

WFO Caribou, Maine

MONTHLY REPORT OF HYDROLOGIC CONDITIONS

REPORT FOR:
MONTH YEAR
September 2017

TO: Hydrologic Information Center, W/OS31
NOAA's National Weather Service
1325 East West Highway
Silver Spring, MD 20910-3283

SIGNATURE
Maureen Hastings, HPM

DATE

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 2017

Outside of the locations in the Saint John Valley, much of WFO Caribou's HSA experienced a continuation of drier than normal conditions through September. On average northern areas saw more rainfall than Downeast, including the Bangor region; Bangor Airport saw a rainfall deficit of over an inch while Frenchville was within 0.01 inch of normal. What rainfall did fall was concentrated over just a few days of the month, resulting in prolonged dry spells. For instance, Caribou went 17 straight days – the 10th through the 26th – with no measurable precipitation. Bangor received less than 0.10 inch from the 9th through the end of the month.

Regardless of location, the bulk of the total monthly precipitation for September fell during the first week, particularly the 3rd through the 7th. This was due to a low pressure system on the 3rd into the 4th, then a stalled frontal boundary on the 6th and 7th. Rainfall amounts during this time frame were generally 0.50 to 1.25 inches, with the dry spell settling in thereafter. A strong cold front brought a line of strong storms to northern areas on the 27th, with some spots seeing a half inch or more. These higher totals were rare, however; much of the areas saw little to no rain over the last half of the month.

Obviously, with such dry conditions, no flooding was reported and rivers remain very low. However, some of the spottier heavy rainfall from convection was able to keep a couple of the USGS gages in the Saint John River Basin in the near normal range. Drought conditions did not change too much, however, with D0-D4 conditions actually slightly shrinking in area over the month.

Precipitation Totals for Select Locations

All units inches

| Location | Total Precip | Normal Precipitation | Departure from Normal | Snowfall | Normal Snowfall | Departure from Normal Snowfall | Greatest Snow Depth |
|-------------|--------------|----------------------|-----------------------|----------|-----------------|--------------------------------|---------------------|
| Frenchville | 3.53 | 3.53 | +0.01 | | | | |
| Caribou | 3.13 | 3.32 | -0.19 | | | | |
| Houlton | 2.59 | 3.40 | -0.81 | | | | |
| Millinocket | 3.42 | 3.72 | -0.30 | | | | |

| | | | | | | |
|--------|------|------|-------|--|--|--|
| Bangor | 2.69 | 3.83 | -1.14 | | | |
|--------|------|------|-------|--|--|--|

*Millinocket snowfall measured at wastewater treatment plant, not the ASOS site

Stream Flows for Selected Rivers

| River | Normal Flow (cfs) | Monthly Mean Flow (cfs) | Monthly Mean Precip (in) | Percentile Class | Drainage (mi ²) | Years of Record |
|-------------------------------------|-------------------|-------------------------|--------------------------|------------------|-----------------------------|-----------------|
| St. John River at Ninemile Bridge | 427 – 1940 | 301 | 0.25 | Low | 1341 | 67 |
| St. John River at Fort Kent | 2400 – 6080 | 1480 | 0.28 | Very Low | 5665 | 91 |
| Aroostook River at Washburn | 418 – 1370 | 754 | 0.51 | Normal | 1654 | 87 |
| Narraguagus River at Cherryfield | 59.4 – 212 | 36.6 | 0.18 | Very Low | 227 | 69 |
| E Br Penobscot River at Grindstone | 543 – 1100 | 556 | 0.74 | Normal | 837 | 115 |
| Mattawamkeag nr Mattawamkeag | 209 – 930 | 131 | 0.10 | Low | 1418 | 83 |
| Piscataquis River nr Dover-Foxcroft | 57.8 – 224 | 52.8 | 0.20 | Low | 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 | 26.50 – 13.80 | 26.43 | 2.43 | Normal | 13 |
| Crooked Road | 7.25 – 5.85 | 7.42 | 0.78 | Low | 13 |
| Hadley Lakes | 6.34 – 5.61 | 6.47 | 0.54 | Low | 30 |
| Kenduskeag | 25.40 – 23.50 | 24.40 | -0.10 | Normal | 37 |
| Calais | 4.22 – 2.39 | 3.73 | 0.85 | Normal | 16 |
| Millinocket | 11.00 – 10.10 | 10.65 | 0.35 | Normal | 22 |
| Clayton Lake | 16.30 – 14.80 | 16.41 | 0.41 | Low | 37 |
| Fort Kent | 11.90 – 9.38 | 10.77 | 0.17 | 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
September 2017
WFO Caribou, ME**

| PIL | TIME (UTC) | Date | Description |
|-----|------------|------|-------------|
| | | | |
| | | | |
| | | | |

