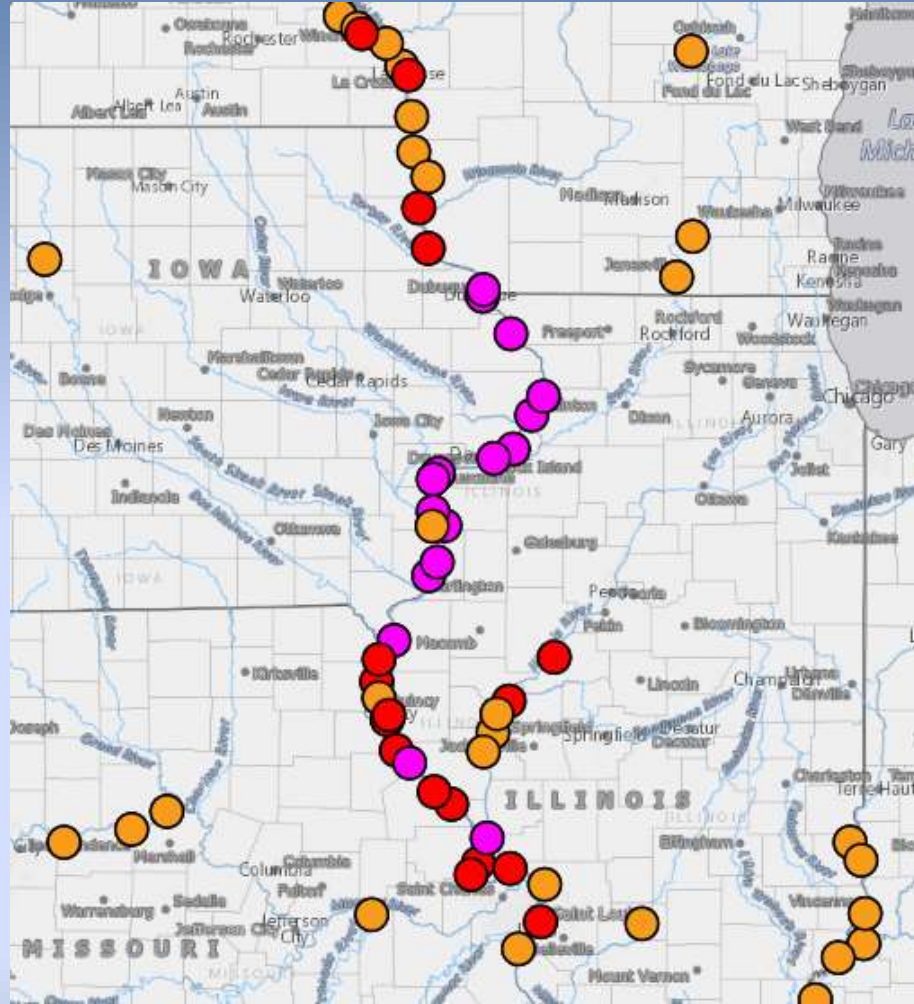




# NWS Quad Cities Flood Update

## April 8, 2019



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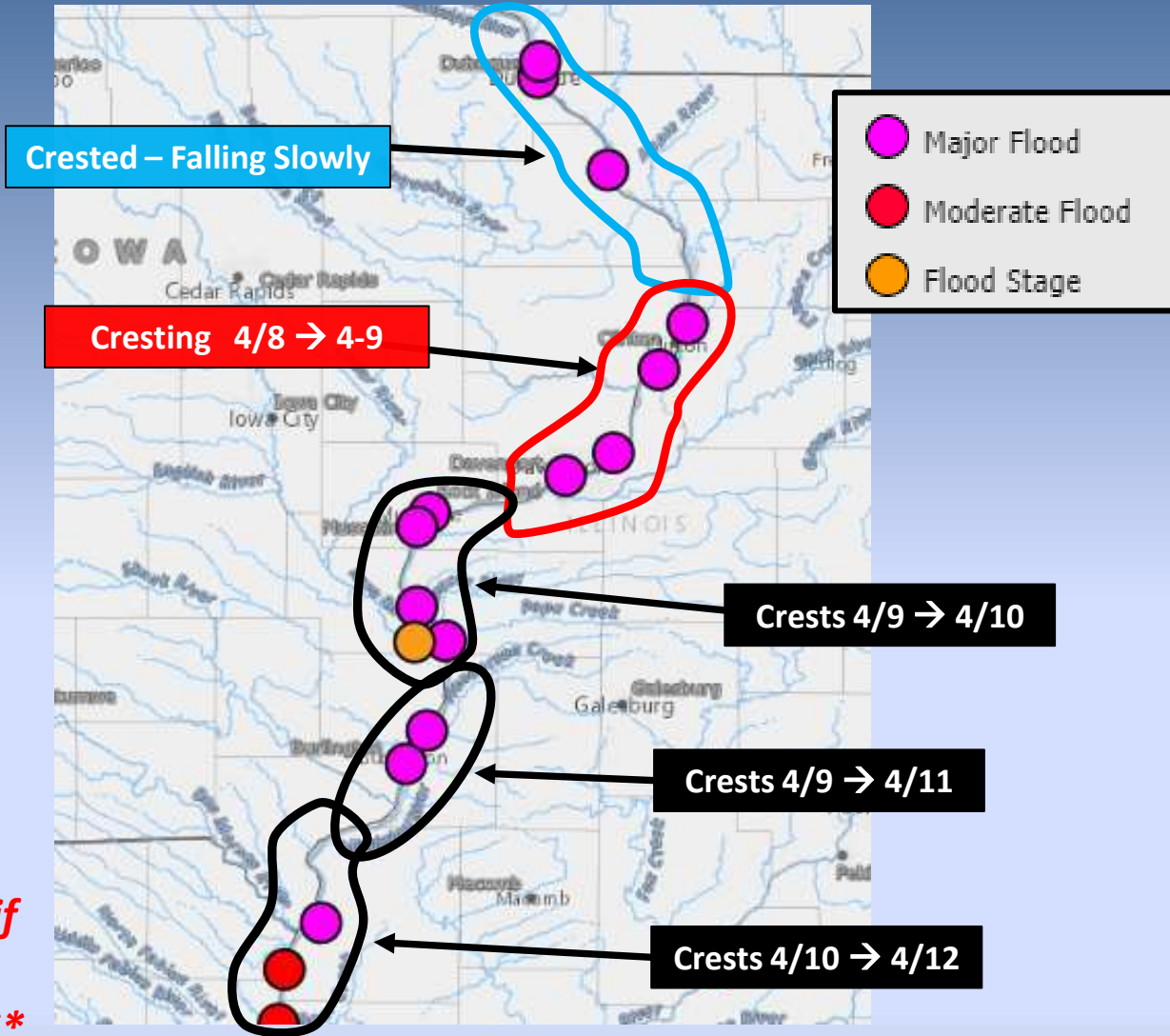


# Snowmelt Crest Forecast

Forecast river stages and crest timing for the next 7 days.

