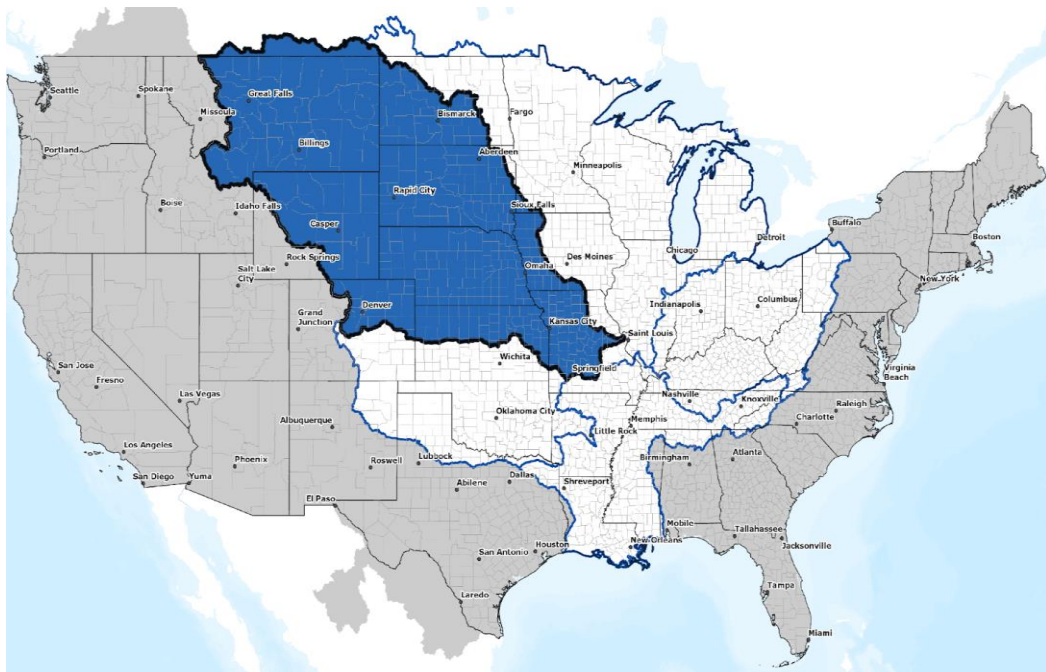




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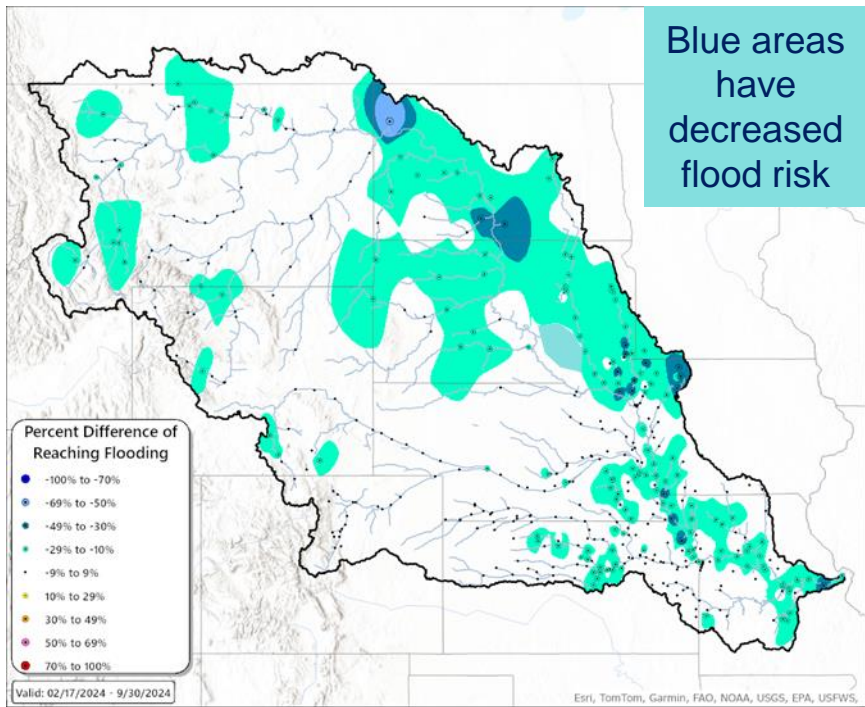
2024 Flood Potential Outlook Missouri River Basin



