Monthly Hydrometeorological Report

Report for January 2025

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): **January 2025** DATE: **February 11th, 2025** SIGNATURE: **Daniel Jablonski, HPM** **Ryan Metzger, 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).	

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

Summary

Lake effect snow showers over the northwest to west wind snow belts was a repetitive weather pattern over Upper Michigan during the month of January, which is reflected in the observed precipitation data. With the lack of significant, widespread snowfall, most sites saw below normal precipitation and snow during the month., An exception to this pattern was Munising. This location is favorable for northwest wind lake effect snow and thus saw 118% of normal precipitation and 134% of normal snowfall (Table 1). The past three months have also generally favored this lake effect pattern, which is why Munising saw the wettest November through January period on record with 190% of normal precipitation (Table 2). Sites away from the favorable west or northwest wind lake effect snow belts did not exceed an inch of precipitation. The lack of system snow is also evident in figures 2 and 3, where the below normal or complete lack of SWE is noted outside the east and Copper Country where the lake effect snow patterns were favorable. This has led to no significant change in drought conditions from December, 2024 where moderate drought spanned the state line with Wisconsin and portions of western Upper Michigan (Figure 4). Streamflow remained mostly near normal across the Upper Peninsula (Figure 1). January was also slightly warmer than normal, with most sites observing 2 to 3 degrees above normal (Table 3).

Location	Precipitation	% of Normal Precip / Snow	Snowfall
WFO Marquette	1.24”	53% / 81%	33.9”
Marquette City	0.91”	49% / 51%	12.9”
Quincy Hill	3.23”	M	56.9”
Ironwood	1.49”	76% / 93%	40.2”
Iron Mountain	0.77”	57% / 41%	6.1”
Manistique	0.67”	39% / M	16.0”
Munising	4.19”	118% / 134%	61.5”
Stambaugh	0.60”	55% / 68%	9.9”

Table 1. Observed liquid equivalent precipitation, percent of normal precipitation and snowfall, and snowfall at long-term climate sites across Upper Michigan for January 2025.

November - January Precipitation Summary

Location	Precipitation	% of Normal	Rank	Last Year
WFO Marquette (Records: 1962-2023)	10.73”	133%	10th Wettest	7.17”
Marquette City (Records: 1875-2023)	8.10”	123%	42nd Wettest	4.72”
Ironwood (Records: 1901-2023)	7.14”	100%	52nd Wettest	5.46”
Iron Mountain (Records: 1902-2023)	7.20”	149%	11th Wettest	2.49”
Manistique (Records: 1938-2023)	8.76”	144%	8th Wettest	4.84”
Munising (Records: 1912-2023)	18.06”	190%	Wettest	8.18”
Stambaugh (Records: 1900-2023)	5.68”	127%	36th Wettest	2.59”

Table 2. Total observed precipitation at long-term climate sites across Upper Michigan for November 2024 through January 2025.

November - January Temperature Summary

Location	Avg Temp	Departure	Rank	Last Year
WFO Marquette (Records: 1962-2023)	24.0°F	+2.9°F	10th Warmest	27.4°F
Marquette City (Records: 1875-2023)	28.2°F	+2.5°F	25th Warmest	30.9°F
Ironwood (Records: 1901-2023)	21.7°F	+2.0°F	38th Warmest	25.9°F
Iron Mountain (Records: 1902-2023)	24.7°F	+2.6°F	25th Warmest	28.1°F
Manistique (Records: 1938-2023)	27.8°F	+2.6°F	19th Warmest	29.2°F
Munising (Records: 1912-2023)	27.1°F	+2.3F	22nd Warmest	29.1°F
Stambaugh (Records: 1900-2023)	21.4°F	+1.8°F	36th Warmest	25.5°F

Table 3. Average temperature observed at long-term climate sites across Upper Michigan for November 2024 through January 2025.

Flooding Conditions

There were no flooding concerns during the month of January 2025.

Media Links

None.

River Conditions

Streamflow for most of Upper Michigan was near normal during January 2025. Much above normal streamflow was observed in the Tahquamenon River basin in Luce County as well as parts of Chippewa and Mackinaw counties. This was a contrast to the below normal streamflow observed in the Pine River basin.