*This does not include rain forecast midweek.*

**\*\*\*High level of uncertainty exists beyond this crest. Additional and potentially higher crests ARE POSSIBLE if heavy rain occurs through early May.\*\*\***

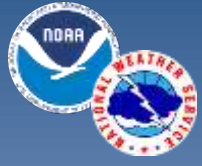


Updated: 4/8/2019

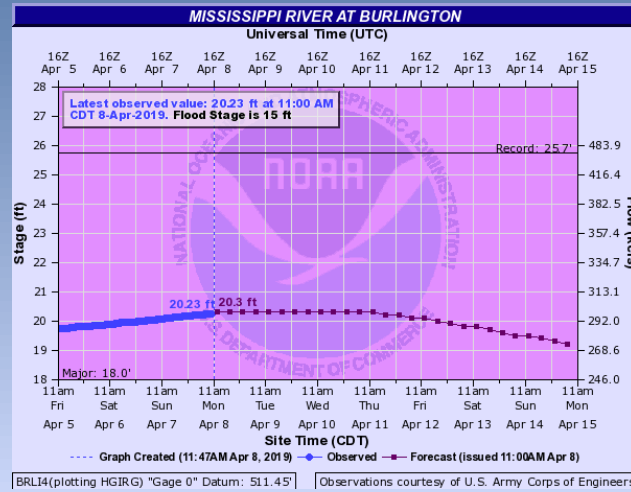
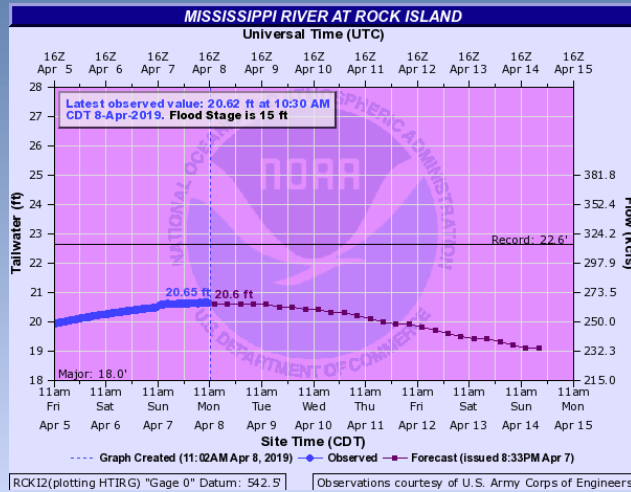
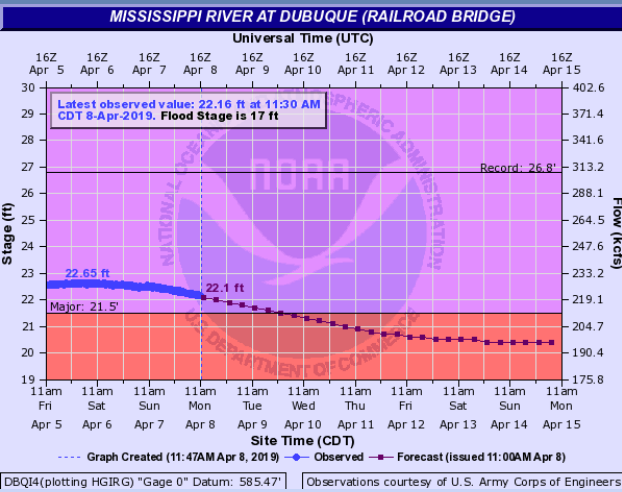


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# Mississippi River Crest Information



- Dubuque → Bellevue LD12: Crested
- Fulton LD13 → Muscatine: Cresting Now
- Illinois City LD16 → Gregory Landing: Cresting through mid-week



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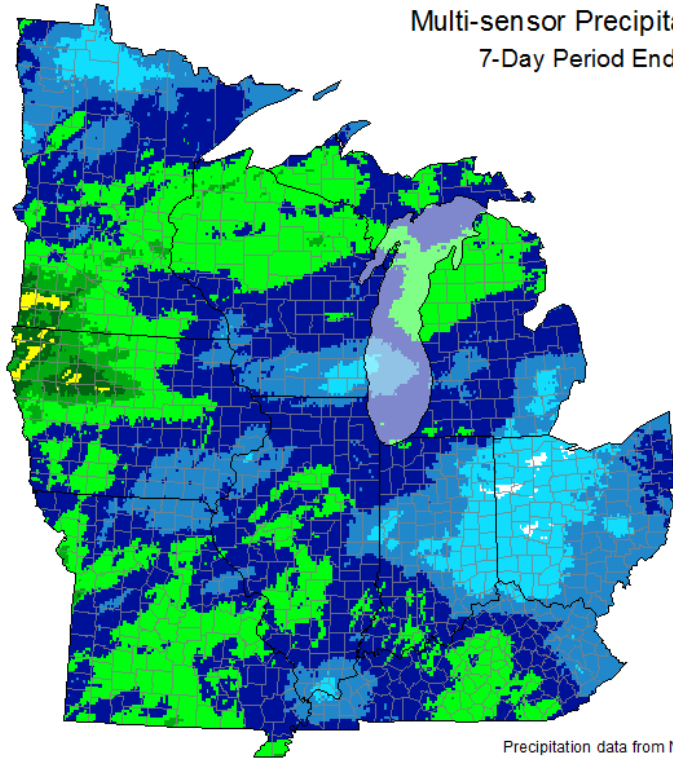
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# Observed Precipitation: 3/31 – 4/6

Multi-sensor Precipitation: Observed (inches)  
7-Day Period Ending the Morning of 4/7/2019

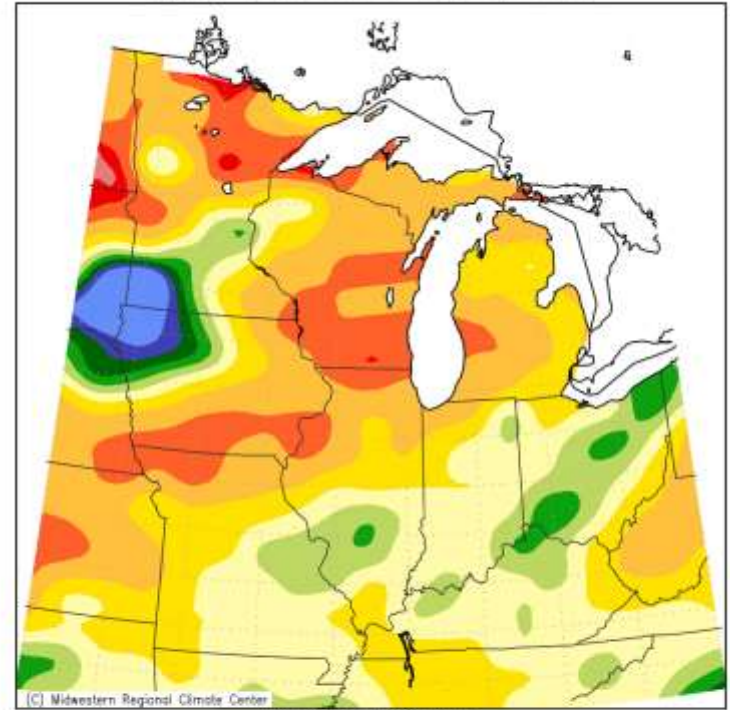


- > 20.0
- 15.0 to 20.0
- 10.0 to 15.0
- 8.0 to 10.0
- 6.0 to 8.0
- 5.0 to 6.0
- 4.0 to 5.0
- 3.0 to 4.0
- 2.0 to 3.0
- 1.5 to 2.0
- 1.0 to 1.5
- 0.50 to 1.00
- 0.25 to 0.50
- 0.10 to 0.25
- 0.01 to 0.10
- < 0.01 (Not Shown)
- Missing Data



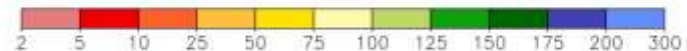
Precipitation data from NWS AHPS: <http://water.weather.gov/precip>

Accumulated Precipitation: Percent of Mean  
March 31, 2019 to April 6, 2019



(C) Midwest Regional Climate Center

Mean period is 1981-2010.

