

<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> <b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b> <b>NATIONAL WEATHER SERVICE</b>	HYDROLOGIC SERVICE AREA (HSA)  <b>WFO Caribou, Maine</b>
<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>		REPORT FOR: MONTH                      YEAR  <b>August                      2025</b>
		SIGNATURE  <b>James Sinko - Meteorologist</b> <b>Hydrology Program Manager</b>
		DATE  <b>September 4, 2025</b>
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		

*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.

### August 2025

August 2025 concluded with slightly below normal to slightly above normal temperatures and well below normal precipitation across Eastern and Northern Maine. The mean 500mb flow across the continental United States featured large ridging in the Southwestern states with troughing in the east and mostly zonal flow across Maine. At the surface numerous rounds of anomalously higher mean sea level pressure anchored by several rounds of surface high pressures over Southern New England kept Maine in a zonal to northwest flow, periodically switching southerly as the surface ridges dipped south of Maine. This pattern resulted in anomalously lower relative humidities across the area combined with lack of rainfall due to numerous high pressure events leading to rapid onset of drought. The first half of the month only saw a few periods of showers across the area with a few weak cold fronts resulting in very little rainfall. More robust progressive systems impacted the area in the latter half of the month that kept numerous locations from finishing at record dry levels.

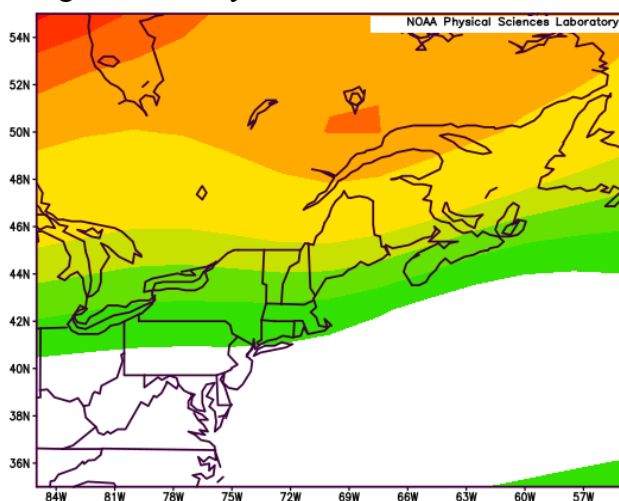


Figure 1: 500mb Geopotential Height (m) Anomalies (1991-2020 Climatology) August 2025

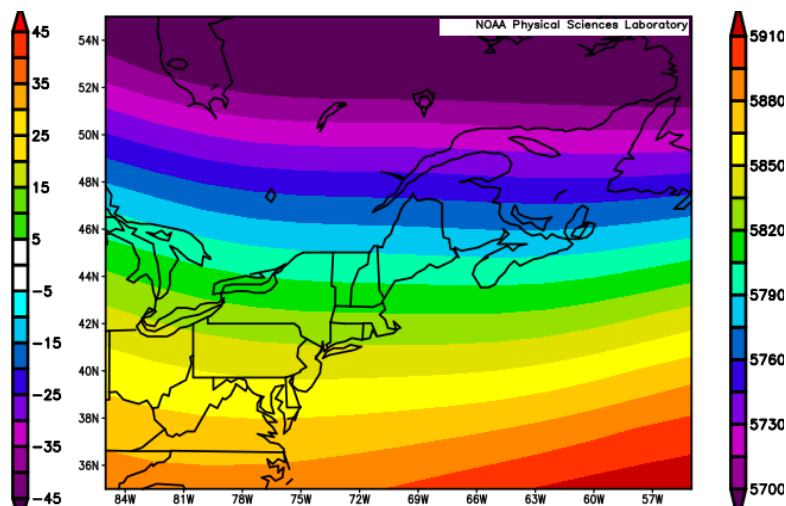


Figure 2: 500mb Geopotential Height (m) Composite Mean August 2025

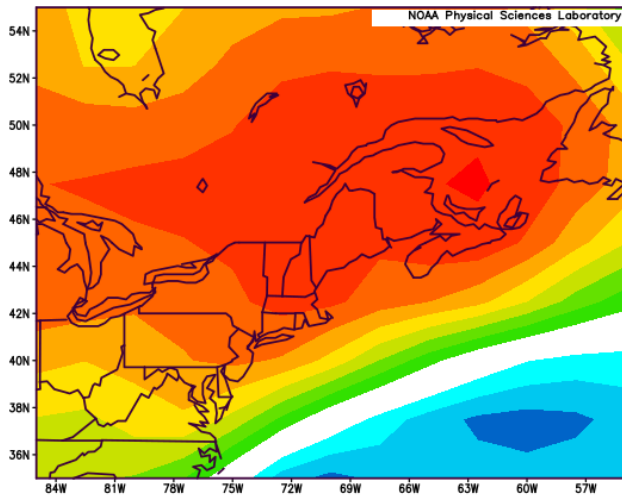


Figure 3: Sea Level Pressure (mb) Anomalies (1991-2020 Climo)  
August 2025

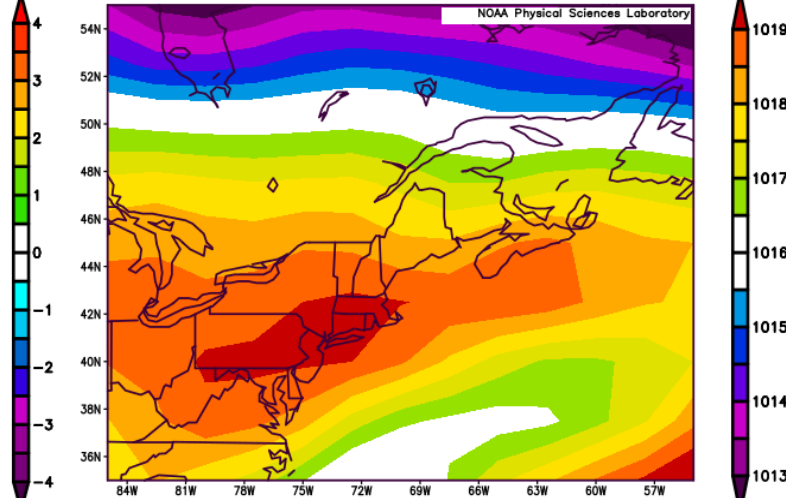


Figure 4: Sea Level Pressure (mb) Composite Mean  
August 2025

Figure 1-4 Source: [NOAA Physical Sciences Laboratory](#)

