

# Wisconsin Ag Climate Outlook

*Updated January 23, 2024*

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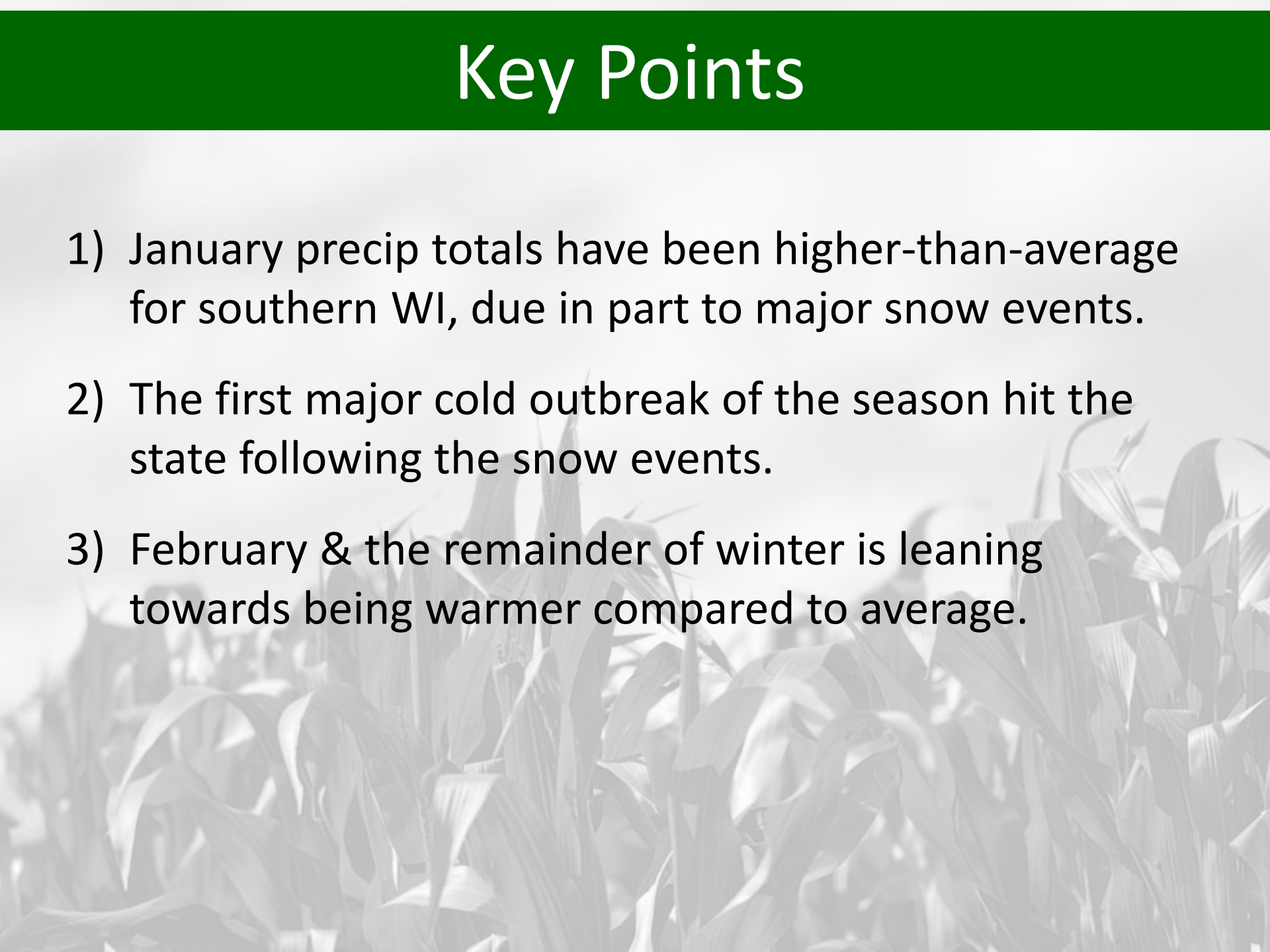
[kristin.foehringer@usda.gov](mailto:kristin.foehringer@usda.gov)

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# Key Points

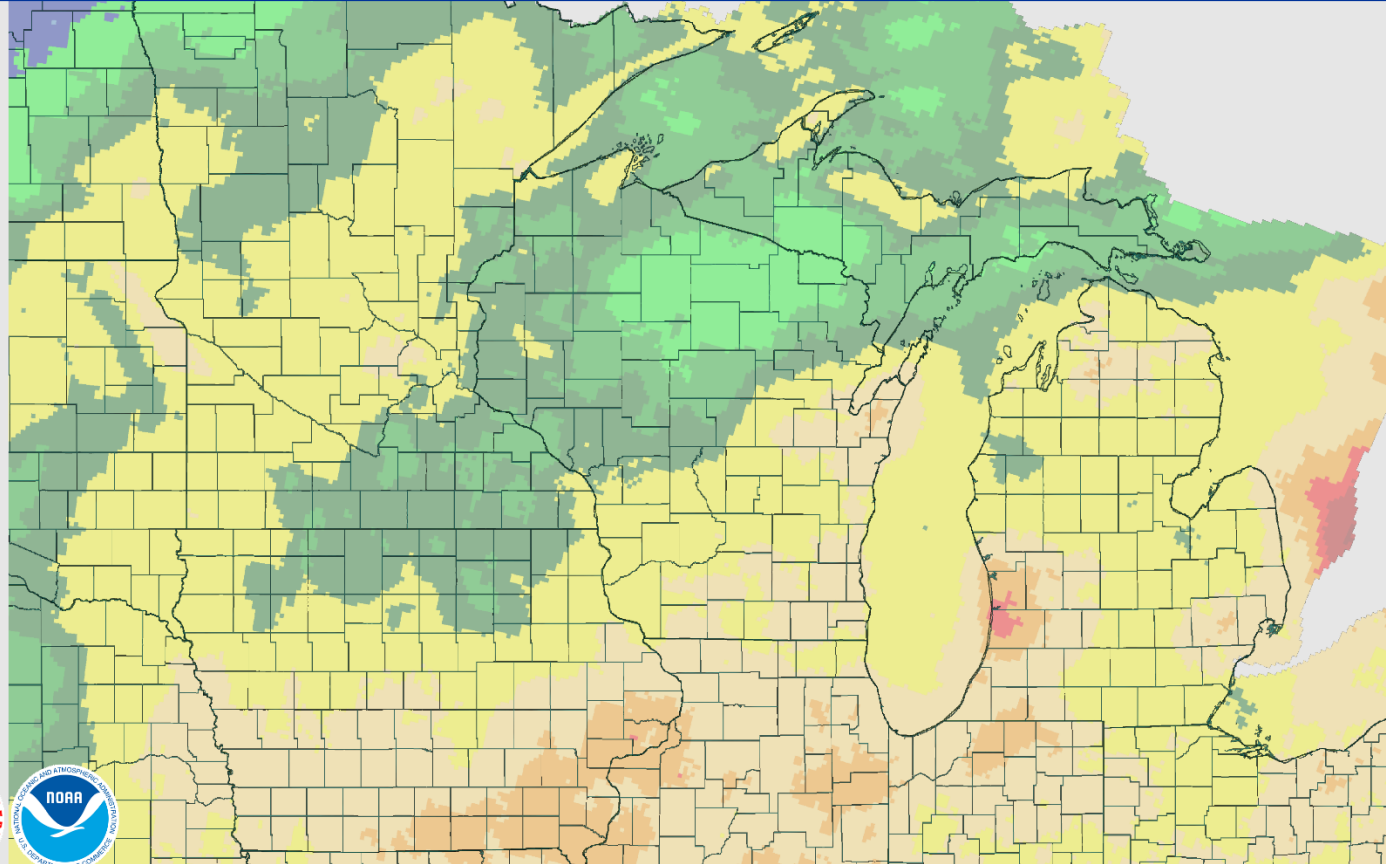
- 1) January precip totals have been higher-than-average for southern WI, due in part to major snow events.
  - 2) The first major cold outbreak of the season hit the state following the snow events.
  - 3) February & the remainder of winter is leaning towards being warmer compared to average.
- 

