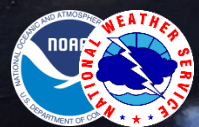
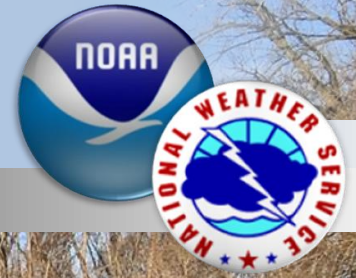


# 3<sup>rd</sup> 2020 Spring Flood Outlook



NATIONAL WEATHER SERVICE-LA CROSSE, WI



[weather.gov/lacrosse](https://weather.gov/lacrosse)

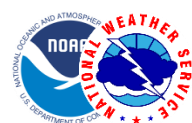


# Main Message

| River                         | Spring Flood Risk            |
|-------------------------------|------------------------------|
| Mississippi River (Main-Stem) | Above normal                 |
| Mississippi Tributaries       | Near-Above Normal (Variable) |

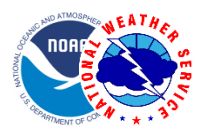
- Minor flooding remains likely on the Mississippi River
- Probabilities for flooding on tributary rivers has reduced substantially

**IMPORTANT:** Precipitation trends this spring will be key in determining how the flooding situation will evolve.

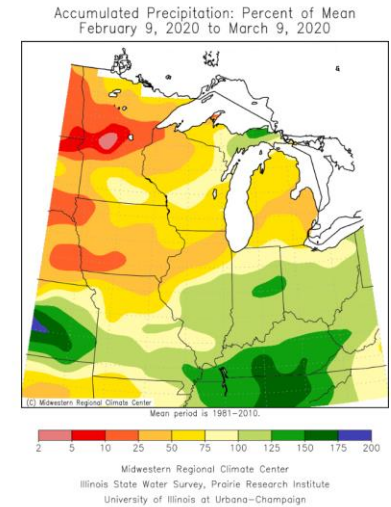
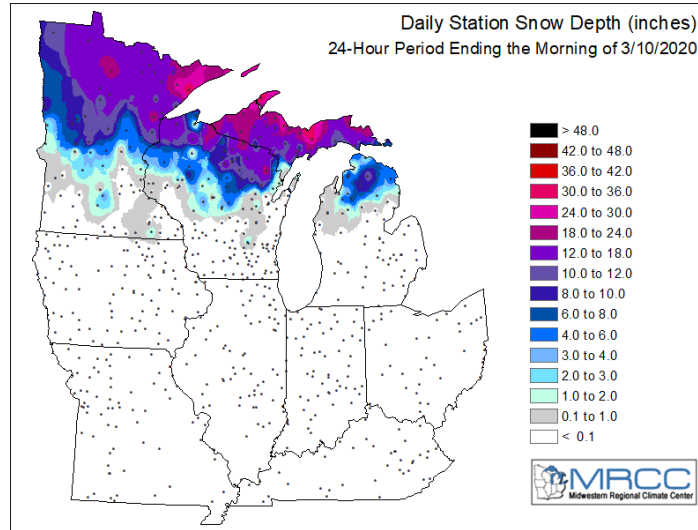
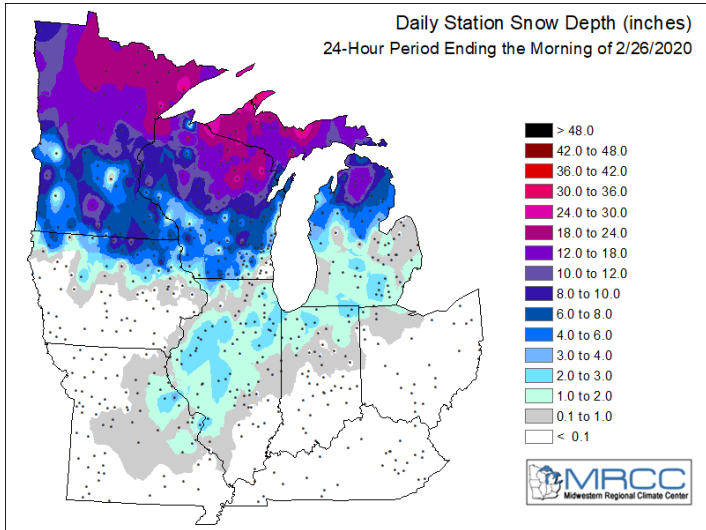


