

NWS FORM E-5 U.S. DEPARTMENT OF COMMERCE NOAA, NATIONAL WEATHER SERVICE MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS TO: NATIONAL WEATHER SERVICE (W/OH12x1) HYDROMETEOROLOGICAL INFO CENTER 1325 EAST-WEST HIGHWAY, RM 7116 SILVER SPRING, MD 20910	HSA OFFICE: Marquette, MI
	REPORT FOR (MONTH / YEAR): November 2018
	DATE: December 11, 2018
	SIGNATURE: Robin J. Turner, MIC Keith White, Hydrology Program Manager
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).	



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

November Precipitation

A relatively significant rain event impacted the Upper Peninsula on November 4th into the morning of the 5th, with about 20 reports of 1-1.5 inches of rain, mainly across the Keweenaw and southeastern Upper Michigan. Following this, temperatures plummeted and the majority of the month was dominated by snow. Most of this snow was of the lake effect variety; however a more significant lake enhanced snow event did affect much of the region on November 9th with the highest snow report of nearly 18" in Ironwood along with widespread wind gusts of 40-50 mph. A review of that storm is available [here](#).

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. The radar-estimated precipitation maps will not be included during the winter due to beam overshooting causing drastic underestimation over the western Upper Peninsula.

Location	Precipitation	% of normal	Rank	Snowfall	Above/Below	Rank
WFO Marquette	2.55"	80		37.7"	+13.3"	10/60
Marquette City	2.00"	76		16.0"	+5.1"	
Houghton Airport	4.19"	197		33.4"	+11.2"	
Ironwood	3.53"	131		40.5"	+16.0"	14/118
Iron Mountain	2.40"	124		5.0"	-0.9"	
Manistique	1.96"	79		14.0"	+9.3"	8/91
Munising	3.77"	101		30.7"	+17.7"	12/102
Newberry	2.59"	88		24.9"	+10.8"	9/113
Stambaugh	1.84"	98		10.4"	+1.6"	

November Flooding

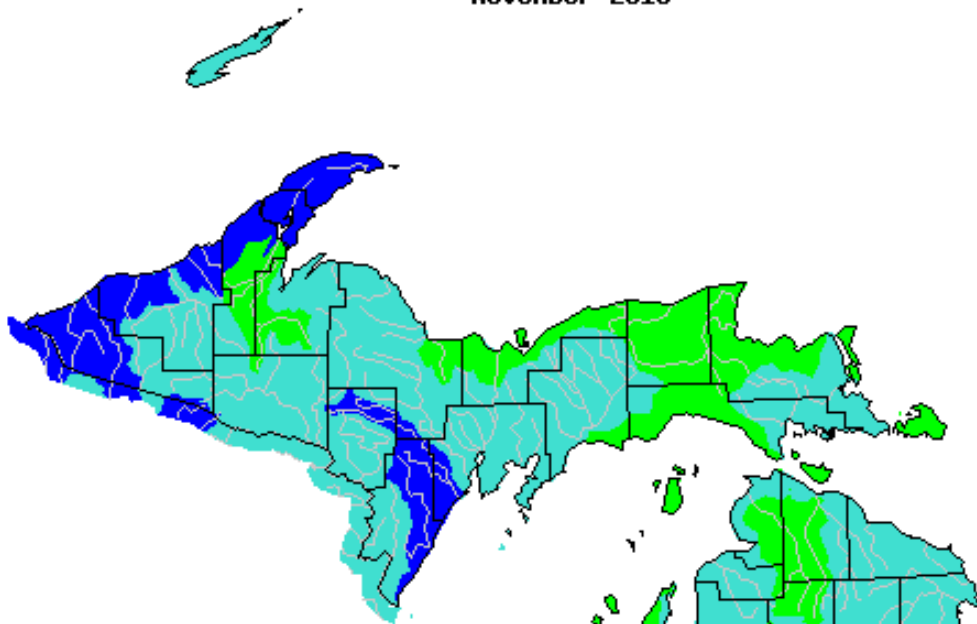
There was no flooding reported to the National Weather Service in the month of November. Thankfully, compared to this time last month, area streamflows have come down from their climatologically high levels somewhat.

Drought Discussion

The December 4th update of the US Drought Monitor continues to indicate no drought conditions across the MWS MQT Hydrologic Service Area (HSA). For the latest drought status, please go to <http://www.drought.gov>.

