



Monthly Report of River and Flood Conditions

Report for February 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): February 2022
	DATE: March 9th, 2022
	SIGNATURE: Linda Gilbert, Lead Meteorologist 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

Overall, the month of February saw a rebound in snowpack conditions as compared to earlier in the season, but many locations across portions of Upper Michigan are running below normal hydrologically-speaking. Areas that remain drought-free have been influenced by Lake Superior’s fairly open waters, allowing for lake-effect to occur and persist rather than a decline in lake-effect snow that historically has occurred late in the winter season due to ice coverage. What is most interesting is that despite Ironwood’s 149% above normal liquid equivalent precipitation for the month of February, it is still lacking in snow depth overall compared to normal, and is in a D1 status as of early March.

Location	Precipitation	% of Normal	Snowfall
WFO Marquette	3.44"	154%	59.6"
Marquette City	1.28"	87%	19.7"
Quincy Hill	3.20"	M	52.4"
Ironwood	2.19"	149%	32.5"
Iron Mountain	0.73"	64%	7.8"
Manistique	1.07"	78%	19"
Munising	3.00"	126%	43.4"
Stambaugh	0.81"	84%	12.2"

NOTE: Precipitation after 8 AM EST February 28th was counted in March stats for all but the WFO Marquette site due to the reporting structure of our cooperative observers.



Flooding Conditions

There were no flooding concerns during the month of February.

River Conditions

Basin streamflow relative to normal.

