

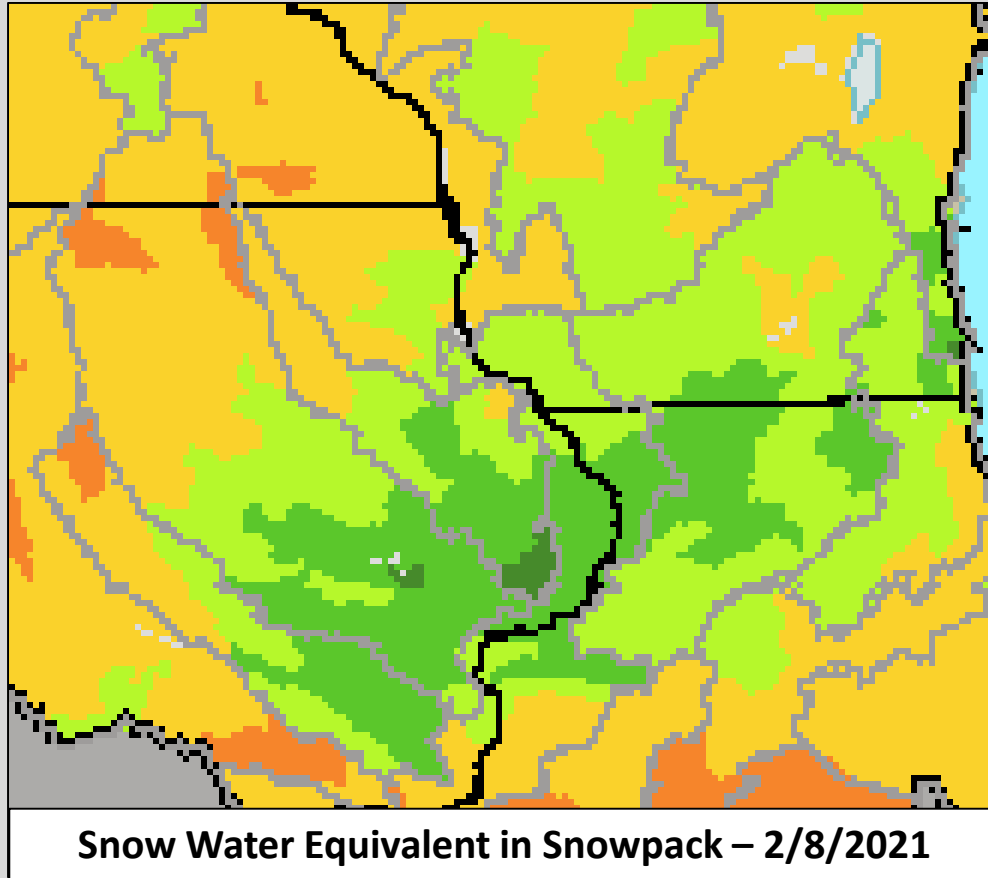


# 2021 Spring Flood Outlook

## National Weather Service – WFO Quad Cities



*\* Based on February 11, 2021 Issuance*



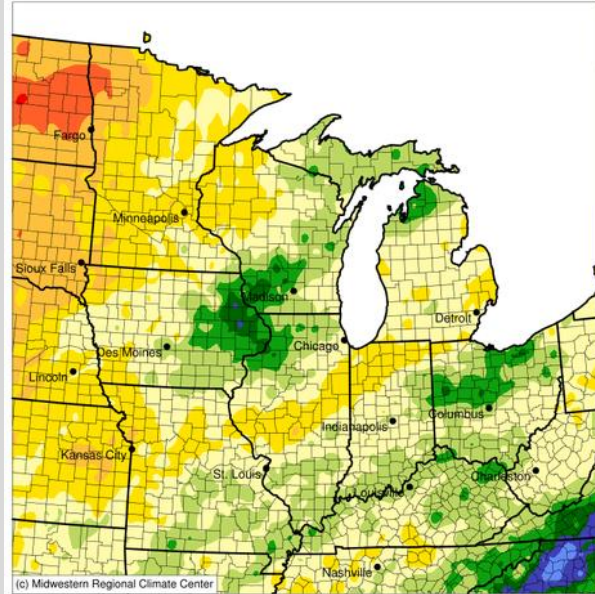
Less than 0.25
0.25 - 1
1.0 - 2.0
2.0 - 3.0
3.0 - 4.0
4.0 - 5.0
5.0 - 6.0
6.0 - 7.0
7.0 - 9.0
Greater than 9.0