November River Levels

November 2018

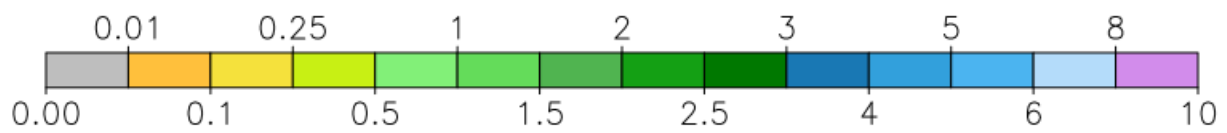
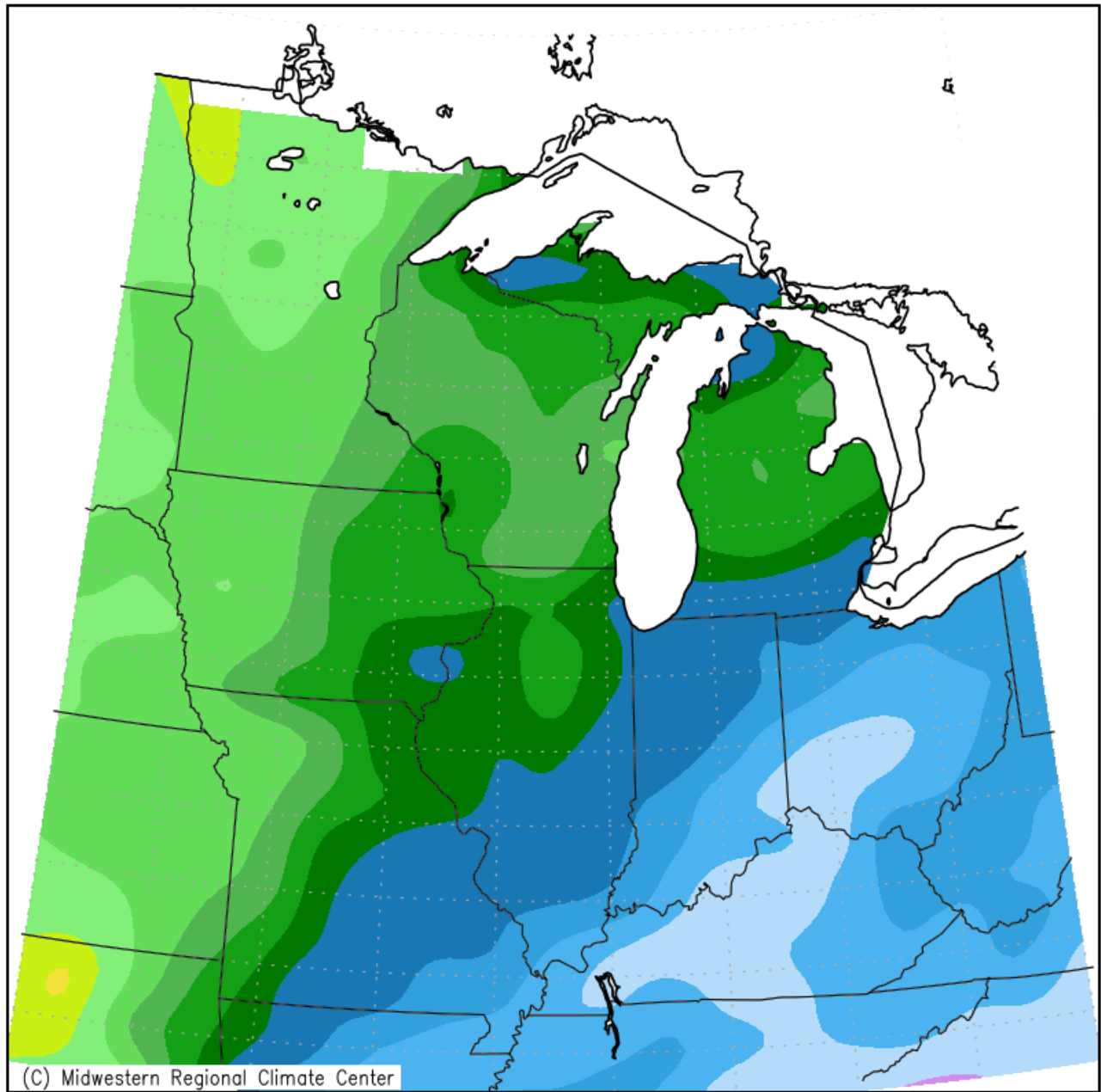


Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		

November Products Issued

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

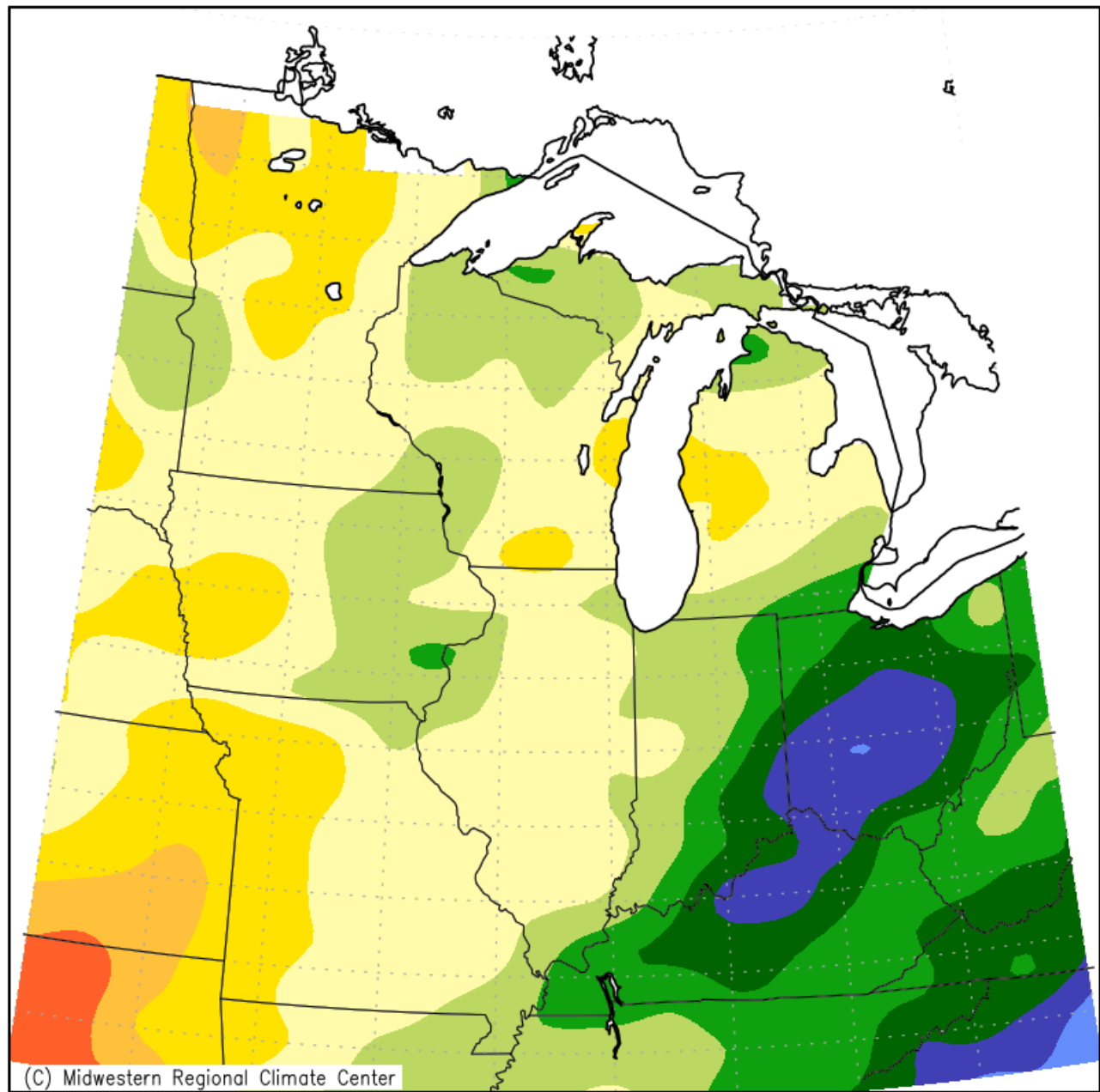
Accumulated Precipitation (in)
November 1, 2018 to November 30, 2018



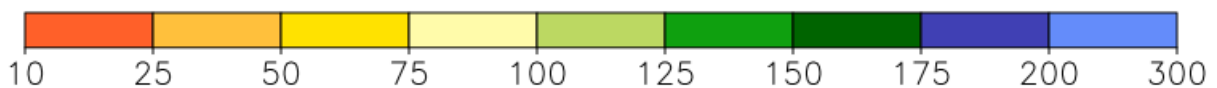
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Illinois State Water Survey, Prairie Research Institute
University of Illinois at Urbana–Champaign

Figure 1. November 2018 Monthly Precipitation Totals

Accumulated Precipitation: Percent of Mean November 1, 2018 to November 30, 2018



Mean period is 1981–2010.



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Figure 2. November 2018 Percent of Mean of Accumulated Precipitation