

Wisconsin Ag Climate Outlook

Week of July 29, 2024

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A note from the authors

Due to the WACO authors having a full week of meetings, travel, and/or personal leave, this week's WACO is being compiled on **Monday, July 29, one day earlier than normal**. Please note that the observations and projections will be affected by this shift. Events that occur on late Monday and Tuesday, July 30, will be covered in next week's WACO.

Have a great week!!

-Team WACO

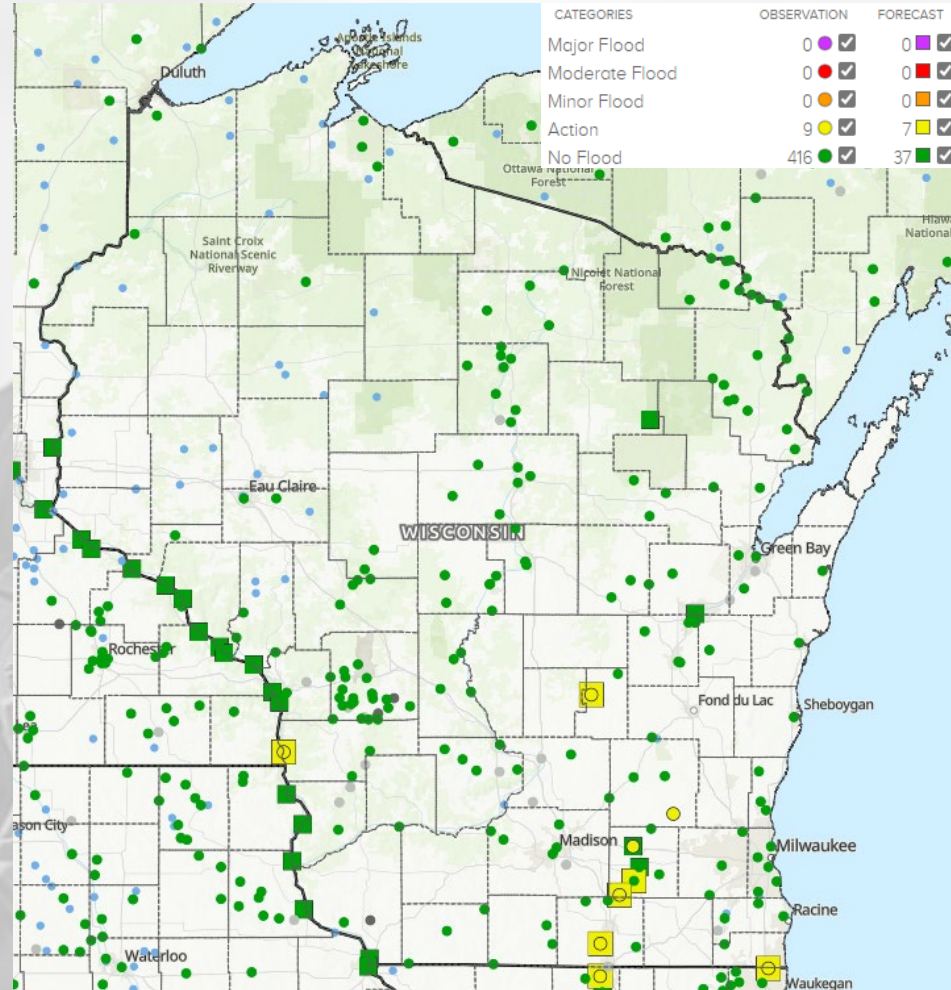
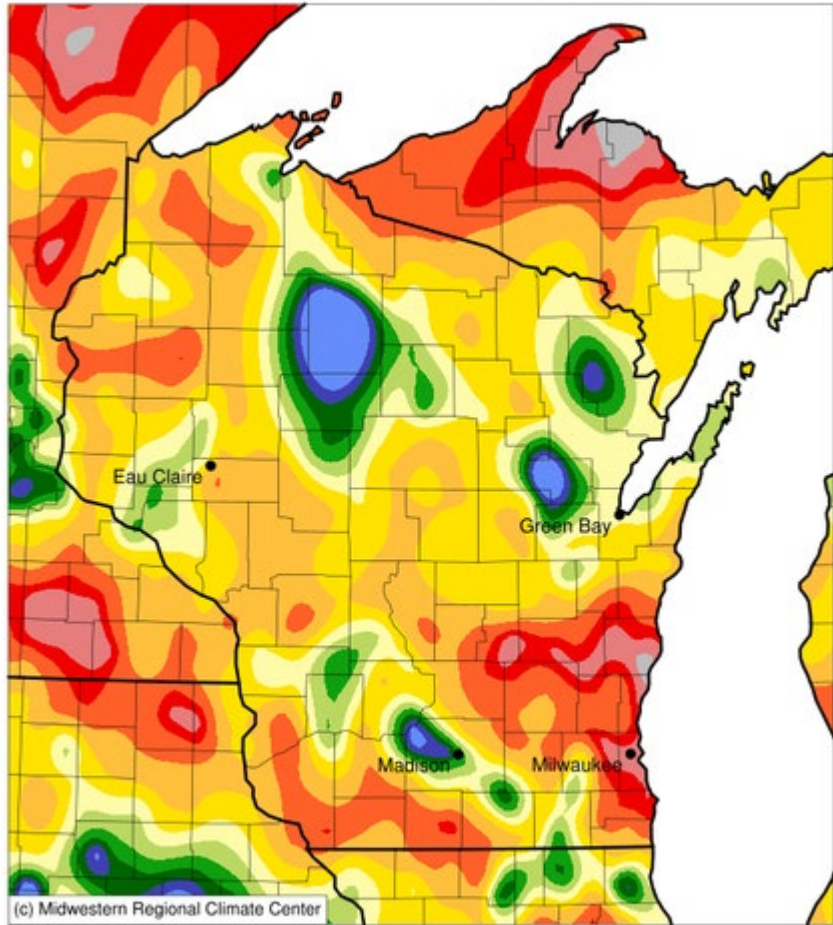
Key Points

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

- 1) Late July has been [cooler-than-normal](#) for most of WI, especially in the E/NE.
 - 2) Soil moisture levels remain at [good to adequate](#) levels for most, even after a [fairly dry week](#). Corn and soybeans in [good to excellent condition](#) are similar compared to last week.
 - 3) This next week looks to be a [bit more active](#) for precip, with a lean towards above average precip for [8-14 days out](#).
- 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](#).

Another Fairly Dry Week

Accumulated Precipitation (in): Percent of 1991-2020 Normals
July 22, 2024 to July 28, 2024

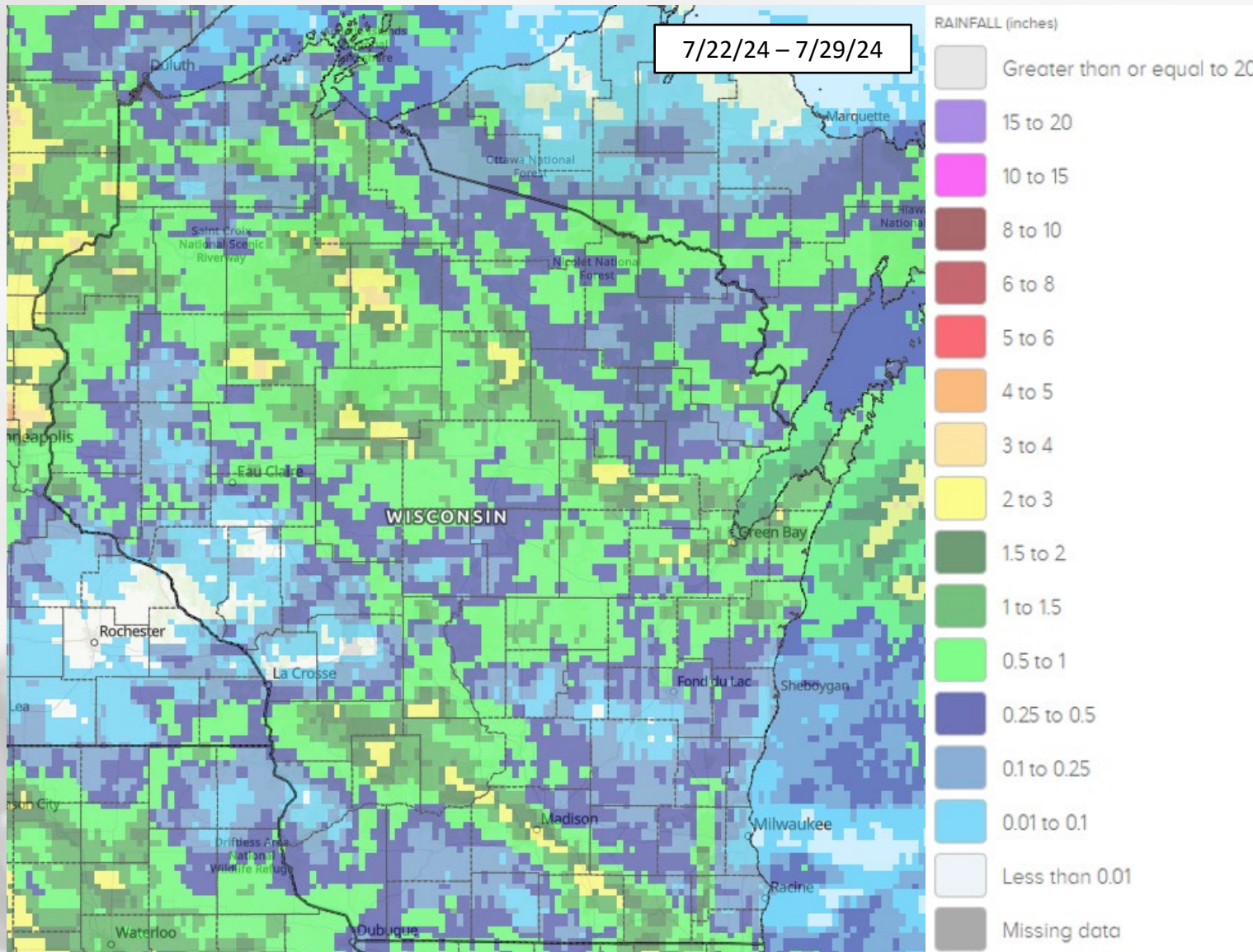


- A dry week for most in the state with many stations reporting **<75%** of the normal weekly total.
- River levels are **no longer at flood stage** in the state and are forecasted to **remain below flood stage**.

