



Monthly Report of River and Flood Conditions

Report for March 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): March 2022
	DATE: April 15th, 2022
	SIGNATURE: Jordan Wendt, 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

Above normal precipitation with near to below normal snowfall amounts were observed during the month of March across Upper Michigan. With this above normal precipitation, drought conditions have been trimmed to just a few locations across the UP and are expected to be removed during this spring. We had optimal melting conditions during the month of March, so there were no flooding concerns across the area.

Location	Precipitation	% of Normal	Snowfall
WFO Marquette	3.28	123%	13.4
Marquette City	2.30	145%	4.5
Quincy Hill	4.41	M	21.5
Ironwood	2.69	133%	18.3
Iron Mountain	3.65	217%	3.5
Manistique	3.54	191%	5.0
Munising	3.10	154%	13.2
Stambaugh	2.52	169%	5.2

NOTE: Precipitation after 8 AM EST March 31st was counted in April 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 March.

River Conditions

Most rivers across Upper Michigan were running near normal for the month of March. The Brule, Sturgeon (Delta), and Menominee basins were running above normal.

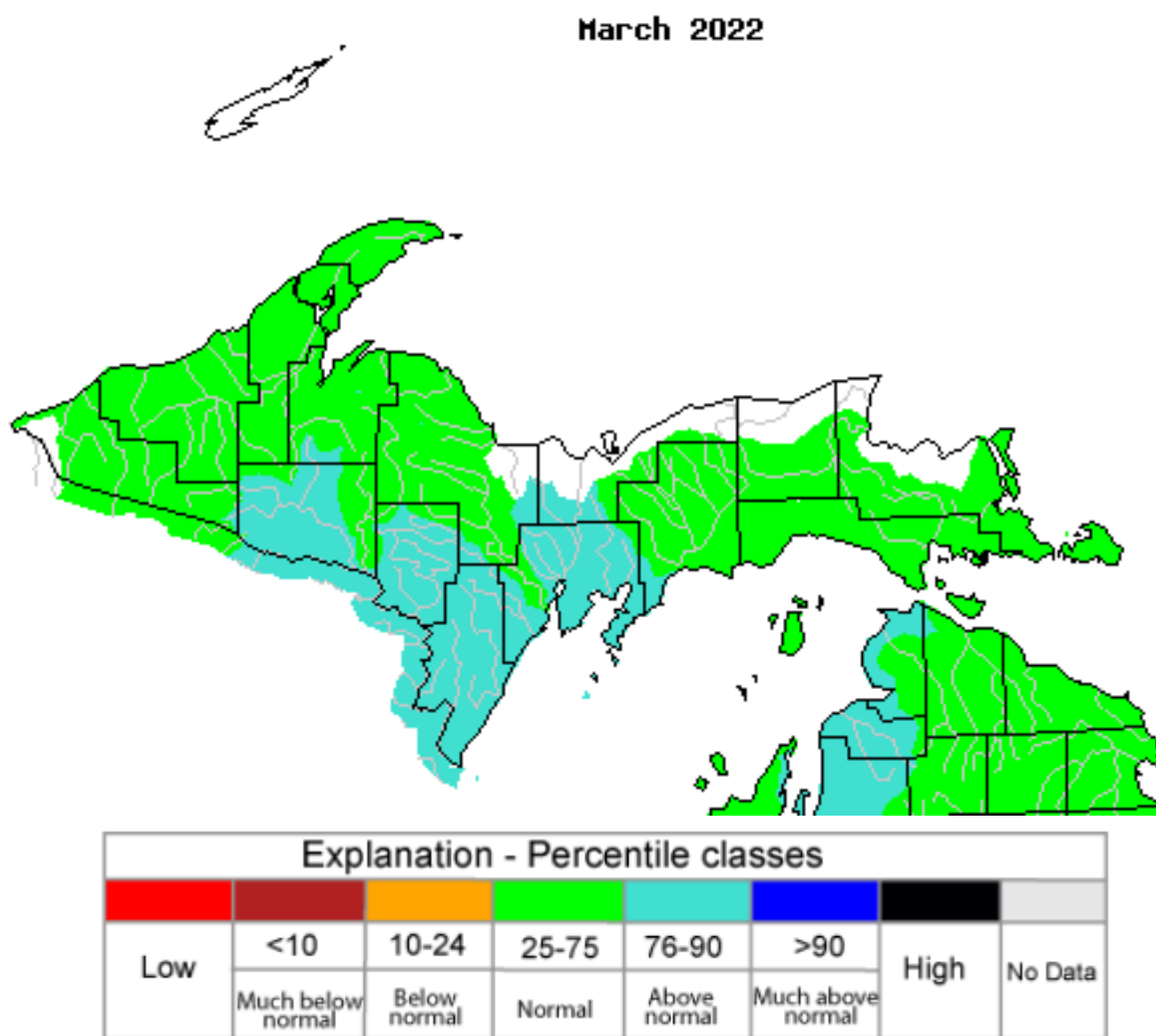


Figure 1: USGS monthly average streamflow in March 2022 across Upper Michigan



Snowpack SWE (Snow Water Equivalent) Conditions

SWE conditions across Upper Michigan at the end of March were near normal for this time of year.

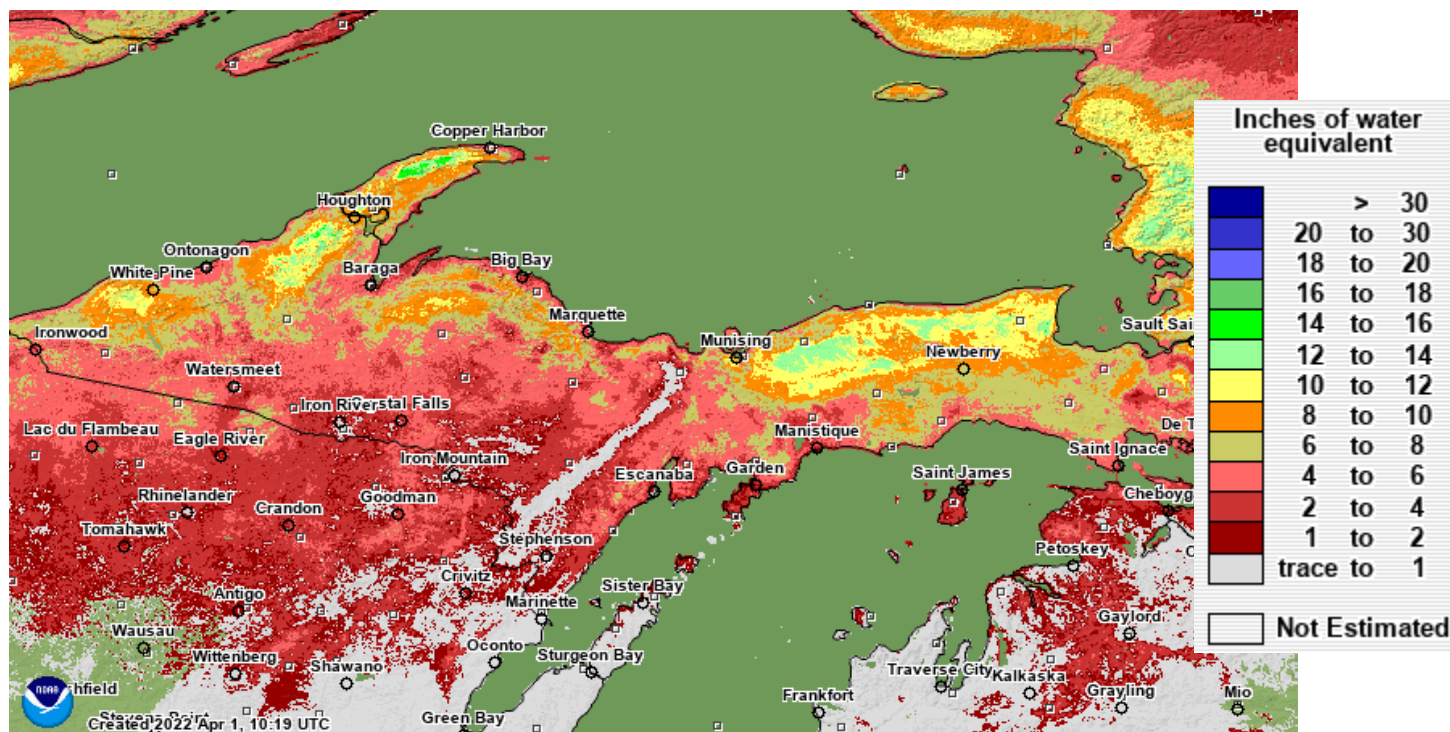


Figure 2: Current modeled snowpack snow water equivalent on April 1st.