### Precipitation Totals for Select Locations *(All Units in Inches)*

Location	Total Precip	Normal Precip	Departure from Normal	% of Normal	Snowfall	Normal Snowfall	Departure from Normal	Greatest Snow Depth	Monthly Average Snow Depth
Frenchville*	2.19	3.77	-1.58	58.1%					
Fort Kent	1.91	3.73	-1.82	51.2%	0.0	0.0	0.0	0	0.0
Van Buren	2.67	3.48	-0.81	76.7%	0.0	0.0	0.0	0	0.0
Limestone	2.82	3.92	-1.10	71.9%					
Caribou	3.25	3.61	-0.36	90.0%	0.0	0.0	0.0	0	0.0
Houlton	1.46	3.52	-2.06	41.5%					
Millinocket*	3.17	3.80	-0.63	83.4%	0.0			0	0.0
Greenville*	2.31	3.96	-1.65	58.3%					
Moosehead*	2.89	3.85	-0.96	75.1%	0.0	0.0	0.0	0	0.0
Dover-Foxcroft	1.86	3.67	-1.81	50.7%	0.0	0.0	0.0	0	0.0
Corinna	1.77	3.59	-1.82	49.3%	0.0	0.0	0.0	0	0.0
Old Town	1.28	3.15	-1.87	40.6%					
Bangor	1.70	3.06	-1.36	55.6%	0.0	0.0	0.0	0	0.0
East Surry	1.81	3.14	-1.33	57.6%	0.0			0	0.0
Robbinston*	2.19	3.45	-1.26	63.5%	0.0	0.0	0.0	0	0.0
Topsfield*	1.04	3.44	-2.40	30.2%	0.0	0.0	0.0	0	0.0

\*Millinocket snowfall measured at CoOp site, not the ASOS site. \*Moosehead Site is in GYX CWA. \*Topsfield Records date back to 2000.  
 \*Robbinston Records dates back to 1994. \*Greenville data gap between 1975 and 1999. \*Baileyville is a partial complete record to 1917.  
 \*Frenchville ASOS has documented issues with precipitation measurements in the winter months.

**Precipitation** in August was well below normal across much of northern and eastern Maine. Totals were generally 40 to 60 percent of normal from southeastern Aroostook County southward to Downeast Maine and the Bangor region. Farther north, from the Katahdin Region to the St. John Valley, rainfall was closer to 80 to 90 percent of normal. The first half of the month was notably dry, with little to no measurable rainfall. Modest precipitation later in the month, including events on August 23–25 and 29–30 that dropped over one inch in some locations, was insufficient to offset earlier deficits. For many locations, this marked the second or third consecutive month of below-normal rainfall. Cooperative observer reports highlighted the dry conditions. At Dover-Foxcroft, the 1.86 inches of rainfall ranked as the 12th driest August since records began in 1976. In Robbinston, August 2025 ranked as the 9th driest on record since 1995.

At the National Weather Service in Caribou, evaporation exceeded precipitation for the entirety of meteorological summer. Above-normal rainfall in July helped mitigate conditions temporarily, but deficits returned in August. Caribou recorded 5.08 inches of evaporation compared to 3.25 inches of rainfall, resulting in a net deficit of 1.83 inches for the month. Soil moisture conditions reflected the dry pattern. By late August, surface to 4-inch soil moisture was below the 10th percentile across the Bangor region and Downeast Maine, while northern Maine ranged from the 10th to 30th percentile. At 4–16 inch depths, soil moisture was in the 5th to 20th percentile in areas that missed soaking rains. At 40–80 inches, much of the region remained below normal due to prolonged deficits, although surface conditions improved in isolated areas following late-month rainfall.

**Drought** conditions developed rapidly during August. Severe Drought (D2) emerged across coastal Downeast Maine, while Moderate Drought (D1) spread across the Piscataquis and Penobscot Valleys, interior Downeast, and far southeastern Aroostook County.

**Groundwater** levels across northern and eastern Maine saw a significant decline during August 2025, impacting the Downeast, Bangor, Central Highlands, Baxter, and North Woods regions. By the end of the month, observation sites in Millinocket and Kenduskeag were in the 5th-10th percentile, classified as Much Below Normal for August. The Hadley Lakes site in Downeast Maine began the month in the normal range but dropped to the 10th-25th percentile. In Calais, groundwater finished the month near the 50th percentile, considered normal, due to previous surpluses. The Clayton Lake rapid response well briefly dipped to the 5th percentile but recovered to normal levels by the end of the month following late-August precipitation. In the St. John Valley, the Fort Kent observation site remained in the normal range, thanks to surplus rainfall in June and July.

**Wildfire** activity, reported from the Maine Forest Service, increased in August significantly above average in Maine in the past few weeks. The Maine Forest Service responded to 129 fires, compared to a 10-year average of 51 fires for the entire month of August. The 129 fires burned 75.86 acres of land. Wildfires have been burning actively at night, burning deep into the ground, and completely consuming larger fuels, all indicative of dry conditions. Vegetation is showing signs of drought stress, with birch and other hardwood trees beginning to change color and drop leaves earlier than normal. At the very end of the month rainfall did help ease fire activity across the region.

**Streamflow** conditions across northern and eastern Maine remained well below normal during August, continuing a prolonged period of rainfall deficits that began in June. While localized improvement was noted in portions of the North Woods, particularly along the upper St. John River, much of the region experienced a very dry August. Few locations recorded all-time low August streamflows, including Grand Lake Stream at Grand Lake Stream, ME, and the St. Croix River at Baring. It should be noted that flows at these sites are regulated by upstream dam operations and subject to release schedules.

Near- to above-normal monthly flows were confined to a few northern basins, including the Big Black River at Depot Mountain, the Allagash River above Allagash, the St. John River at Dickey, and the East Branch Penobscot River at Grindstone. Elsewhere, streamflows were generally well below normal. The lower St. John and Fish River system, as well as the Aroostook and Meduxnekeag Rivers, all reported below normal flows. The Piscataquis River system was especially impacted, with all gages registering much below normal and several daily record low flows observed at Dover-Foxcroft.

Additional systems also experienced significant low flow conditions. The lower Penobscot and Mattawamkeag Rivers fell to much below normal, while critically low flow on the Wytovitlock Stream near Wytovitlock caused backwater effects that impaired gage accuracy. The Narraguagus River dropped below normal, and the St. Croix River at Vanceboro fell to much below normal. These persistent low flow conditions have likely created challenges for agricultural operations dependent on surface water sources for irrigation.

