

Wisconsin Ag Climate Outlook

Week of August 5, 2024

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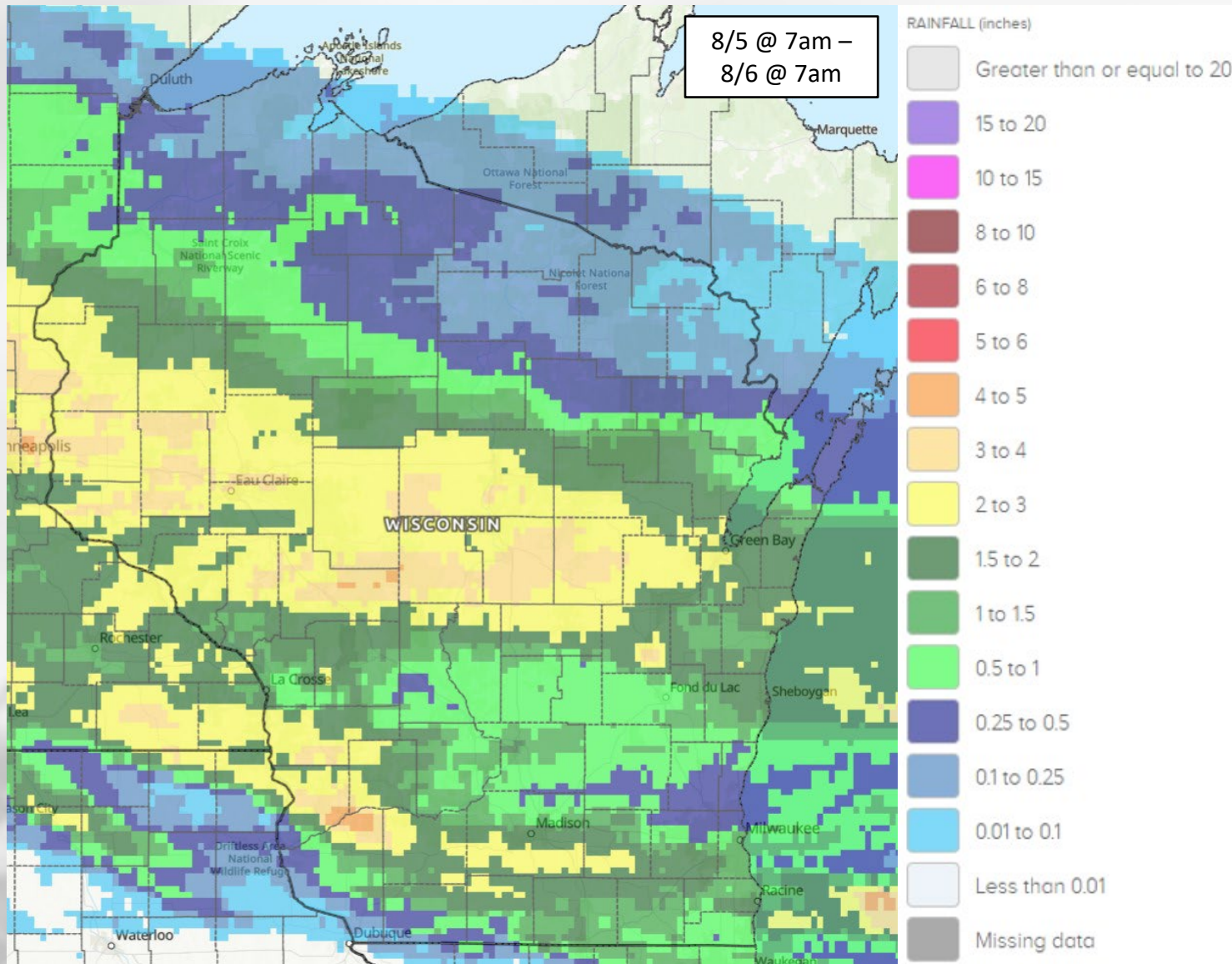
dennis.todey@usda.gov

Key Points

Navigate to select slides by clicking on the [links](#) below.

- 1) Temperatures were a few degrees [above normal](#) statewide last week, with seasonal GDD's nearing [2000 units](#) in the south.
 - 2) The USDM is indicating [abnormal dryness](#) in parts of N WI, while many in the central and south are in [higher moisture percentiles](#).
 - 3) There is a slight lean towards [warmer and wetter](#) in the outlooks for the middle of August.
- *For this week's agronomic recommendations from UW Extension, click [here](#).*
 - *For the latest GDD accumulation maps, click [here](#).*
 - *For NASS crop progress & condition maps, click [here](#).*

Monday Storms & Heavy Rain



Highest Total Rainfall Measurements

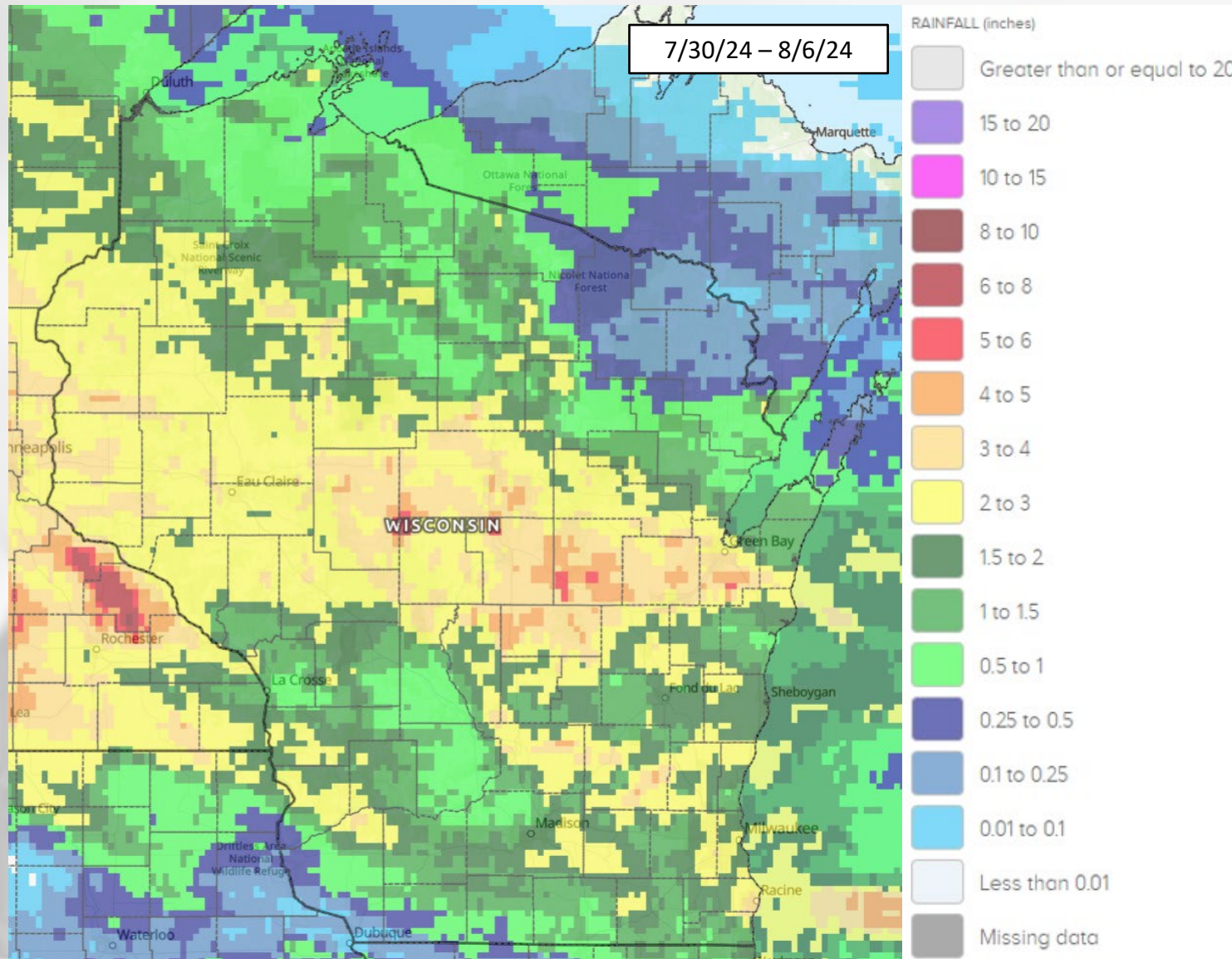
August 5

Airport	County	Rainfall
BOSCOBEL	Grant	3.23
CHIPPEWA VALLEY	Chippewa	2.19
MARSHFIELD	Wood	1.81
WISCONSIN RAPIDS	Wood	1.74
SPARTA FORT MCCOY	Monroe	1.38
WAUSAU	Marathon	1.34
MEDFORD TAYLOR	Taylor	1.26
GREEN BAY	Brown	0.91
LA CROSSE	La Crosse	0.86
LONE ROCK	Sauk	0.82

<https://water.noaa.gov/>

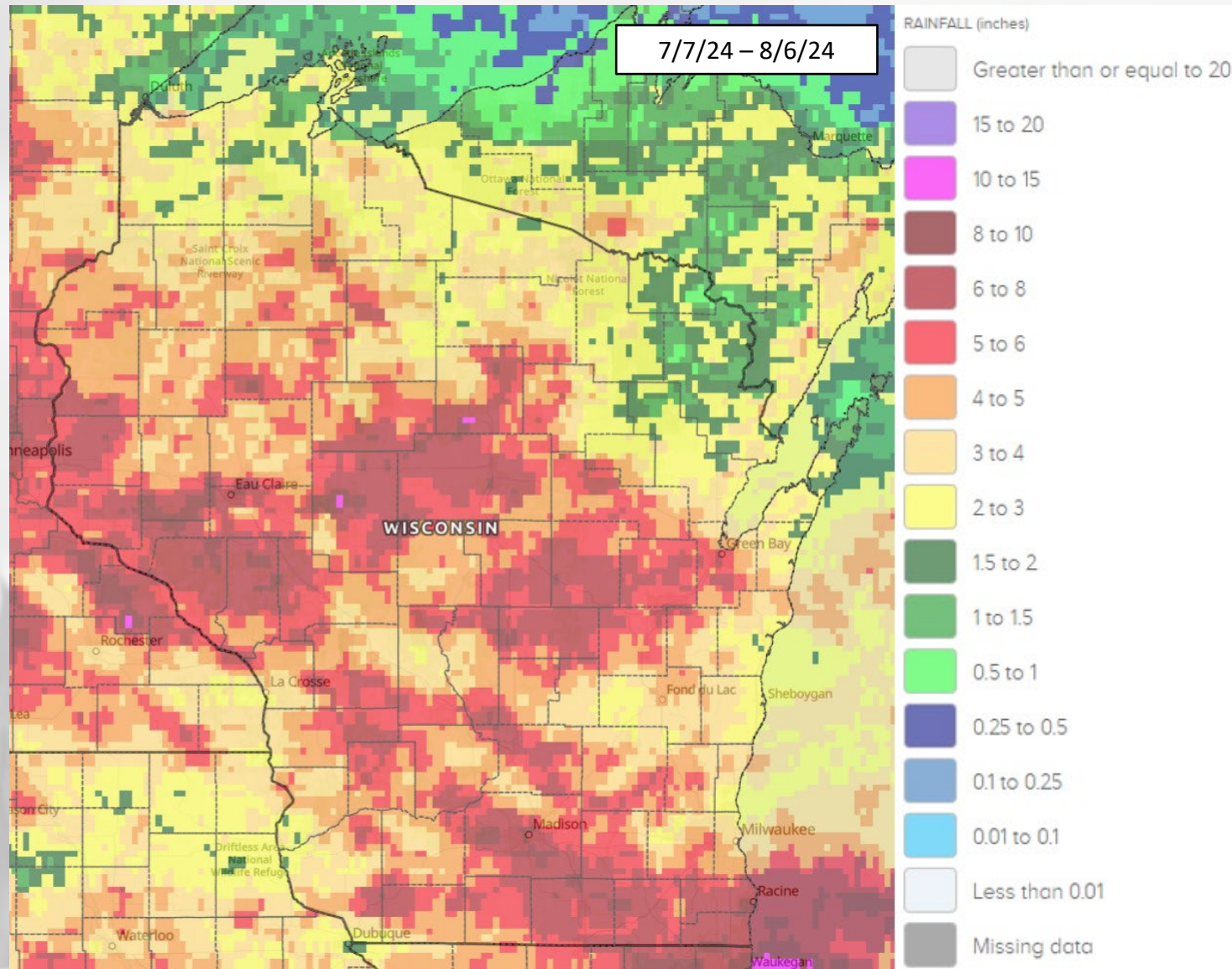
Severe Storm Reports - [LINK](#)