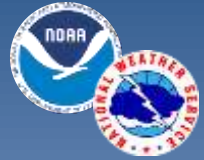


Midwestern Regional Climate Center  
Illinois State Water Survey, Prairie Research Institute  
University of Illinois at Urbana-Champaign



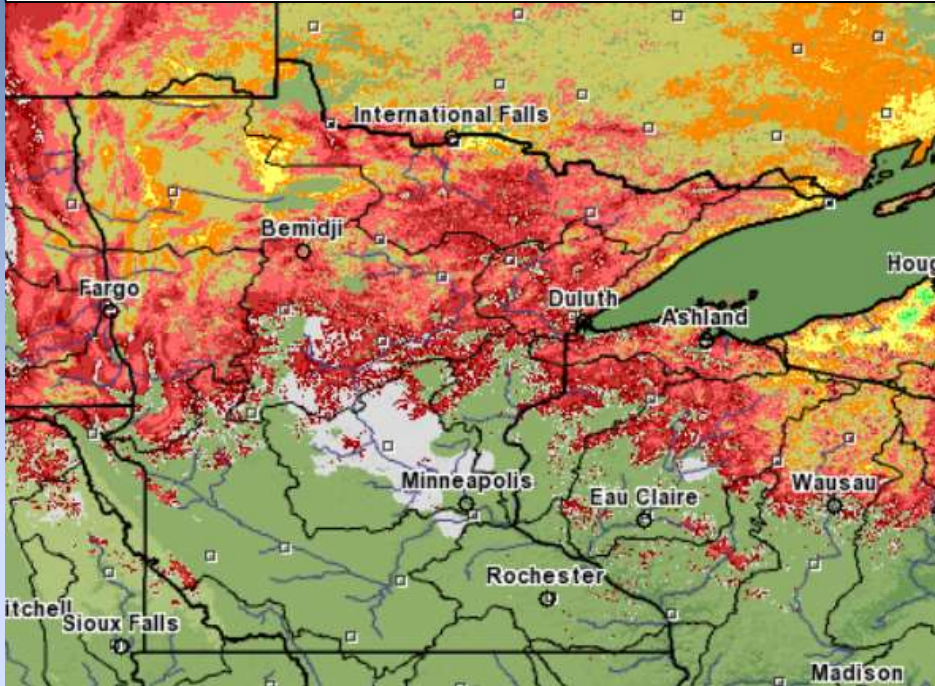
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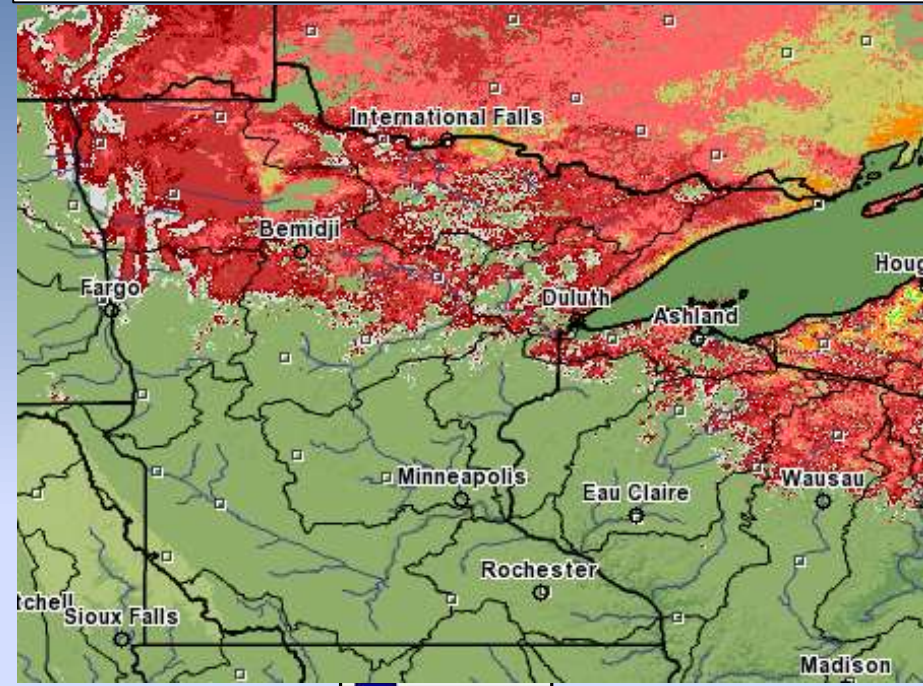


# Snowpack Change in the Past 7 Days

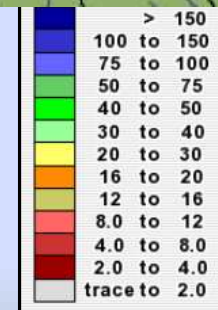
Snow Depth – April 1, 2019



Snow Depth – April 8, 2019



Considerable melting has occurred in the past week. Overall, the melt has occurred at a favorable pace.

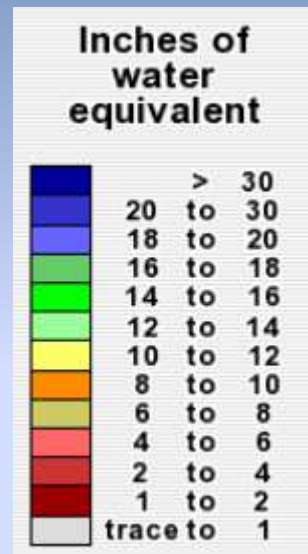
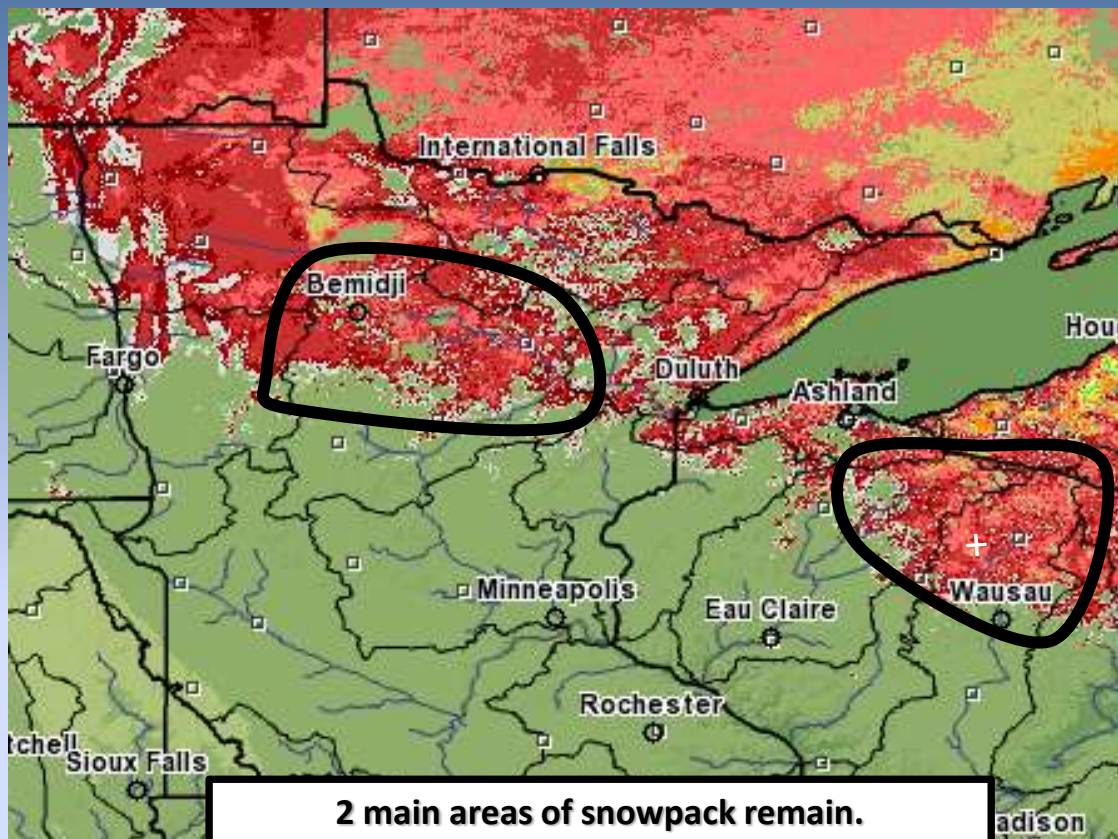






# Current Snow Water Equivalent

Remaining liquid water in the snow available for runoff as of 4/8/2019



**2 main areas of snowpack remain.**  
1) Mississippi Headwaters Watershed  
2) Upper Chippewa & Wisconsin River Watersheds