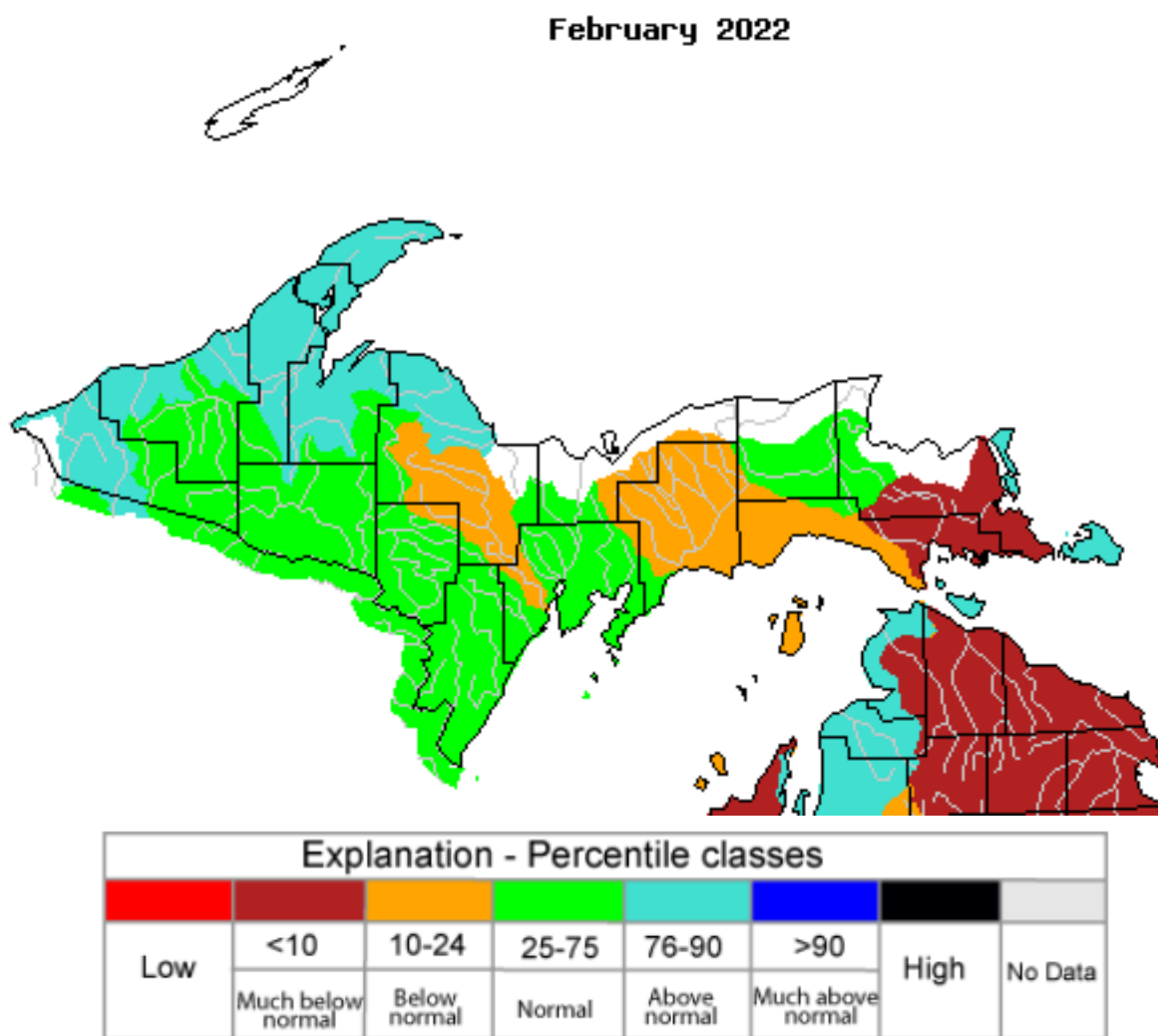


Figure 1: USGS monthly average streamflow in February 2022 across Upper Michigan.



Snowpack Conditions

Although the season started out running below normal for most of Upper Michigan in terms of the snowpack, the month of February allowed for a rebound in normal snow depths for many locations. Compared to one year ago, the SWEs are generally running higher, with amounts exceeding 10" in some eastern locations as well as up through the spine of the Keweenaw Peninsula.