7 Day Precip



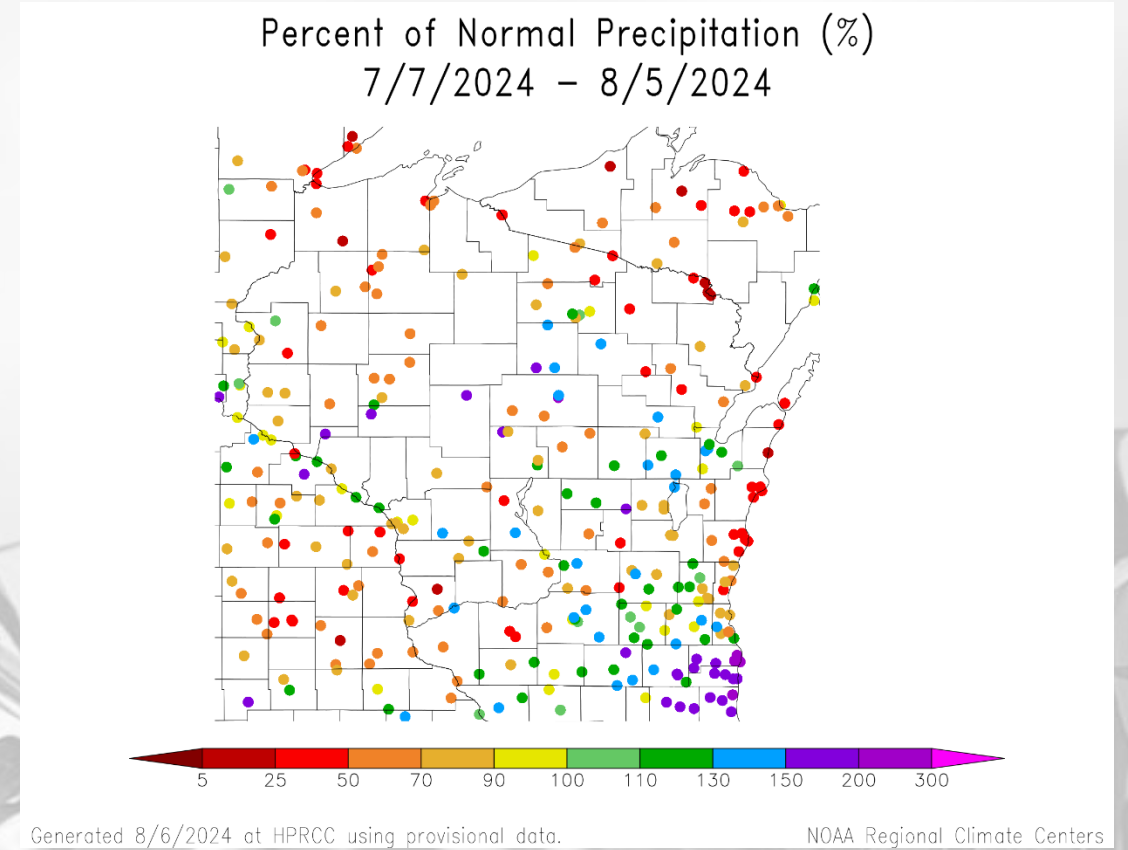
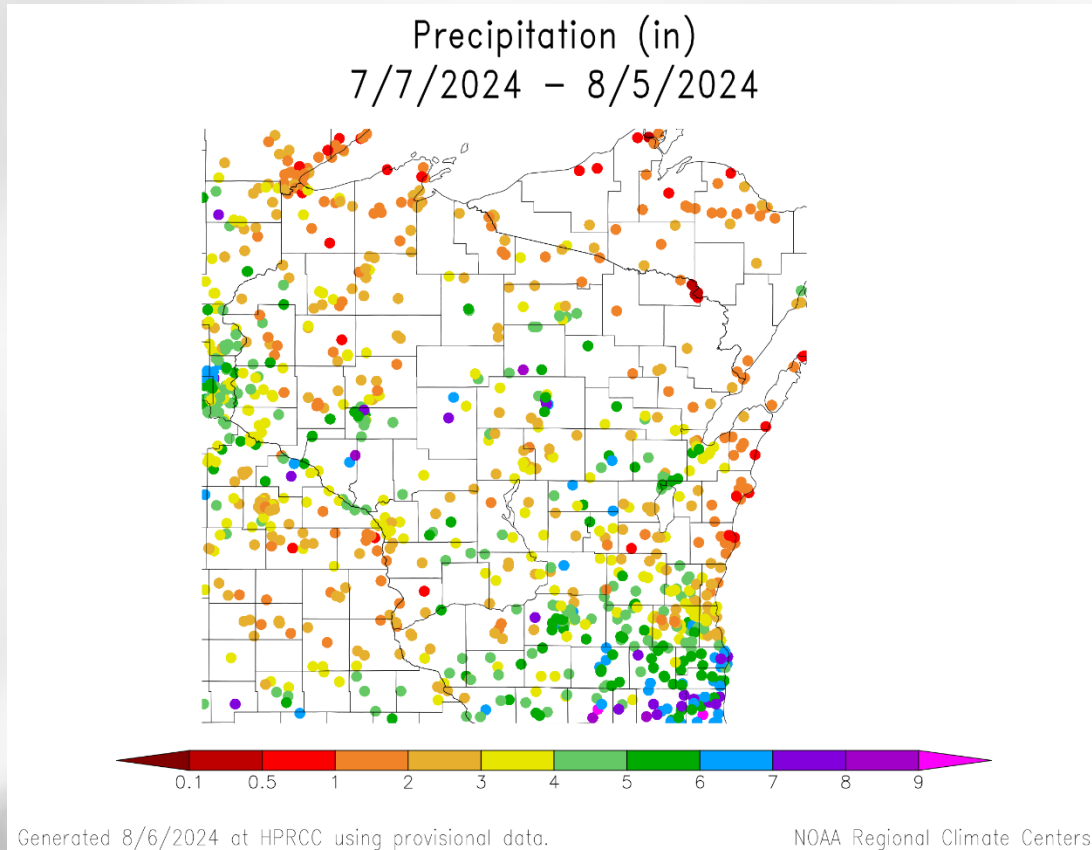
- A large portion of the state received **2" or more** this past week, mainly in a line from the Twin Cities to Green Bay.
- Pockets of **4+"** were common across the central region
- **Lesser precip** amounts in the far NE and SW corners → **0.5" or less.**

30 Day Precip



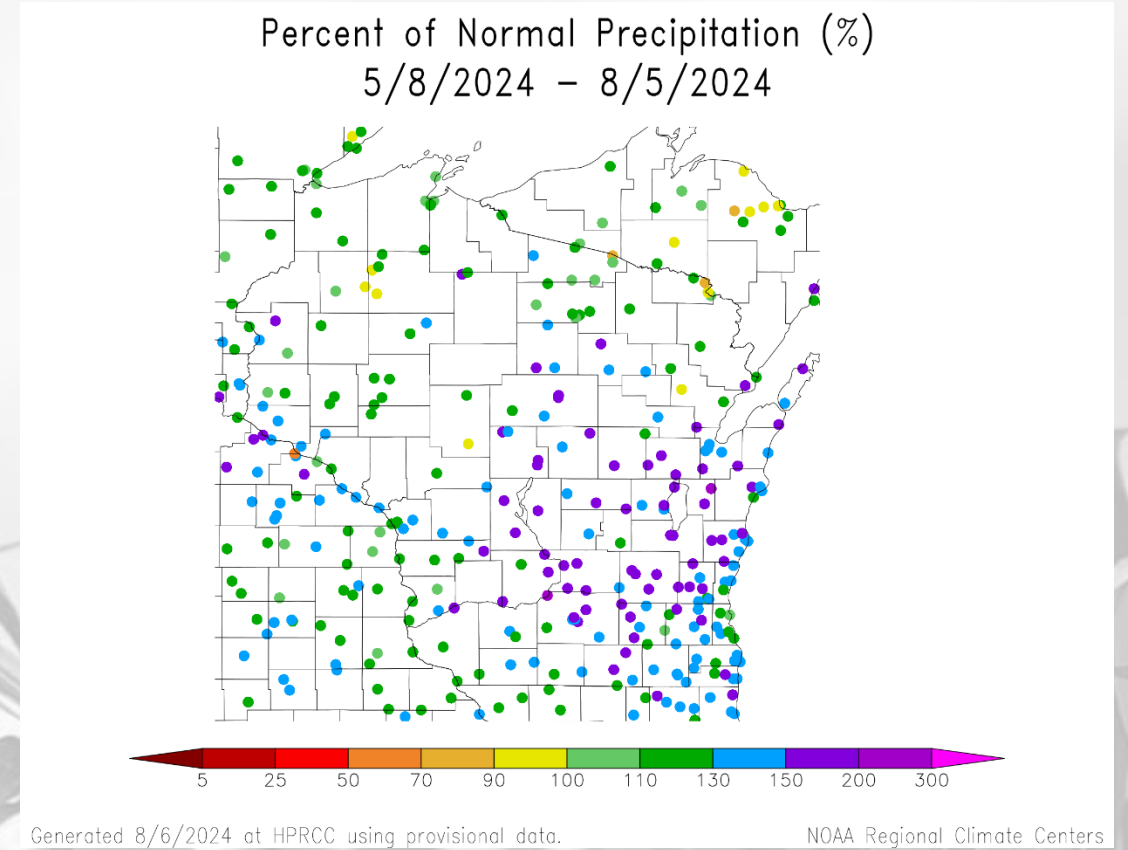
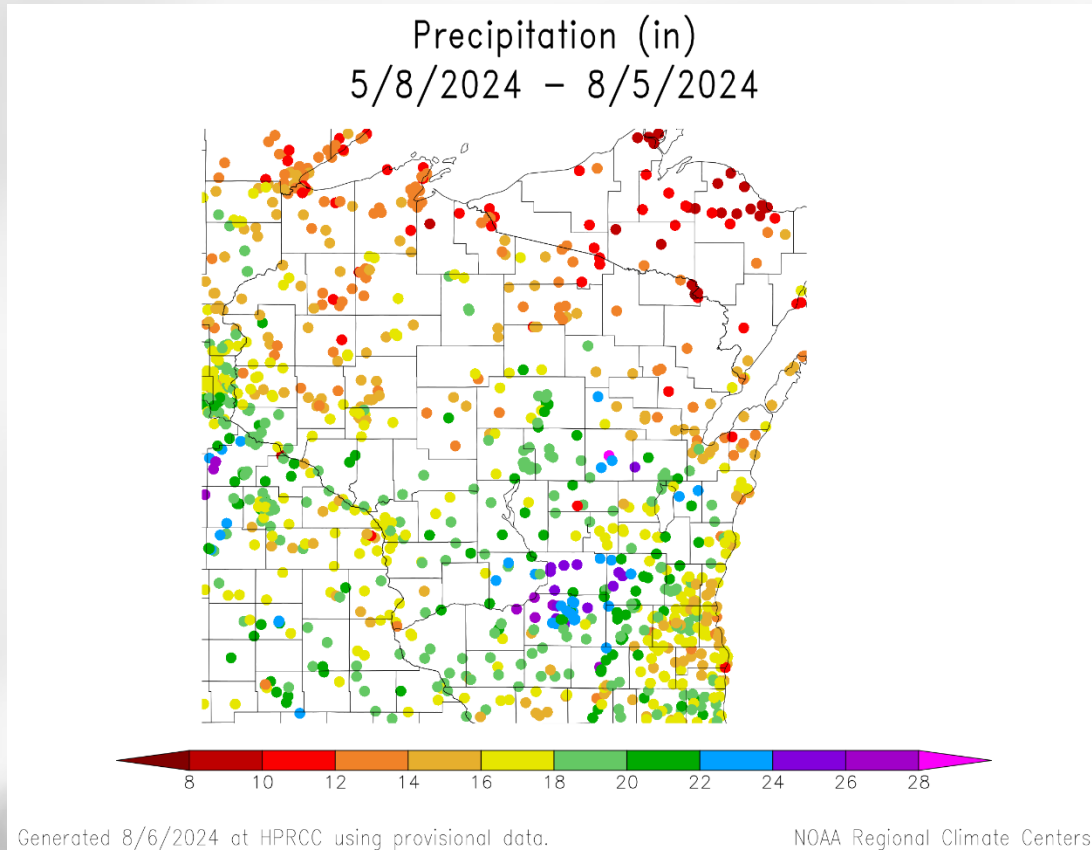
- **5" or more** was common in the WC, central, and SC counties.
- Isolated pockets of estimated **10+"** in Clark & Lincoln Counties.
- **3" or less** in the far SW, along Lake Michigan, & the far N/NE.

30 Day Precip Total/% Avg.



- Precipitation has been very **hit-or-miss** over the last 30 days. There are stations in the same county that **differ by a matter of inches**.
- Racine/Kenosha stations at **>150% of average**, as well as at select stations in the NC/NW.
- Lowest totals along Lake Michigan & the far NW -- **<1"** for some.

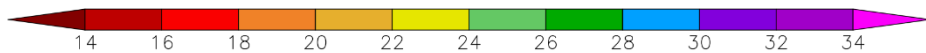
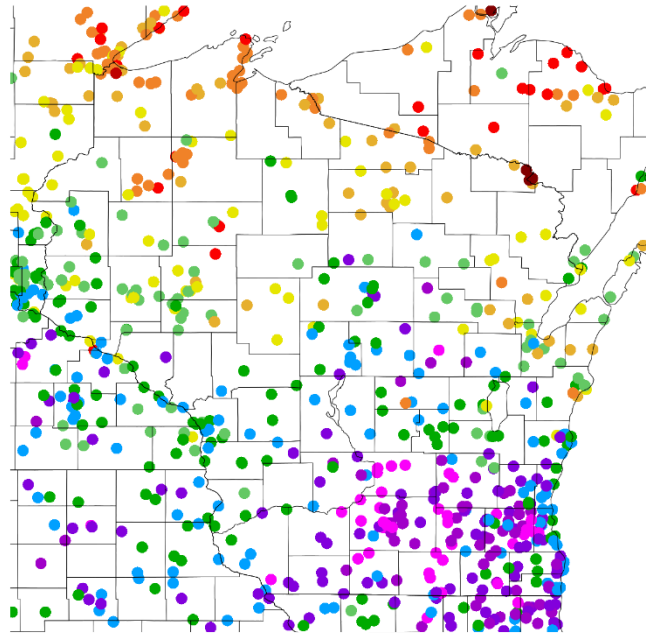
90 Day Precip Total/% Avg.



- **Over 2 feet** of precip accumulated between Madison & Portage; **20+”** common in SC & the Central Sands.
- Lowest totals in the NC/NW → **10-14”** (red/orange dots) common.
- Majority of stations are at **100% or more** of normal; **>150%** common across the middle of WI & points to the E/NE.

2024 Precipitation (so far)

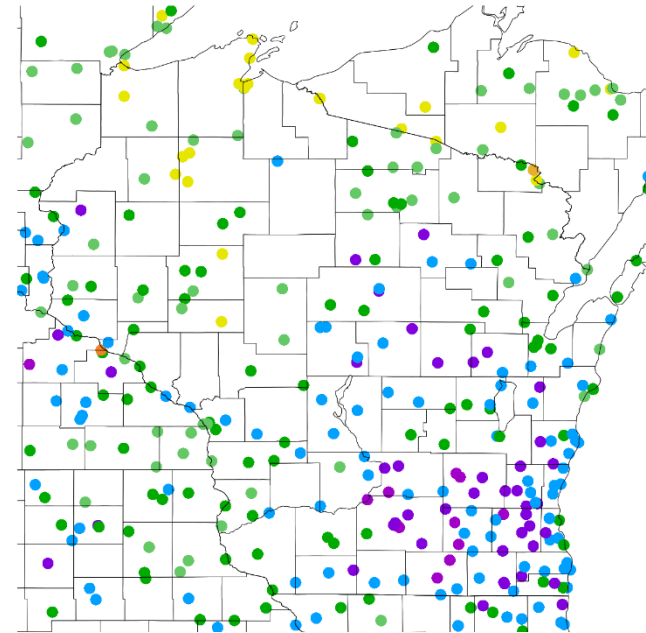
Precipitation (in)
1/1/2024 - 8/5/2024



Generated 8/6/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Precipitation (in)
1/1/2024 - 8/5/2024



Generated 8/6/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

Soil Moisture Models

- **80th percentile or greater** for soil moisture conditions across the central belt of WI and the NW, where precip totals have been above normal the past few weeks.
- **Dry percentiles** are beginning to show up in the N/NE counties, where precip has been lower than normal.

Model Notes:

Red areas = top 5 driest in 100 years.

