MAC-T Monthly Call

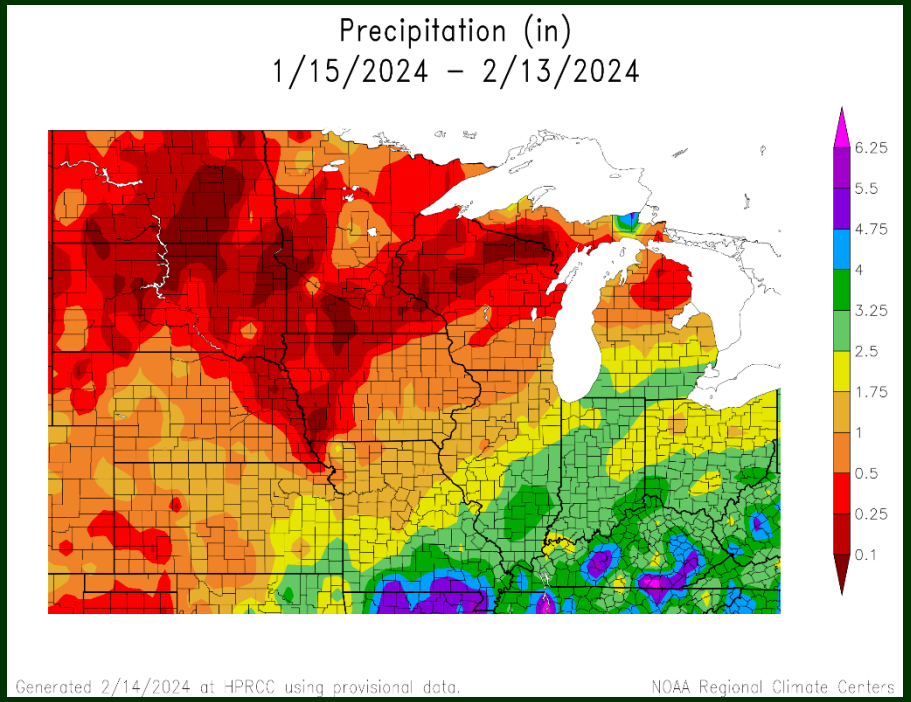
Midwest Agriculture & Climate Team

15 February 2024

For more information:

Dennis.todey@usda.gov

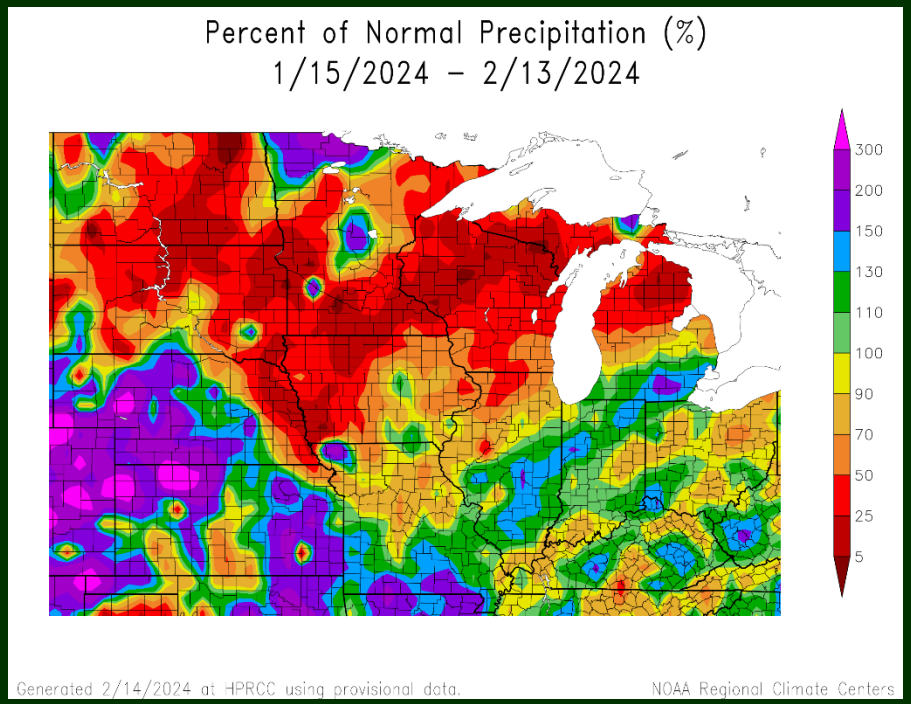
USDA Midwest Climate Hub
U.S. DEPARTMENT OF AGRICULTURE

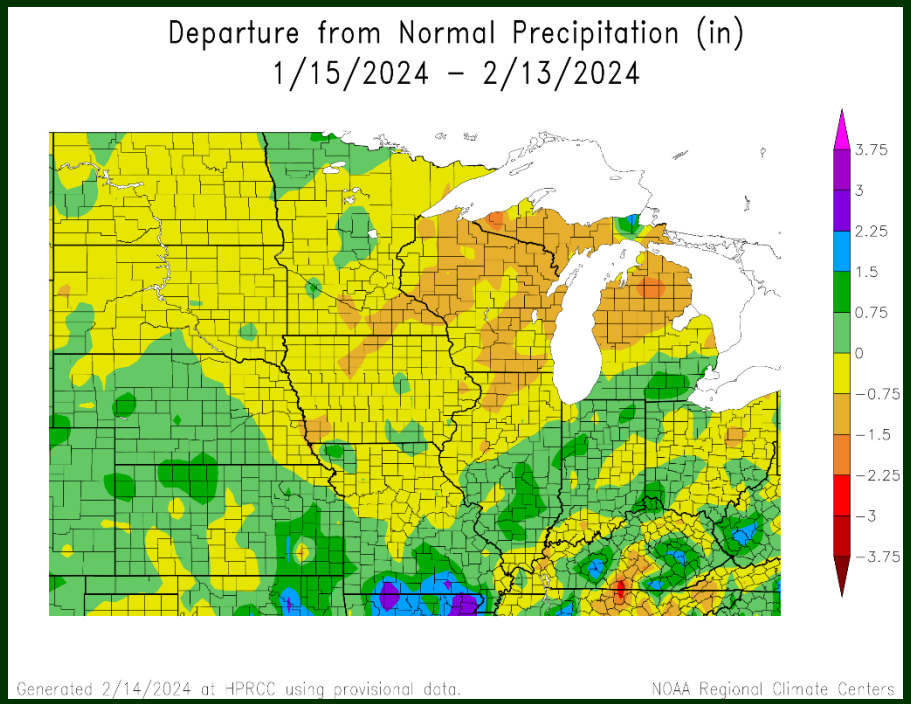


Monthly Precip

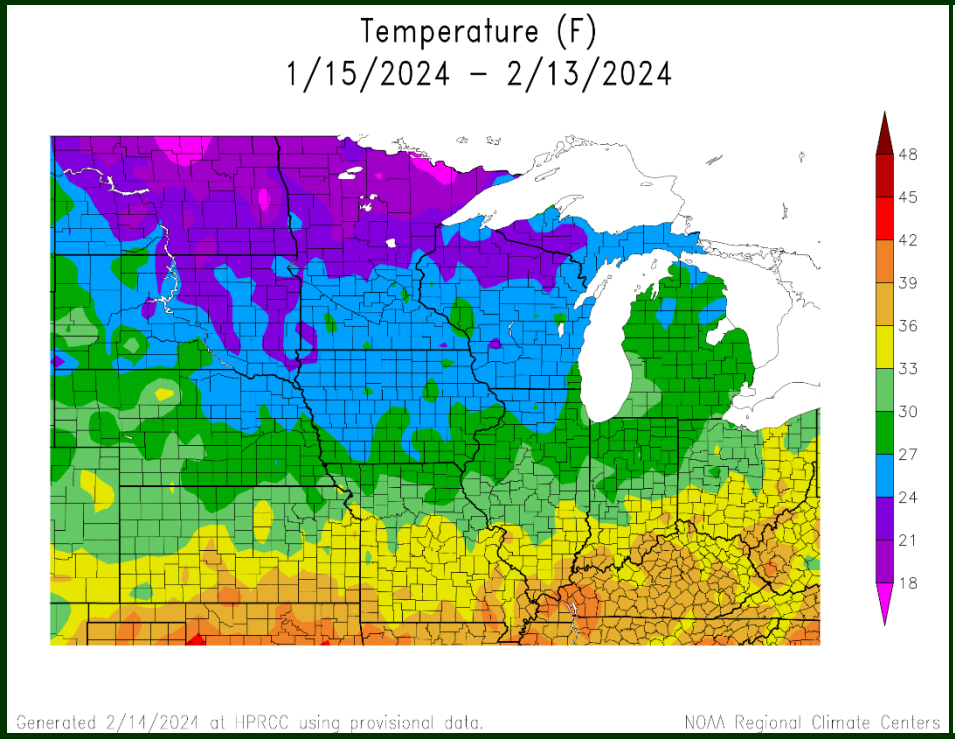
- Highest precip totals in the S/SE, lowest in the N/NW.
  - In the N, totals were ≤50% of the monthly normal
  - In the S, totals were ≥100% of the monthly normal
- For most, 30-day totals were within +/-1” of the monthly normal.