**Jessica Brooks**  
Service Hydrologist  
NWS Quad Cities



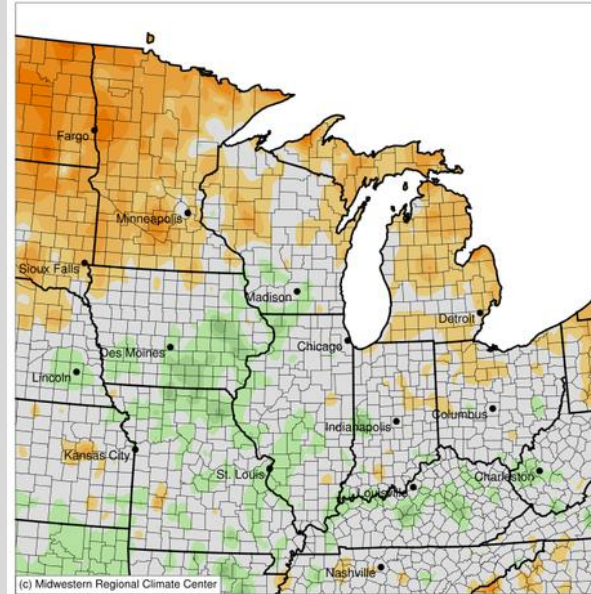
# Antecedent Conditions: 2020 Fall Moisture & 2020/21 Winter Season Temps & Precip

**Accumulated Precipitation (in): Percent of 1981-2010 Normals**  
September 01, 2020 to November 30, 2020



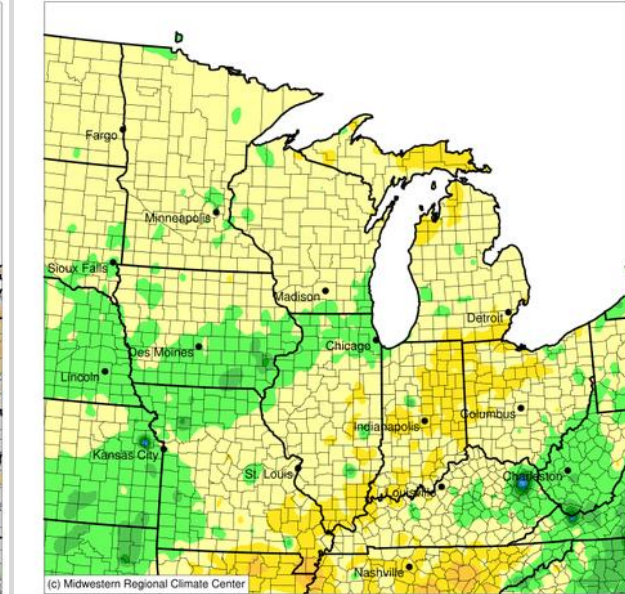
Stations from the following networks used: WBAN, COOP, FAA, GHCN, ThreadEx, CoCoRaHS, WMO, ICAO, NWSLI, Missouri FSA, Missouri Mesonet, Midwestern Regional Climate Center  
cli-MATE: MRCC Application Tools Environment  
Generated at: 2/8/2021 10:53:10 PM CST

**Average Temperature (°F): Departure from 1981-2010 Normals**  
December 01, 2020 to February 18, 2021



Stations from the following networks used: WBAN, COOP, FAA, GHCN, ThreadEx, CoCoRaHS, WMO, ICAO, NWSLI, Missouri FSA, Missouri Mesonet, Midwestern Regional Climate Center  
cli-MATE: MRCC Application Tools Environment  
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**Accumulated Precipitation (in): Departure from 1981-2010 Normals**  
December 01, 2020 to February 18, 2021

