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): **May 2019** DATE: **June 4, 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.

May Precipitation

Precipitation was well above normal for the second month in a row and continues a trend that stretches back a full 12 months in which the majority of the Upper Peninsula has seen 50-100% more precipitation than normal.

The vast majority of this month's precipitation came in 4 events. On the first of the month, winter's last hurrah brought rain and snow to the area, with a general 0.25-0.6" of precip but isolated higher amounts approaching 1". The snow was quick to melt and generally dry conditions were observed through May 7th.

On May 8th-9th, a widespread 1.5-2" of rain fell across the Upper Peninsula, but thankfully this came over a relatively long period. A few locations in the higher terrain out west also recorded additional light snow in this event. Again, mainly dry weather followed for the next week plus with only some light to moderate showers on the 15th-17th.

The most impactful rain event of the month came on the 18th and 19th. The vast majority of the area received in excess of 1.75" of rain over those two days, with several locations in the north central and northeast recording 2.5-3.5+ inches.

Lastly, on the 27th into the 28th, another 0.5-1.5" of rain fell across mainly Southern Upper Michigan, with less than 0.2" reported over the far west.

Below is a chart of some of the larger cities in the Upper Peninsula, with monthly precipitation in inches and the percent of 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	% of normal	Rank	Snowfall	Above/Below
WFO Marquette	7.86"	258	2/57	5.9"	+4.5"
Marquette City	5.24"	207	12/154	0.0"	-0.6"
Quincy Hill	4.31"	172		3.3"	+2.3"
Ironwood	4.79"	153		1.2"	-0.7"
Iron Mountain	5.78"	190	9/118	0"	0"
Manistique	5.29"	194	3/90	0"	-T"
Munising	5.82"	195	5/102	T"	-0.3"
Newberry	4.88"	187		0.5	+0.4"
Stambaugh	5.19"	171	14/120	T"	-0.5"

May Flooding

The only river gage that was still reporting levels above flood stage entering May was the Michigamme River near Witch Lake, however flood waters were quickly receding and the river fell below flood stage by midday on the first.

After another several days of heavy rain on already saturated soils and with rivers still running well above average, flooding again occurred on the Sturgeon River near Alston for about 7 hours on the 20th. Similar to the April event, water briefly covered Halonen Road in two places. The Middle Branch of the Escanaba River at Humboldt also briefly flooded, with water flowing over County Rd FX just south of the gage site the evening of the 20th. Several other river gage locations reached bankfull stage but did not exceed flood stage during this time period. These include but are not limited to the Paint River at Crystal Falls and the Chocolay River near Harvey.