February 15, 2024

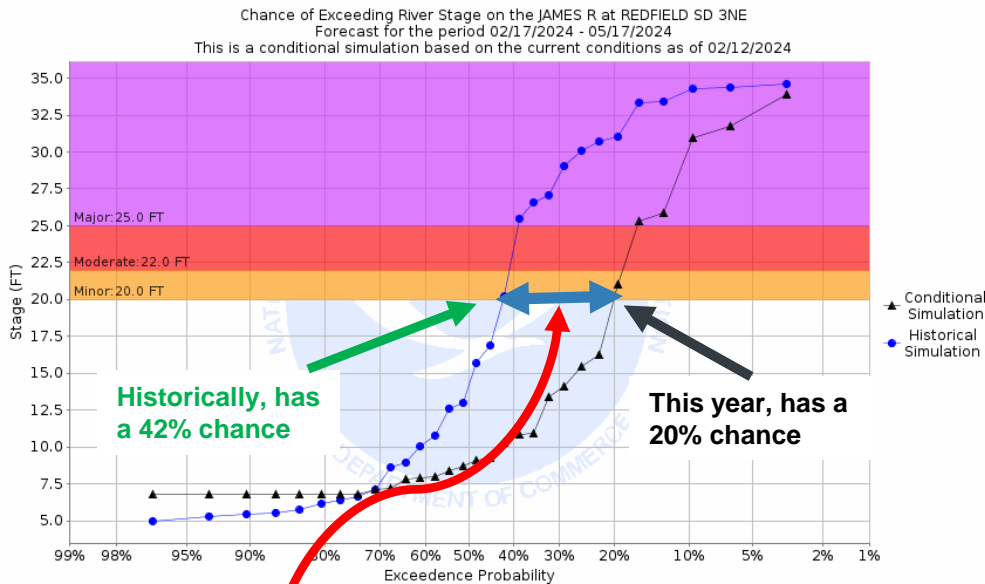
MISSOURI BASIN:

CHANCE OF REACHING FLOOD STAGE IN 2024 AS COMPARED TO HISTORICAL



Ensemble Streamflow Prediction (ESP)

Percent Difference of Reaching Minor Flooding versus Historical Average



22 percent decrease in chance to reach flood stage during next 3 months

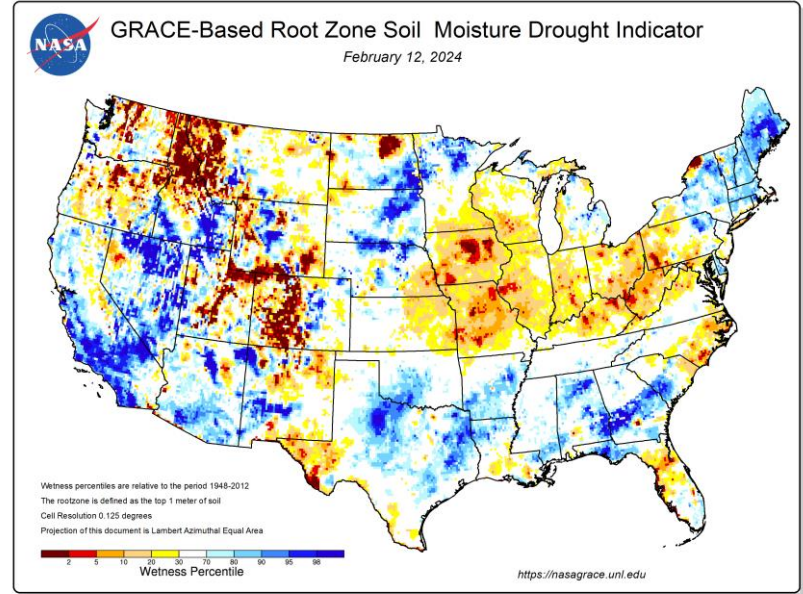
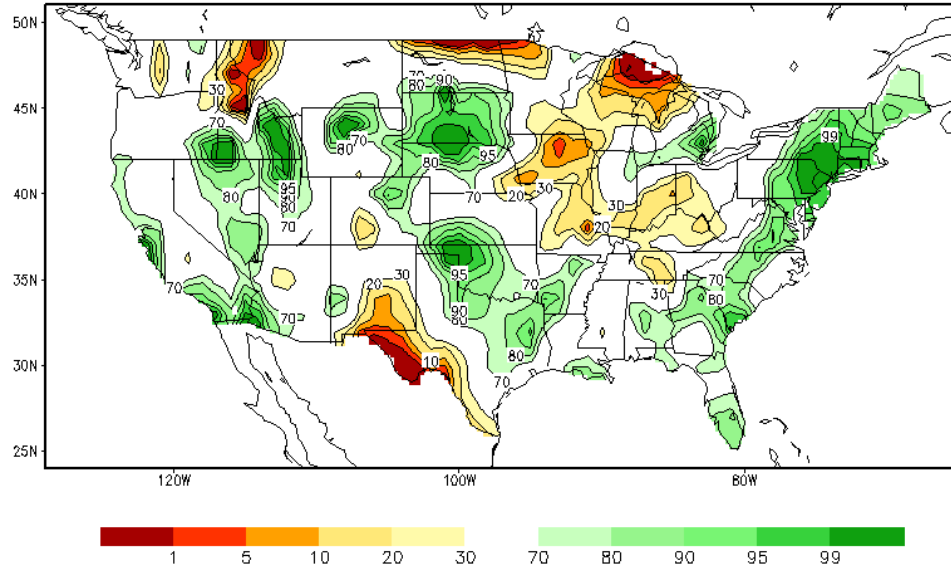