**Water storage** across key river systems in Eastern & Northern Maine generally remained within normal ranges through August but the impacts of the drought were noticeable by late month. The Penobscot River system began the month at 81.8% of capacity, or 1.0% above the long-term average which is normal. By the end of August, storage decreased to 70.5%, which became slightly below the long-term average by 2.2%. Ripogenus Dam storage started the month near 30 billion cubic feet, consistent around the 50th percentile which is normal range for August, and ended the month down at 25 billion cubic feet also within the normal range but on the lower end. The Union River system started the month at 59.3% of capacity, 8.3% below the long-term average. By month's end, storage declined to 43.5%, or 9.3% below average. The drop off by the end of the month at many of the storage locations indicated the impacts of the lack of rainfall and ongoing drought conditions. Please note: water release schedules are subject to change based on evolving weather conditions and power system operational needs, and may not be reflected in monthly storage statistics.

**Temperatures** in August 2025 across the region exhibited a range from slightly above normal to 1.0 degree Fahrenheit below the 1991-2020 averages. In Caribou, the average temperature of 64.2 degrees Fahrenheit was 0.7 degrees below the established 1991-2020 average for August. No primary climate site concluded the month within the top 10 coolest on record for August. All four primary climate sites observed maximum temperatures averaging above normal, primarily attributable to a notable heatwave from August 10th to the 13th, during which maximum temperatures averaged 1.0 to 3.0 degrees above the 1991-2020 normals throughout the area. Caribou experienced four consecutive days with a high temperature of 90 degrees Fahrenheit or higher, thereby equaling the longest such streak on record. The four-day period from the 10th through the 13th also represented the warmest four-day stretch on record for Caribou, with an average of both high and low temperatures reaching 79.0 degrees Fahrenheit. Multiple daily record high temperatures were established in Caribou, Millinocket, and Houlton during this event.

Excluding the aforementioned heatwave, August 2025 was characterized by numerous unseasonably cool nights across the region. Minimum temperatures averaged 2.0 to 3.5 degrees below the 1991-2020 normals across northern and eastern Maine. In Houlton, the average minimum temperature for the month was 49.0 degrees, which is 3.1 degrees below normal. This ranked as the 9th coolest average low temperature for the month of August on record in Houlton, with records dating back to 1948. In Bangor, the average low temperature for August was 53.5 degrees, representing a deviation of 3.5 degrees below the 1991-2020 normal. This constituted the 14th coolest average minimum temperature for August on record in Bangor, and the coolest since 2006 (53.2 degrees). Records in Bangor commenced in 1925. Neither Caribou nor Millinocket concluded the month within the top 20 for coolest average low temperature for August.

Houlton recorded 20 days with a low temperature below 50 degrees Fahrenheit during the month, falling one day short of the record of 21, established in 1968. In Millinocket, there were 14 days when the low temperature descended below 50 degrees Fahrenheit. This ranked as the 6th most on record, and the highest number since 1964 (17 days). The highest number of days with lows below 50 degrees Fahrenheit in Millinocket in August occurred in 1903 (20 days). Records in Millinocket date back to 1903.

The coolest morning of the month transpired on the 19th. Caribou and Houlton registered low temperatures of 38 and 35 degrees Fahrenheit, respectively. This tied with 2005 as the second earliest low temperature (after August 1st) of 38 degrees Fahrenheit or lower on record. The earliest such low temperature occurred on August 13th, 1941 (36 degrees Fahrenheit). It also marked the second earliest (tied with 2005) low of 35 degrees Fahrenheit or lower in Houlton on record, occurring just two days later than the record from August 17th, 1979 (35 degrees Fahrenheit). Numerous locations in northern Maine experienced early season frost on the 19th. A weather station in Estcourt Station recorded a low of 31 degrees Fahrenheit that morning.

<b>Town/City</b>	<b>Avg Monthly Temperature (°F)</b>	<b>Normal Monthly Temperature (°F)</b>	<b>Departure from Normal (°F)</b>
<b>Frenchville</b>	63.5	64.6	<b>-1.1</b>
<b>Fort Kent</b>	62.5	62.9	<b>-0.4</b>
<b>Van Buren</b>	63.6	64.1	<b>-0.5</b>
<b>Limestone</b>	63.1	62.9	<b>0.2</b>
<b>Caribou</b>	64.2	64.9	<b>-0.7</b>
<b>Houlton</b>	63.5	64.4	<b>-0.9</b>
<b>Millinocket</b>	66.4	66.5	<b>-0.1</b>
<b>Greenville*</b>	65.3	64.8	<b>0.5</b>
<b>Moosehead</b>	65.4	63.3	<b>2.1</b>
<b>Dover-Foxcroft</b>	66.5	65.9	<b>0.6</b>
<b>Corinna</b>	67.3	67.7	<b>-0.4</b>
<b>Old Town</b>	65.5	65.5	<b>0.0</b>
<b>Bangor</b>	67.2	68.2	<b>-1.0</b>
<b>East Surry</b>	64.7	66.7	<b>-2.0</b>
<b>Robbinston*</b>	66.2	66.5	<b>-0.3</b>
<b>Topsfield*</b>	68.2	66.7	<b>1.5</b>

Read below for specific details & maps of Streamflows, Groundwater Levels, Non-Routine Hydrologic Products issued by WFO Caribou and Drought conditions.

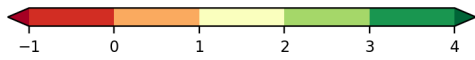
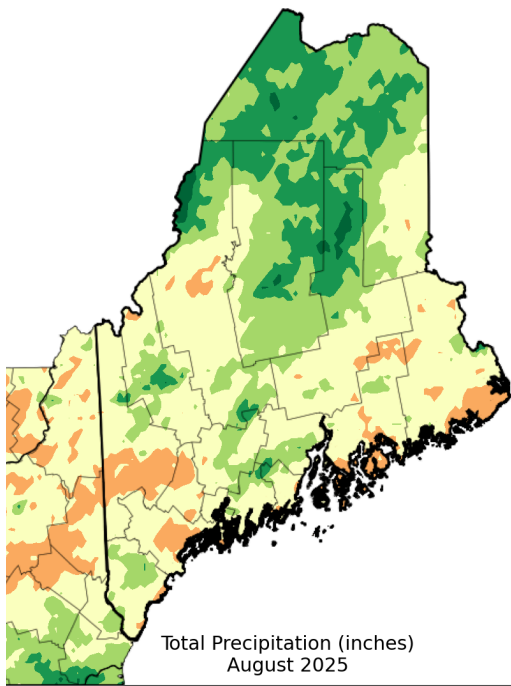


