

A winter landscape featuring a red barn with a grey roof and a small cupola, situated in a snow-covered field. The barn is surrounded by a wooden fence and several small trees. In the background, there are rolling hills covered in snow, with a dense forest of bare trees on the upper slopes. The sky is a clear, pale blue.

2022 Spring Flood Outlook

**Mike Welvaert
Service Coordination Hydrologist
NWS-North Central River Forecast Center, Chanhassen, MN**

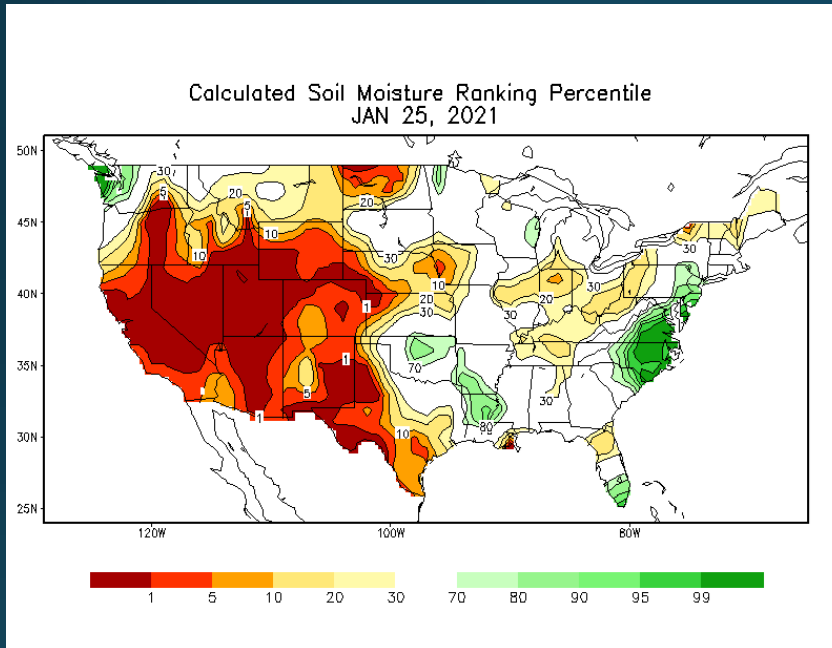
Spring 2022 Flooding Outlook

- Current conditions point to an average risk for spring flooding this year.
 - Near normal river levels
 - Lower to near normal soil moisture
 - Average snowpack
 - Average frost depths
- Things can change, we still have several weeks of winter.
- Continue to monitor the latest forecasts and communications from the National Weather Service.

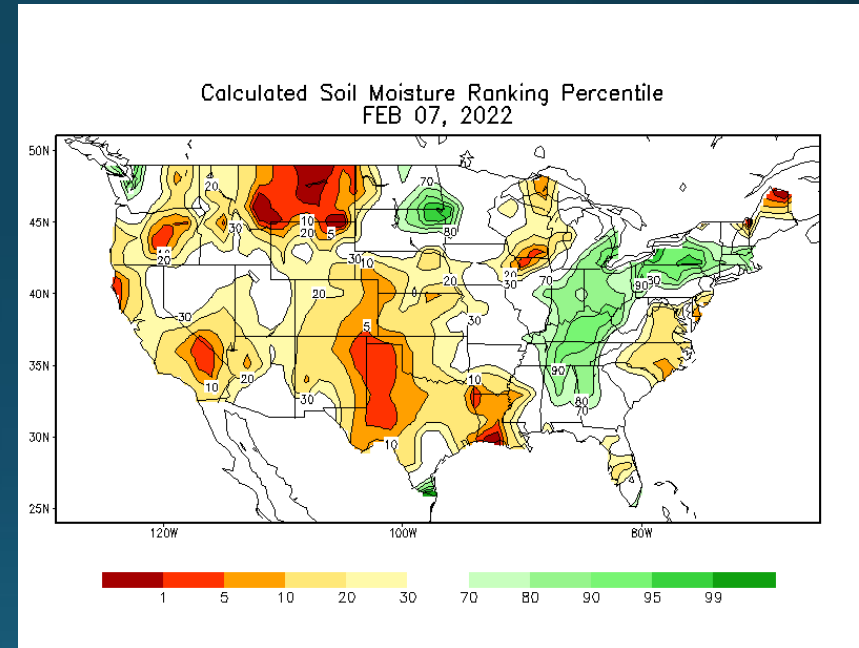


Soil Moisture

Last Year



This Year



Soil moisture is similar: at bit lower over WI; maybe higher in MN.
The ranking is near normal this year or slightly below in some spots.
Less potential for runoff this year. What about frost depth?