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

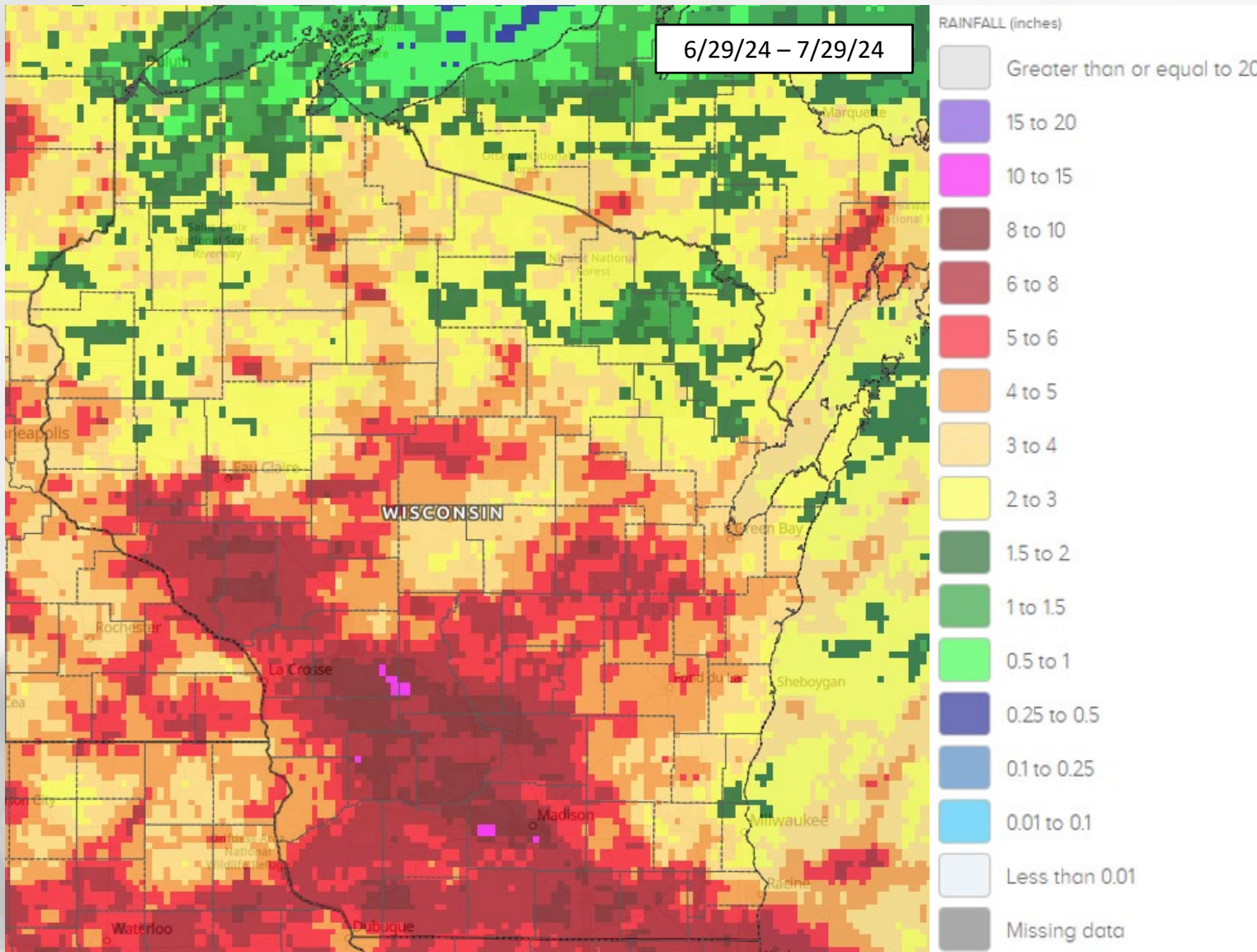
<https://mrcc.purdue.edu/CLIMATE>

7 Day Precip



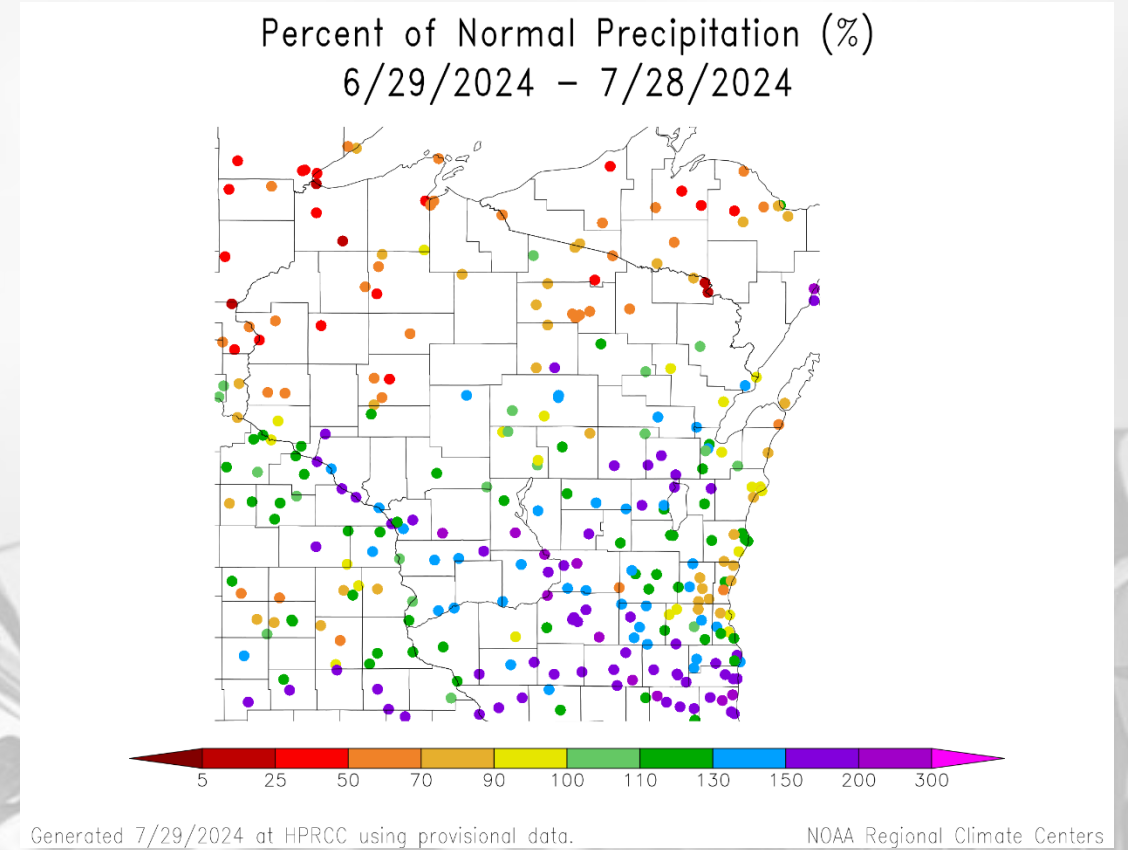
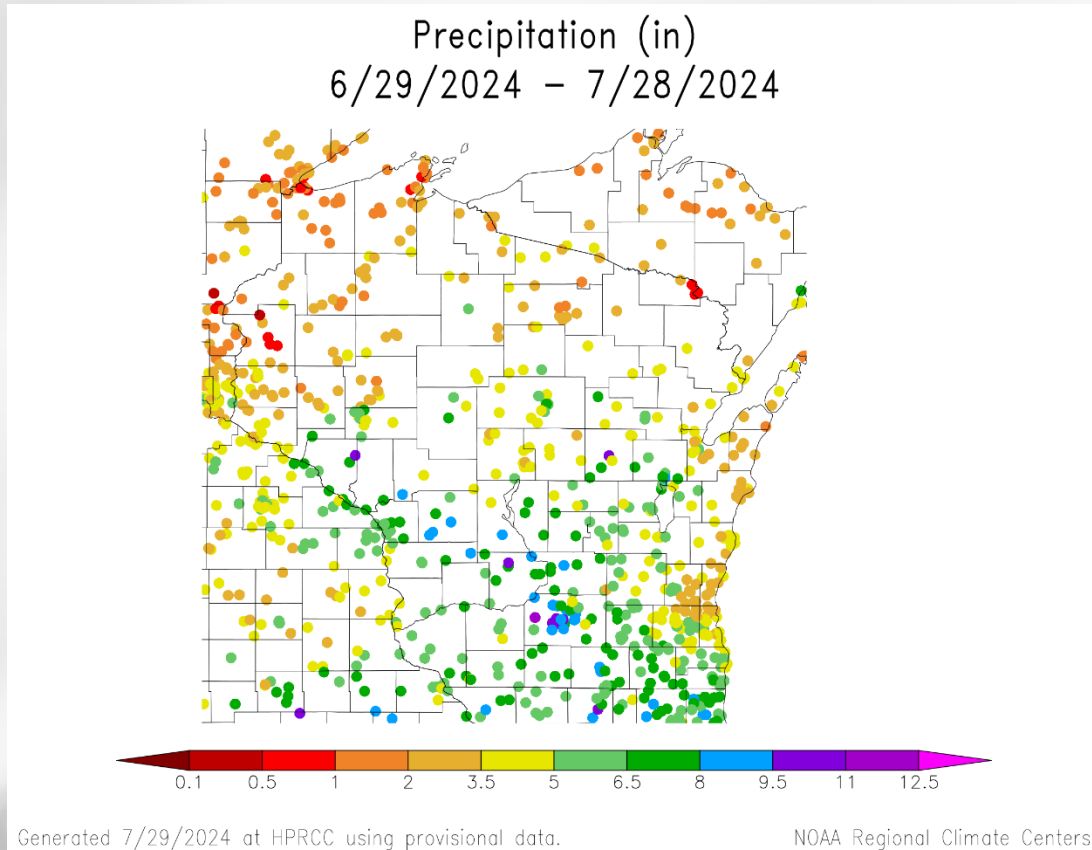
- Most of the state received a **<1"** of precip last week.
- Pockets of **2-3"** are scattered across the state.
- **Little to no precip** observed between La Crosse and Eau Claire, as well as south of Fond du Lac.

30 Day Precip



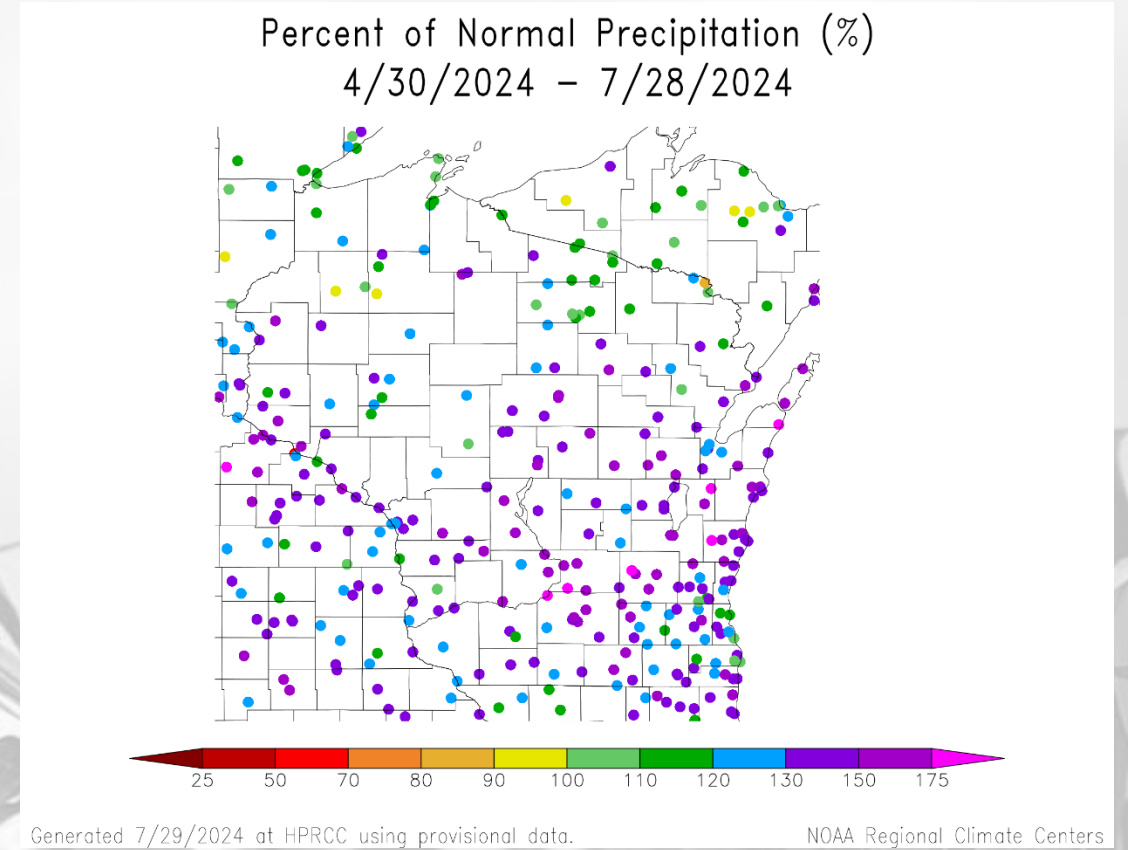
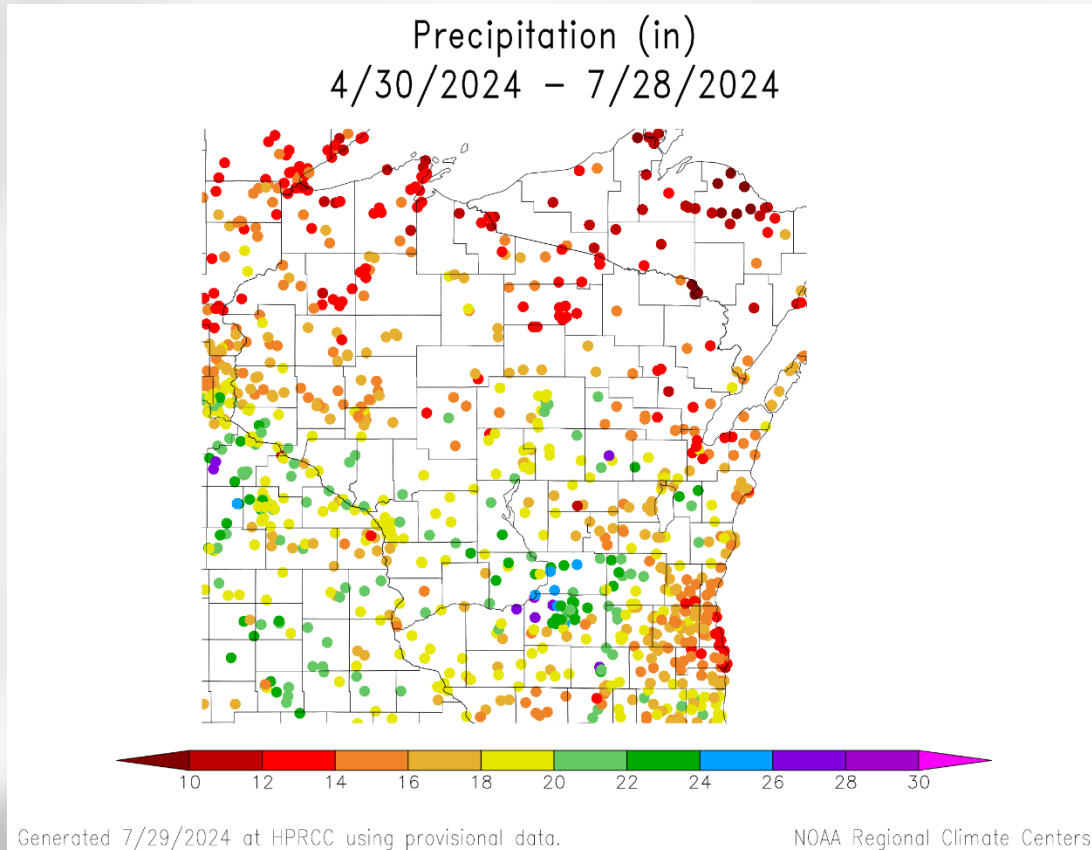
- **6" or more** was common in the WC, SW, and SC counties.
- Heaviest pockets in parts of Dane & Monroe Counties → estimated **>10"**.
- **3" or less** is estimated in large portions of the NW counties. Some areas in the far N had **<2"**.