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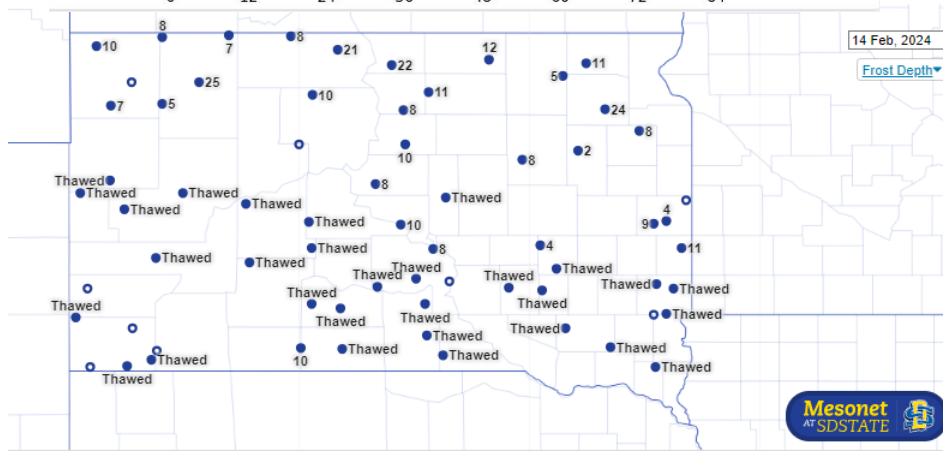
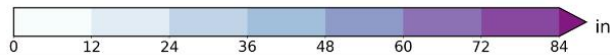
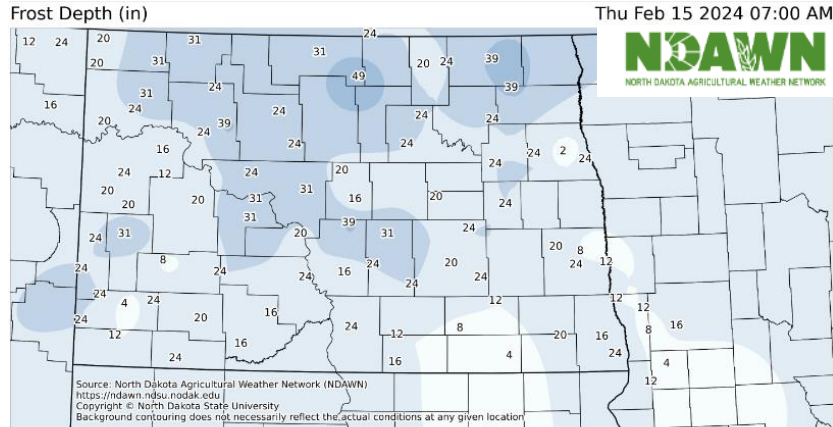
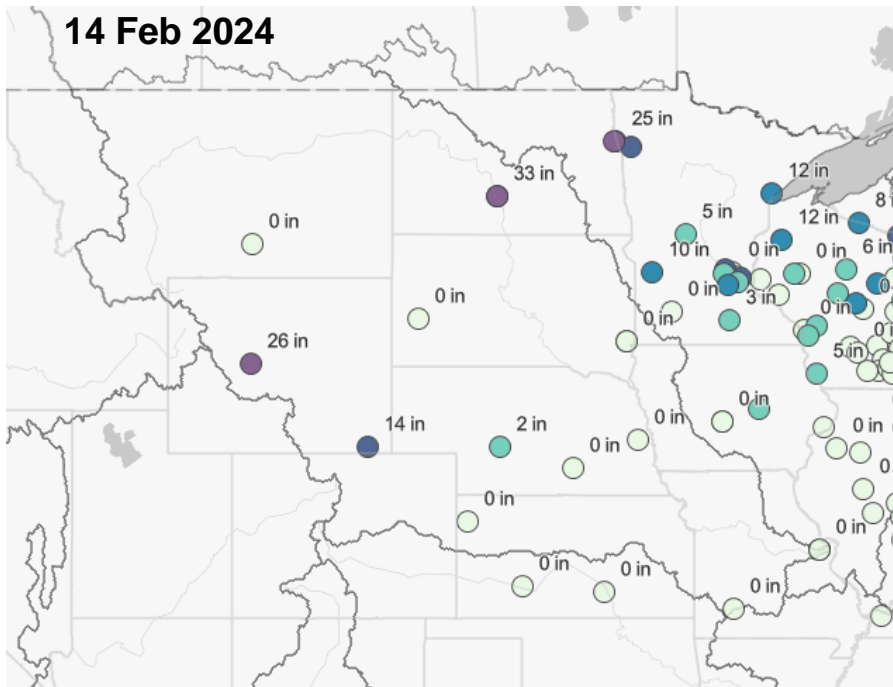
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MISSOURI BASIN: SOIL MOISTURE CONDITIONS

