Monthly Report of River and Flood Conditions

Report for May 2022

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 2022** DATE: **June 12th, 2022** SIGNATURE: **Nathan Lynum, Asst. Hydro Program Manager** **Robin J. Turner, MIC**
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.

Summary

May 2022 saw continued normal to much above normal streamflow as the winter snowpack continued to melt into regional waterways. Elevated river levels were observed on the Michigamme River, Middle Branch Escanaba River, Paint River and Sturgeon River in the first six days of May and in the immediate middle of the month. Slow-moving, heavy-rain producing thunderstorms created areal and flash flooding in central portions of Upper Michigan between May 12th and 13th. A Flash Flood Warning was issued late in the afternoon of May 12th for up to 3 inches of rain that fell in south-central Dickinson County. News and social media reports showed flooded streets and washed out roadways in northern Marquette County from the heavy downpours that occurred in the late afternoon and evening of May 12th. The Porcupine Mountains and eastern Luce County remain the only areas that are highlighted in the Drought Monitor as being Abnormally Dry. The Climate Prediction Center continued to show wetter than normal soils for the month over the central and western U.P.

Location	Precipitation	% of Normal	Snowfall
WFO Marquette	3.53	105	0.0
Marquette City	2.32	80	0.0
Quincy Hill	3.44	M	0.0
Ironwood	4.28	114	0.0
Iron Mountain	4.16	120	0.0
Manistique	3.92	132	0.0
Munising	2.54	83	0.0
Stambaugh	5.86	185	0.0

NOTE: Precipitation after 8 AM EST May 31st was counted in June stats for all but the WFO Marquette site due to the reporting structure of our cooperative observers.

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Flooding Conditions

The beginning of May 2022 featured elevated river levels mainly from continued snow melt, but also some light rainfall. The elevated river levels were especially noted on the Sturgeon and Michigamme Rivers in central Upper Michigan through the first six days of May. Areal and flash flooding conditions occurred in the afternoon and evening of May 12th as slow-moving, heavy-rain producing thunderstorms overspread the western and central U.P. The heaviest rain that day fell in the central portions of Upper Michigan, and also created another round of elevated river levels (Paint River and Michigamme River) and riverine flooding (Middle Branch Escanaba River) by May 13th. The Middle Branch Escanaba River crested at 6.51 feet (slightly above the Flood Stage of 6.50 feet) two different times in the early the afternoon of May 13th before falling below Flood Stage by late afternoon. Elevated river levels also returned to the Michigamme River until May 16th when the last River Flood Advisory was cancelled. The second half of May was fairly quiet with no more flooding observed or reported.

River Conditions

Streamflow across much of southern portions of Upper Michigan was near-normal, while flows in the western and northern parts of the U.P. were above to much above-normal. Wet soils aided in producing efficient runoff of snow melt and light rain in early May that then transitioned into excessive rainfall in mid-May creating areal, flash and riverine flooding.