Drought Discussion

Above normal precipitation has allowed for the removal of most drought areas across Upper Michigan. For the latest drought status, please visit <http://www.drought.gov>.

April 12, 2022
 (Released Thursday, Apr. 14, 2022)
 Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	88.17	11.83	1.50	0.00	0.00	0.00
Last Week 04-05-2022	52.16	47.84	1.50	0.00	0.00	0.00
3 Months Ago 01-11-2022	45.28	54.72	27.69	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 04-13-2021	82.24	17.76	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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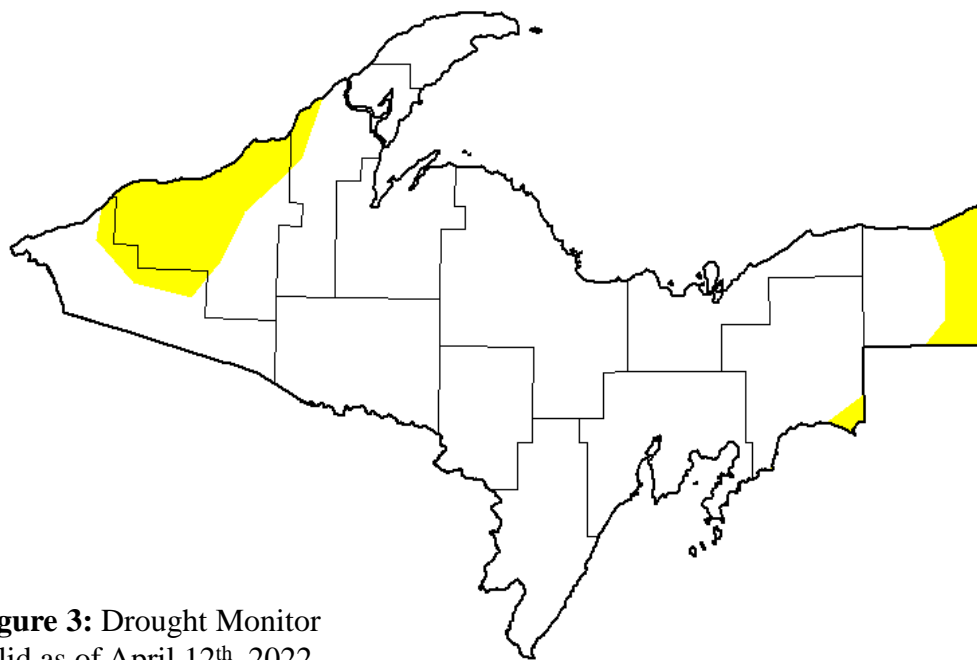


Figure 3: Drought Monitor valid as of April 12th, 2022.



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Media Links

None.

