



# Spring Flood Outlook #2

February 23, 2023

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Late February 2023 Update



## Key Messages

- Most river basins have an **above normal amount of water in the snowpack**, increasing the risk for spring flooding
- **Spring Flooding is highly dependent on weather conditions in March and April** - slower melt reduces the risk of flooding, faster melt and rainfall events increase the risk of flooding

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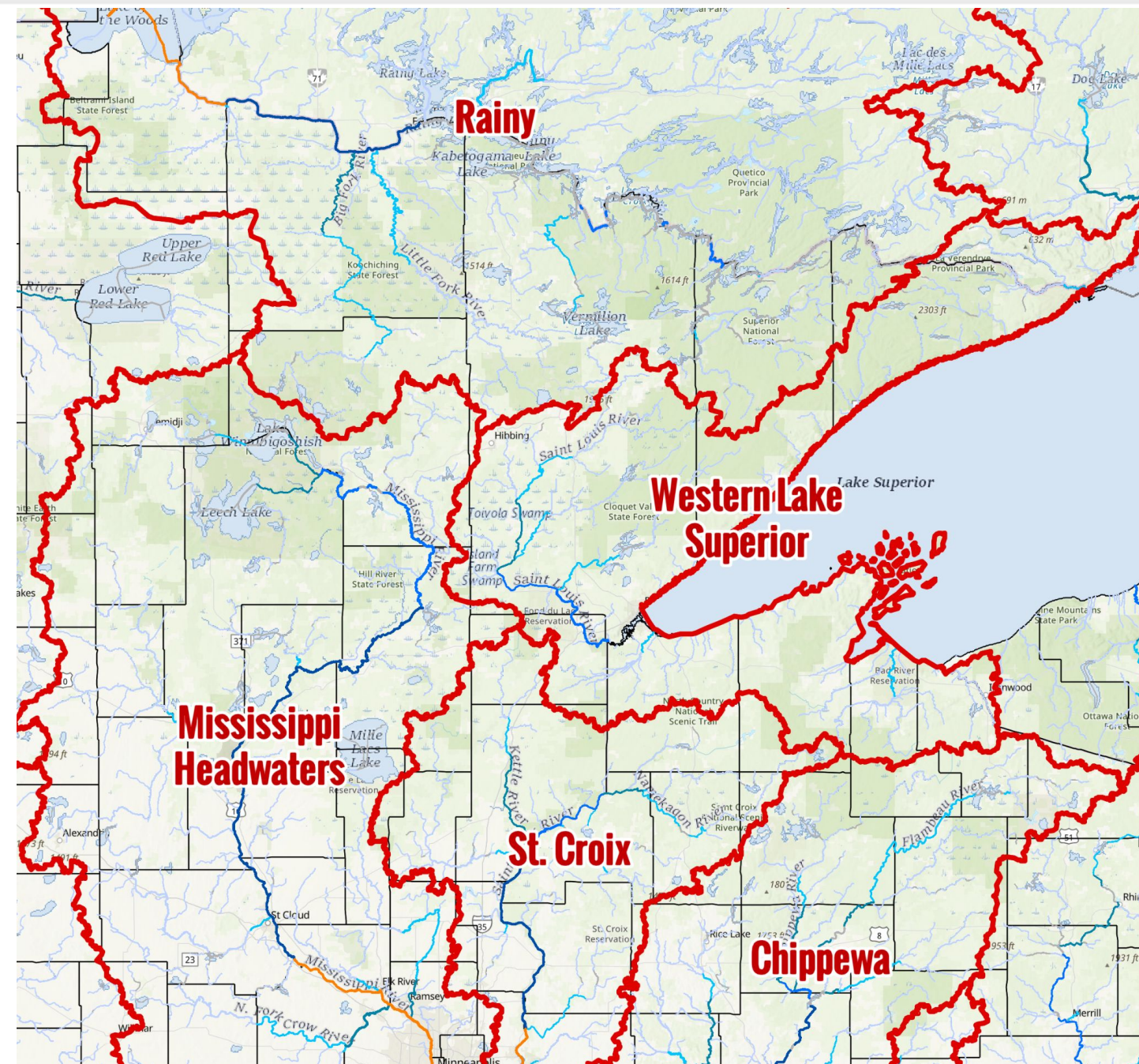
## What Has Changed