Frost Depth (inches)

In regions of the central U.S.






February 8, 2022

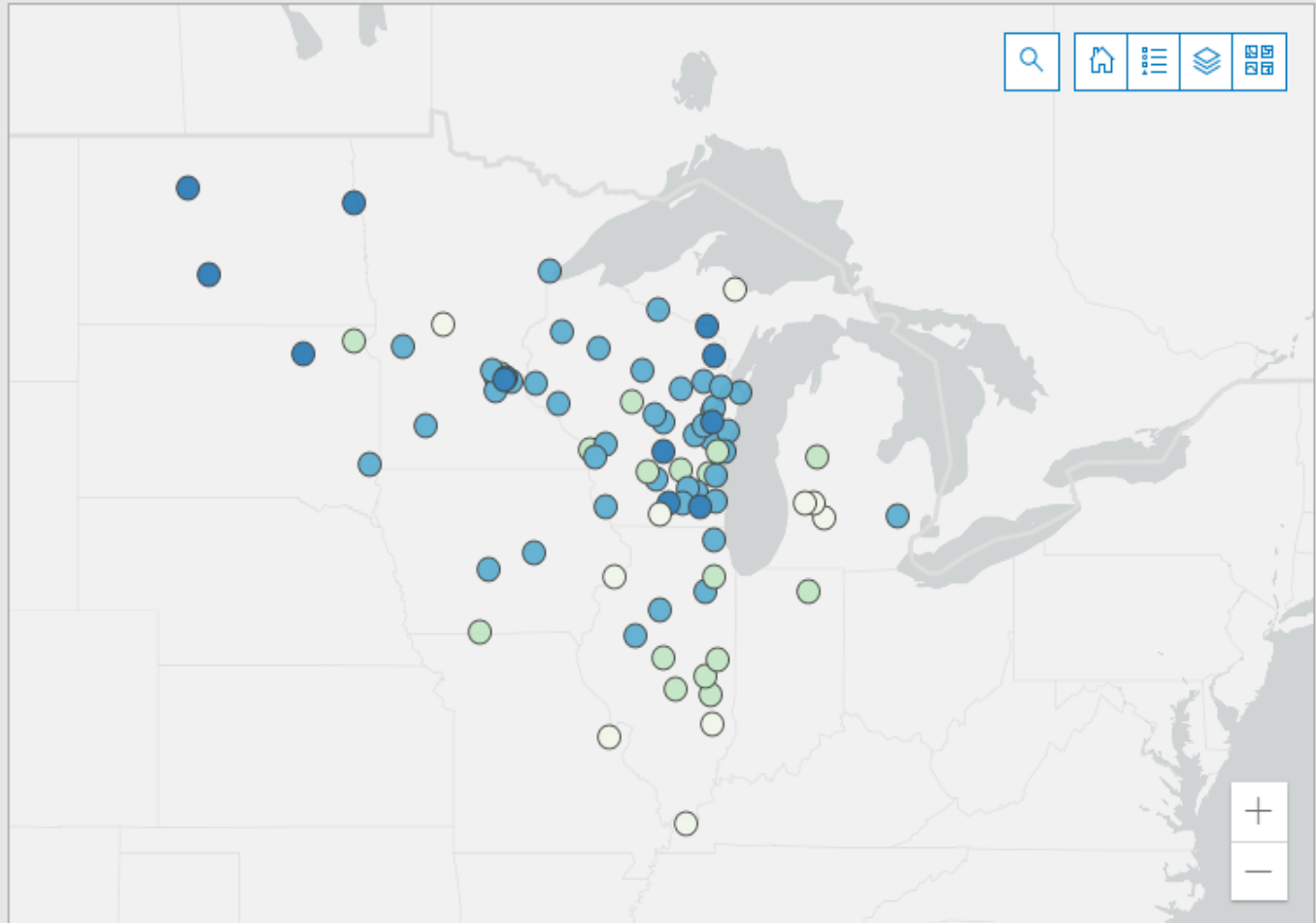
About This Map

This map displays frost depth measurements in terms of inches below the soil surface. Frost depth reports are commonly from frost tube instruments, visual reports from construction or cemetery sites, or other types of electronic probes.