# Flood Risk Considerations

| Threat                     | Impact to Potential Spring Flooding |
|----------------------------|-------------------------------------|
| High river levels          | Increased Threat                    |
| High soil moisture         | Increased Threat                    |
| Winter Precipitation       | Below Normal, Decreased Threat      |
| Snowpack/Liquid Equivalent | Melt Ongoing, Decreasing Threat     |
| Rate of Snowmelt           | Slow So Far, Decreased Threat       |
| Frost Depth                | Thawing, Some Frozen Ground         |
| Spring Precipitation       | Unknown                             |



# What has changed since Feb 27<sup>th</sup>



## What has changed?

- Snow melt across much of the local area and below normal precipitation has reduced the chances for significant flooding.

# Streamflow Conditions

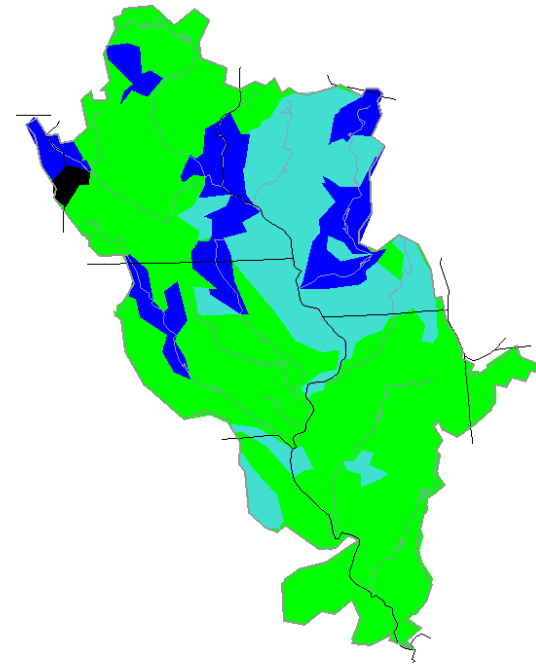
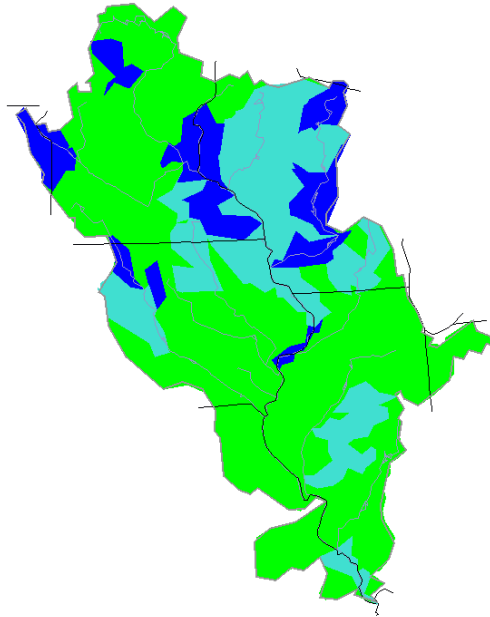
## Upper Mississippi Basin