- **Increase for spring flooding risk** compared to previous outlook



## Next Scheduled Update

- March 9, 2023



National Oceanic and  
Atmospheric Administration  
U.S. Department of Commerce

National Weather Service  
Duluth, MN





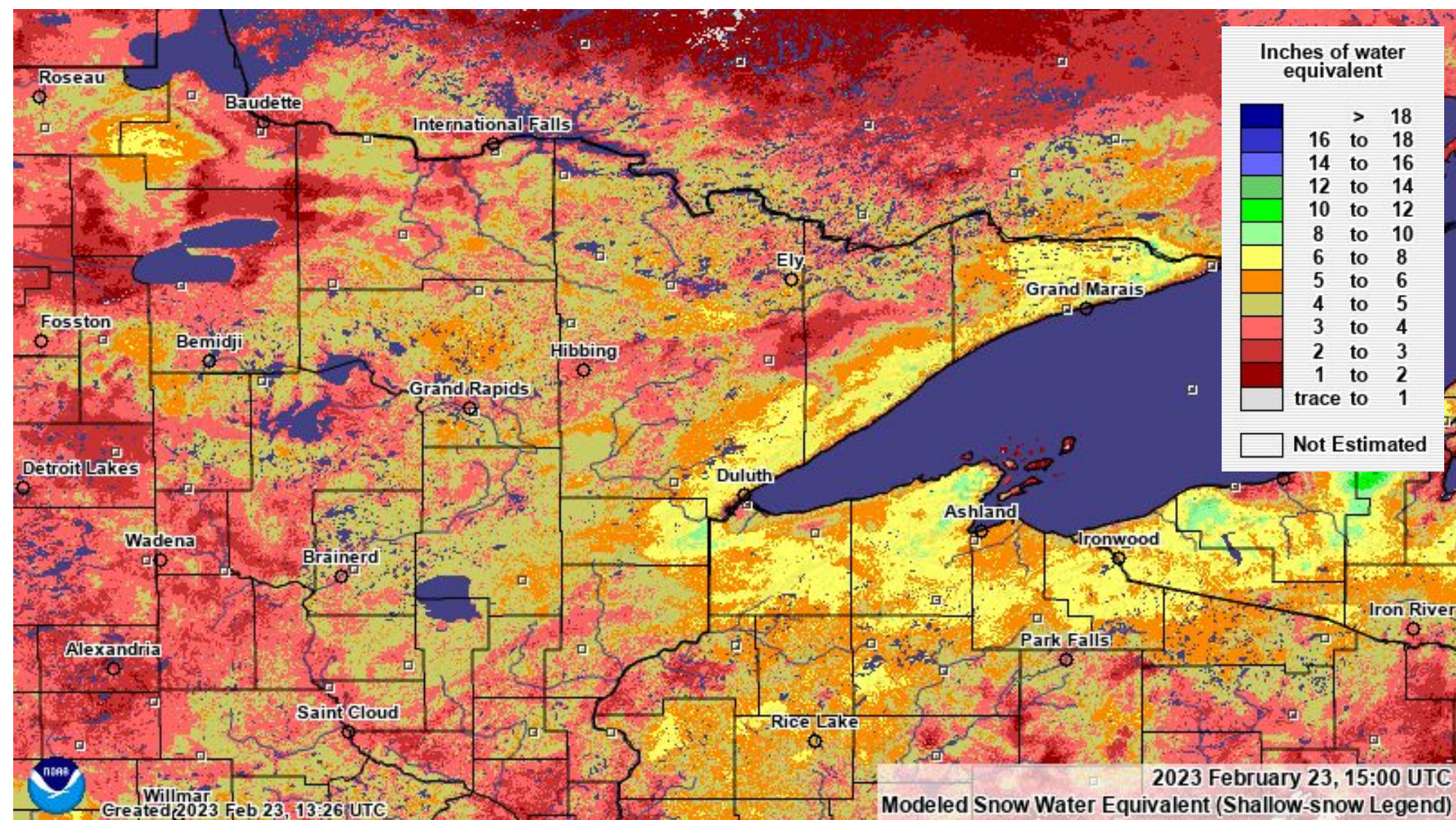
# Current Snow Water Equivalent

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Map shows a modeled estimate of water in the snowpack

- Currently **3-6"** of water in the snowpack for most the region (Rainy, Mississippi Headwaters, St Croix, and Chippewa basins)
- **Western Lake Superior basin has 5-8"+ of water in the snowpack** for both the north and south shore, which is well above normal







# Current Regional Snow Water

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How much water is in the snow pack right now compared to normal?