# 30 Day Precip

January 23, 2024 30-Day Observed Precipitation

Created on: January 23, 2024 - 16:45 UTC

Valid on: January 23, 2024 12:00 UTC

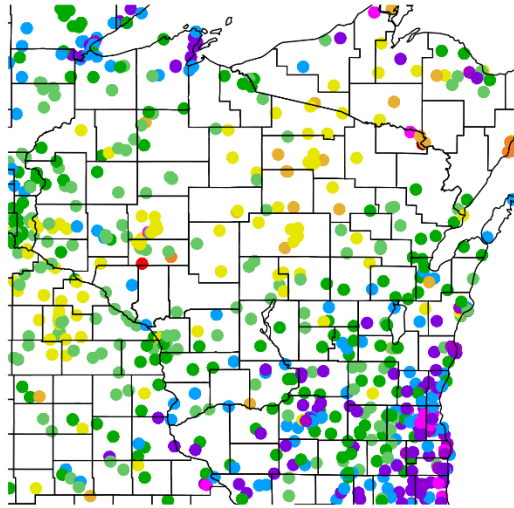


<https://water.weather.gov/precip/>

- Ranging from <1" in the north-central to 3-4" in the east and south

# 30 Day Precip Total/% Avg.

Precipitation (in)  
12/24/2023 - 1/22/2024



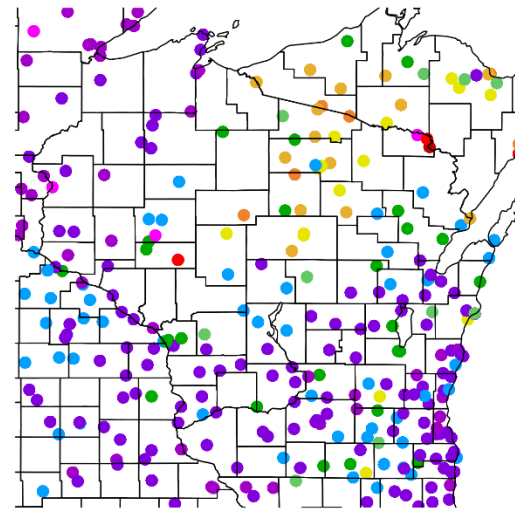
0.1 0.15 0.3 0.6 1.05 1.5 1.95 2.4 2.85 3.3 3.75

Generated 1/23/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Most of the state has been **wetter-than-average** since Christmas.
- Driest in the NC counties ( $\leq 1.5''$ ,  $< 90\%$  of average)
- Wettest in the SE counties ( $\geq 3''$ ,  $> 150\%$  of average)

Percent of Normal Precipitation (%)  
12/24/2023 - 1/22/2024



5 25 50 70 90 100 110 130 150 200 300

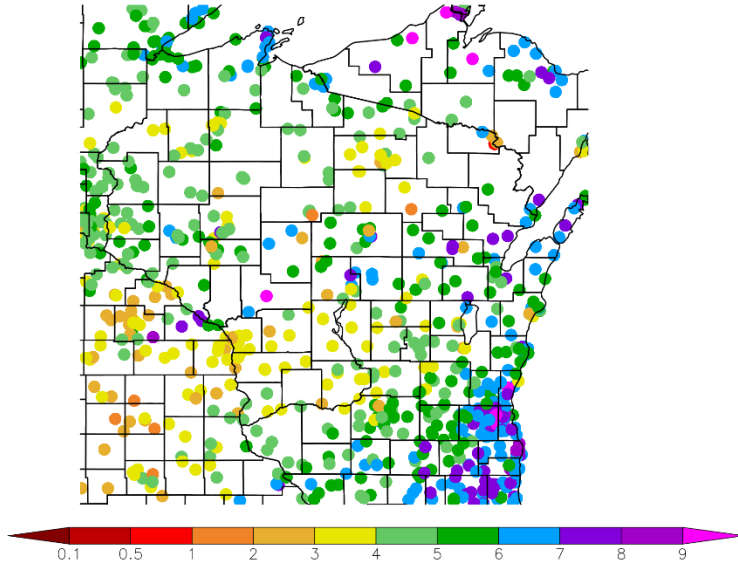
Generated 1/23/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

# 90 Day Precip Total/% Avg.

Precipitation (in)  
10/25/2023 - 1/22/2024



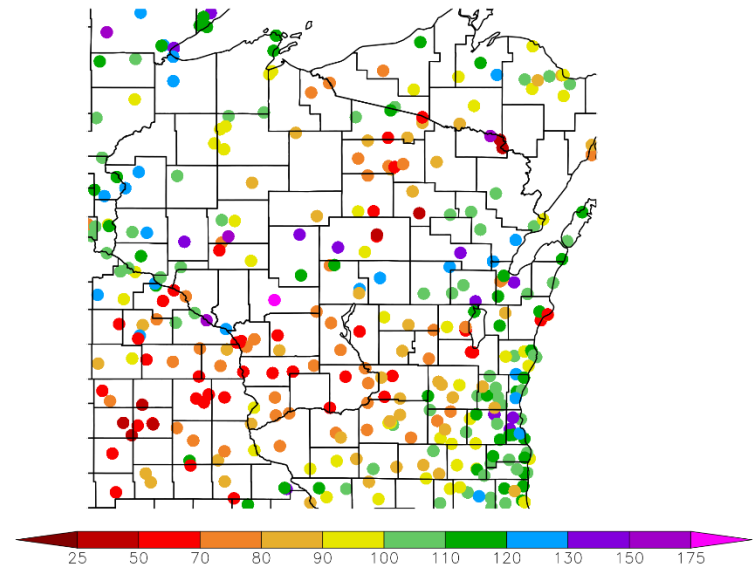
Generated 1/23/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

- Late fall dryness is still showing up in the SW and in the NC regions.
  - $\leq 4''$  over 90 days;  $< 70\%$  of average
- Wettest region has been the SE and around the Door peninsula ( $6+''$  of precipitation).

Percent of Normal Precipitation (%)  
10/25/2023 - 1/22/2024

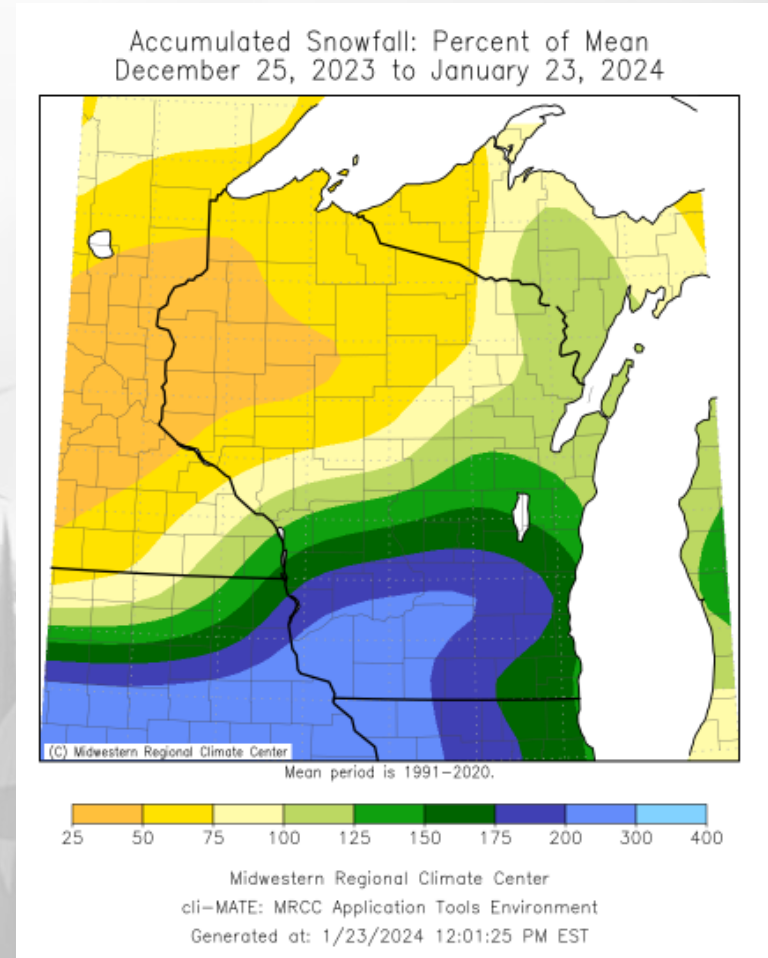
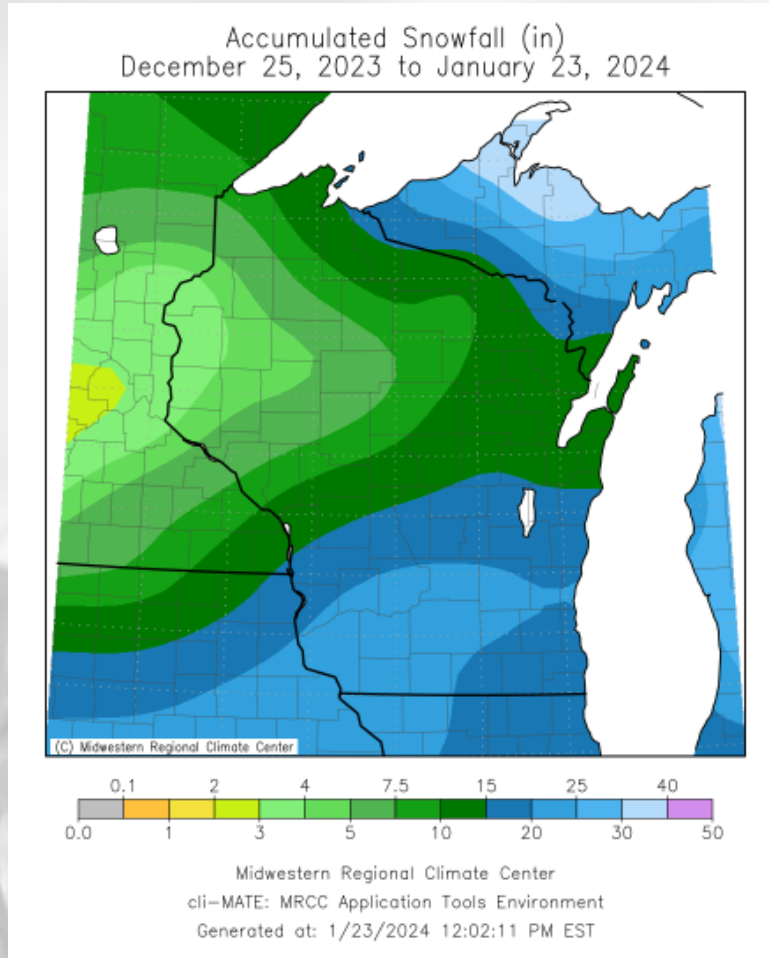


Generated 1/23/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

# January Snowfall

- Snow totals ranging from **<4"** (far NW) to **>20"** (SW, SC)
- Snowfall was **>2×** the normal total for the SW; below avg. for most in the north.