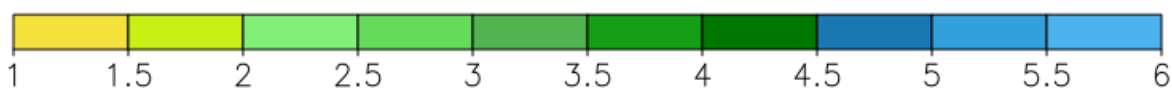
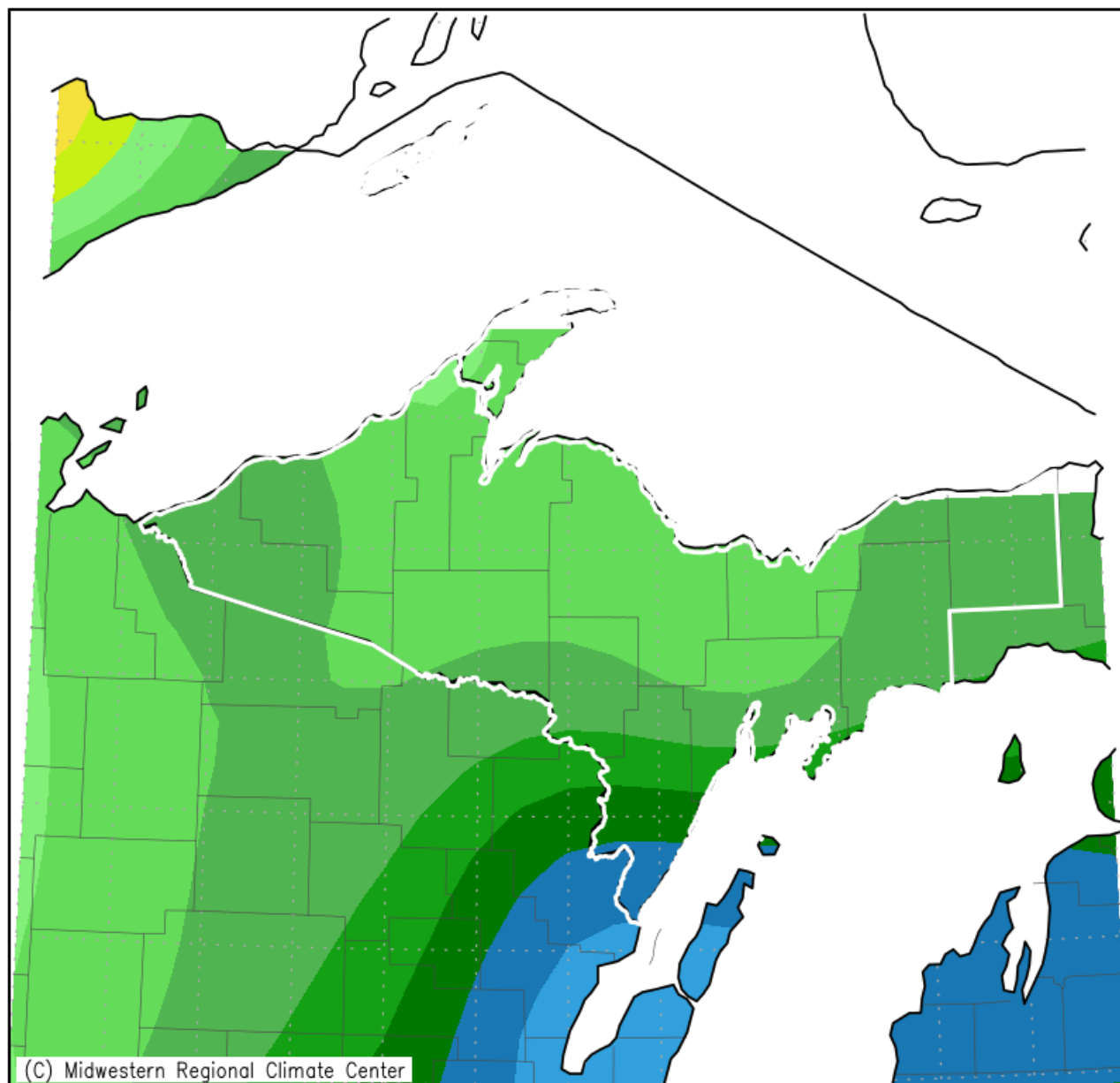
Hydro Products Issued

Product	Number
Hydrologic Outlook (ESF)	2
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
Daily River Forecasts (RVD)	0



