

Southern Wisconsin Spring Flood Outlook

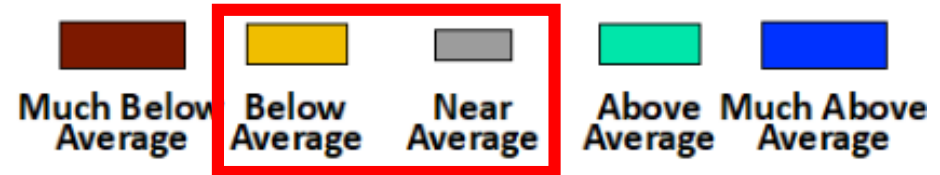
Feb 9, 2023

Presenter: Sarah Marquardt, Senior Service Hydrologist
sarah.Marquardt@noaa.gov



National Weather Service Milwaukee

Key Points



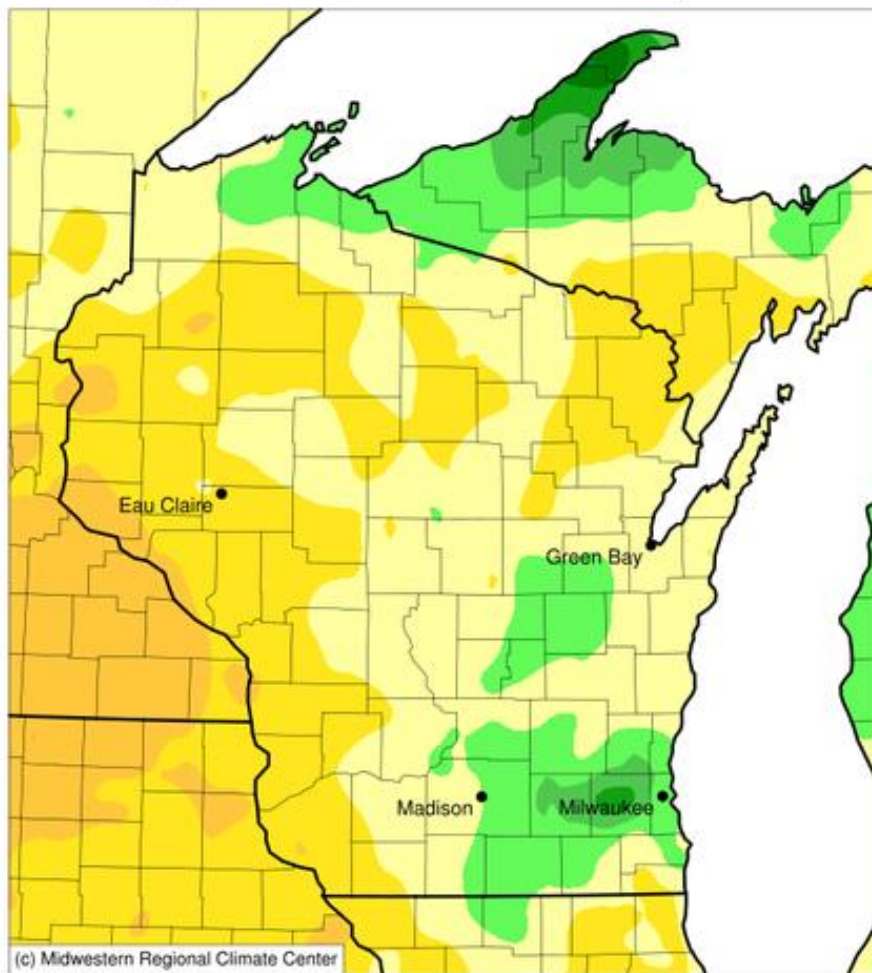
- **Spring flood risk is average to slightly below average across all of southern Wisconsin**
 - Main factor is below normal snow pack
 - Additional snow pack will increase this risk
 - Break Up Ice Jam Risk
- **Flooding is still possible, the underlying risk is not elevated at this time**
 - Flooding is possible with rain on frozen ground
 - Greatest risk of flooding occurs with snow melt and moderate to heavy rain

Flood Risk Factor	Status	Risk
Snowpack	Below Average	Lowers Risk
Soil Moisture	Average to Slightly Above	Slightly Increases Risk
Frost Depth	Lower than Average	Slightly Decreases Risk
River Levels	Average to Above Average	Slightly Increases Risk
Spring Precipitation	?	?
Spring Temperatures	?	?

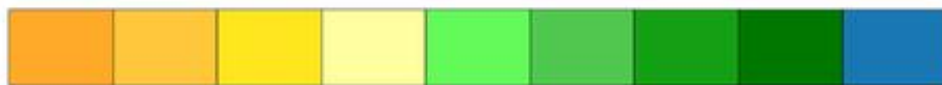


Accumulated Precipitation (in): Departure from 1991-2020 Normals

September 01, 2022 to November 30, 2022



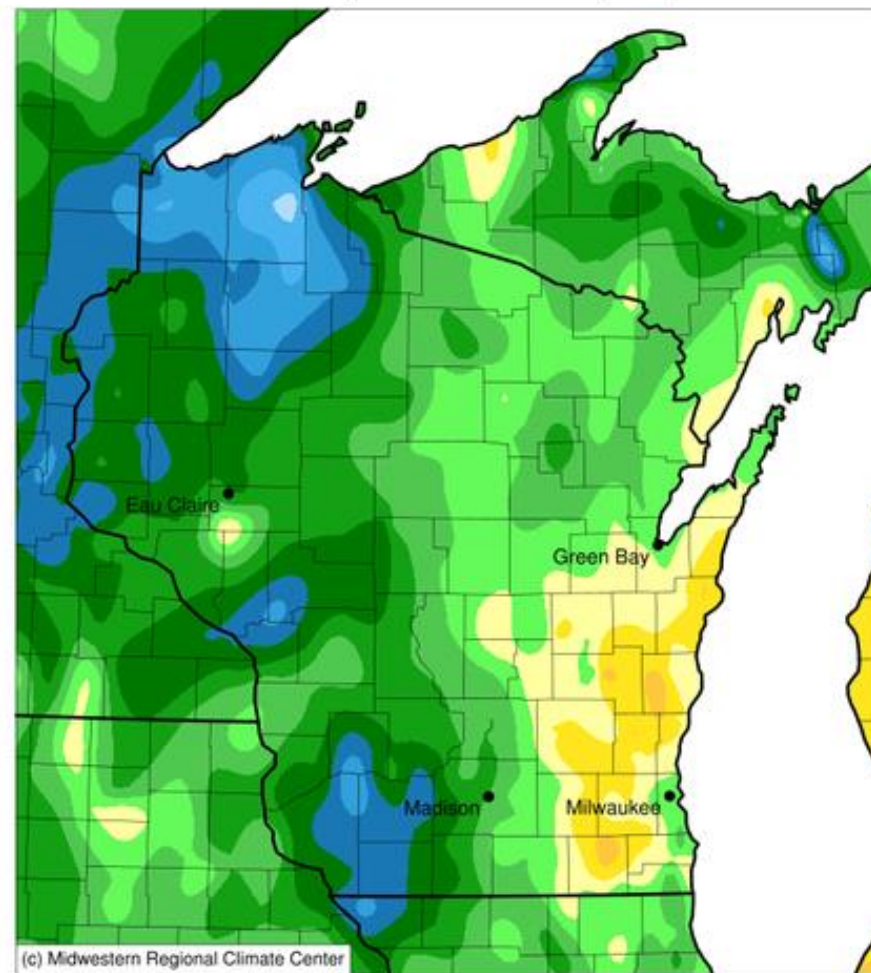
(c) Midwestern Regional Climate Center



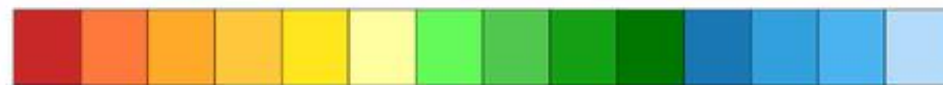
-6 -4 -2 0 2 4 6 8
Stations from the following networks used: WBAN, COOP, FAA, GHCN, ThreadEx, CoCoRaHS, WMO, ICAO, NWSLI, Midwestern Regional Climate Center cli-MATE: MRCC Application Tools Environment
Generated at: 2/9/2023 9:44:17 AM CST