Figure 5. Total Precipitation (inches) August 2025

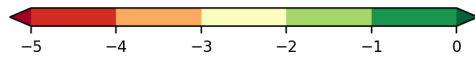
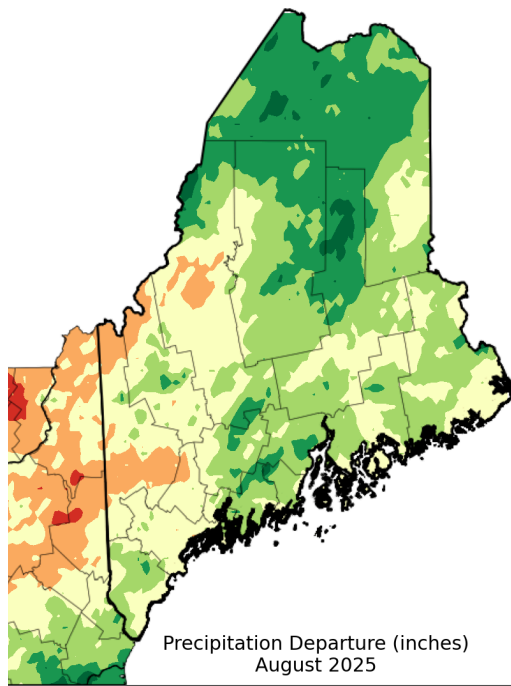


Figure 6. % of Normal Precipitation August 2025

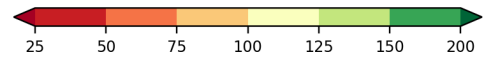
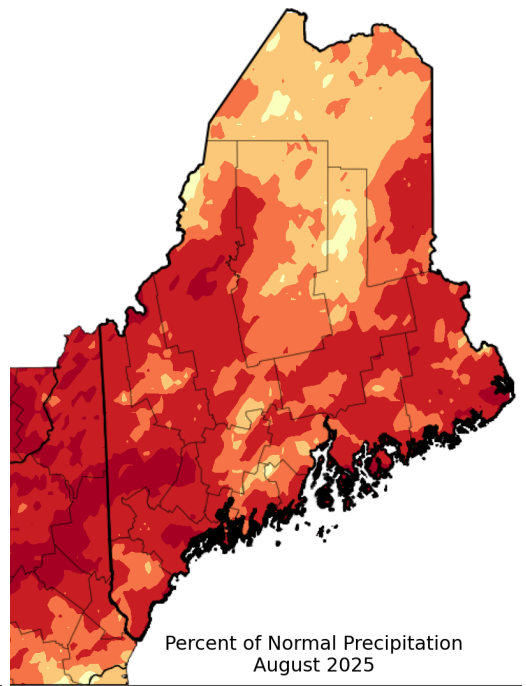


Figure 7. Precipitation Departure (inches) August 2025

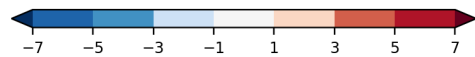
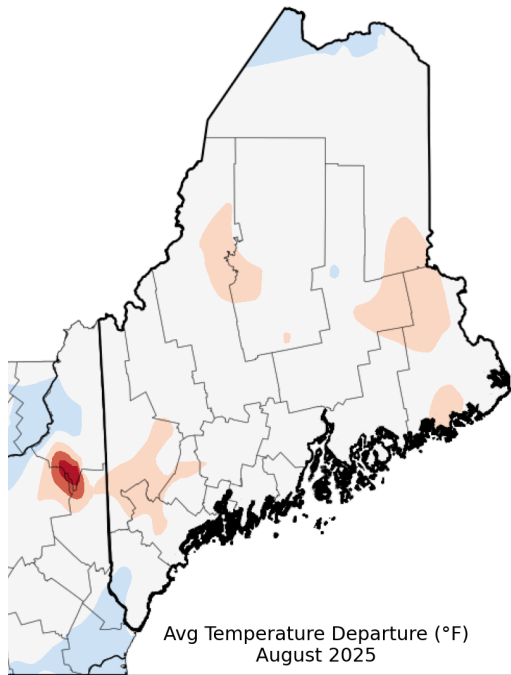


Figure 8. Avg Temperature Departure August 2025  
Figure 5-8 Source: [Northeast Regional Climate Center](#)

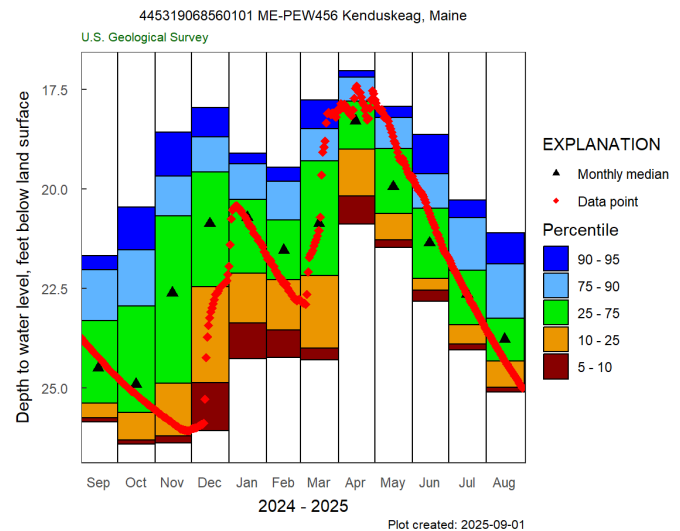
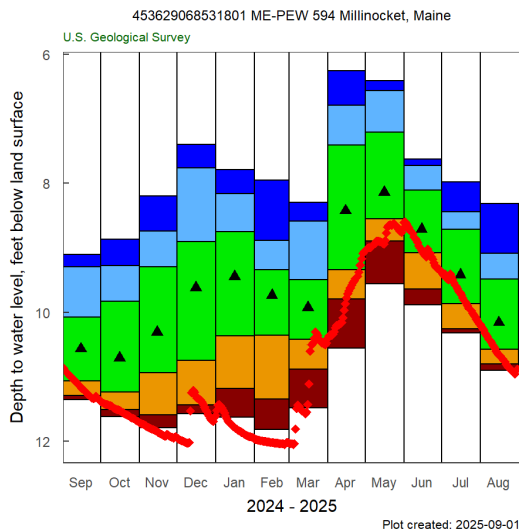
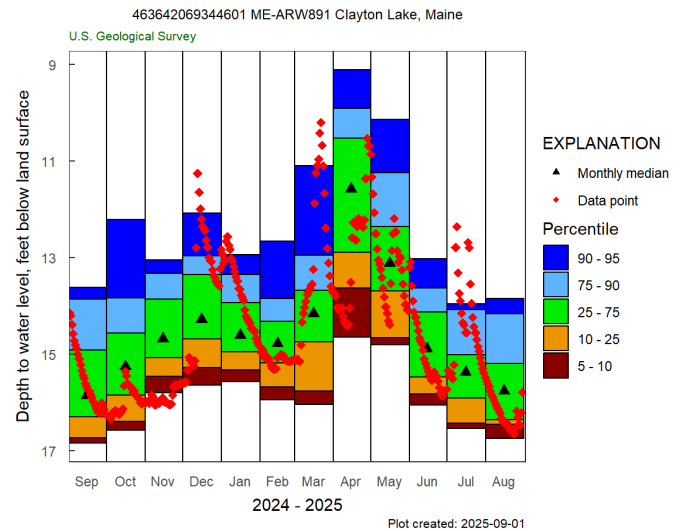
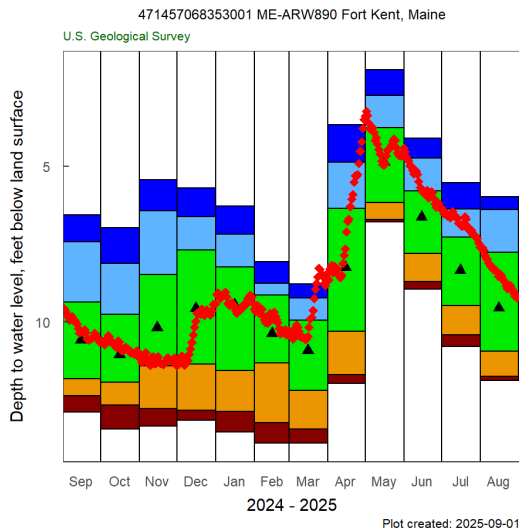
### August Average Monthly Streamflows