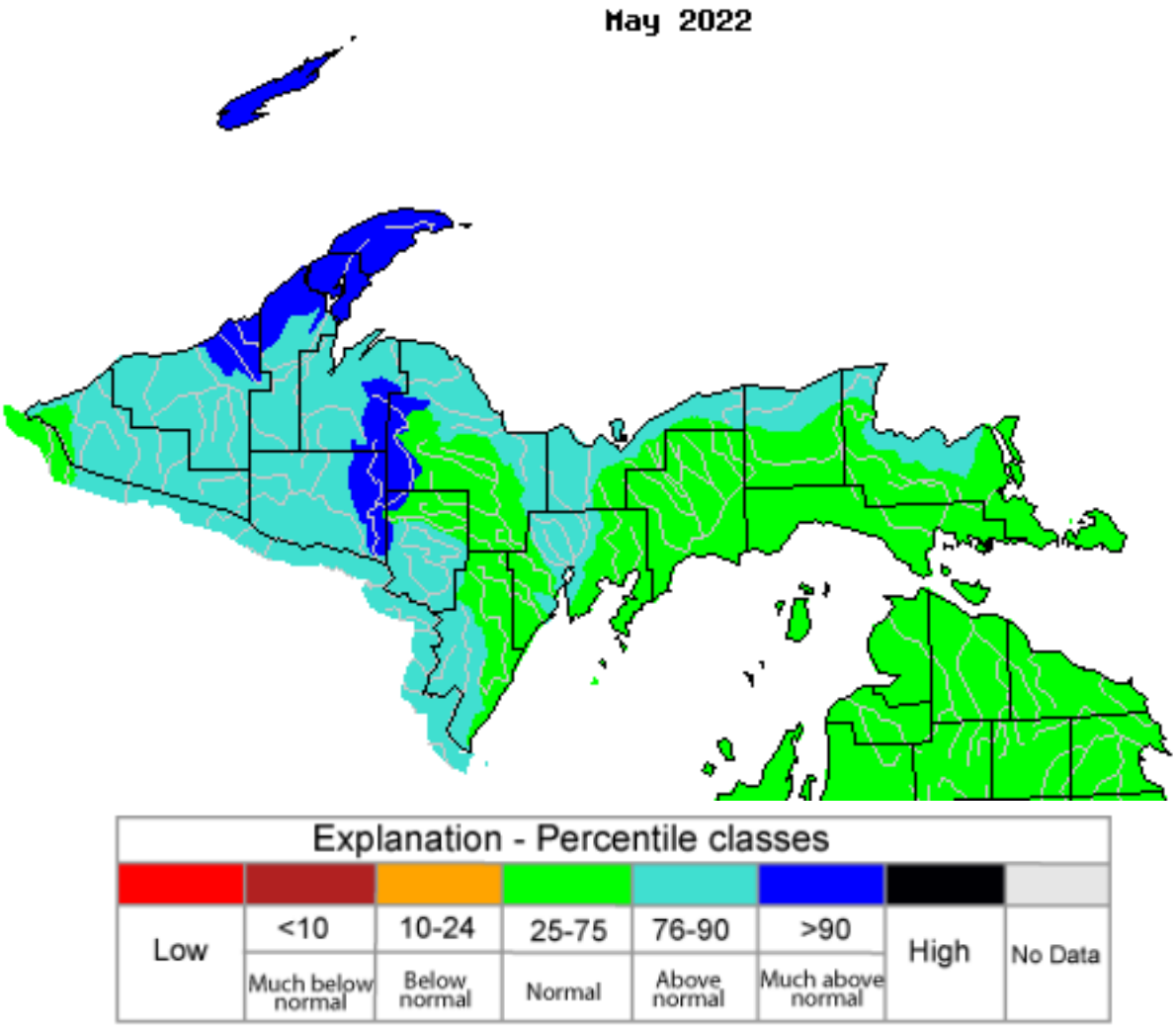

Figure 1: USGS monthly average streamflow in May 2022 across Upper Michigan

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Snowpack SWE (Snow Water Equivalent) Conditions

No snowpack currently exists across Upper Michigan.