Soil Frost Depth (Inches)

FrostDepth

-  > 24 - 60
-  > 12 - 24
-  > 12 - 12
-  > 6 - 12
-  0 - 6



Esri, HERE, Garmin, FAO, NOAA, USGS, EPA

Powered by Esri

National Weather Service
Protecting Lives and Property



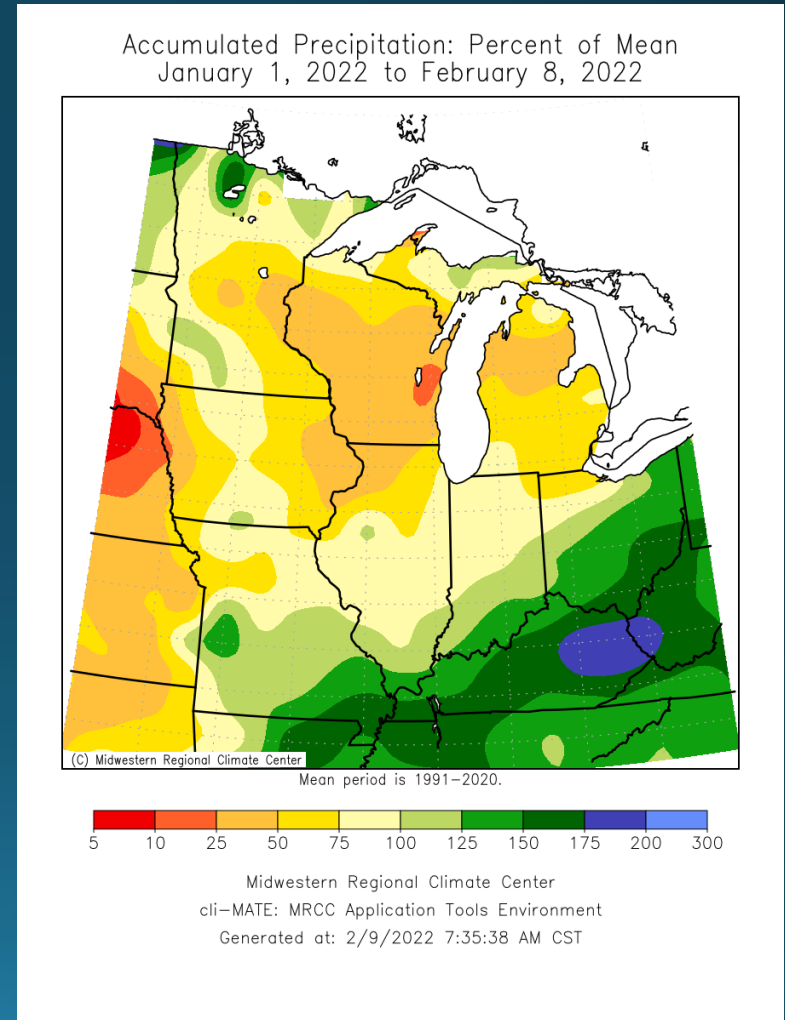
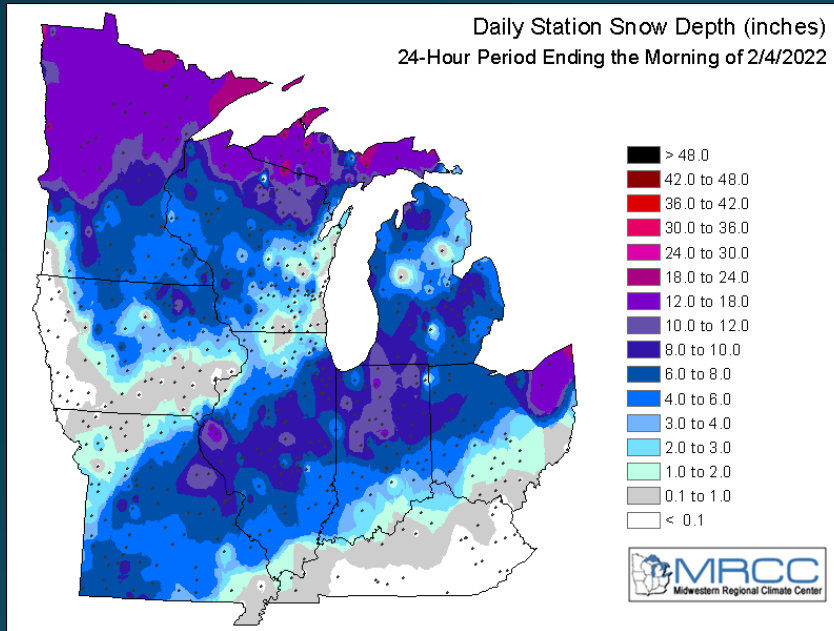
Frost depth compared to past years?