## Rainy River

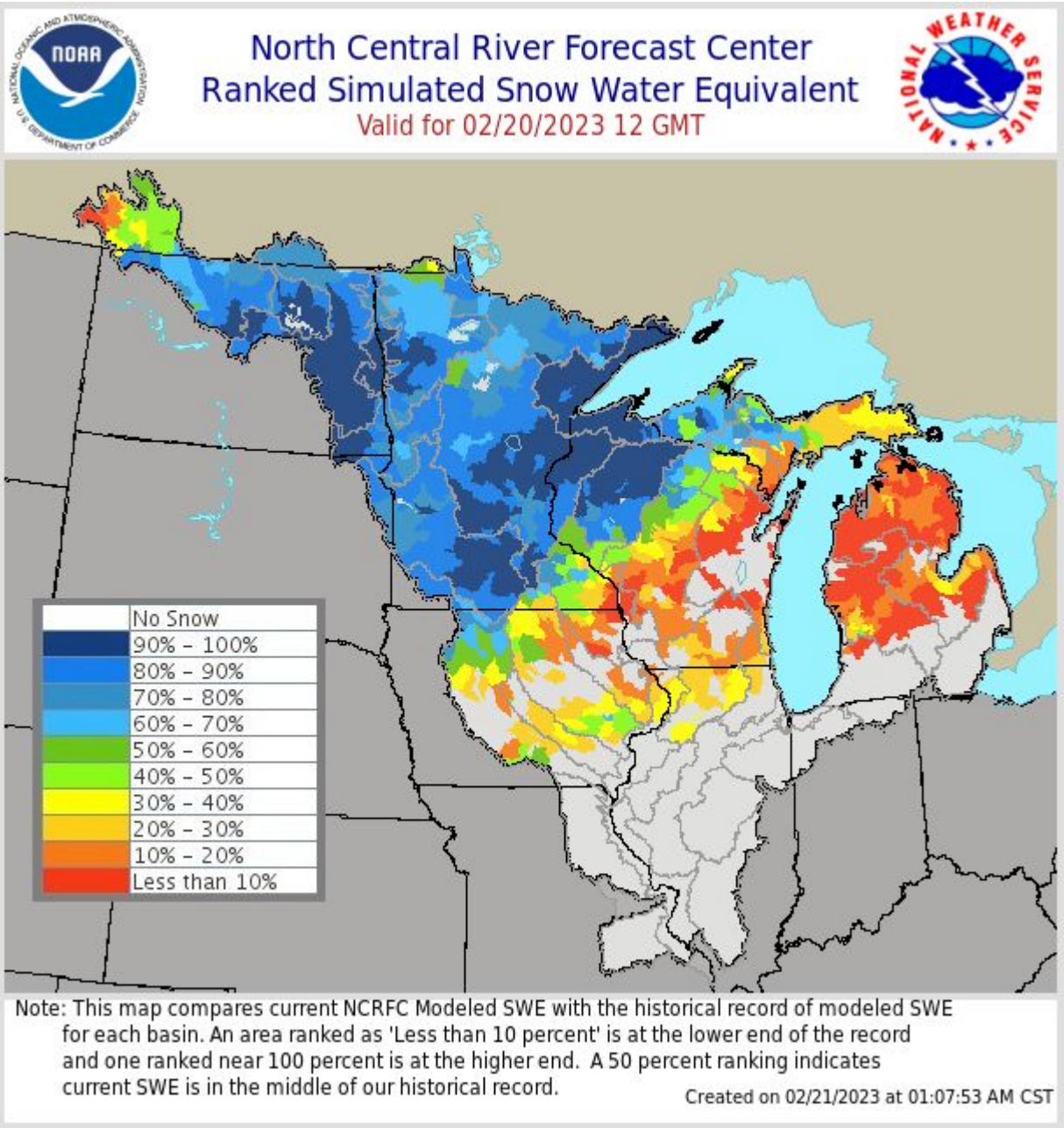
→ Slightly Above Normal

## Mississippi Headwaters

→ Much Above Normal

## St Croix River

→ Much Above Normal



## Western Lake Superior North Shore (MN)

→ Much Above Normal

## Western Lake Superior South Shore (WI)

→ Much Above normal

## Chippewa

→ Much Above Normal

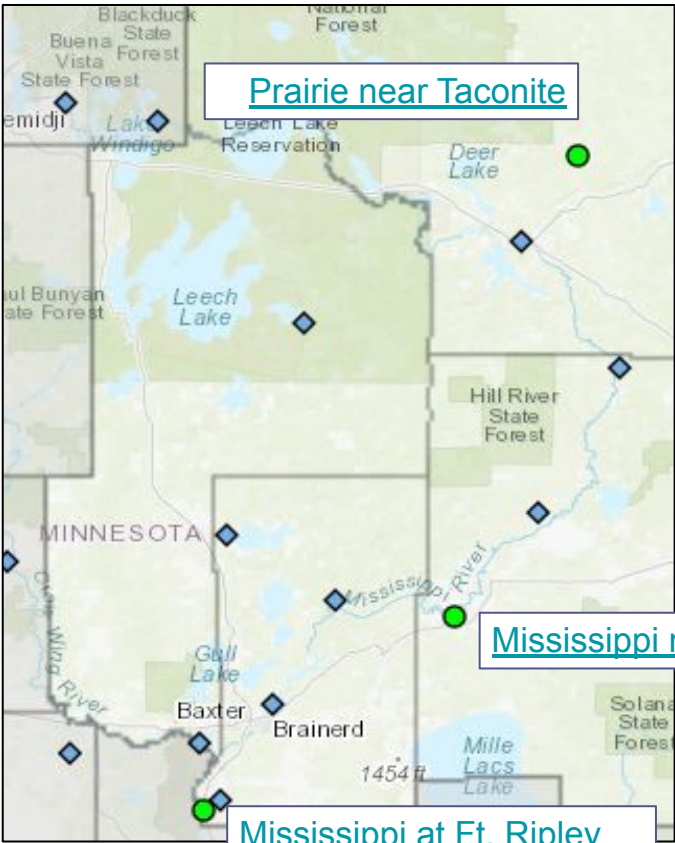




# Upper Mississippi Basin Outlook

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## Spring Flood Outlook



Point	Flood Stage	Chance of Minor Flood	Chance of Moderate Flood
St. Croix nr. Danbury	7 ft.	14%	8%
Snake at Pine City	9 ft.	31%	8%
Prairie near Taconite	10 ft.	<5%	<5%
Mississippi near Aitkin	13 ft.	88%	53%
Mississippi at Ft. Ripley	10.5 ft.	63%	26%



### View Interactive Map:

- [River Observations](#)
- [Short-Term River Forecasts](#)
- [Long-Range River Flood Risk](#)



