

<b>NWS FORM E-5</b>  U.S. DEPARTMENT OF COMMERCE NOAA, NATIONAL WEATHER SERVICE  <b>MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS</b>  TO: NATIONAL WEATHER SERVICE (W/OH12x1) HYDROMETEOROLOGICAL INFO CENTER 1325 EAST-WEST HIGHWAY, RM 7116 SILVER SPRING, MD 20910	HSA OFFICE: <b>Marquette, MI</b>
	REPORT FOR (MONTH / YEAR): <b>August 2018</b>
	DATE: <b>September 11, 2018</b>
	SIGNATURE: <b>Robin J. Turner, MIC</b> <b>Keith White, Hydrology Program Manager</b>
When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (WSOM E-41).	

X

An X inside this box indicates no flooding occurred within this Hydrologic Service Area.

**August Flooding**

August was another relatively quiet month across the Upper Peninsula in terms of flooding. Despite areas of heavy rainfall over the previously saturated western UP, no reports of river flooding were received by NWS Marquette, and minor street flooding in Ironwood on the morning of the 24<sup>th</sup> after 2.5-3” of rain in a 7 hour period fell over the city.

Three Flood Advisories were issued during the month. On August 1<sup>st</sup>, a Small Stream Flood Advisory was issued for a portion of Luce County with radar indicated rainfall totals approaching 2-3” over a localized area.

A similar swath of 2-3” rainfall totals fell across far northwestern Gogebic County along the Lake Superior shoreline on August 26<sup>th</sup>, leading to another Small Stream Flood Advisory there.

Lastly, two rounds of heavy rain fell over northern Houghton County on August 30<sup>th</sup> and 31<sup>st</sup>, with 2 day totals of 2-3” with a pocket or two of isolated higher totals. A Flood Advisory was issued on the 31<sup>st</sup> in anticipation of the last round of showers and storms moving over the area.

**August Precipitation**

Two distinct maxima of heavy rain fell during the month of August, with much above normal precipitation falling across the western Upper Peninsula and also across a swath stretching from southern Dickinson County eastward through southern Schoolcraft and Luce counties. An area of near-normal precipitation with localized areas of 0.5”-1” departures in either direction fell across the central counties of Iron, eastern Baraga, northern Dickinson, and much of Marquette stretching east into Alger. Northern Schoolcraft and Luce Counties saw below average precipitation, especially near Paradise.

Below is a chart of some of the larger cities in the Upper Peninsula, with monthly precipitation in inches and the amount of inches above or below normal for the month. Any notable monthly ranks are also included. See figures 1 and 2 below for a smoothed out aerial view of these data.

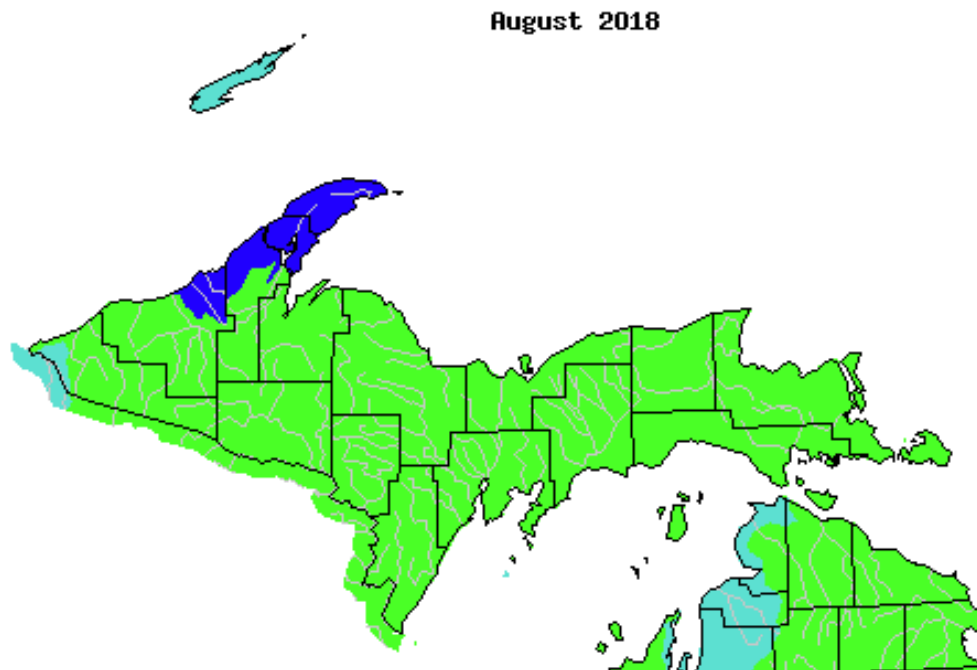
Location	Precipitation	Above/Below	Rank
WFO Marquette	4.65”	+1.60”	9/57
Marquette City	3.21”	+0.58”	
Houghton Airport	4.50”	+2.09”	21/131
Ironwood	7.43”	+4.06”	3/117
Iron Mountain	4.90”	+1.64”	
Manistique	3.83”	+0.58”	
Munising	2.70”	-0.78”	

Newberry	2.73"	-0.50"	
Stambaugh	2.63"	-0.47"	

### **Drought Discussion**

The September 6<sup>th</sup> release of the US Drought Monitor scaled back D0 drought, limiting it to the northeastern third of Luce county. That area received a lot of rain in 3 days following the issuance, and no drought impacts are expected. For the latest drought status, please go to <http://www.drought.gov>.