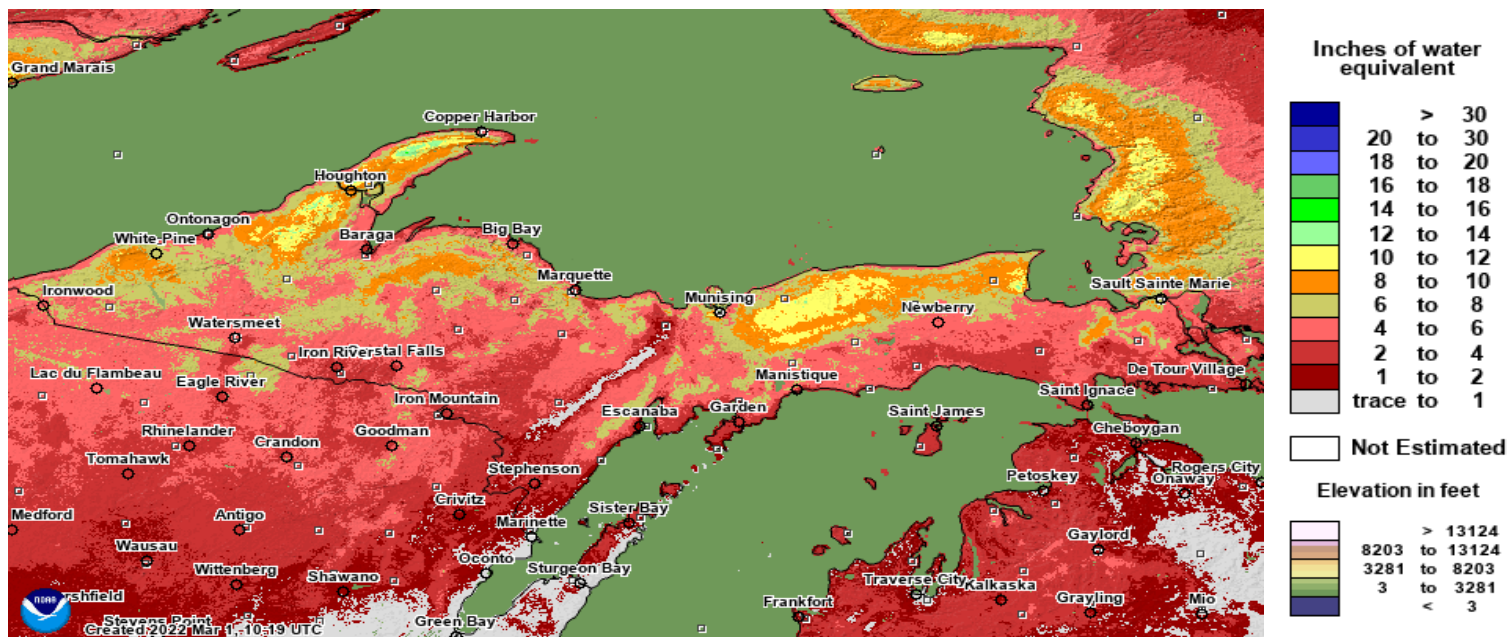


Figure 2: Current modeled snow water equivalent on March 1st.

Drought Discussion

The areas of Upper Michigan currently not in drought have been influenced by the fairly open waters of Lake Superior throughout much of the month of February, allowing for ample lake-effect snow to occur and persist. For the latest drought status, please visit <http://www.drought.gov>.

March 8, 2022

(Released Thursday, Mar. 10, 2022)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	51.86	48.14	27.63	0.00	0.00	0.00
Last Week 03-01-2022	52.33	47.67	27.63	0.00	0.00	0.00
3 Months Ago 12-01-2021	18.11	81.89	35.49	0.51	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 03-09-2021	11.19	88.81	0.00	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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National Drought Mitigation Center



droughtmonitor.unl.edu

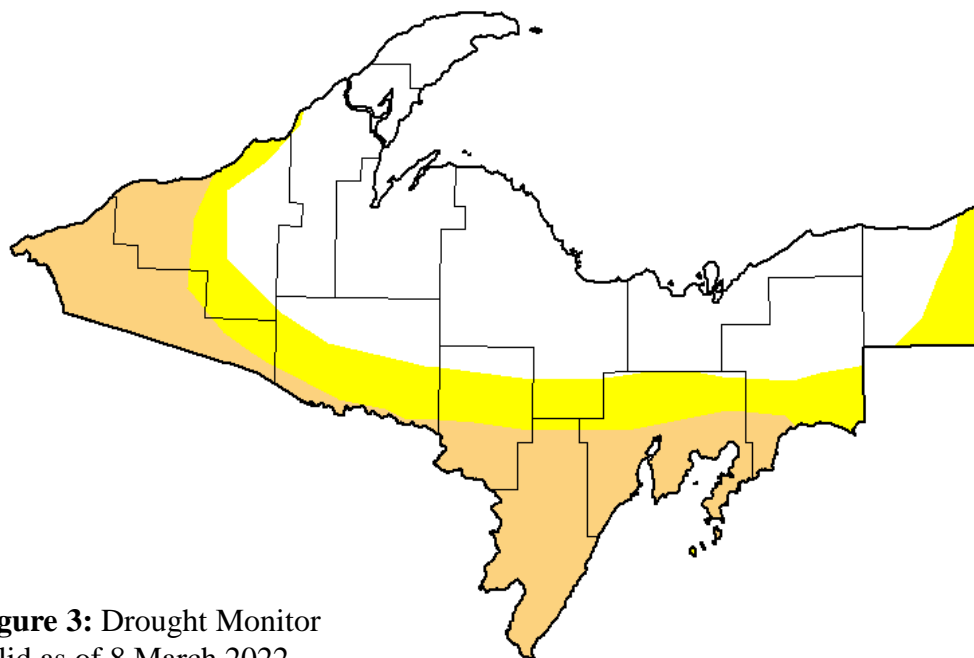


Figure 3: Drought Monitor valid as of 8 March 2022.



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Media Links

None.