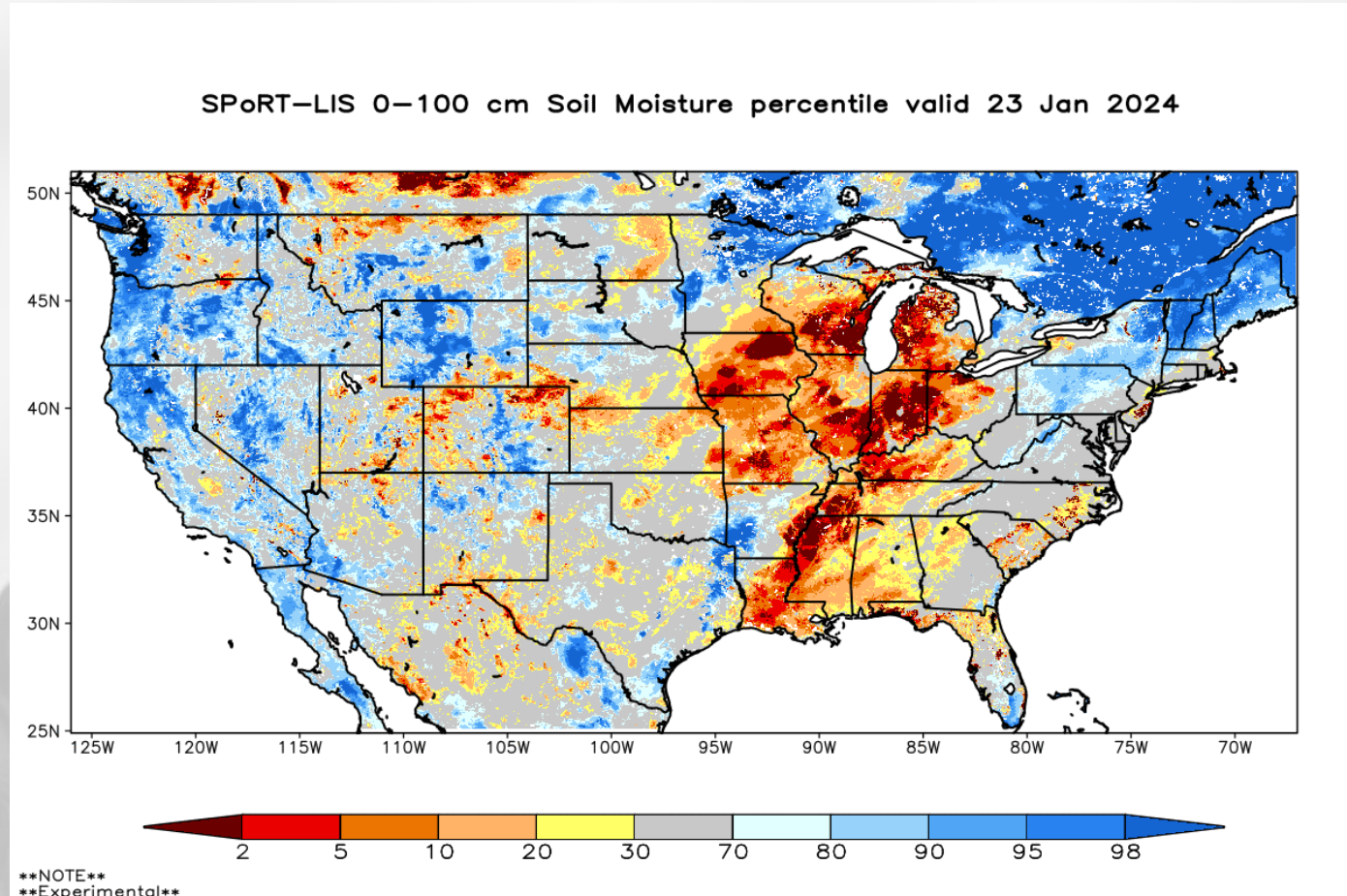


# Modeled Soil Moisture

- Little to no change in WI over last 30 days.
- Soil conditions improved to the S and E where precip fell as rain.

Model Notes:

Red areas would be top 5 driest in 100 years. Dark red = top 2 driest.



[https://weather.msfc.nasa.gov/sport/case\\_studies/lis\\_CONUS.html](https://weather.msfc.nasa.gov/sport/case_studies/lis_CONUS.html)

[https://www.cpc.ncep.noaa.gov/products/Soilmst\\_Monitoring/US/Soilmst/Soilmst.shtml](https://www.cpc.ncep.noaa.gov/products/Soilmst_Monitoring/US/Soilmst/Soilmst.shtml)

[https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp\\_new.shtml#](https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml#)

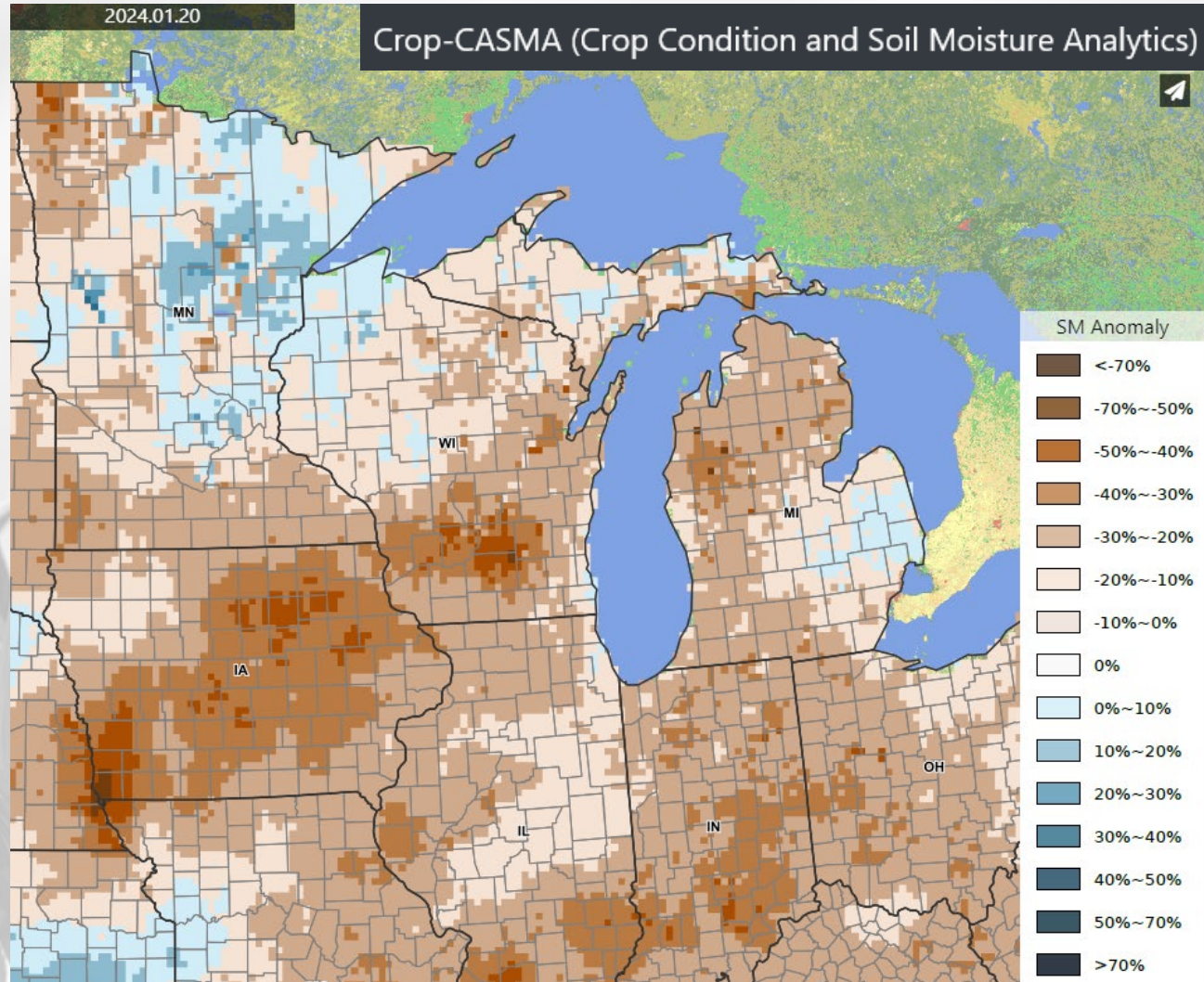
# Modeled Soil Moisture

**Alternate product from GMU and partners.**

- Soil conditions still remain drier than normal, with the wettest conditions in the NW.
- Most dry in the SW/SC region.
- Conditions remain dry across most of the Midwest.