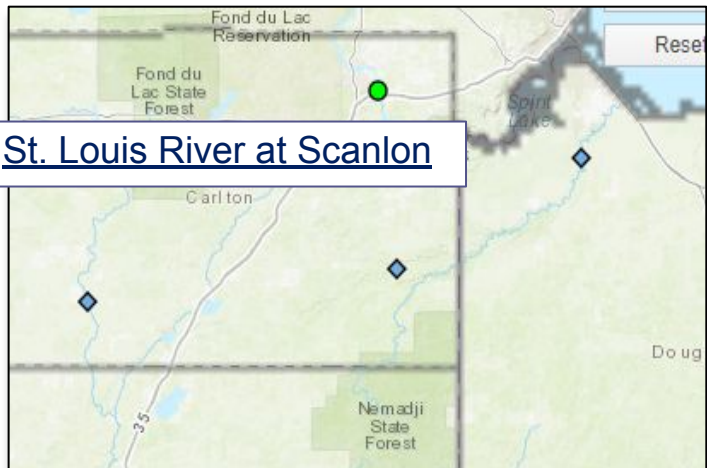




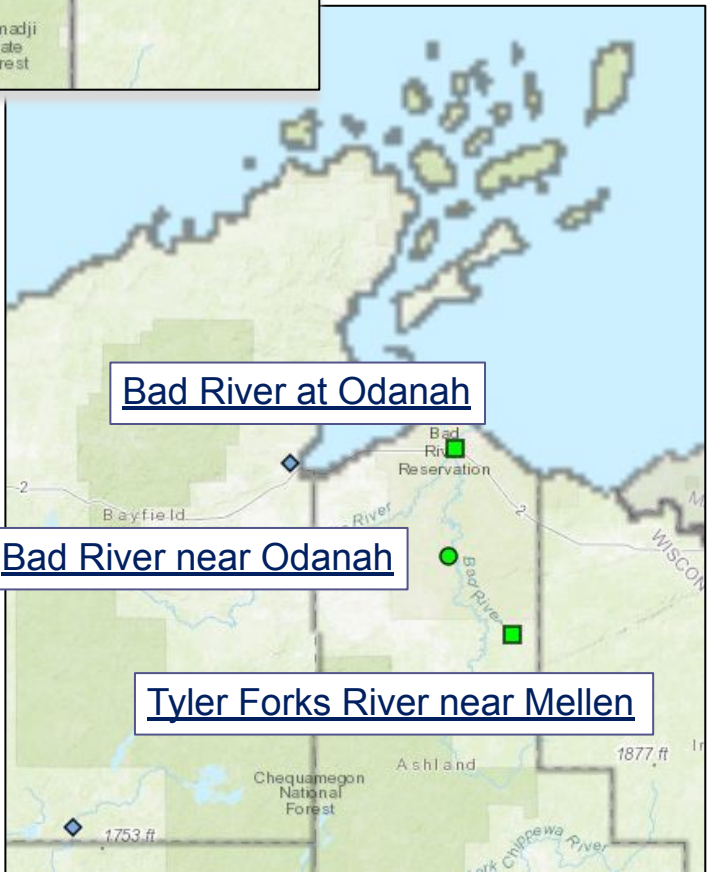
# W. Lake Superior Basin Outlook

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## Spring Flood Outlook



St. Louis River at Scanlon



Bad River at Odanah

Bad River near Odanah

Tyler Forks River near Mellen

Point	Flood Stage	Chance of Minor Flood	Chance of Moderate Flood
St. Louis at Scanlon	10.5 ft.	33%	22%
Bad River at Odanah	8.5 ft.	11%	6%
Bad River nr. Odanah	16.0 ft.	11%	7%
Tyler Forks River nr. Mellen	9.0 ft.	78%	55%

### View Interactive Map:

- [River Observations](#)
- [Short-Term River Forecasts](#)
- [Long-Range River Flood Risk](#)