February Average

Average Past 7 Days

Tuesday, March 10, 2020

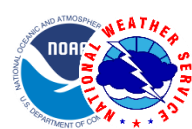
Tuesday, March 10, 2020



Very Little Change



| 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 |      |         |

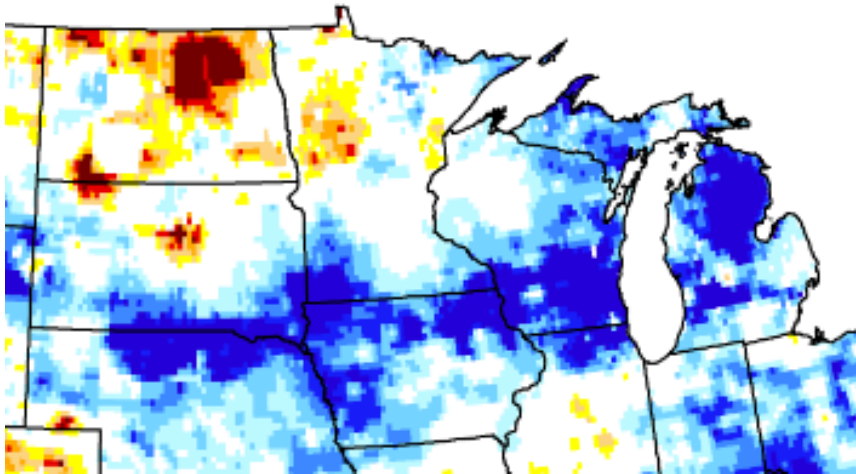


NATIONAL WEATHER SERVICE-LA CROSSE, WI

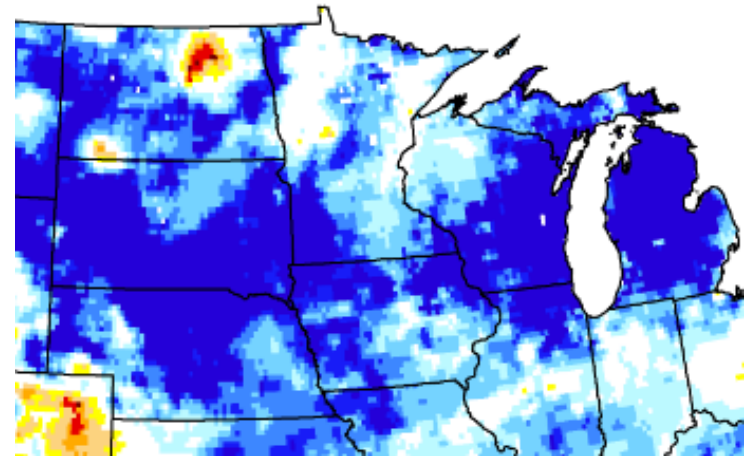
Much above normal streamflow for

# Surface Soil Moisture

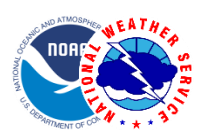
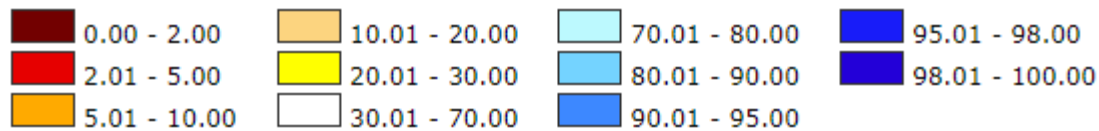
March 11, 2019