**Model Notes:**

*Model compares to time of year – suggests that soils are drier/wetter than is typical for this time of the season.*

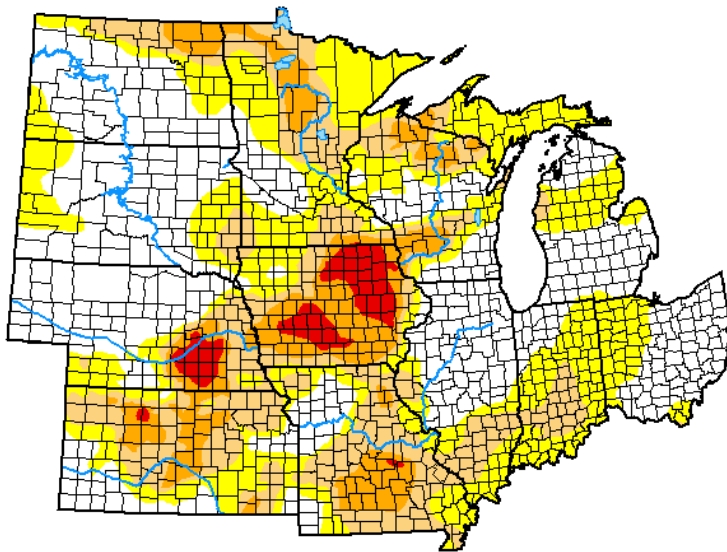


<https://nassgeo.csiss.gmu.edu/CropCASMA/>



# US Drought Monitor

## U.S. Drought Monitor North Central States



**January 16, 2024**

*(Released Thursday, Jan. 18, 2024)*

Valid 7 a.m. EST

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	40.48	59.52	31.08	12.51	2.84	0.00
<b>Last Week</b> <i>01-09-2024</i>	37.47	62.53	38.46	15.97	3.36	0.00
<b>3 Months Ago</b> <i>10-17-2023</i>	29.38	70.62	44.16	21.06	6.33	0.65
<b>Start of Calendar Year</b> <i>01-02-2024</i>	37.52	62.48	38.54	16.91	3.77	0.02
<b>Start of Water Year</b> <i>09-26-2023</i>	25.87	74.13	49.98	25.16	7.67	0.73
<b>One Year Ago</b> <i>01-17-2023</i>	28.00	72.00	45.10	22.06	11.54	5.13

Intensity:



*The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>*

Author:

Adam Hartman  
NOAA/NWS/NCEP/CPC



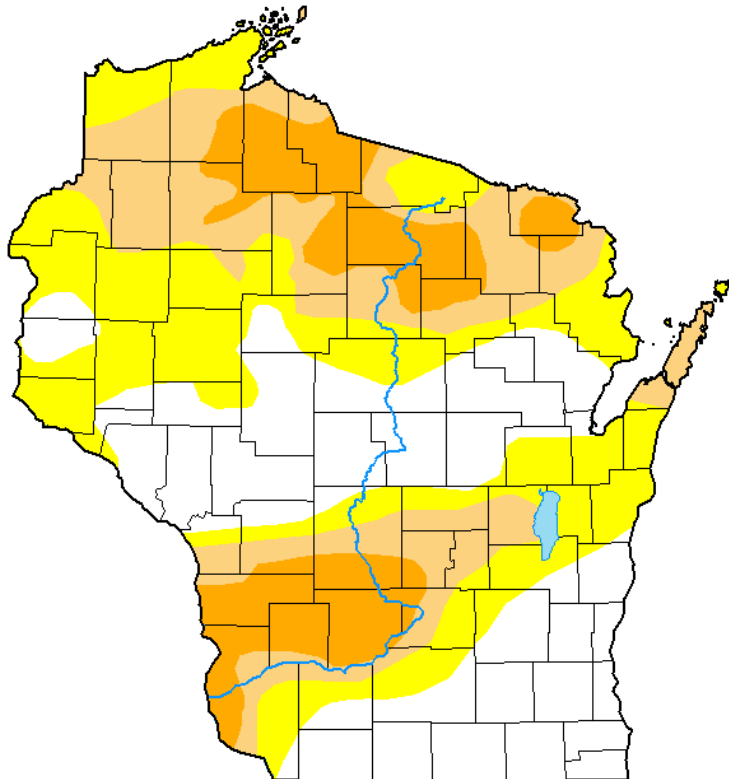
[droughtmonitor.unl.edu](http://droughtmonitor.unl.edu)

- Decreases in all drought severity categories across the region.
- There are no areas of D4 drought in the North Central states.
- Localized areas of D3 persist but have shrunk.

*Note: D0 is not considered drought.*

# US Drought Monitor

## U.S. Drought Monitor Wisconsin



January 16, 2024

(Released Thursday, Jan. 18, 2024)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	33.68	66.32	35.51	14.93	0.00	0.00
Last Week 01-09-2024	33.04	66.96	37.34	16.80	0.26	0.00
3 Months Ago 10-17-2023	6.49	93.51	68.19	23.65	3.04	0.00
Start of Calendar Year 01-02-2024	33.04	66.96	37.34	16.80	0.26	0.00
Start of Water Year 09-26-2023	2.04	97.96	80.86	37.74	6.77	0.00
One Year Ago 01-17-2023	91.10	8.90	1.97	0.00	0.00	0.00

Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Adam Hartman  
NOAA/NWS/NCEP/CPC



[droughtmonitor.unl.edu](http://droughtmonitor.unl.edu)

Amount of state in:

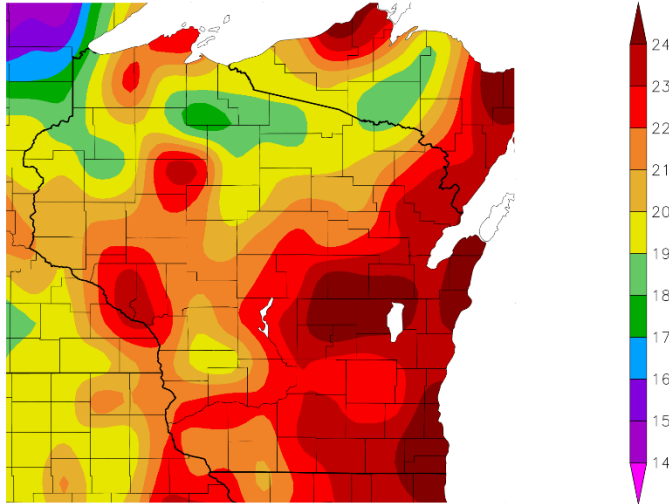
- D1-D4 – 35.5% ↓
- D2-D4 – 14.9% ↓
- D3-D4 – 0.0% ↓
- D4 – 0.0% --

*Note:* ↑ ↓ indicate change from November 21<sup>st</sup>. Red up arrows indicate increase in drought area; vice-versa for green arrows.

<http://droughtmonitor.unl.edu/>

# 30 Day Temperatures

Temperature (F)  
12/24/2023 - 1/22/2024

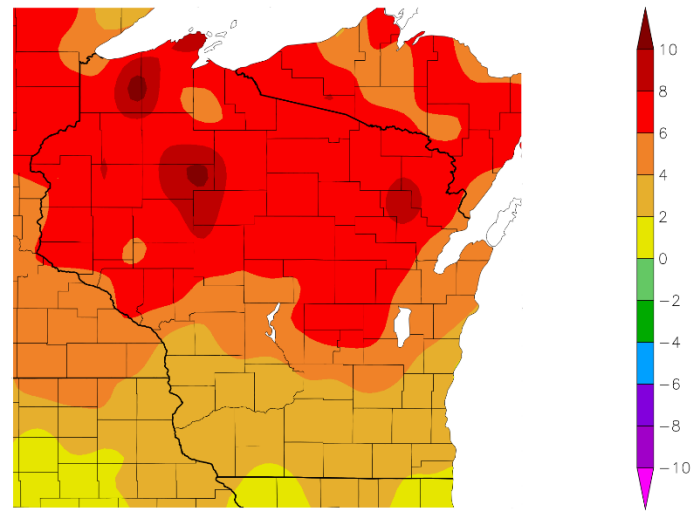


Generated 1/23/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Highest average T in the E (22-24+°F).
- Lowest averages in NC WI ( $\leq 20^\circ\text{F}$ ).
- Monthly averages across the state were above normal for all.
  - This is despite the cold outbreak in mid-January (see next slide).