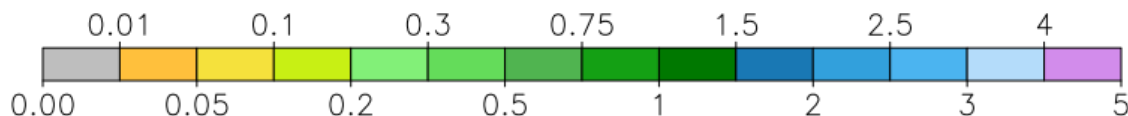
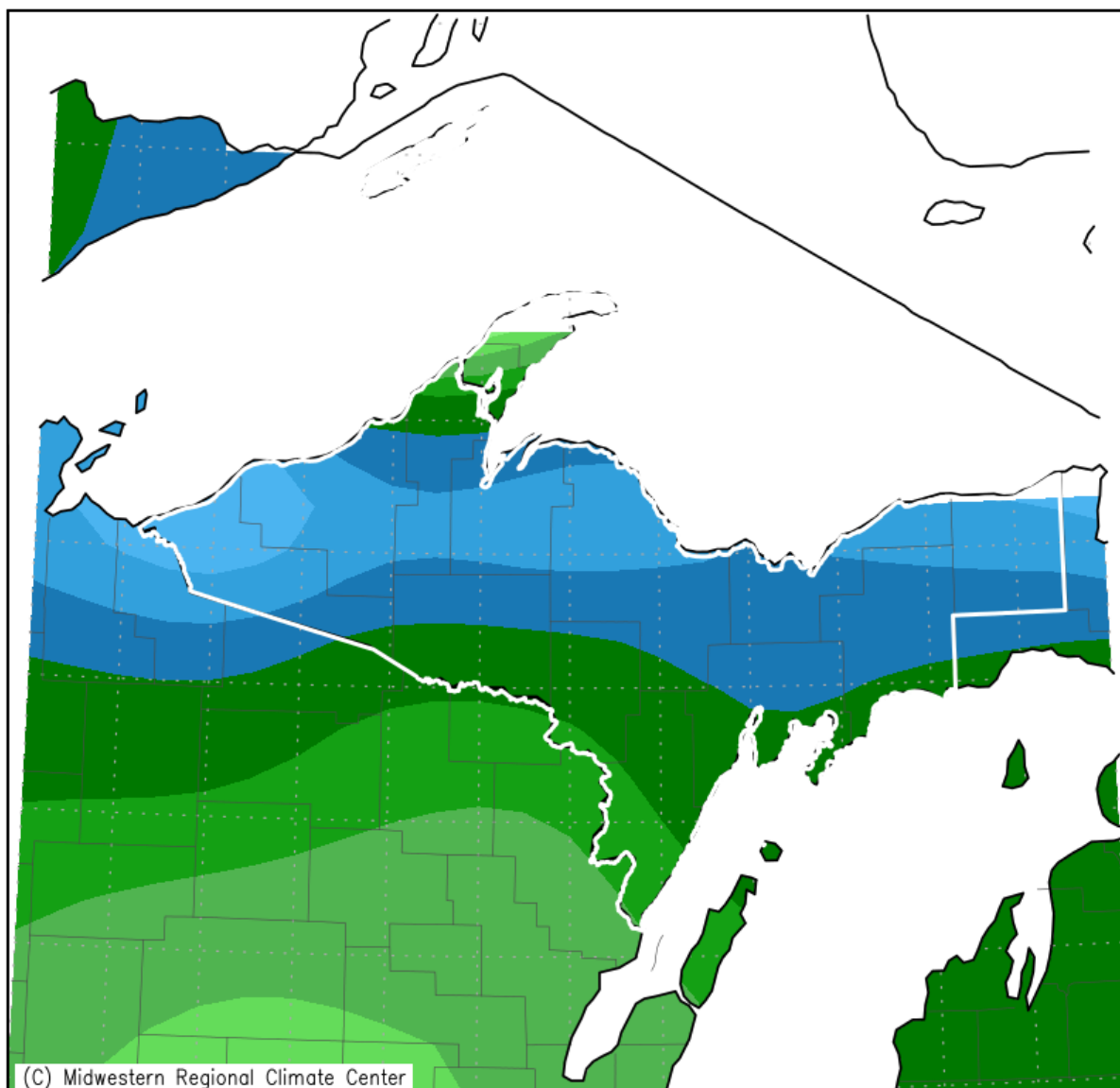
Hydro Products Issued

Product	Number
Hydrologic Outlook (ESF)	3
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)	28
Daily River Forecasts (RVD)	0