Accumulated Precipitation (in): Departure from 1991-2020 Normals

December 01, 2022 to February 08, 2023



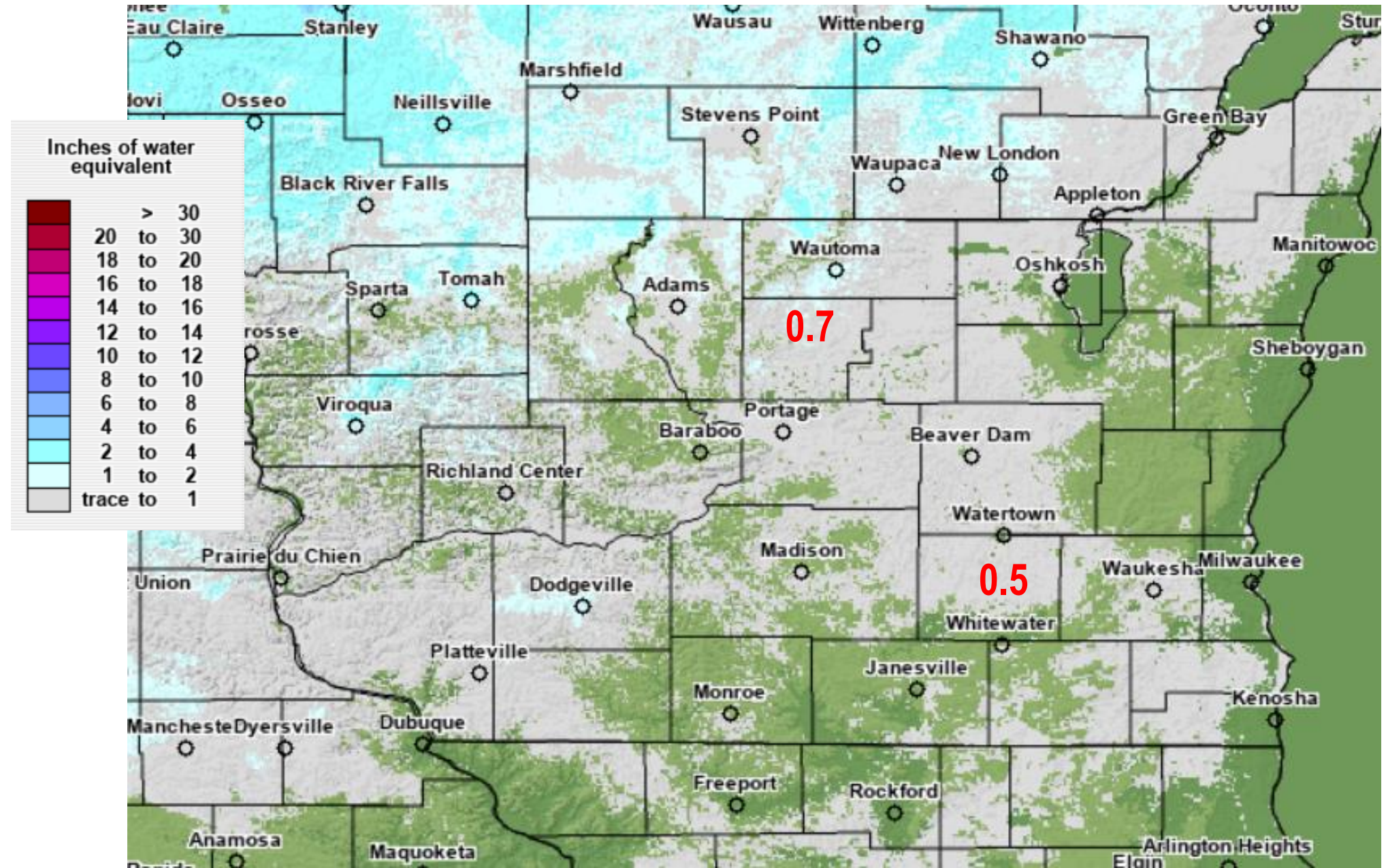
(c) Midwestern Regional Climate Center



-2.5 -2 -1.5 -1 -0.5 0 0.5 1 1.5 2 2.5 3 3.5
Stations from the following networks used: WBAN, COOP, FAA, GHCN, ThreadEx, CoCoRaHS, WMO, ICAO, NWSLI, Midwestern Regional Climate Center cli-MATE: MRCC Application Tools Environment
Generated at: 2/8/2023 2:26:40 PM CST