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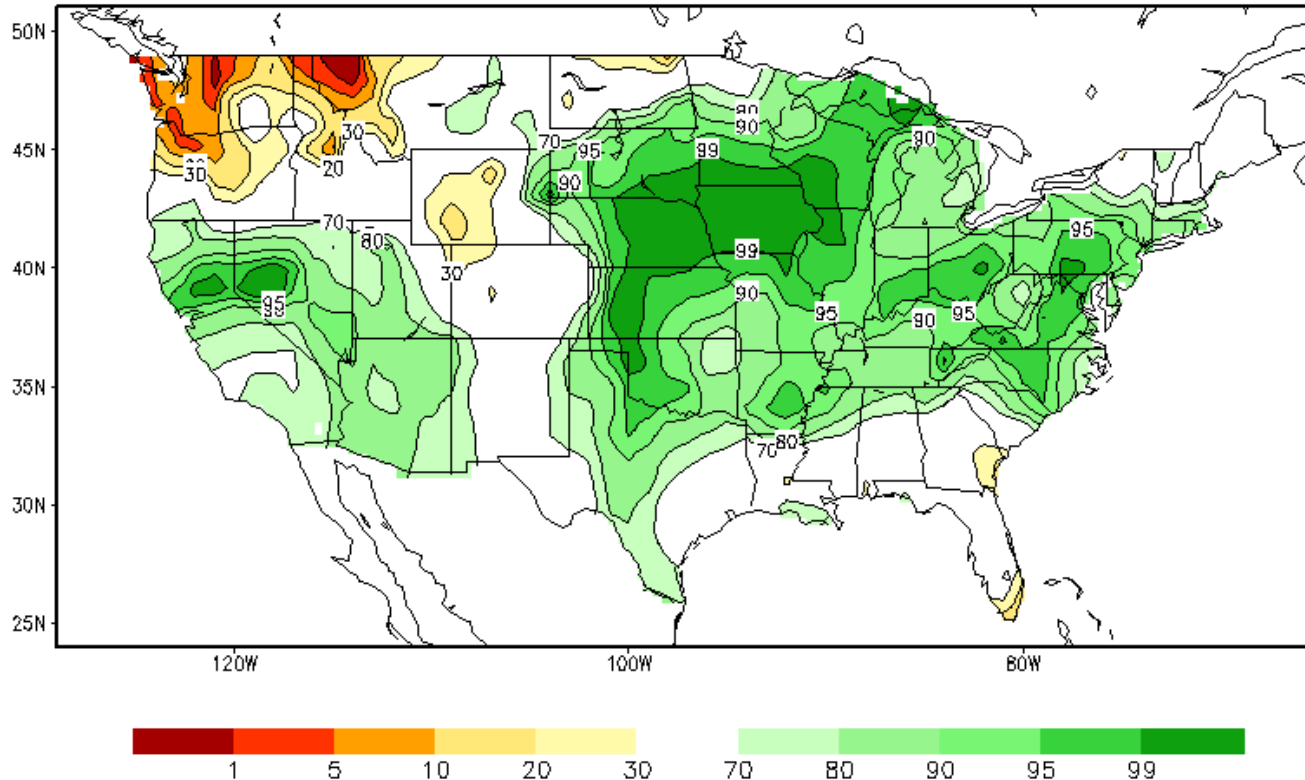
Last rise due to snowmelt expected 4/15-4/25





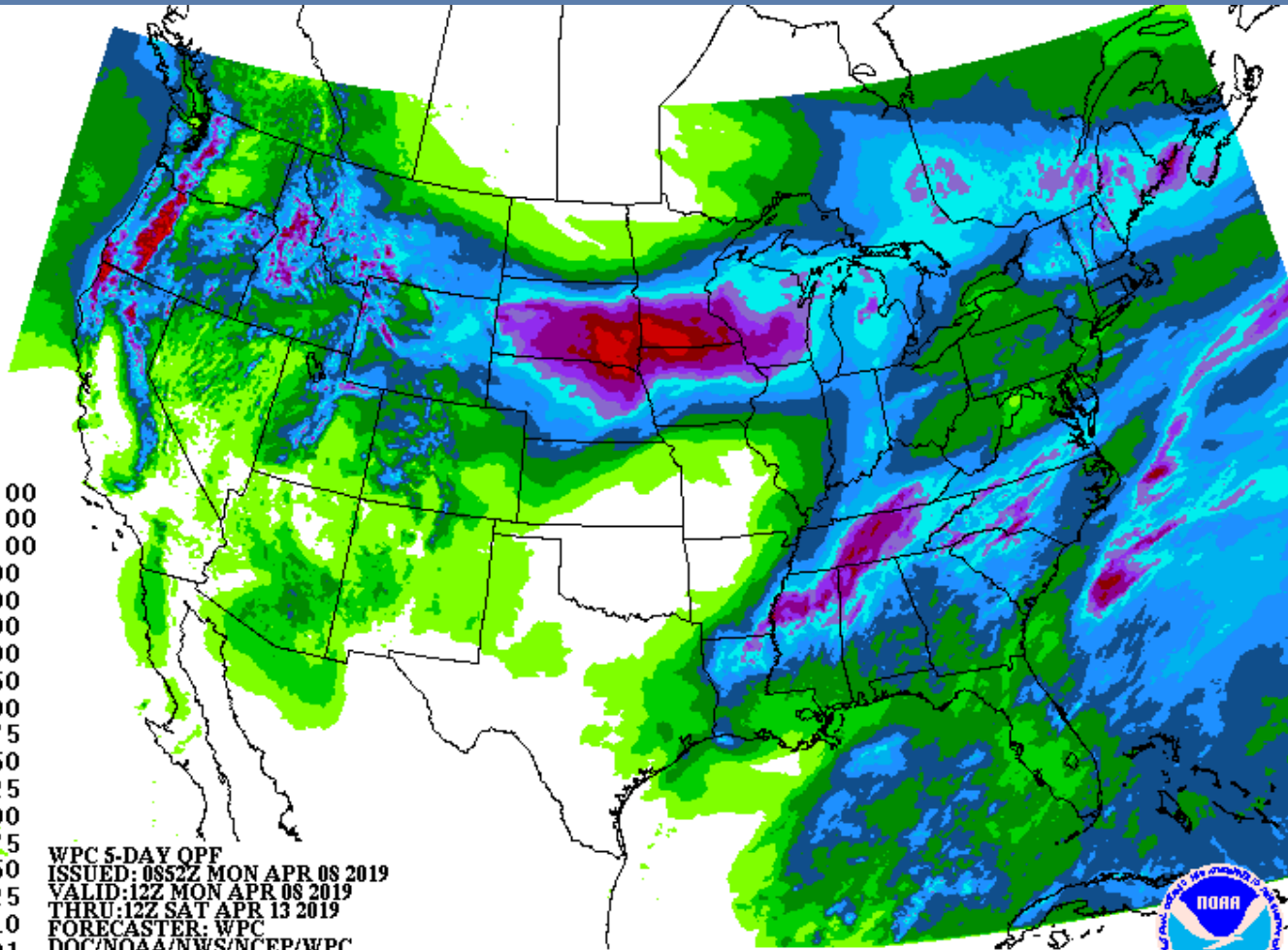
# Current Soil Moisture

Calculated Soil Moisture Ranking Percentile  
APR 07, 2019





# 5-Day Forecast Precipitation



**Strong storm system to impact the region this week.**

**Considerable uncertainty still on the storm track and precipitation type**

**Rises on tributaries likely! Flooding?**

**Rain vs snow will impact the timing of the runoff into the rivers and therefore river level impacts.**

WPC 5-DAY OFF  
ISSUED: 0852Z MON APR 08 2019  
VALID: 12Z MON APR 08 2019  
THRU: 12Z SAT APR 13 2019  
FORECASTER: WPC  
DOC/NOAA/NWS/NCEP/WPC