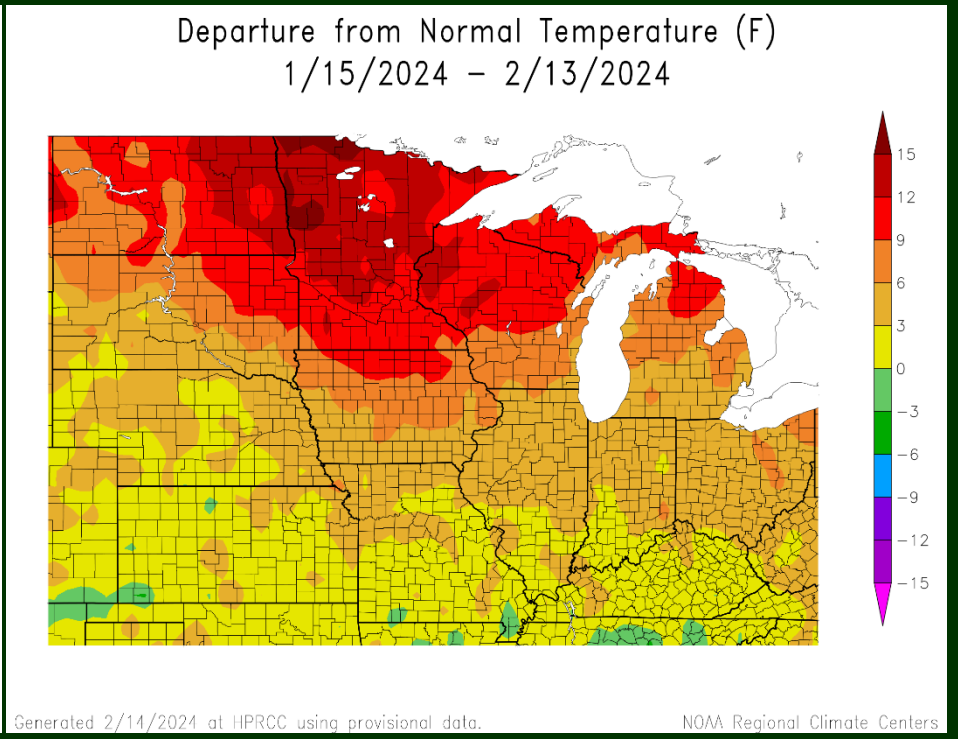
https://hprcc.unl.edu/maps.php?map=ACISClimateMaps





Monthly Temps

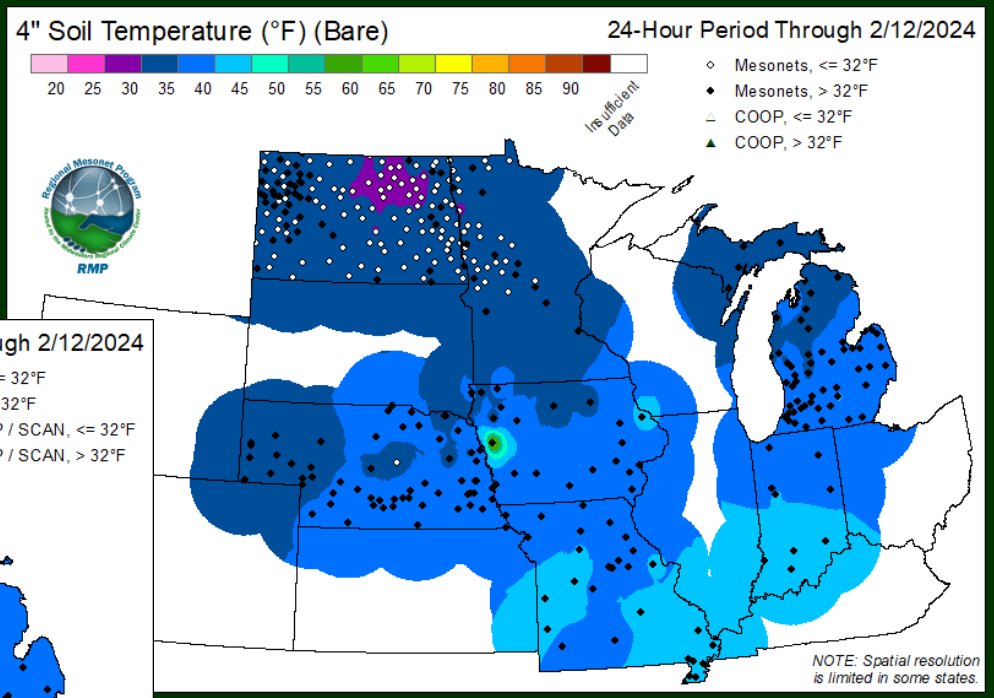


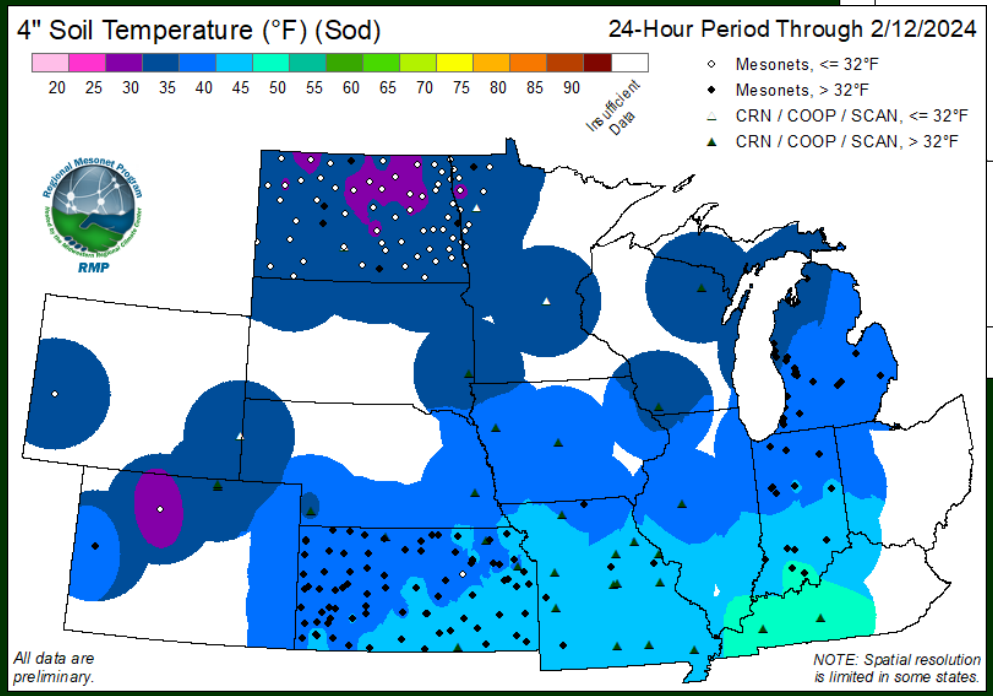


- Above average temps region-wide.
- Most above average in the north (9-15°F above normal)
- Temps near to normal further to the south.