Snow Water Equivalent 2/8/23



Expected Liquid Precip - Official NWS Forecast

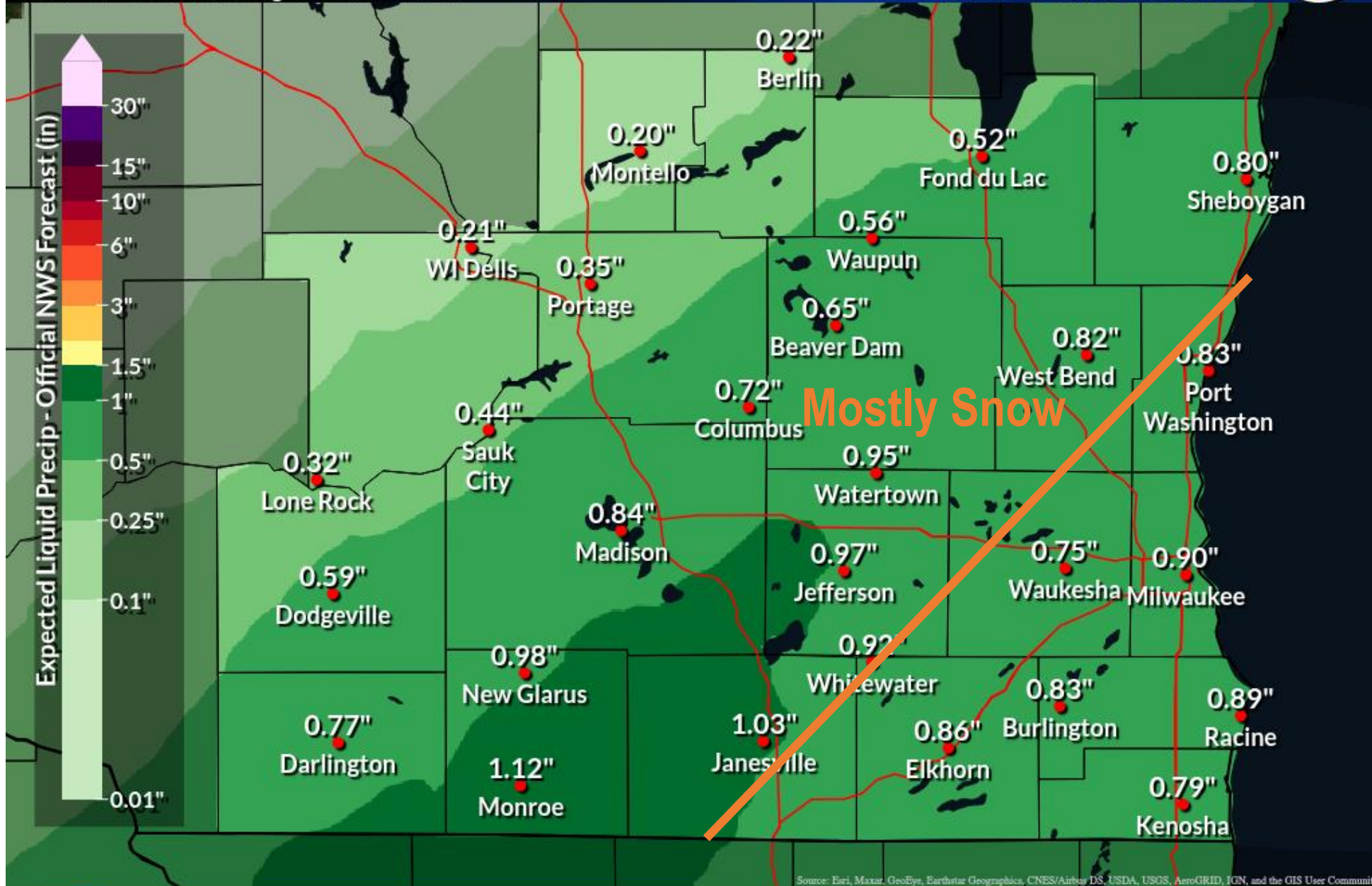
Weather Forecast Office
Milwaukee, WI



Valid Thu 6:00AM through Fri 6:00AM CST

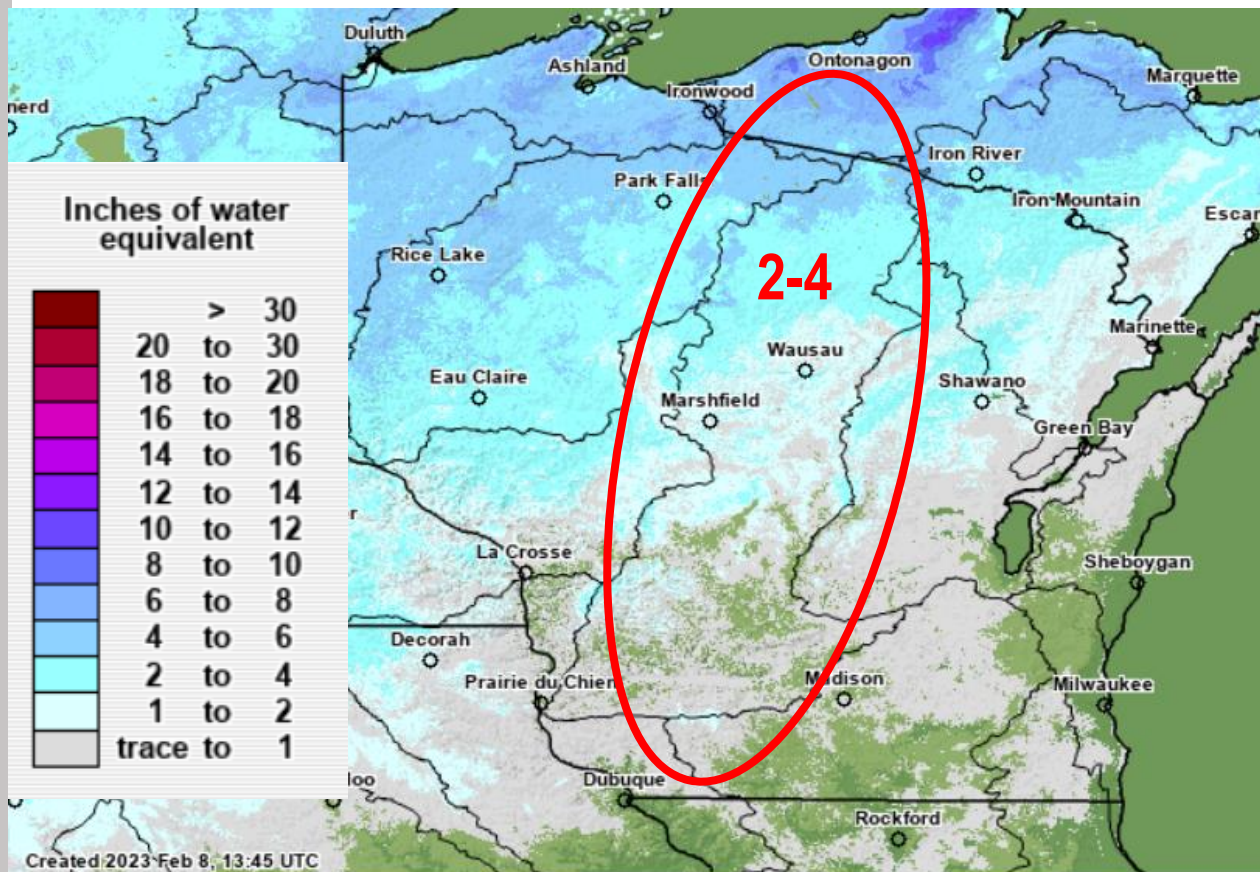
