NWS FORM E-5	**U.S. Department of Commerce** NOAA, NATIONAL WEATHER SERVICE	**HSA OFFICE:** **Grand Rapids, MI**
MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS		REPORT FOR (MONTH & YEAR): **March 2025**
TO:	NATIONAL WEATHER SERVICE (W/OS31) HYDROMETEOROLOGICAL INFO CENTER 1325 EAST-WEST HIGHWAY, RM 13468 SILVER SPRING, MD 20910	DATE: April 16th 2025
		SIGNATURE: Bruce Smith MIC Andrew Dixon, Service Hydrologist Joe Ceru, Meteorologist

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 that no flooding occurred within this hydrologic service area.

Summary

A warmer and wetter March with precipitation events through the month. March went out like a lion with a large severe weather event on March 30th. However, that event moved quickly with no impacts to the rivers. Flows ended the month around normal and no flooding throughout the month.

Flood Conditions

Several precipitation events occurred throughout the month with the biggest rises occurring towards the beginning and the end of the month. There was a precipitation event from the 4th to the 5th which caused some rises to the rivers on the 6th through the 7th. Only Holt on Sycamore Creek and Jackson on the Grand went above Action stage and nothing to flood stage.

The middle of the month saw a return to winter with snowfall through much of the region on the 20th. However, this melted quickly with no remarkable changes to flow. The end of the month brought a large severe weather system across lower Michigan with damaging winds and tornados across southern lower Michigan. Rivers began to show stark rises that didn't come to peak until April.

Precipitation was above normal across the region with Accumulated Mean Precip in the 3 to 5 inches range. (Figure 1). The Percent of Mean (Figure 2) shows 125 to 200 percent of normal. While this kept flows around normal, it did little to the overall drought (Figure 5) which U.S. Drought Monitor effectively shows Most of Lower Michigan below in a D0 or greater, with much of Central Michigan in a D1 Moderate Drought. While USGS monthly streamflow for March (Figure 3) showed the Grand River below normal, it had begun the month in the 25 to 75% Quartile range and meandered between that

and the 10-25% Range. The Grand River ended the month towards the top of the 10-25% range. The Muskegon and Kalamazoo Rivers did similar to the Grand, however had slightly higher precipitation so remained in 25-75% Quartile to end the month.

Flood Stage Report

No forecast points exceeded flood stage during the month. Thus, the NWS Form E-3 "Flood Stage Report" was not issued.

River Conditions

The end of March percentage of normal flow for selected rivers is listed below:

Location	River	% of Normal
Scottville	Pere Marquette	114
Whitehall	White	123
Evart	Muskegon	153
Mt. Pleasant	Chippewa	121
Lansing	Grand	106
Grand Rapids	Grand	79
East Lansing	Red Cedar	124
Hastings	Thornapple	91
Battle Creek	Battle Creek	86
Battle Creek	Kalamazoo	100

General Hydrologic Information

March precipitation amounts for Grand Rapids, Lansing, and Muskegon, Michigan were, 3.87, 2.90, and 3.03 inches, respectively (Figure 1). Monthly departures were 1.48, 0.77, and 0.63 inches, respectively. Percent of mean precipitation for March 2025 is shown in Figure 2. Temperatures for the month of March at Grand Rapids, Lansing and Muskegon were warmer than normal. The monthly average temperature departures for these sites were +4.8, +5.9 , and +4.9 degrees Fahrenheit, respectively.