https://hprcc.unl.edu/maps.php?map=ACISClimateMaps

Soil Temps

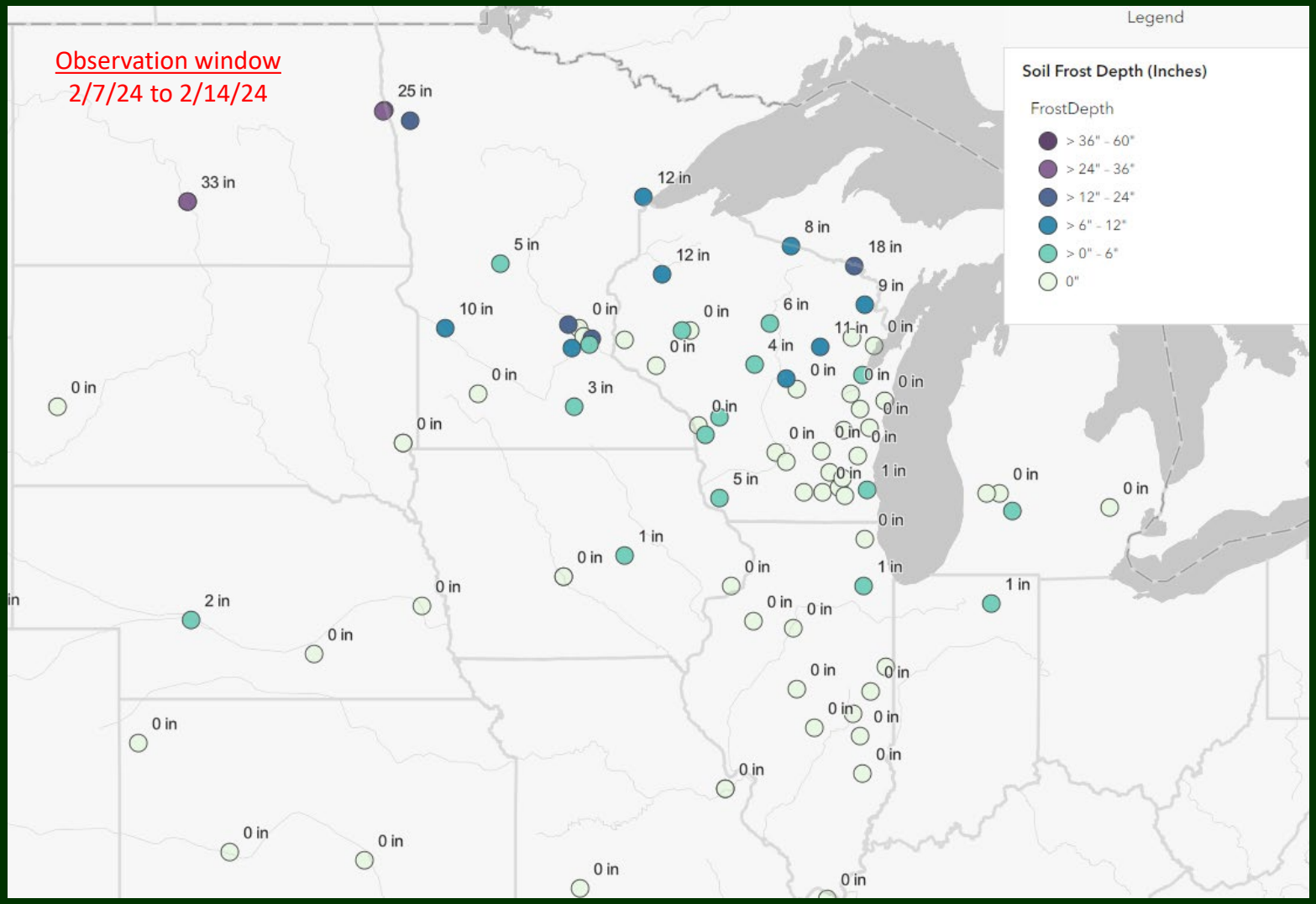




- Range from 40-45°F in the S to 30-35°F in the N

https://mrcc.purdue.edu/RMP/currentMaps#banner

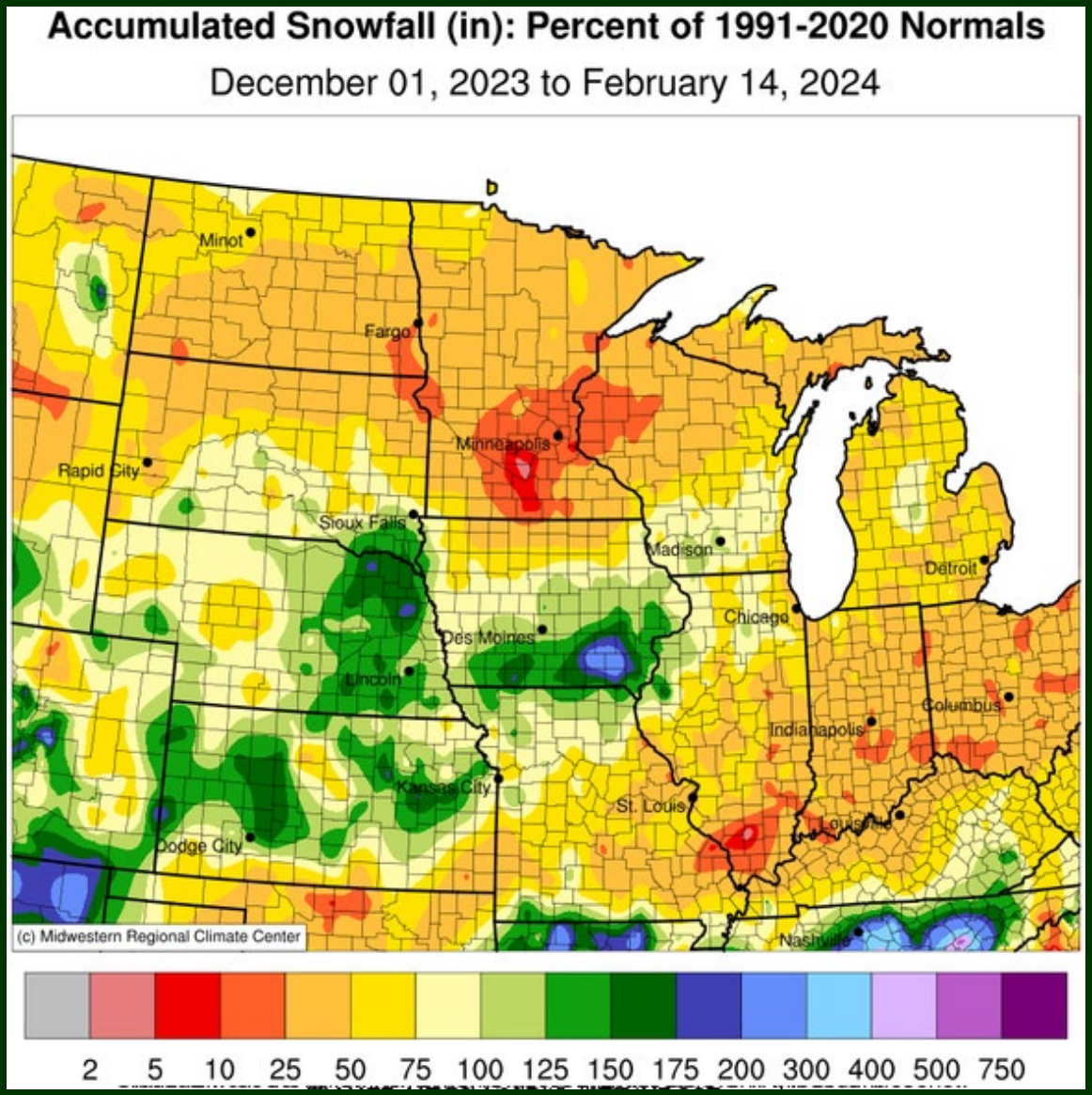
Frost Depth



Frost depths are shallow for this time of year.

https://www.weather.gov/ncrfc/LMI_FrostDepthMap

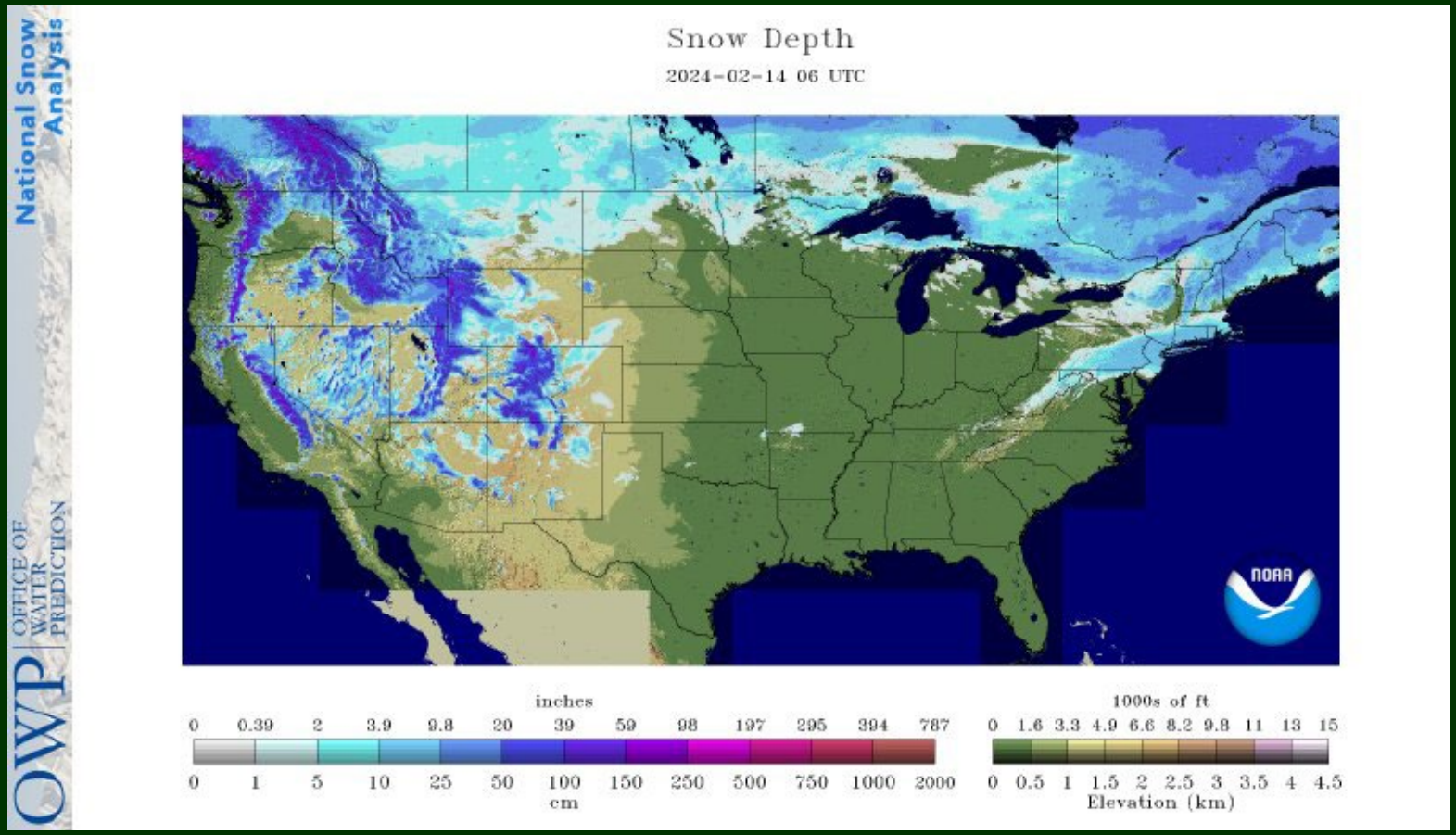
Snowfall



- Most locations in the north central region are experiencing below-average snow fall this winter.
  - Some areas of ≤25% of normal.
  - At or near-record lows in MN, northern WI, IN, OH
- Above average in southern IA, eastern NE, portions of KS.

