Flood Warning was issued for the Aroostook River at Washburn for this jam. This hydrograph did spike above Minor Flood Stage(14.0 ft) on the 21st but did not cause any flooding. The gage appeared to be ice affected. The jam let go with no flooding downstream or upstream.

Flooding did occur later in the month of April starting on the 26th and continuing through the 30th:

The heavy rainfall and rapid snowmelt that occurred on the 25th into the 27th led to some flooding across the region, especially across Northern Maine. Numerous brooks and streams went out of their banks with some main stem rivers going into flood. A Flood Watch was issued leading up to the event followed with Areal Flood Warnings and Point Flood Warnings for some of the main stem rivers. Numerous roads were washed out or flooded. The St. John River at Fort Kent hit just below Flood Stage of 22.42 ft on 4/29. Flood Stage is 22.5 ft. Some minor lowland flooding did occur. The Fish River went above Minor Flood Stage(11.0 ft) on the evening of the 29th and remained above Flood Stage through the end of the month. The Mattawamkeag River went above Minor Flood Stage(13.5 ft) on 4/26. The river climbed to about 15.66 ft on the 30th with some roads being inundated with water. The Route 2 bridge in Island Falls was closed for safety purposes due to water rising to just below the bridge.

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	3.79	2.81	+0.98	NA	NA	NA	NA
Caribou	4.62	2.66	+ 1.96	8.8	7.4	+1.4	22
Houlton	3.46	3.88	- 0.42	NA	NA	NA	NA
*Millinocket	4.36	3.56	+ 0.80	NA	NA	NA	NA
Bangor	4.77	3.62	+ 1.15	2.3	3.7	-1.4	2

*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	NA	NA	NA	NA	1341	67
St. John River at Fort Kent	18700 – 35600	25700	4.84	Normal	5665	91

Aroostook River at Washburn	NA	NA	NA	NA	1654	87
Narraguagus River at Cherryfield	924 - 1450	1520	7.47	Above Normal	227	69
E Br Penobscot River at Grindstone	NA	NA	NA	NA	837	115
Mattawamkeag nr Mattawamkeag	7030 – 10100	11100	8.73	Above Normal	1418	83
Piscataquis River nr Dover-Foxcroft	1630 - 2500	2150	8.05	Normal	298	115

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	3.89 - 0.60	-0.69	-1.87	Above Normal	13
Crooked Road	5.23 – 4.65	4.43	-0.50	High	13
Hadley Lakes	4.18 – 3.46	3.46	-0.38	Normal	30
Kenduskeag	19.20 – 17.80	17.61	-0.79	Above Normal	37
Calais	0.69 – 0.04	-0.59	-1.03	High	16
Millinocket	9.38 – 7.36	9.40	1.16	Below Normal	22
Clayton Lake	12.30 – 10.50	13.32	1.82	Below Normal	37
Fort Kent	10.50 – 6.74	9.86	1.30	Normal	38

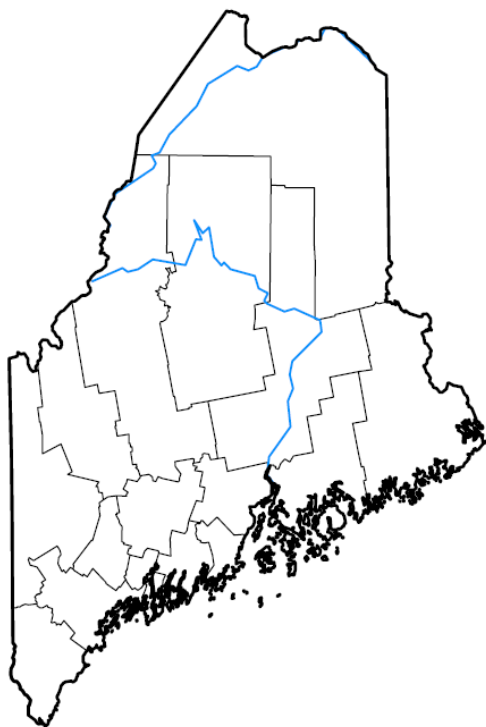
Flow or Water Level	Percentile Range	Explanation
Record Low	0 th	The monthly mean streamflow or median water level during this month is the lowest ever recorded during the period of record for this site.
Very Low	0 th to 10 th	The monthly mean streamflow or median water level during this month is less 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
April 2018
WFO Caribou, ME**