30 Day Precip Total/% Avg.



- Highest monthly totals in a line from Madison to La Crosse → **8" or more common.**
- **5" or more** for the S & W counties, which was **130+% of average** (some stations over **200%**).
- Lower totals along the Lake Michigan shore and in the NW → **3.5" or less (<100% of avg.)**

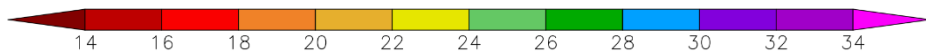
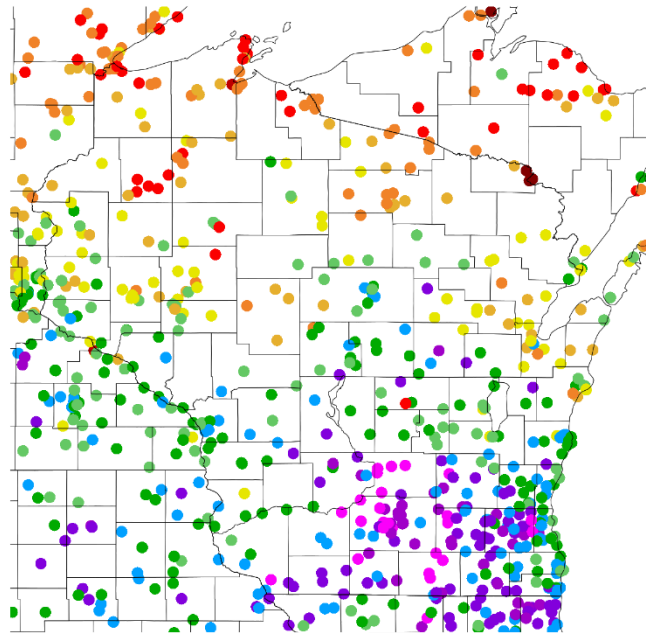
90 Day Precip Total/% Avg.



- **Over 2 feet** of precip accumulated between Madison & Portage; **20+”** common in the SC region.
- Lowest totals in the north and along Lake Michigan → **12-16”** (red/orange dots) common.
- Majority of stations are at **120% or more** of normal; **100-130%** near Milwaukee and the NW/NC.

2024 Precipitation (so far)

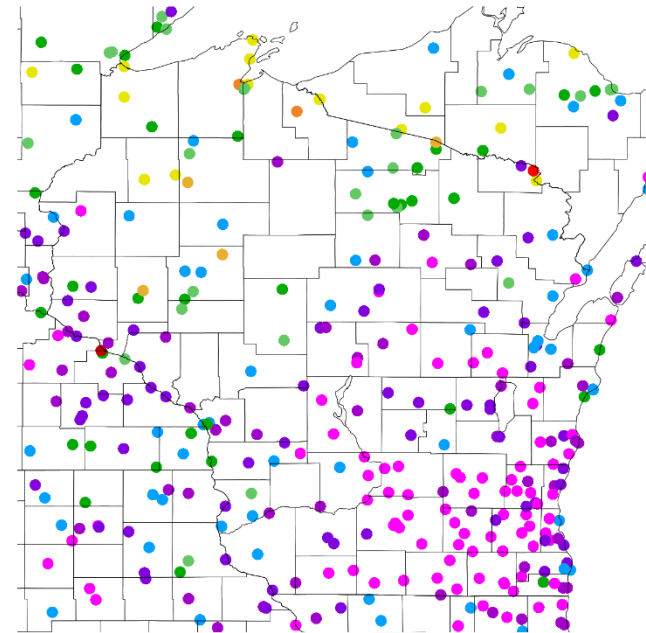
Precipitation (in)
1/1/2024 – 7/28/2024



Generated 7/29/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Precipitation (in)
1/1/2024 – 7/28/2024



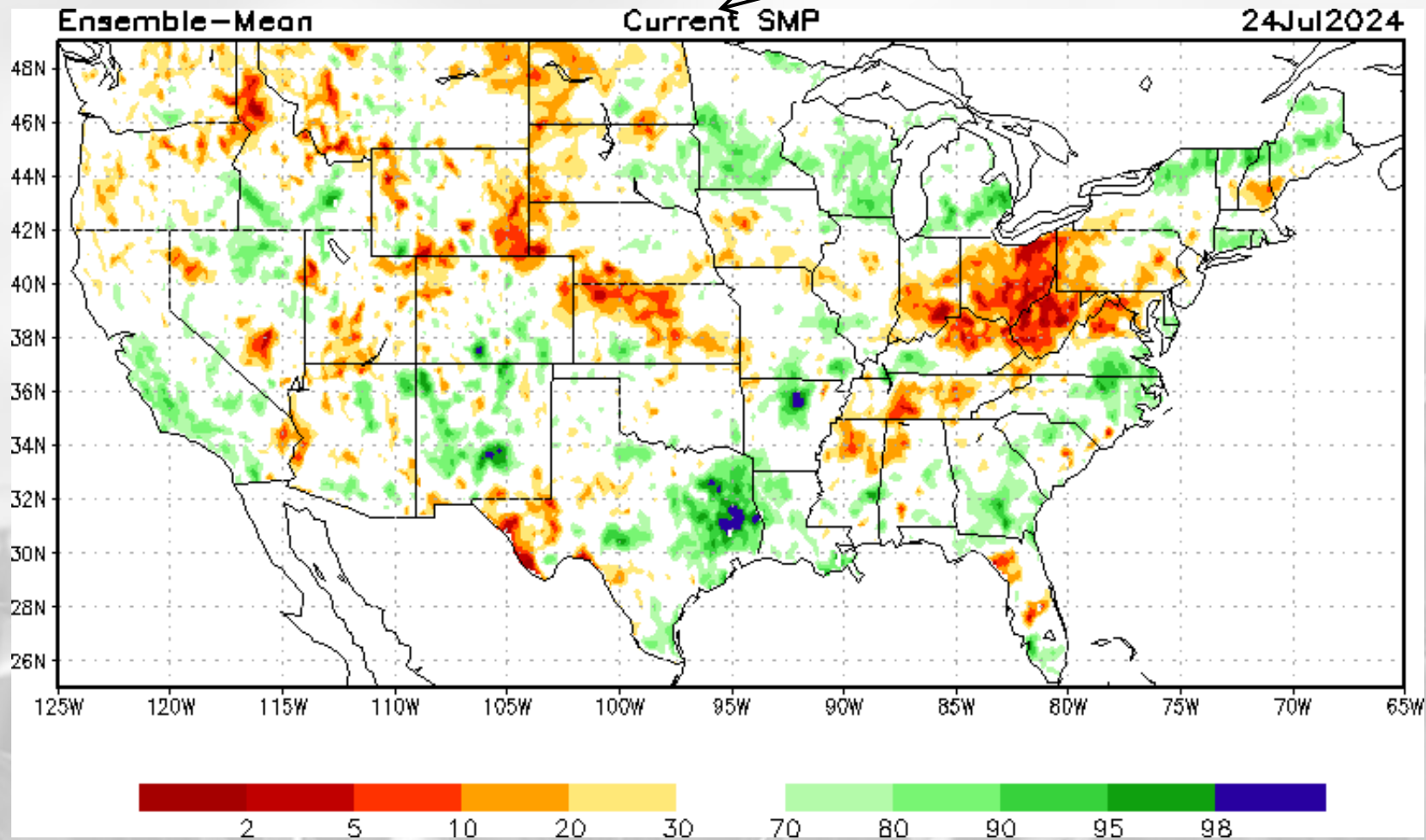
Generated 7/29/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