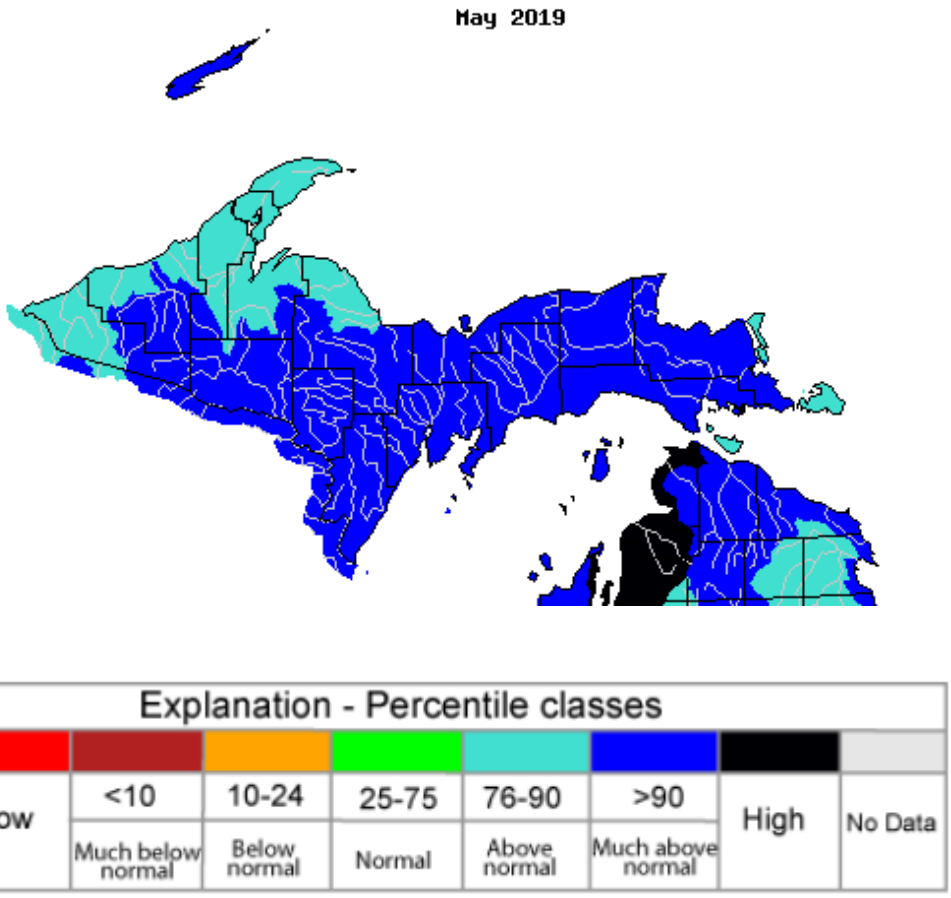
Media Links

https://www.upmatters.com/news/local-news/manistique-paper-inc-dam-part-of-critical-dam-removal-project/2001098688

Drought Discussion

The May 28th update of the US Drought Monitor continues to indicate no drought conditions across the NWS MQT Hydrologic Service Area (HSA). For the latest drought status, please go to http://www.drought.gov.

May River Levels



May Products Issued

5 – Hydrologic Outlook (ESF; May 17th updated 3 times; one monthly 90 day outlook)
0 – Flood Watch (FFA)
4 – Flood Warning (FLW; Two warnings, one correction and one misplaced cancellation statement)
51 – Flood Advisories and Statements (FLS; includes some corrected products and some carryover statements from warnings issued in April)
0 – Flash Flood Warning (FFW)
0 – Flash Flood Statement (FFS)
31 – Hydrologic Summary (RVA)
31 – Daily River Forecasts (RVD)