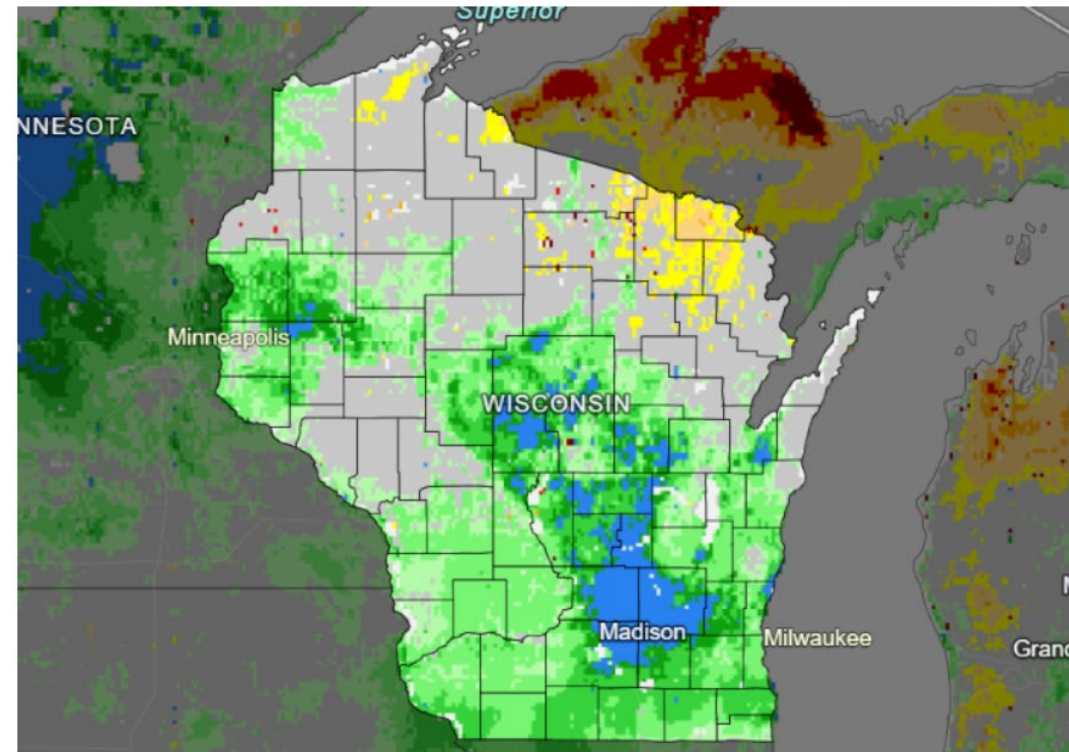
Dark red areas = top 2 driest in 100 years.

It's worth noting that each soil moisture model has their own characteristics and input variables, so there tends to be variation between models. Thus, it's worthwhile to look at multiple models opposed to just one.

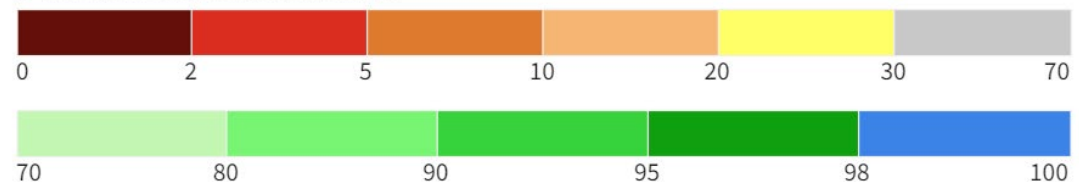
https://weather.msfc.nasa.gov/sport/case_studies/lis_CONUS.html

<https://www.drought.gov/states/wisconsin>

0-100 cm Soil Moisture Percentile



0-100 cm Soil Moisture Percentile

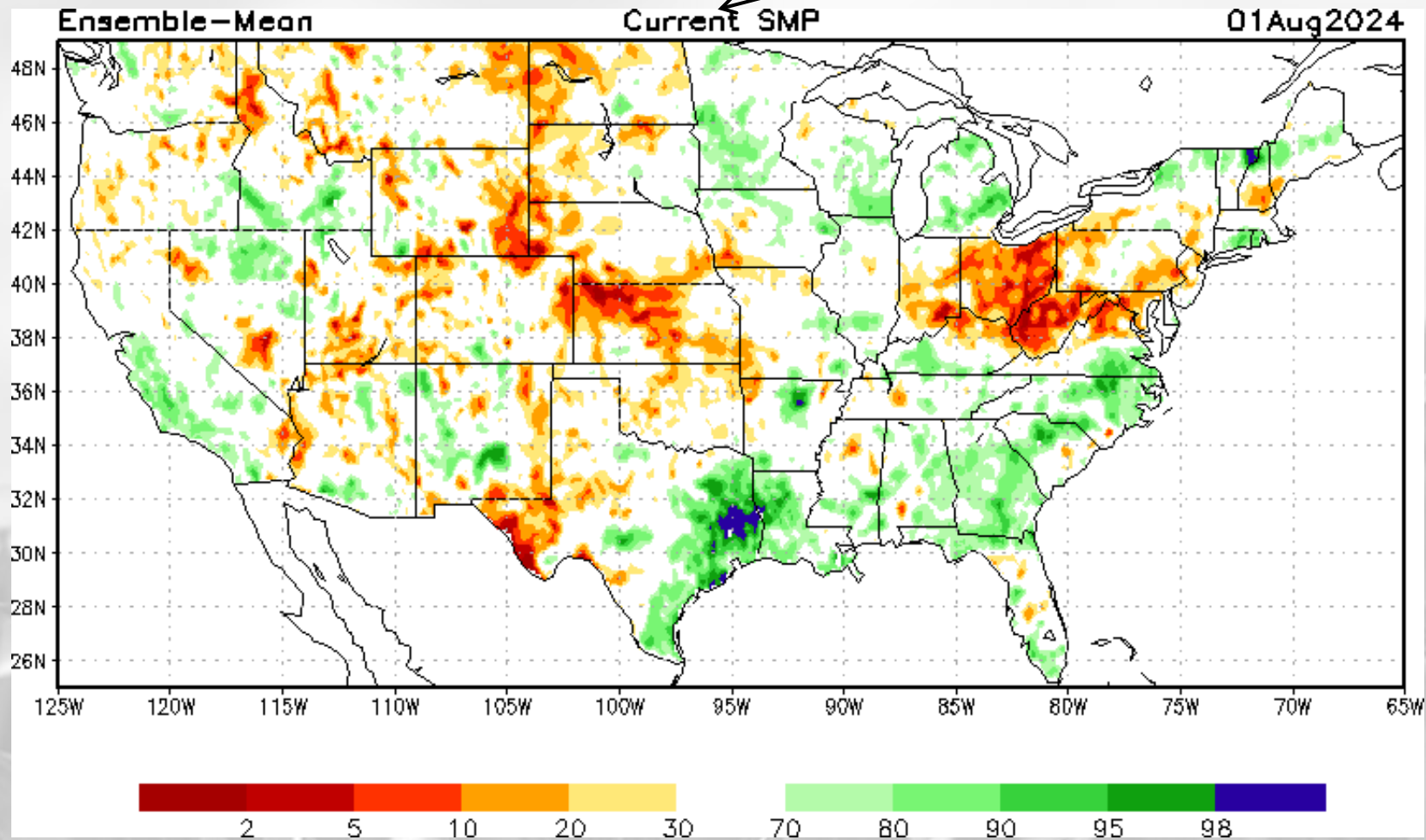


Source(s): NASA
Data Valid: 08/06/24

Drought.gov

Soil Moisture Models

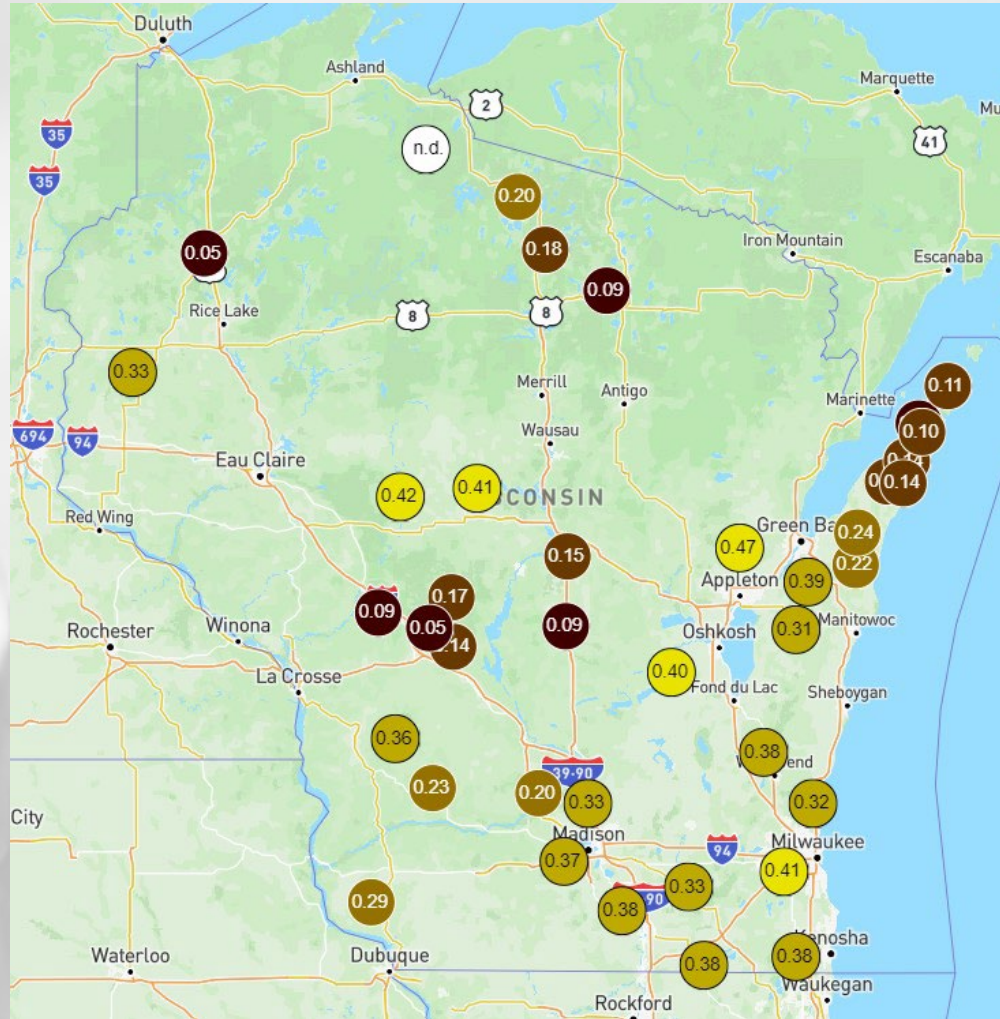
NOTE: this map displays the soil moisture percentile for August 1. It was the most recent update on August 6.



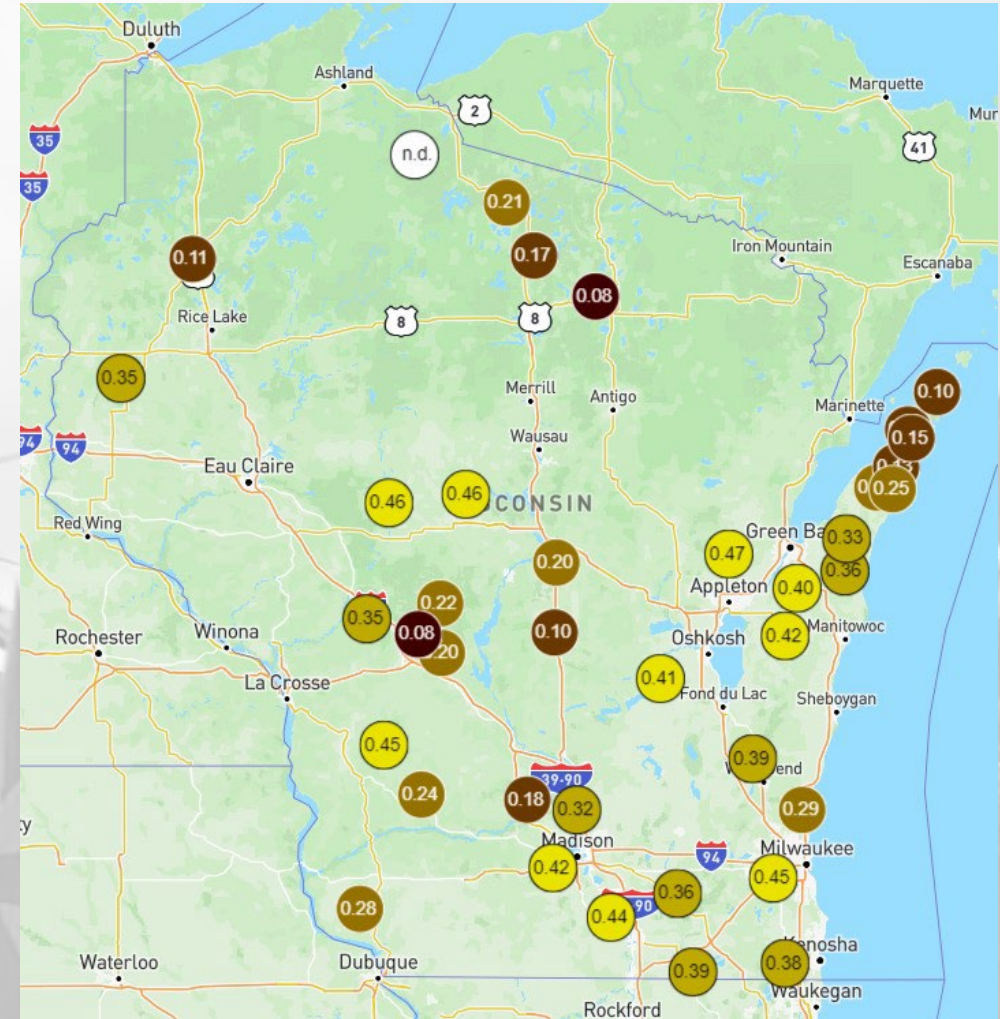
https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml

Wisconet Soil Moisture (4" Depth)