Soil Moisture Models

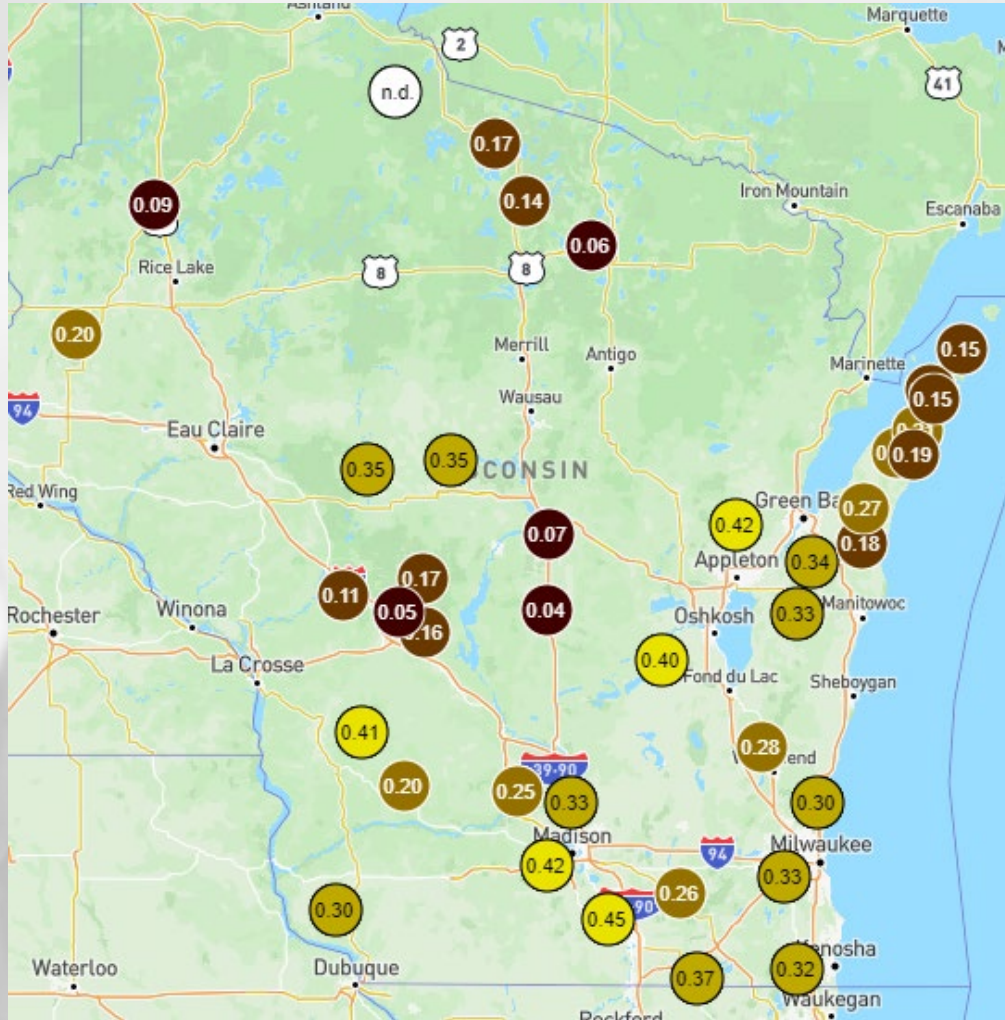
NOTE: this map displays the soil moisture percentile for July 24. It was the most recent update on July 29.



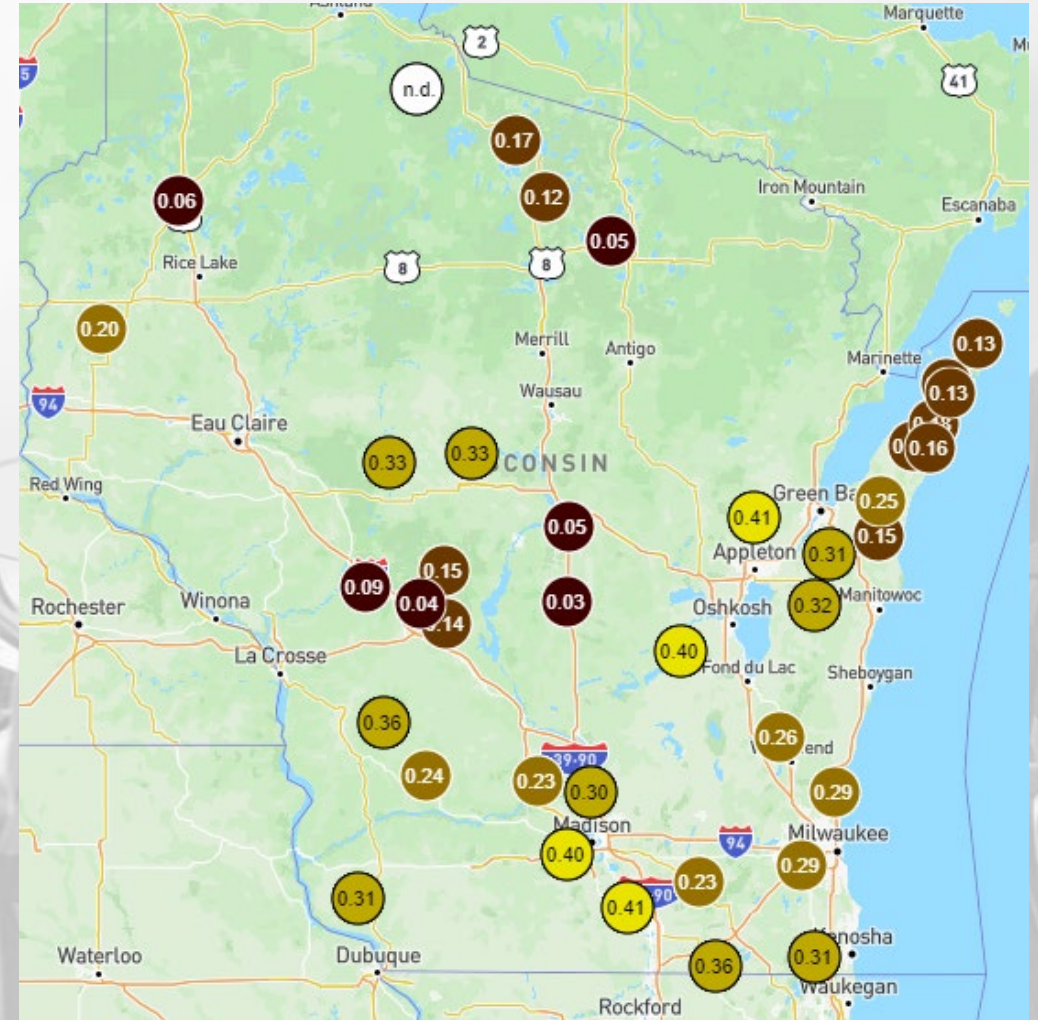
https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml

Wisconet Soil Moisture (4" Depth)