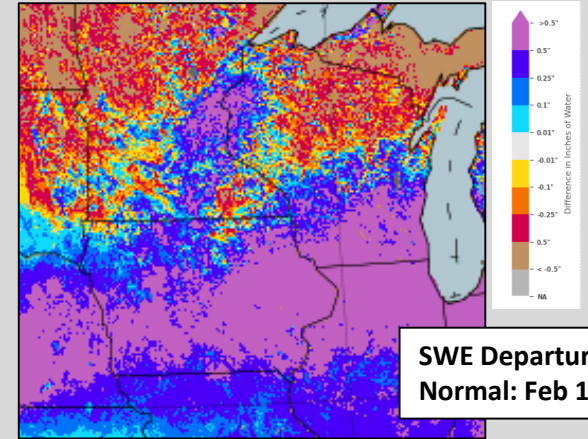
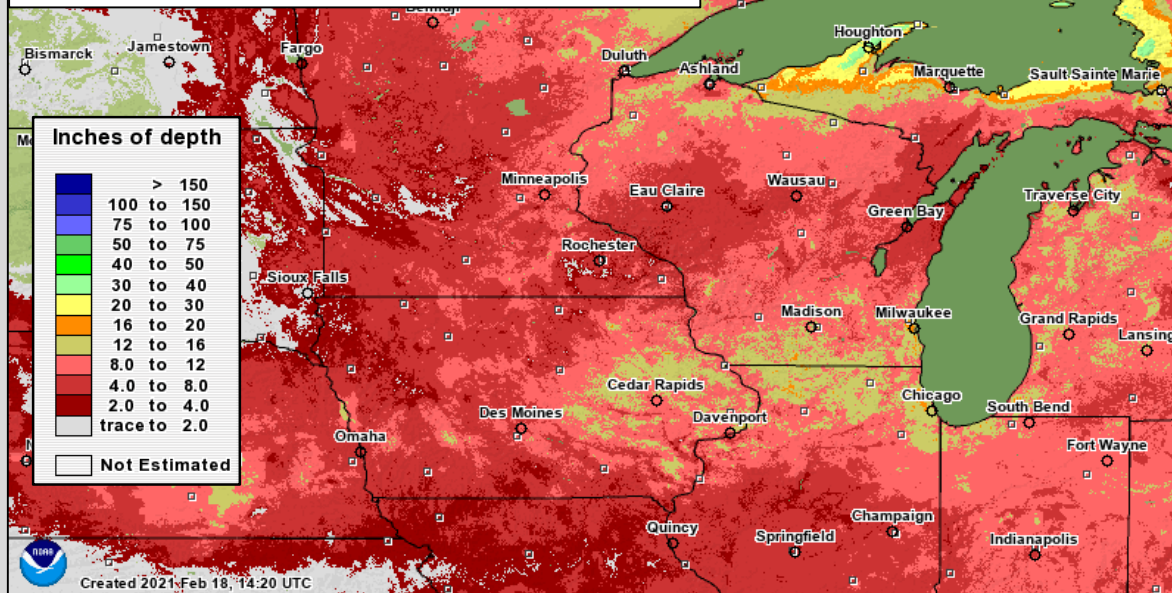


Stations from the following networks used: WBAN, COOP, FAA, GHCN, ThreadEx, CoCoRaHS, WMO, ICAO, NWSLI, Missouri FSA, Missouri Mesonet, Midwestern Regional Climate Center  
cli-MATE: MRCC Application Tools Environment  
Generated at: 2/18/2021 10:04:49 AM CST