https://mrcc.purdue.edu/CLIMATE

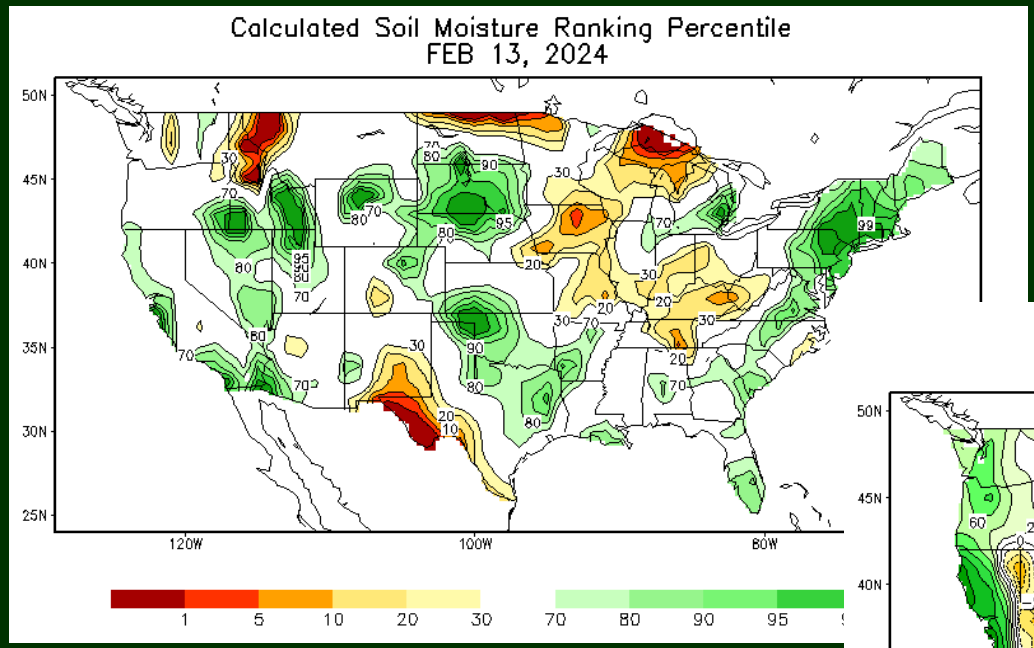
Snow Depth

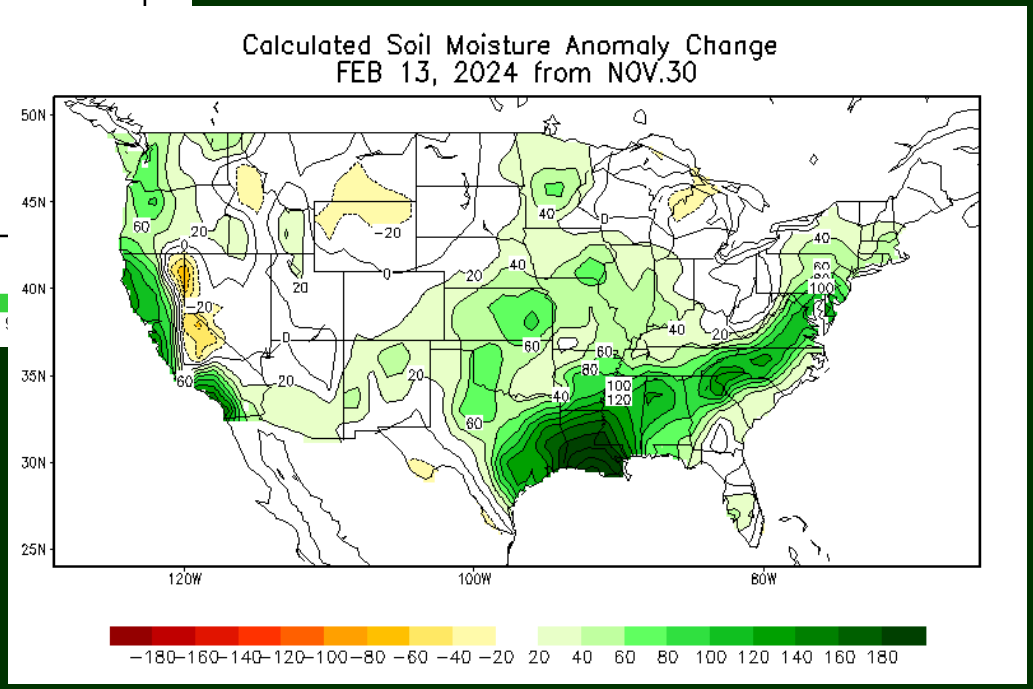


- Only snow cover in the region is around Lake Superior, northwestern MN, and ND.

https://www.nohrsc.noaa.gov/nsa/

Soil Moisture

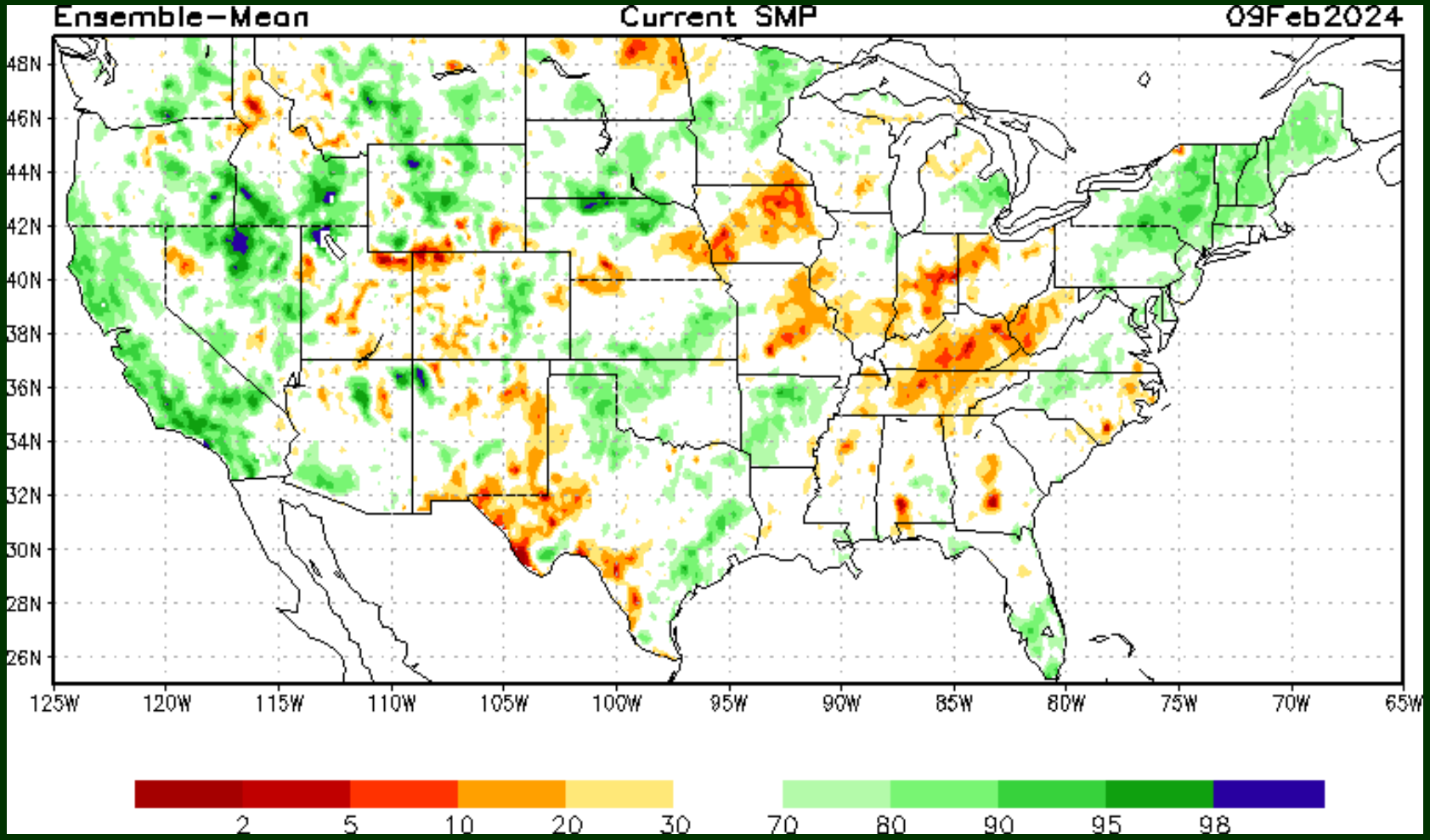




- Conditions remain dry in most of the Corn Belt.
- Some improvement in soil moisture since late fall.

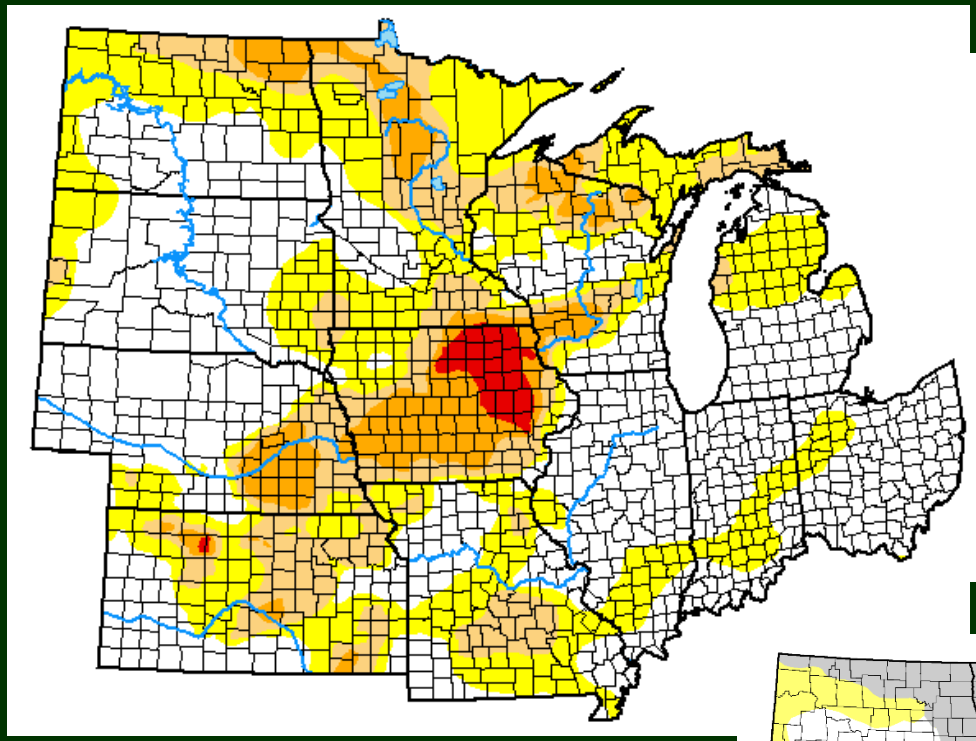
https://www.cpc.ncep.noaa.gov/products/Soilmst_Monitoring/US/Soilmst/Soilmst.shtml#