\*Data provided by the U.S. Geological Survey\*

River	Monthly Mean Flow (cfs)	% Normal (mean)	Percentile Class	Drainage (mi <sup>2</sup> )	Years of Record
Big Black River near Depot Mtn	71	46%	Normal	171	40
St. John River at Nine Mile Bridge	310	23%	Below Normal	1341	73
Allagash River near Allagash	601	52%	Normal	1478	94
St. John River at Dickey	876	34%	Normal	2680	79
St. John River at Fort Kent	1224	23%	Much Below Normal	5929	97
Fish River near Fort Kent	271	37%	Below Normal	873	94
Aroostook River near Masardis	184	29%	Below Normal	892	66
Aroostook River at Washburn	408	38%	Below Normal	1654	93
St. Croix River at Vanceboro	325	42%	Much Below Normal	413	95
St. Croix River at Baring	451	28%	Low	1374	64
Grand Lake Stream at Grand Lake Stream	69	15%	Low	228.3	95
Narraguagus River at Cherryfield	45	32%	Below Normal	227	76
East Branch Penobscot River at Grindstone	552	59%	Normal	837	102
Mattawamkeag near Mattawamkeag	101	13%	Much Below Normal	1418	89
Piscataquis River near Dover-Foxcroft	20	11%	Much Below Normal	298	121
Sebec River at Sebec	67	24%	Much Below Normal	326	69
Piscataquis River at Medford	157	19%	Much Below Normal	1162	93
Penobscot River at West Enfield	3463	53%	Much Below Normal	6422	121

### August Monthly Average Groundwater Levels

Station	Percentile Class	Monthly Mean Depth to Water Level below land surface (feet)	Years of Record
Hadley Lakes	Normal	5.71	40
Kenduskeag	Below Normal	24.28	47
Calais	Normal	2.91	45
Millinocket	Below Normal	10.19	32
Clayton Lake	Below Normal	15.50	47
Fort Kent	Normal	7.55	49