Friday, July 26th @ MIDDAY



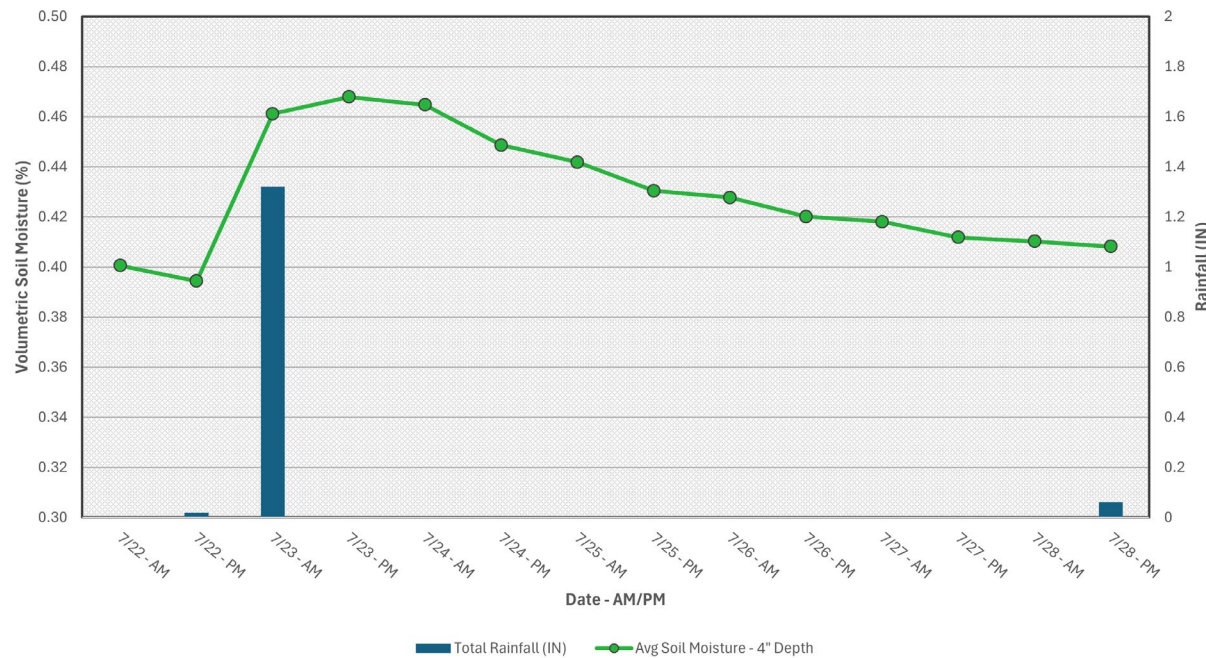
Monday, July 29th @ MIDDAY



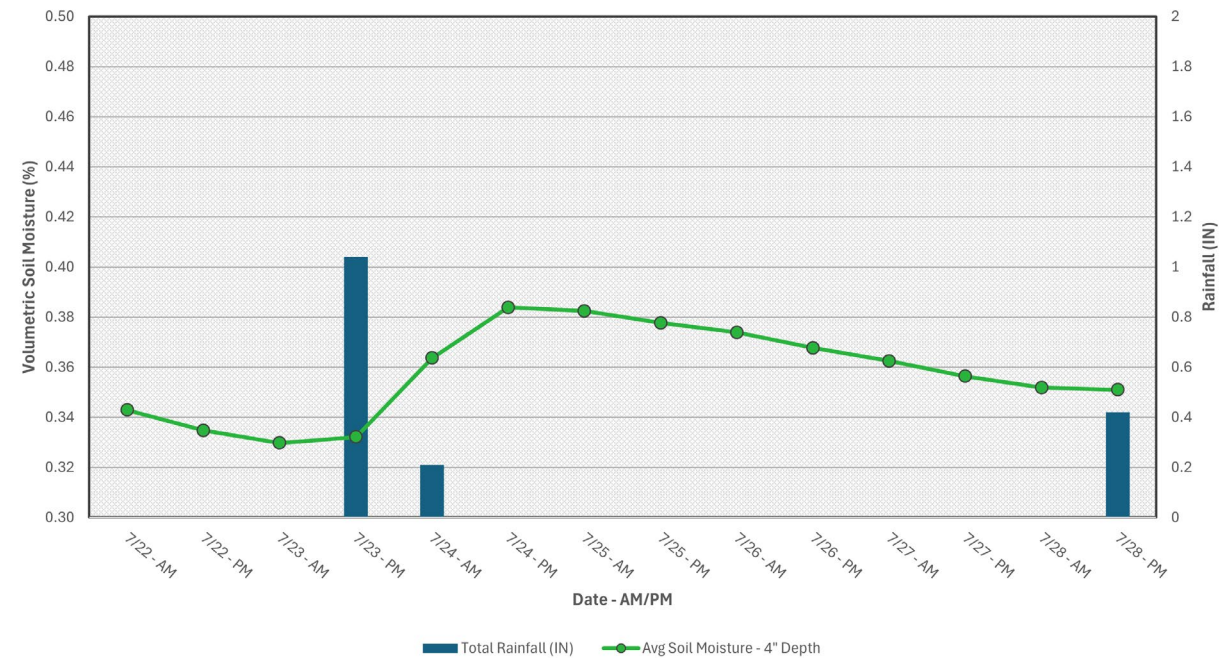
Wisconet Soil Moisture – 4" Depth

Soil moisture time series at select Wisconet stations

Rain & Soil Moisture - Black Creek (Outagamie Co.) - BLCR



Rain & Soil Moisture - Walworth (Walworth Co.) - DUDA

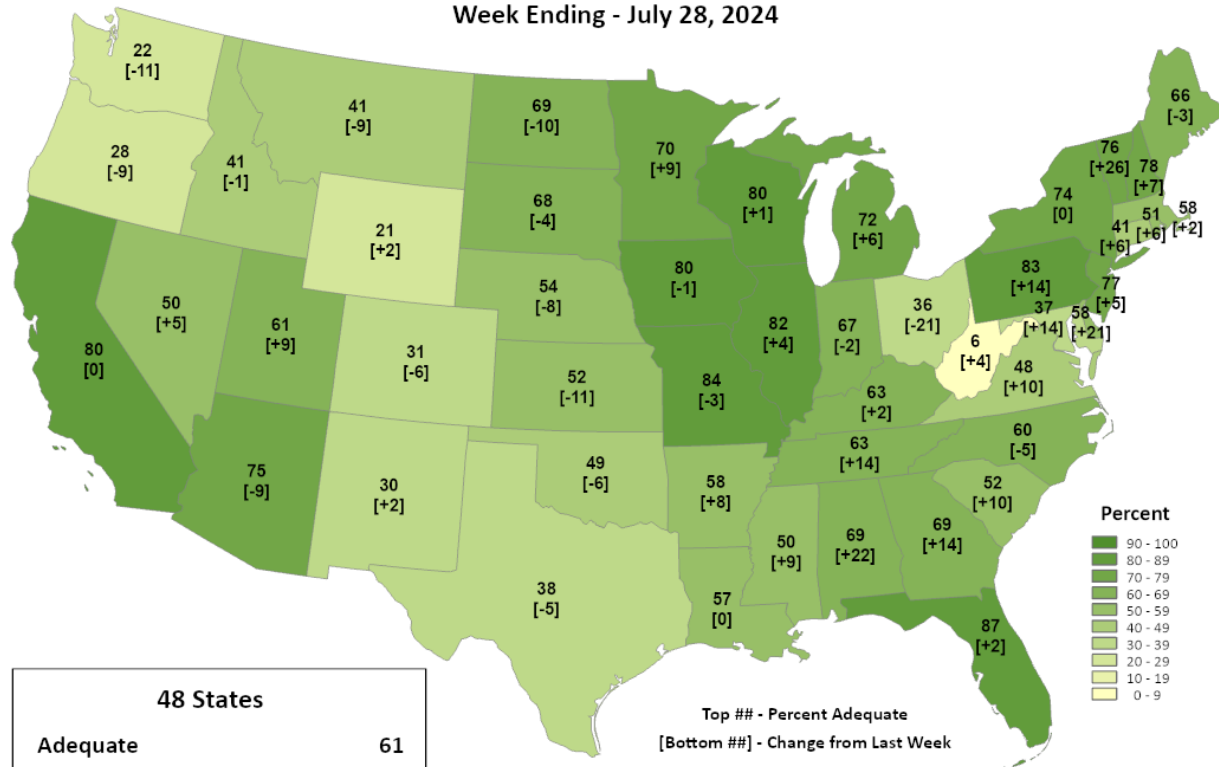


NASS Topsoil & Subsoil Moisture



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

Topsoil Moisture Percent Adequate Week Ending - July 28, 2024



48 States	
Adequate	61
Change from Last Week	-1

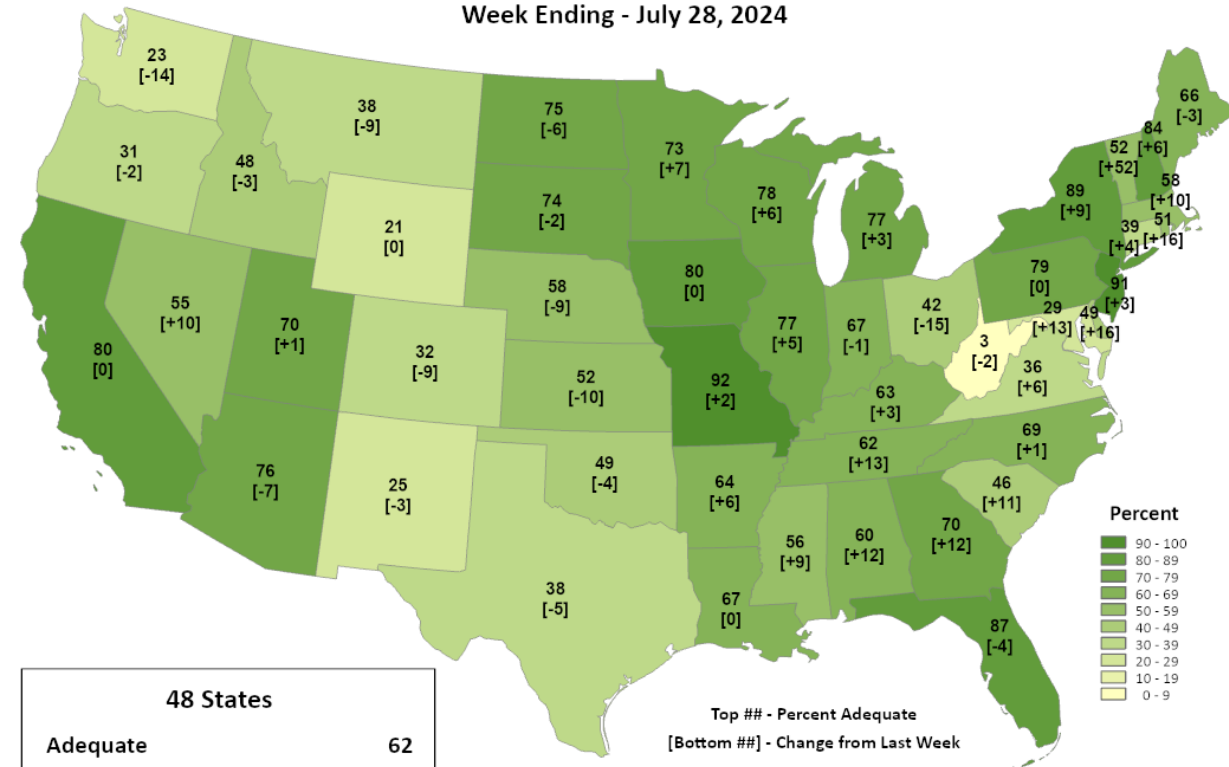
Top ## - Percent Adequate
[Bottom ##] - Change from Last Week

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



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

Subsoil Moisture Percent Adequate Week Ending - July 28, 2024



48 States	
Adequate	62
Change from Last Week	-2

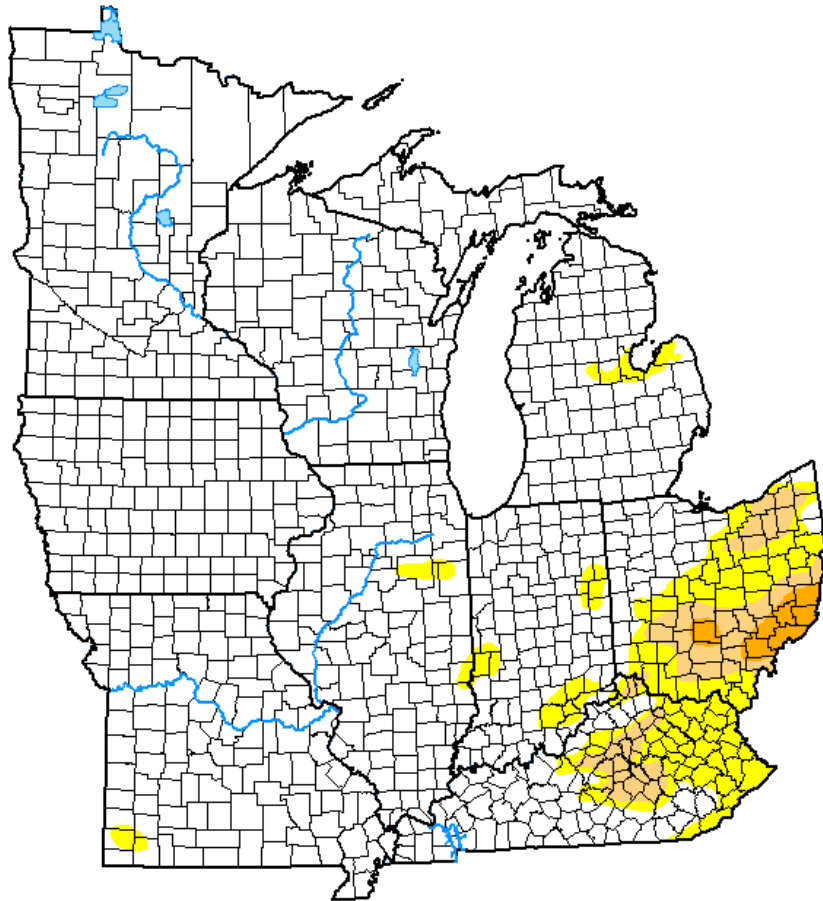
Top ## - Percent Adequate
[Bottom ##] - Change from Last Week

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

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

US Drought Monitor

U.S. Drought Monitor Midwest



July 23, 2024

(Released Thursday, Jul. 25, 2024)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	88.99	11.01	3.85	0.82	0.00	0.00
Last Week <i>07-16-2024</i>	87.34	12.66	3.73	0.67	0.00	0.00
3 Months Ago <i>04-23-2024</i>	58.41	41.59	23.36	6.34	0.30	0.00
Start of Calendar Year <i>01-02-2024</i>	22.92	77.08	50.25	20.76	4.20	0.00
Start of Water Year <i>09-26-2023</i>	16.82	83.18	54.98	23.81	6.21	0.13
One Year Ago <i>07-25-2023</i>	17.45	82.55	55.60	20.78	4.99	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:

Rocky Bilotta
NCEI/NOAA



droughtmonitor.unl.edu

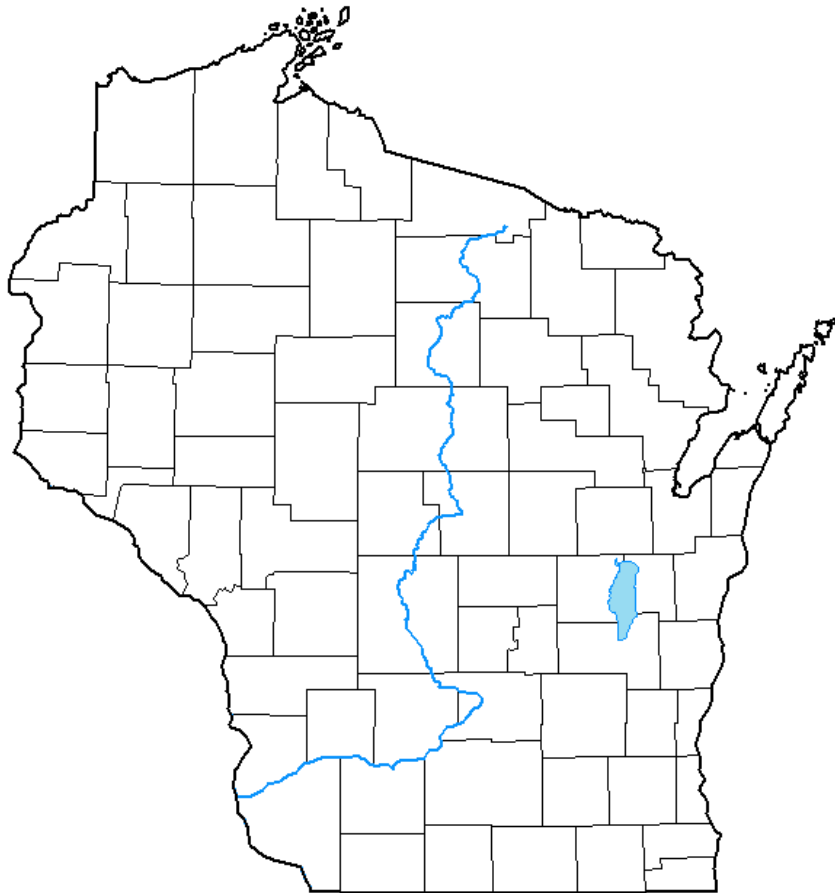
- Compared to last week:
 - **Similar** to last week, with the worst drought in the state of OH
- **3.9%** of the Midwest is categorized in D1 (moderate) drought.
- **0.8%** in D2 drought, all in OH.
- **11%** of the Midwest is in D0 (abnormally dry) conditions, down from **13%** last week.

Note: D0 is not considered drought.