Soil Moisture



https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml

US Drought Monitor



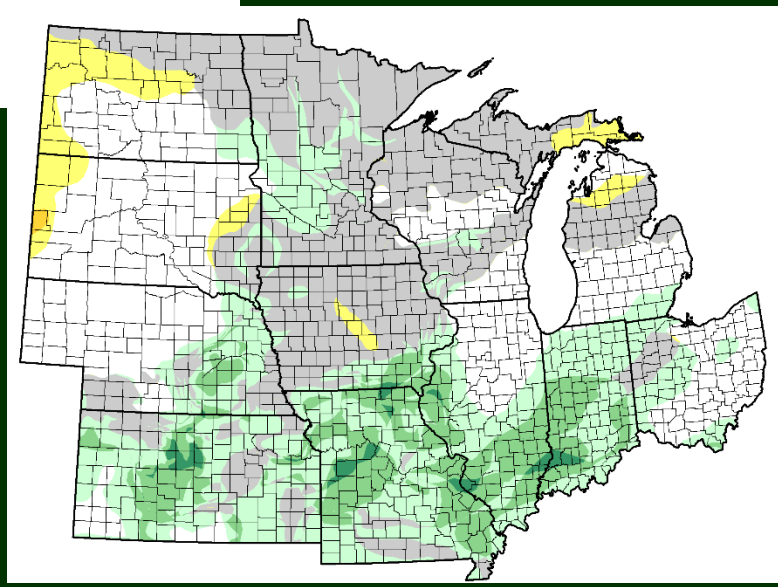
February 6, 2024
(Released Thursday, Feb. 8, 2024)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	48.13	29.08	13.84	7.52	1.43	0.00
Last Week 01-30-2024	47.81	28.57	14.37	7.80	1.45	0.00
3 Months Ago 11-07-2023	43.93	24.30	16.01	11.97	3.32	0.47
Start of Calendar Year 01-02-2024	37.52	23.94	21.63	13.15	3.75	0.02
Start of Water Year 09-26-2023	25.87	24.15	24.82	17.49	6.94	0.73
One Year Ago 02-07-2023	36.16	19.85	22.45	10.10	6.38	5.07

Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought

- Drought remains an issue, with areas of D2 & D3 drought remaining in IA and other localized areas.
- Largest improvements correlate with higher precipitation totals.



5 Class Degradation
4 Class Degradation
3 Class Degradation
2 Class Degradation
1 Class Degradation
No Change
1 Class Improvement
2 Class Improvement
3 Class Improvement
4 Class Improvement
5 Class Improvement

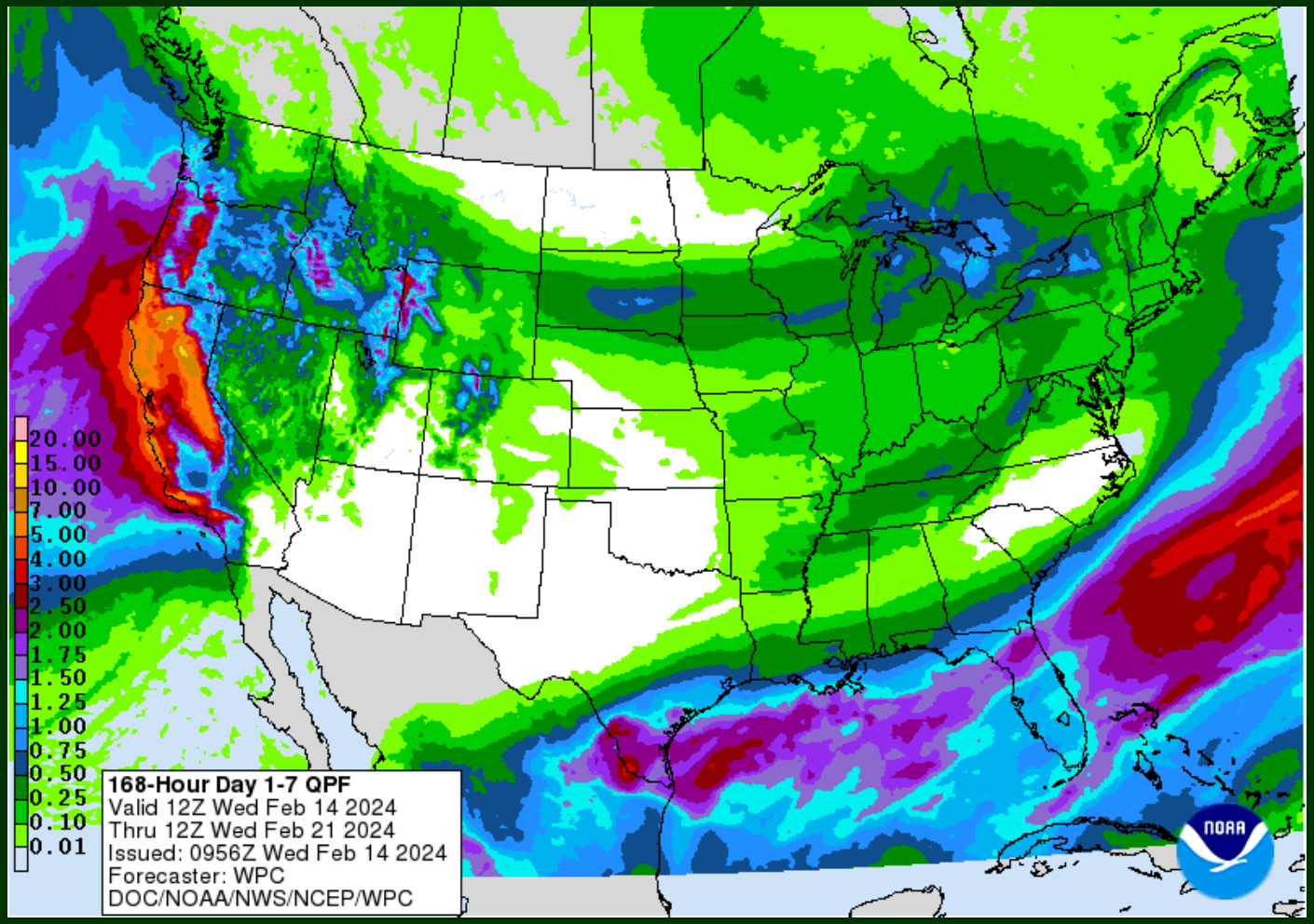
2/6/24 compared to 12/12/23

https://agindrought.unl.edu/Other.aspx

Assorted Ag Issues

- Soils remain dry through much of the region.
- Some soil moisture recovery in the S/E Corn Belt from higher precip totals.
- May have been some fruit tree/vine injury from extreme cold in January.

