

**NWS**      **U.S. Department of Commerce**  
**FORM**     NOAA, NATIONAL WEATHER SERVICE  
**E-5**

**HSA OFFICE:**  
**Grand Rapids, MI**

**MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS**

REPORT FOR (MONTH & YEAR):  
**February 2025**

TO:            NATIONAL WEATHER SERVICE (W/OS31)  
                  HYDROMETEOROLOGICAL INFO CENTER 1325  
                  EAST-WEST HIGHWAY, RM 13468 SILVER  
                  SPRING, MD 20910

DATE:  
March 10th, 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).

An **X** inside this box indicates that no flooding occurred within this hydrologic service area.

**Summary**

February was colder and drier than normal with snowfall events interspersed throughout the first half of the month. The second half of the month was mostly dry with a warming trend the last week of the month. This caused many of the rivers that were iced over to thaw and also brought some minor rises to the rivers.

**Flood Conditions**

Fairly quiet on the rivers. The month was colder than normal and many rivers and forecast points were iced over for most of the month. Flows were thus fairly low and fluctuating little. The end of the month saw temperatures rise above freezing during the daytime and freeze at night. This brought an organized river ice break up.

With temperatures ending the month in the 50s the melting snow brought some rises to the rivers with flows ending the month at above normal, even though the monthly flow overall saw most river basins have flow that was below normal (Figure 3).

There is still 1 to 2 inches of SWE in the furthest headwaters of the Muskegon River watershed, but the warm up towards the end of February melted the rest. There was some snow along the lakeshore snow belts at the end of February and into the beginning of March.

This was a fairly classic winter in the fact that the rivers froze and then stayed frozen for a sustained period of time. So far through the end of February and continuing into March the melt of the river ice has been steady and peaceful.

### **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**

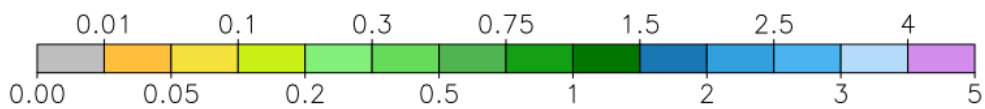
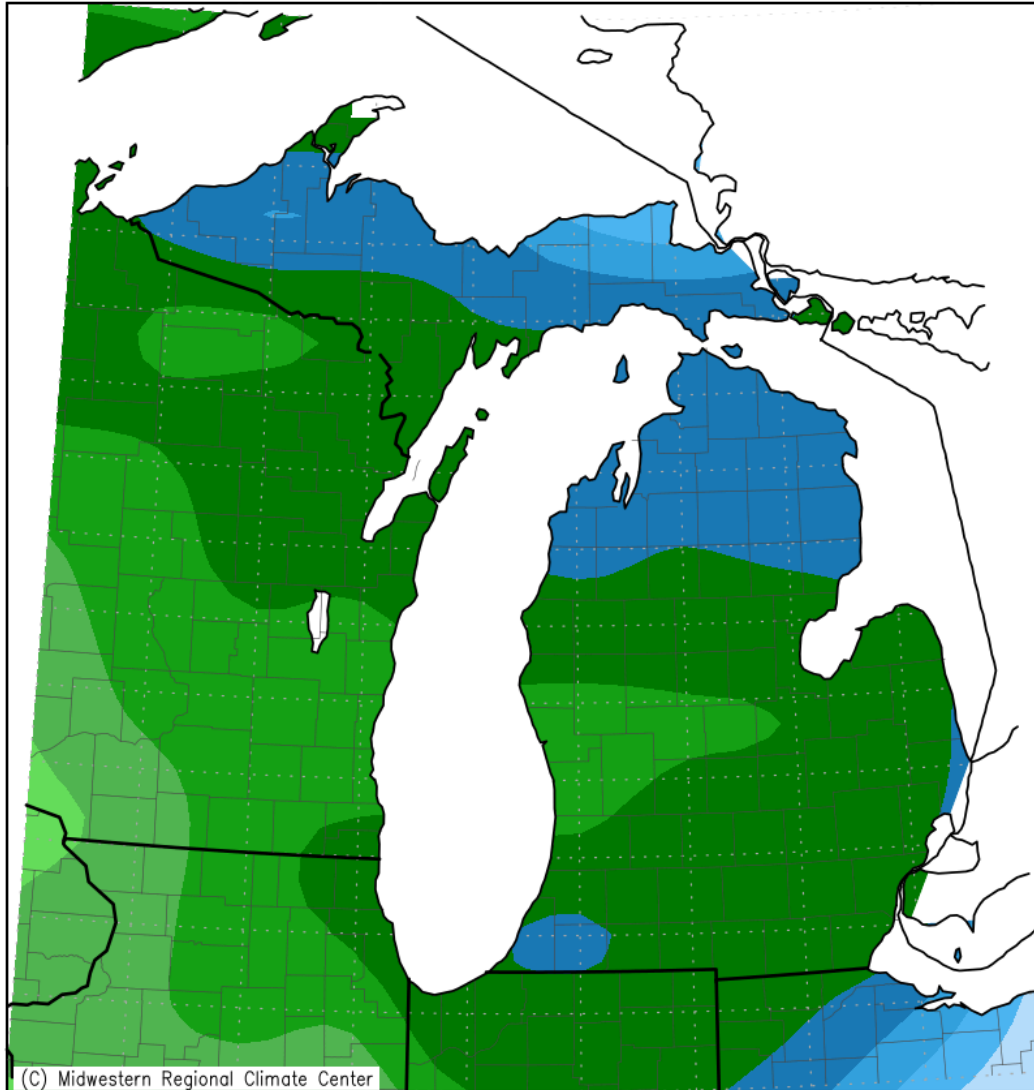
The end of February percentage of normal flow for selected rivers is listed below:

<u>Location</u>	<u>River</u>	<u>% of Normal</u>
Scottville	Pere Marquette	107
Whitehall	White	95
Ewart	Muskegon	99
Mt. Pleasant	Chippewa	ICED
Lansing	Grand	133
Grand Rapids	Grand	98
East Lansing	Red Cedar	196
Hastings	Thornapple	134
Battle Creek	Battle Creek	144
Battle Creek	Kalamazoo	104

### **General Hydrologic Information**

February precipitation amounts for Grand Rapids, Lansing, and Muskegon, Michigan were, 0.89, 0.89, and 0.82 inches, respectively (Figure 1). Monthly departures were -1.23, -0.82, and -1.29 inches, respectively. Percent of mean precipitation for February 2025 is shown in Figure 2. Temperatures for the month of February at Grand Rapids, Lansing and Muskegon were colder than normal. The monthly average temperature departures for these sites were -2.1, -1.5, and -1.6 degrees Fahrenheit, respectively.

Accumulated Precipitation (in)  
February 1, 2025 to February 28, 2025

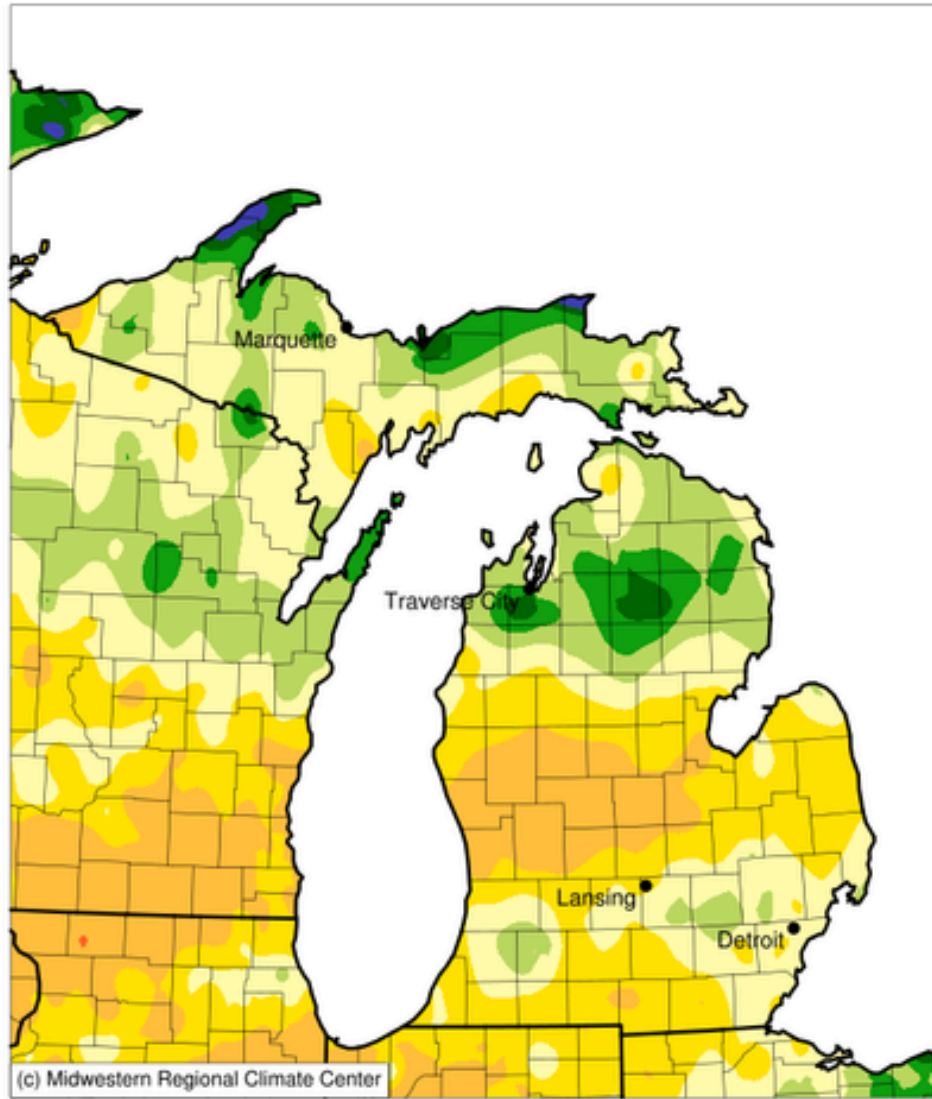


Midwestern Regional Climate Center  
cli-MATE: MRCC Application Tools Environment  
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Figure 1. February 2025 Monthly Precipitation Totals. Widespread precipitation across Lower Michigan along the Lakeshore.