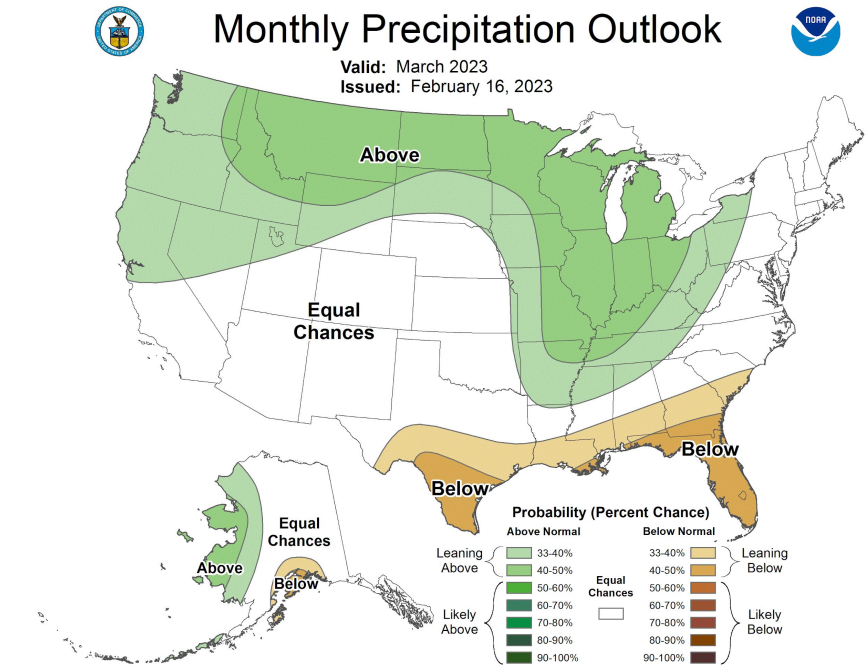
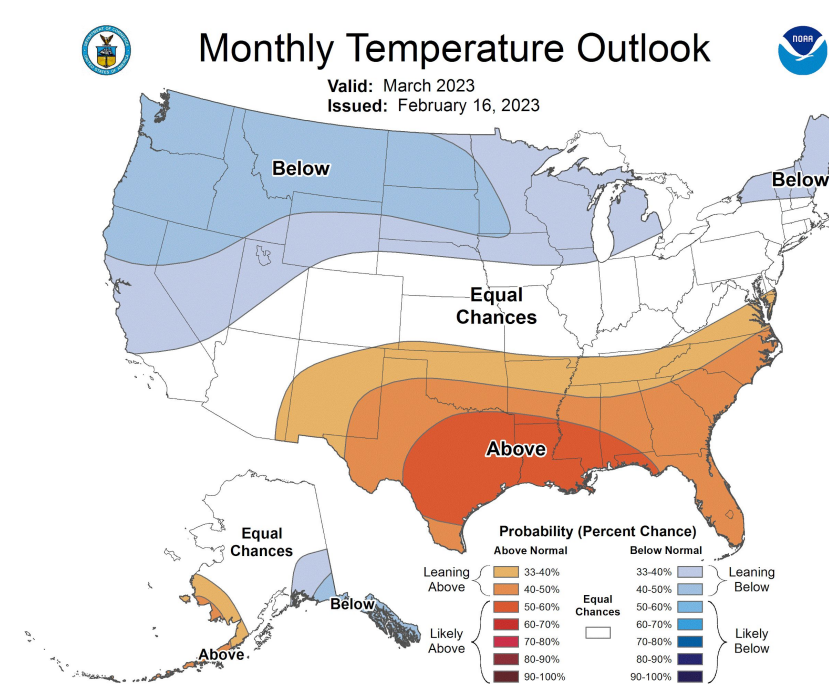
# Spring Weather Outlook

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These are general outlooks that depict broad trends for the weeks and months ahead