Departure from Normal Temperature (F)  
12/24/2023 - 1/22/2024



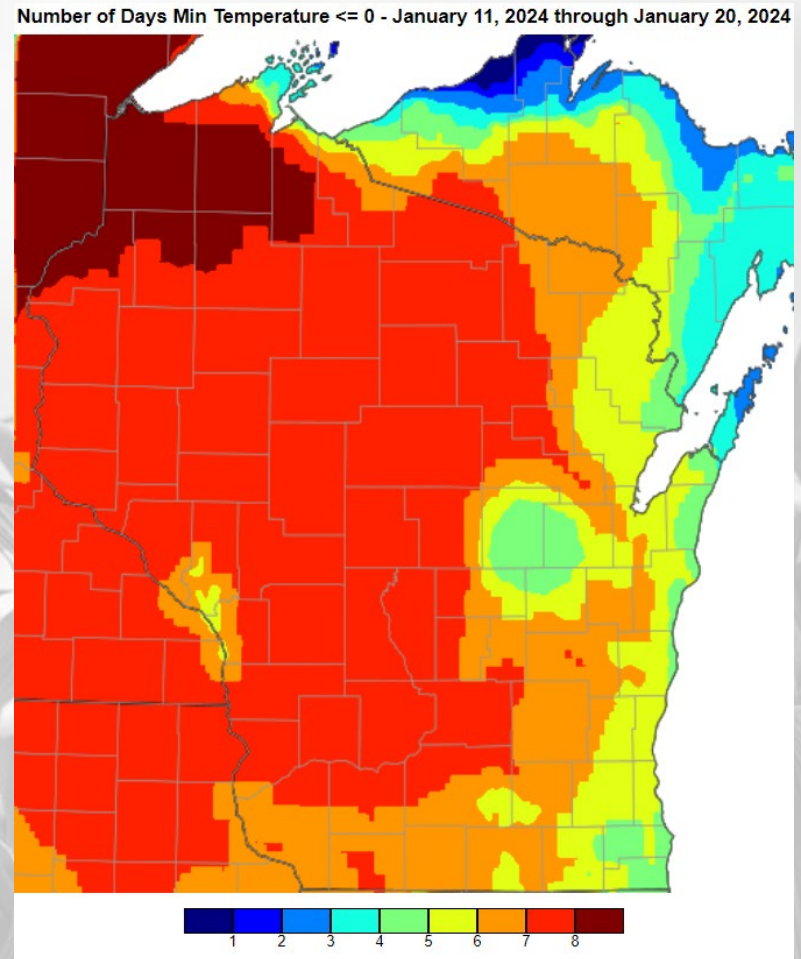
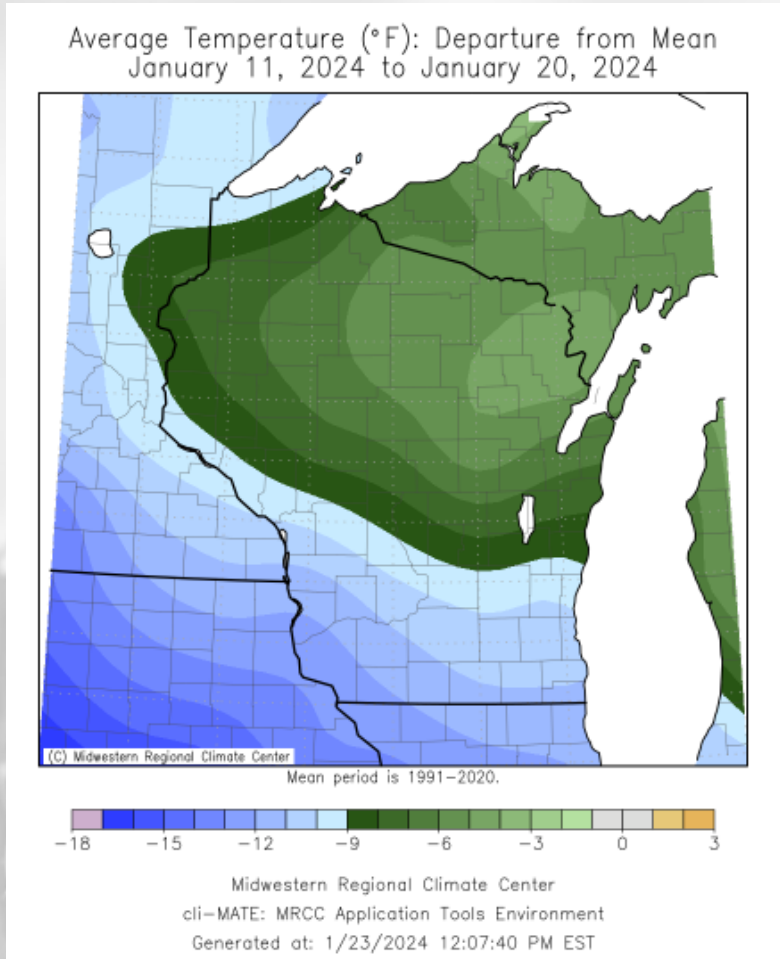
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NOAA Regional Climate Centers

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

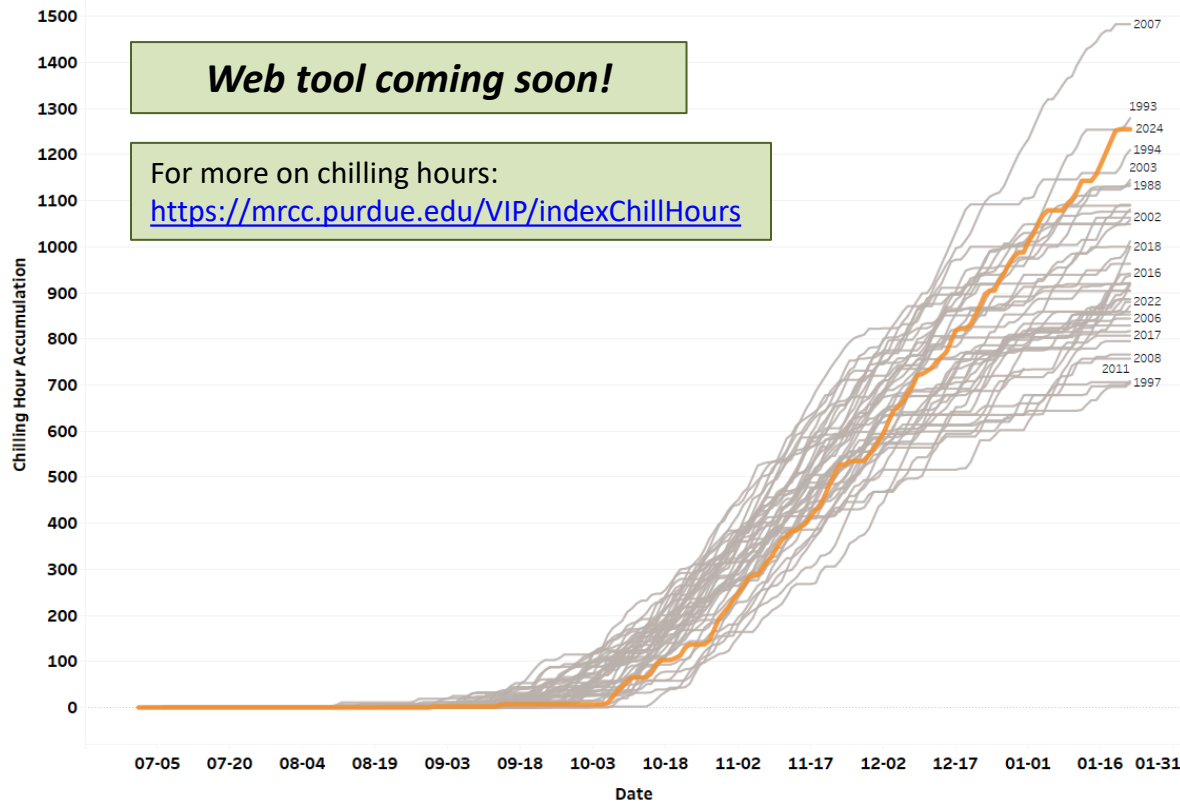
# January Cold Snap

- Cold outbreak across the state during the 2<sup>nd</sup> and 3<sup>rd</sup> weeks in January
- Below avg. temps statewide with most daily lows at our below 0°F.



# Fruit -- Chilling Hours

Running Chilling Hour Accumulation over All Seasons in Period of Record  
MADISON DANE COUNTY REGIONAL AP, WI  
"Season" year listed at end of plot lines refers to selected End Date.



Select lower-bound and upper-bound temperatures and start and end dates. Please allow a few moments after each selection.