**Accumulated Precipitation (in): Percent of 1991-2020 Normals**

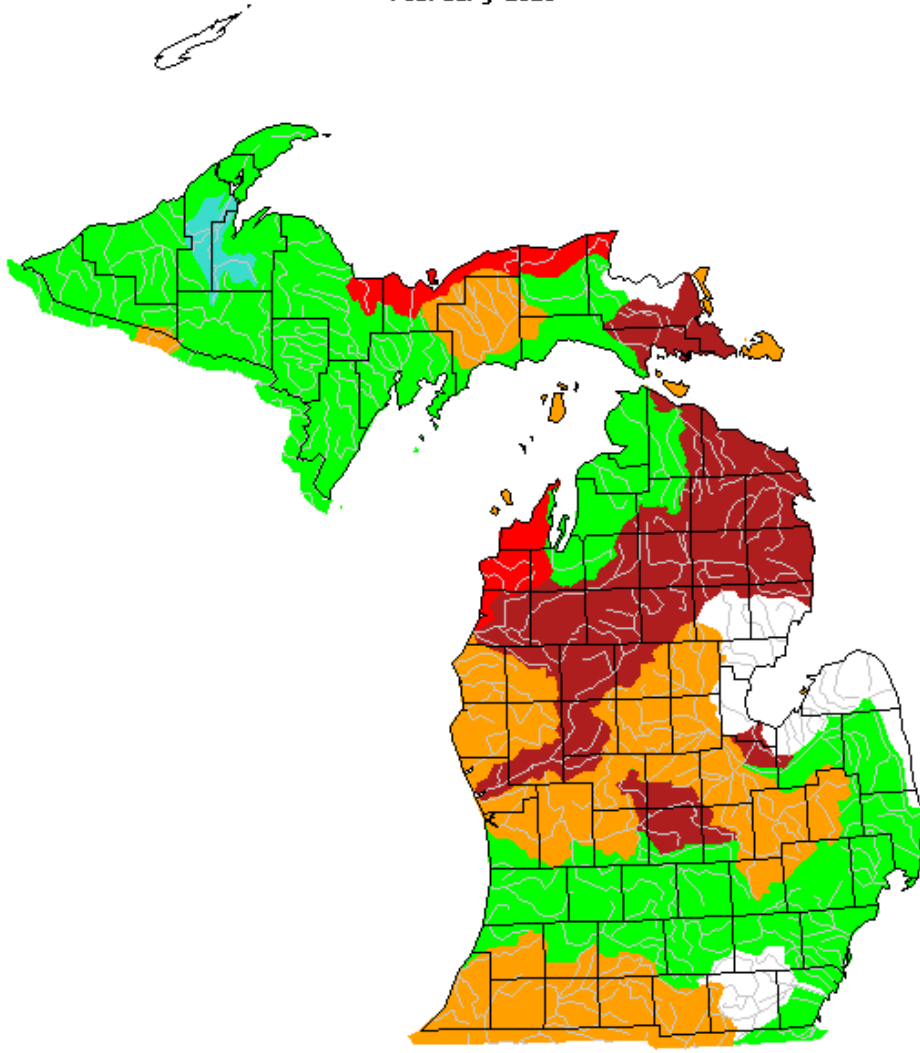
February 01, 2025 to February 28, 2025



2 5 10 25 50 75 100 125 150 175

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

February 2025



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		

Figure 3. USGS monthly streamflow for February grouped by significant hydrologic units. Most river basins in southern Lower Michigan are below normal except in and around the Kalamazoo River watershed.