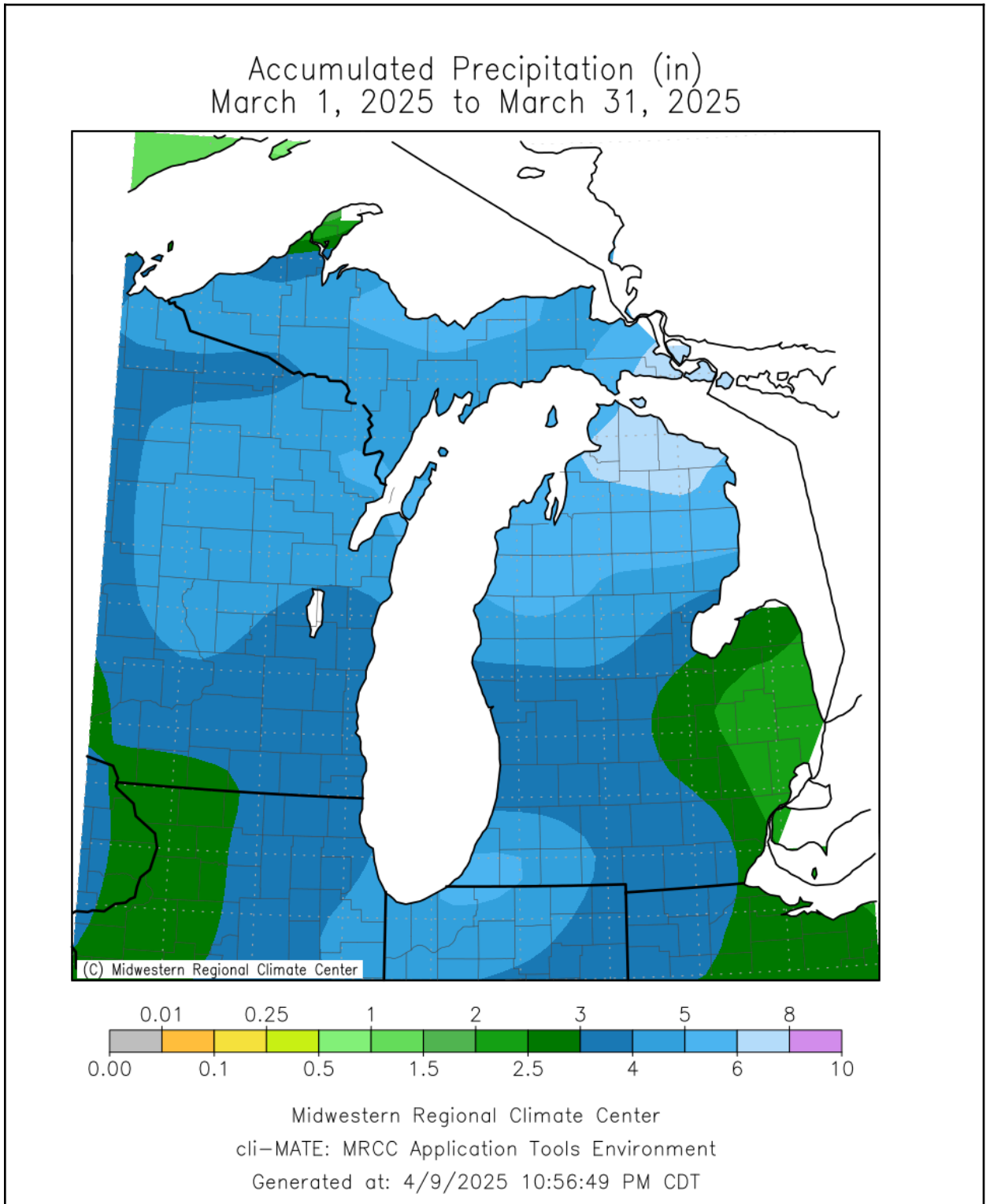

Figure 1. March 2025 Monthly Precipitation Totals. Widespread precipitation across Lower Michigan along the Lakeshore.