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

US Drought Monitor

U.S. Drought Monitor Wisconsin



July 23, 2024
(Released Thursday, Jul. 25, 2024)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	100.00	0.00	0.00	0.00	0.00	0.00
Last Week <small>07-16-2024</small>	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago <small>04-23-2024</small>	56.39	43.61	19.02	3.29	0.00	0.00
Start of Calendar Year <small>01-02-2024</small>	33.04	66.96	37.34	16.80	0.26	0.00
Start of Water Year <small>09-26-2023</small>	2.04	97.96	80.86	37.74	6.77	0.00
One Year Ago <small>07-25-2023</small>	0.00	100.00	82.44	46.51	12.70	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:

Rocky Bilotta
NCEI/NOAA



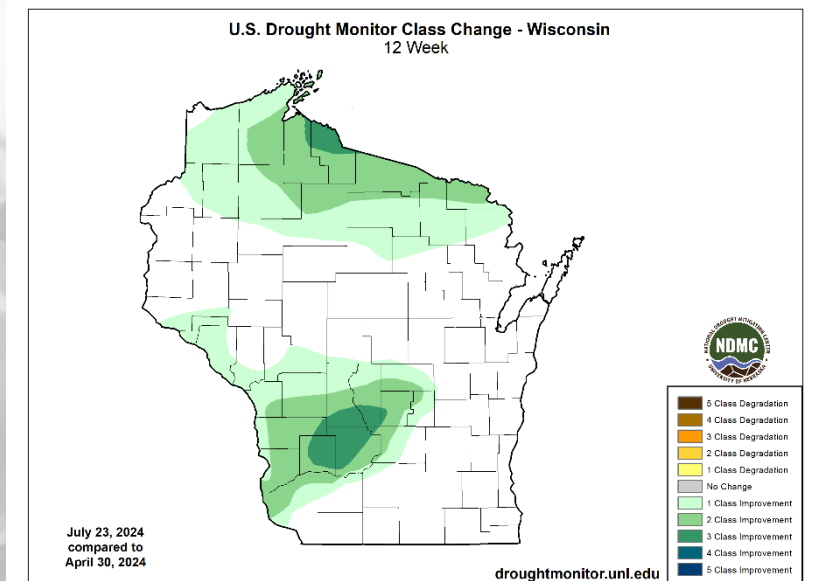
droughtmonitor.unl.edu

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

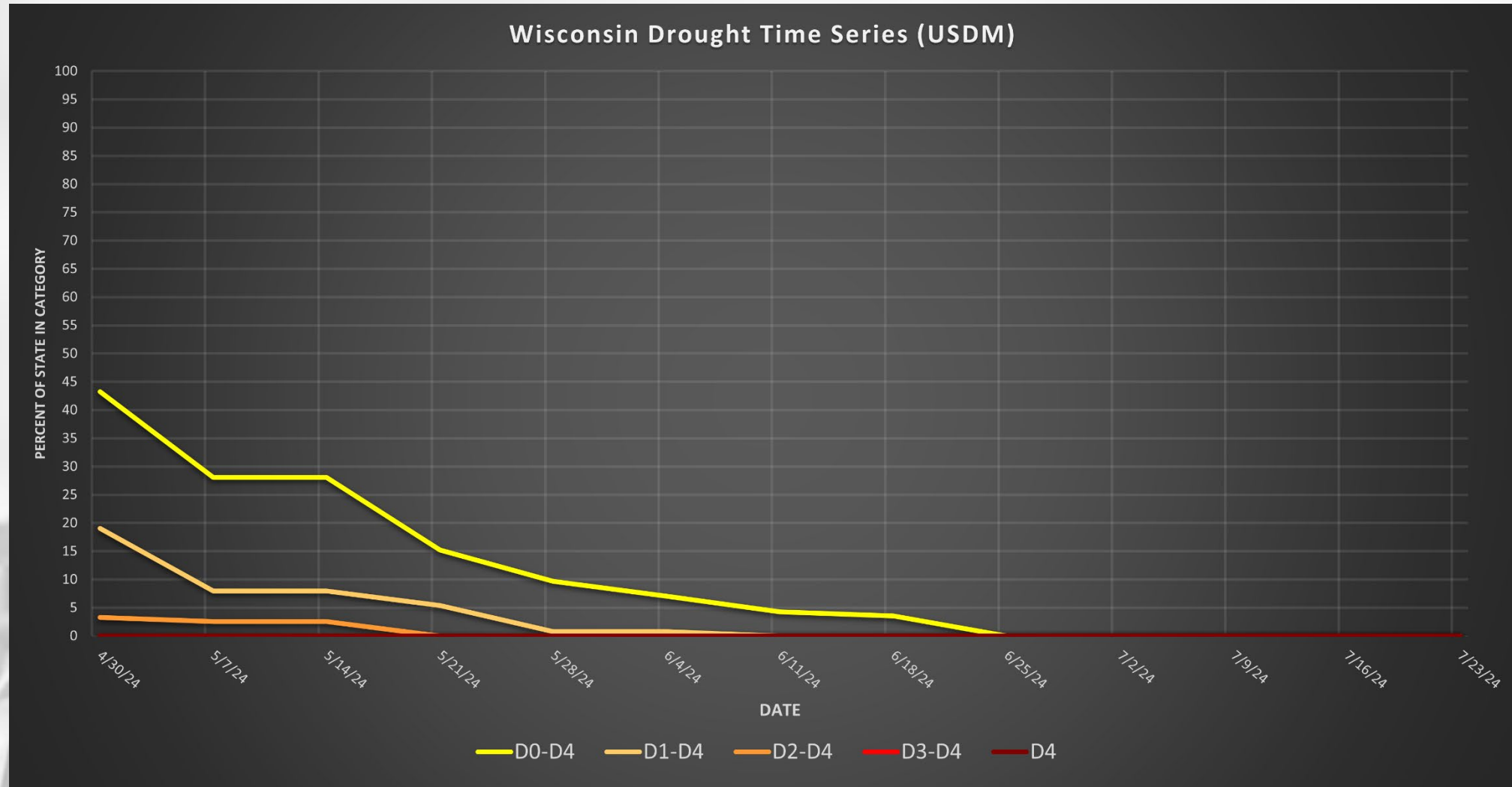
Amount of state in:

- 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.

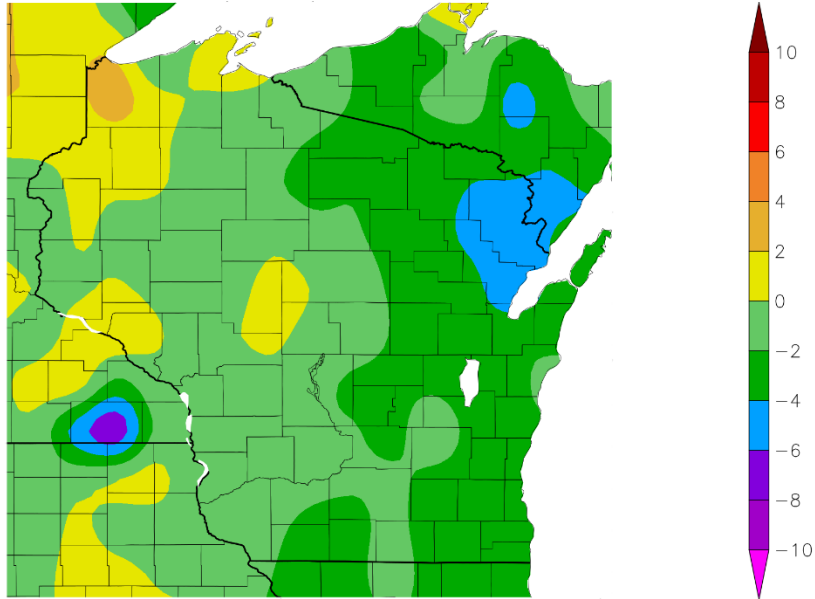


USDM Time Series



7 Day Temperatures

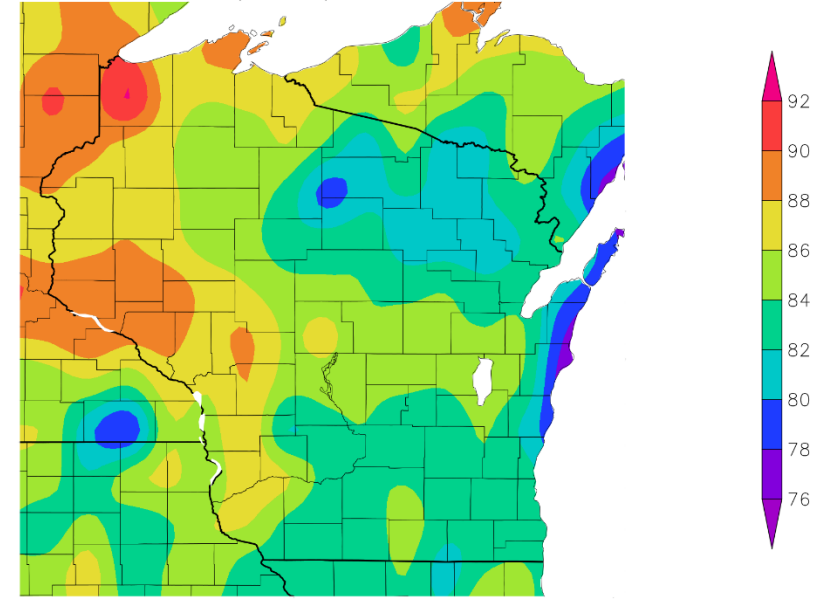
Departure from Normal Temperature (F)
7/22/2024 – 7/28/2024



Generated 7/29/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Highest 1-Day Maximum Temperature (F)
7/22/2024 – 7/28/2024



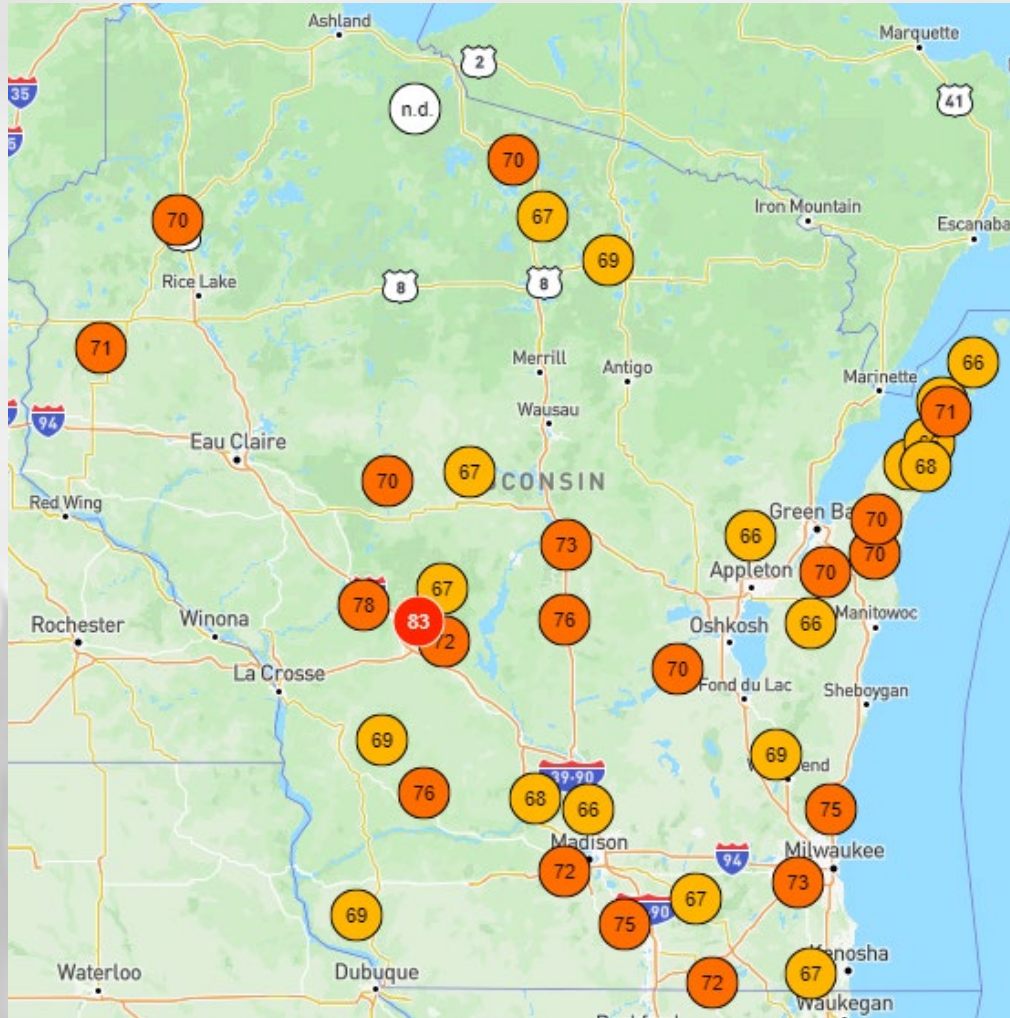
Generated 7/29/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