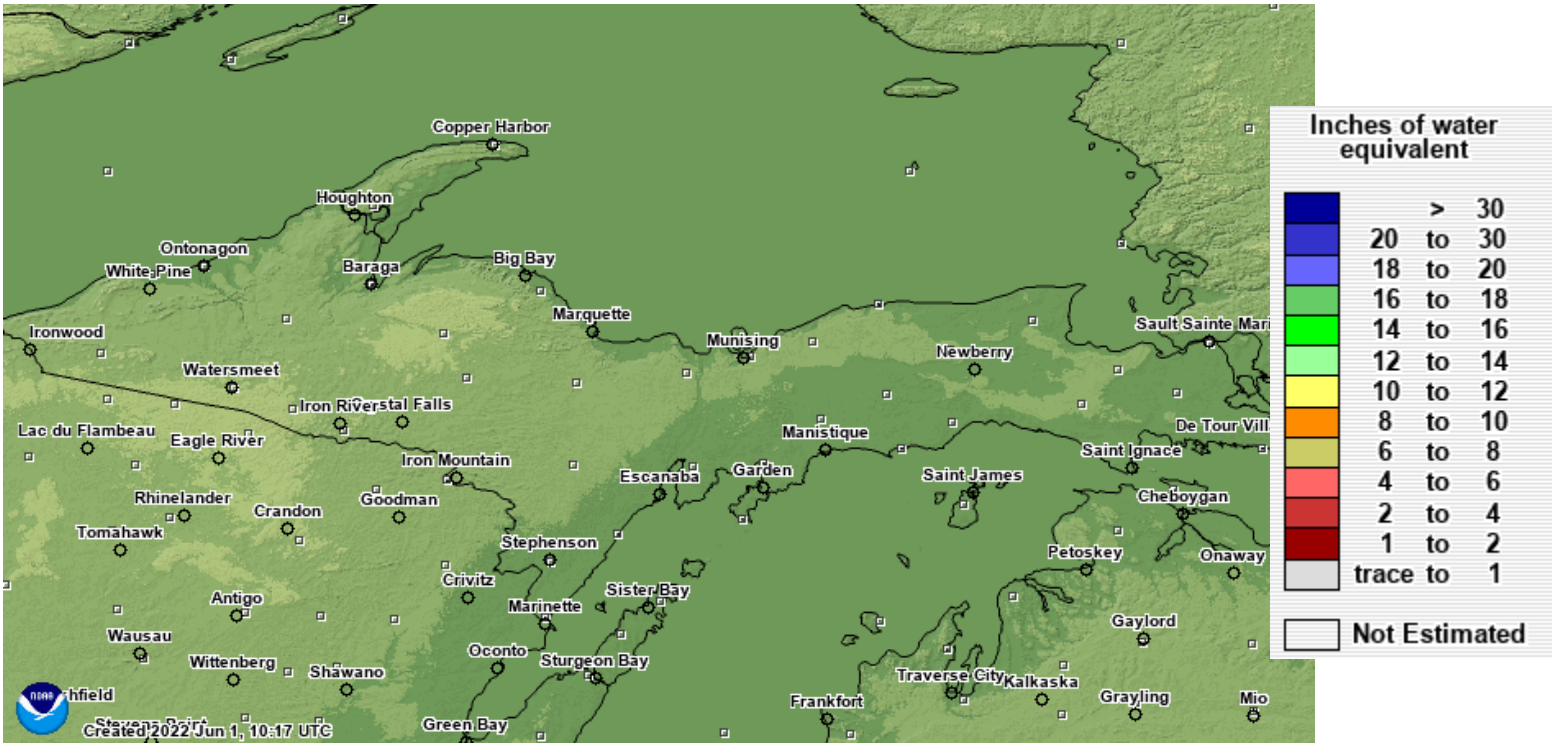
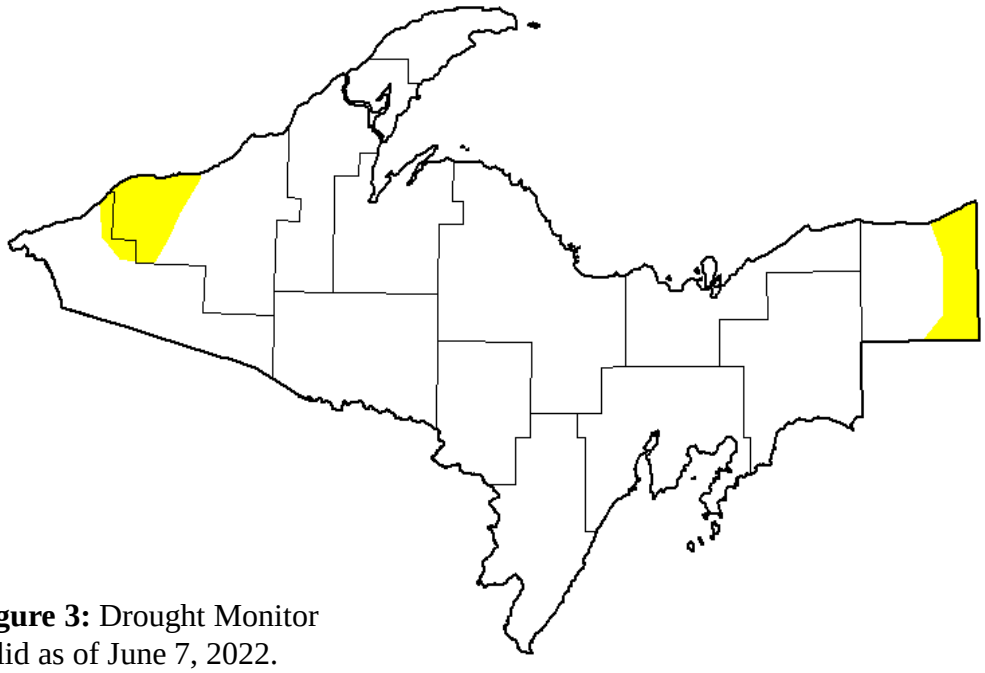


Figure 2: Current modeled snowpack snow water equivalent on June 1st.

Drought Discussion

Upper Michigan remains drought free except for areas around the Porcupine Mountains and the eastern Hiawatha National Forest where abnormally dry conditions continued in May. For the latest drought status, please visit www.drought.gov.