Precipitation Summary

Accumulated Precipitation (in)
March 1, 2022 to March 31, 2022



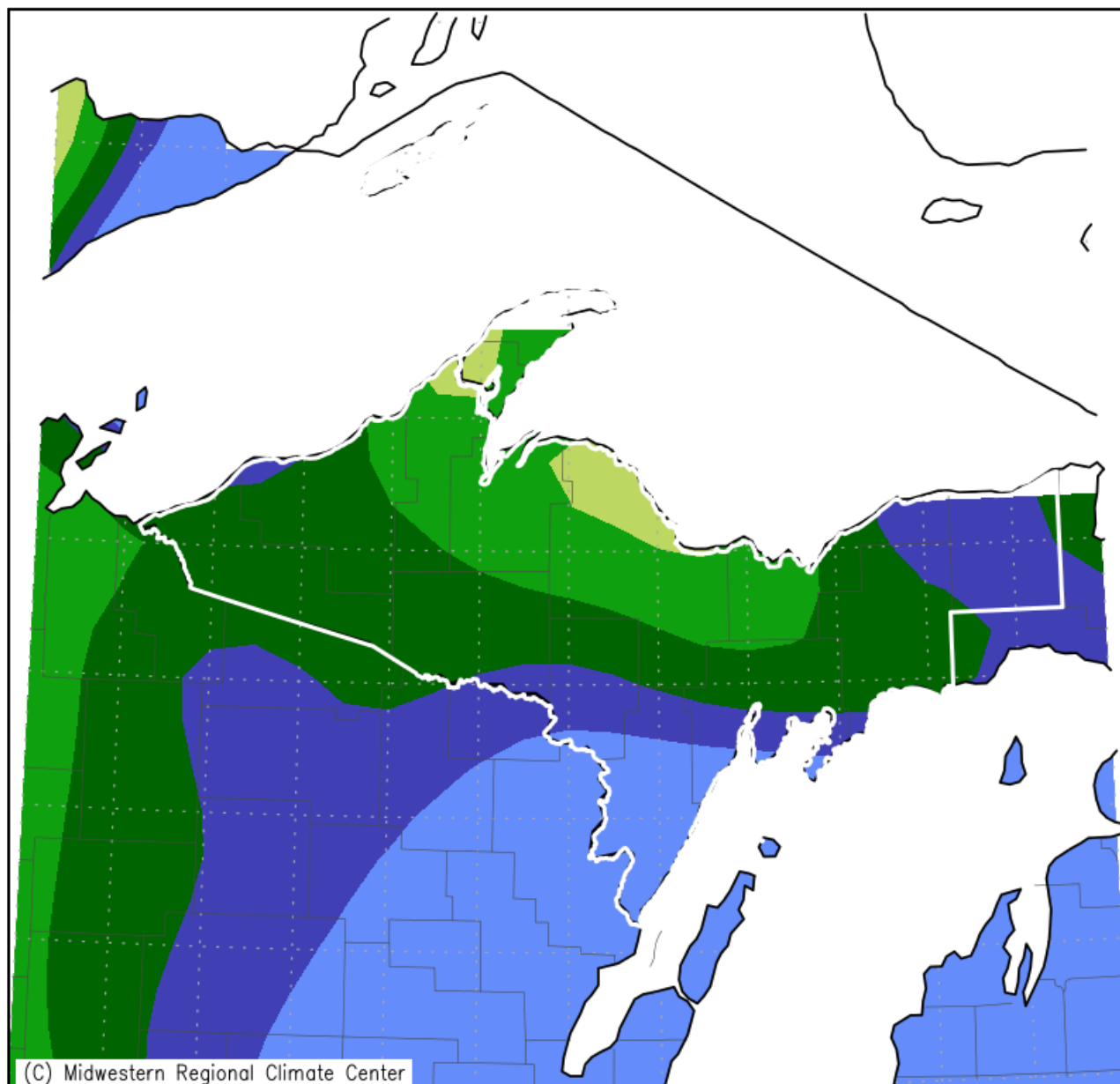
Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 4/15/2022 6:43:23 AM CDT

Figure 4: March 2022 Monthly Precipitation Totals.

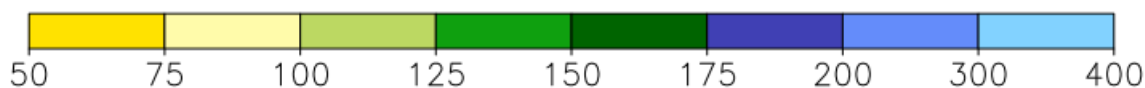


Precipitation Summary Continued

Accumulated Precipitation: Percent of Mean
March 1, 2022 to March 31, 2022



Mean period is 1991–2020.



Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 4/15/2022 6:45:18 AM CDT

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



Soil Moisture Anomaly

Calculated Soil Moisture Anomaly (mm)
MAR, 2022

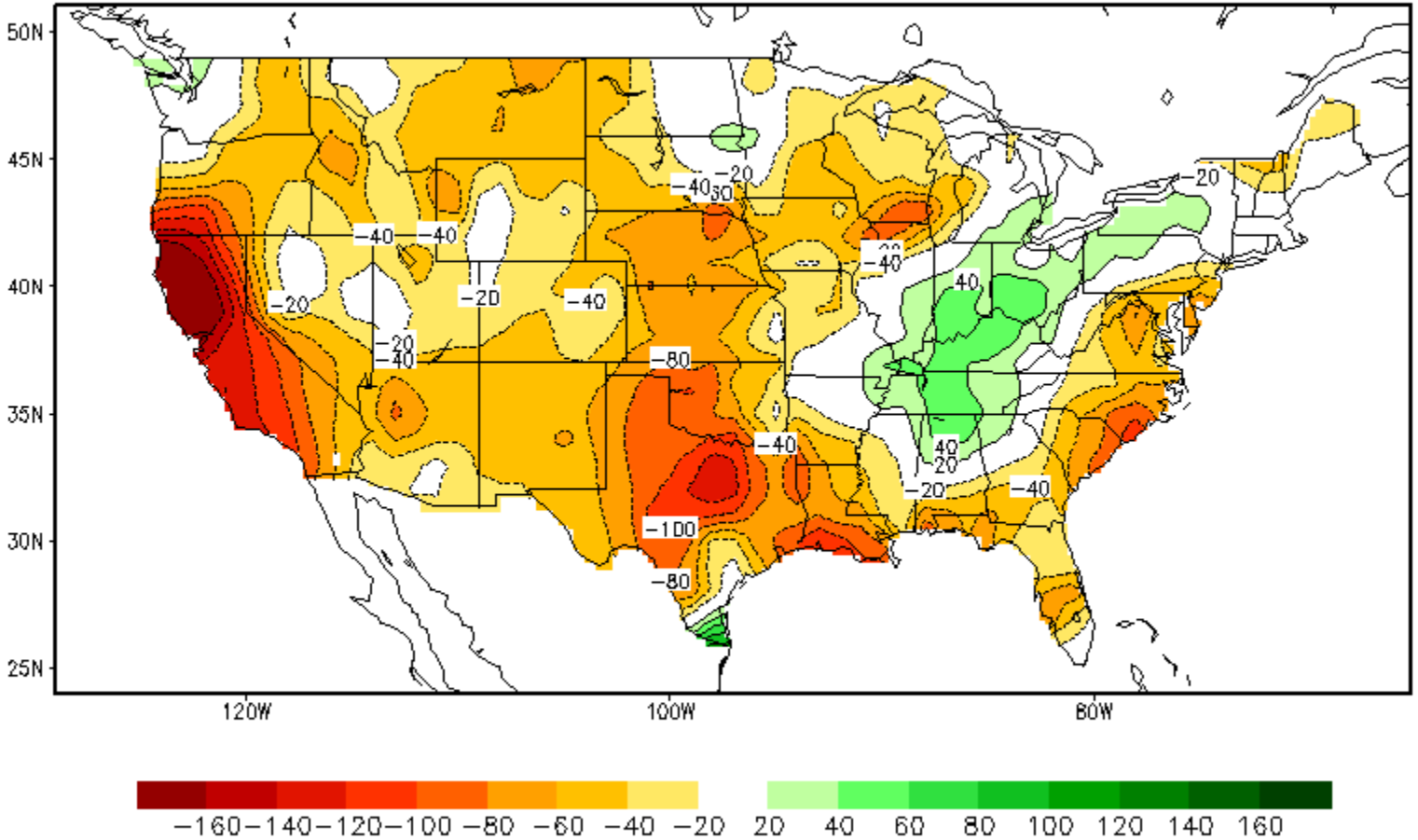


Figure 6: Climate Prediction Center’s monthly average soil moisture anomaly for March 2022.