# Snow Depth/Snow Water Equivalent

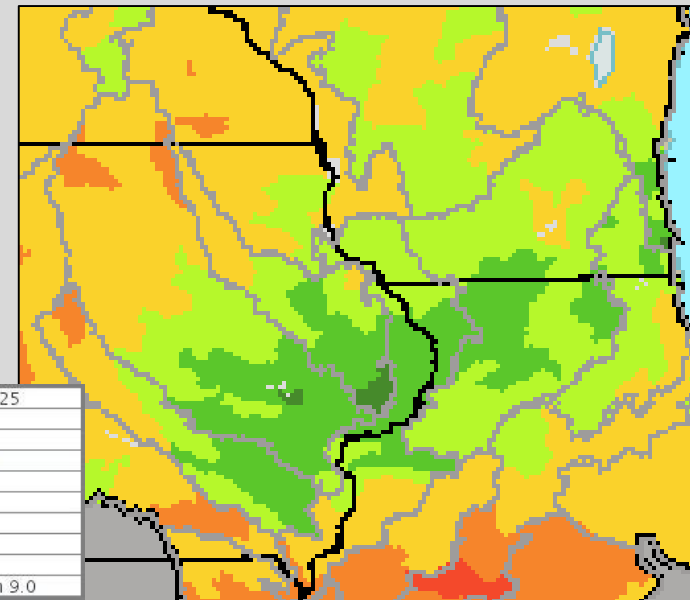
## Snow Depth – February 18, 2021



SWE Departure from Normal: Feb 18, 2021

Snow being observed across the entire region

- Iowa, northern Illinois and southern Wisconsin have well above normal snow depth, while the remainder of the watershed is generally below normal for snowpack
- SWE 2-4 inches in higher snowpack, no parte



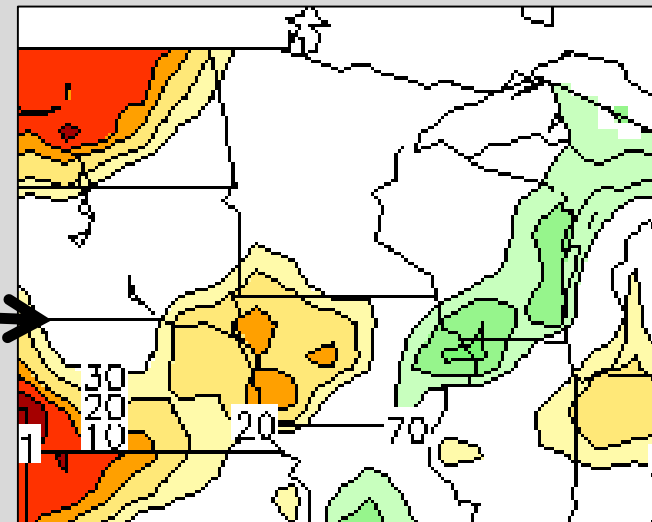
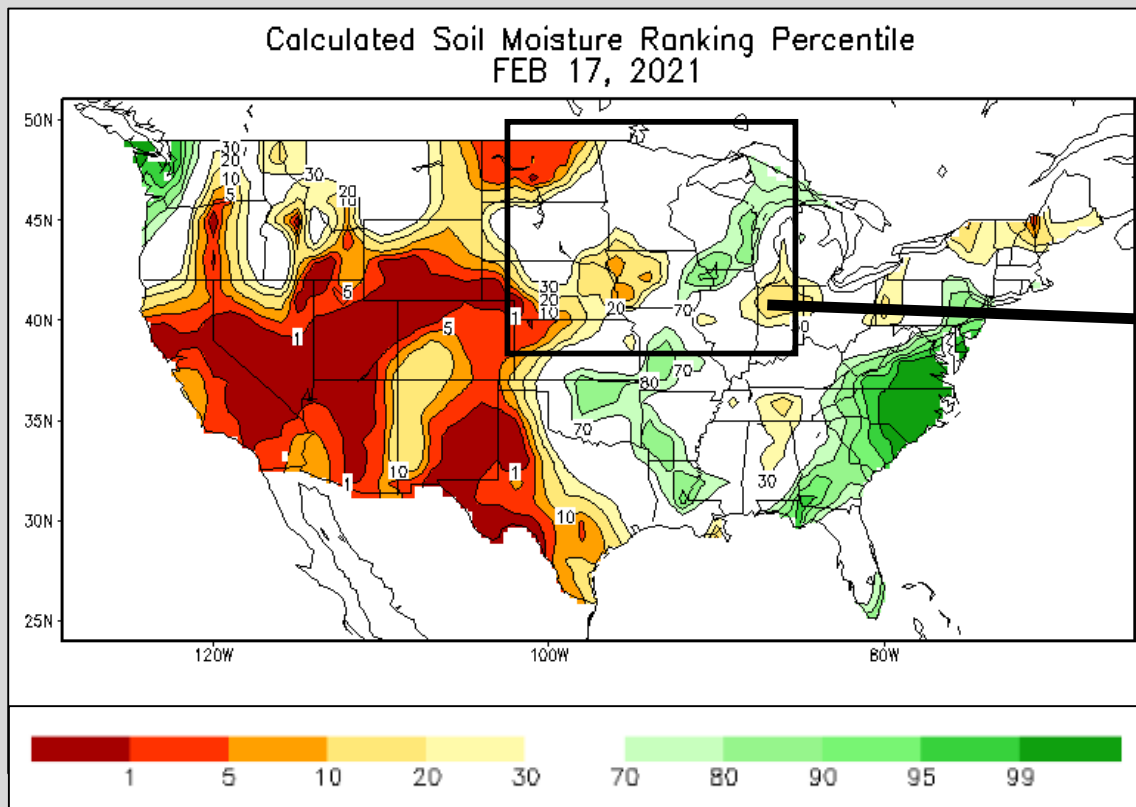
Images courtesy of NOHRSC