Friday, August 2nd @ Midday



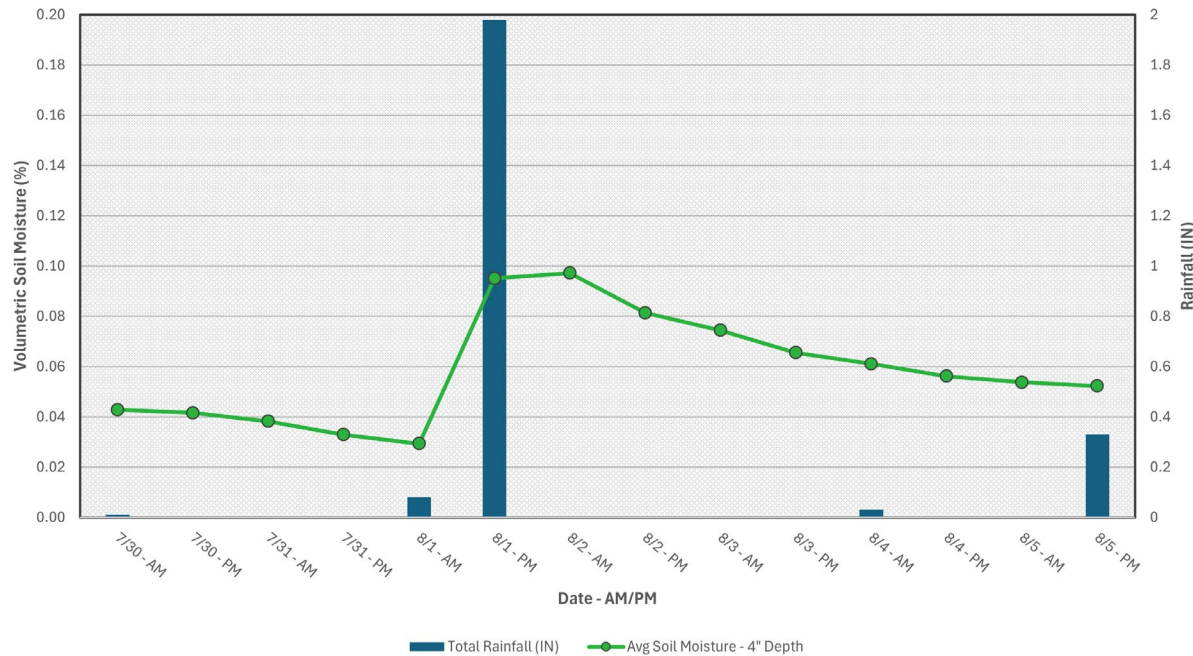
Tuesday, August 6th @ Midday



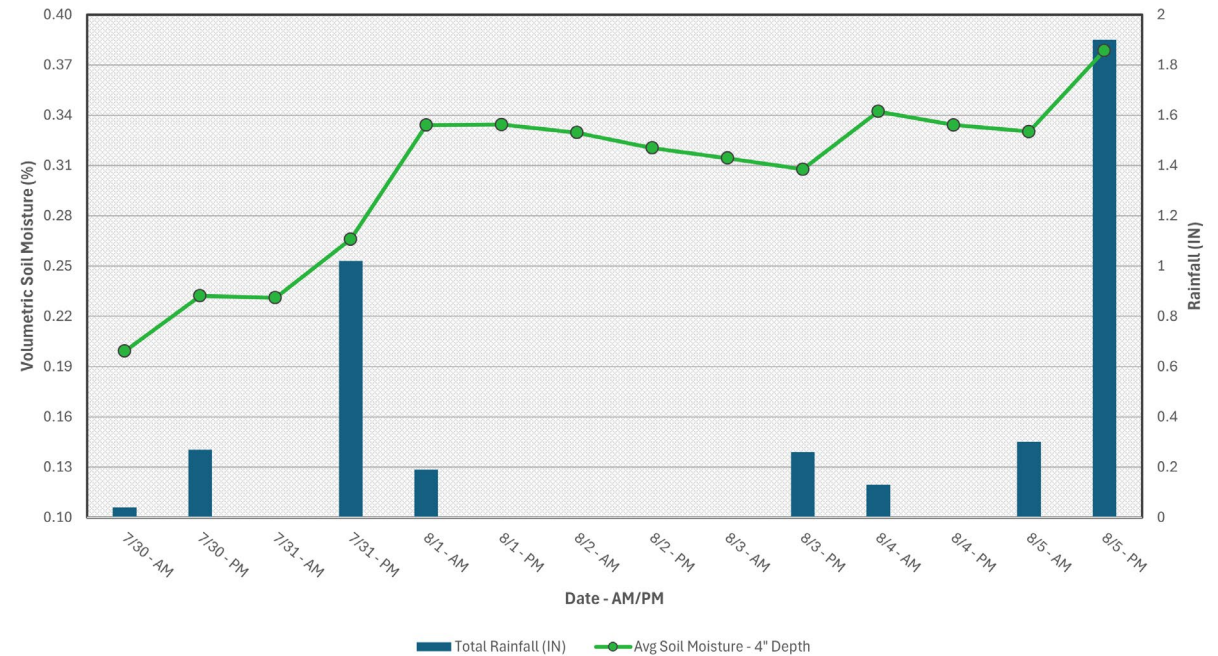
Wisconet Soil Moisture – 4" Depth

Soil moisture time series at select Wisconet stations

Rain & Soil Moisture - Hancock (Waushara Co.) - HNCK



Rain & Soil Moisture - Clear Lake (Polk Co.) - CLLK

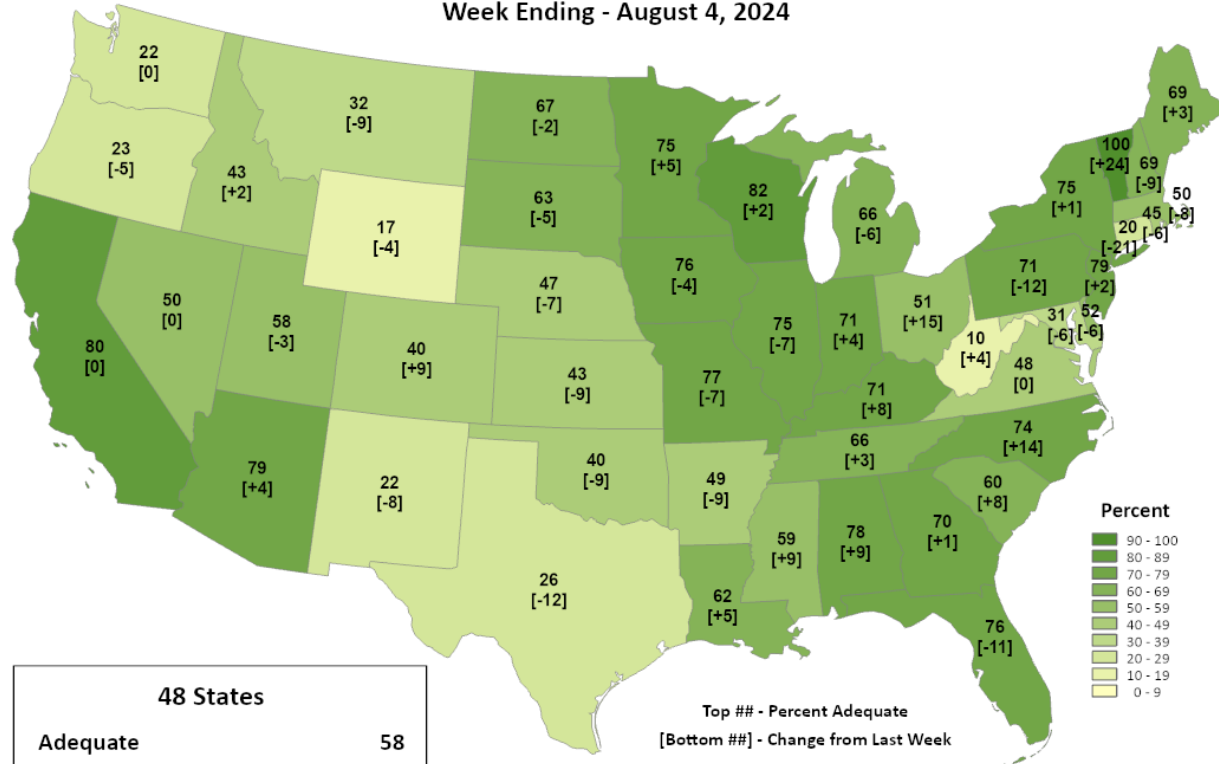


NASS Topsoil & Subsoil Moisture



This product was prepared by the
USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)

Topsoil Moisture Percent Adequate Week Ending - August 4, 2024



48 States	
Adequate	58
Change from Last Week	-3

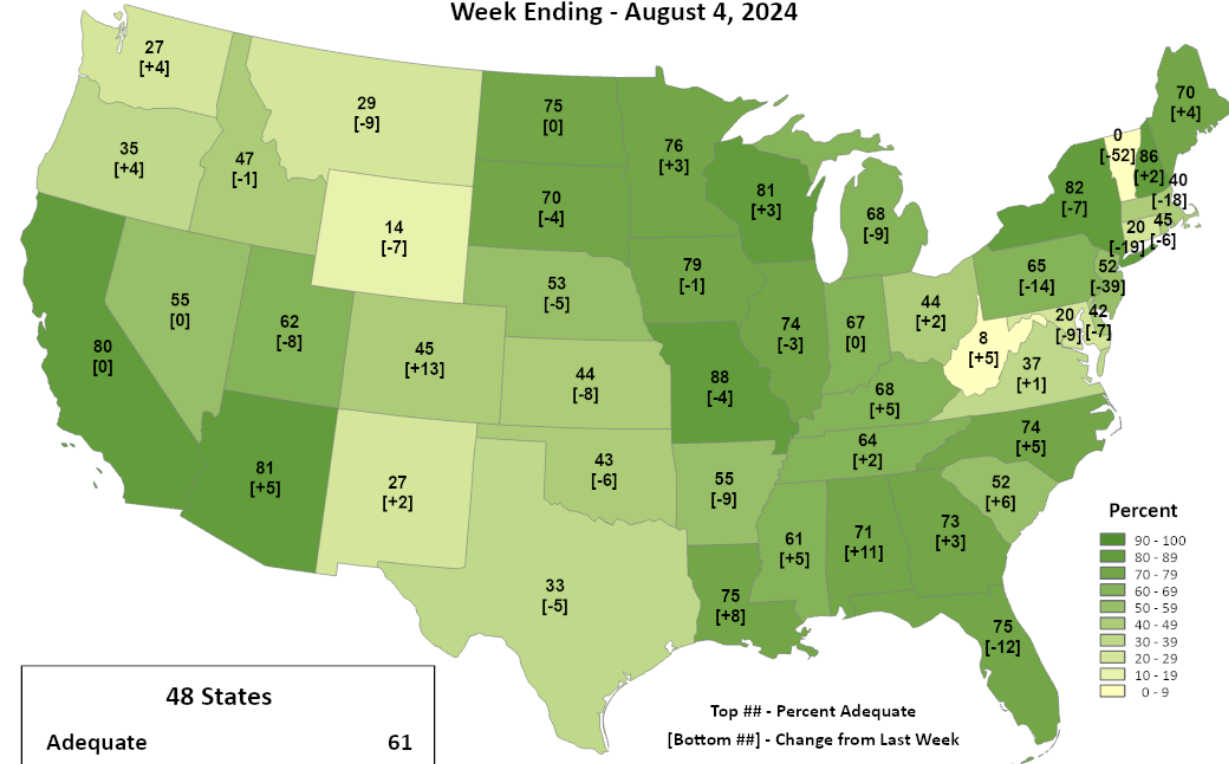
Top ## - Percent Adequate
[Bottom ##] - Change from Last Week

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.



This product was prepared by the
USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)

Subsoil Moisture Percent Adequate Week Ending - August 4, 2024



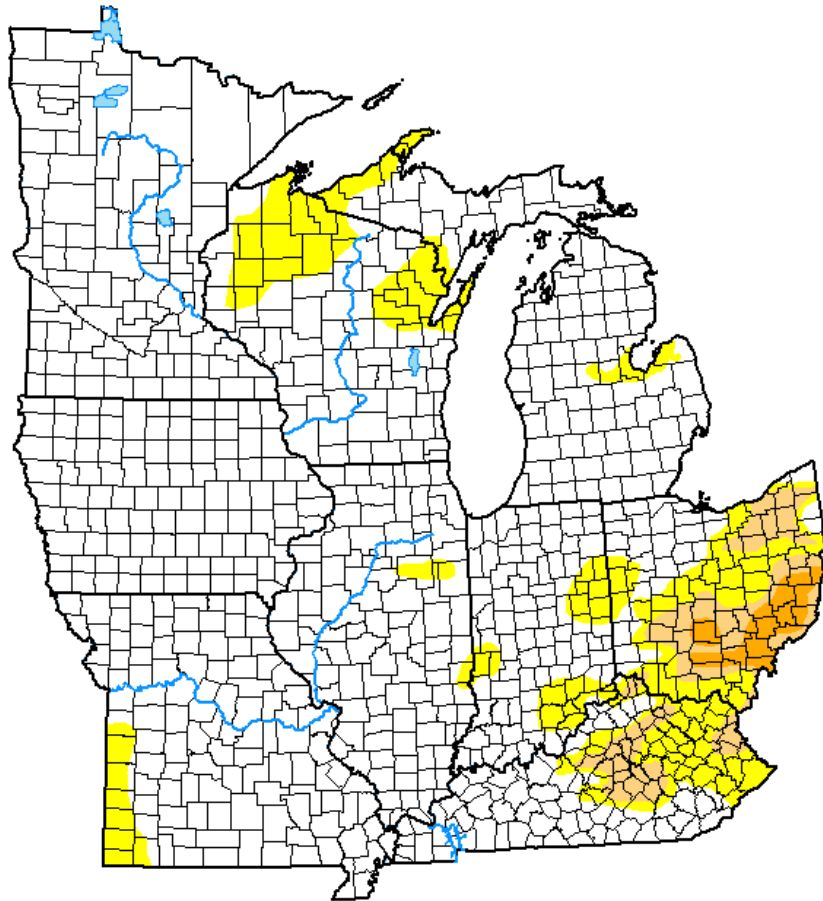
48 States	
Adequate	61
Change from Last Week	-1

Top ## - Percent Adequate
[Bottom ##] - Change from Last Week

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

US Drought Monitor

U.S. Drought Monitor Midwest



July 30, 2024

(Released Thursday, Aug. 1, 2024)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	83.85	16.15	4.48	1.14	0.00	0.00
Last Week 07-23-2024	88.99	11.01	3.85	0.82	0.00	0.00
3 Months Ago 04-30-2024	65.57	34.43	18.32	4.95	0.28	0.00
Start of Calendar Year 01-02-2024	22.92	77.08	50.25	20.76	4.20	0.00
Start of Water Year 09-26-2023	16.82	83.18	54.98	23.81	6.21	0.13
One Year Ago 08-01-2023	23.90	76.10	52.43	22.35	4.96	0.00

Intensity:

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

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:

Lindsay Johnson
National Drought Mitigation Center



droughtmonitor.unl.edu

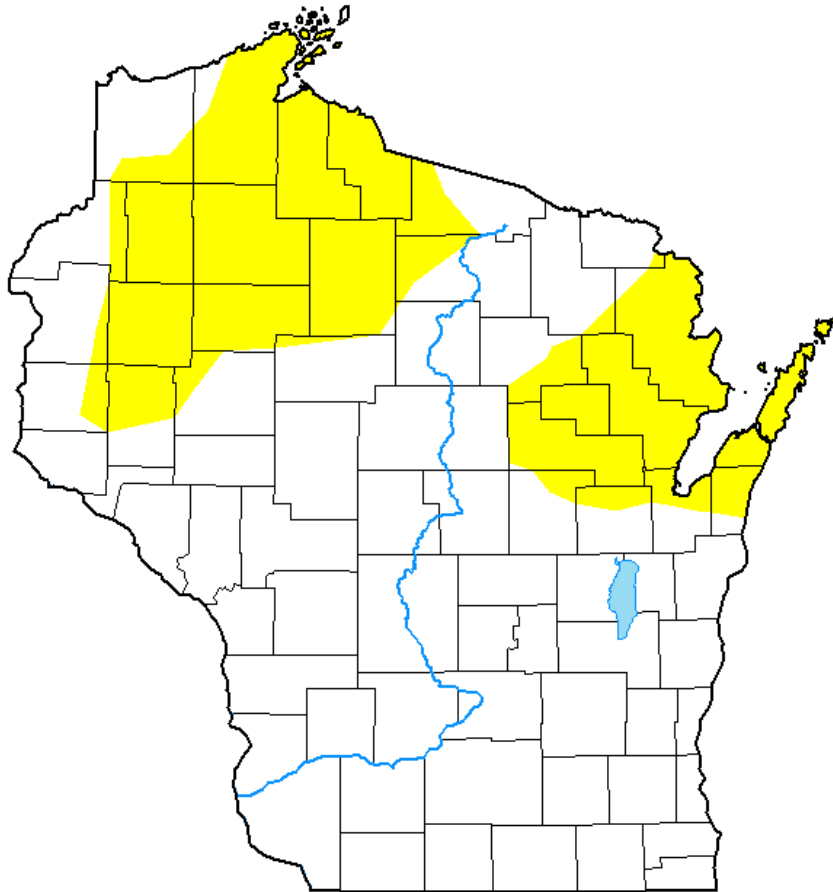
- Compared to last week:
 - Increases in drought/dryness coverage, with an addition of D0 in northern WI.
- **4.5%** of the Midwest is categorized in D1 (moderate) drought.
- **1.1%** in D2 drought, all in OH.
- **16%** of the Midwest is in D0 (abnormally dry) conditions, up from **11%** last week.

Note: D0 is not considered drought.

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

US Drought Monitor

U.S. Drought Monitor Wisconsin



July 30, 2024
(Released Thursday, Aug. 1, 2024)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	71.12	28.88	0.00	0.00	0.00	0.00
Last Week 07-23-2024	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago 04-30-2024	56.73	43.27	19.01	3.29	0.00	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 08-01-2023	2.06	97.94	80.64	41.92	12.15	0.00

Intensity:

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

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>

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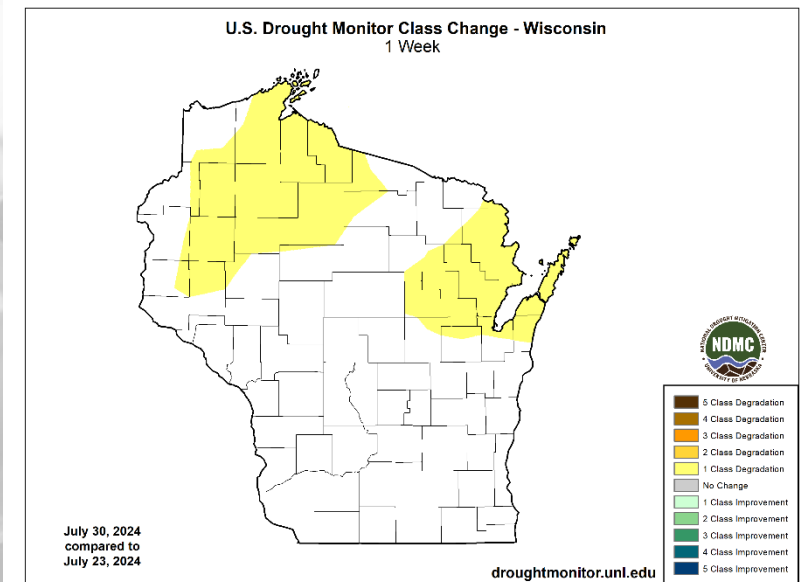
droughtmonitor.unl.edu

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

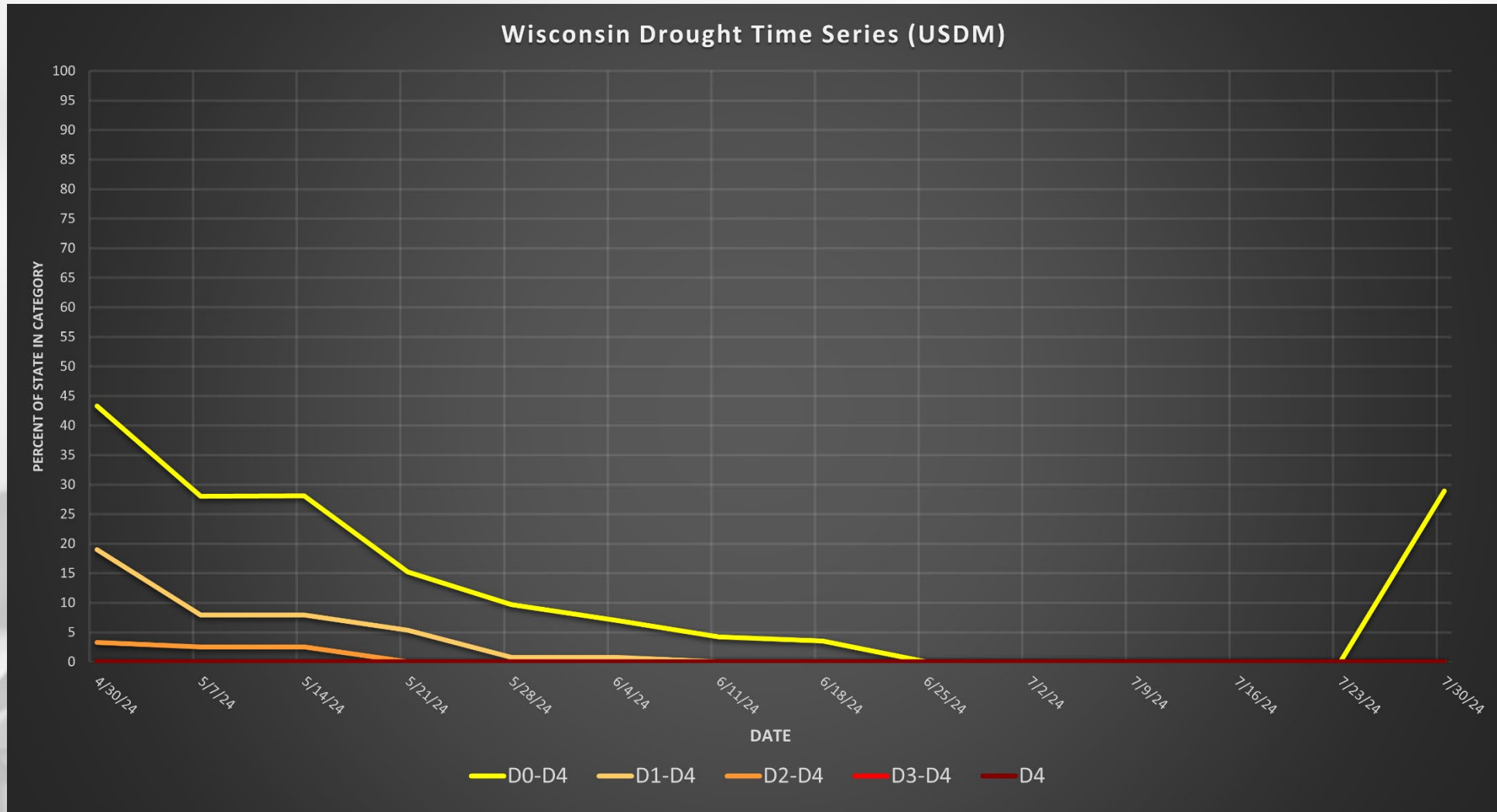
Amount of state in:

- D1-D4 – 0.0% --
- D2-D4 – 0.0% --
- D3-D4 – 0.0% --
- D4 – 0.0% --

Note: ↑↓ indicate change from last week. Red up arrows indicate increase in drought area; vice-versa for green arrows.



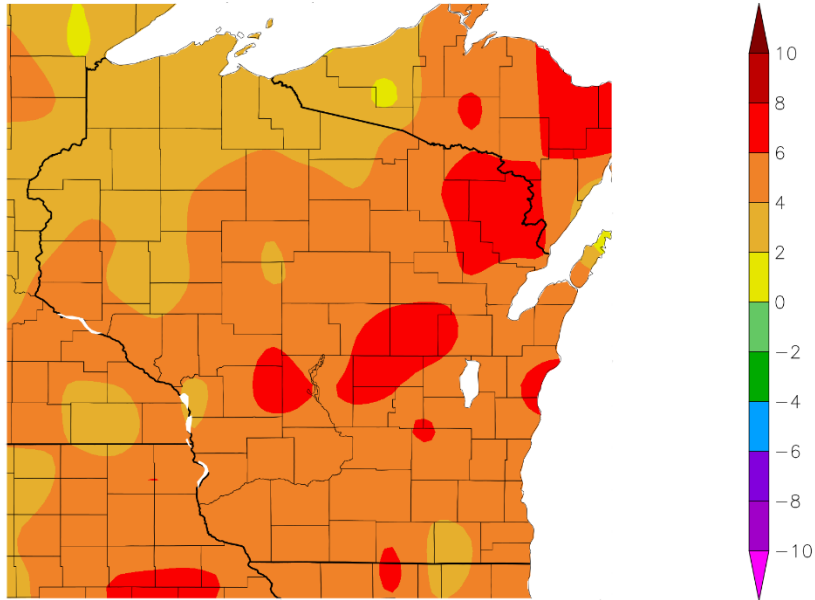
USDM Time Series



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

7 Day Temperatures

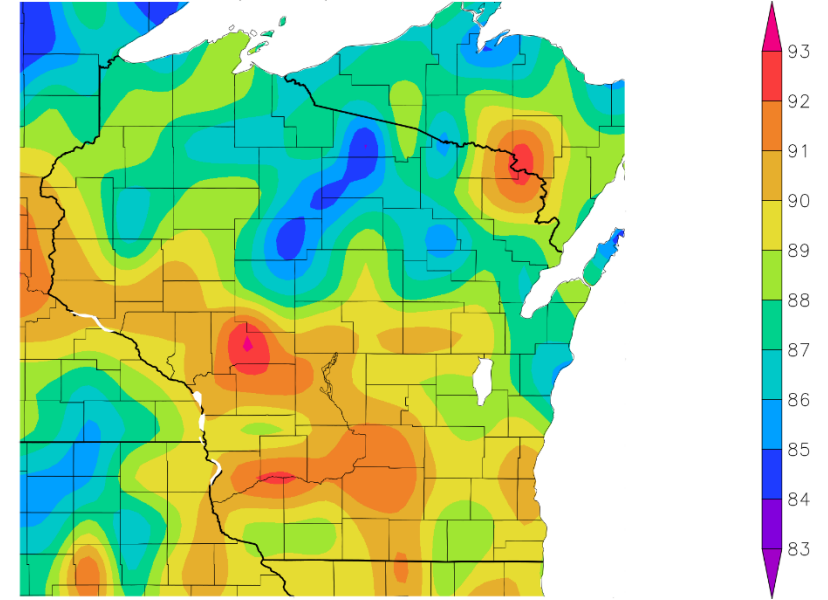
Departure from Normal Temperature (F)
7/30/2024 – 8/5/2024



Generated 8/6/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Highest 1-Day Maximum Temperature (F)
7/30/2024 – 8/5/2024



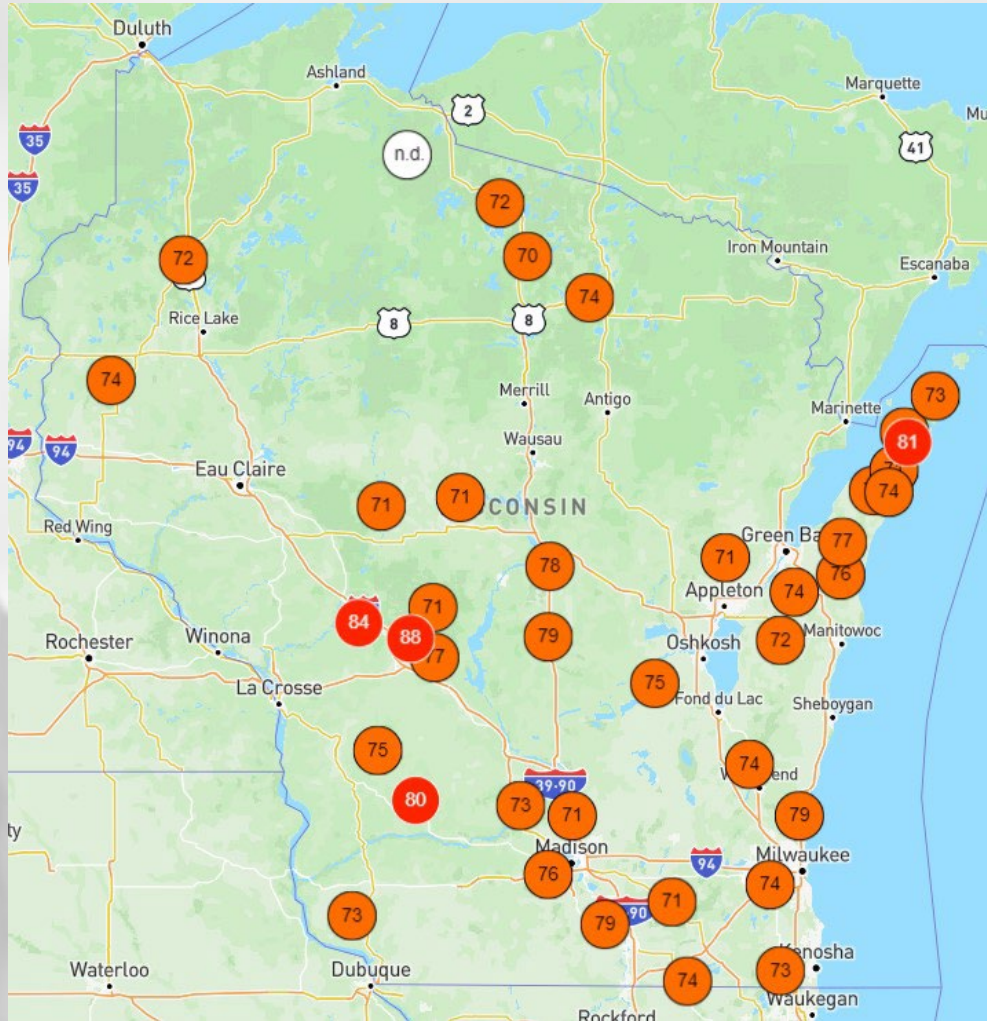
Generated 8/6/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