June 7, 2022
(Released Thursday, Jun. 9, 2022)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	94.90	5.10	0.00	0.00	0.00	0.00
Last Week 05-31-2022	94.90	5.10	0.00	0.00	0.00	0.00
3 Months Ago 03-08-2022	51.86	48.14	27.63	0.00	0.00	0.00
Start of Calendar Year 01-04-2022	26.00	74.00	35.44	0.51	0.00	0.00
Start of Water Year 09-28-2021	51.73	48.27	6.70	0.49	0.00	0.00
One Year Ago 06-08-2021	30.01	69.99	7.76	0.00	0.00	0.00

Intensity:
None
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. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

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CPC/NOAA

droughtmonitor.unl.edu

Figure 3: Drought Monitor valid as of June 7, 2022.

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Media Links

County Road washout: https://www.uppermichiganssource.com/2022/05/13/marquette-county-road-510-washout-among-damage-after-heavy-rain/
Flooded roads in town of Ishpeming, MI: https://www.uppermichiganssource.com/2022/05/13/marquette-county-crews-work-roads-damaged-by-severe-storms/
Water drawdown began after partial dam failure in April: https://www.mlive.com/news/2022/05/drawdown-to-repair-partially-failed-dam-in-upper-peninsula-will-continue-into-2023.html

Hydro Products Issued

Product	Number
Hydrologic Outlook (ESF)	2
Flood Watch (FFA)	0
Flood Warning (FLW)	1
Flood Advisories and Statements (FLS)	50
Flash Flood Warning (FFW)	3
Flash Flood Statement (FFS)	2
Hydrologic Summary (RVA)	31
Daily River Forecasts (RVD)	29