### **August River Levels**

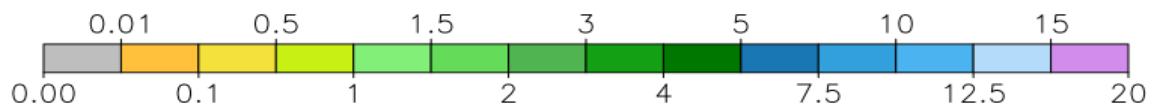
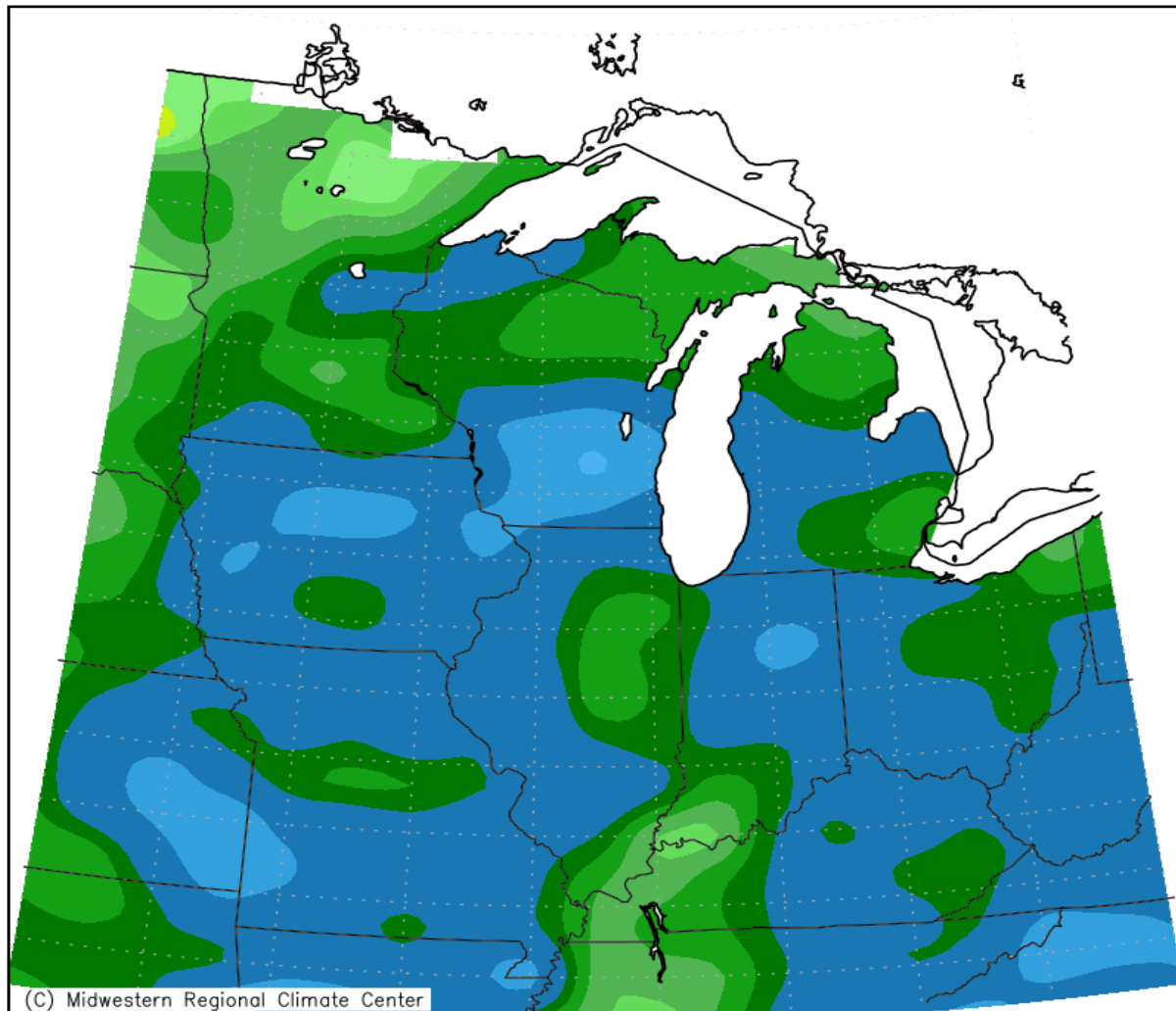


Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		

### **August Products Issued**

- 0 – Flash Flood Watch (FFA)
- 0 – Flood Warning (FLW)
- 0 – Flash Flood Warning (FFW)
- 0 – Flash Flood Statement (FFS)
- 4 – Flood Advisories and Statements (FLS)
- 31 – Hydrologic Summary (RVA)
- 31 – Daily River Forecasts (RVD)
- 1 – Hydrologic Outlook (ESF)

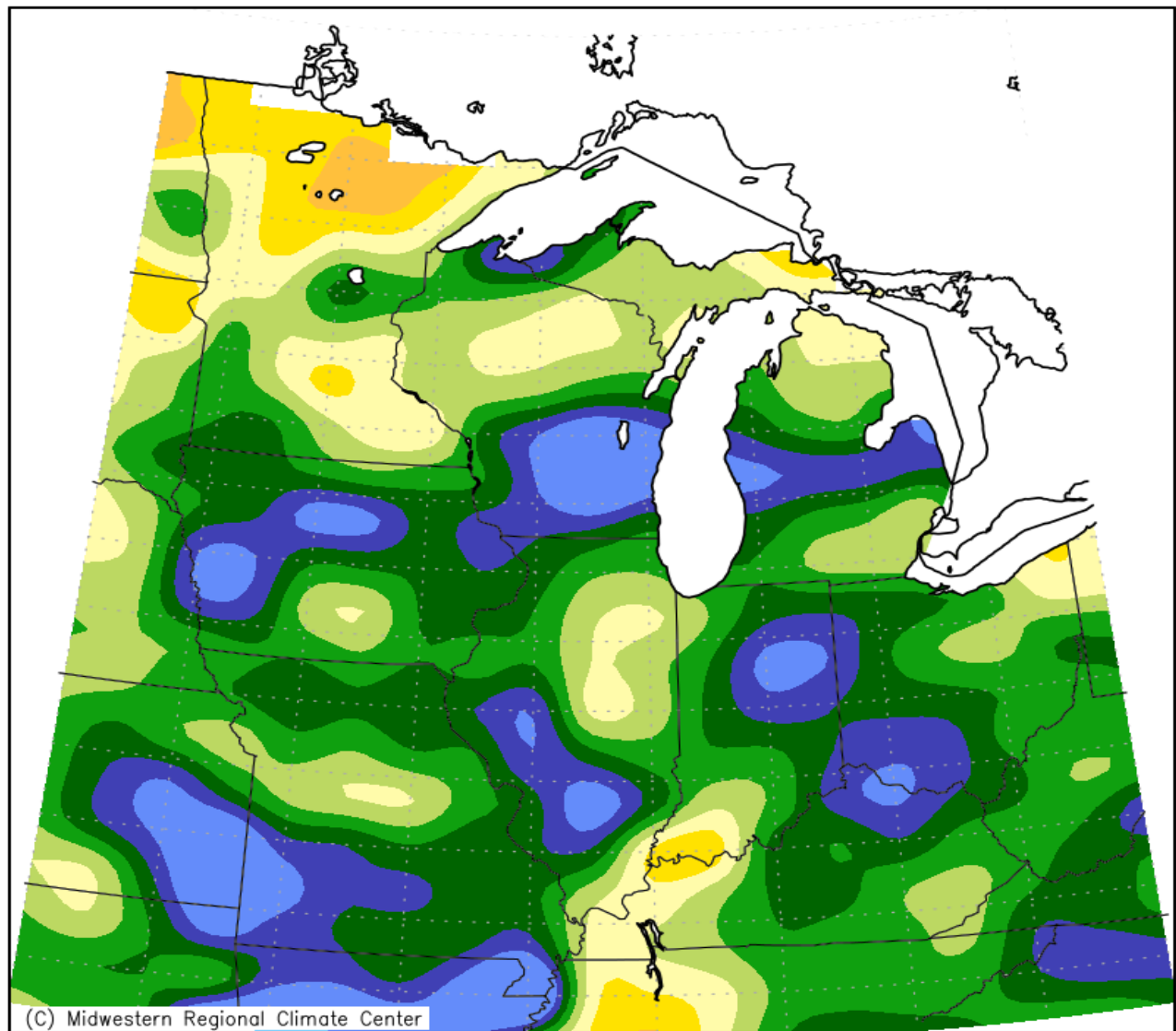
Accumulated Precipitation (in)  
August 1, 2018 to August 31, 2018



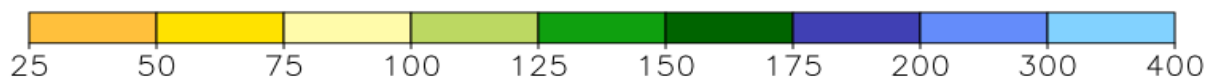
Midwestern Regional Climate Center  
Illinois State Water Survey, Prairie Research Institute  
University of Illinois at Urbana–Champaign

Figure 1. August 2018 Monthly Precipitation Totals

# Accumulated Precipitation: Percent of Mean August 1, 2018 to August 31, 2018



Mean period is 1981–2010.



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Figure 2. August 2018 Percent of Mean of Accumulated Precipitation