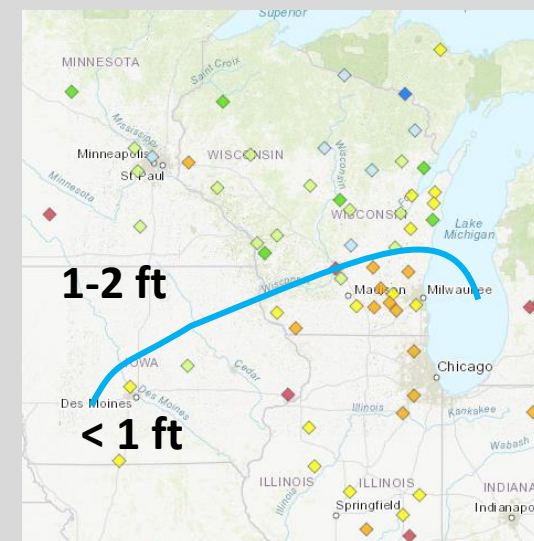
NATIONAL WEATHER SERVICE  
QUAD CITIES IA/IL  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION



# Soil Moisture/Frost Depth



- Soil moisture across the Upper Mississippi River basin is near to below normal. Exception is a swath from eastern Iowa into northeast Wisconsin.
- There is capacity for snowmelt or new rainfall to infiltrate into the soils, producing less runoff.
- Shallower than normal frost depths could contribute to lessen flood risk if soils are able to thaw quickly this spring.