March 9, 2020



Wetness Percentiles Relative to period 1948-2009



NATIONAL WEATHER SERVICE-LA CROSSE, WI

# Snow Liquid

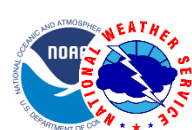
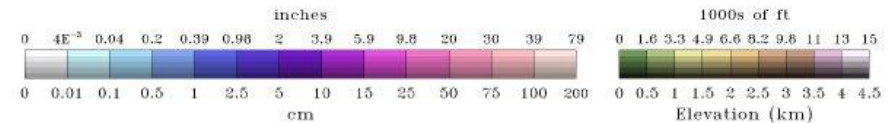
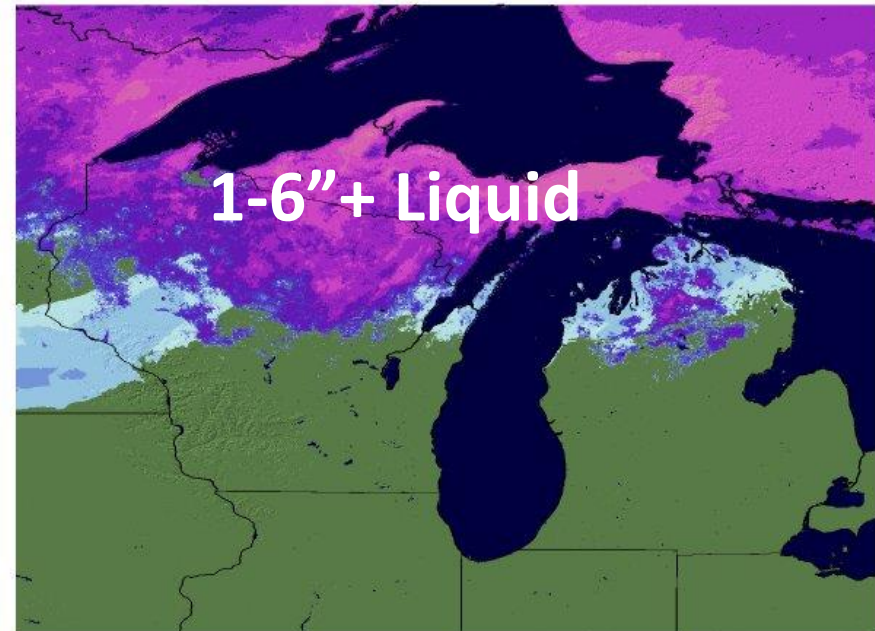
**1-6"+ of liquid remains in the snowpack over northern Wisconsin and northern Minnesota.**