Issued Feb 09, 2023 5:01 AM CST

National Weather Service Milwaukee

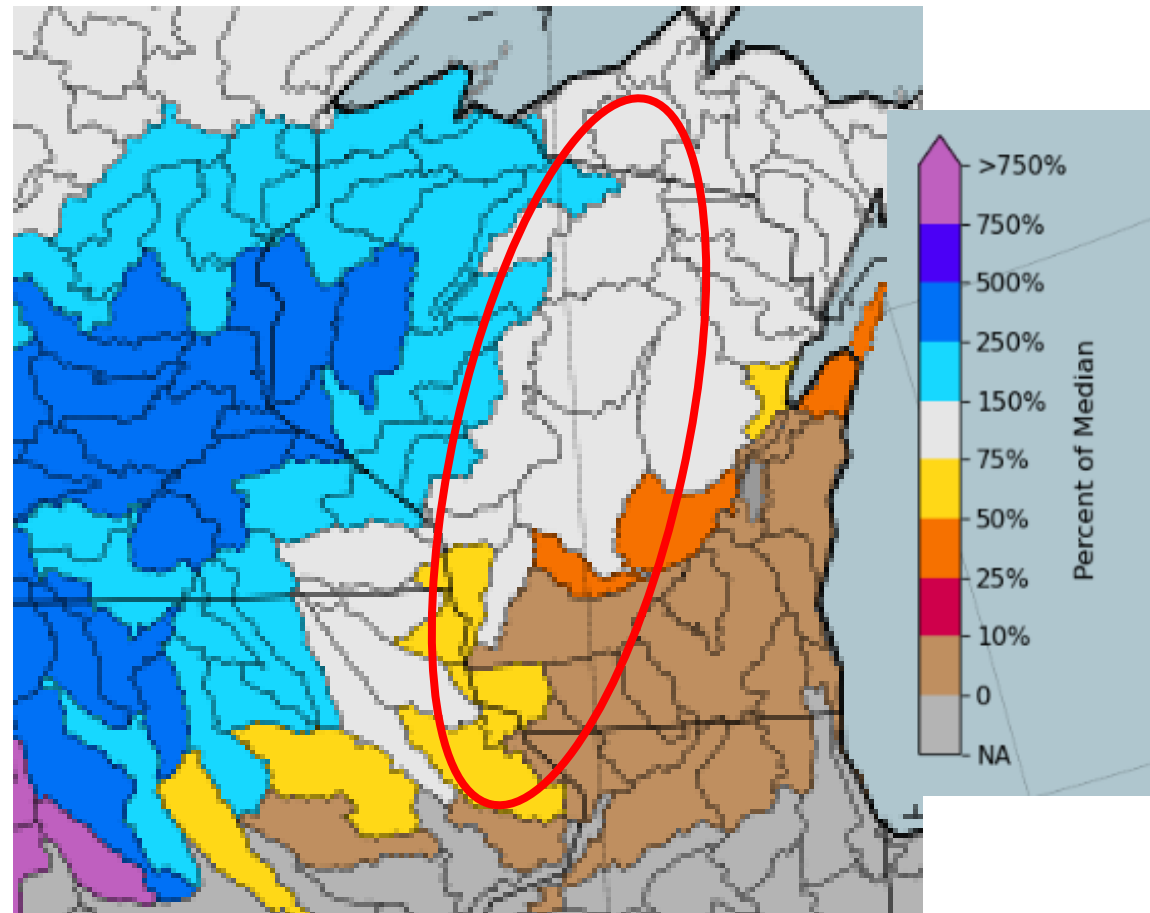


Wisconsin River

Snow Water Equivalent 2/8/23



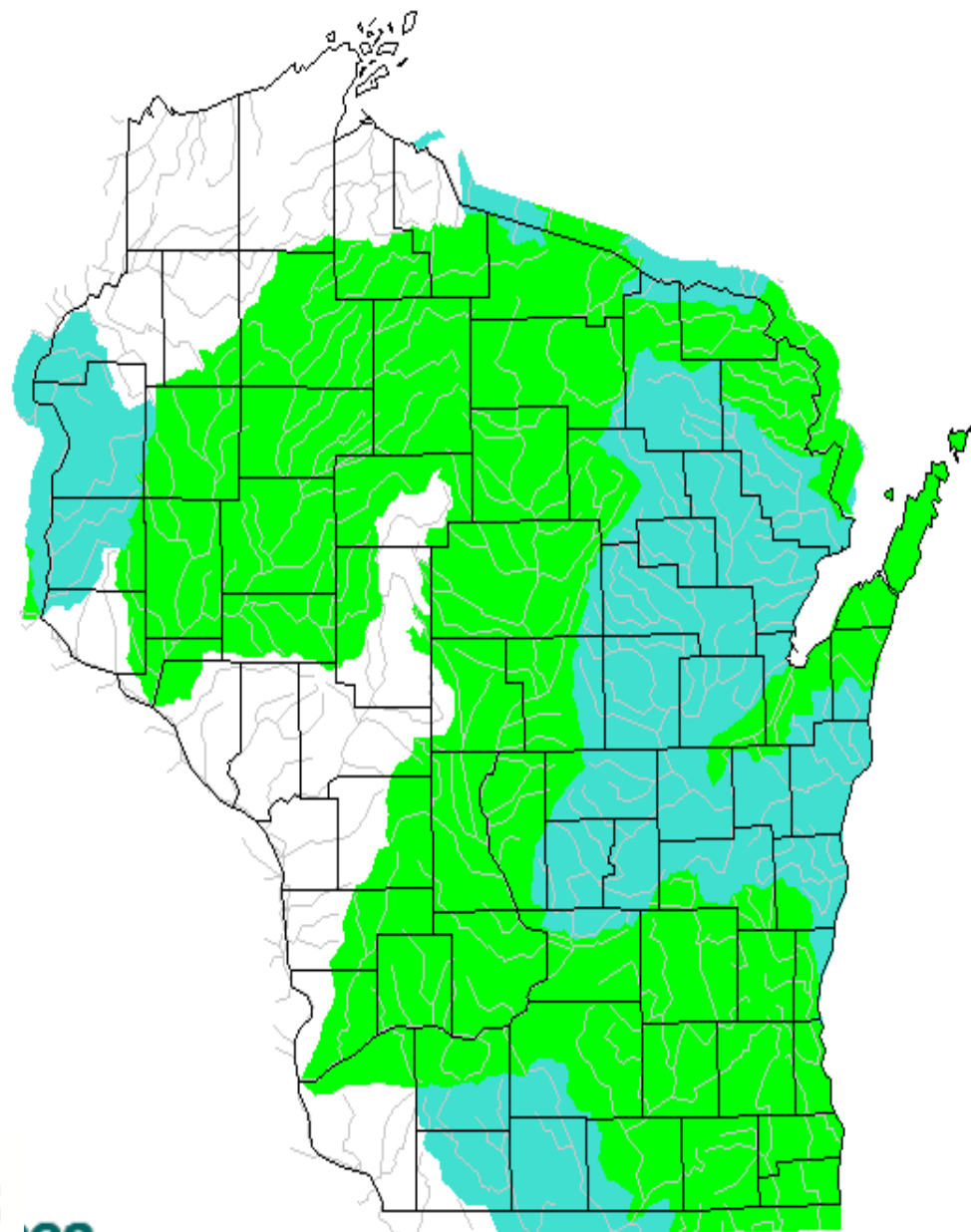
Snow Water Equivalent Percent of Mean 2/8/23