- Frost Depth at NWS La Crosse:
 - January 26, 2020 **17 inches**
 - January 26, 2021 **8 inches**
 - February 7, 2022 **12 inches**



Current Snow/Precipitation Information

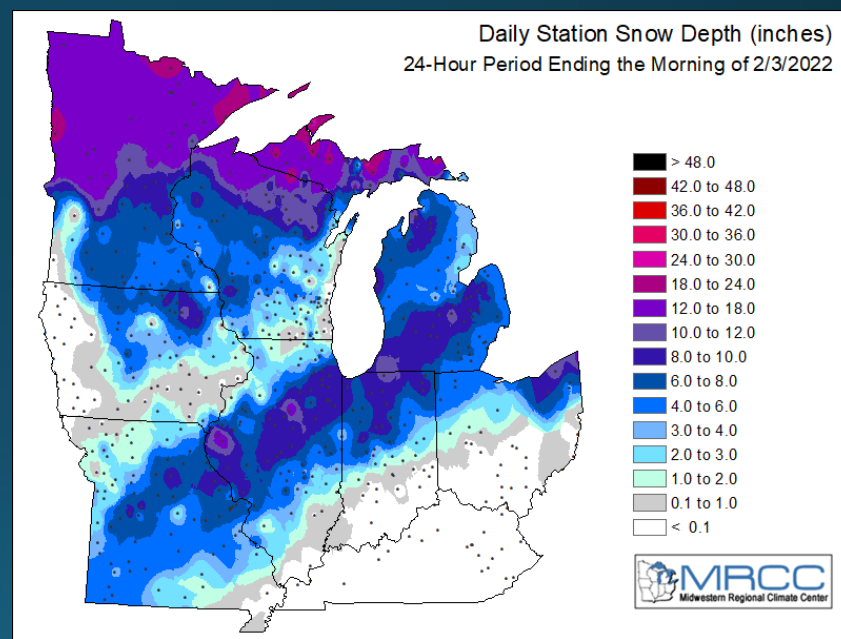
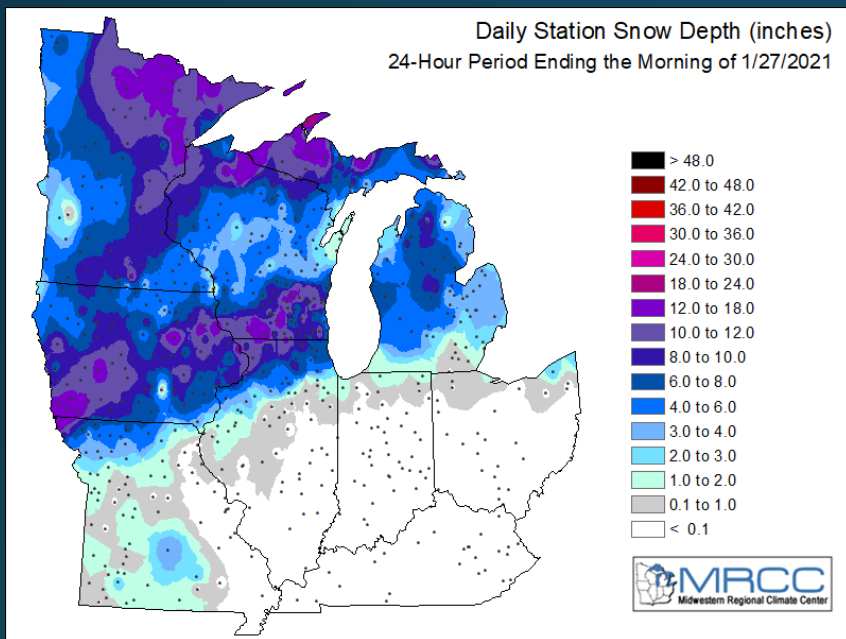
National Weather Service
Protecting Lives and Property