1-7 Day Precip

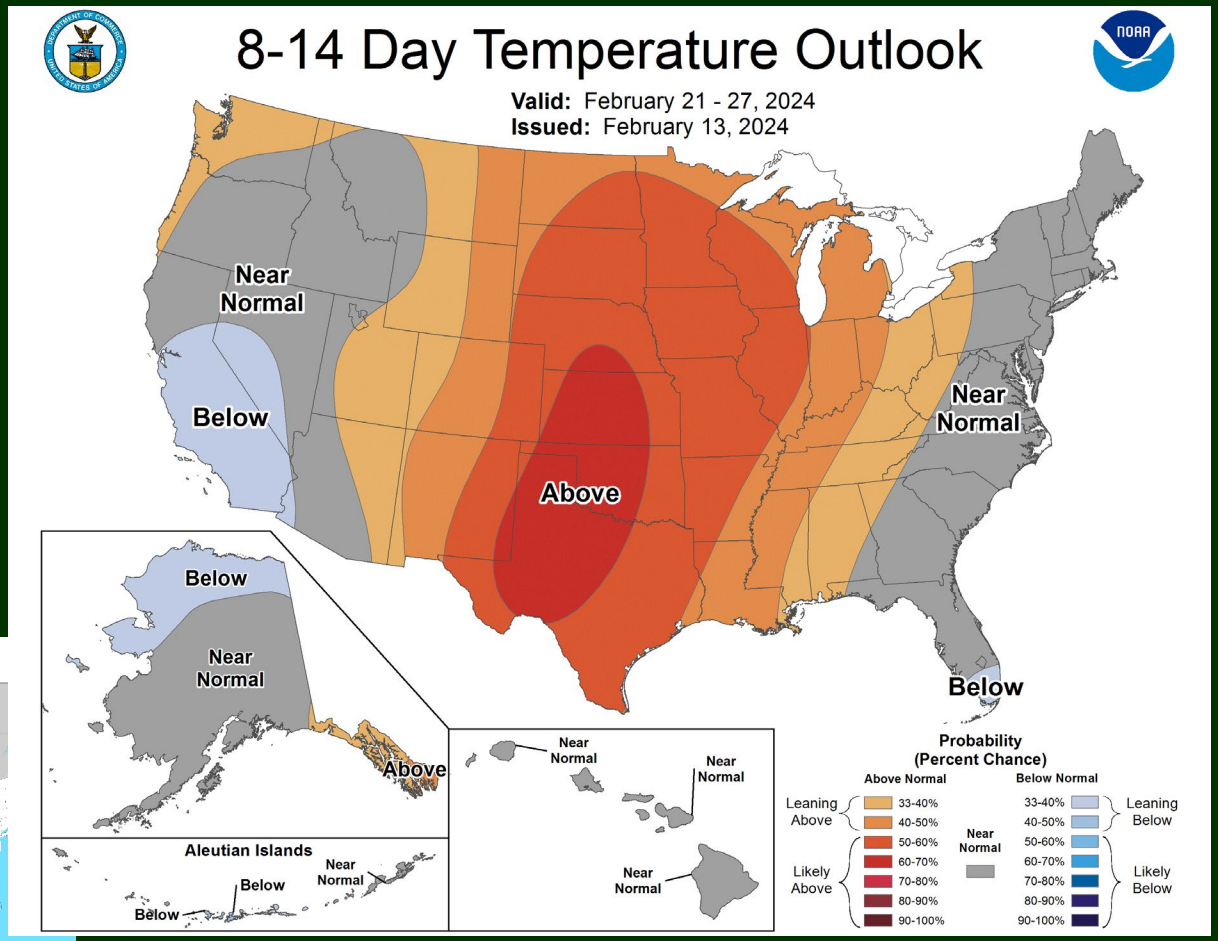


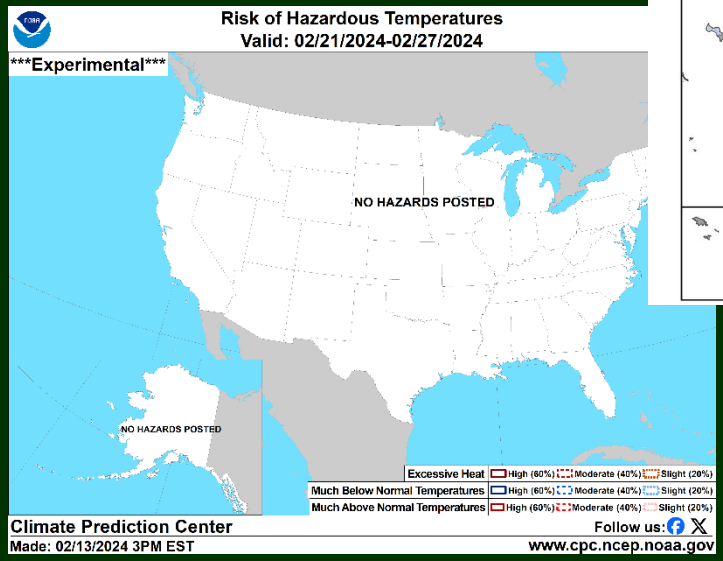
- Precip forecasted for most but expect totals to be relatively low.
- Expect some of this precip to fall as snow.

http://www.wpc.ncep.noaa.gov/qpf/day1-7.shtml

Temperature Outlook

- Temperatures still likely above average across the entire region.
- No risk of hazardous temperatures.

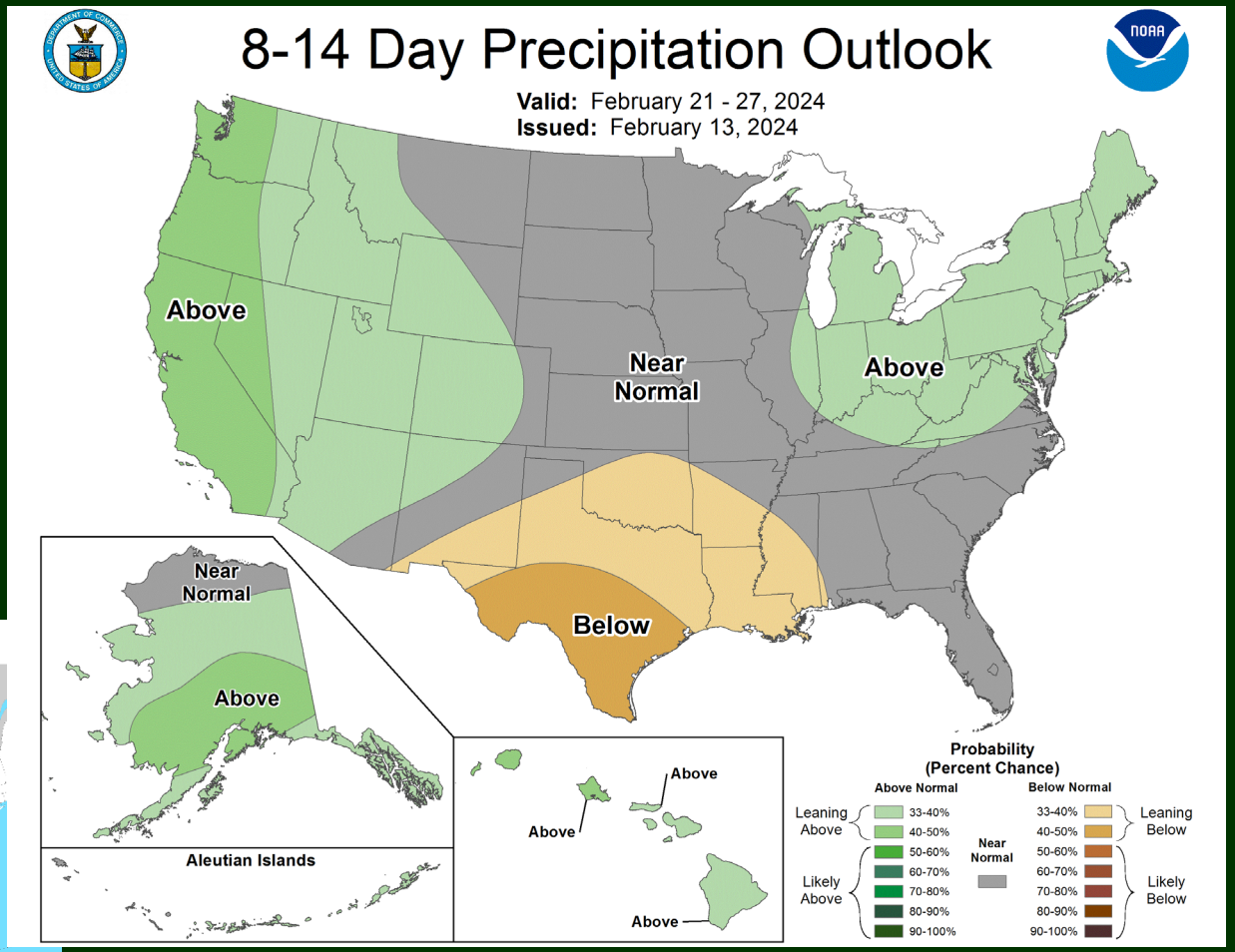


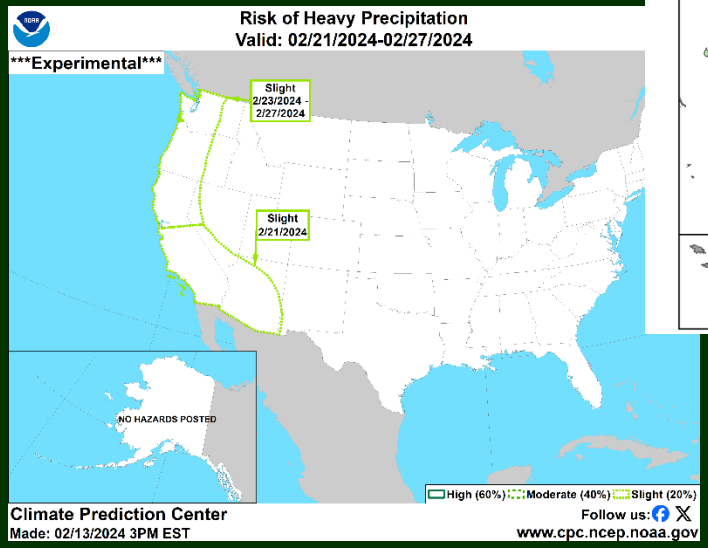


http://www.cpc.ncep.noaa.gov/

Precipitation Outlook

- Near normal precipitation for most of the region.
- Leaning above normal further to the east.
- No risk of heavy precipitation.