Precipitation Summary

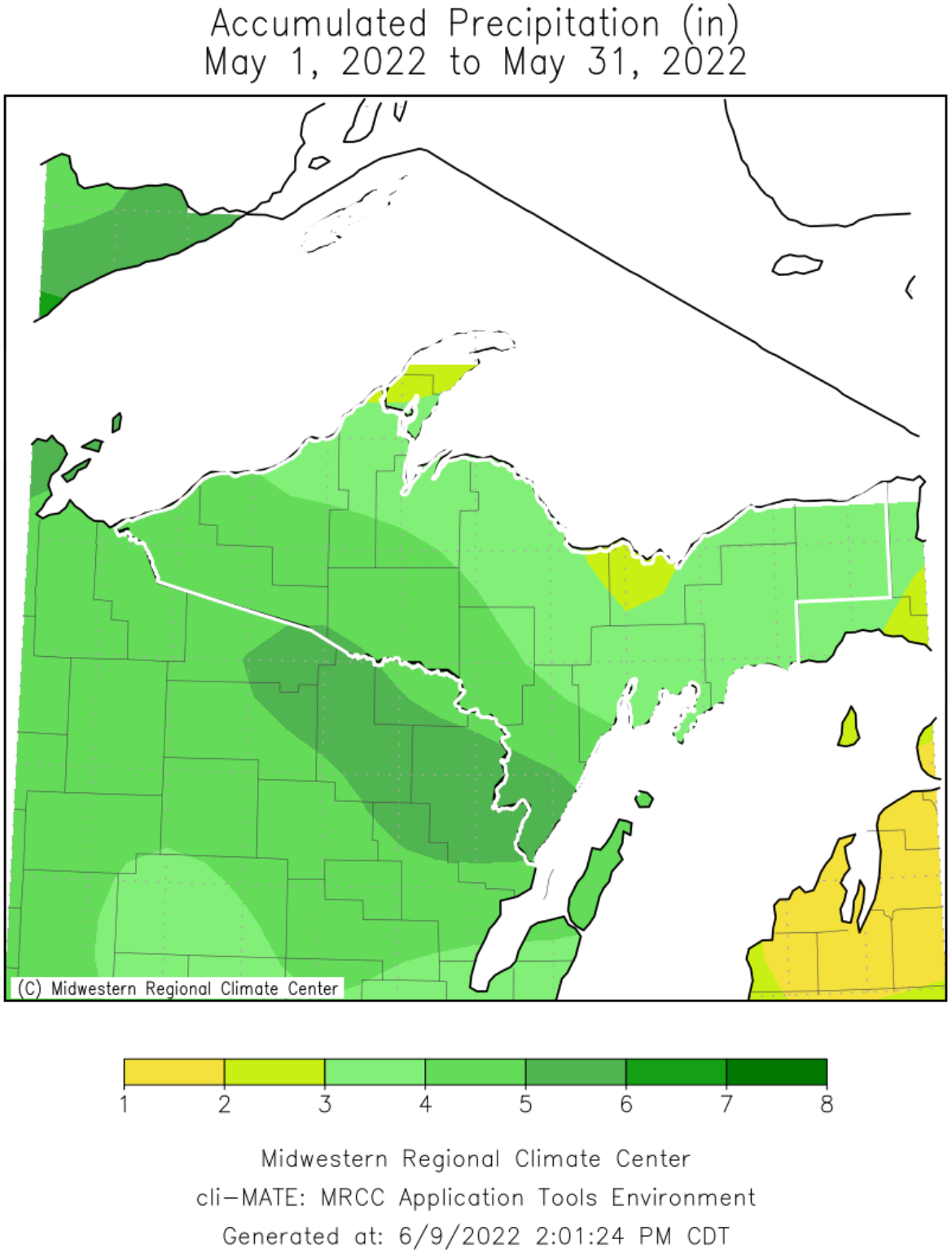

Figure 4: May 2022 Monthly Precipitation Totals.

Precipitation Summary Continued

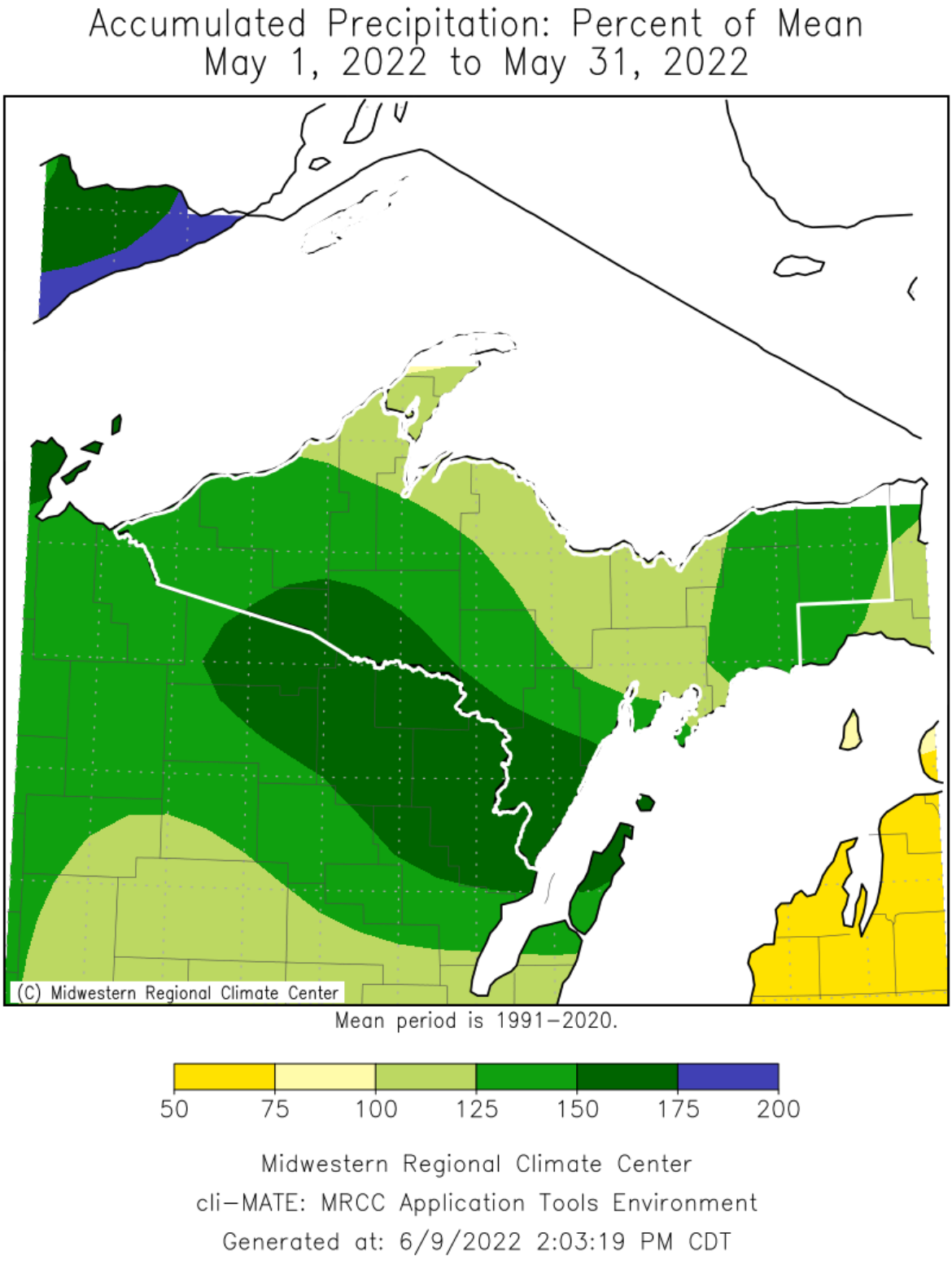

Figure 5: May 2022 Percent of Normal of Accumulated Precipitation.