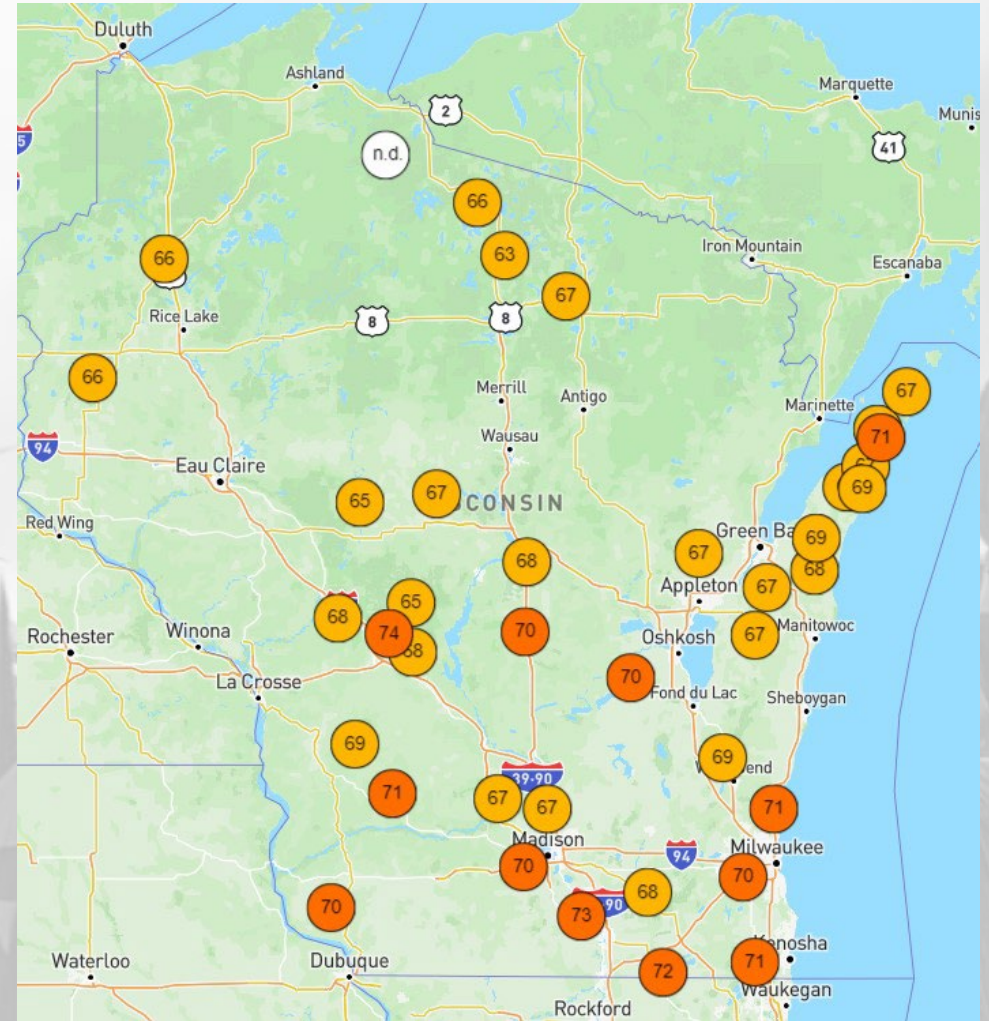
- Last week was **above normal** by $\geq 4^{\circ}\text{F}$ for the majority of WI.
- Some in the Central Sands and far NE experienced average temps $> 6^{\circ}\text{F}$ **above normal**.
- Weekly 1-day maximums in the **low 90's** for many in western and southern WI.

Wisconet Soil Temp (4" Depth)

Friday, August 2nd @ Midday

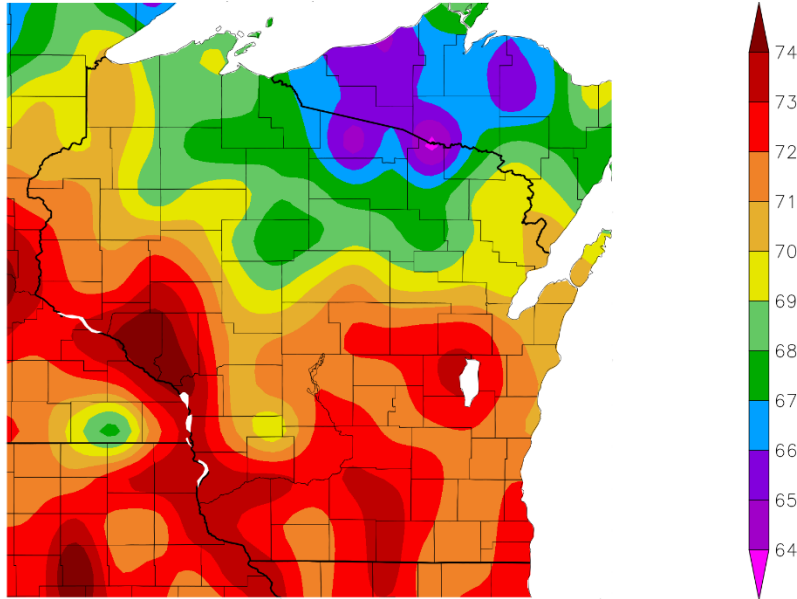


Tuesday, August 6th @ Midday



30 Day Temperatures

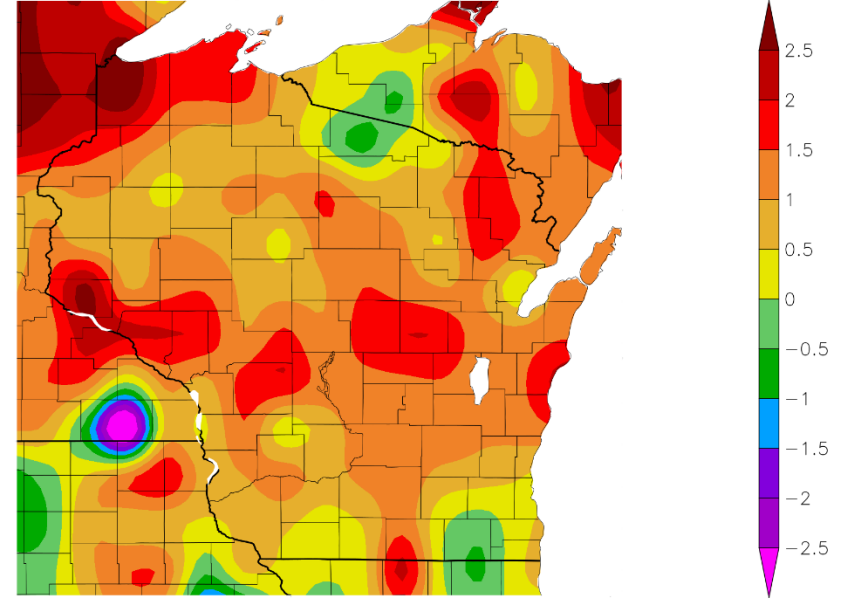
Temperature (F)
7/7/2024 – 8/5/2024



Generated 8/6/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Temperature (F)
7/7/2024 – 8/5/2024



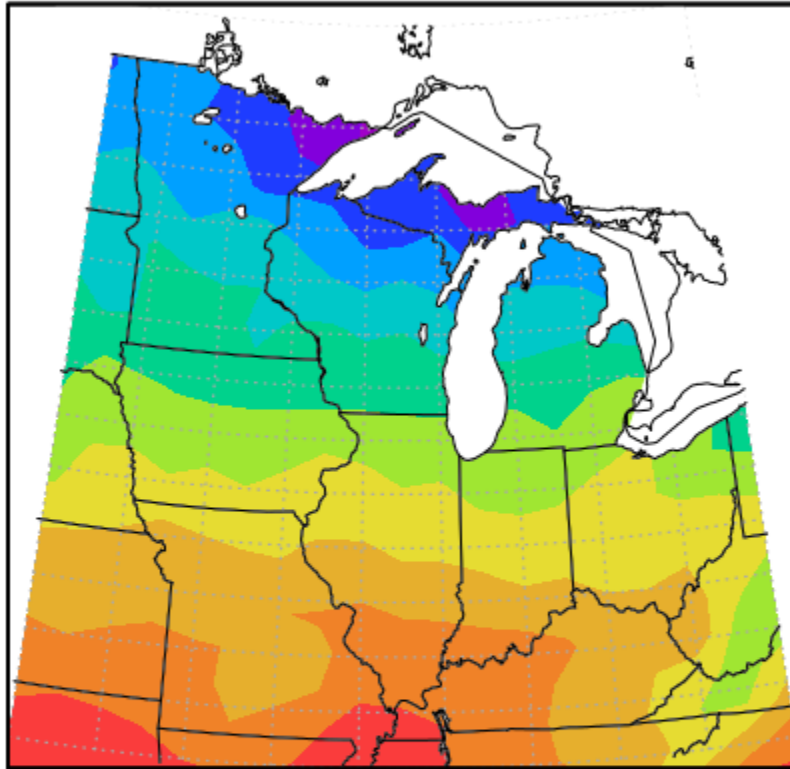
Generated 8/6/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Temperatures for the past month ranged from **70-72°F** in the S & W to **64-67°F** in the far N.
 - **Above average** by 0.5-2°F for most compared to climatological (1991-2020) average. This is flip-flopped from last week's departure from average.
 - **Slightly below average** in parts of the NC and far SE.

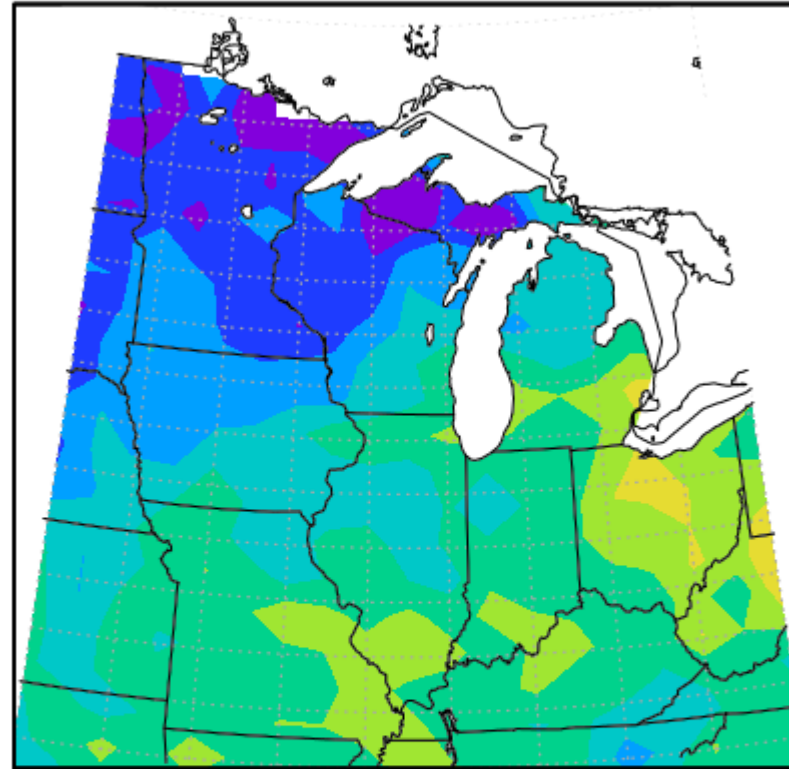
Growing Degree Days (Base = 50°F; Since April 1)

Total MGDD from 4/1/2024 to 8/5/2024



Midwestern Regional Climate Center
Purdue University

MGDD Departure, 4/1/2024 to 8/5/2024



Midwestern Regional Climate Center
Purdue University
Normals Period, 1991–2020

- **1800-2000** GDD in the S to **1200-1600** GDD in the N.
- SE WI is **150-200** GDD further ahead of the average; **within -/+50** of average in the W/NW and far north.

To calculate GDD for your corn variety and planting date, use this [tool](#).

To see specific degree models for pests in your location, use the [Vegetable Disease & Insect Forecasting Network](#).

https://mrcc.purdue.edu/climate_watch

NASS Crop Progress – Corn

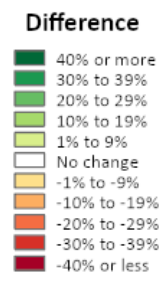
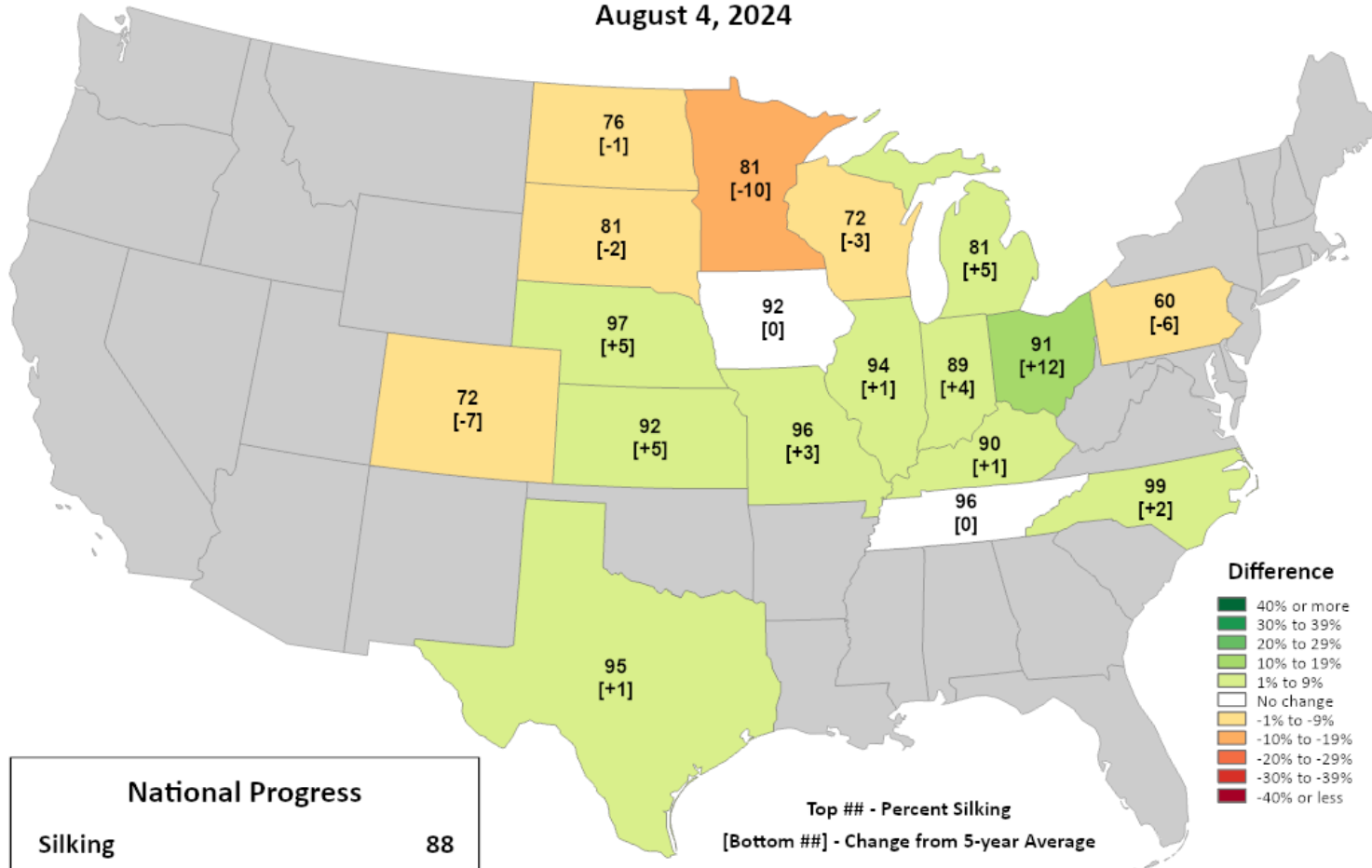