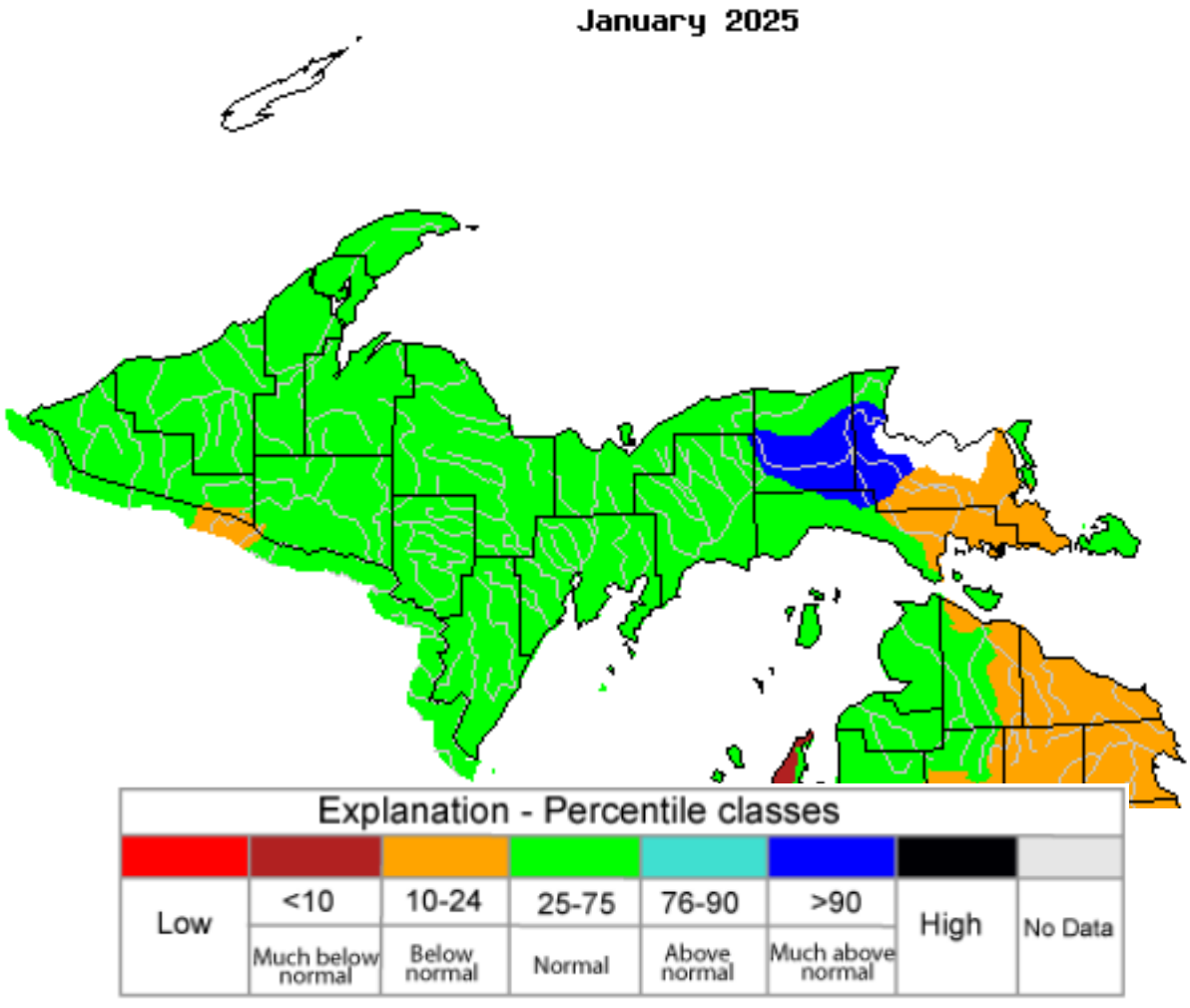

Figure 1: USGS monthly average streamflow in January 2025 across Upper Michigan.

Snowpack SWE (Snow Water Equivalent) Conditions

The highest SWE values were over the northeastern Upper Peninsula, particularly between Munising and Newberry where northwest wind lake effect snow was favored; above normal SWE was observed. Higher SWE values were also noted over the higher terrain areas of the Copper Country. Below normal SWE was noted in south central Upper Michigan where much of Menominee County had no snow on the ground by the end of the month.