**Expect continued river rises on the Mississippi, Wisconsin, and the Black rivers.**

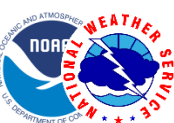
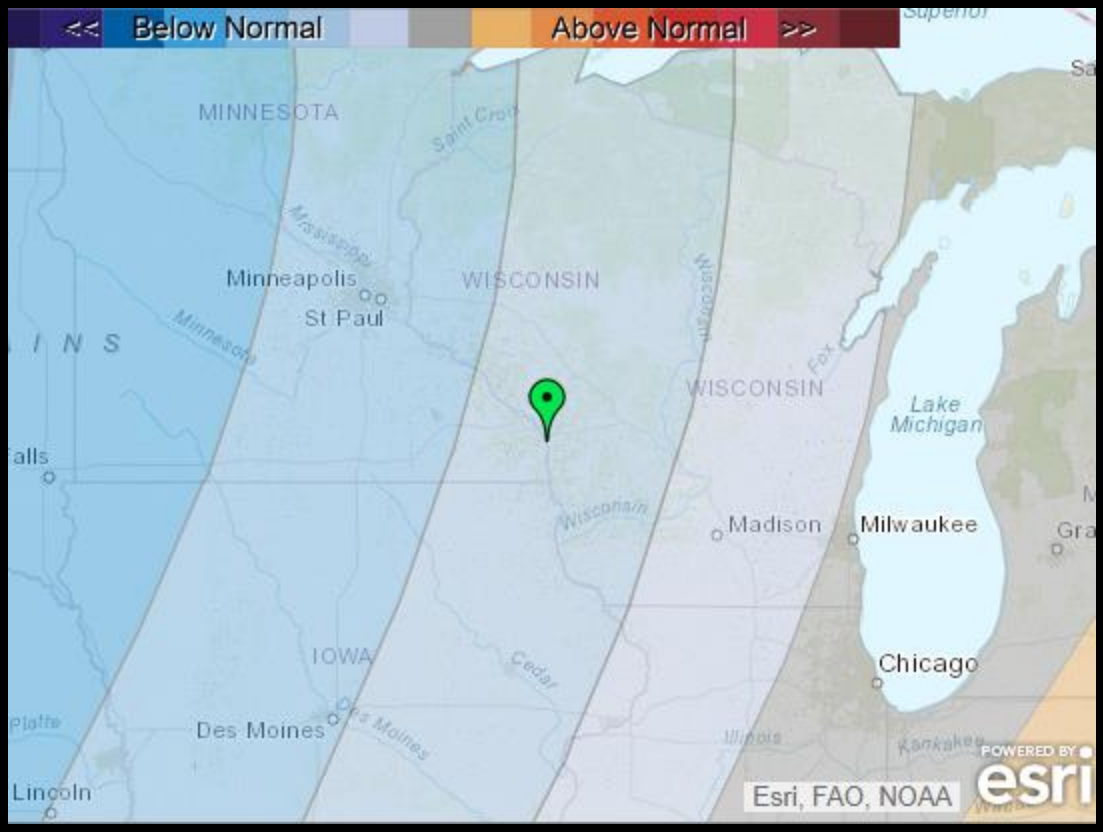
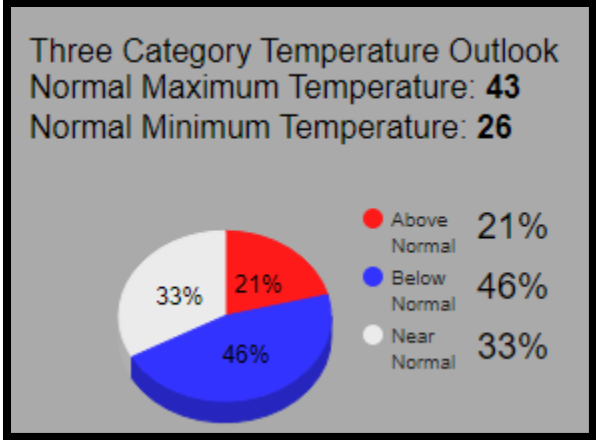
National Snow 2019-2020 Analysis 2020  
OWP OFFICE OF WATER PREDICTION

## Snow Water Equivalent

2020-03-11 06 UTC



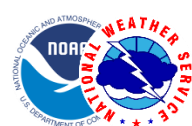
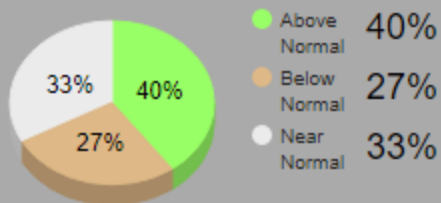
# March 18-24 Temperature Outlook