Lower-Bound Temperature (°F)  
Must be less than Upper-Bound Temperature  
32

Upper-Bound Temperature (°F)  
Must be greater than Lower-Bound Temperature  
45

Start Date  
Must be on or after July 1st in a July 1st to June 30th year  
7/1/2023

End Date  
Must be on or before the next June 30th after the Start Date  
1/22/2024

Go Back to Map View



USDA Climate Hubs  
U.S. DEPARTMENT OF AGRICULTURE



This tool was funded by the NOAA National Centers for Environmental Information (NCEI) and USDA-Agricultural Research Service (ARS) Midwest Climate Hub/National Program 216 Sustainable Agriculture

About

Leave Feedback

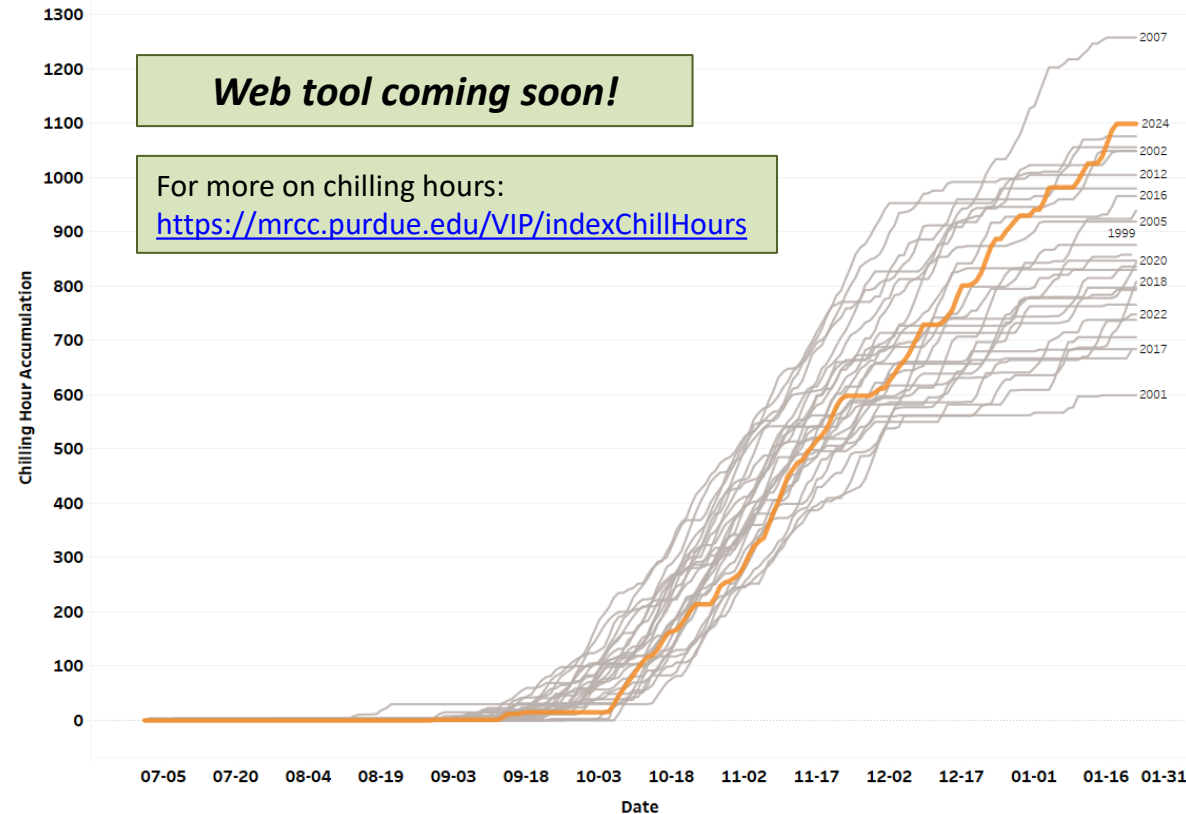
- Dane County Airport – **1255 chill hours** accumulated (as of 1/22)
- 2023-24 has more CH accumulated compared to most prior years (grey lines)

# Fruit -- Chilling Hours

Running Chilling Hour Accumulation over All Seasons in Period of Record

MARSHFIELD MUNICIPAL AP, WI

"Season" year listed at end of plot lines refers to selected End Date.



Select lower-bound and upper-bound temperatures and start and end dates. Please allow a few moments after each selection.

Lower-Bound Temperature (°F)

Must be less than Upper-Bound Temperature

32

Upper-Bound Temperature (°F)

Must be greater than Lower-Bound Temperature

45

Start Date

Must be on or after July 1st in a July 1st to June 30th year

7/1/2023

End Date

Must be on or before the next June 30th after the Start Date

1/22/2024

Go Back to Map View



USDA Climate Hubs  
U.S. DEPARTMENT OF AGRICULTURE



This tool was funded by the NOAA National Centers for Environmental Information (NCEI) and USDA-Agricultural Research Service (ARS) Midwest Climate Hub/National Program 216 Sustainable Agriculture

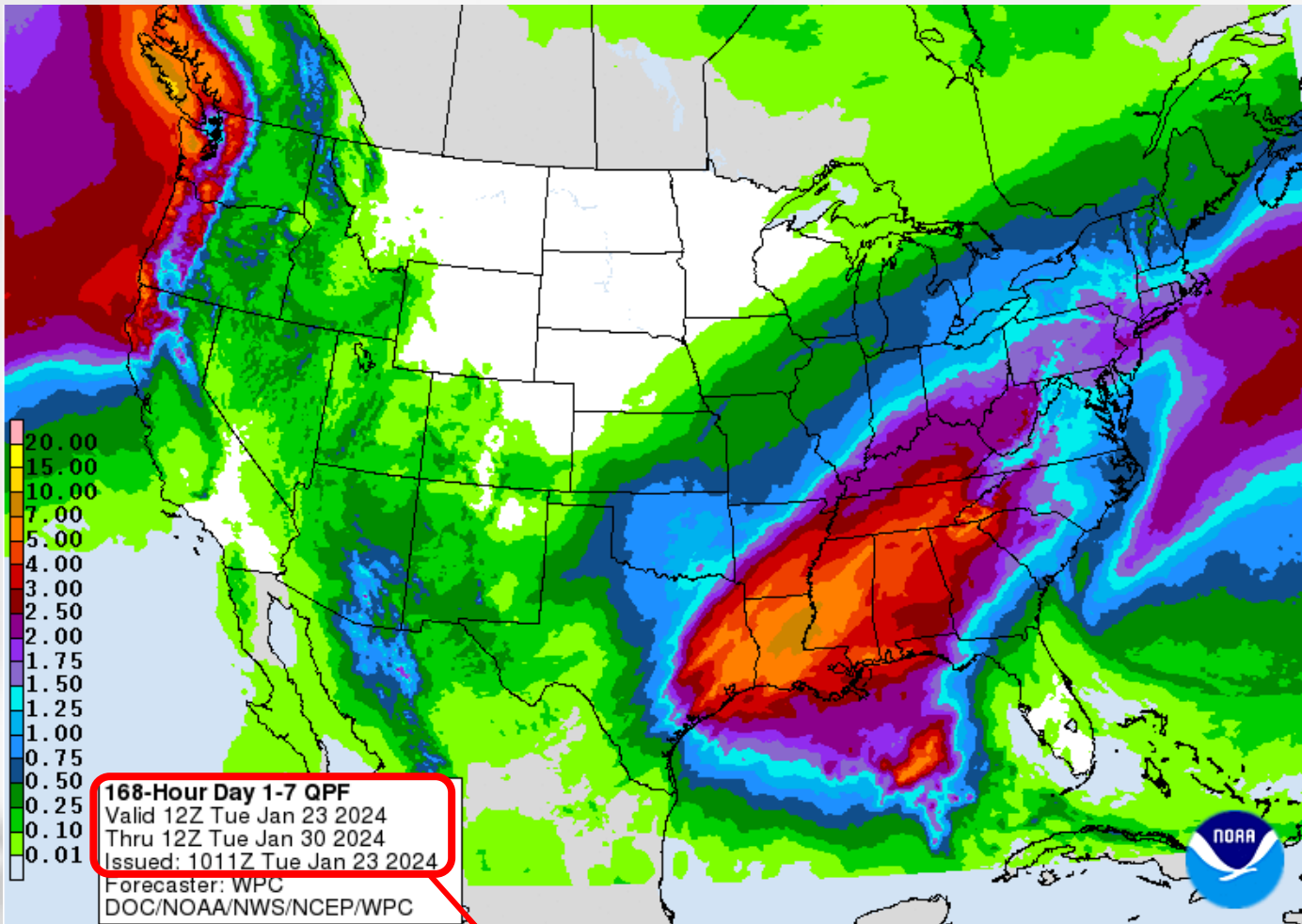
About

Leave Feedback

- Marshfield Municipal Airport – **1099 chill hours** accumulated (as of 1/22)
- 2023-24 has more CH accumulated compared all prior years (grey lines) except 2007

# 7 Day Forecast Precip

- Minimal chances of precip over the next week.
- Highest totals forecasted across SE WI.
- Precip could fall as a wintry mix, snow, or rain depending on temperatures.