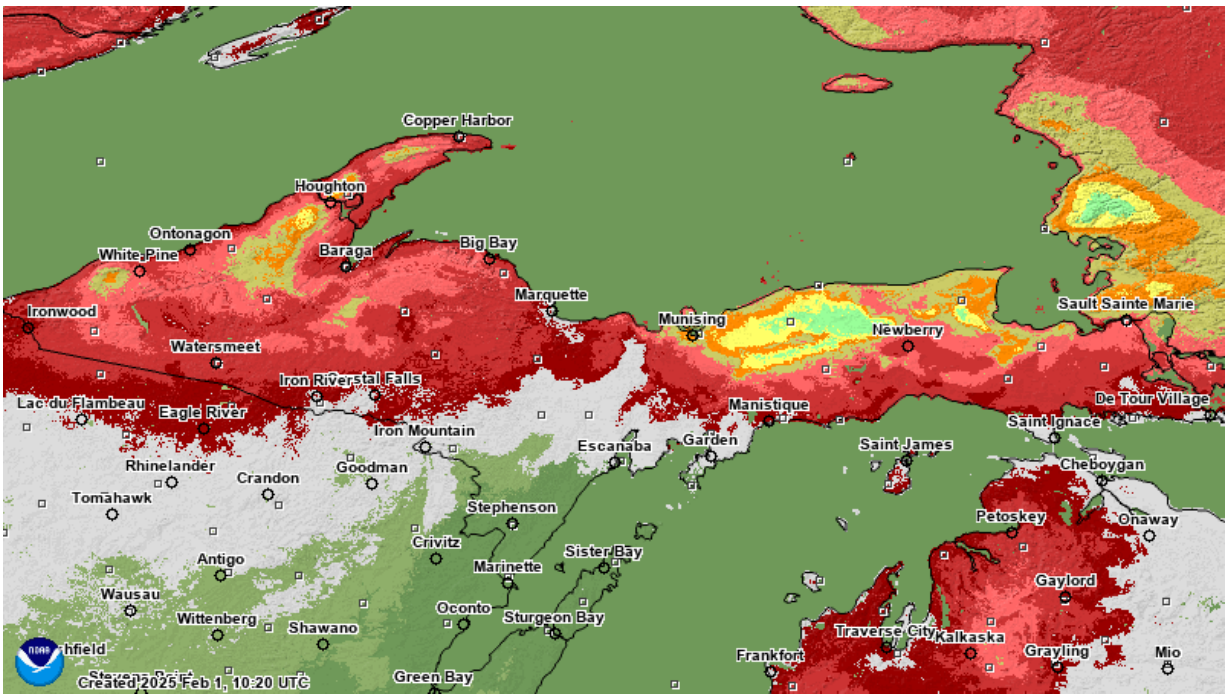

Figure 2: Current modeled snowpack snow water equivalent on February 1st, 2025.

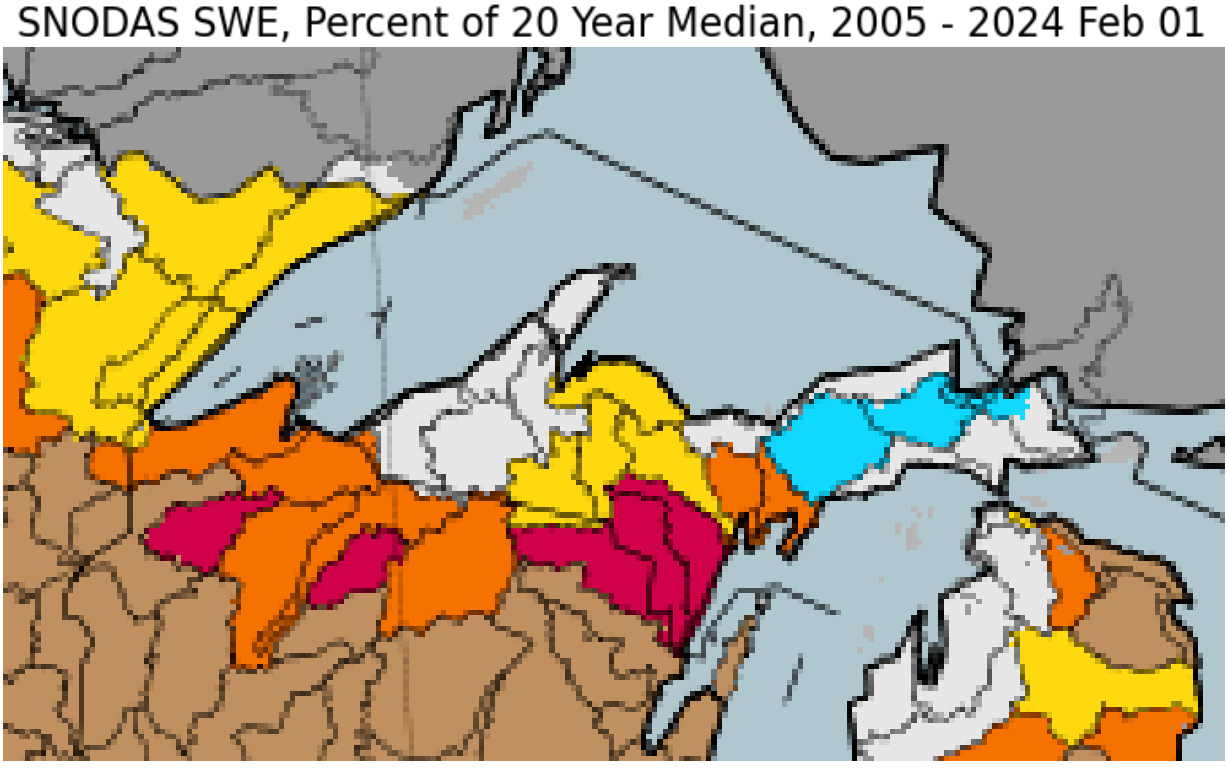

Figure 3: Modeled snow water equivalent for drainage basins on February 1st , 2025 as a percent of 20-year median.