This product was prepared by the
USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)

Corn Progress

Percent Silking

August 4, 2024



National Progress	
Silking	88
Change from 5-year Average	0

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

- Silking is nearing 75% complete in WI corn fields. Silking is **behind normal pace** in WI and points to the W.
- In WI, silking is **72% complete**. 3% behind the 5-year average pace & up **14%** from last week.
- Doughing → **24% complete**

NASS Crop Progress – Soybean

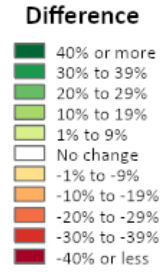
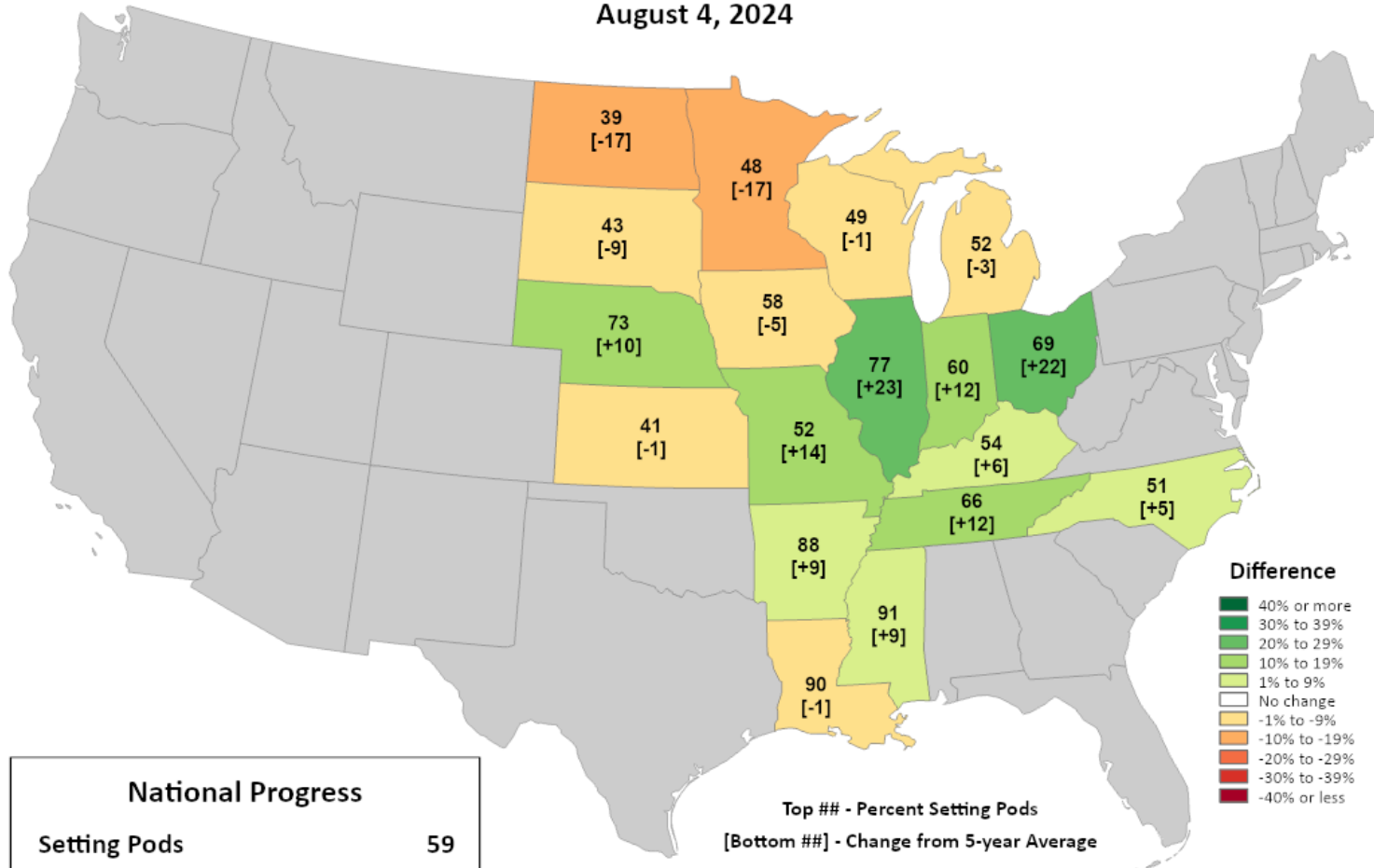


This product was prepared by the
USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)

Soybeans Progress

Percent Setting Pods

August 4, 2024



National Progress	
Setting Pods	59
Change from 5-year Average	+3

Top ## - Percent Setting Pods
[Bottom ##] - Change from 5-year Average

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

- Soybean pod setting is slightly **behind normal pace** in WI and in surrounding states. **Well ahead** of normal pace to the S/SE.
- In WI, pod set is **49% complete**. 1% behind of the 5-year average pace & up **19%** from last week.
- Blooming → **81% complete**

NASS Crop Condition

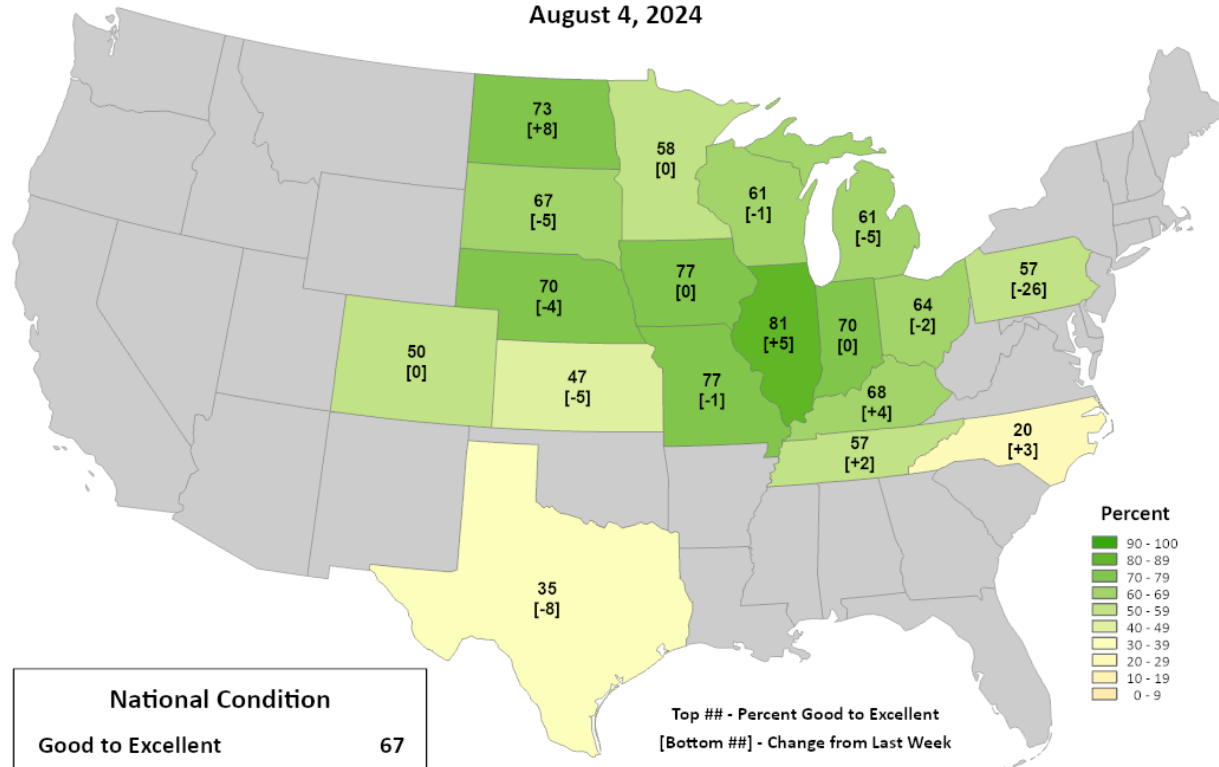


This product was prepared by the
USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)

Corn Conditions

Percent Good to Excellent

August 4, 2024



National Condition	
Good to Excellent	67
Change from Last Week	-1

Top ## - Percent Good to Excellent
[Bottom ##] - Change from Last Week

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

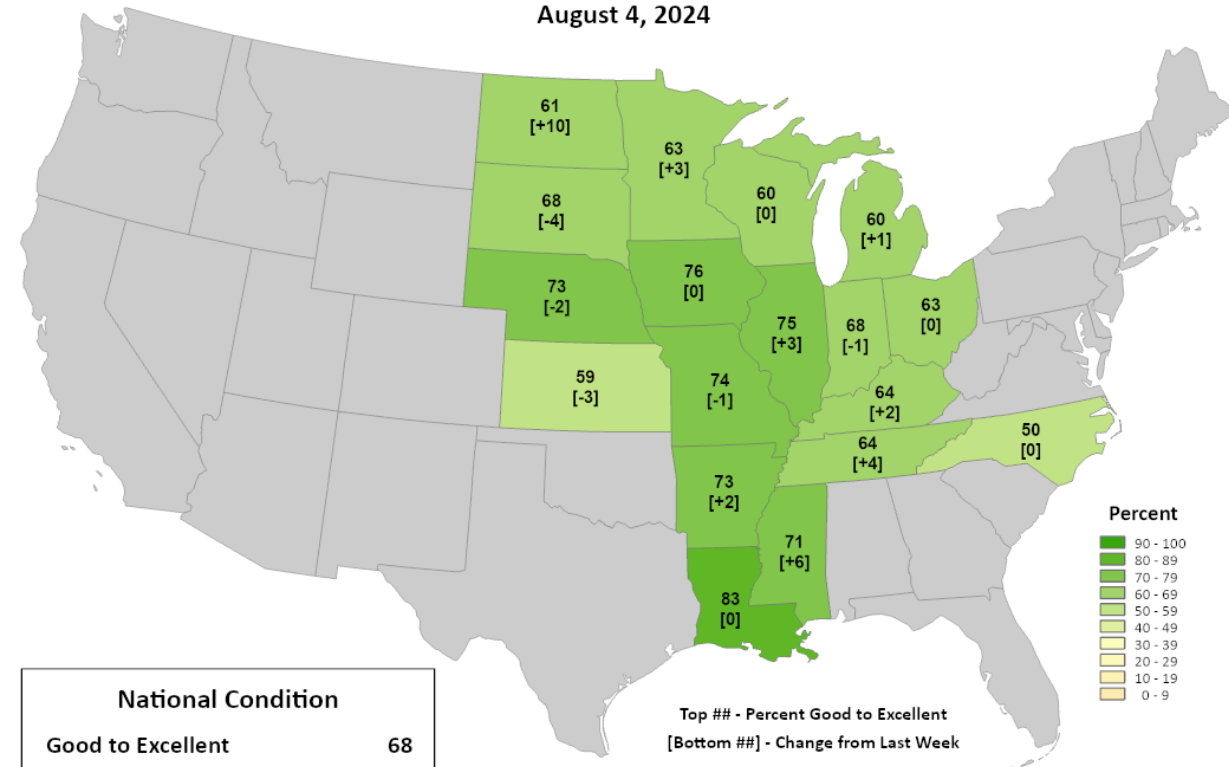


This product was prepared by the
USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)

Soybean Conditions

Percent Good to Excellent

August 4, 2024



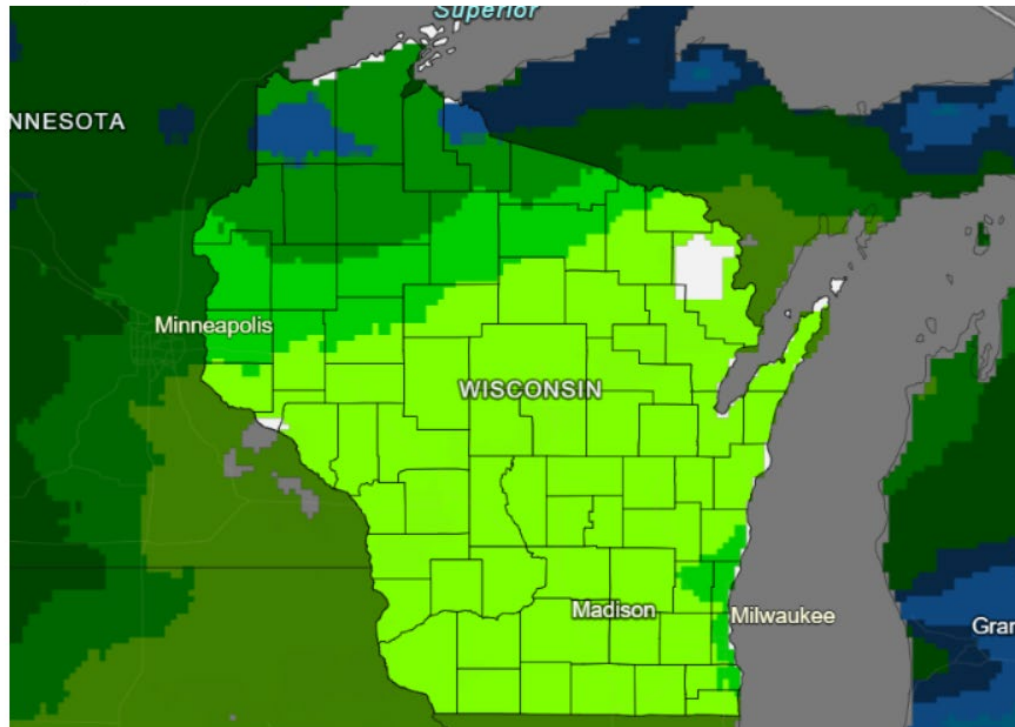
National Condition	
Good to Excellent	68
Change from Last Week	+1