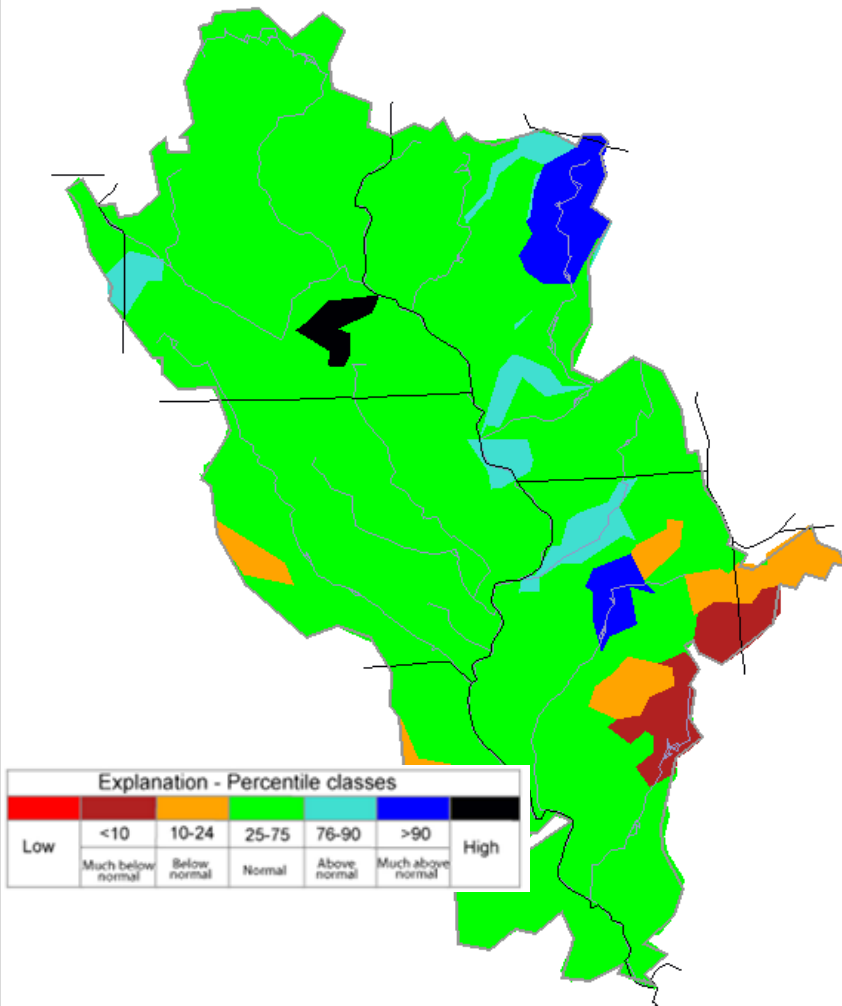


Frost Depth – mid February 2021



# Streamflows

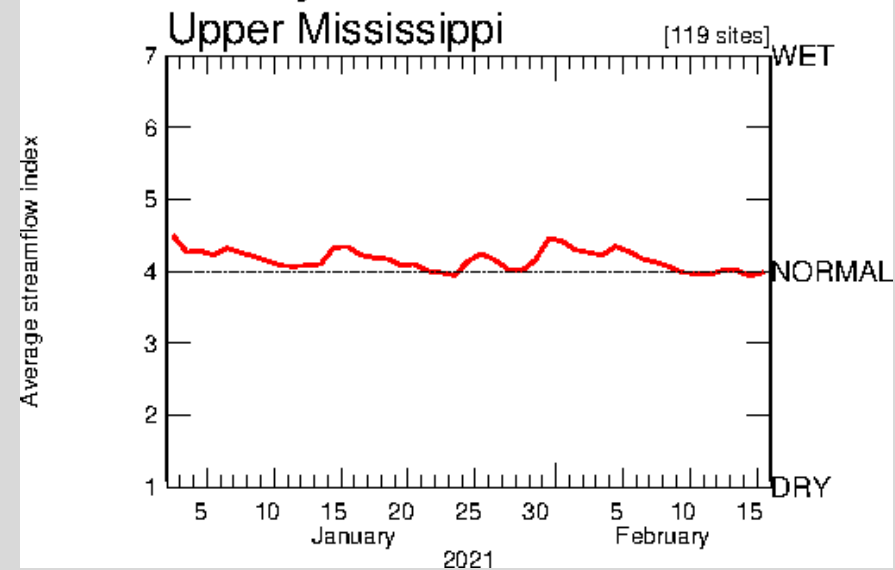
Wednesday, February 17, 2021



USGS

- In general, near normal streamflows across the region.
- Current streamflows indicate there is room in rivers for runoff from snowmelt or spring rains