Drought Discussion

Moderate drought conditions continue over interior western Upper Michigan, especially over Gogebic, Iron, and Dickinson counties. Abnormally dry conditions continue over the south central sections of the U.P. and from the Porcupine Mountains southeast through Iron County. For the latest drought status, please visit http://www.drought.gov.

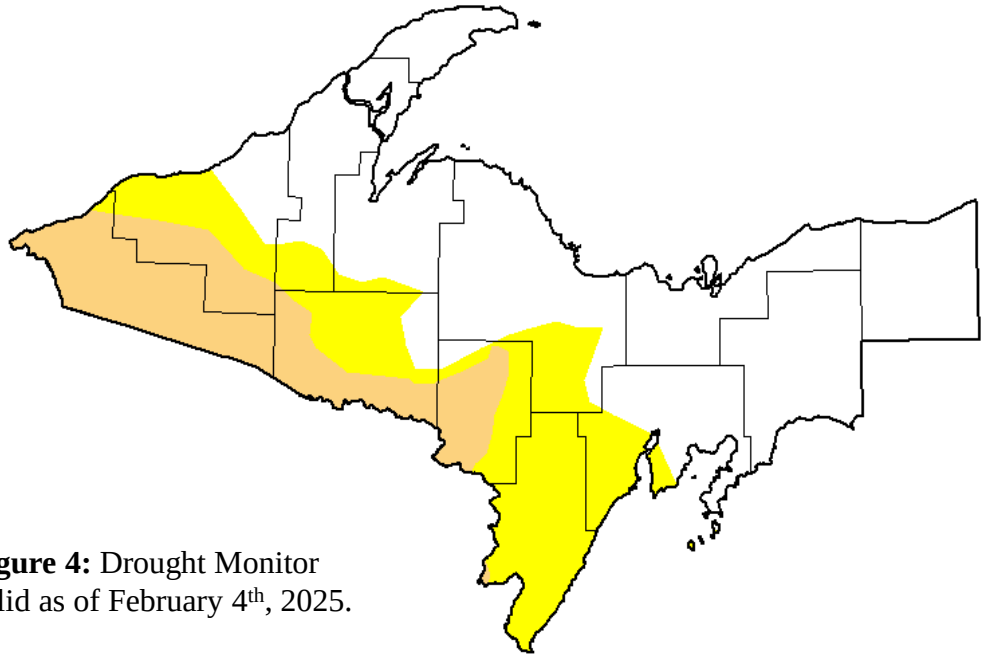

Figure 4: Drought Monitor valid as of February 4th, 2025.

February 4, 2025
(Released Thursday, Feb. 6, 2025)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	56.54	43.46	17.85	0.00	0.00	0.00
Last Week 01-28-2025	57.72	42.28	17.85	0.00	0.00	0.00
3 Months Ago 11-05-2024	0.00	100.00	89.00	18.81	0.00	0.00
Start of Calendar Year 01-07-2025	57.50	42.50	17.85	0.00	0.00	0.00
Start of Water Year 10-01-2024	1.50	98.50	64.78	40.63	0.00	0.00
One Year Ago 02-06-2024	0.00	100.00	25.83	4.96	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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National Drought Mitigation Center

droughtmonitor.unl.edu

Hydro Products Issued

Product	Number
Hydrologic Outlook (ESF)	0
Flood Watch (FFA)	0
Flood Warning (FLW)	0
Flood Advisories and Statements (FLS)	0
Flash Flood Warning (FFW)	0
Flash Flood Statement (FFS)	0
Hydrologic Summary (RVA)	31