14 day Mean Streamflow Percentile

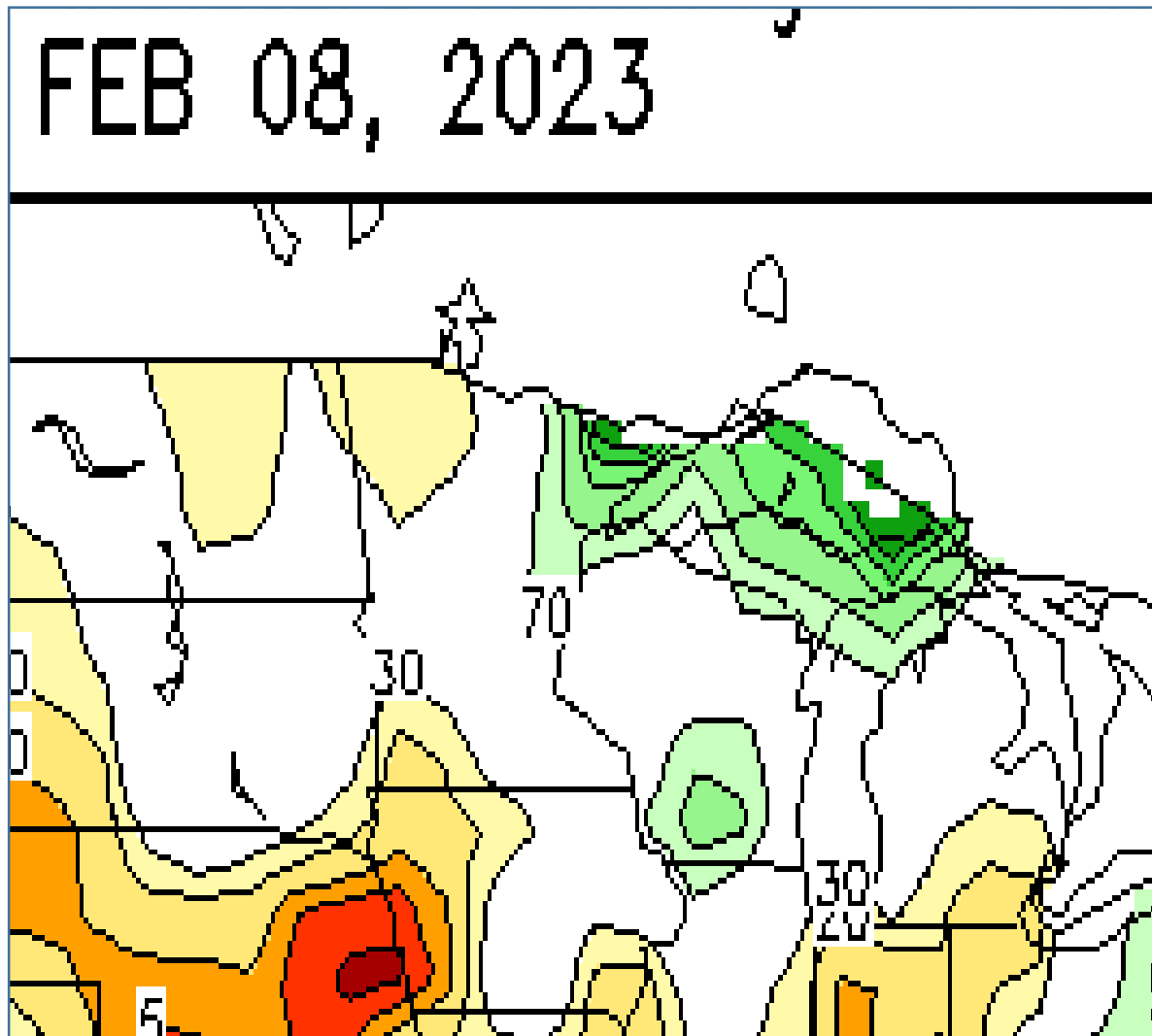
Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		

Wednesday, February 08, 2023

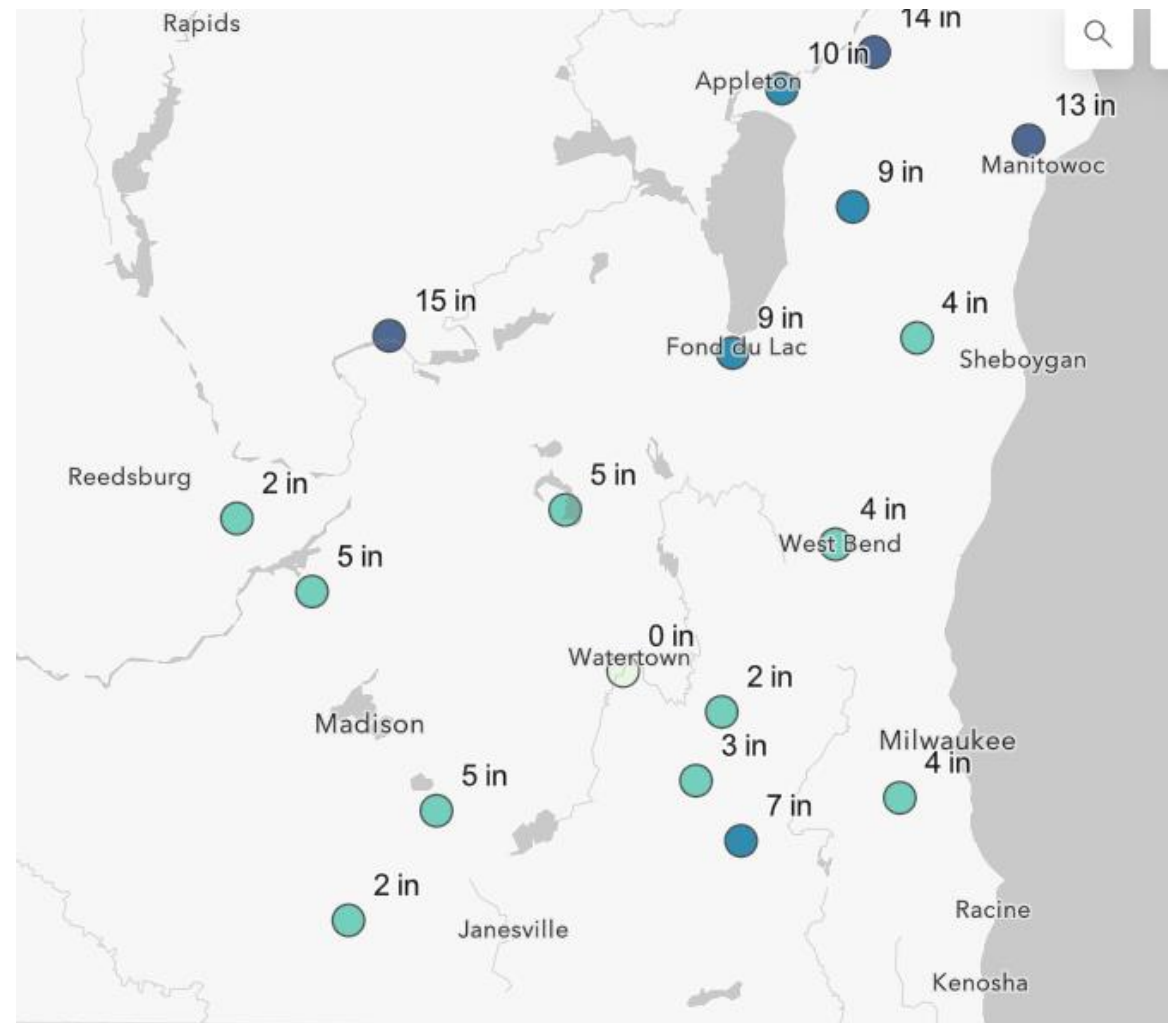


Soil Moisture Percentile

FEB 08, 2023



Frost Depth 2/6/2023



How Does This Compare to Last Year?