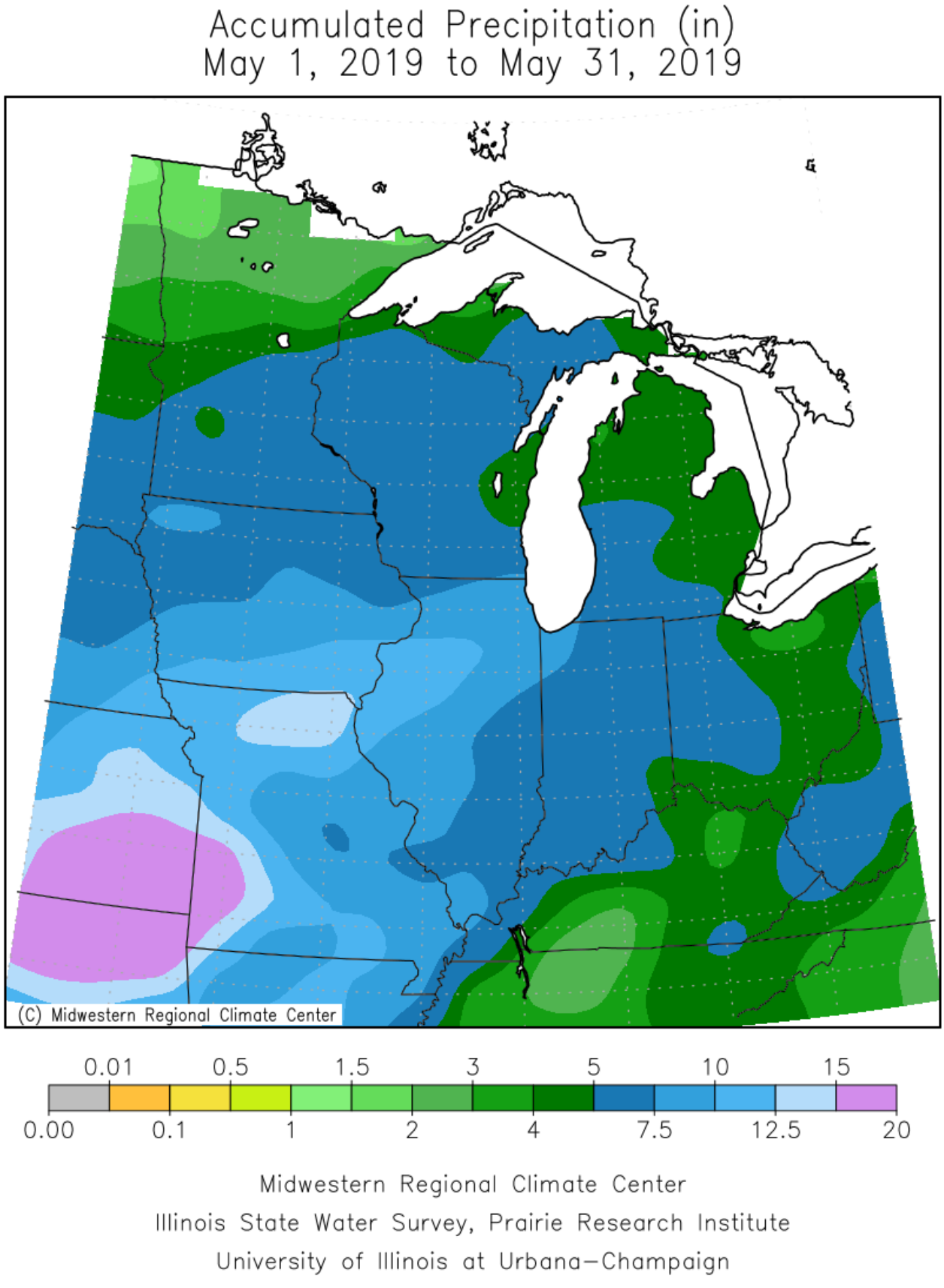


Figure 1. May 2018 Monthly Precipitation Totals.

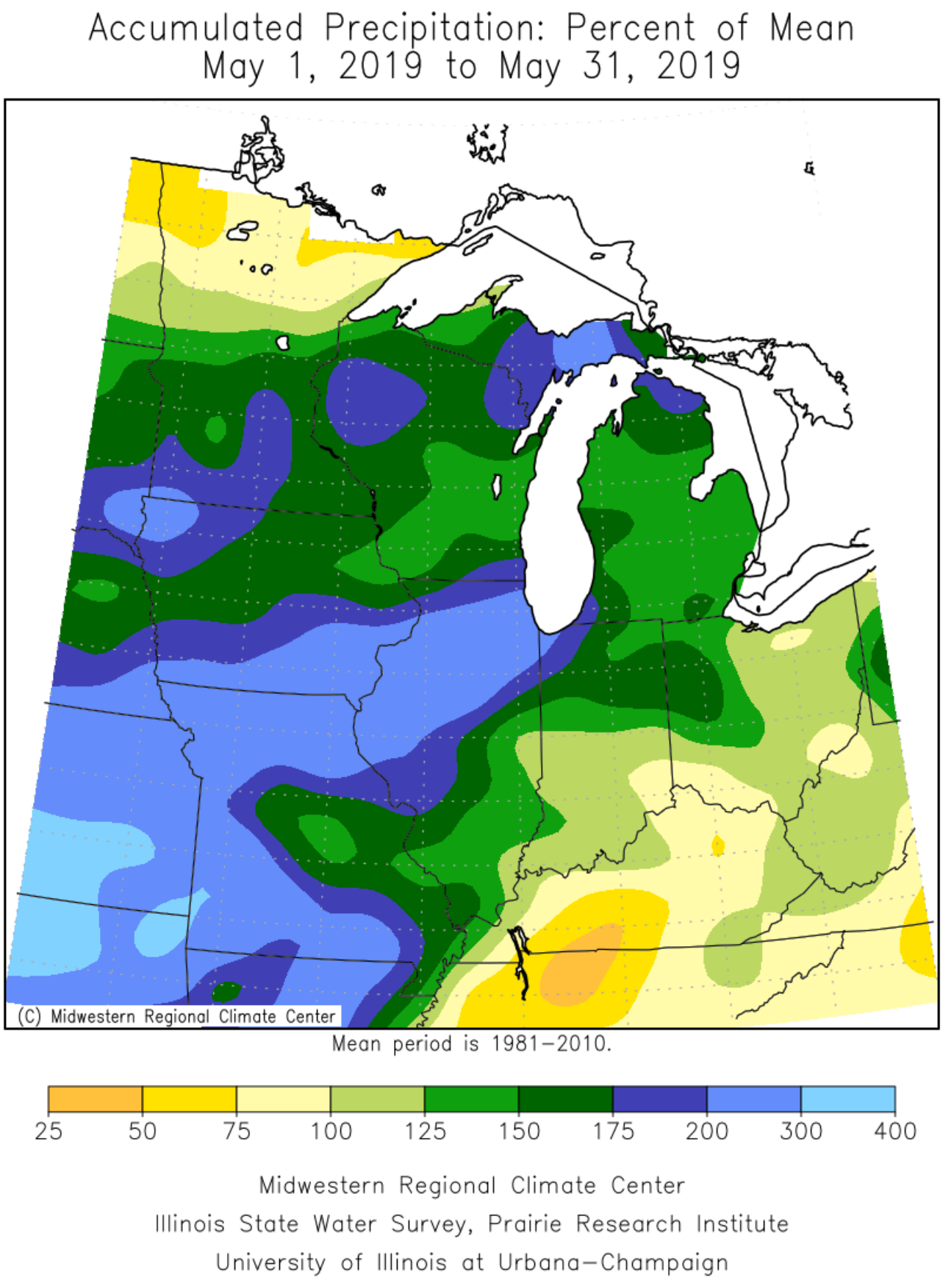


Figure 2. May 2018 Percent of Mean of Accumulated Precipitation