Calculated Soil Moisture Ranking Percentile  
FEB, 2025

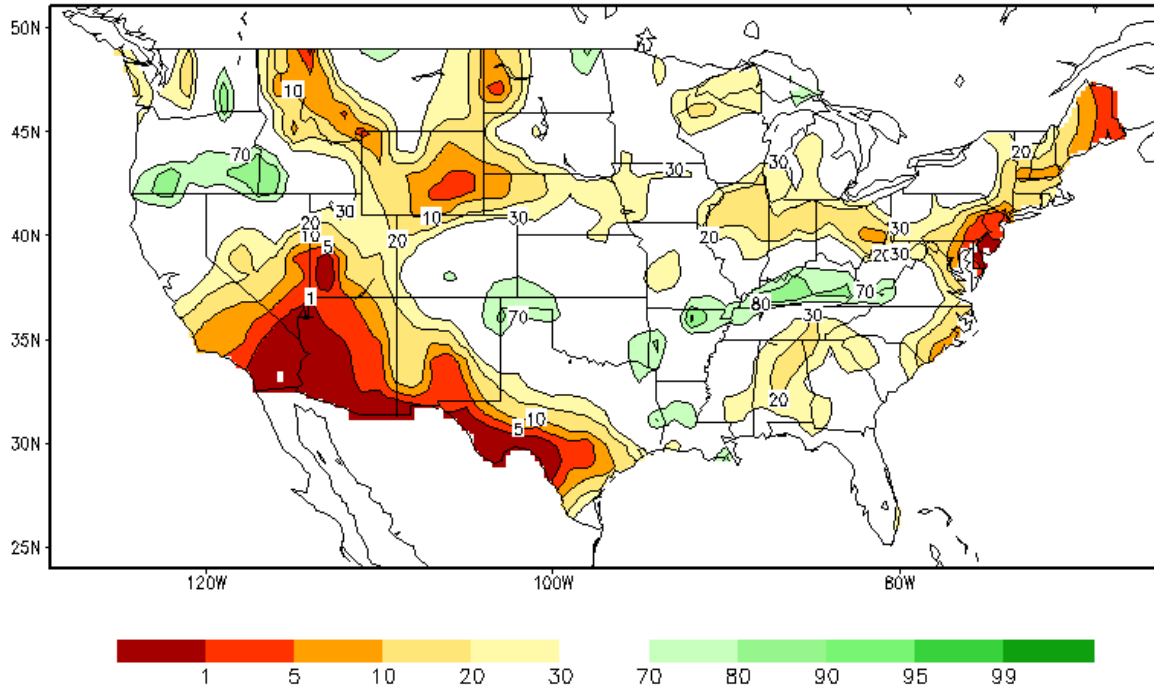


Figure 4. Calculated Soil Moisture Percentile for February 2025. Soil moisture is below normal across southern lower Michigan.

## U.S. Drought Monitor Michigan

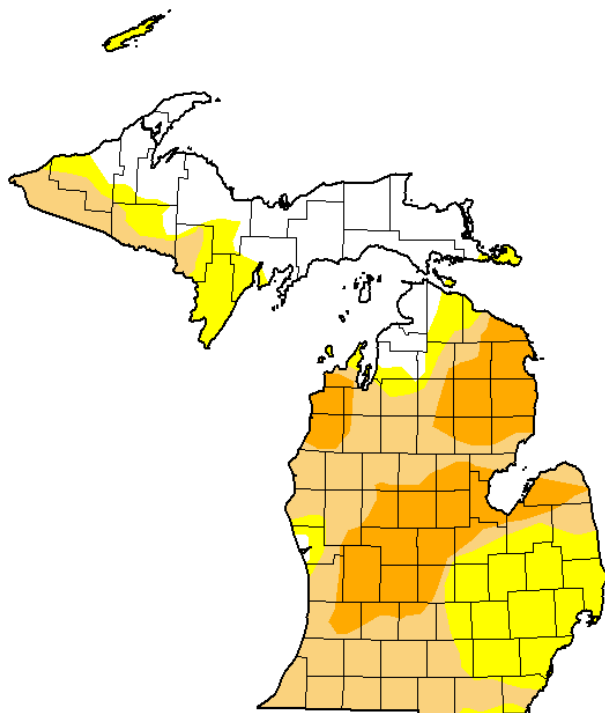
March 4, 2025

(Released Thursday, Mar. 6, 2025)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	20.93	79.07	55.05	21.56	0.00	0.00
Last Week 02-25-2025	20.93	79.07	54.71	21.56	0.00	0.00
3 Months Ago 12-03-2024	6.44	93.56	63.57	19.88	0.00	0.00
Start of Calendar Year 01-07-2025	17.62	82.38	53.51	18.40	0.00	0.00
Start of Water Year 10-01-2024	22.16	77.84	26.85	13.25	0.00	0.00
One Year Ago 03-05-2024	8.79	91.21	27.40	3.54	0.00	0.00



### Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate 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>

### Author:

Curtis Riganti  
National Drought Mitigation Center



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

Figure 5. U.S. Drought Monitor effectively shows the spread of D2 Severe Drought across Central Michigan and extending into Southwestern Michigan.

### Hydrologic Products issued this month

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

### News Articles and Related Documentation