Precipitation Summary

Accumulated Precipitation (in)
February 1, 2022 to February 28, 2022



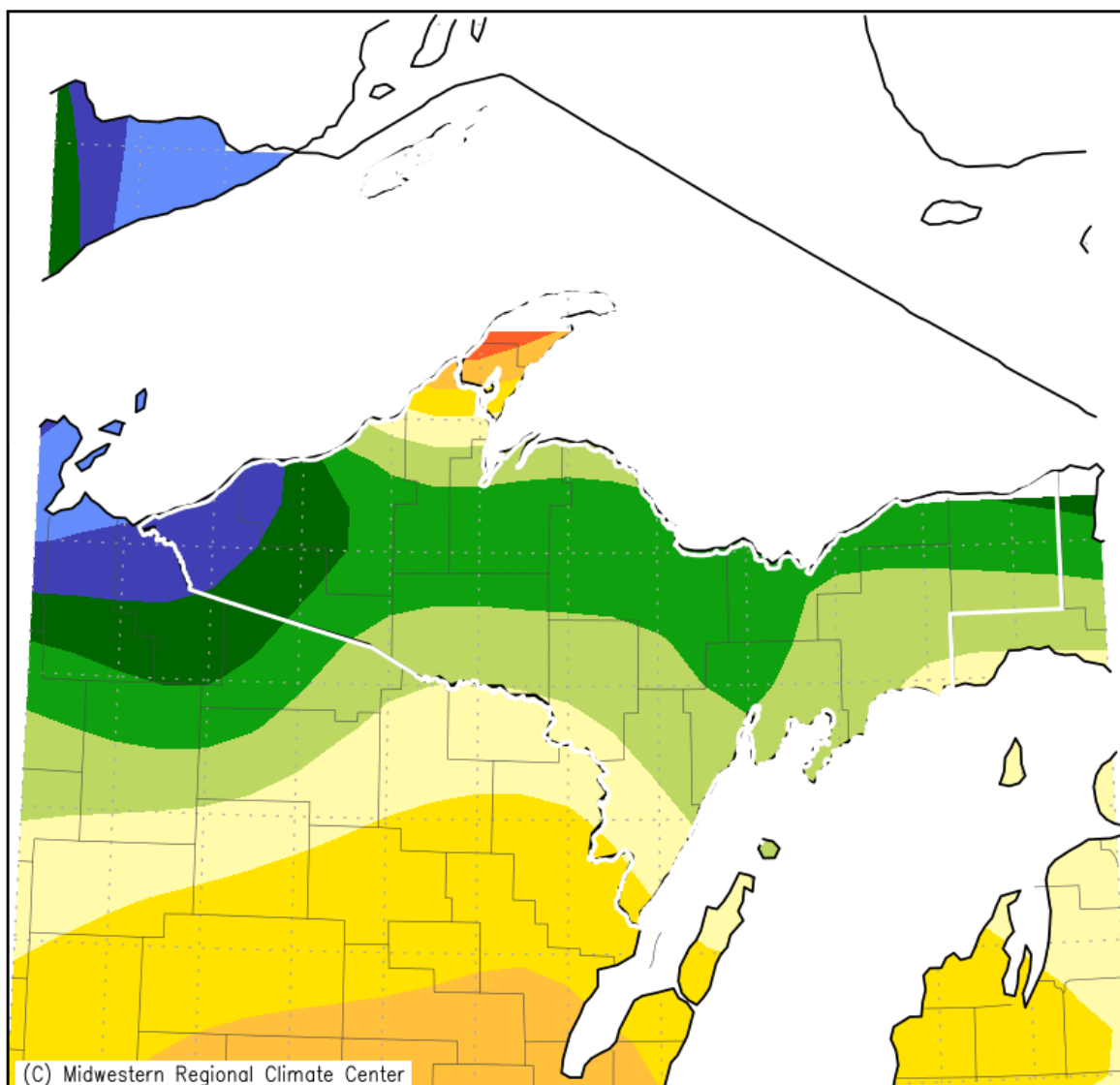
Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 3/12/2022 2:37:07 PM CST

Figure 4: February 2022 monthly precipitation totals.



Precipitation Summary Continued

Accumulated Precipitation: Percent of Mean
February 1, 2022 to February 28, 2022



Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
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Figure 5: February 2022 percent of normal of accumulated precipitation.