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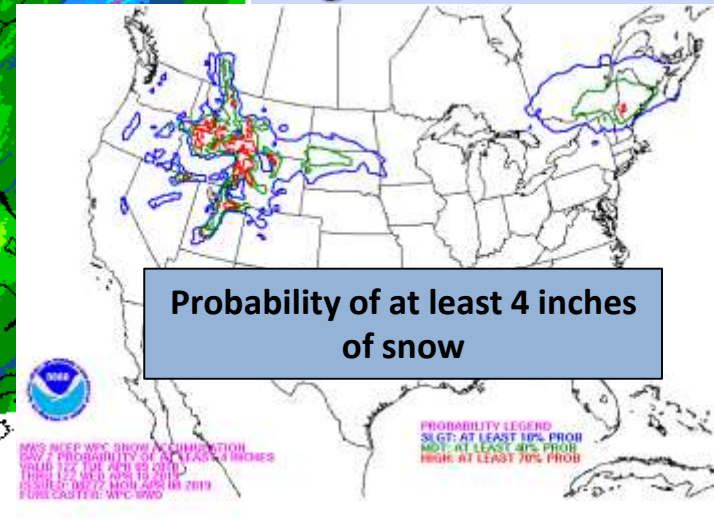
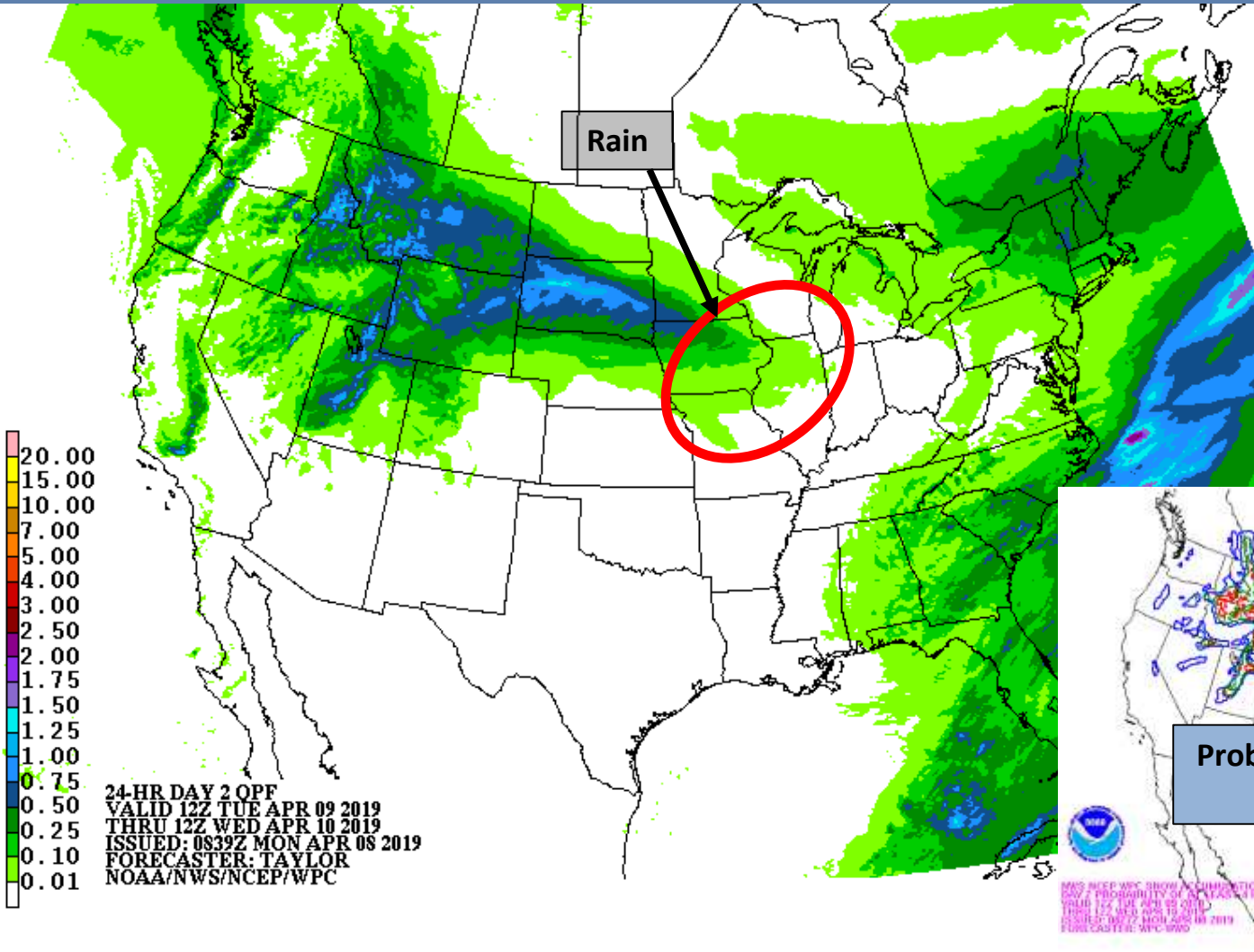




# Day 2 Forecast Precipitation Tuesday/Tuesday Night

Storm system begins moving into the region Tuesday evening.

Significant amounts are not expected through Tuesday Night.



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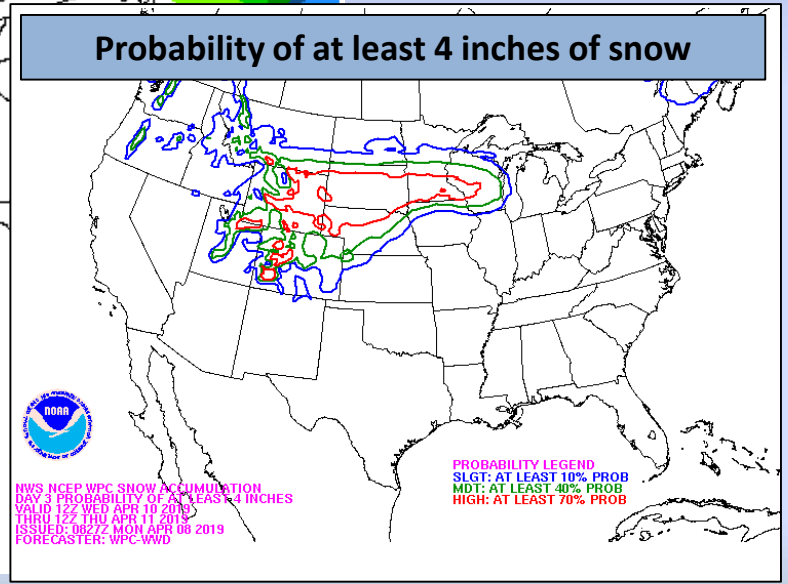
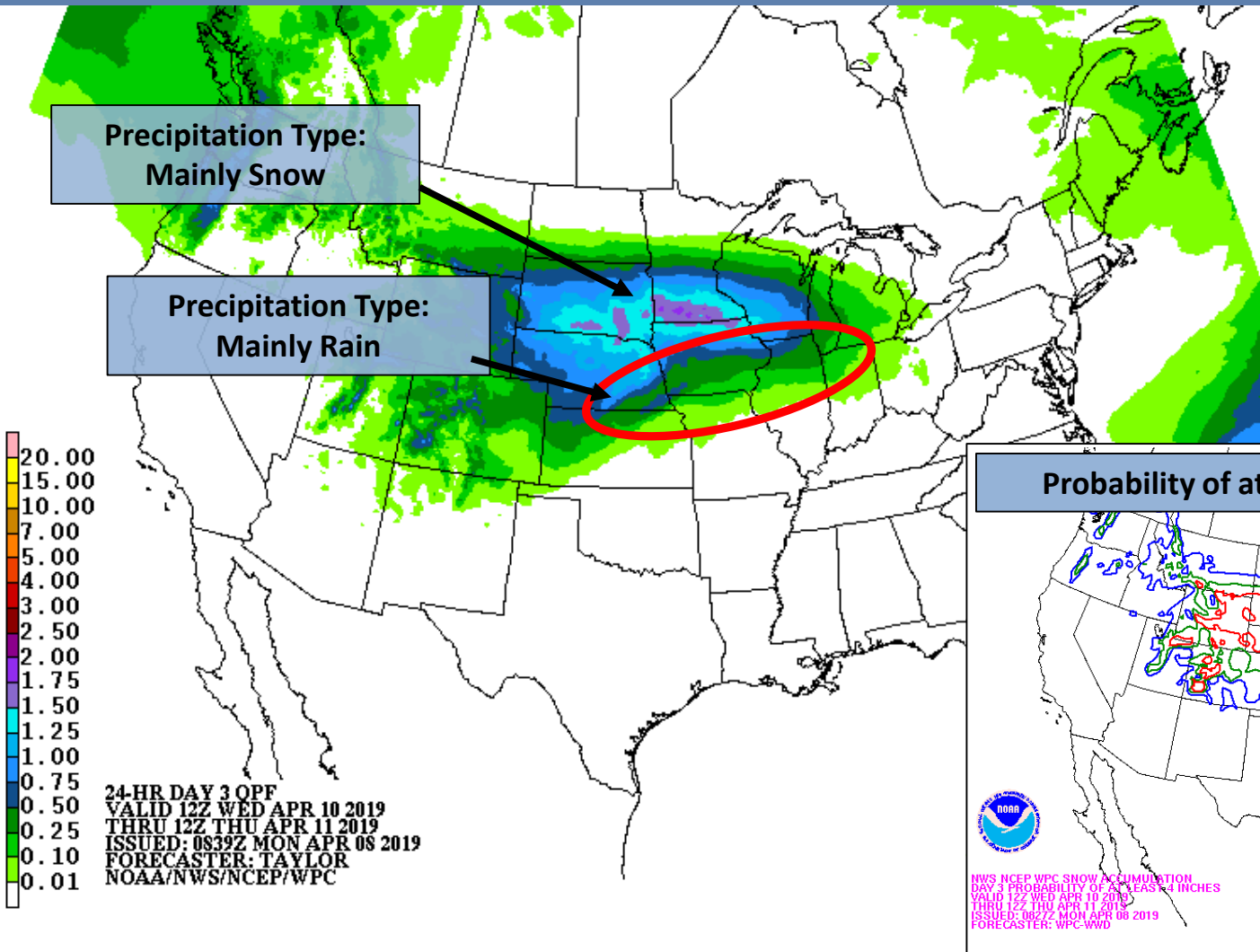
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# Day 3 Forecast Precipitation Wednesday/Wednesday Night