Precipitation Summary

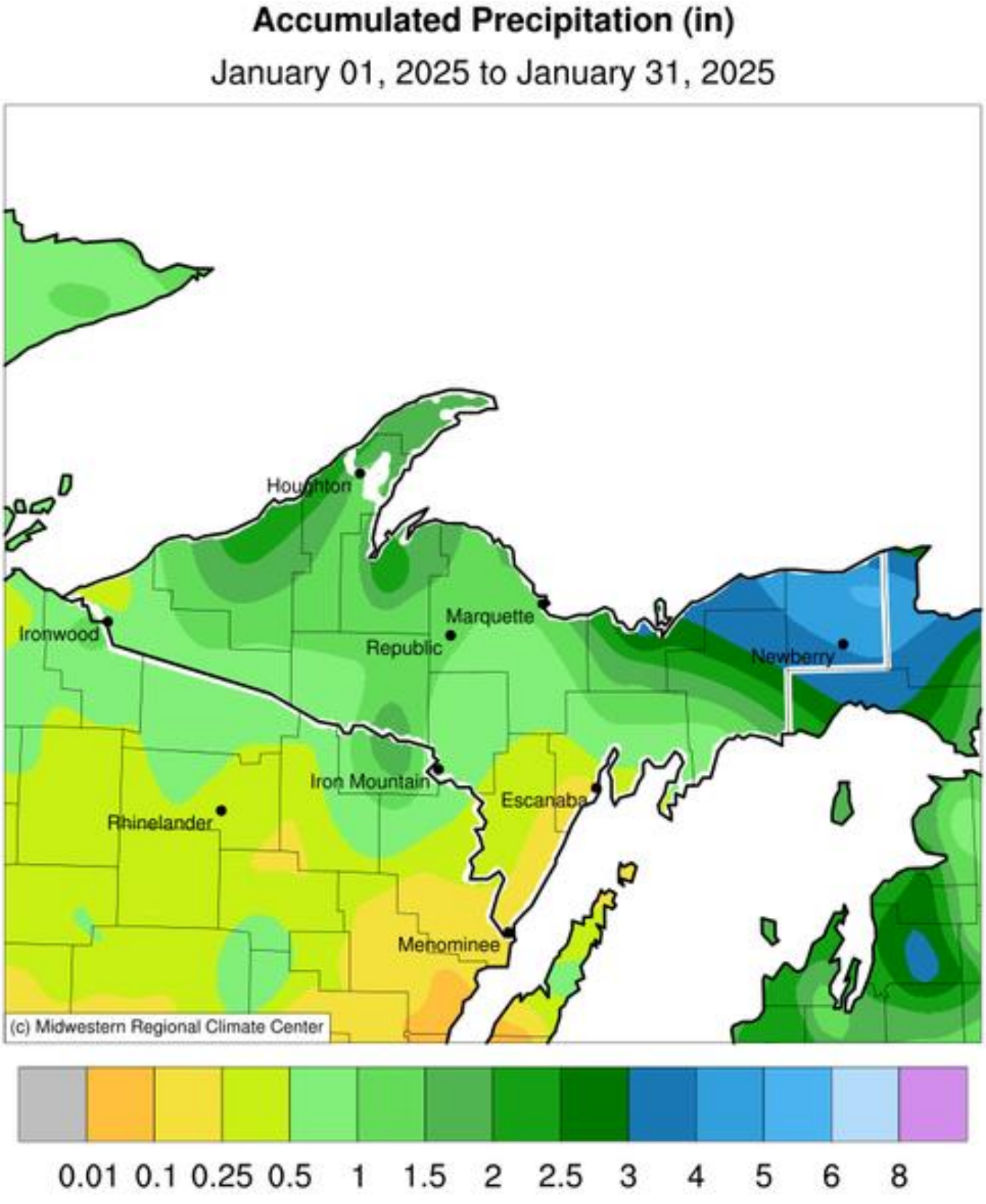

Figure 5: January 2025 Monthly Precipitation Totals. Image generated February 10th, 2025 from the Midwestern Regional Climate Center.