Calculated Soil Moisture Ranking Percentile
FEB 14, 2024

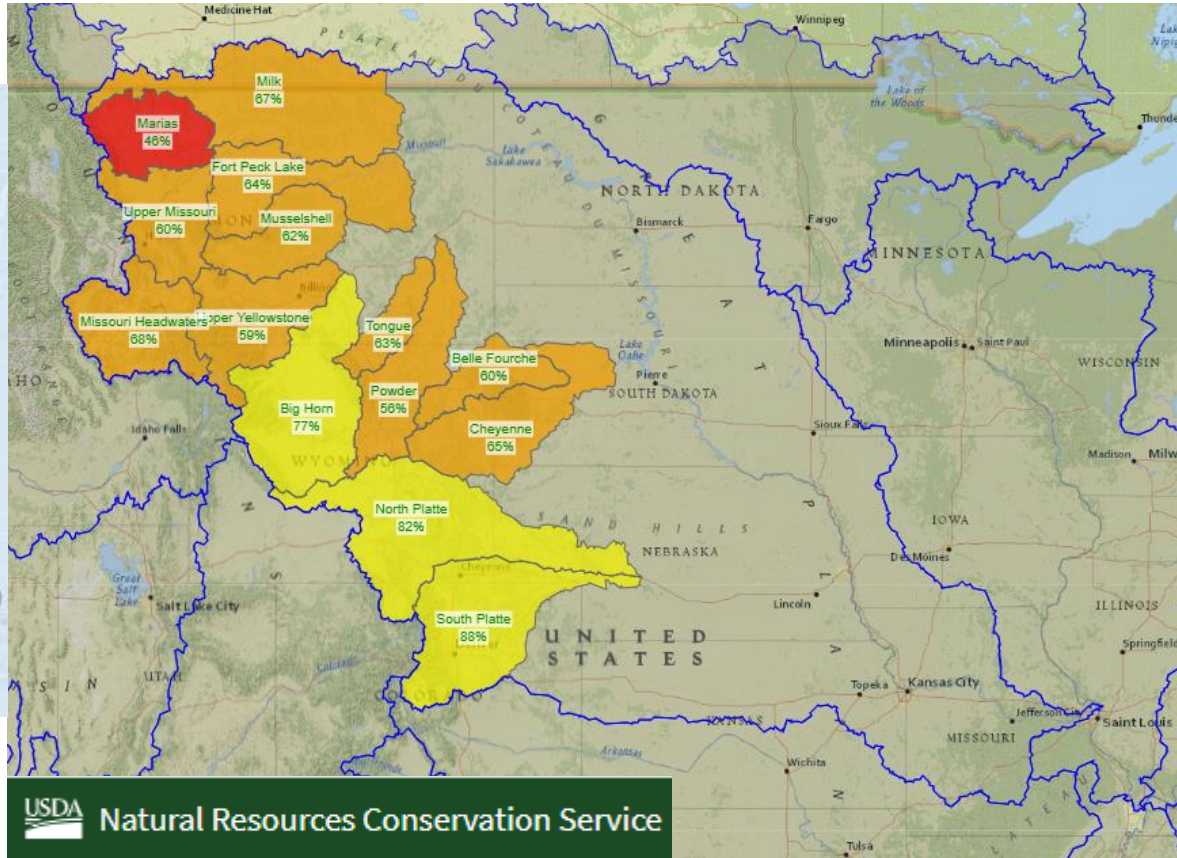


MISSOURI BASIN: FROST DEPTHS



MISSOURI BASIN:

Mountain Snowpack As of 14 February 2024

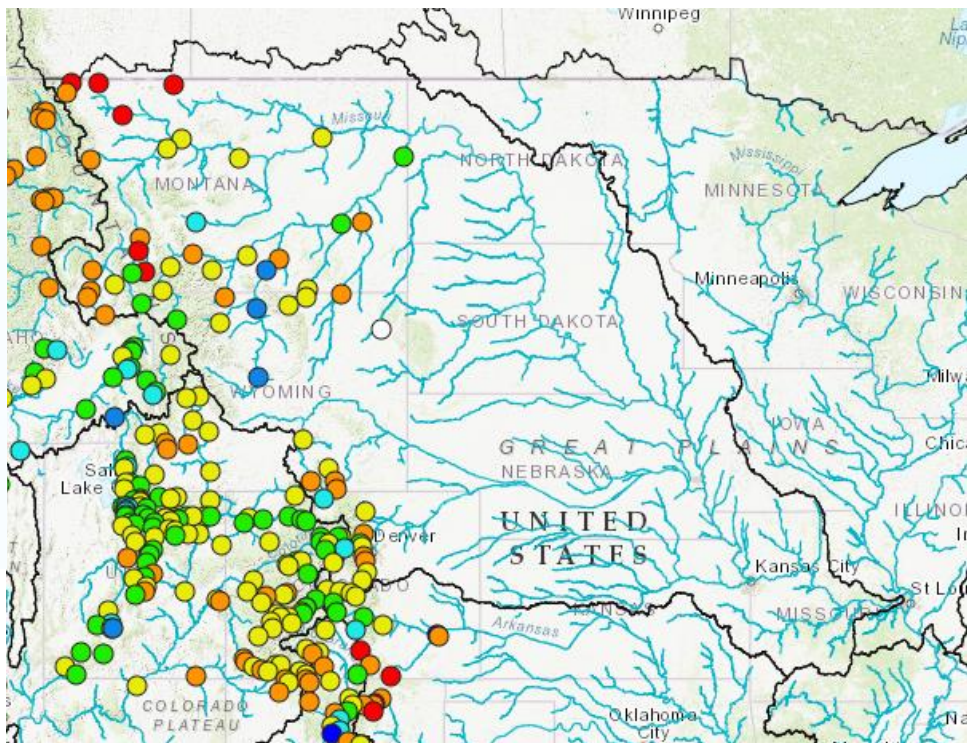
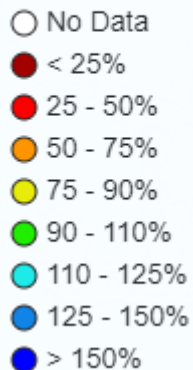


Mountain snowpack running well below average....

MISSOURI BASIN:

Mountain Runoff Volume April-September Percent of Normal

Percent Normal



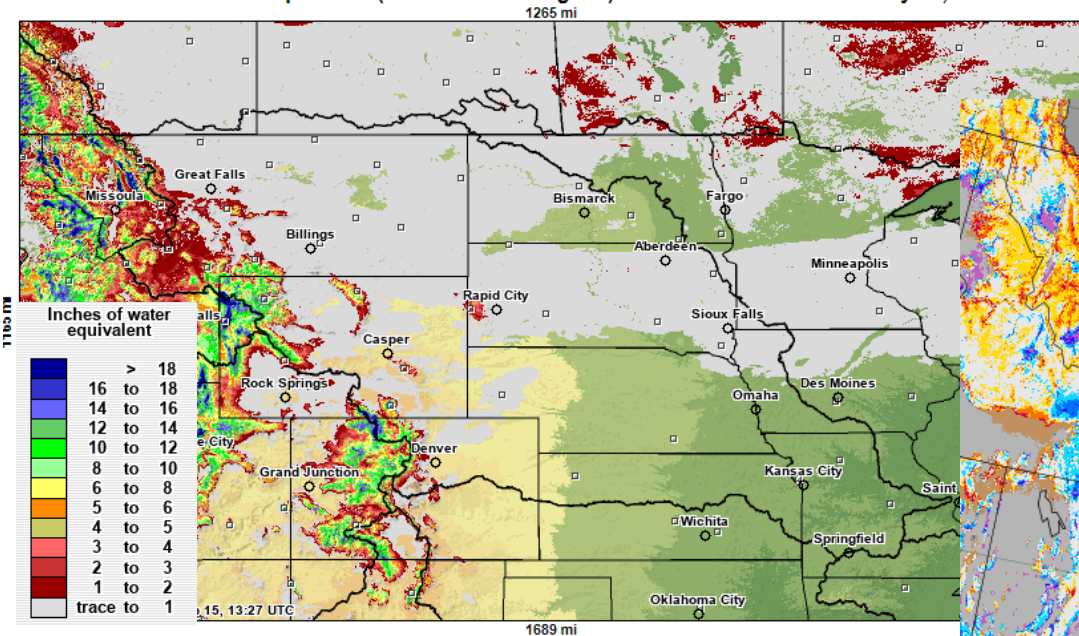
Mountain runoff volume projected to be below normal (per 01 Feb 2024 Outlook)