Heavy snow is expected north of the area.

The southern side of the storm will be rain, but how much is still uncertain.

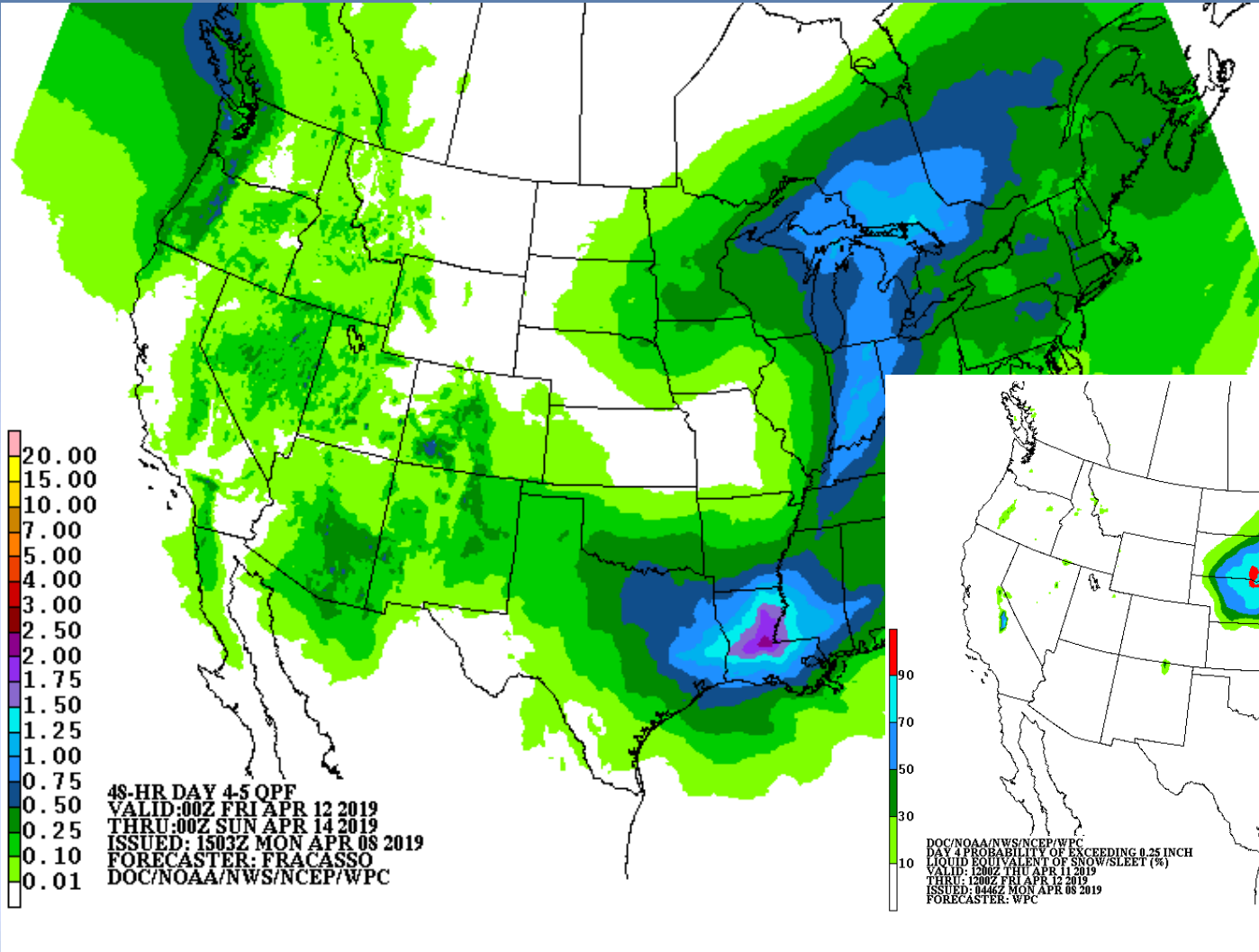


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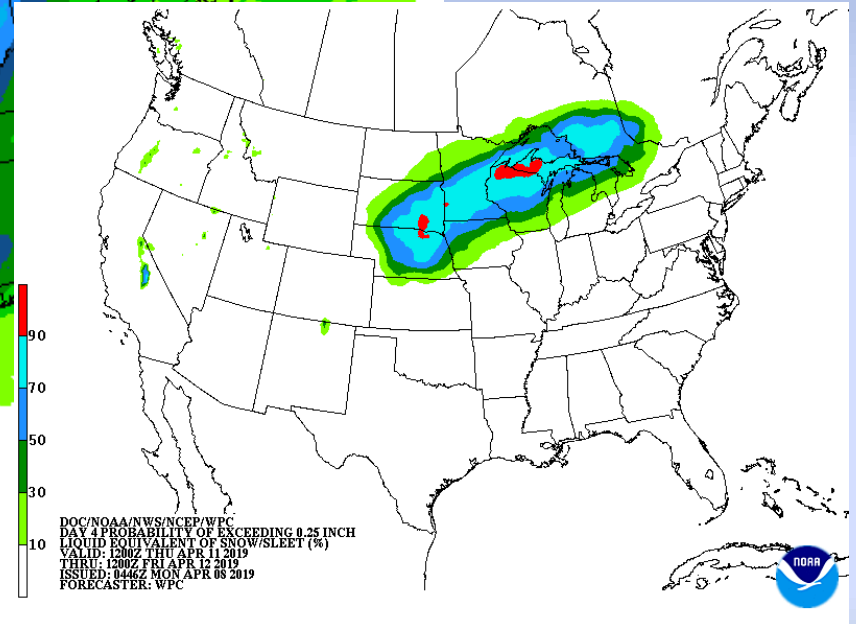


# Days 4-5 Forecast Precipitation Thursday Night → Saturday



Back side of the storm will be colder.