Precipitation Summary Continued

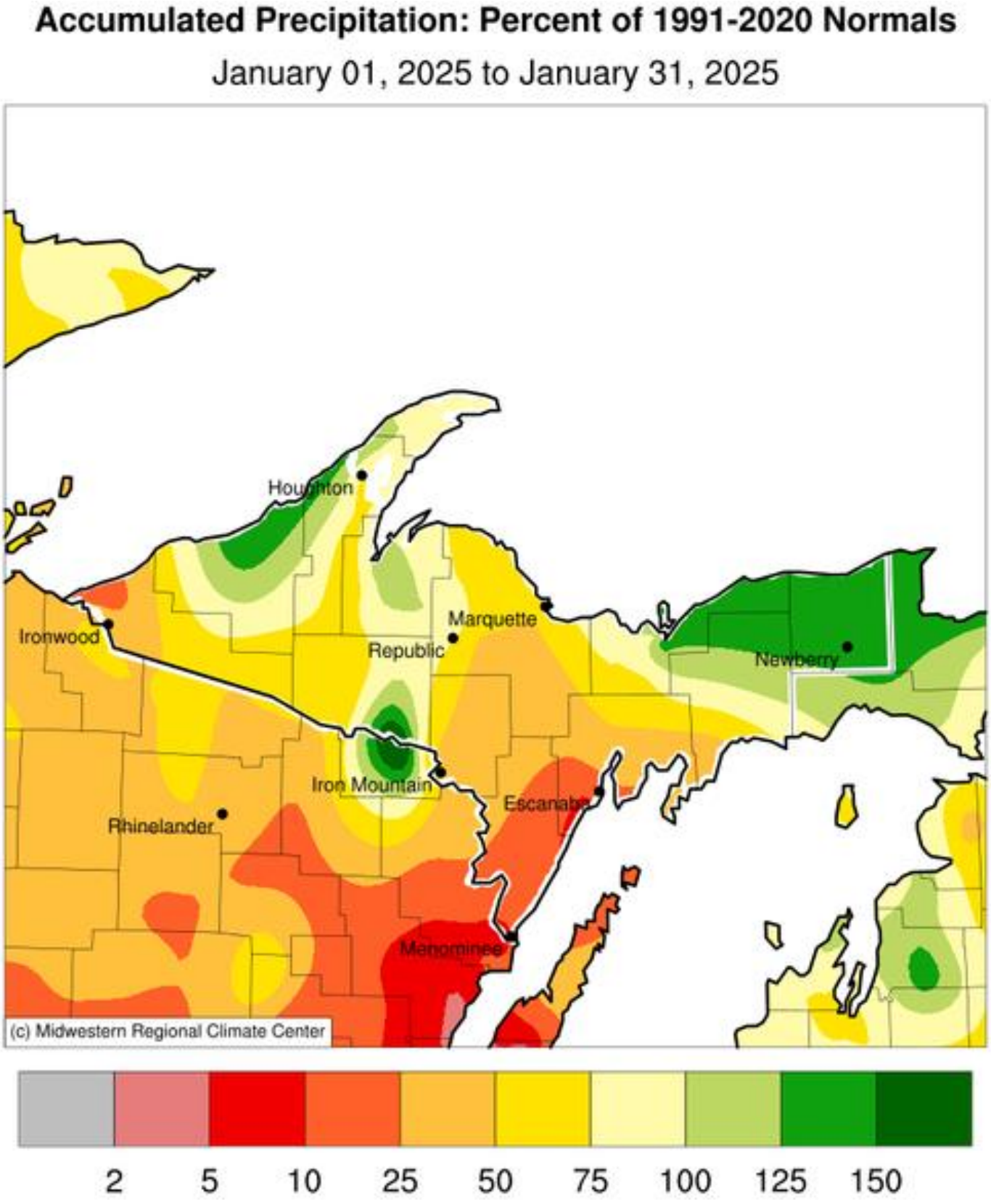

Figure 6: January 2025 Percent of Normal of Accumulated Precipitation. Image generated February 10th, 2025 from the Midwestern Regional Climate Center.