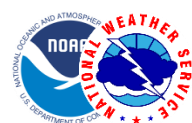
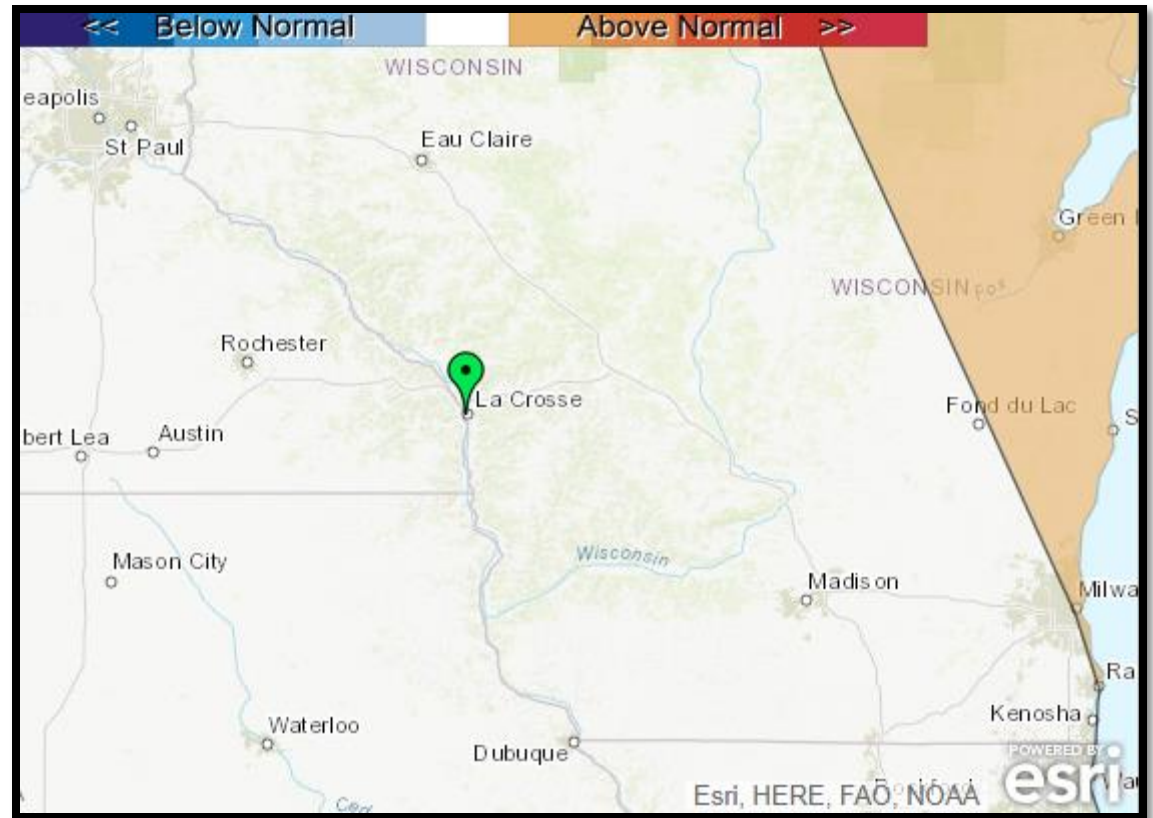
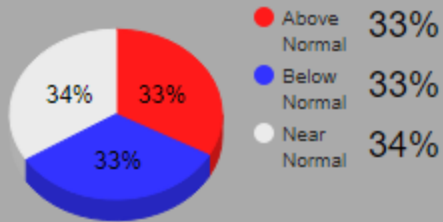
# March 18-24 Precipitation Outlook