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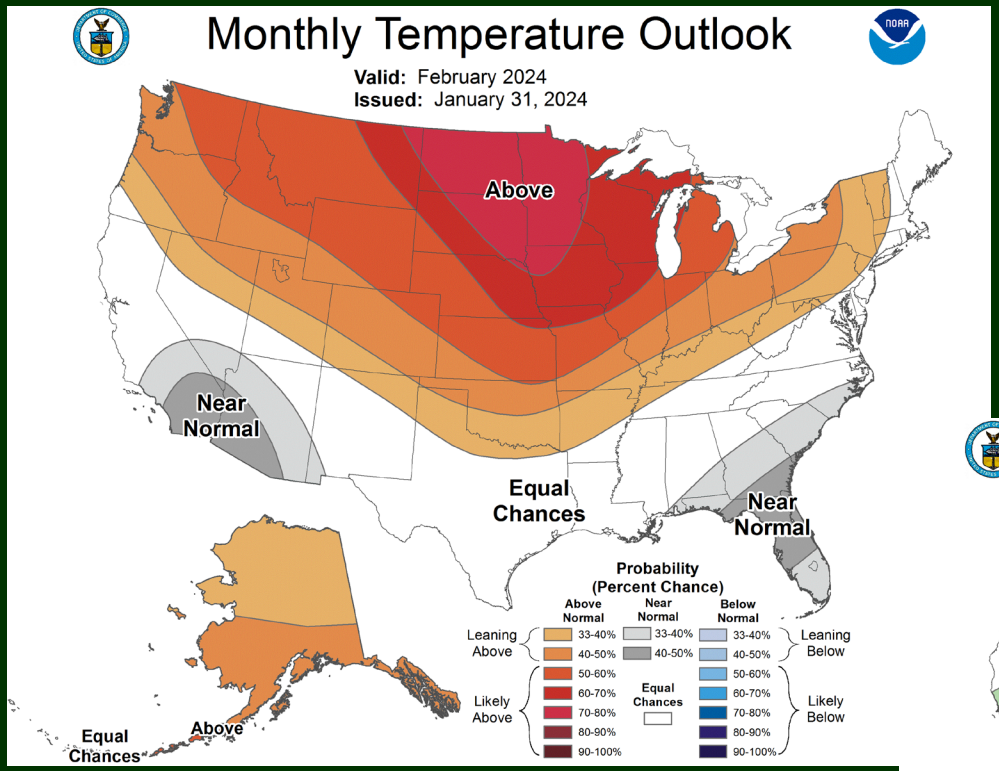
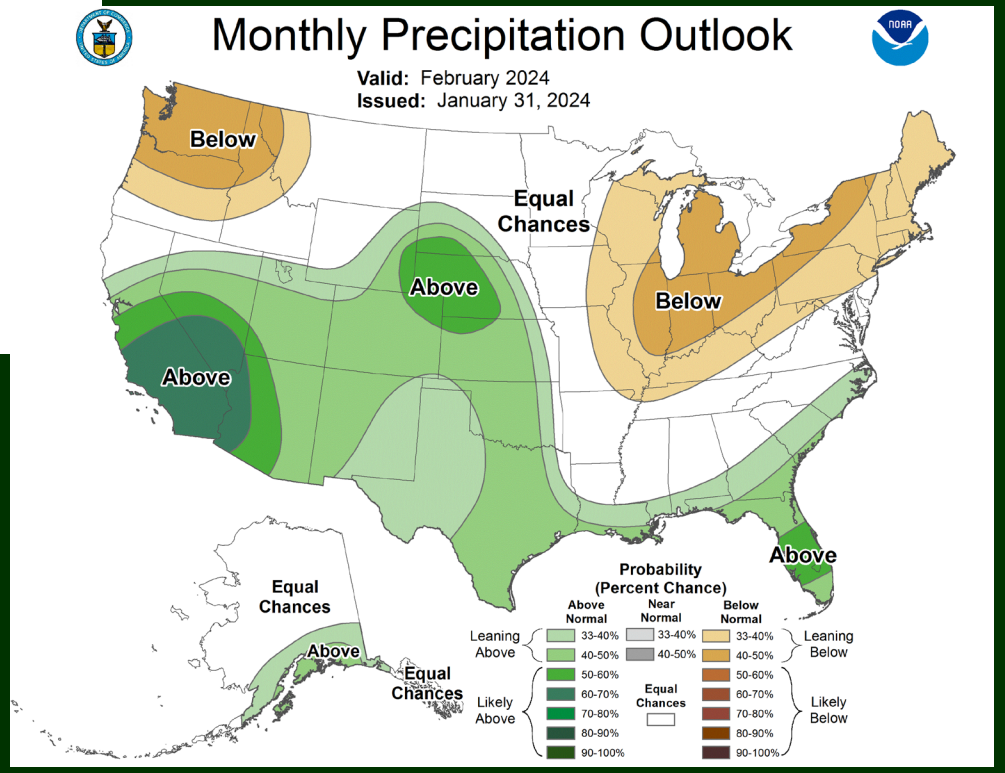
1-Month Outlook

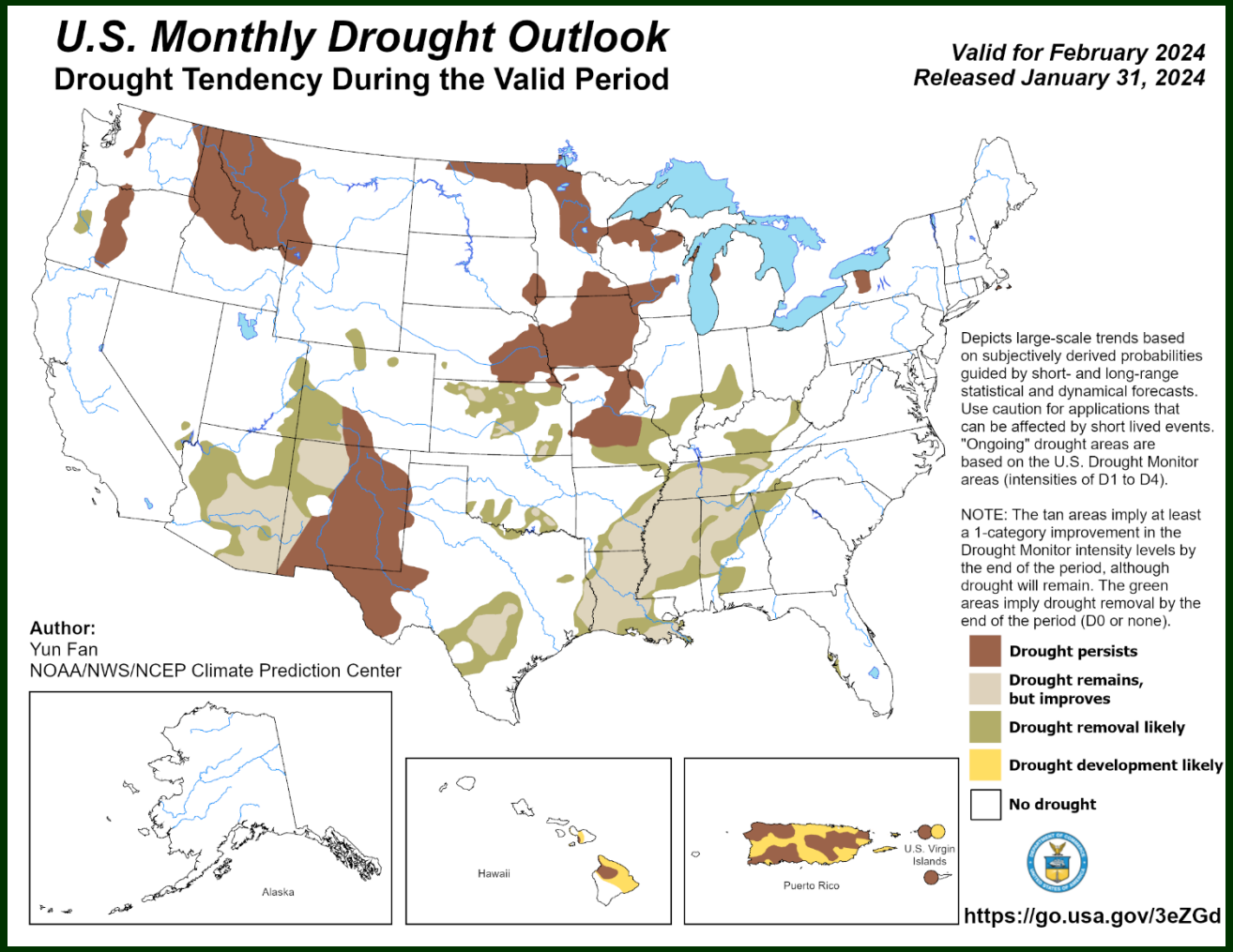


- Likely warmer across the entire area, especially in the northern portion of the region.
- Leaning above normal precipitation in the west. Equal chances across the center of the region. Leaning drier in the Ohio Valley and Great Lakes.



http://www.cpc.ncep.noaa.gov/

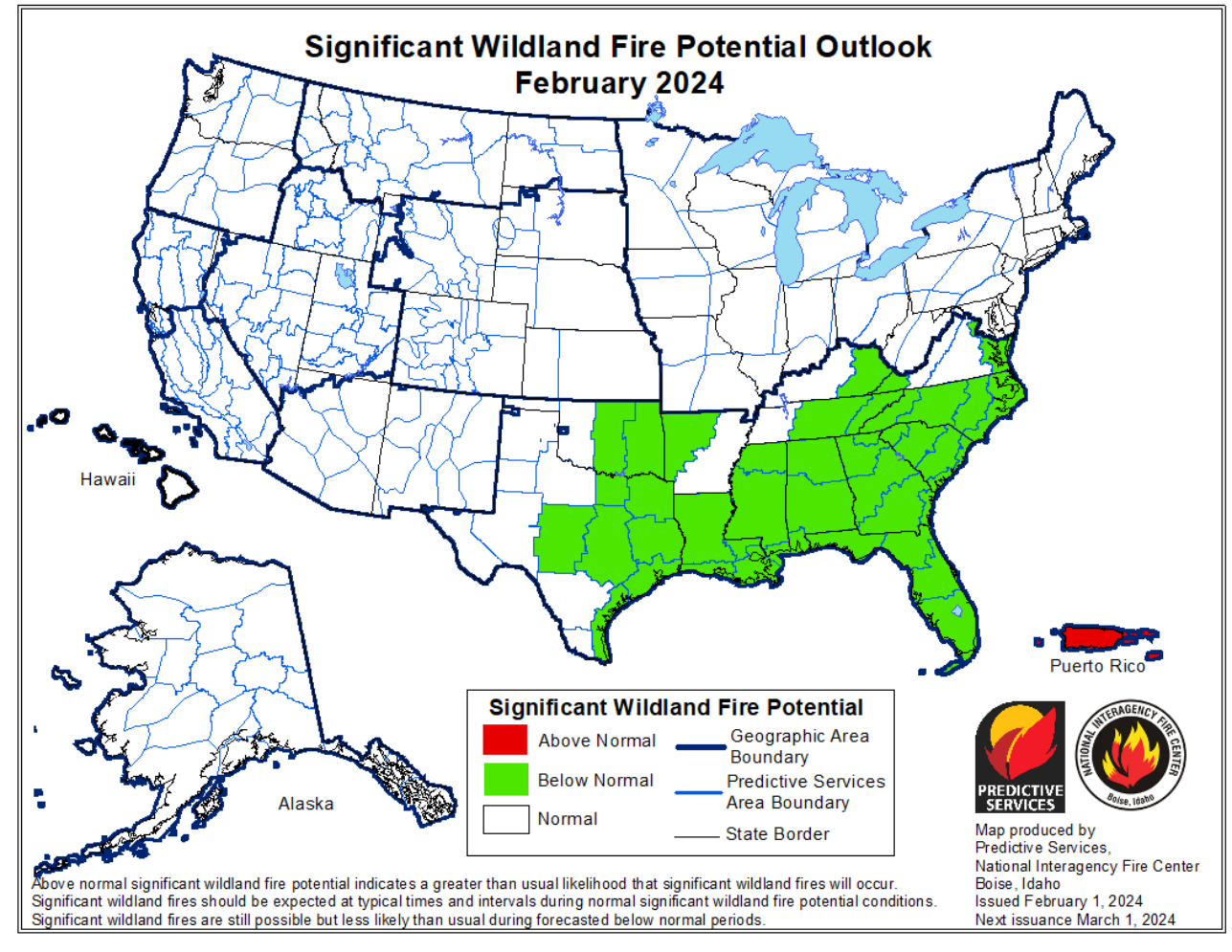
Drought in the Midwest/Plains



- Drought persistence likely across much of region.
- Drought removal is likely in southern MO/IL/IN and KS.
- Precipitation climatology is lower for this time of year; less chance for replenishing soils.