Soil Moisture Anomaly

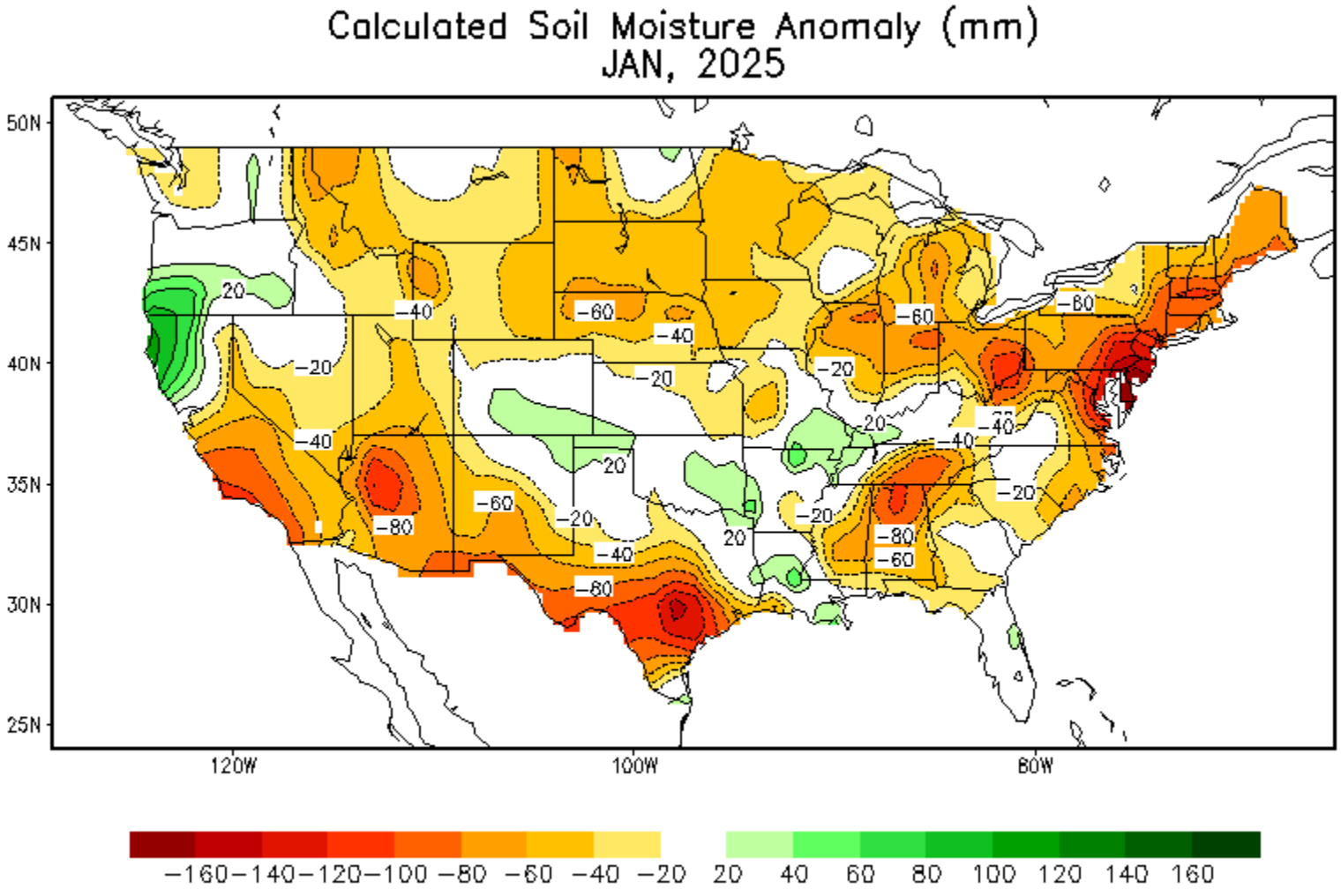

Figure 7: Climate Prediction Center's monthly average soil moisture anomaly for January 2025.