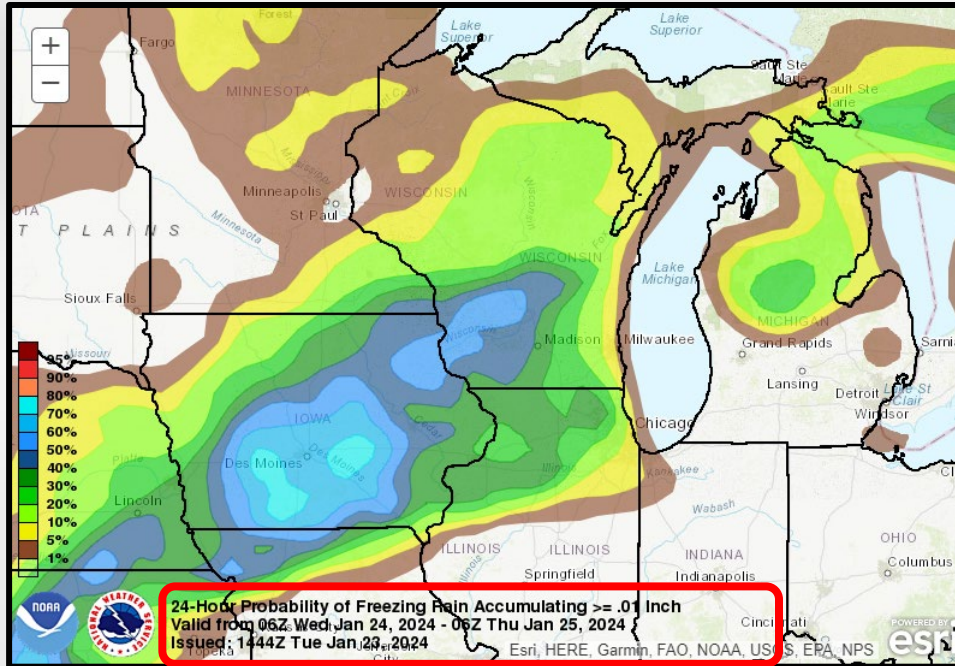
Forecast for 1/23/24 thru 1/29/24

<https://www.wpc.ncep.noaa.gov/qpf/p168i.gif>

# Snow/Sleet Chances

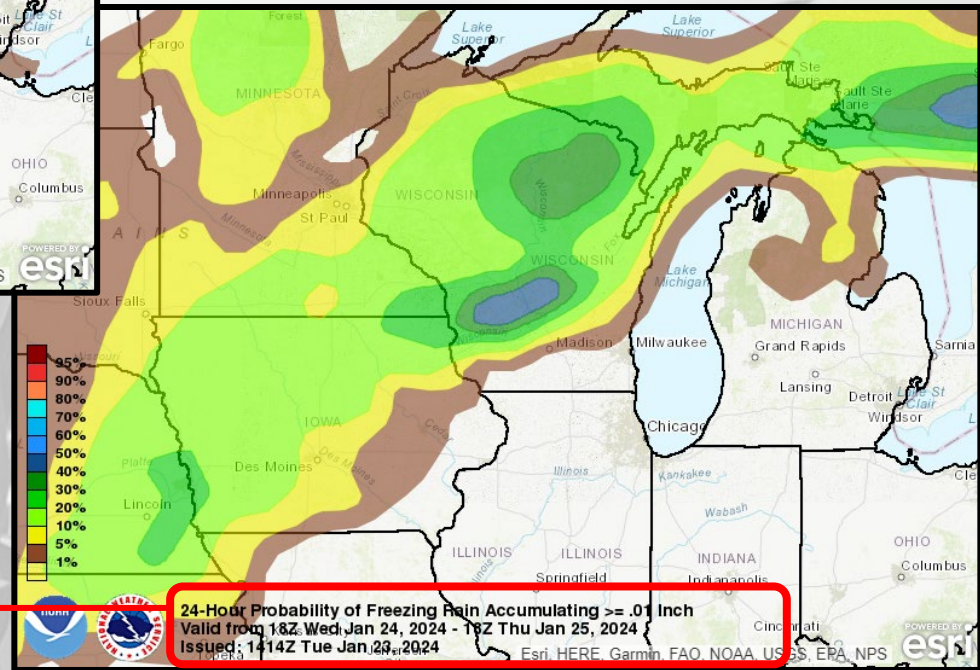
- Be aware of the potential for slick conditions this week with wintry mix and potential freezing rain.

*How to interpret maps: probability of an impactful freezing rain event.*



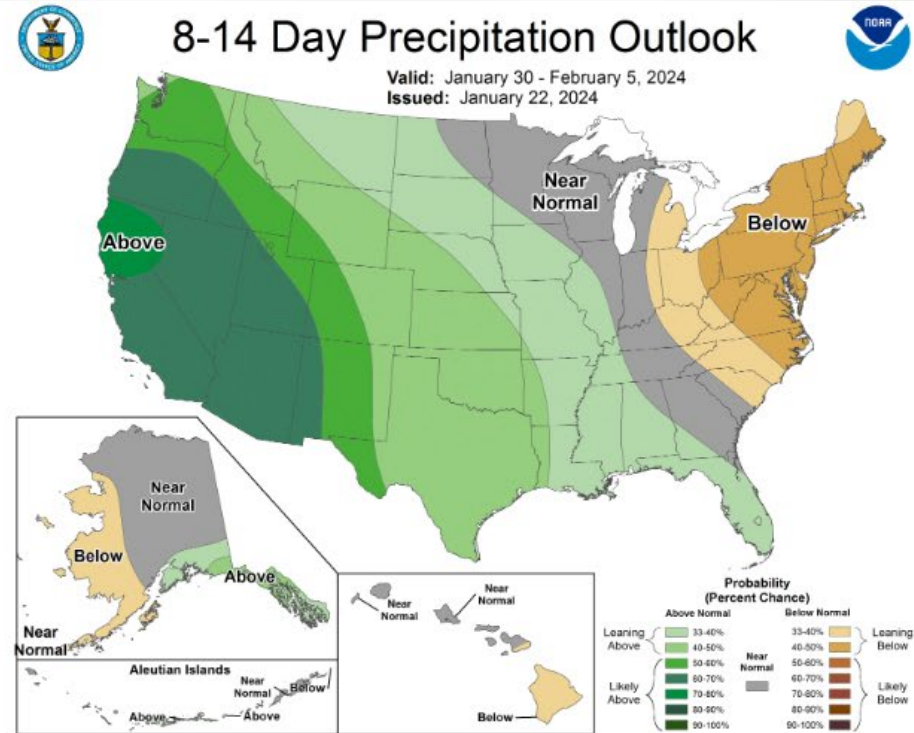
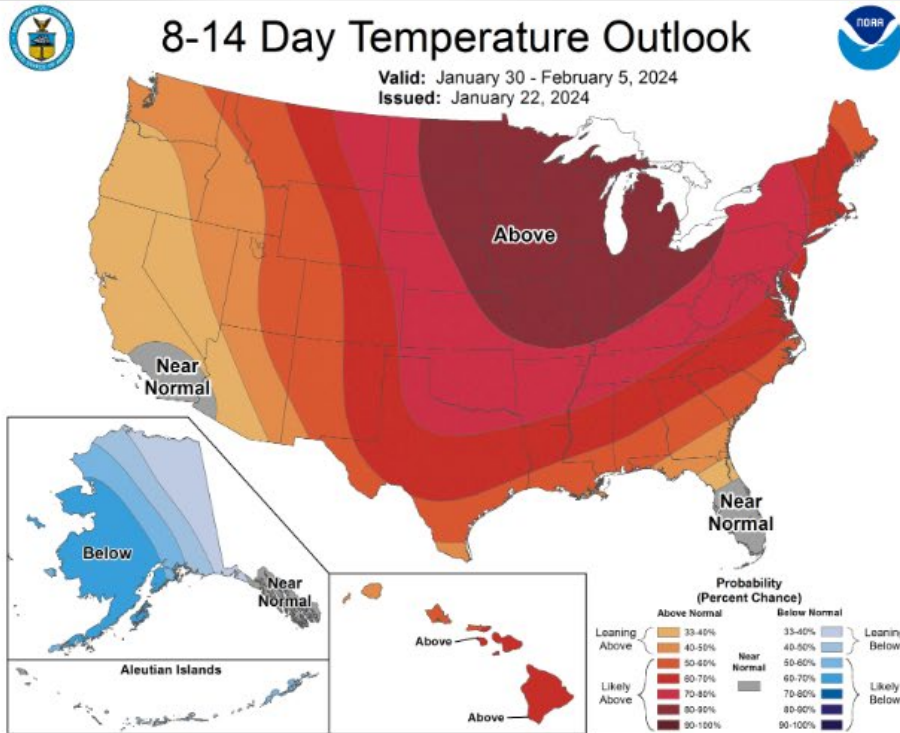
**Jan 24-25**  
(12am-12am CST)