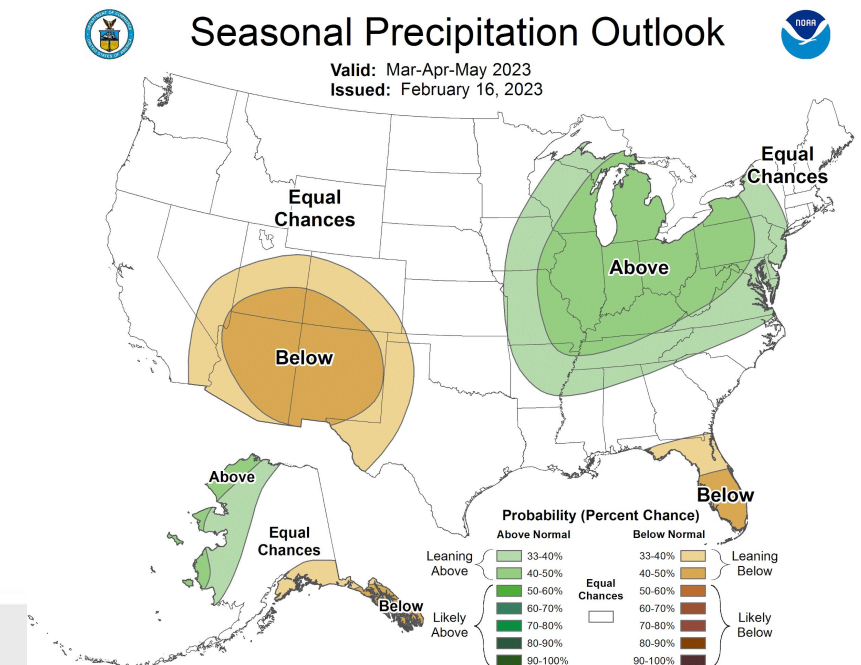
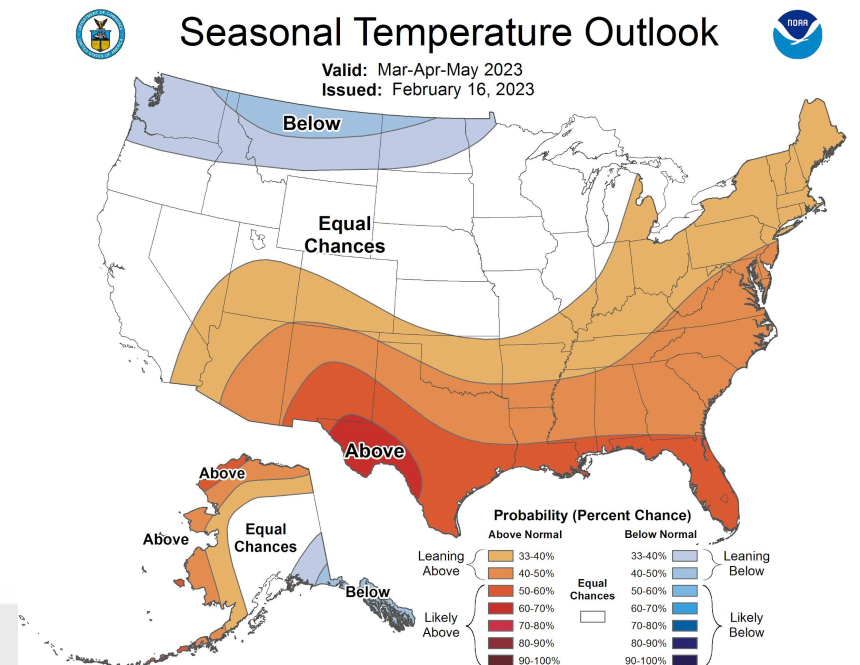
## Next Month (March)

- Temperatures slightly leaning Below Normal
- Precipitation leaning Above Normal
- Impact to Spring Flooding: **Increases Risk**



## Seasonal Outlook (March-April-May)

- No strong signals for temperatures
- Precipitation equal chances to slightly above normal
- Impact to Spring Flooding: **Neutral**







# Spring Flood Outlook #2

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Potential for Spring Flooding across Northeast Minnesota and Northwest Wisconsin

## Key Messages

- The spring flooding potential across the Northland is above normal
- **An above normal chance of flooding on the Mississippi River at Aitkin and Ft. Ripley.**
- Increased risk of minor flooding for the Bad River and the St. Louis River.
- Limited frost which will allow snowmelt to infiltrate the soil.

## Next Scheduled Briefings

- March 9 (Final Outlook)
- *Additional outlooks may follow if warranted*

Threat	Impact to Potential Spring Flooding	Link to Image(s)
High river levels	Neutral	<a href="#">USGS WaterWatch MN WI</a>
High soil moisture	Above normal in NE Minnesota Neutral in NW Wisconsin	<a href="#">CPC Soil Moisture</a>
Winter Precipitation	Above normal in NE Minnesota and in NW Wisconsin	<a href="#">Climate Prediction Center 6 to 10 Day 8 - 14 Day</a>
Snowpack/ Liquid Equivalent	Elevated	<a href="#">Snow Analysis</a> <a href="#">Snow Depth Ranking</a>
Rate of Snowmelt	To Be Determined	<a href="#">24, 48, &amp; 72 hr Snowmelt</a>
Frost Depth	Lower	<a href="#">Frost Depth Map</a>
Spring Precipitation	Above Normal	<a href="#">Precip Forecast (3-Month)</a>