- Upper Missouri above Ft. Peck: 59%
- Yellowstone: 89%
- North Platte: 95%
- South Platte: 82%

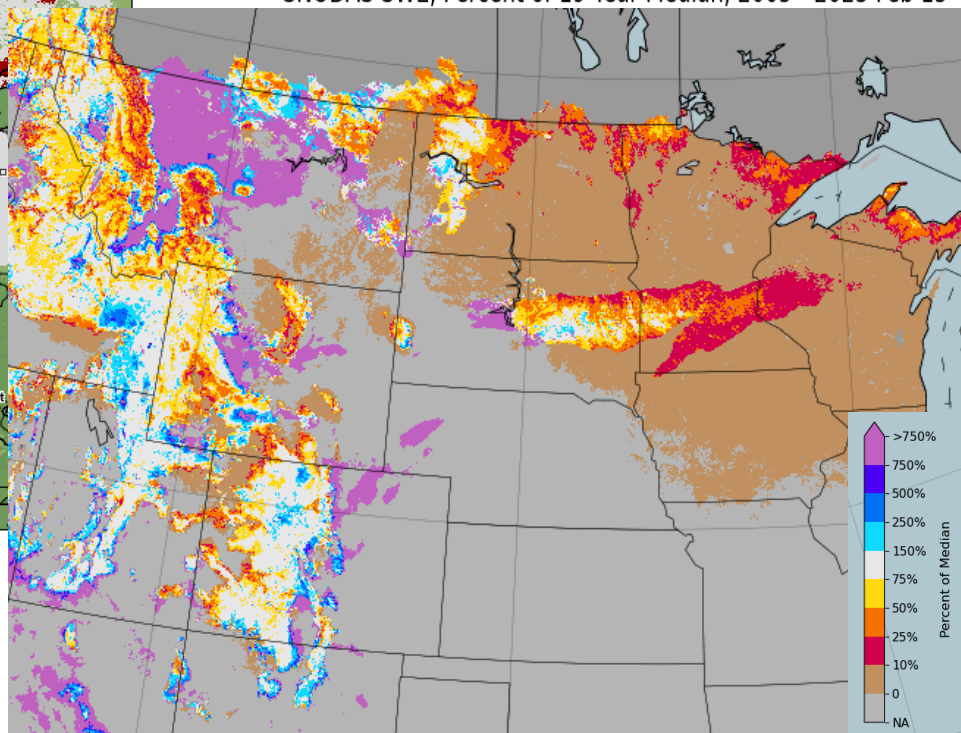
MISSOURI BASIN:

Plains Snowpack as of 16 February 2024

Modeled Snow Water Equivalent (Shallow-snow Legend) forecasted for 2024 February 15, 15:00 UTC



SNODAS SWE, Percent of 19 Year Median, 2005 - 2023 Feb 15



Snow Water Equivalent (inches)