Shallow and Deep Soil Moisture Percentiles

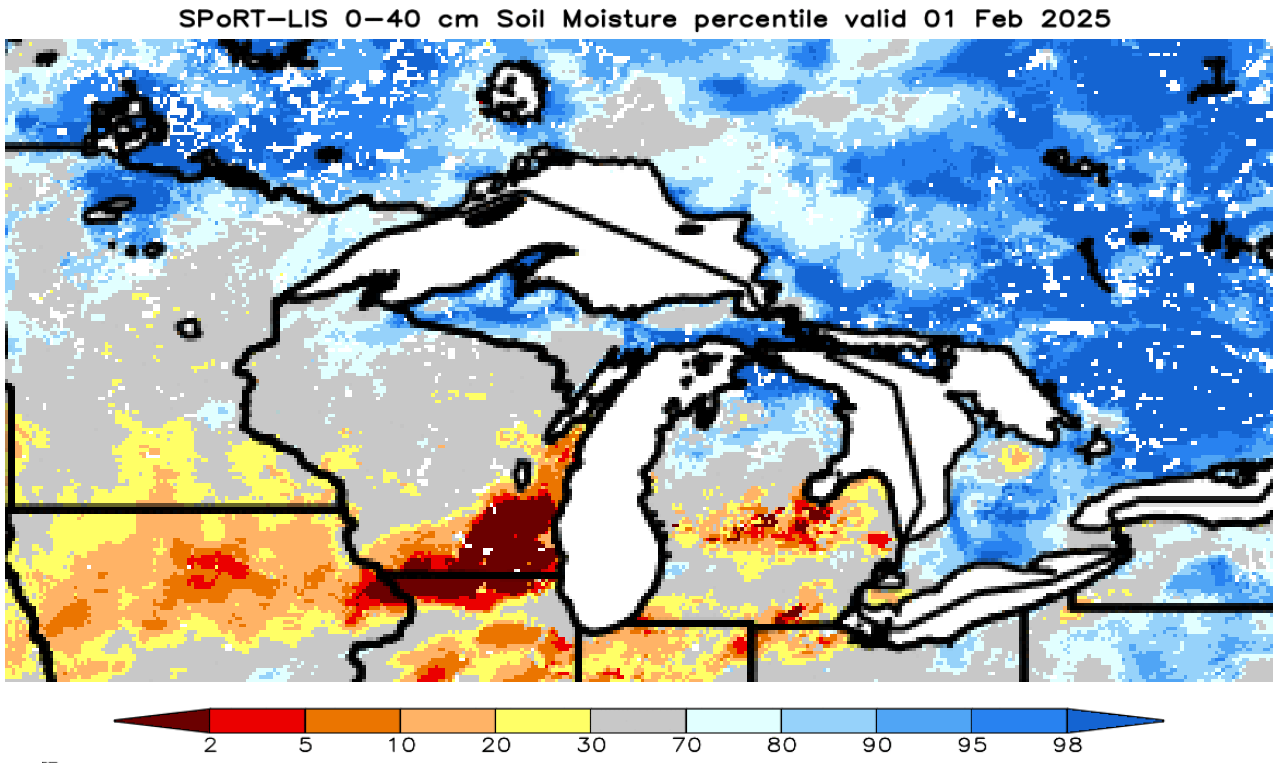

Figure 8: NASA's Short-term Prediction Research and Transition (SPoRT) Center's shallow (0-40 cm) soil moisture percentile valid February 1st, 2025.

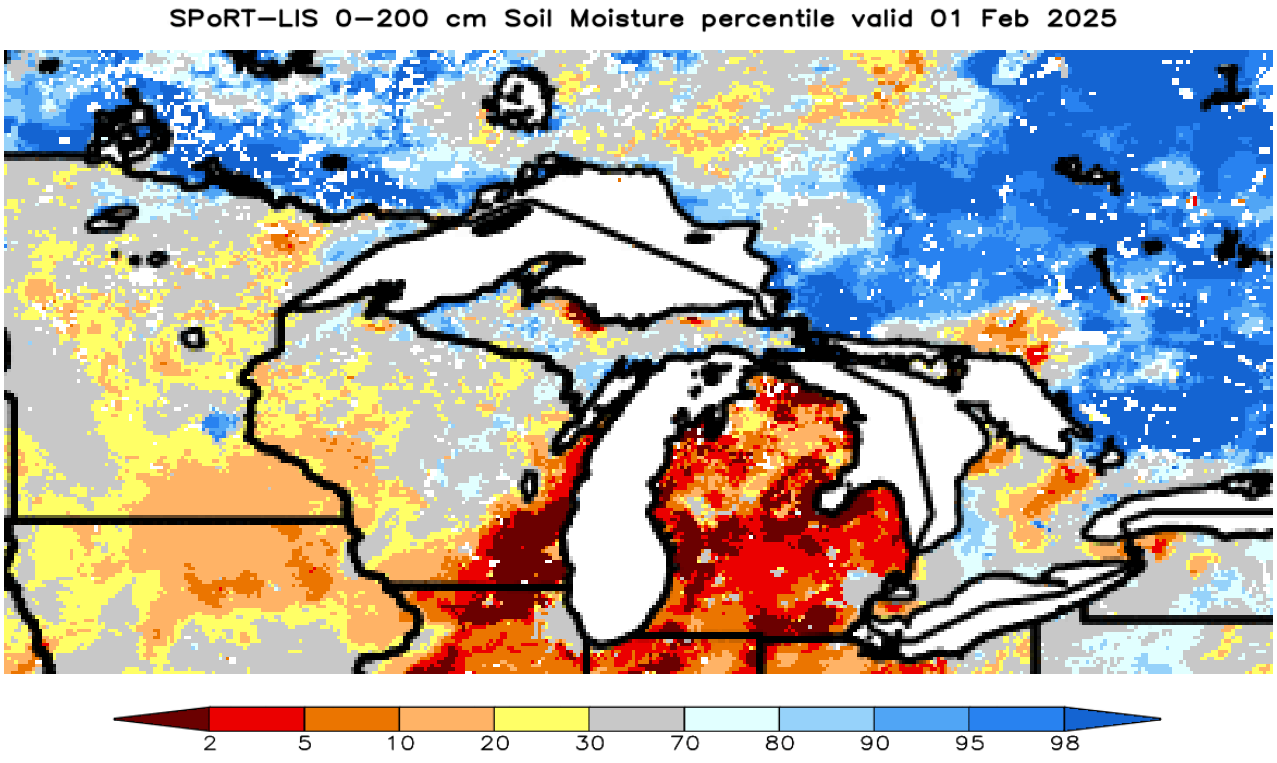

Figure 9: NASA's Short-term Prediction Research and Transition (SPoRT) Center's deep (0-200 cm) soil moisture percentile valid February 1st, 2025.