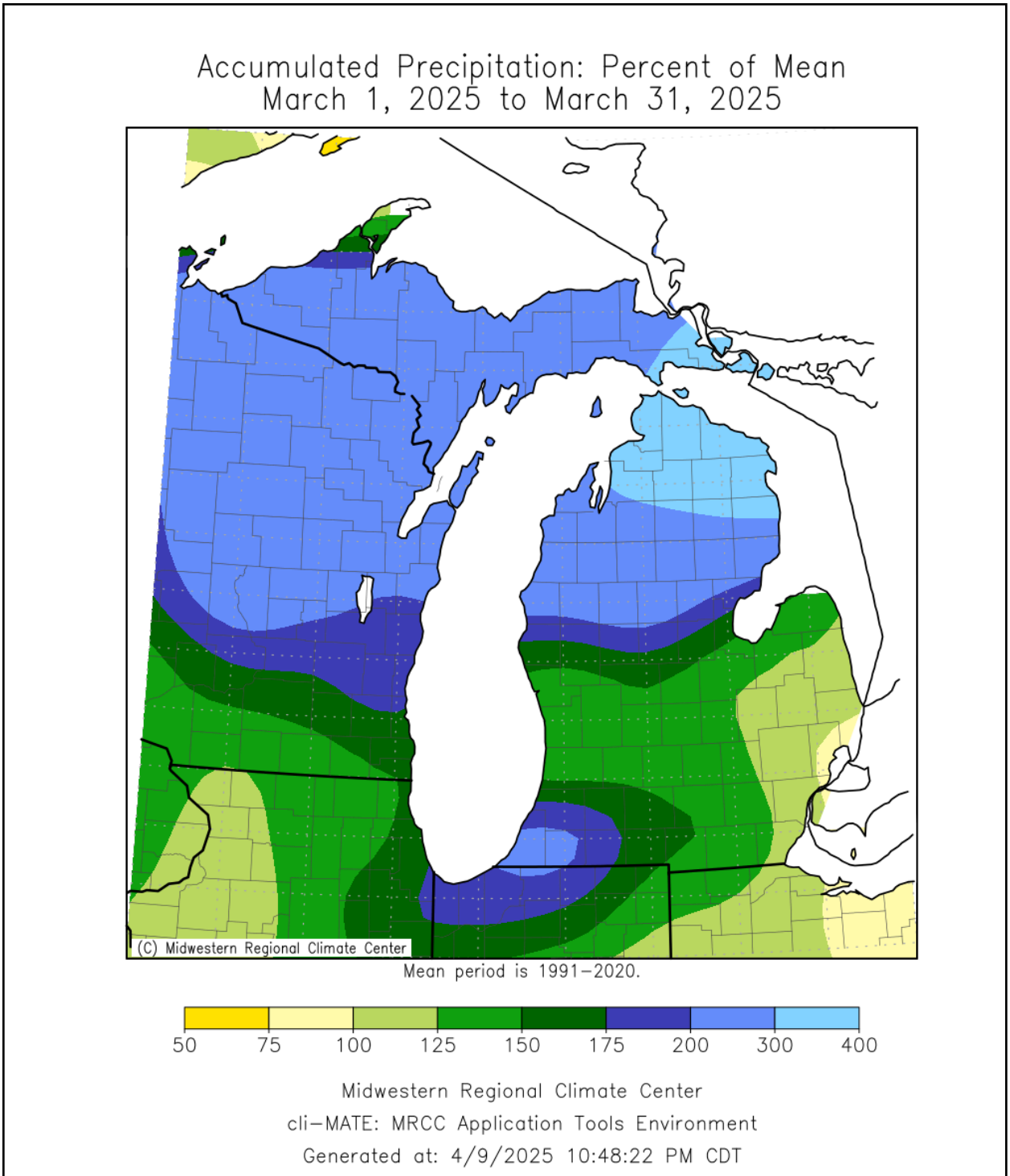

Figure 2.March 2025 Percent of Mean of Accumulated Precipitation.