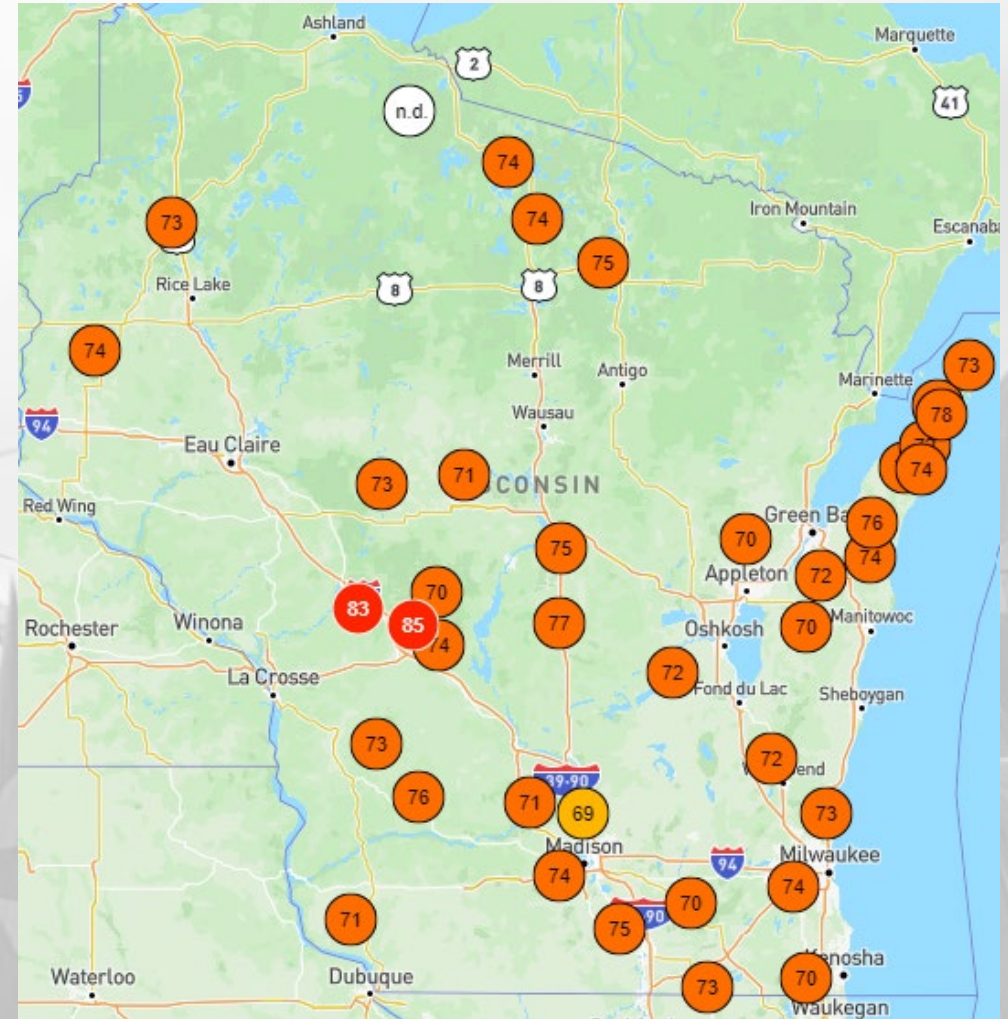
- Last week was **below normal** for most, especially for the eastern half of the state (**2-6°F below normal**)
- **Near average** on the western side of WI, with the far NW experiencing above **normal temps**.
- Weekly 1-day maximums in the **low 80's** for most, with the W/NW reaching the **upper 80's**.

Wisconet Soil Temp (4" Depth)

Friday, July 19th @ Midday

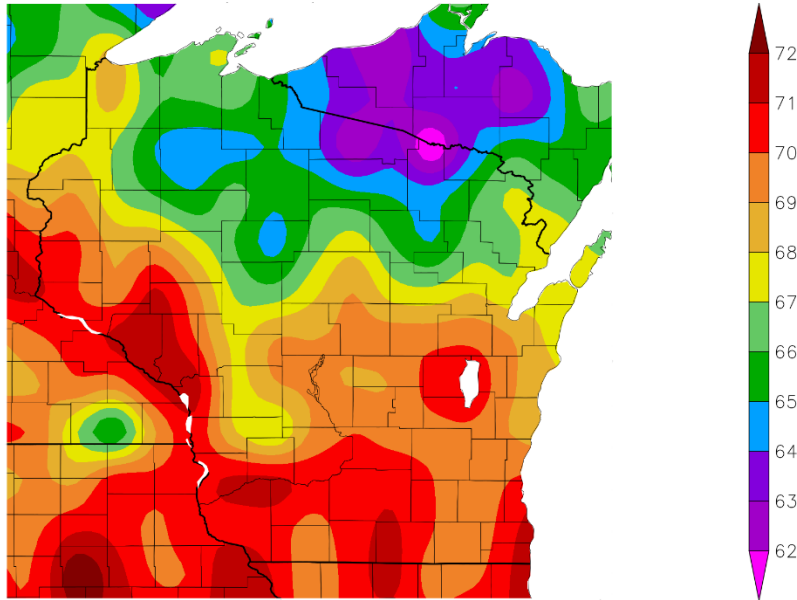


Monday, July 22nd @ Midday



30 Day Temperatures

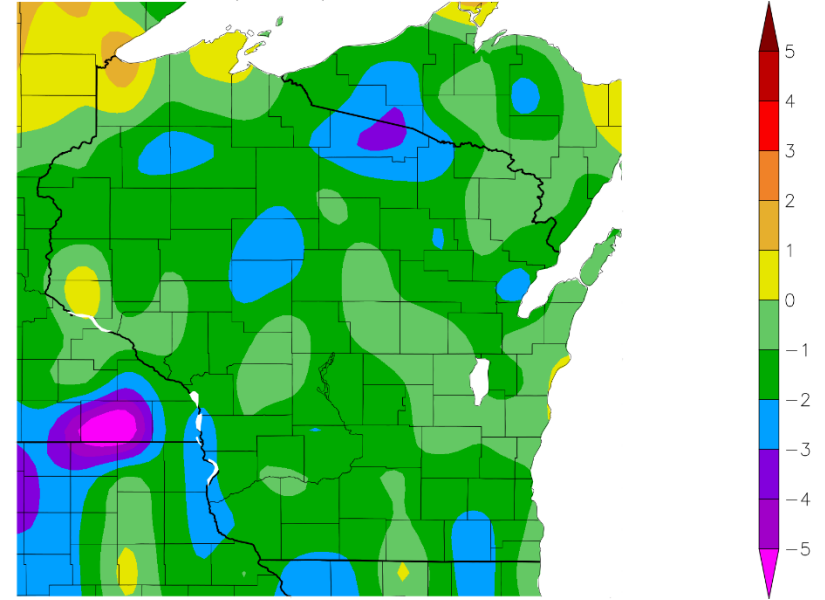
Temperature (F)
6/29/2024 – 7/28/2024



Generated 7/29/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Temperature (F)
6/29/2024 – 7/28/2024



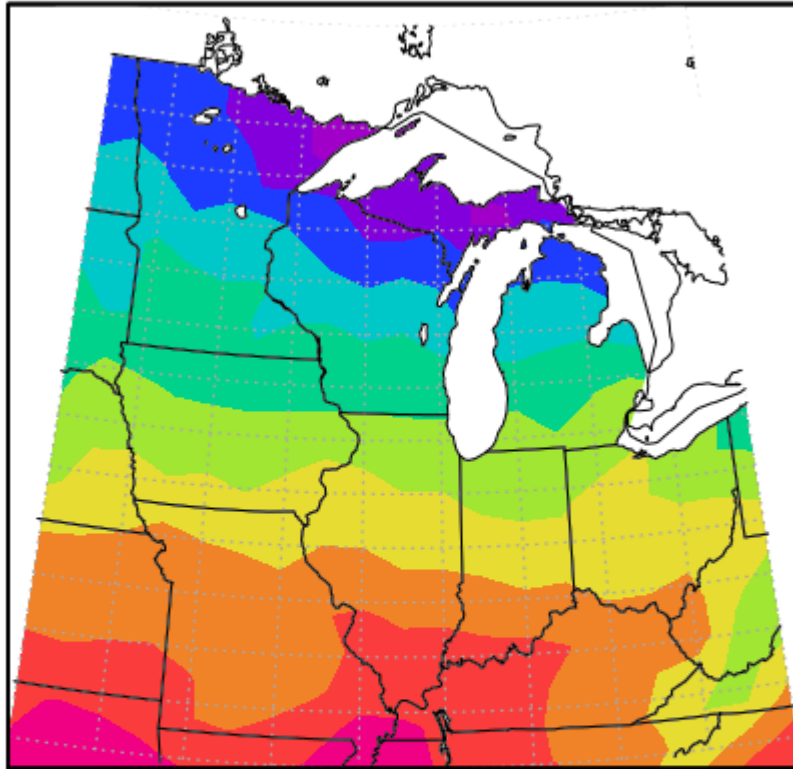
Generated 7/29/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Temperatures for the past month ranged from **70-72°F** in the S & W to **62-65°F** in the far N.
 - **Below average** by 1-3°F for most compared to climatological (1991-2020) average.
 - **Slightly above average** in parts of the NW and along Lake Michigan.

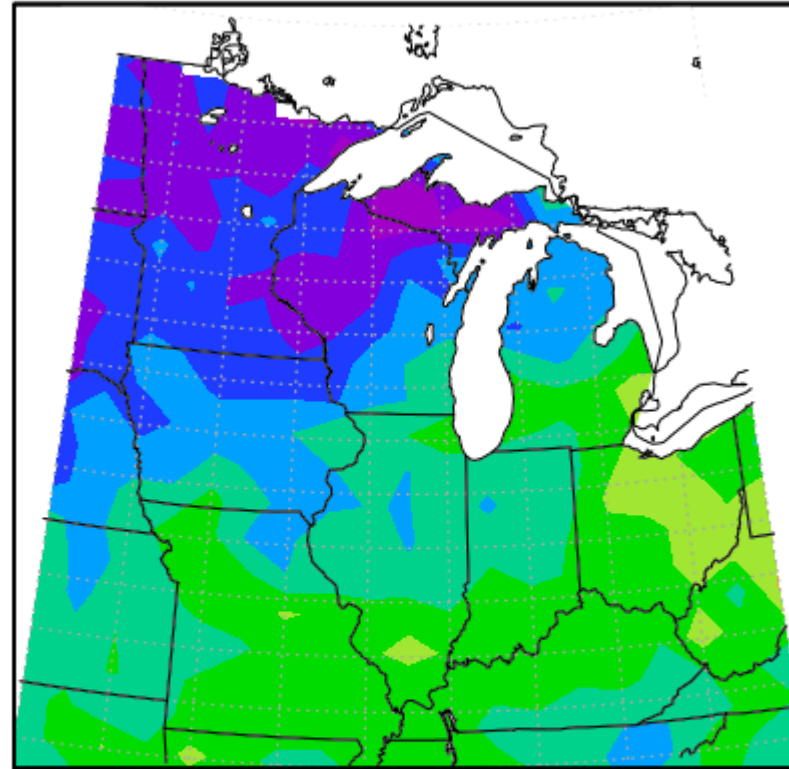
Growing Degree Days (Base = 50°F; Since April 1)