Snowpack Comparison

January 27, 2021

February 3, 2022

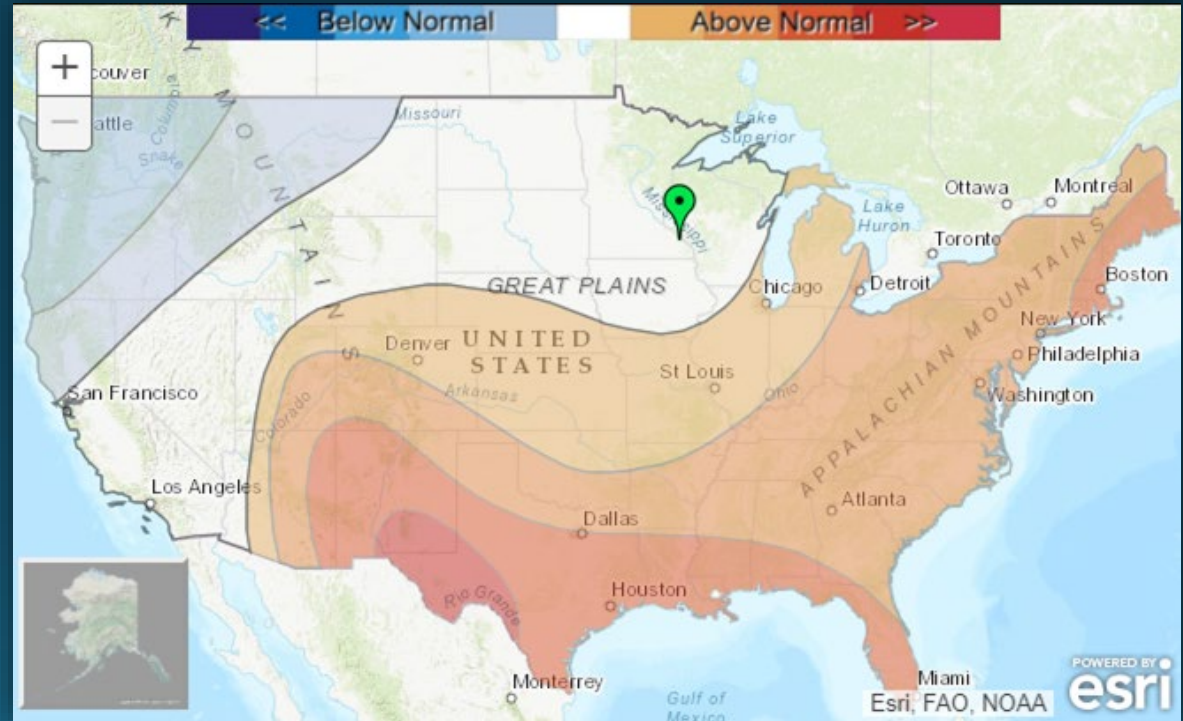
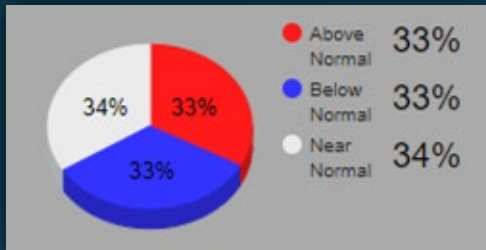