Snow, or a mix of rain & snow?



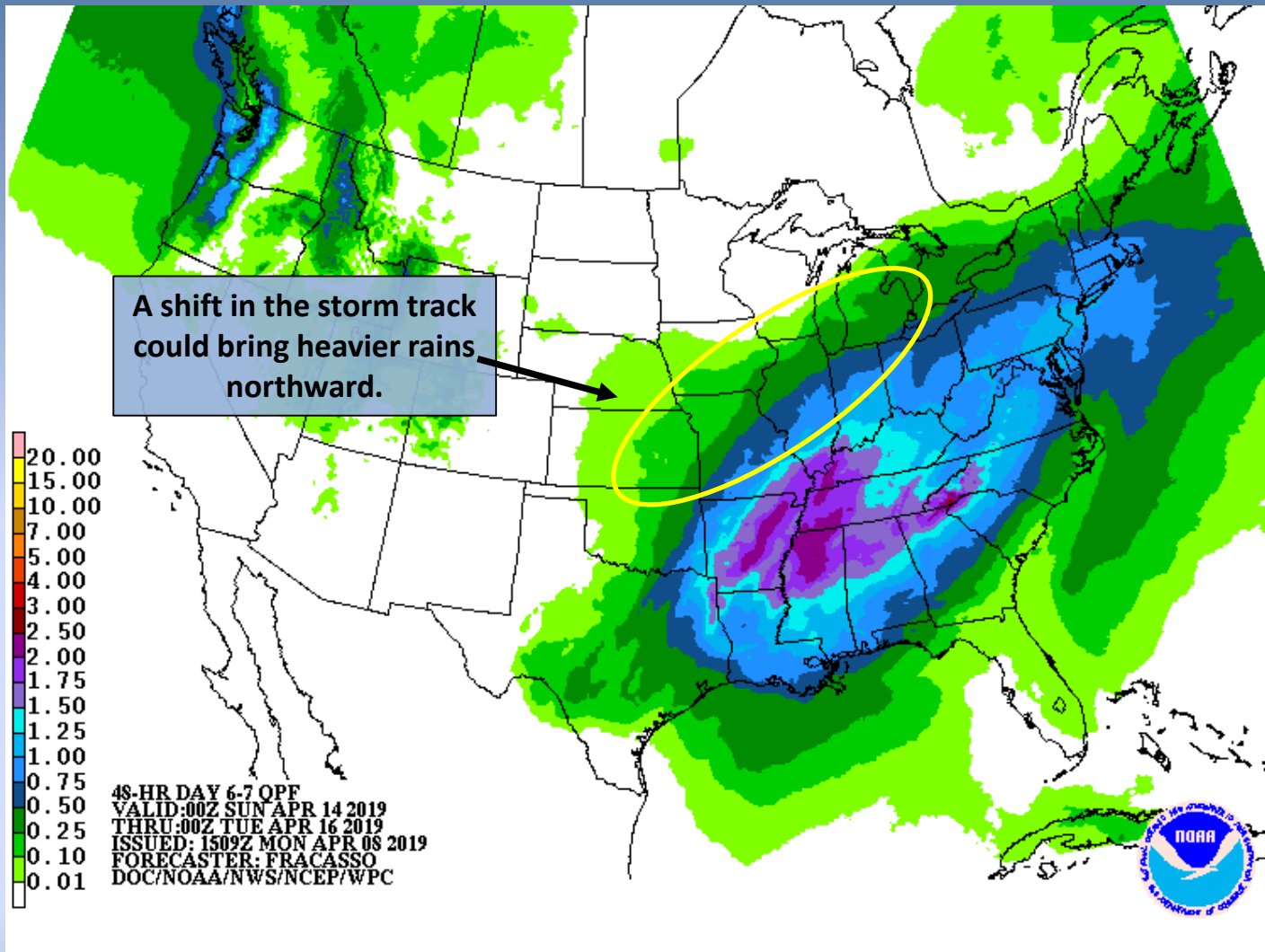
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# Days 6 & 7 Forecast Precipitation Saturday Night through Monday





# Impact of this Week's Precipitation

**Tributaries will likely see rises. The extent of the rises though is very uncertain.**

**Mississippi River scenarios:**

- **Another rise similar to recent crest level**
- **Another rise higher than recent crest level**
- **Levels hold steady for a longer period of time**

**High levels will likely be in place through the end of April.**



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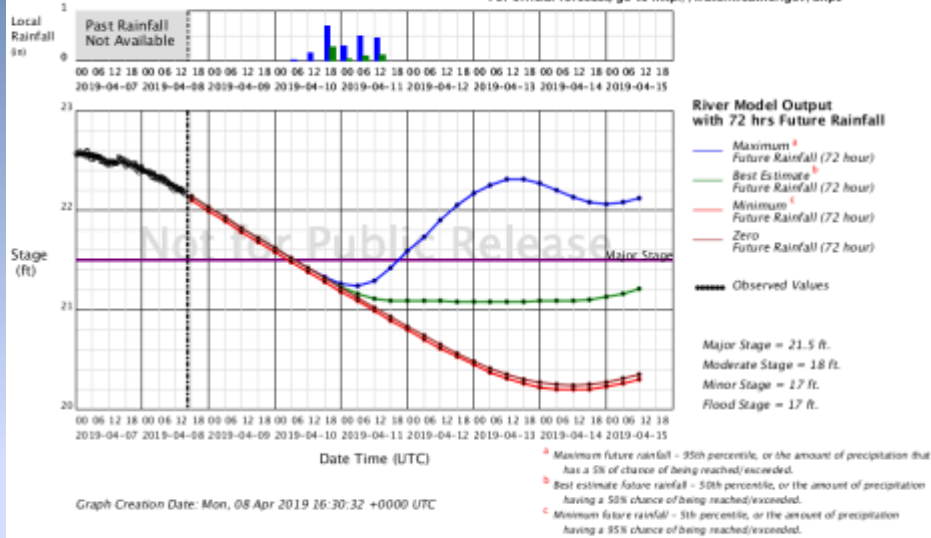
# Impact of this Week's Precipitation

## Preliminary River Model Output – Use with Caution

NCRFC Ensemble Model Output  
DBQ4 -- Mississippi River -- Dubuque, IA

This product has not been reviewed by NWS Forecasters

For official forecast, go to <http://water.weather.gov/ahps>

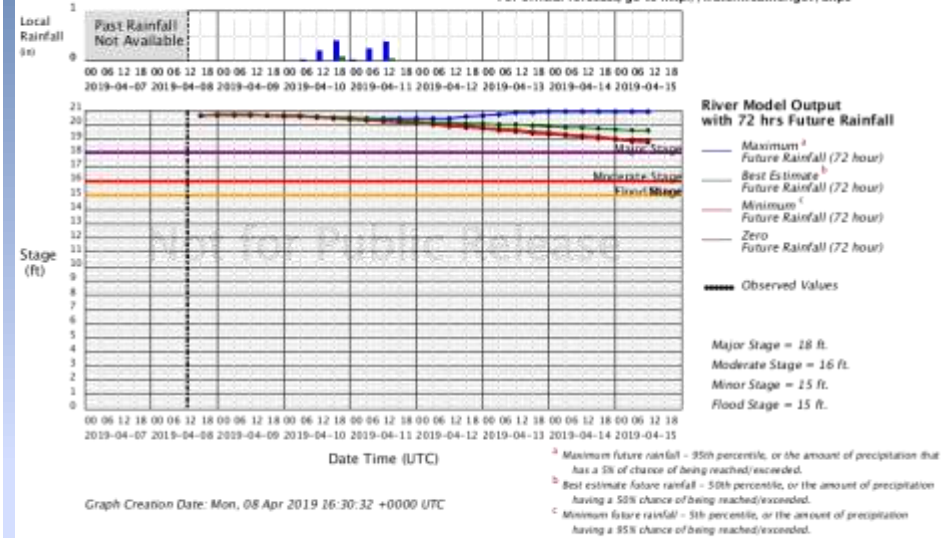


## Preliminary River Model Output – Use with Caution

NCRFC Ensemble Model Output  
RCK12 -- Mississippi River -- Rock Island L&D 15, IL

This product has not been reviewed by NWS Forecasters

For official forecast, go to <http://water.weather.gov/ahps>



These are scenarios using 3 days of forecast rainfall.