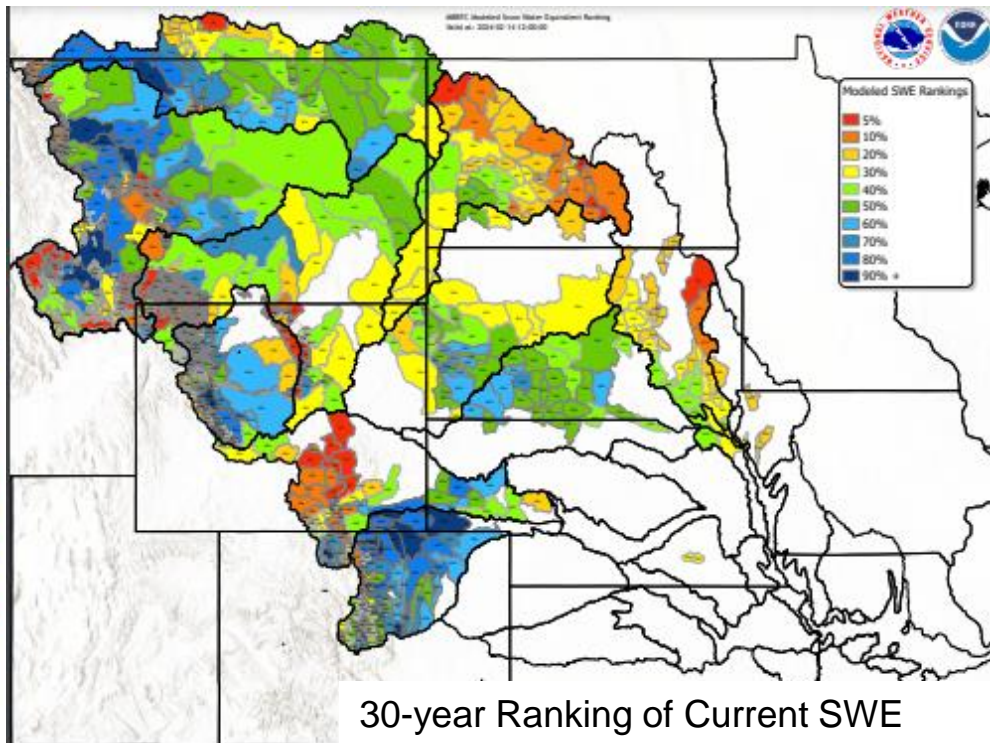
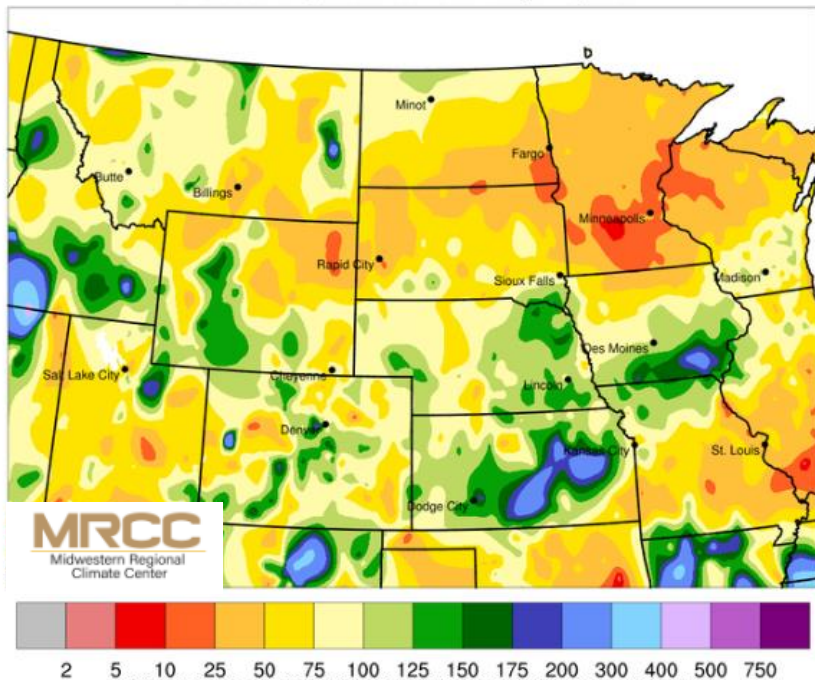