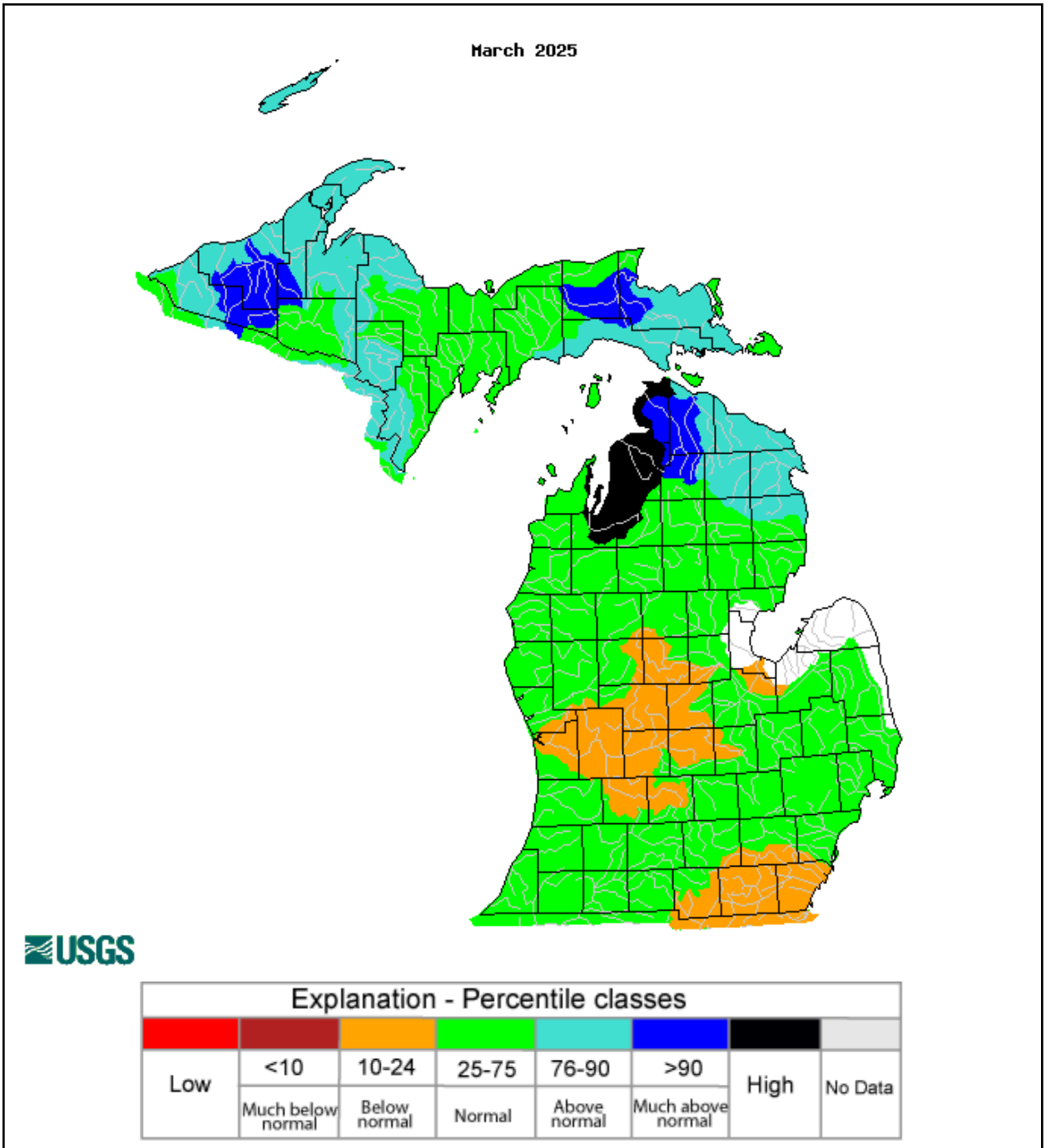

Figure 3. USGS monthly streamflow for March grouped by significant hydrologic units. Most river basins in southern Lower Michigan are normal except the upper portion of the Grand river watershed.

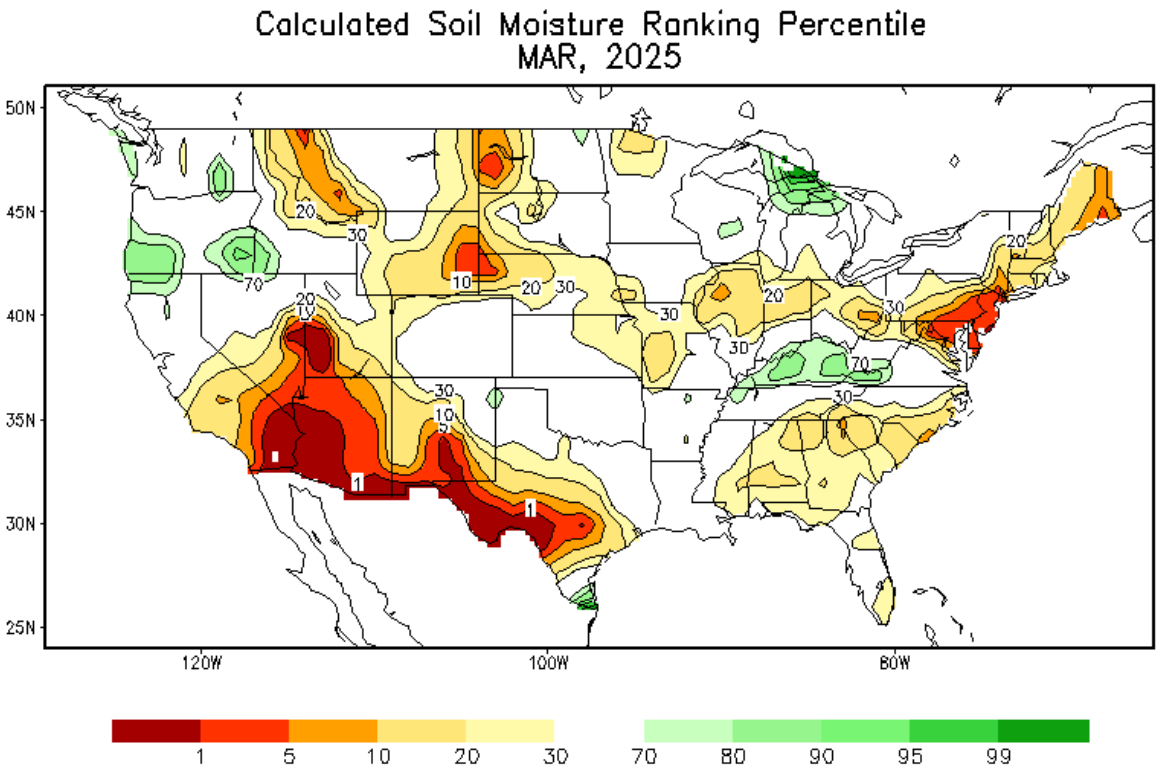

Figure 4.Calculated Soil Moisture Percentile for March 2025. Soil moisture is below normal across southern lower Michigan.