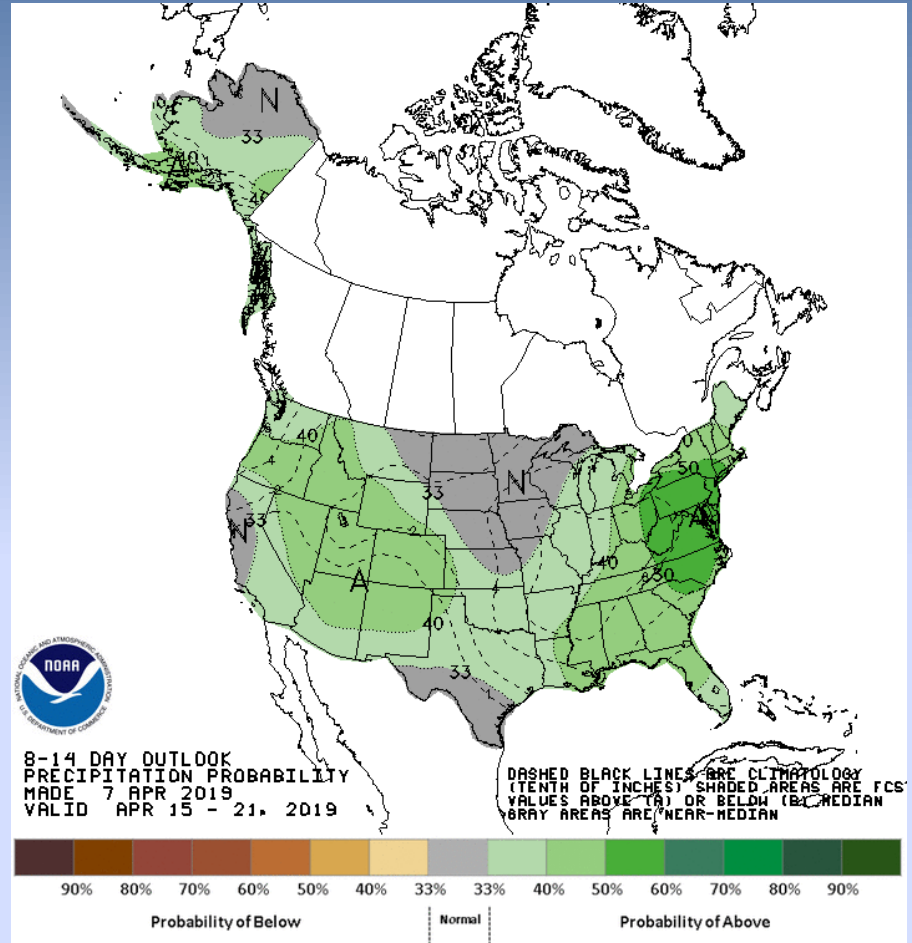
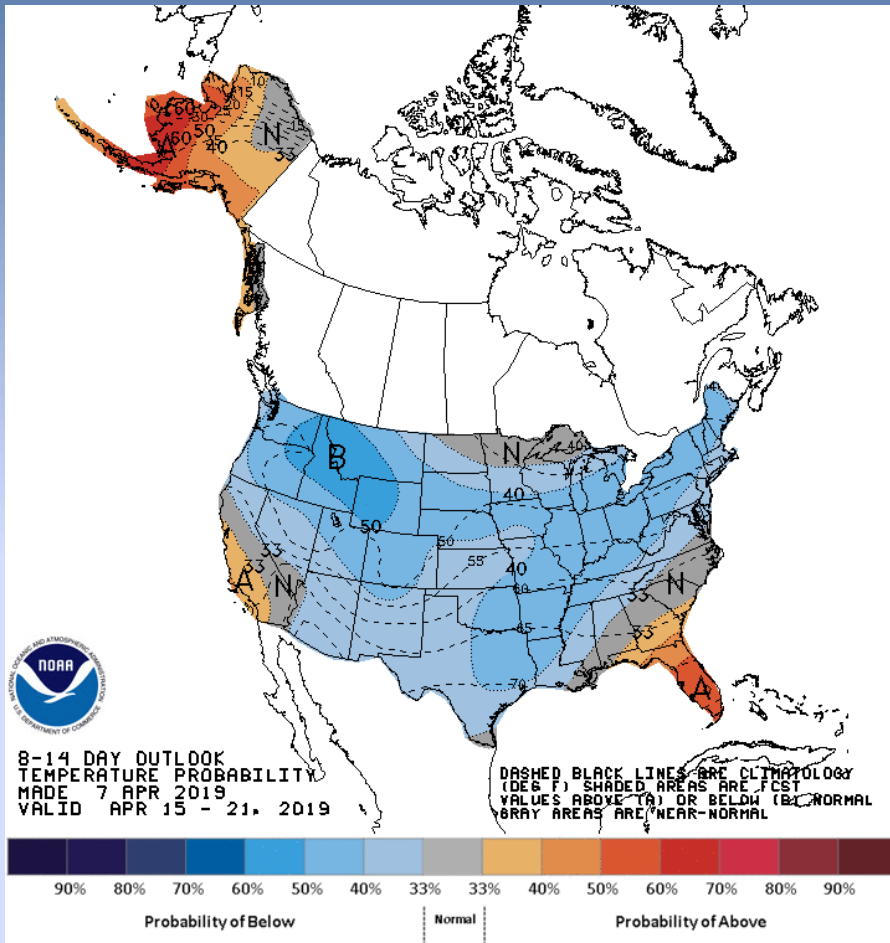
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# Week 2 Outlook



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# Summary

- **Current snowmelt crest working downstream.**
- **Snow on the ground today alone will not cause additional significant rises.**
- **The area and the rivers remain very susceptible to any rainfall**
- **New snowpack is likely north of the area by the end of the week**
  
- **Tributaries will likely see rises in the next week due to this week's storm system.**
  
- **There is considerable uncertainty to how this storm will impact the Mississippi River, however confidence is high that there will be either additional rises or a longer period of time with levels remaining high.**





# Information Sources

- Advanced Hydrologic Prediction Service (AHPS) (observations and forecasts, etc) — [water.weather.gov](http://water.weather.gov)
- Local Quad Cities WFO AHPS — [water.weather.gov/ahps2/index.php?wfo=DVN](http://water.weather.gov/ahps2/index.php?wfo=DVN)
- North Central River Forecast Center — [weather.gov/ncrfc](http://weather.gov/ncrfc)
- National Operational Hydrologic Remote Sensing Center (snow information) — [nohrsc.noaa.gov](http://nohrsc.noaa.gov)
- NWS Weather Prediction Center — [wpc.ncep.noaa.gov](http://wpc.ncep.noaa.gov)
- NWS Climate Prediction Center — [cpc.ncep.noaa.gov](http://cpc.ncep.noaa.gov)

**Quad Cities WFO Forecast Discussions (technical weather and hydrology discussion)**  
**[forecast.weather.gov/product.php?site=DVN&issuedby=DVN&product=AFD](http://forecast.weather.gov/product.php?site=DVN&issuedby=DVN&product=AFD)**

Find out more information at: [www.weather.gov/dvn/River\\_Levels](http://www.weather.gov/dvn/River_Levels)

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