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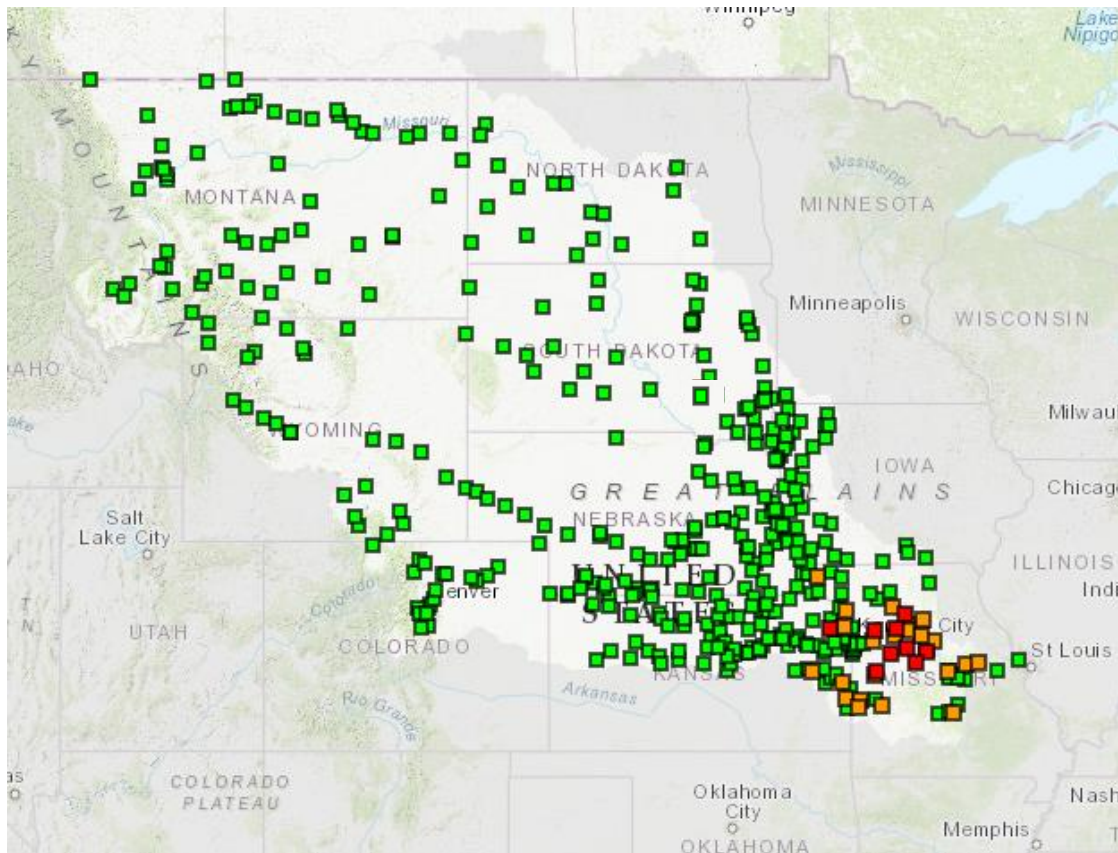
MISSOURI BASIN: Plains Snowpack Compared to “Normal”

Accumulated Snowfall (in): Percent of 1991-2020 Normals
October 01, 2023 to February 15, 2024



MISSOURI BASIN:

Locations Expected to Flood This Spring



United States	▼
NWS Weather Forecast Offices	▼
Missouri Basin River Forecast Center	▼
Water Resources Regions	▼

428 total gauges

Show locations with 50% or greater chance of flooding during Feb-Mar-Apr (34)

- 0 Gauges: > 50% Major Long-Range Flood Risk
- 9 Gauges: > 50% Moderate Long-Range Flood Risk
- 25 Gauges: > 50% Minor Long-Range Flood Risk
- 394 Gauges: < 50% Long-Range Flood Risk
- 0 Gauges: No forecast within selected timeframe

[Show all locations](#)

Last map update:
02/15/2024 at 11:27:59 am EST
02/15/2024 at 16:27:59 UTC

[What is UTC time?](#)

[Map Help](#)

[Product Description](#)

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MISSOURI BASIN:

Flood Potential Outlook: Summary Points

- **Overall, spring flood risk is normal to lower-than-normal.**
- Mountain snowpack is below to well-below normal this year. We still have roughly 30% of snow accumulating period remaining.
- Plains snowpack widespread, but very shallow.
- Soils thawed south of extreme northern South Dakota. Frozen soils may enhance flood risk across North Dakota and Montana.
- Ice is rotting in place, or has already moved out of much of the plains. Ice jam break-up flooding risk is low. **Where river ice remains, risk for ice jamming remains.**
- **Flood Potential mountains:** No flooding currently expected.
- **Flood Potential northern plains:** No flooding currently expected.
- **Flood Potential lower basin:** Episodic minor-to-moderate level flooding likely in the lower portion of the basin (southeastern NE, eastern KS, southern IA, MO) due to Spring-time thunderstorm activity.
- **Flood Potential Missouri River mainstem:** Minor flooding likely downstream of KC, again due to thunderstorm activity.