Soil Moisture Anomaly

Calculated Soil Moisture Anomaly (mm)
FEB, 2022

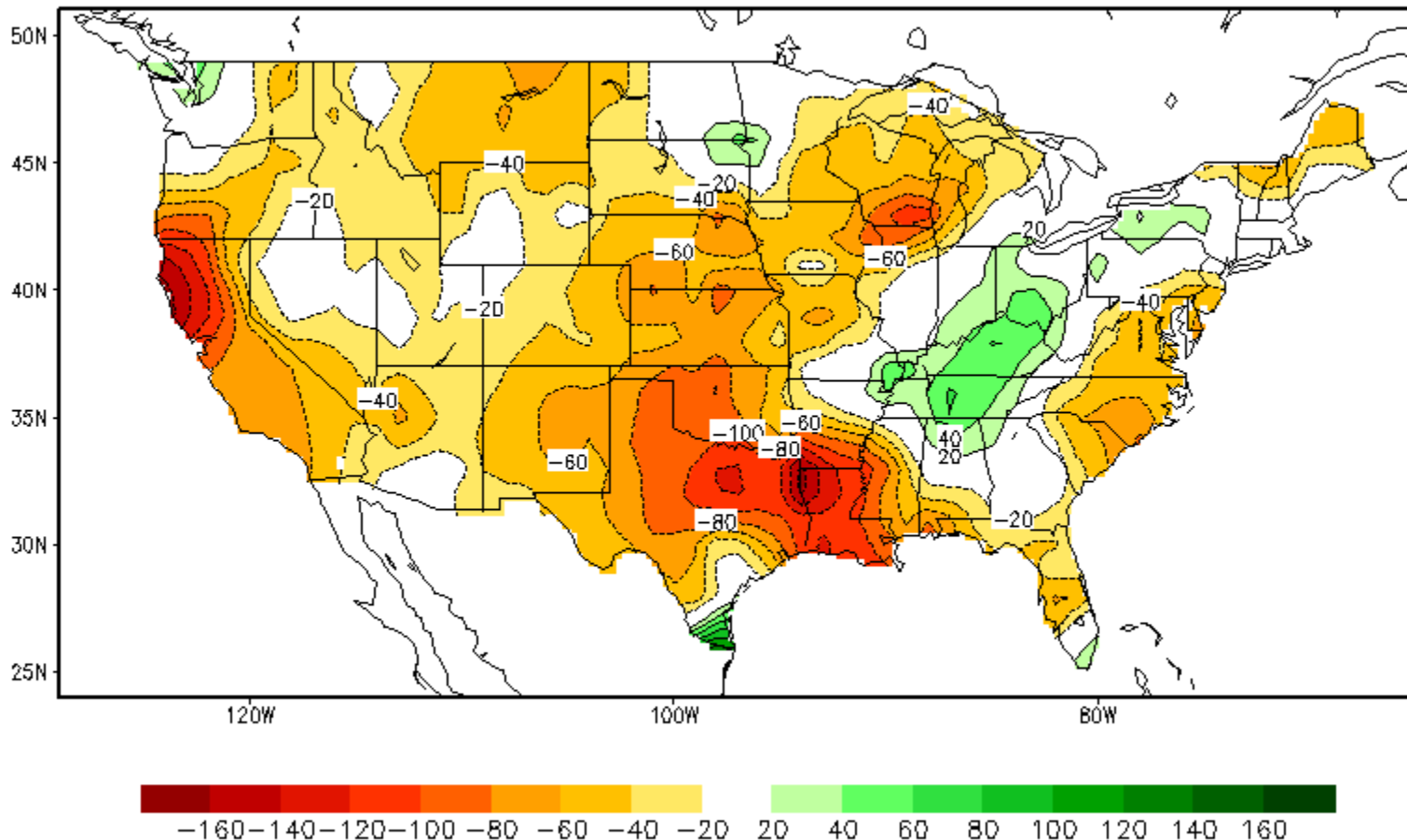


Figure 6: Climate Prediction Center's monthly average soil moisture anomaly for February 2022.