Three Category Precipitation Outlook  
Normal Precipitation: **0.52**



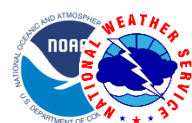
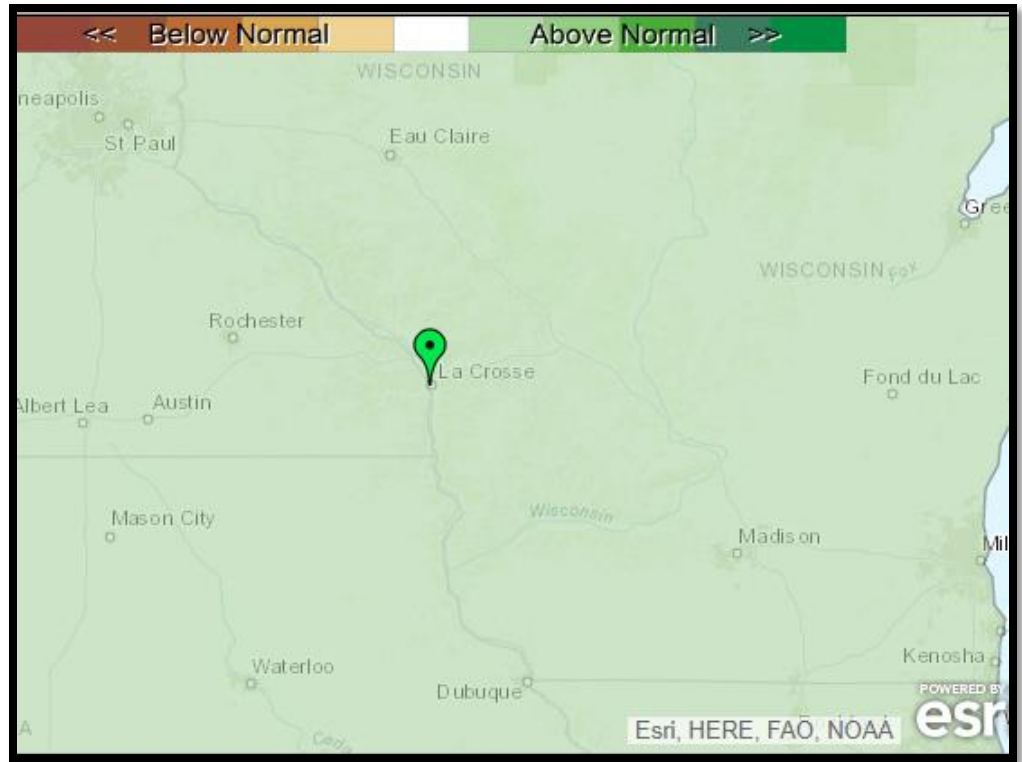
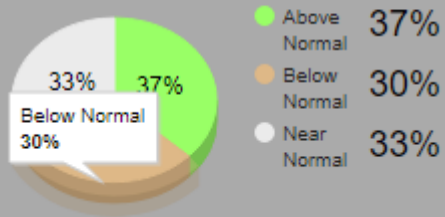
# March-May Temperature Outlook

Three Category Temperature Outlook  
Normal Maximum Temperature: **57**  
Normal Minimum Temperature: **37**



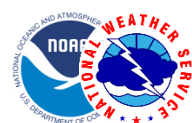
# March-May Precipitation Outlook

Three Category Precipitation Outlook  
Normal Precipitation: **9.37**



# Summary

- **Putting the flood risk into perspective this Spring**
  - **Near to above normal threat for flooding**
  - **Probabilities favor minor flooding**
- **While the threat for moderate to major flooding has been significantly reduced, minor flooding is likely**
- **Precipitation trends this Spring will be key in determining how the flooding situation will evolve**



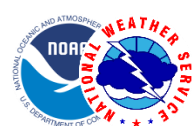
# Spring Hydrologic Outlook Takeaways

**Above normal flooding probability  $\neq$  higher flooding magnitude**

**1) This years first and second spring hydrologic outlooks indicated a much above normal flooding potential**

- Probabilities were high (>90% for minor flooding) but much less for moderate and major flooding**

**2) Conditions during the spring snow melt (temperatures and precipitation) drive how the melt and potential flooding threat evolve**

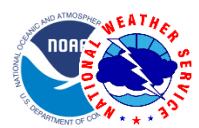


# 2020 Spring Hydrologic Outlook

- **Monitor later forecast and information from the National Weather Service closely**

**Website for the latest Information:**

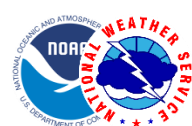
<https://www.weather.gov/arx/2020FloodOutlook>



# Rainfall Trend Research

[https://www.youtube.com/watch?v=\\_ykgbzFe9c&feature=youtu.be](https://www.youtube.com/watch?v=_ykgbzFe9c&feature=youtu.be)

- **NWS La Crosse YouTube Channel**
- **“Recent Rainfall and River Trends Over the Upper Mississippi River Valley”**



## Contact Info:

Email: [john.Wetenkamp@noaa.gov](mailto:john.Wetenkamp@noaa.gov)

Phone: (608) 784-8275 x493