National Weather Service
Protecting Lives and Property



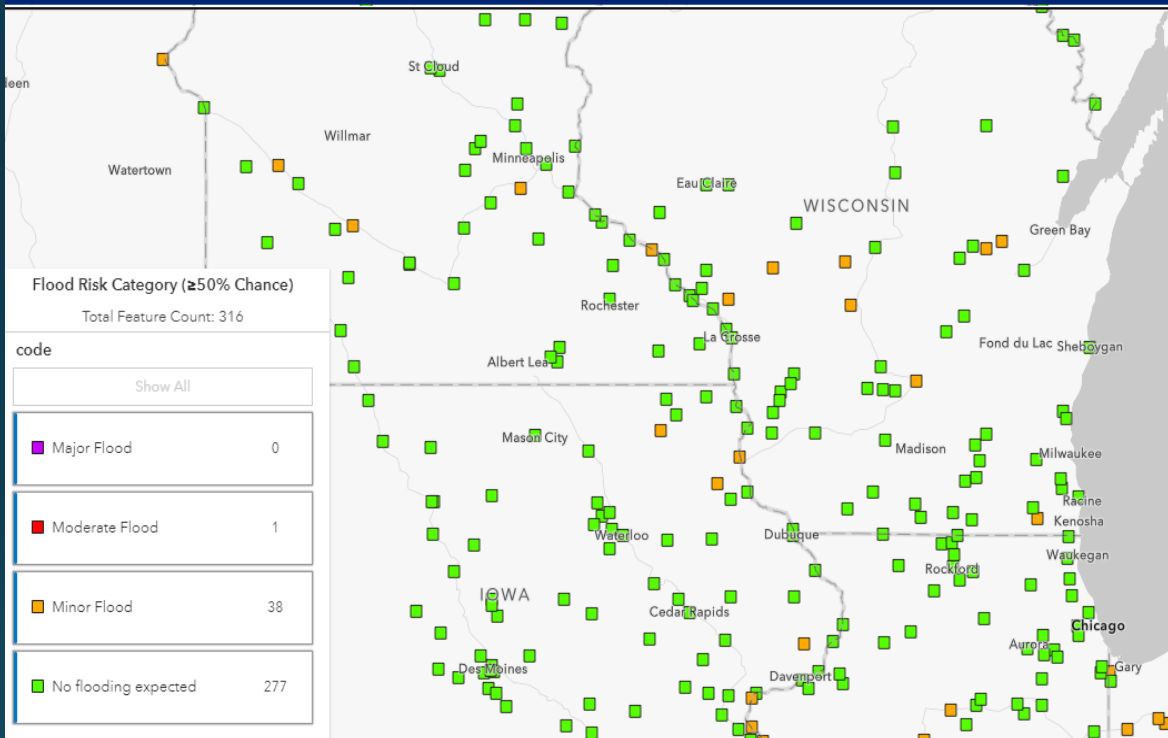
Temperatures Outlook Through April

Breakdown for La Crosse, WI



Long-Range Flood Risk

NCRFC LRO for Feb-Mar-Apr 2022 (Initial Conditions: 2/8/2022)



Long range outlook based on conditions on 2-8-2022.

< 50% chance of Chance of Flooding across the majority of the area

First Spring Flood Outlook: 2/10/2022

National Weather Service
Protecting Lives and Property

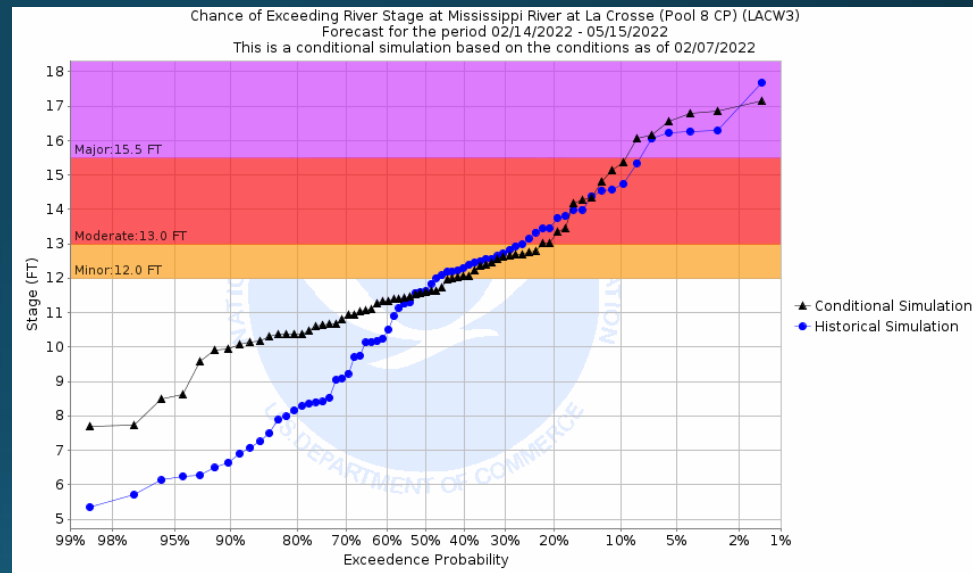


Spring Flood Outlook Dates

National Weather Service

Protecting Lives and Property

- 1st issuance: February 10th
- 2nd issuance: February 24th
- 3rd issuance: March 10th



Summary

- Overall near normal chances for flooding this Spring
- Near normal streamflow, soil moisture, and winter snows.
- Future precipitation and temperatures the rest of this winter-spring will be key on whether the flood risk changes.
 - Equal chances for above or below normal temperatures and precipitation favored at this time, with a slight lean toward above normal precipitation.

Potential Spring Flooding Factors	Impact to Potential Spring Flooding
River Levels	Normal Levels
Soil Moisture	Near to Below Normal
Winter Precipitation	Near to Below Normal
Snowpack/Liquid Equivalent	Below Normal
Rate of Snowmelt	Unknown
Frost Depth	Normal Levels
Spring Precipitation	Unknown



Thank You
Contact Information:

Mike.Welvaert@noaa.gov

Molly.Peters@noaa.gov