PIL	TIME (UTC)	Date	Description
PWMFLWCAR	1908	4/21	Areal Flood Warning for ice jam at Washburn(WSHM1)
PWMFFACAR	1900	4/25	Flood Watch for rain and snow melt
PWMFLWCAR	1615	4/26	Areal Flood Warning for rain and snow melt
PWMFLWCAR	1944	4/26	River Point Flood Warning for Mattawamkeag River(MATM1)
PWMFLWCAR	0102	4/27	New Areal Flood Warning for continued rain/snow melt
PWMFLWCAR	0856	4/27	River Point Flood Warning for Big Black River(BBRM1)
PWMFLWCAR	2033	4/27	River Point Flood Warning for St. John River at Fort Kent(FTKM1)
PWMFLWCAR	2135	4/27	River Point Flood Warning for Fish River at Fort Kent(FIHM1)
PWMFFACAR	1919	4/28	Cancellation for Flood Watch
PWMFLSCAR	0626	4/29	Cancellation for River Point Warning for Big Black River(BBRM1)
PWMFLSCAR	1547	4/29	Cancellation for River Point Warning Fish River at Fort Kent(FIHM1)
PWMFLSCAR	1547	4/29	Cancellation for River Point Warning St. John River at Fort Kent(FTKM1)
PWMFLWCAR	0004	4/30	New River Point Warning for Fish River at Fort Kent(FIHM1)
PWMFLSCAR	1511	4/30	Flood Advisory for Minor Flooding
PWMFLWCAR	2103	4/30	New River Point Warning for St. John River at Fort Kent(FTKM1)
PWMFLWCAR	2318	4/30	New River Point Warning for Big Black River(BBRM1)

Drought Conditions

U.S. Drought Monitor Maine



April 3, 2018

(Released Thursday, Apr. 5, 2018)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	100.00	0.00	0.00	0.00	0.00	0.00
Last Week <i>03-27-2018</i>	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago <i>01-02-2018</i>	92.38	7.62	0.00	0.00	0.00	0.00
Start of Calendar Year <i>01-02-2018</i>	92.38	7.62	0.00	0.00	0.00	0.00
Start of Water Year <i>09-26-2017</i>	57.81	42.19	24.62	0.00	0.00	0.00
One Year Ago <i>04-04-2017</i>	72.14	27.86	0.88	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.

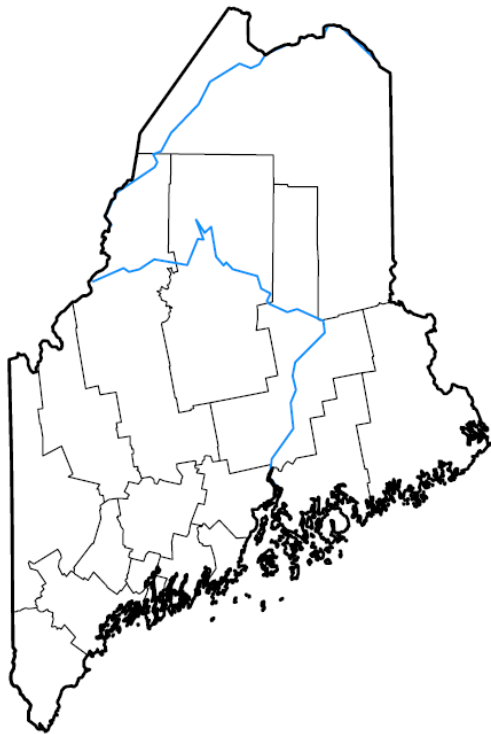
Author:

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NOAA/NWS/NCEP/CPC



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

U.S. Drought Monitor
Maine



April 24, 2018

(Released Thursday, Apr. 26, 2018)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	100.00	0.00	0.00	0.00	0.00	0.00
Last Week <i>04-17-2018</i>	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago <i>01-23-2018</i>	92.38	7.62	0.00	0.00	0.00	0.00
Start of Calendar Year <i>01-02-2018</i>	92.38	7.62	0.00	0.00	0.00	0.00
Start of Water Year <i>09-26-2017</i>	57.81	42.19	24.62	0.00	0.00	0.00
One Year Ago <i>04-25-2017</i>	83.41	16.59	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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<http://droughtmonitor.unl.edu/>