Soil Moisture Anomaly

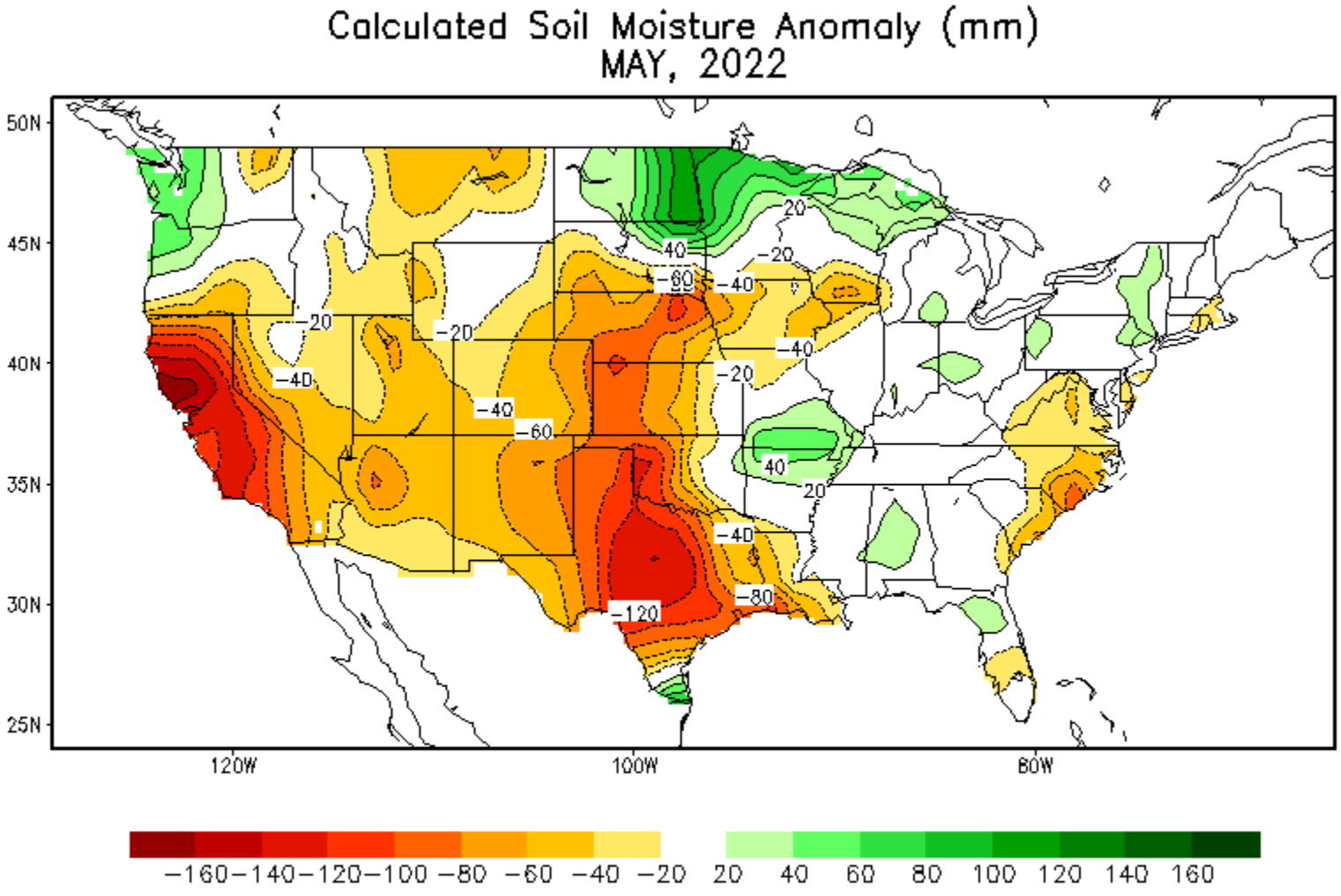

Figure 6: Climate Prediction Center's monthly average soil moisture anomaly for May 2022.