- **2022: Spring flood risk was below average**
 - **Below normal snow pack**
 - **Drier than normal soils**
 - **Fall and winter precipitation was below average**
 - **Moderate to severe drought conditions in Feb 2022**



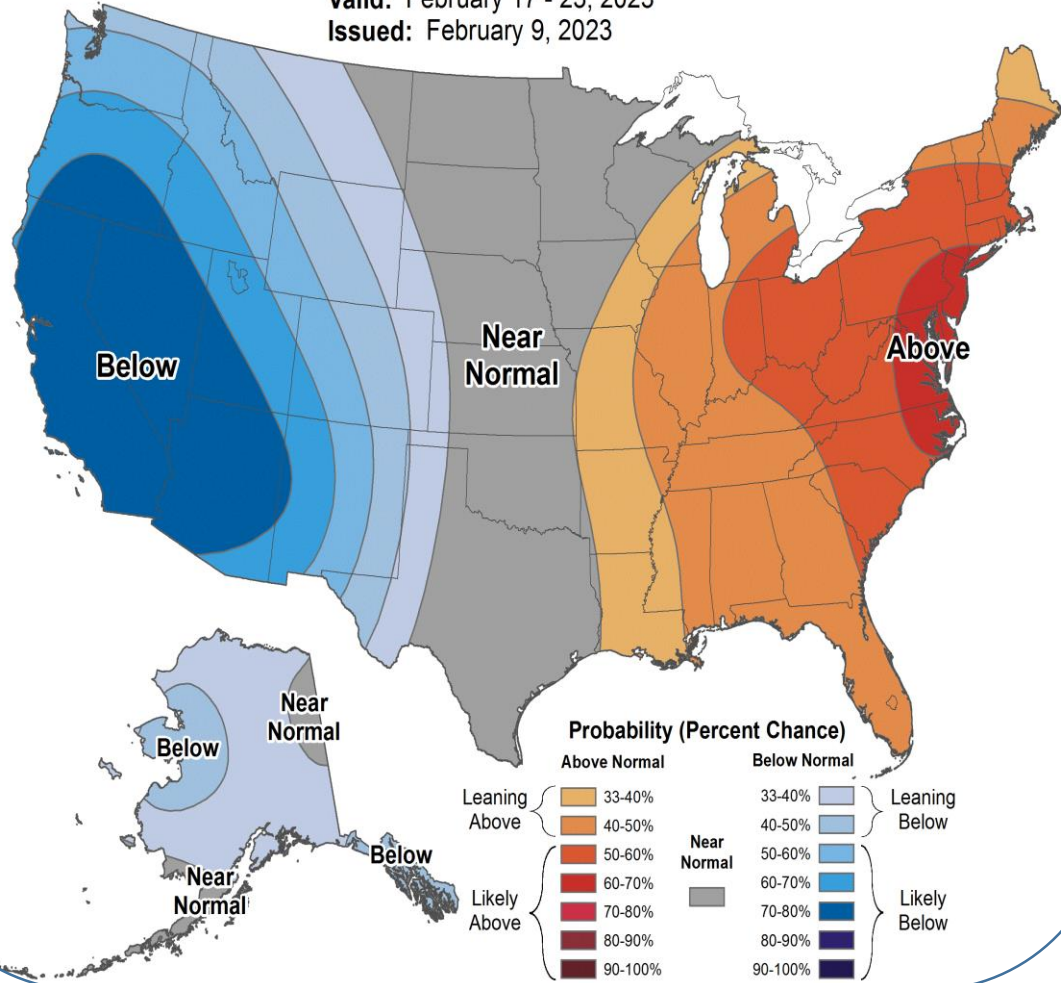


8-14 Day Temperature Outlook



Valid: February 17 - 23, 2023

Issued: February 9, 2023

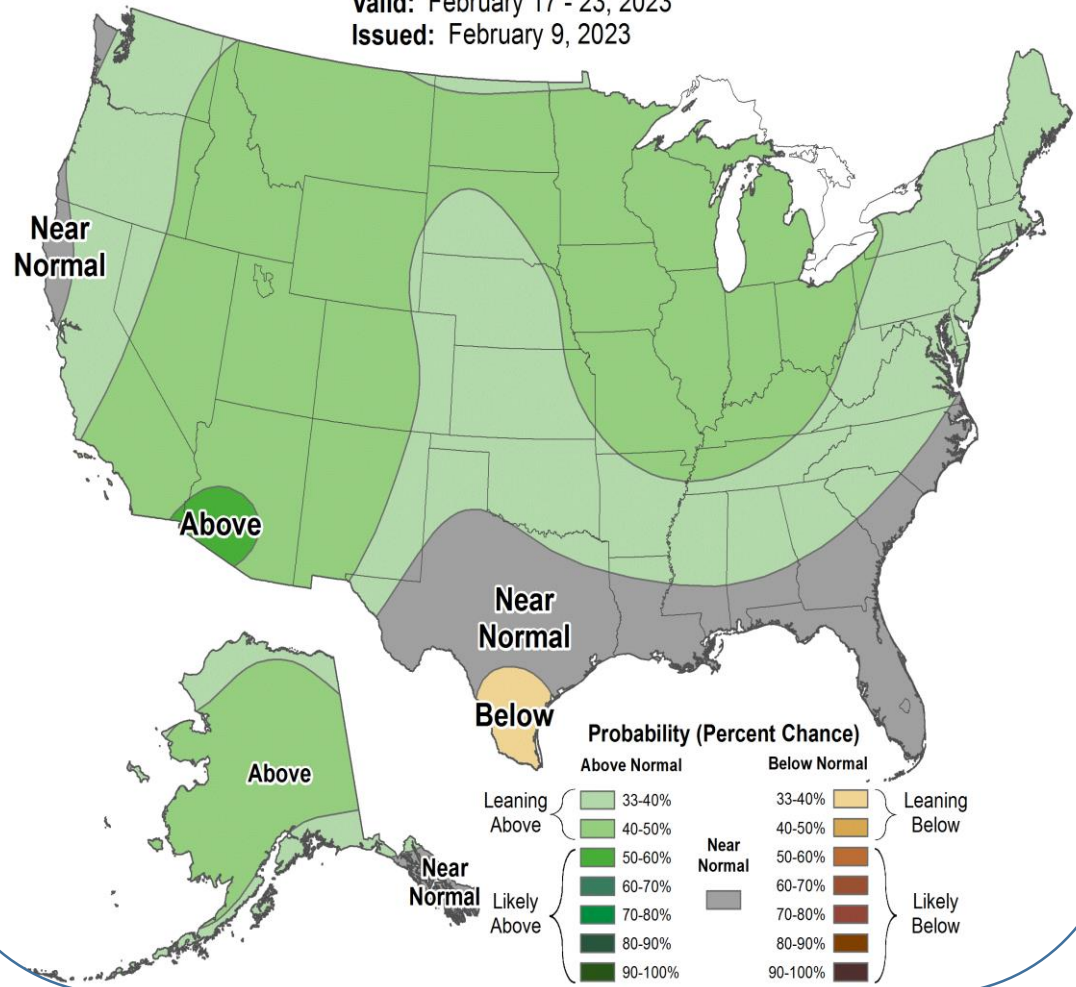


8-14 Day Precipitation Outlook