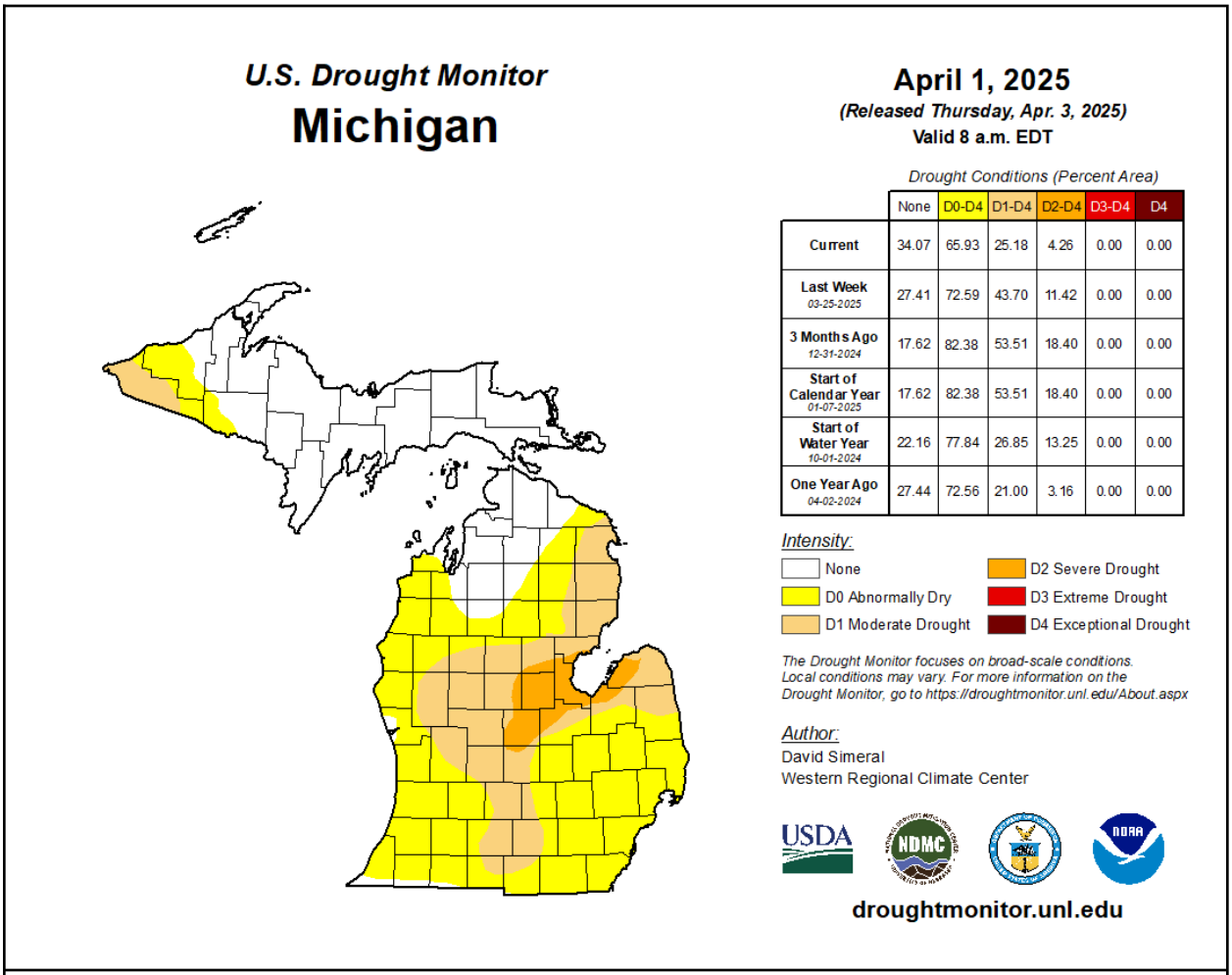

Figure 5.U.S. Drought Monitor effectively shows Most of Lower Michigan below in a D0 or greater, with much of Central Michigan in a D1 Moderate Drought.

Hydrologic Products issued this month

31 Hydrologic Summaries (ARBRVAGRR)
1 Probabilistic Hydrologic Outlook (ARBESFGRR)
1 Event-driven Hydrologic Outlook (ARBESFGRR1)
0 Areal Flood Advisory Statements (ARBFLSGRR)
0 Flood Warning Statements (ARBFLWGRR)
0 Flood Watch Statements (ARBFFAGRR)
0 River Statements (ARBRVSGRR)

News Articles and Related Documentation