*Last 45 Days*



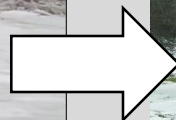
Images courtesy of US Geological Survey



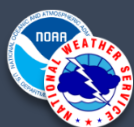
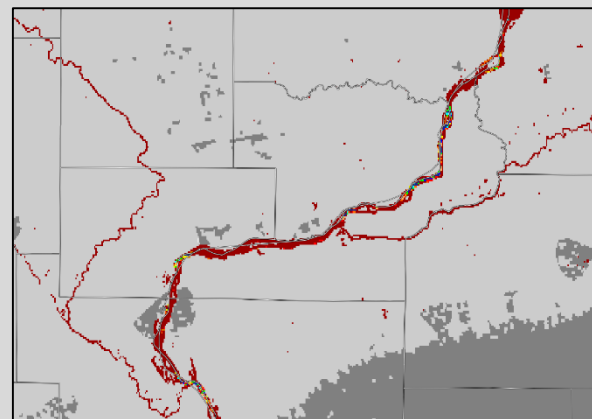
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# Ice Jam Potential

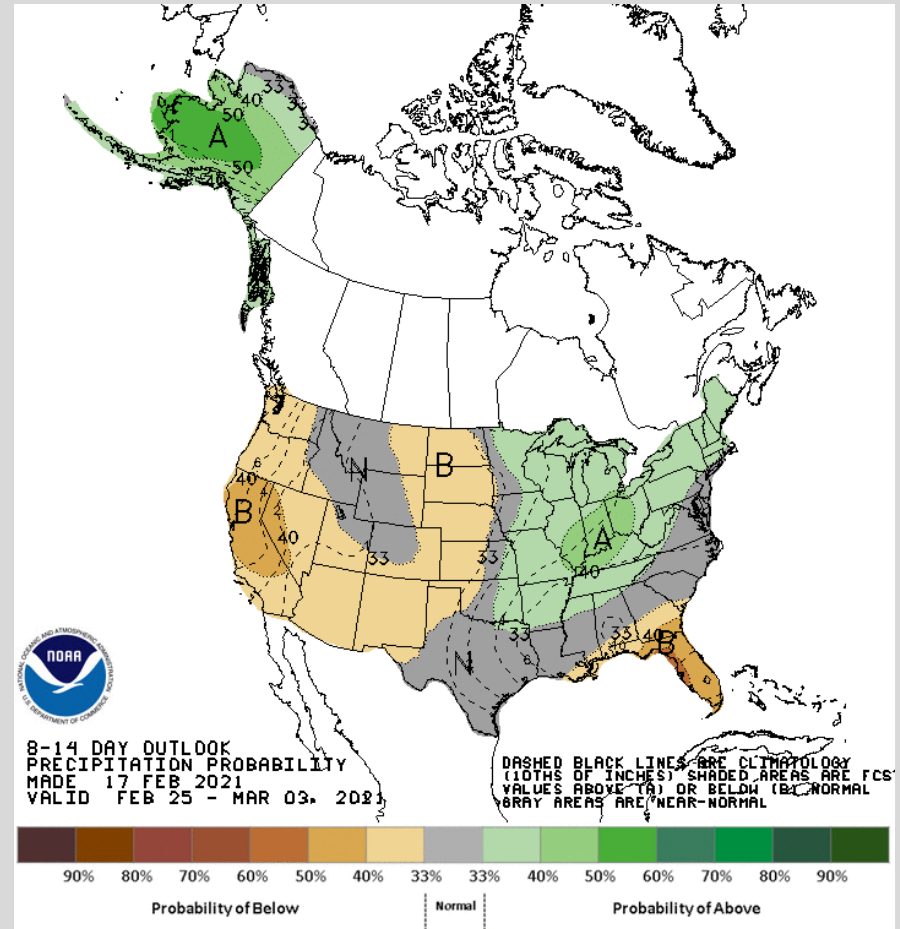
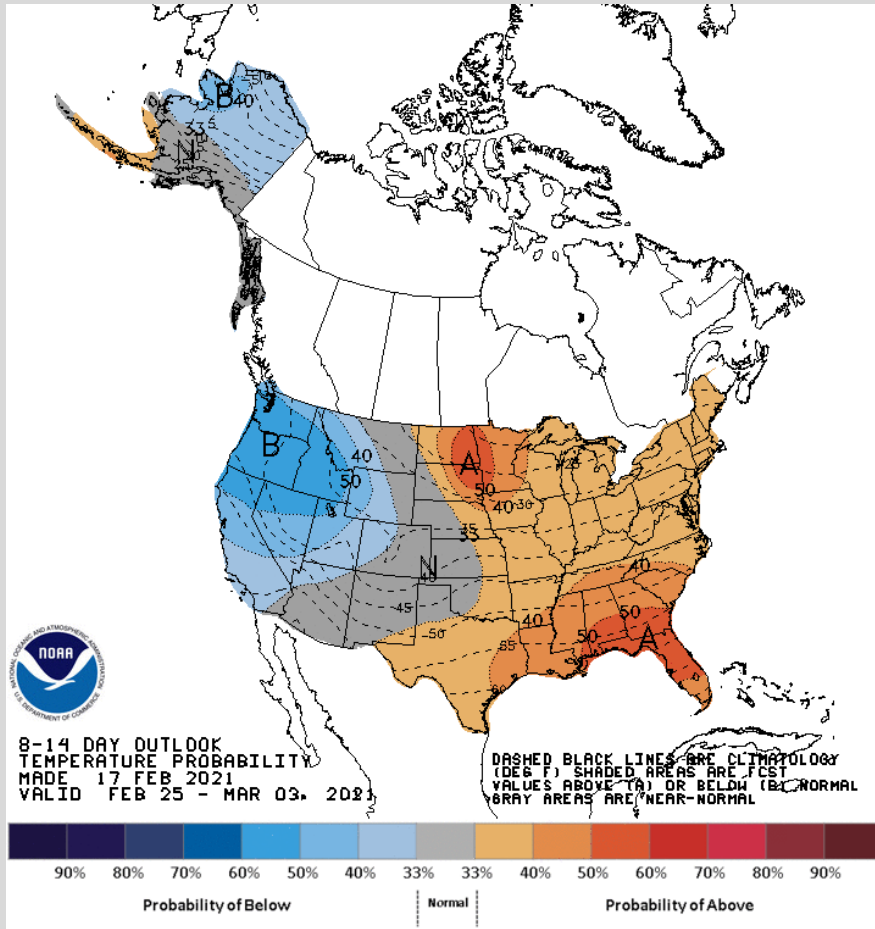