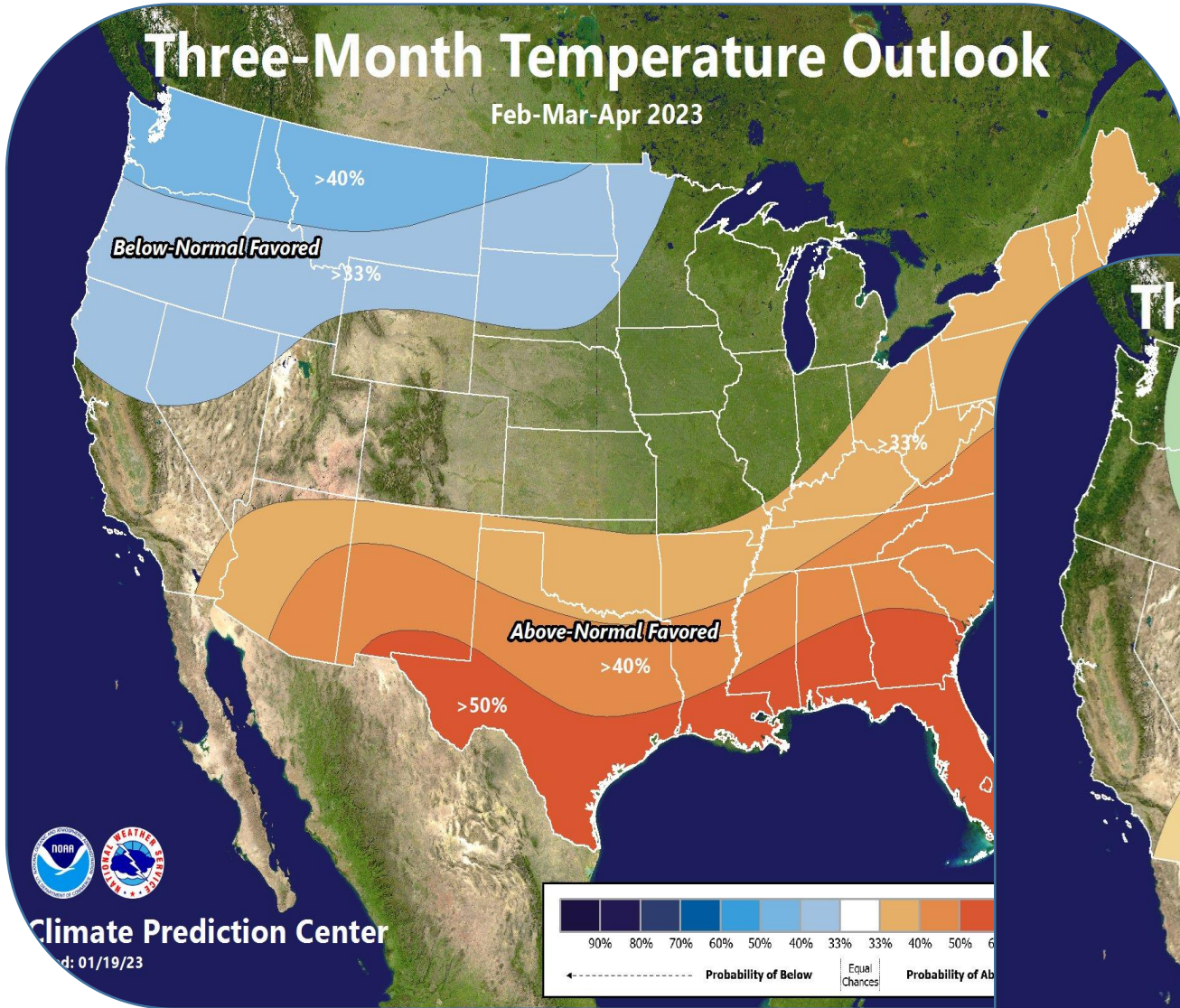
Valid: February 17 - 23, 2023

Issued: February 9, 2023



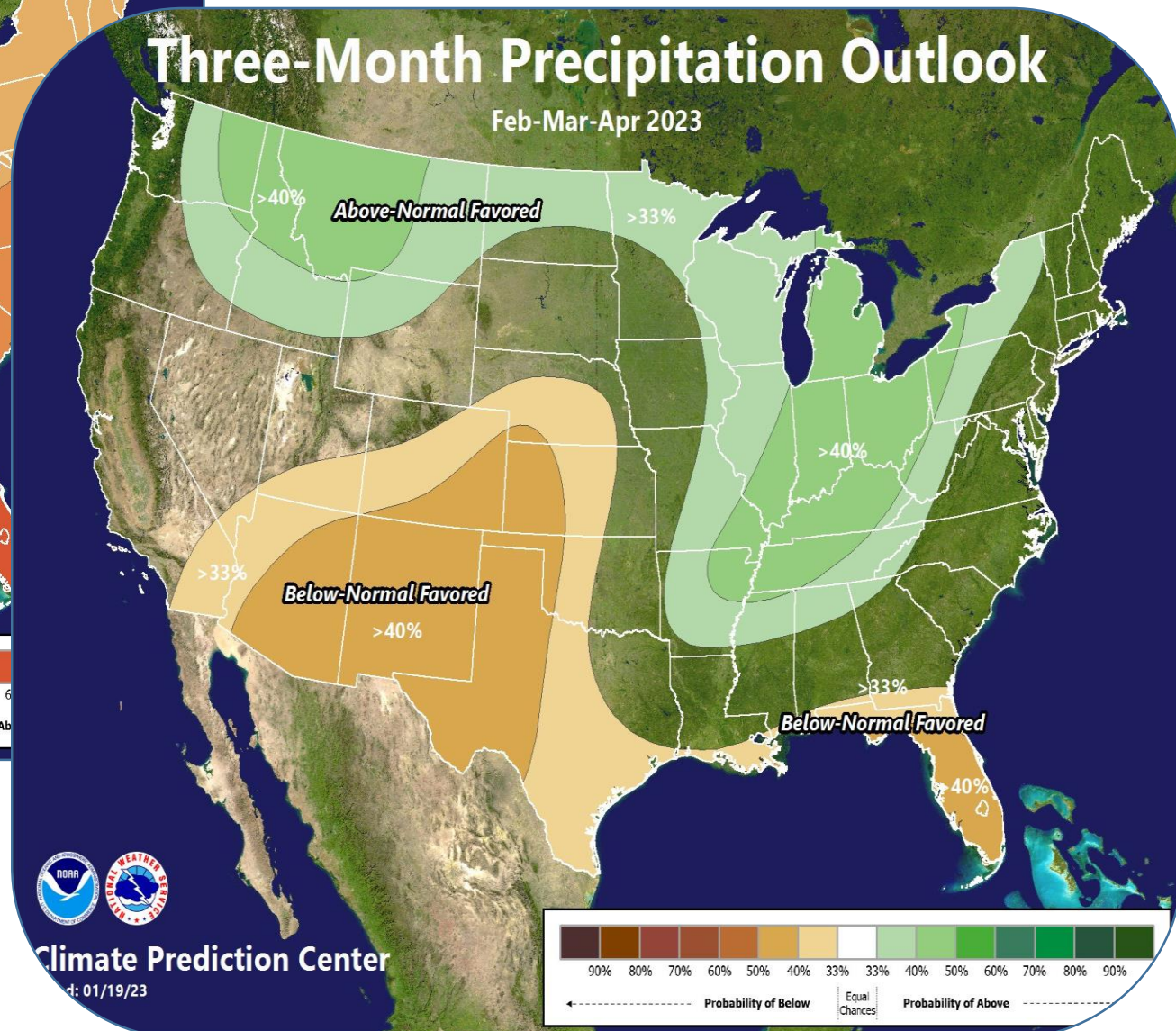
Three-Month Temperature Outlook

Feb-Mar-Apr 2023



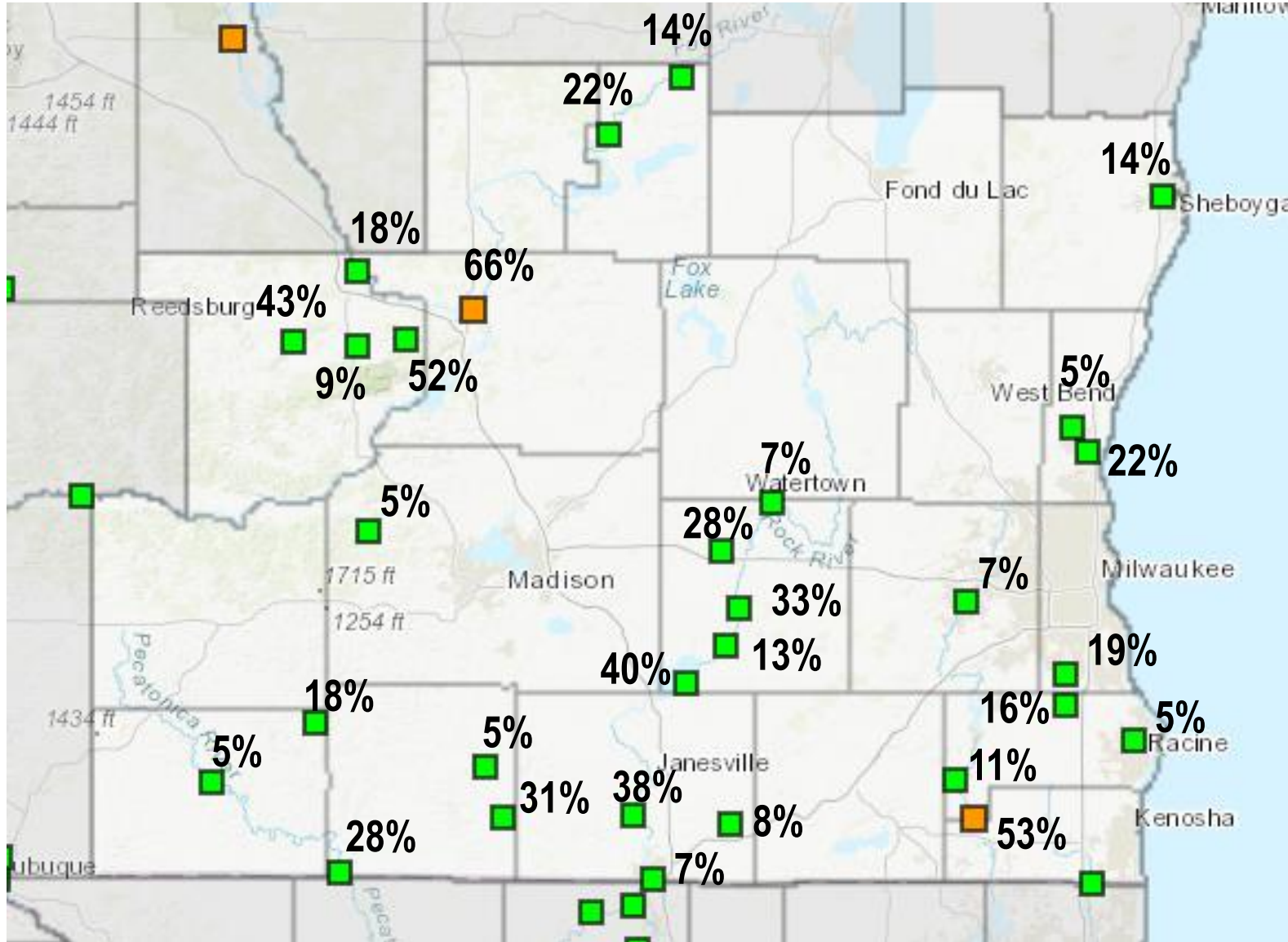
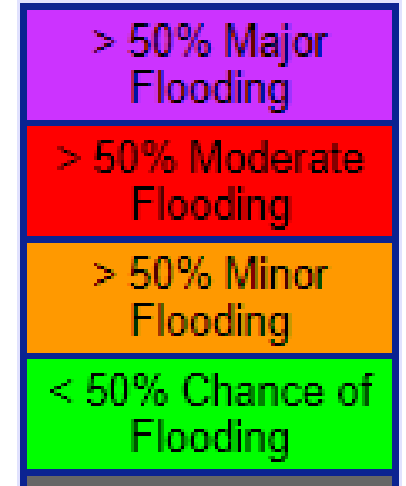
Three-Month Precipitation Outlook

Feb-Mar-Apr 2023



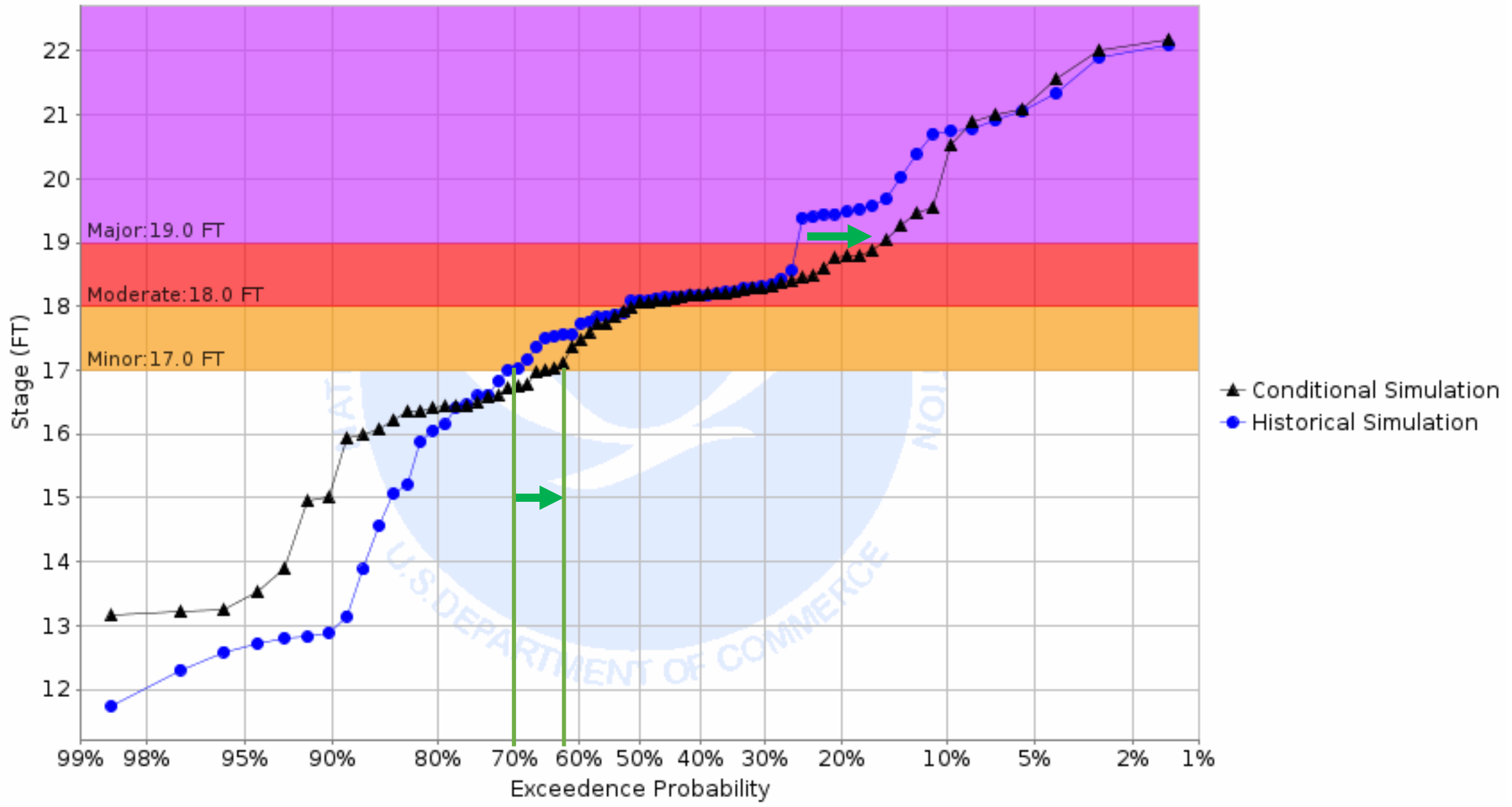
Chance of exceeding Minor Flood stage during Feb-March-April Season