Top ## - Percent Good to Excellent
[Bottom ##] - Change from Last Week

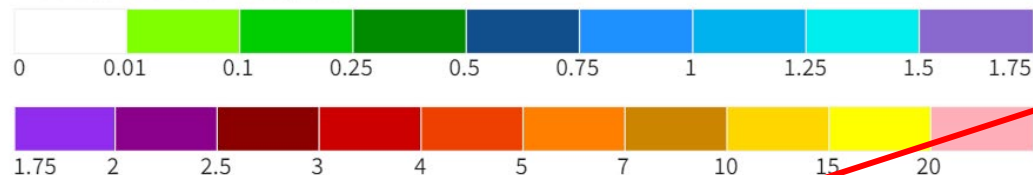
Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

7 Day Precip Forecast

7-Day Quantitative Precipitation Forecast for August
6-13, 2024



Predicted Inches of Precipitation



Source(s): National Weather Service Weather Prediction Center
Last Updated: 08/06/24

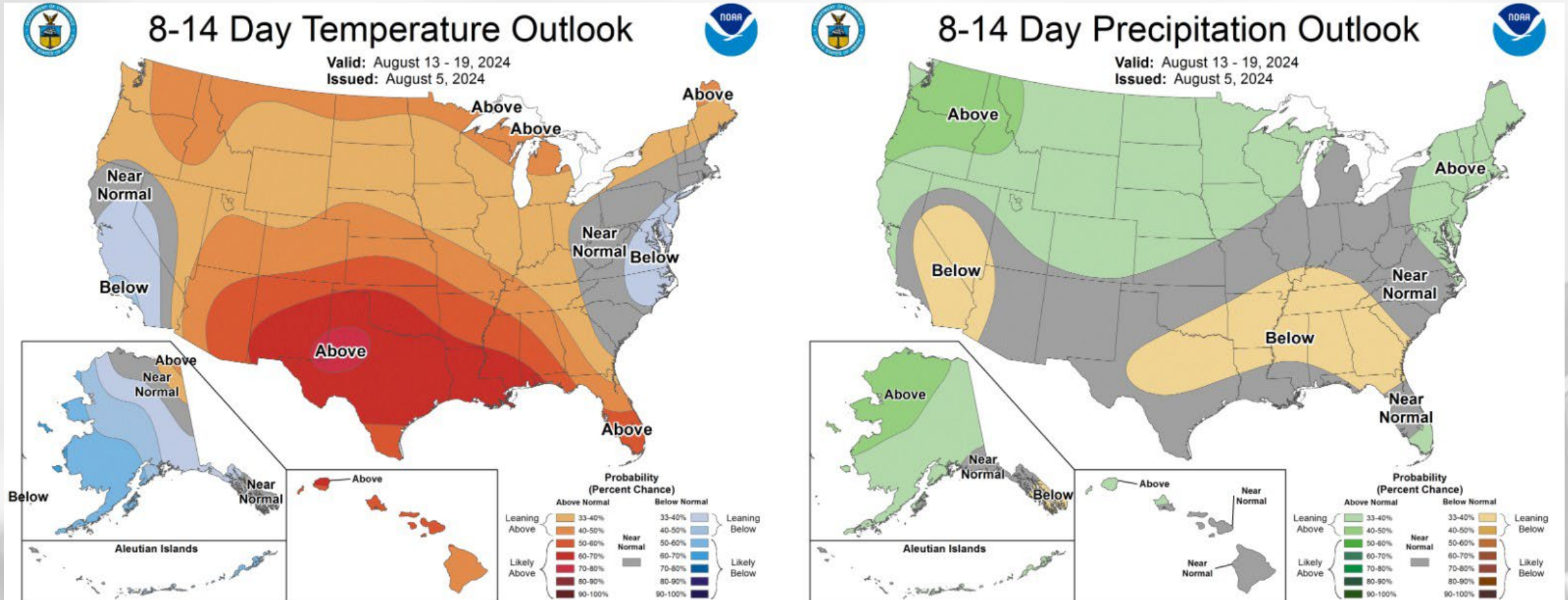
Drought.gov

- **A drier week** forecasted for WI this next week.
 - Highest chances for rain on **Wednesday into Thursday morning**.
 - Precip most likely in the **NW**, but totals are forecasted to be **<1"**.

Forecast for 8/6/24 thru 8/13/24
(Begins at 7am CDT)

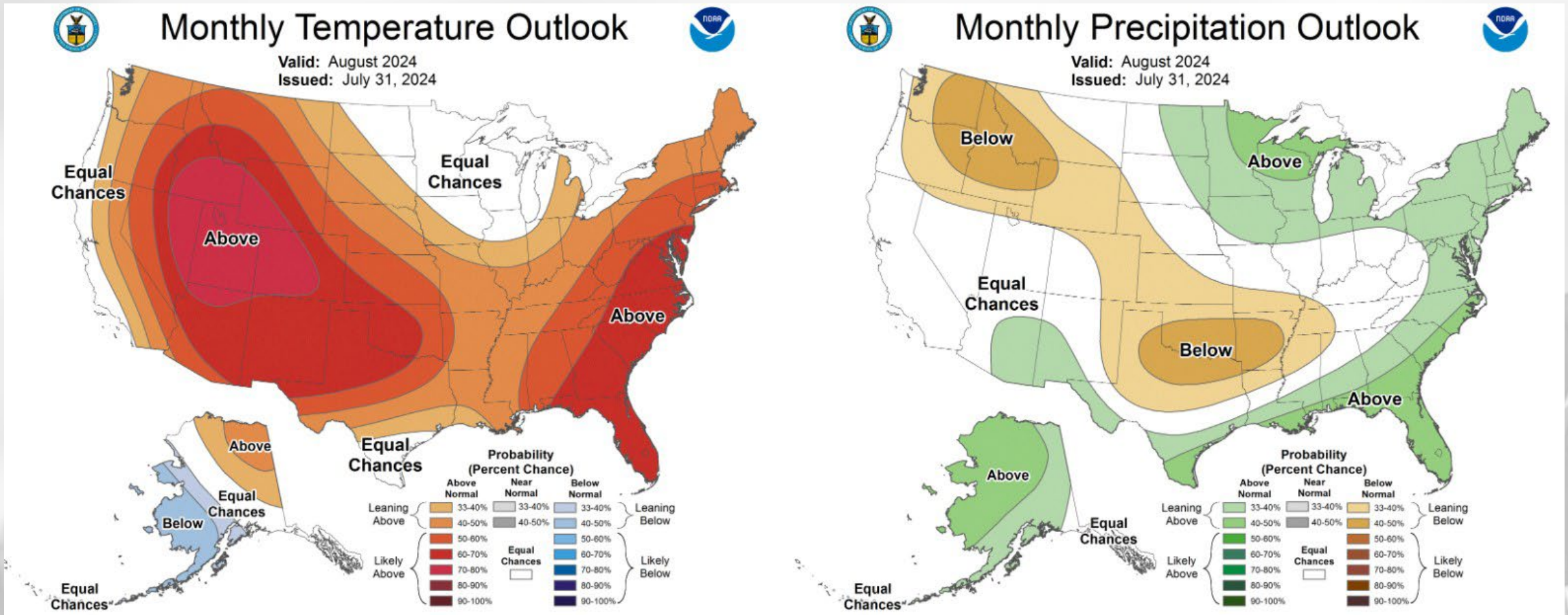
<https://www.wpc.ncep.noaa.gov/qpf/p168i.gif>
<https://www.drought.gov/states/wisconsin>

8-14 Day Temp & Precip Outlook



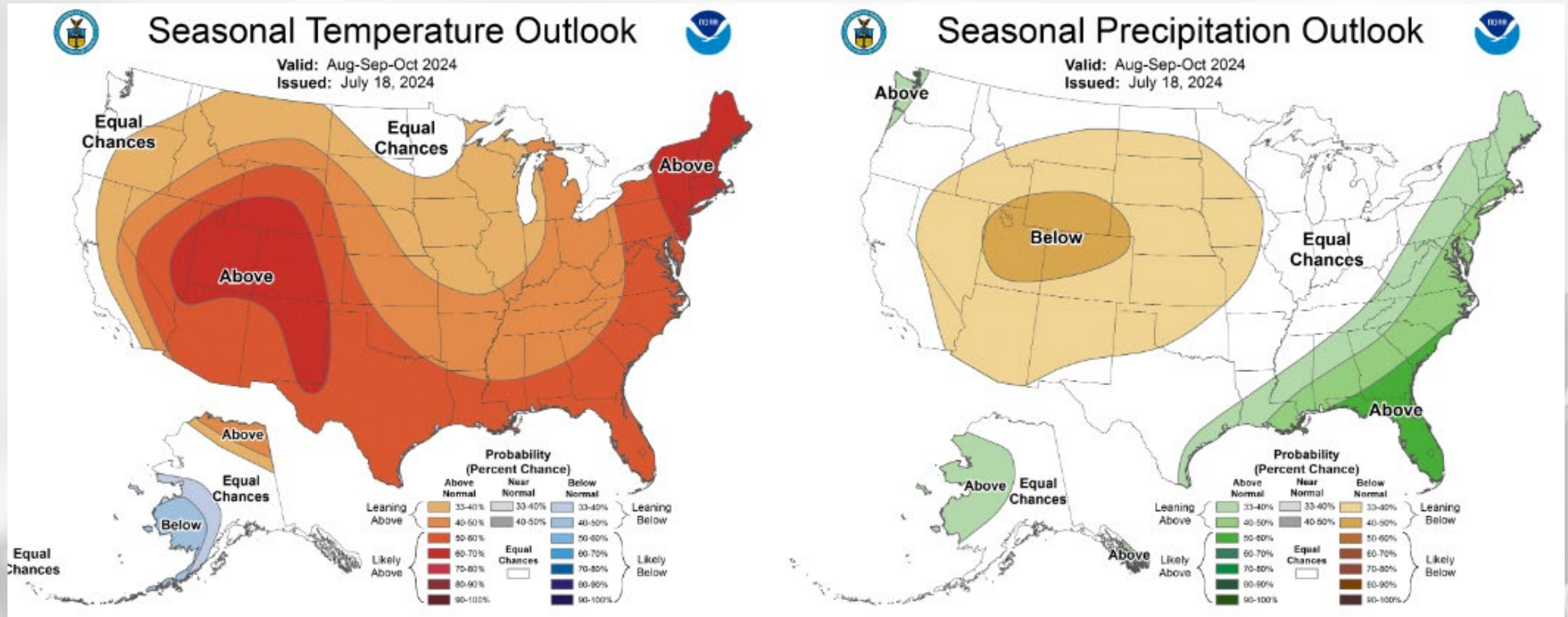
Mid August: Temperatures leaning above normal. Precipitation leaning above normal except for the far SE (near normal).

30 Day Temp & Precip Outlook



Month of August: Temperatures uncertainty with equal chances. Precipitation leaning above normal, more so in the N.

90 Day Temp & Precip Outlook



Late summer into fall: Temperatures leaning towards above normal. Precipitation uncertainty with equal chances.

Take-Home Points

Current Conditions:

- A **warmer-than-average** week for most of WI last week helped push the 30-day average temps **above the climatological normal**.
- Precip has been very **hit-or-miss** over the past week & month. Monthly totals were **highest in the S/SE and parts of the NW**.

Impact:

- **Abnormal dryness** is showing up in parts of the N, with higher moisture percentiles in the middle of the state.
 - **Corn** silking is running **3%** behind normal pace, with **61%** of the crop reported in good to excellent condition.
 - **Soybeans** pod setting is running **1%** behind normal pace, with **60%** of the crop reported in good to excellent condition.
- GDDs are approaching **2000 (1600) units** in the southern (northern) counties, running **ahead of normal pace** in the S & E.

Outlook:

- **Lesser precip totals** forecasted across WI this next week, with a higher likelihood in the **NW**.
- Temperatures leaning **above normal** heading into mid August, with most in the state leaning towards **above normal** precip.
- The warmer-than-normal conditions have a higher probability to **continue** into early fall with a La Niña pattern taking shape. Currently, we are in a **neutral phase**.

Agronomic Considerations

Crop Development

- Soil moisture is adequate or even high in most places. Be cautious about trafficking fields during muddy conditions to avoid rutting. Remember, compaction occurs when soil water content is at, or slightly above, field capacity!
- Hot days mean accumulations of 20+ GDUs per day. Keep on top of your growth stages to time other applications.
- Scouting for crop stage and development of issues is very important this year as the wet spring means that there is a lot of variability in fields and across farms.
- As short season crops come off, consider diverse cover crop mixes to help mitigate any compaction that may have occurred this spring.

Manure Applications

- Runoff risk is low for most of the state in the next week. Be mindful of the possibility of runoff and plan manure applications accordingly. Check the DATCP runoff risk advisory forecast [here](#).
- After wheat harvest there is an opportunity for manure and cover crops, see info [here](#).

Pest Management

- Peak western bean cutworm flights have passed in the South. Sign up to receive text alerts when pests are in your region [here](#).
- Japanese beetles have emerged, monitor for defoliation thresholds, see [here](#) for management information.
- Conditions have been right in many places for tar spot and white mold, information available [here](#).
- Time to scout for soybean aphid, see more info [here](#).

Forage Management

- Ensure wide swaths when mowing alfalfa to increase rate of drying and harvest sooner, reducing risk of rain damage.
- Avoid hay fire risks. Be aware of hay moisture and monitor stack temperature when putting up dry hay, consider wrapped bales.
- Look out for herbicide carryover, volunteers in late summer seeding of alfalfa after wheat. [Read more.](#)

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.

Thank you!!

-The WACO Team

Citizen Science Opportunity

CoCoRaHS – Community Collaborative Rain, Hail, & Snow Network

The Mission

(From cocorahs.org)

- Provide accurate high-quality precipitation data for end-users;
- Increasing the density of precipitation data available throughout the country;
- Encouraging citizens to have fun participating in meteorological science and heightening their awareness about weather;
- Providing weather education opportunities.



Sign Up Here:

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Photo Credit: USDA



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