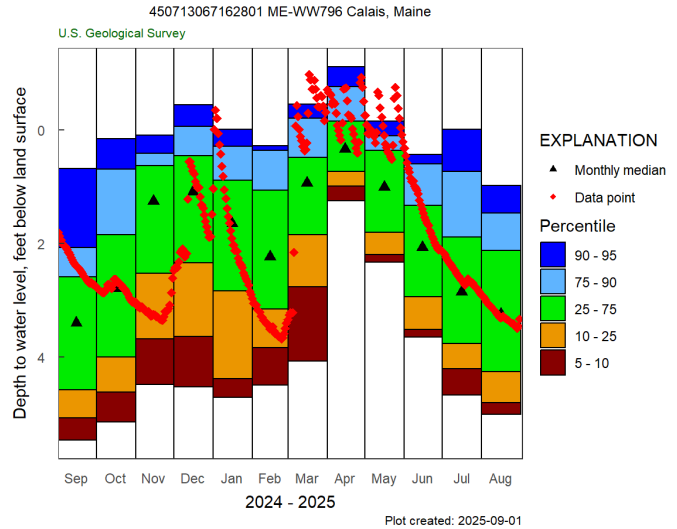
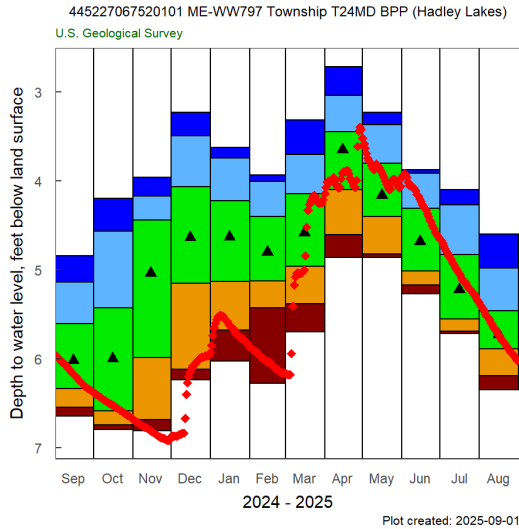
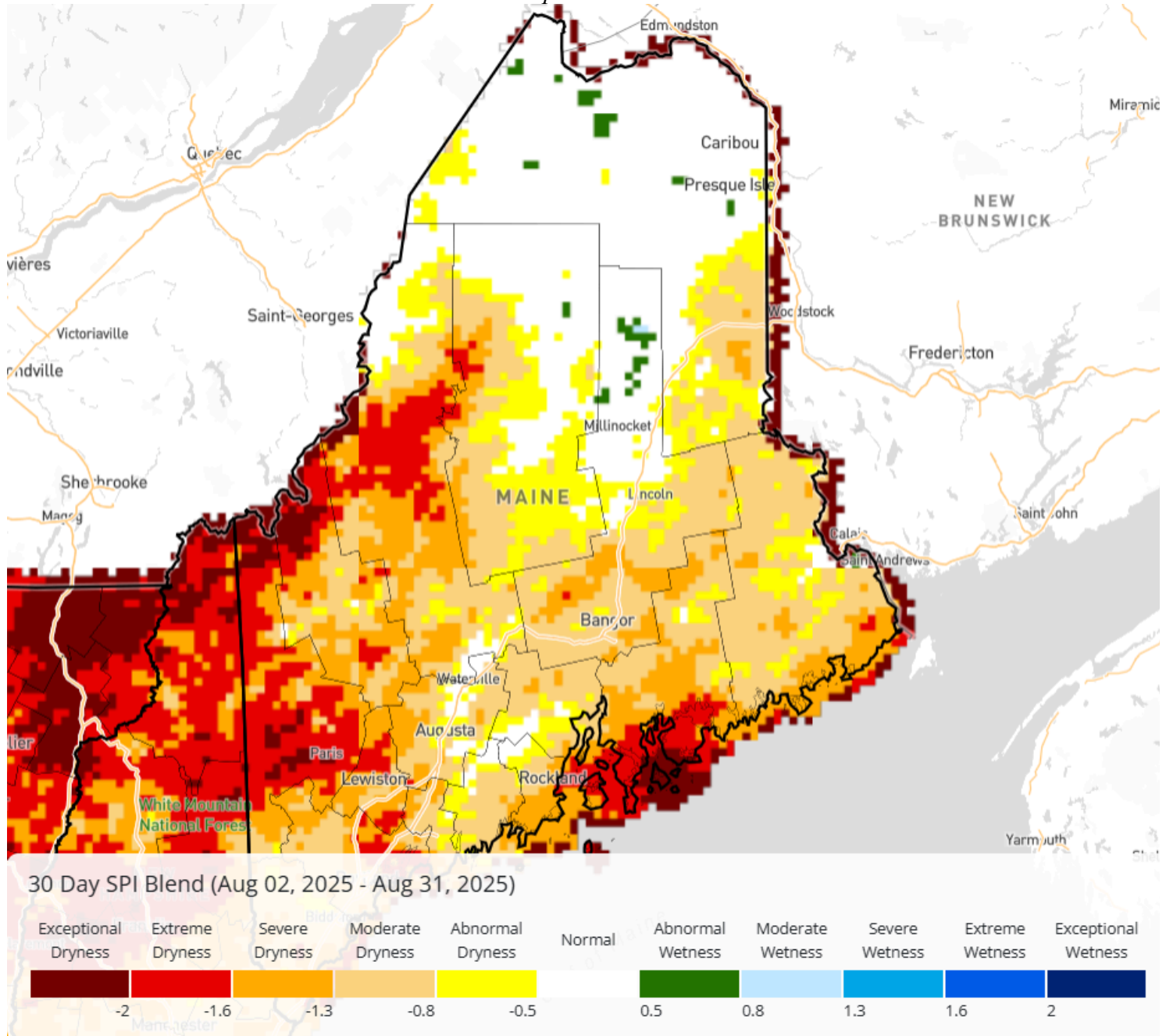


Figure 9-14: Groundwater Level Yearly Plots to Current  
Source: [United States Geological Survey](https://www.usgs.gov/)

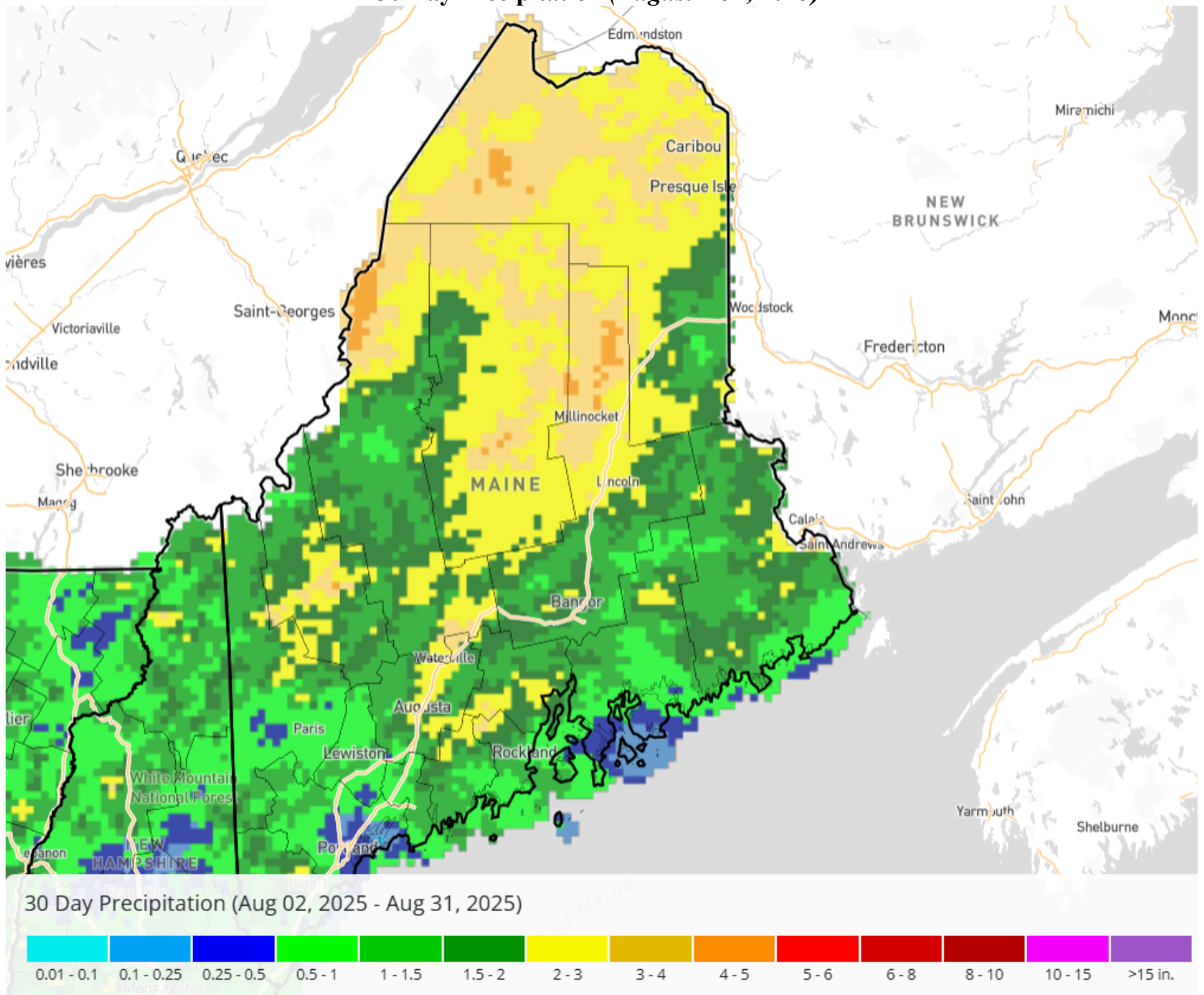
Flow or Water Level	Percentile Range	Explanation
Ice Impacted	NA	Ice impacted resulting in No Data available
Low	0 <sup>th</sup>	The monthly mean streamflow or median water level during this month is the lowest ever recorded during the period of record for this site.
Much Below Normal	0 <sup>th</sup> 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.
Below Normal	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.
Above Normal	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.
Much Above Normal	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.
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.