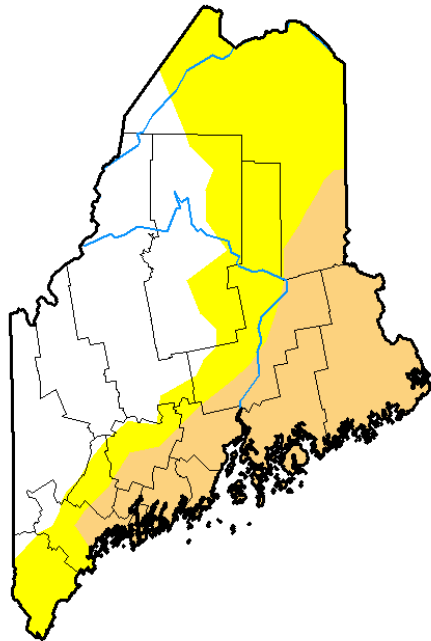
**Significant River Crests
September 2017
WFO Caribou, ME**

| Location | ID | Date | Time (UTC) | Crest Stage (ft) | Flood Stage (ft) |
|----------|----|------|------------|------------------|------------------|
| | | | | | |
| | | | | | |
| | | | | | |

Drought Monitor for September 5, 2017

**U.S. Drought Monitor
Maine**

September 5, 2017
(Released Thursday, Sep. 7, 2017)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|---|--------|-------|-------|-------|-------|------|
| Current | 35.65 | 64.35 | 28.88 | 0.00 | 0.00 | 0.00 |
| Last Week 08-29-2017 | 35.65 | 64.35 | 28.88 | 0.00 | 0.00 | 0.00 |
| 3 Months Ago 06-06-2017 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Start of Calendar Year 01-01-2017 | 23.74 | 76.26 | 62.91 | 0.57 | 0.00 | 0.00 |
| Start of Water Year 09-27-2016 | 42.23 | 57.77 | 40.81 | 26.75 | 8.35 | 0.00 |
| One Year Ago 09-06-2016 | 55.99 | 44.01 | 14.19 | 7.01 | 0.02 | 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:

Deborah Bathke
National Drought Mitigation Center



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

Drought Monitor for September 26th, 2017

U.S. Drought Monitor Maine

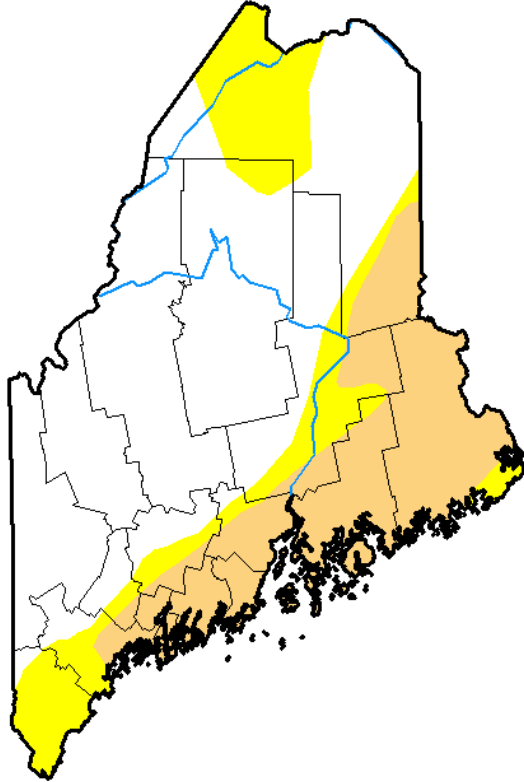
September 26, 2017

(Released Thursday, Sep. 28, 2017)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|---|-------|-------|-------|-------|-------|------|
| Current | 57.81 | 42.19 | 24.62 | 0.00 | 0.00 | 0.00 |
| Last Week 09-19-2017 | 57.81 | 42.19 | 24.62 | 0.00 | 0.00 | 0.00 |
| 3 Months Ago 06-27-2017 | 96.45 | 3.55 | 0.00 | 0.00 | 0.00 | 0.00 |
| Start of Calendar Year 01-03-2017 | 23.74 | 76.26 | 62.91 | 0.57 | 0.00 | 0.00 |
| Start of Water Year 09-27-2016 | 42.23 | 57.77 | 40.81 | 26.75 | 8.35 | 0.00 |
| One Year Ago 09-27-2016 | 42.23 | 57.77 | 40.81 | 26.75 | 8.35 | 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:

Brad Rippey
U.S. Department of Agriculture



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