https://www.cpc.ncep.noaa.gov/products/expert_assessment/month_drought.png

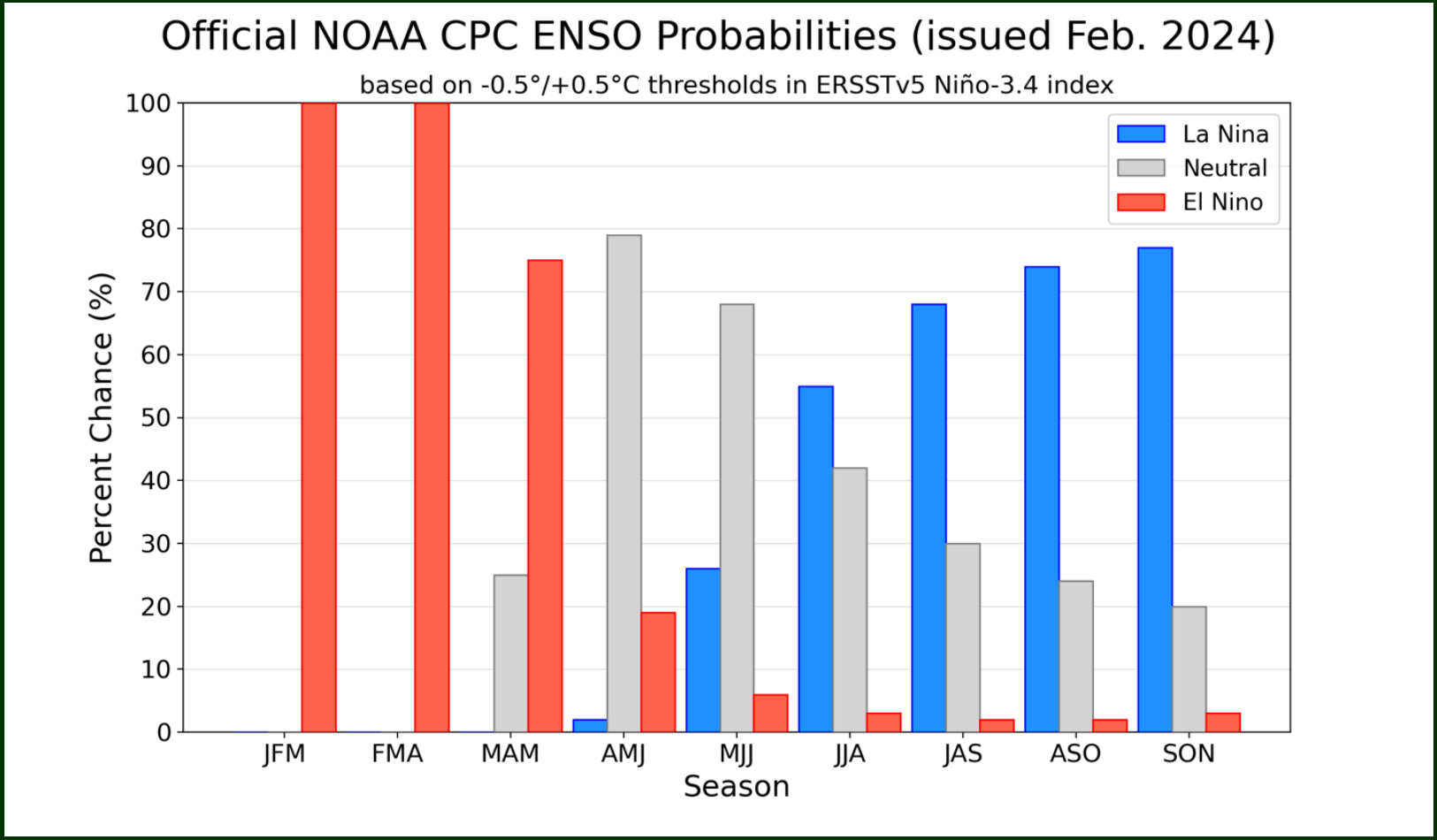
Fire in the Midwest/Plains



- Fire risk is considered “normal” for the month of February according to NIFC.

https://www.nifc.gov/nicc-files/predictive/outlooks/month1_outlook.png

La Niña Watch



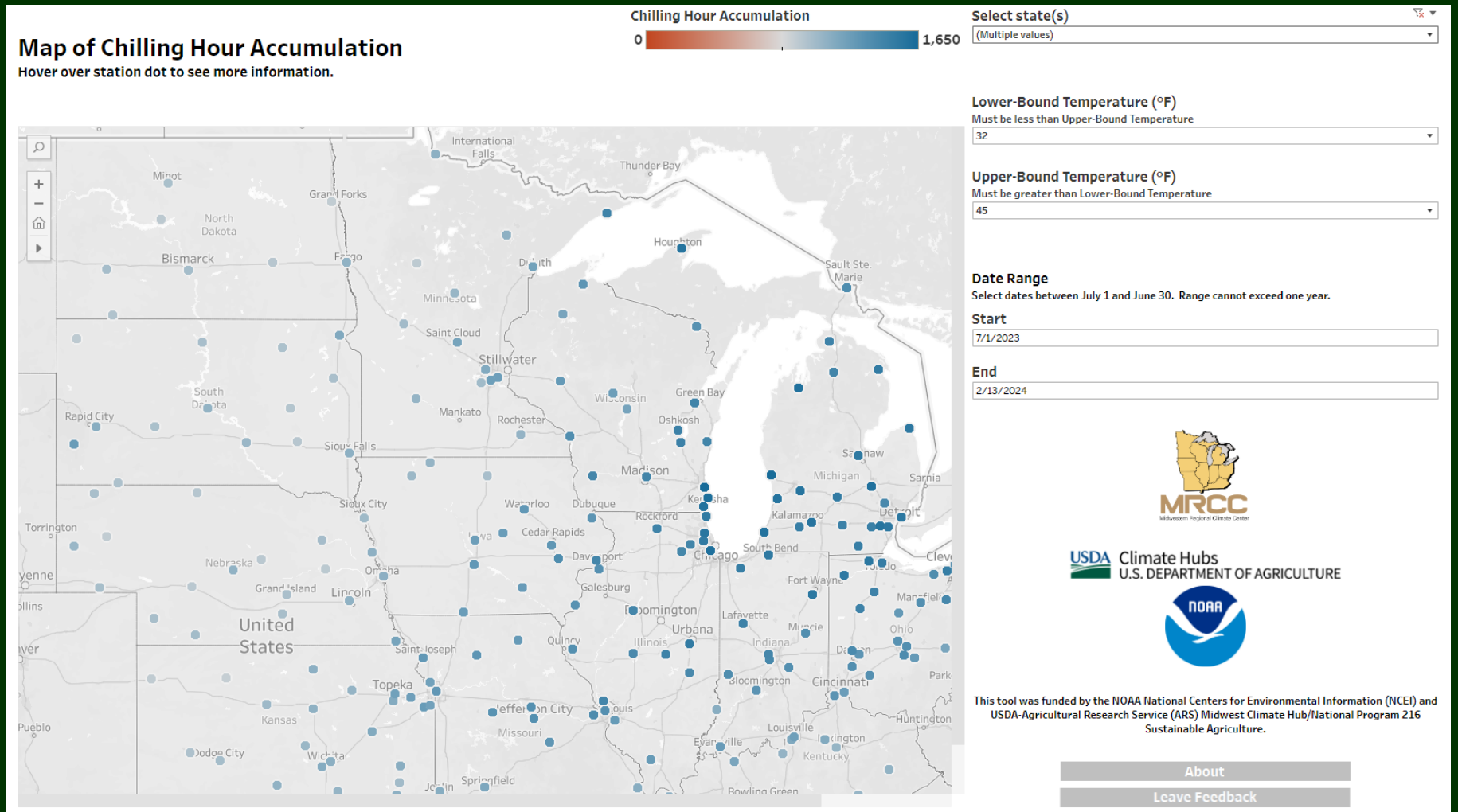
- A rapid transition from El Niño to La Niña → see "Summary" for expected impacts

https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.shtml

Summary

- Little to no improvement in drought conditions with low precipitation/snowfall totals over the last 30+ days.
  - The exception to this is southern IN through KS → drought has improved and may be removed by month's end.
- January was a warmer-than-average month region-wide, a trend that is expected to continue through February.
- The remainder of February looks to be drier to the east and normal to above normal to the west.
- Transition from El Niño to La Niña
  - This can sometimes be associated with drought, but not a consistent signal.
  - Recent research has pointed to warmer temperatures being more likely during the summer of these rapid transitions.

Chilling Hours Tool



Now available! → https://mrcc.purdue.edu/ChillingHours

Next MAC-T Monthly Call

Next Call

March 6th – Time TBD