- **Ice Jam action has been quiet so far this season**
- **Recent cold air has allowed ice to develop and thicken in area rivers**
- **Concern for ice jams will be focused on break-up.**



# Week 2 Climate Outlook

## February 25<sup>th</sup> – March 3<sup>rd</sup>



# Spring Flood Outlook

## --Bottom Line--

### Mississippi River:

**Near Normal / Above Normal downstream of Quad Cities (Minor)**

### Local Rivers:

**Above Normal**

- 
- Snowpack is the primary driver for the flood risk this spring: above normal amounts locally, but below normal in the upper portions of the Mississippi River basin
  - While the snowpack is concerning, when combined with the drier soils, shallow frost, and near normal streamflows, these factors nearly balance out the flood threat for this Spring Season.
  - The occurrence and severity of flooding will be determined by the rate of snowmelt and additional spring precipitation
  - Higher risk will be for a lower severity flooding season (more widespread minor to moderate flooding)





# Spring Flood Outlook Dates

*Initial Issuace was February 11, 2021*

**Updated Outlooks:**

**February 25, 2021**

**March 11, 2021**

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**Information from this outlook and for conditions going through the spring can be found at:**

**[weather.gov/dvn/2021\\_springfloodoutlook](https://weather.gov/dvn/2021_springfloodoutlook)**

**Jessica Brooks**

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