**Jan 24-25**  
(12pm-12pm CST)





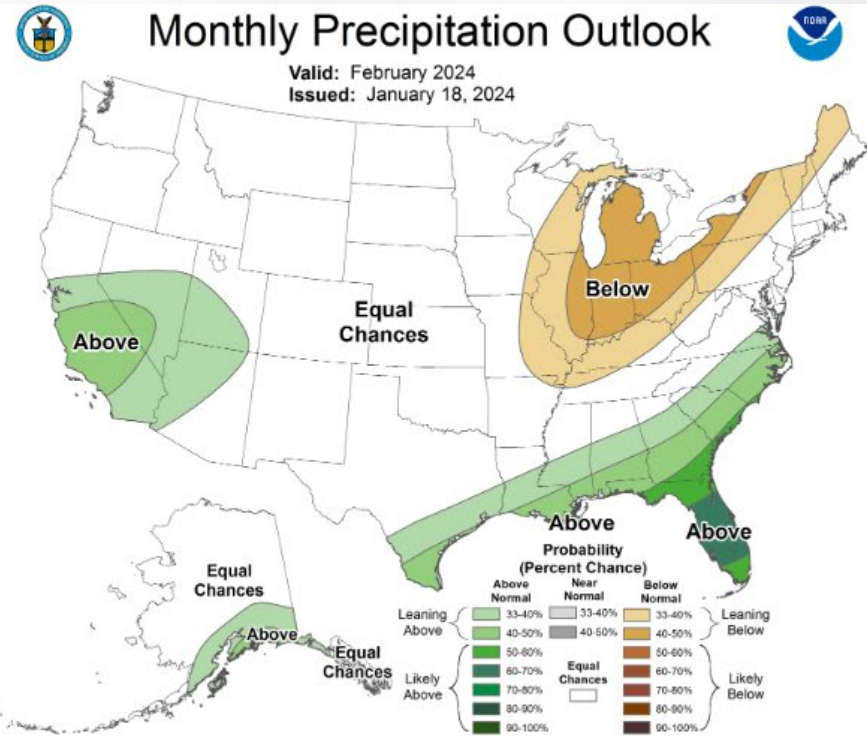
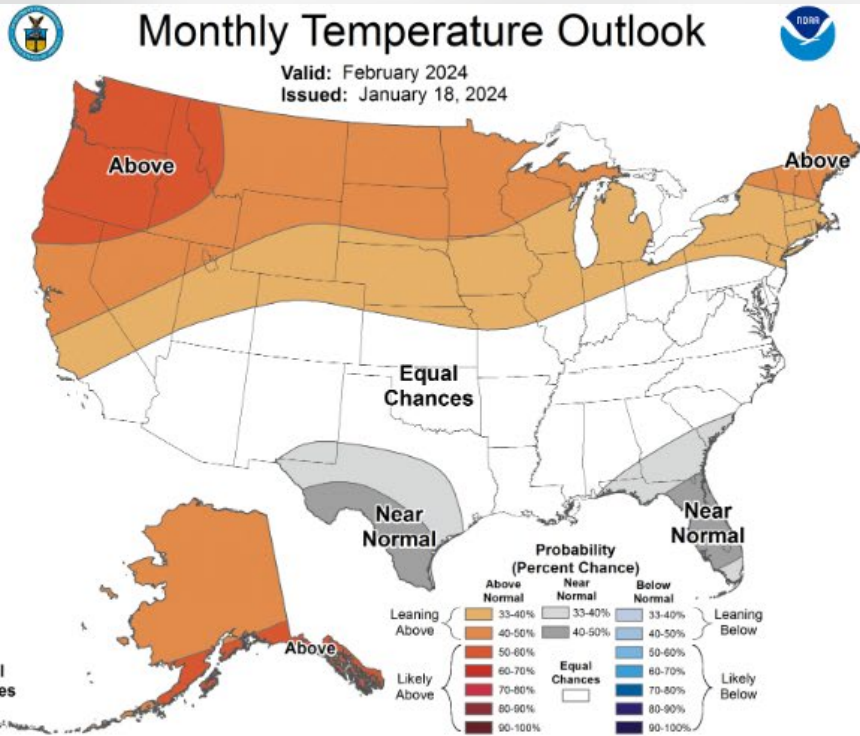
# 8-14 Day Temp & Precip Outlook



**Early February:** Temperatures likely to be above normal. Precipitation is leaning near normal.

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

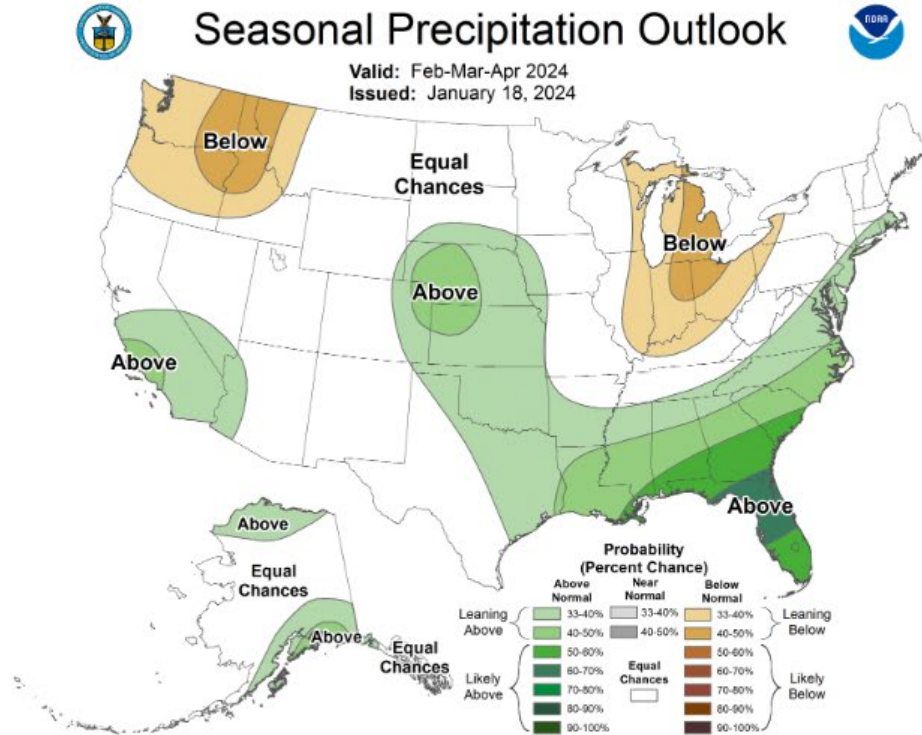
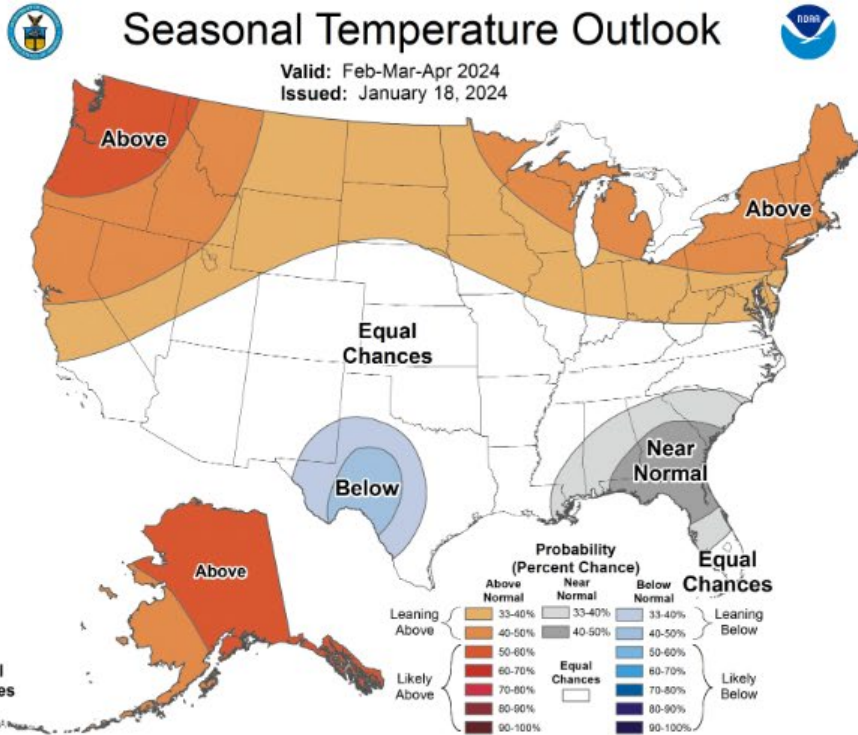
# 30 Day Temp & Precip Outlook



**The month of February:** Temperatures are leaning above normal. Precipitation is leaning below normal (S,E) or equal chances (NW).

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

# 90 Day Temp & Precip Outlook



**Feb. – April:** Temperatures leaning towards above average. Precipitation is showing equal chances for most. *El Nino* is a major driver of these conditions.

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

# Take Home

- **Current conditions:**

- January has so far been wetter-than-average for many in WI, due in part to major snow events in the S.
- Temperatures were warmer-than-average, despite a major cold outbreak following the snowfall events.

- **Impact:**

- Soil moisture conditions remain drier than normal with minimal change since December.
- Drought conditions improved slightly, enough so to eliminate D3 or worse drought from the state.
- Chilling hour accumulation has topped 1000 hours at both Madison and Marshfield.

- **Outlook:**

- The first week of February has a higher probability of warmer-than-average with near-normal precip.
- The warmer-than-normal conditions have a higher probability to persist for the rest of the winter season due in part to El Nino.

# User Survey!

Are you a regular user of the Wisconsin Ag Climate Outlook (WACO)? Or maybe you are viewing these slides for the first time this week? Either way, we want to hear **your** feedback on this new resource! Please take a few minutes and fill out this survey:

## [LINK TO SURVEY](#)

Your feedback will help us better serve your ag-climate data needs through WACO.

If you have any trouble accessing or filling out the survey, please email Josh Bendorf at [Joshua.Bendorf@usda.gov](mailto:Joshua.Bendorf@usda.gov).

Thank you!!  
-The WACO Team

# For More Information

Photo Credit: USDA



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