### 30 Day SPI Blend (August 2-31, 2025)

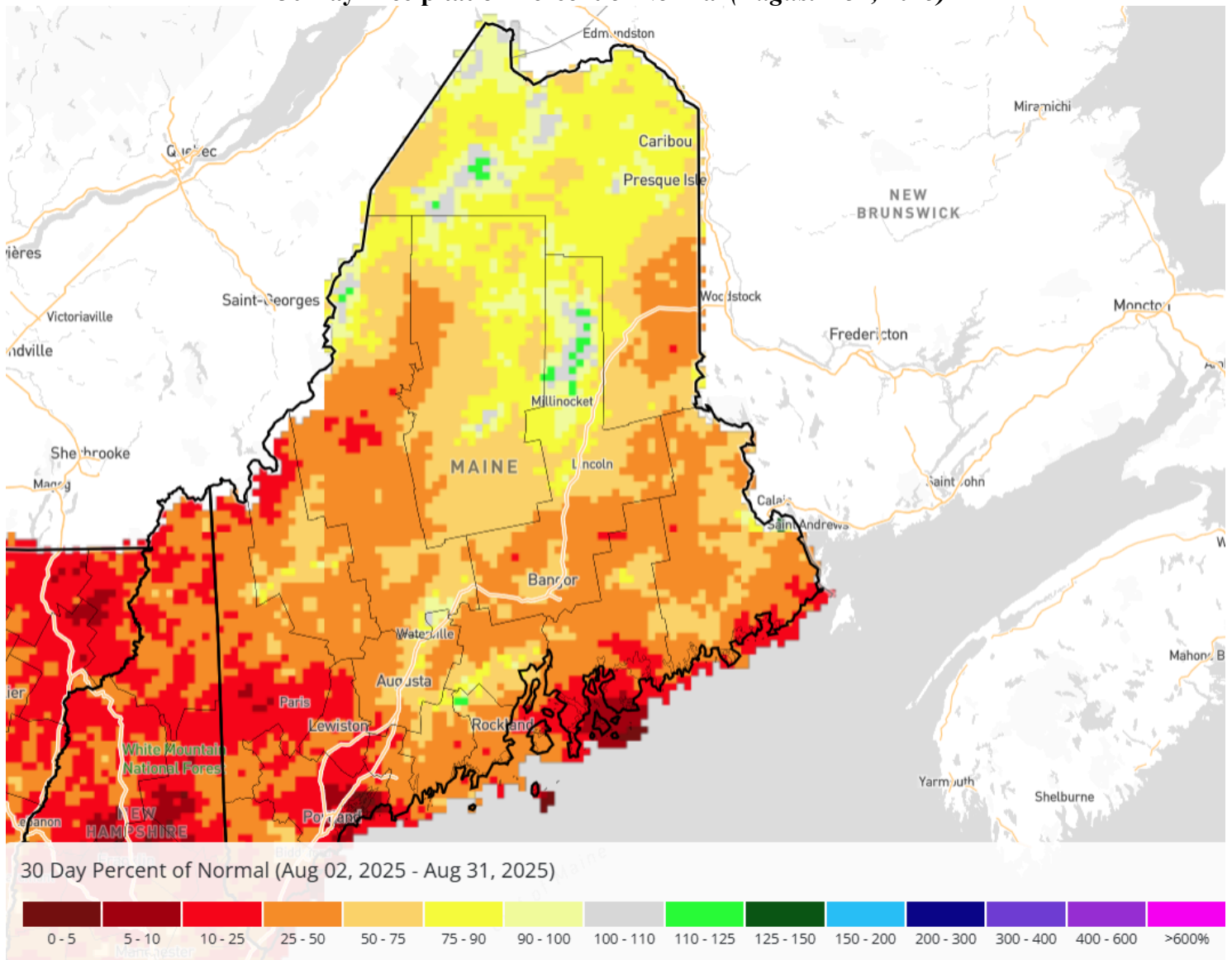
The SPI Blend is a modified version of the Standardized Precipitation Index (SPI) that is used to assess drought conditions by considering precipitation data on multiple time scales. It uses a linear weighting system, giving more weight to recent precipitation within a given time period. This approach allows for a more nuanced understanding of drought conditions compared to the traditional SPI, which considers all precipitation equally within a time period.