Greater than 50% chance of exceeding flood levels during March-April-May Season





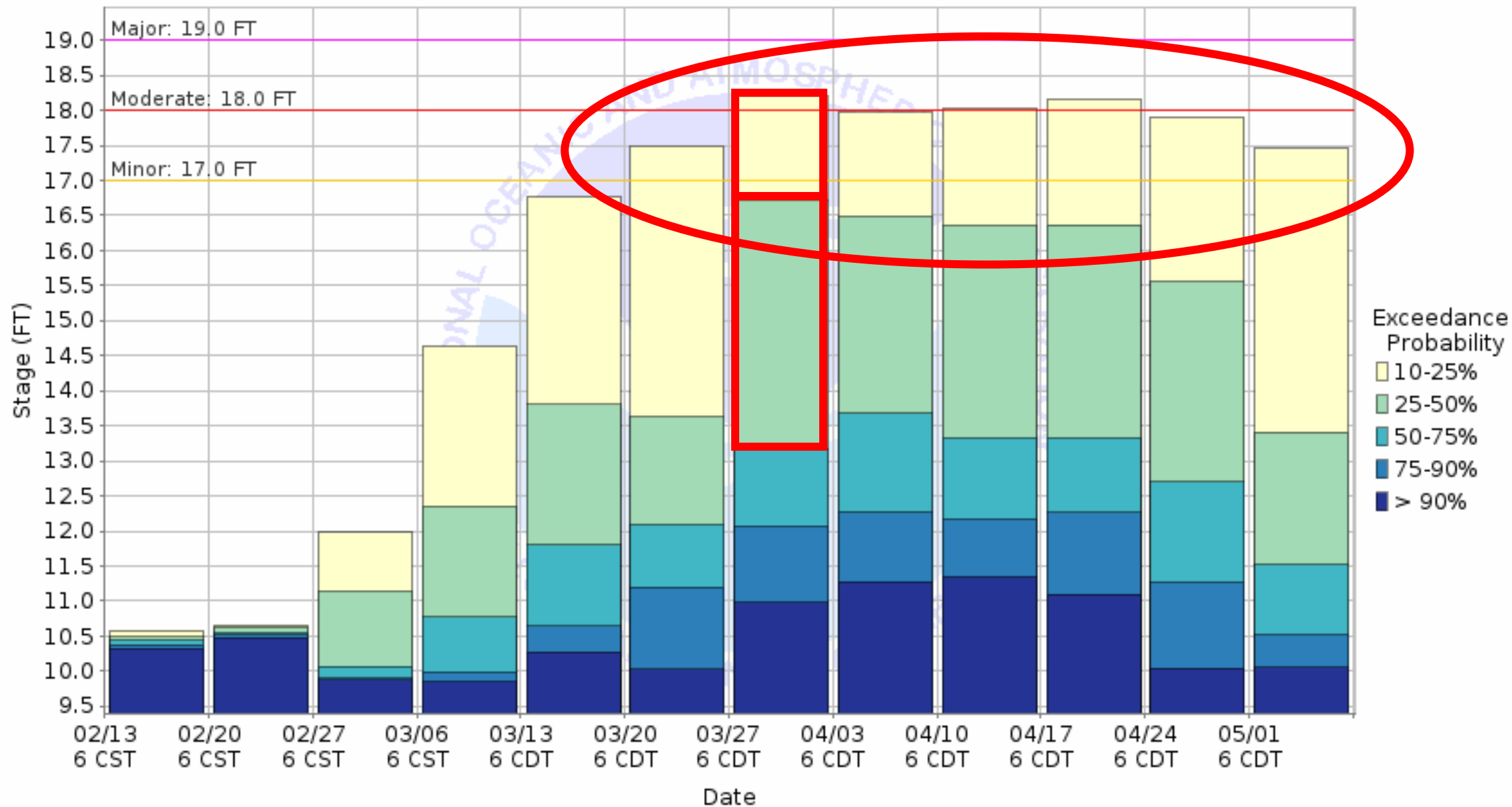
Chance of Exceeding River Stage at Wisconsin River at Portage (PORW3)
Forecast for the period 02/13/2023 - 05/14/2023
This is a conditional simulation based on the conditions as of 02/06/2023



Weekly Chance of Exceeding River Stage at Wisconsin River at Portage (PORW3)

Forecast for the period 02/13/2023 - 05/14/2023

This is a conditional simulation based on the conditions as of 02/06/2023



How To Find River Probability Info

NWS Forecast Office Milwaukee/Sullivan, WI

Weather.gov > Milwaukee/Sullivan, WI

Milwaukee/Sullivan, WI

Weather Forecast Office

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RADAR UPDATE 7:25 AM

Snow starting to end from west to east. However, road morning commute. Only minor additional accumulation.

Click a location below for detailed forecast.



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Greater than: 50% chance of exceeding river flood levels during Feb-Mar-Apr

Legend:

- > 50% Major Flooding
- > 50% Moderate Flooding
- > 50% Minor Flooding
- < 50% Chance of Flooding
- Long-Range Flood Risk Not Calculated

Last map update: 02/24/2022 at 12:15:49 pm CST
02/24/2022 at 18:15:49 UTC

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National Observations

Probability Information

This probabilistic forecast is issued by the North Central River Forecast Center

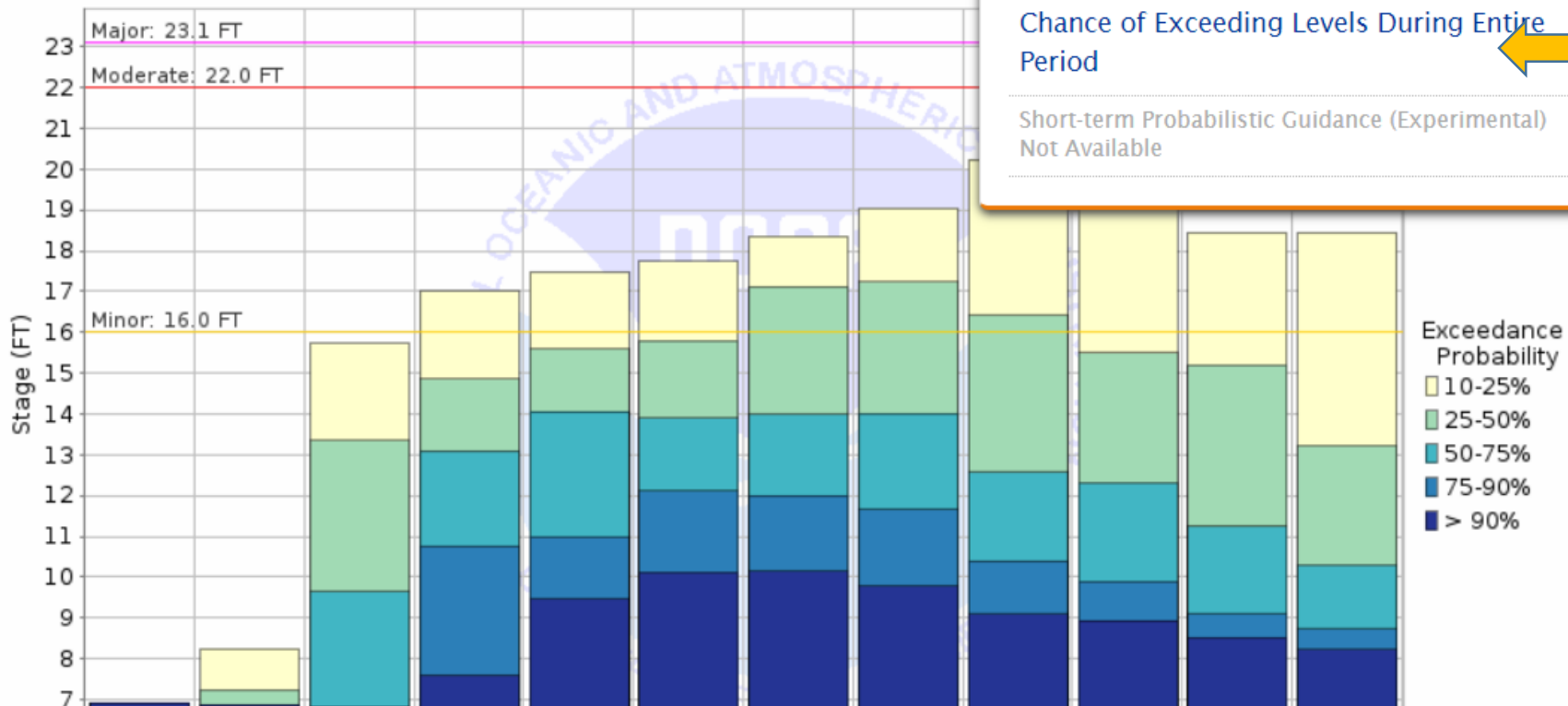
Hydrograph

River at a Glance

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Probability Information

Weekly Chance of Exceeding River Stage at Baraboo River a
Forecast for the period 02/15/2021 - 05/1
This is a conditional simulation based on the condition

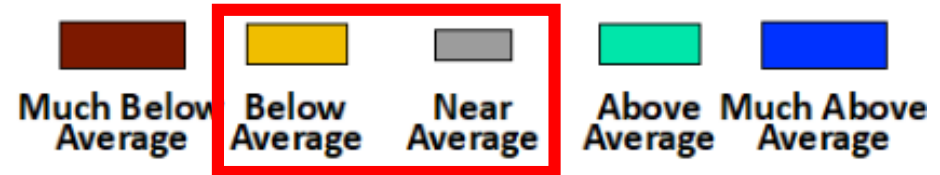


Weekly Chance of Exceeding Levels

Chance of Exceeding Levels During Entire Period

Short-term Probabilistic Guidance (Experimental)
Not Available

Flood Risk Summary



- **Spring flood risk is average to slightly below average across all of southern Wisconsin**
 - **Streamflow is near to slightly above normal**
 - **Soil moisture is near to slightly above normal**
 - **Snow water content is average to below normal**
- **The greatest flood threat occurs if there is a rapid snowmelt or heavy rain**
- **Break up ice jams possible**

**Next Update:
Feb 23-24**

Questions?

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