### 30 Day Precipitation (*August 2-31, 2025*)



### 30 Day Precipitation Percent of Normal (*August 2-31, 2025*)



**Non-Routine Hydrologic Products from WFO Caribou, ME  
August 2025**

<b>Product</b>	<b>How Many Issued</b>	<b>Reason for Issuance</b>
None	NA	NA

**CoCoRaHS Complete Precipitation Reports  
www.cocorahs.org  
August 2025**

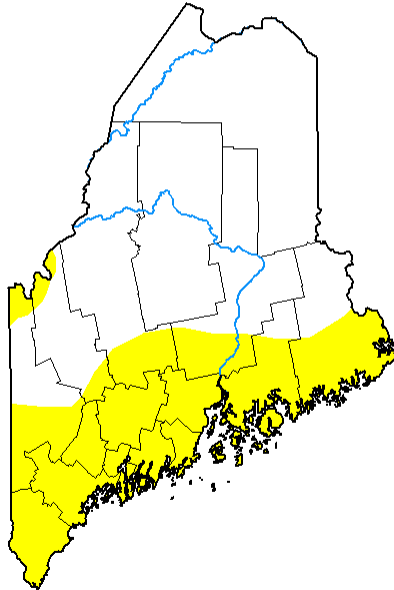
<b>Station Number</b>	<b>Station Name/Location</b>	<b>Total Precipitation (inches)</b>
ME-AR-15	Presque Isle 1.3 WSW	3.32
ME-AR-18	New Sweden 4.9 NNW	3.24
ME-AR-28	Presque Isle 4.2 S	2.89
ME-AR-41	Castle Hill 1.0 S	3.72
ME-AR-42	Houlton 2.5 NNW	1.30
ME-HN-2	East Surry	1.85
ME-HN-4	Mariaville 1.4 ESE	1.04
ME-HN-42	Bucksport 3.3 NNW	1.58
ME-HN-56	Surry 2.5 SSE	1.20
ME-PN-10	Lincoln 4.3 NE	1.47
ME-PN-47	Milford 0.8 SSW	2.12
ME-PN-55	Orono 1.1 SSW	1.77
ME-PN-58	Hudson 2.4 ESE	0.84
ME-PN-62	Glenburn 2.0 ESE	2.18
ME-PN-63	Dixmont 4.5 NE	1.99
ME-PS-9	Abbot 4.6 WNW	2.98
ME-WS-4	Cooper 0.5 SE	2.41
ME-WS-10	Pembroke 5.4 SSE	1.13
ME-WS-11	Whiting 2.3 WSW	1.24
ME-WS-31	Eastport 1.4 ESE	1.39
ME-WS-34	Perry 3.8 NNW	2.80

**\*Additional CoCoRaHS reports were not complete with 31 days of record**

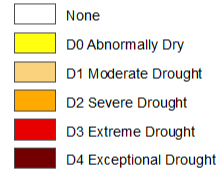
**Source: <https://cocorahs.org/ViewData/TotalPrecipSummary.aspx>**

**Drought Monitor August 5, 2025**  
**U.S. Drought Monitor**  
**Maine**

**August 5, 2025**  
(Released Thursday, Aug. 7, 2025)  
Valid 8 a.m. EDT



**Intensity:**



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:**

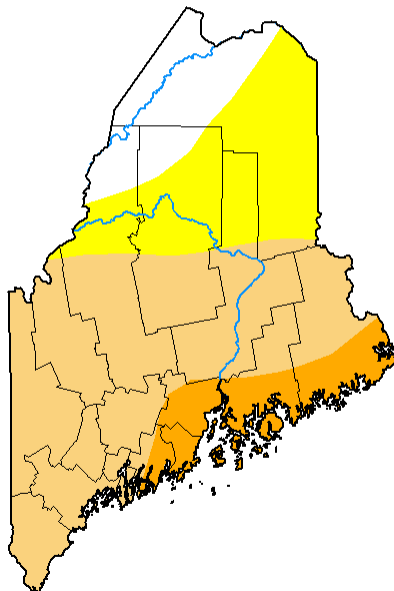
Richard Tinker  
CPC/NOAA/NWS/NEP



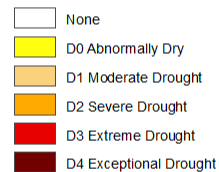
[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

**Drought Monitor August 26, 2025**  
**U.S. Drought Monitor**  
**Maine**

**August 26, 2025**  
(Released Thursday, Aug. 28, 2025)  
Valid 8 a.m. EDT



**Intensity:**



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:**

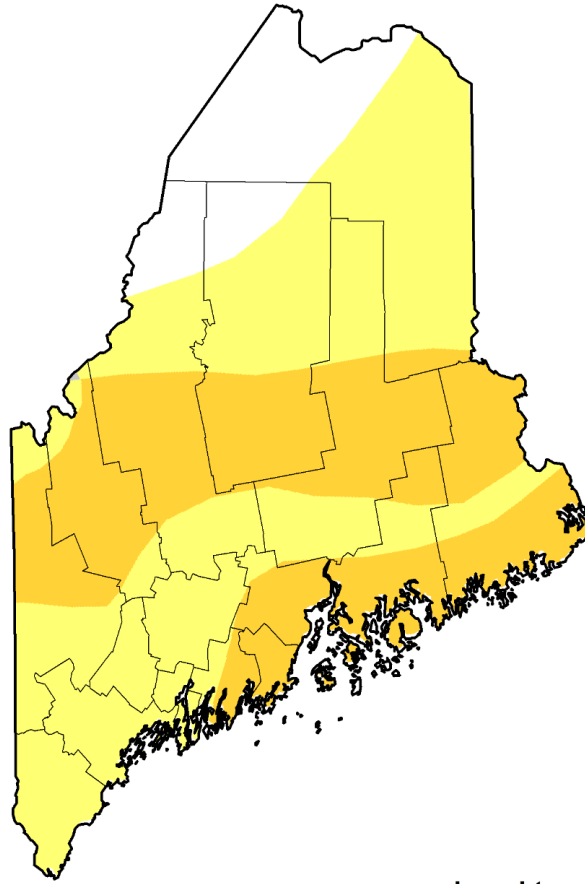
Brad Rippey  
U.S. Department of Agriculture



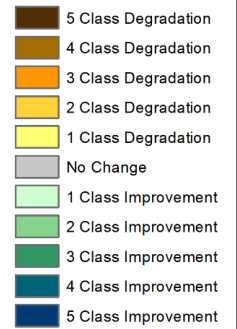
[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

## Drought Monitor Change in August 2025

### U.S. Drought Monitor Class Change - Maine 3 Week



August 26, 2025  
compared to  
August 5, 2025



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

Week	None (%)	D0-D4 (%)	D1-D4 (%)	D2-D4 (%)	D3-D4 (%)	D4 (%)	DSCI
8/5/2025	64.59	35.41	0	0	0	0	35
8/26/2025	13.10	86.90	62.67	10.93	0	0	160
Change	-51.49	51.49	62.67	10.93	0	0	125



## **Dry Conditions / Drought Photos**

North Newburgh, Penobscot County, 8/22/2025  
Courtesy: Will Seavey



Eagle Lake, Aroostook County, 8/16/2025  
Courtesy: Pete Freeman





Prospect Harbor, Hancock County, 8/16/2025  
Courtesy: Laurie Mattila



Prentiss, Penobscot County, 8/16/2025  
Courtesy: Kathy Bosse

*Notes: Lots of early leaf drops, birches, maples, aspen. Very crunchy walking.*