Total MGDD from 4/1/2024 to 7/28/2024



Midwestern Regional Climate Center
Purdue University

MGDD Departure, 4/1/2024 to 7/28/2024



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

- **1600-1800** GDD in the S to **1000-1400** GDD in the N.
- SC/SE WI is **100-150** 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

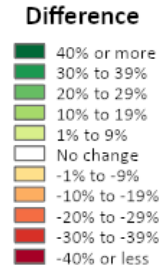
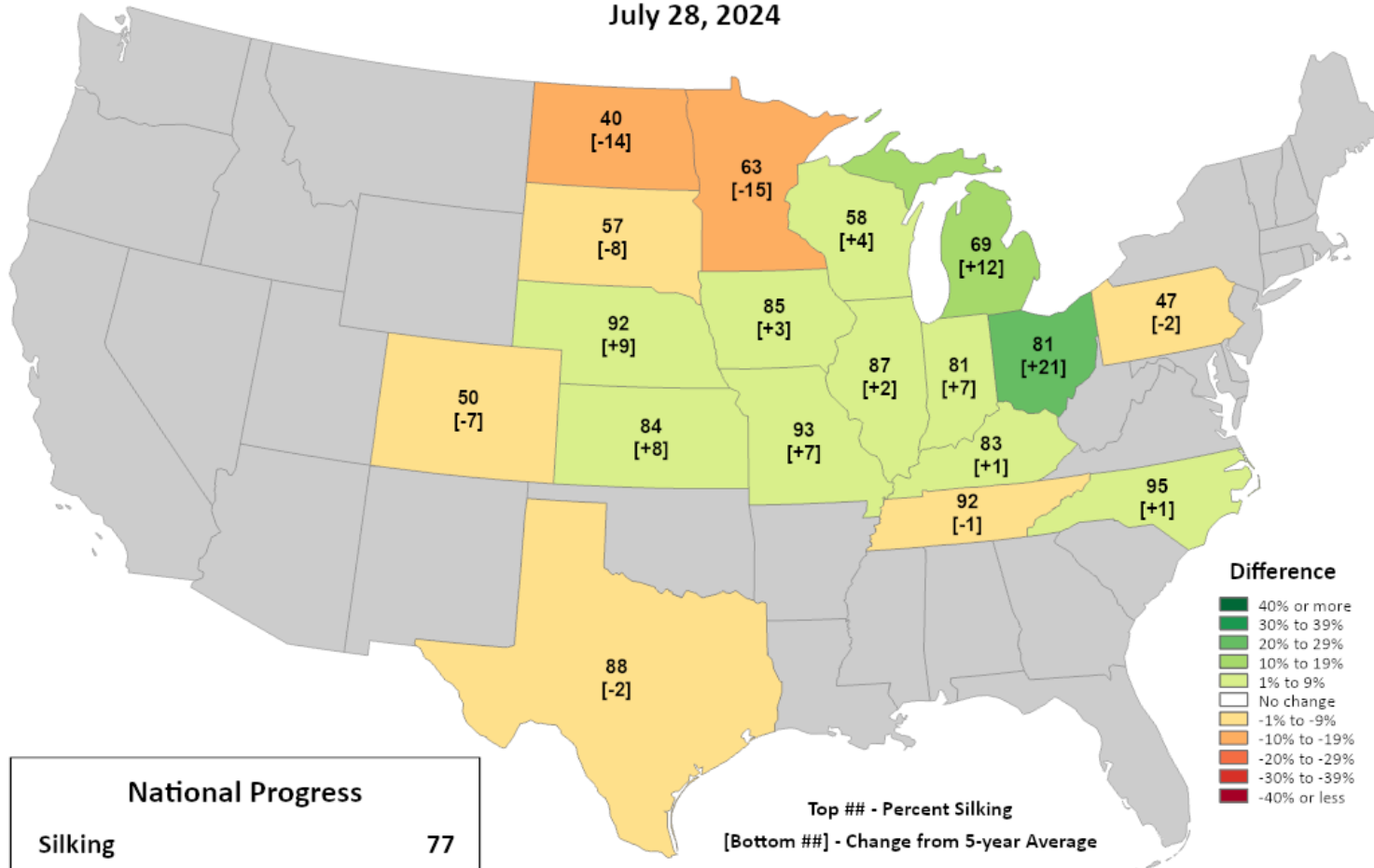


This product was prepared by the
USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)

Corn Progress

Percent Silking

July 28, 2024



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

National Progress	
Silking	77
Change from 5-year Average	+1

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

- Silking is over 50% complete in WI corn fields. Silking is **ahead of normal pace** in WI and points to the S & E.
 - In WI, silking is **58% complete**. 4% ahead of the 5-year average pace & up **18%** from last week.
 - Doughing → **15% complete**

NASS Crop Progress – Soybean

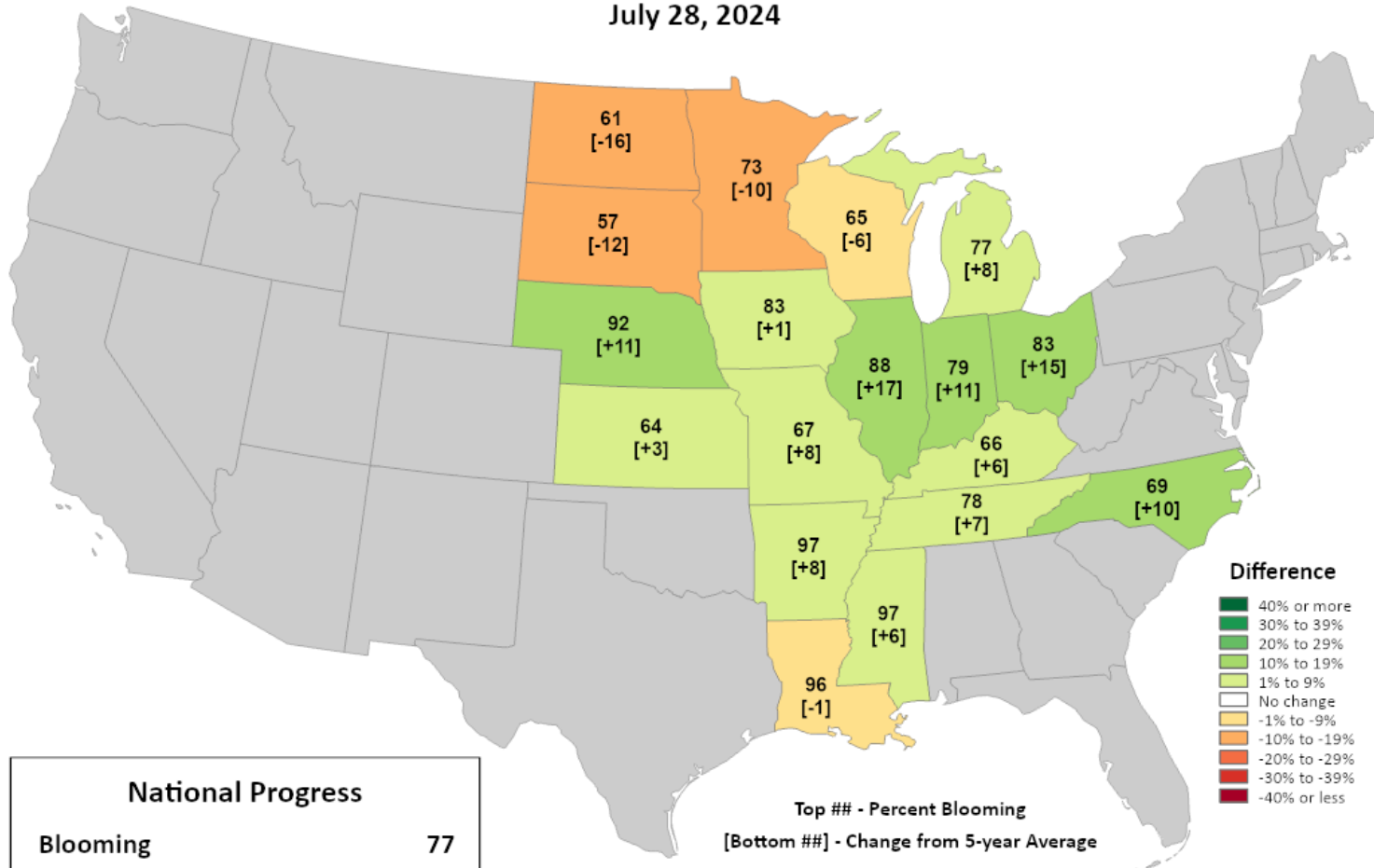


This product was prepared by the
USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)

Soybeans Progress

Percent Blooming

July 28, 2024



National Progress	
Blooming	77
Change from 5-year Average	+3

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

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

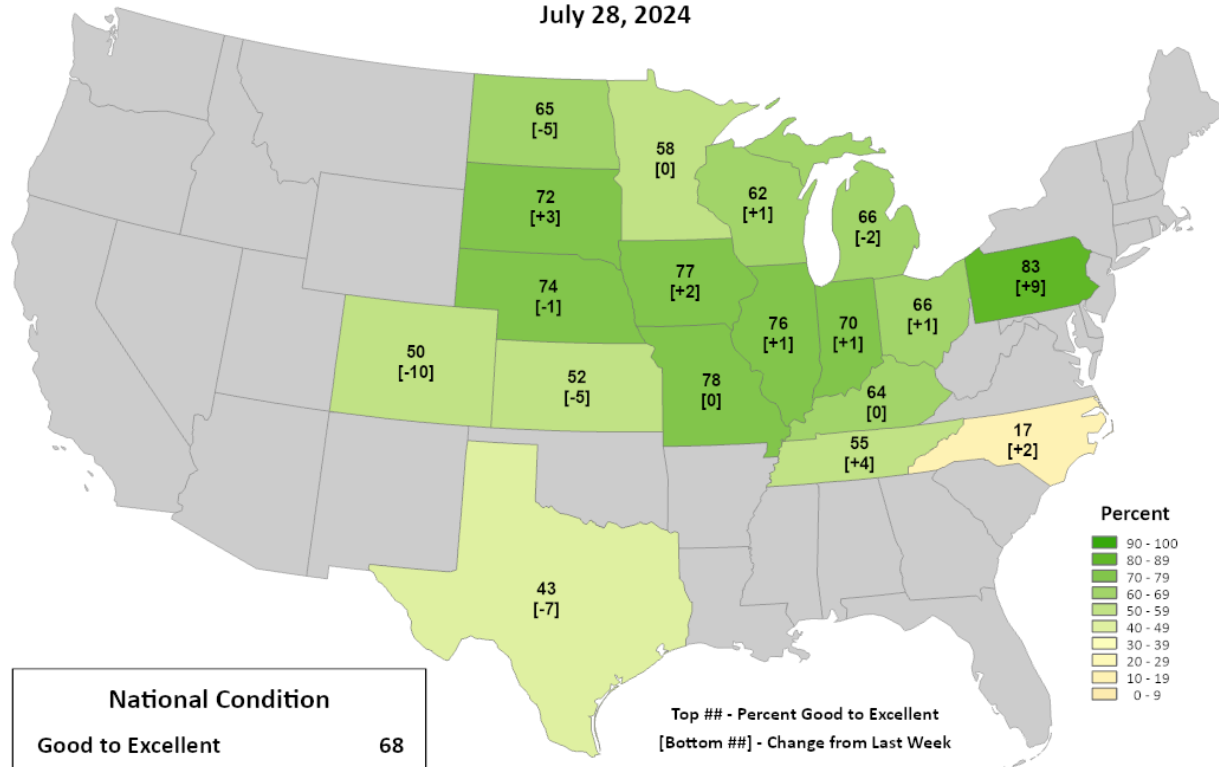
- Soybean bloom is still running **behind normal pace** in WI and points to the W/NW. Well **ahead of normal pace** to the SE.
 - In WI, blooming is **65% complete**. 6% behind of the 5-year average pace & up **18%** from last week.
 - Setting pods → **30% complete**

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 July 28, 2024

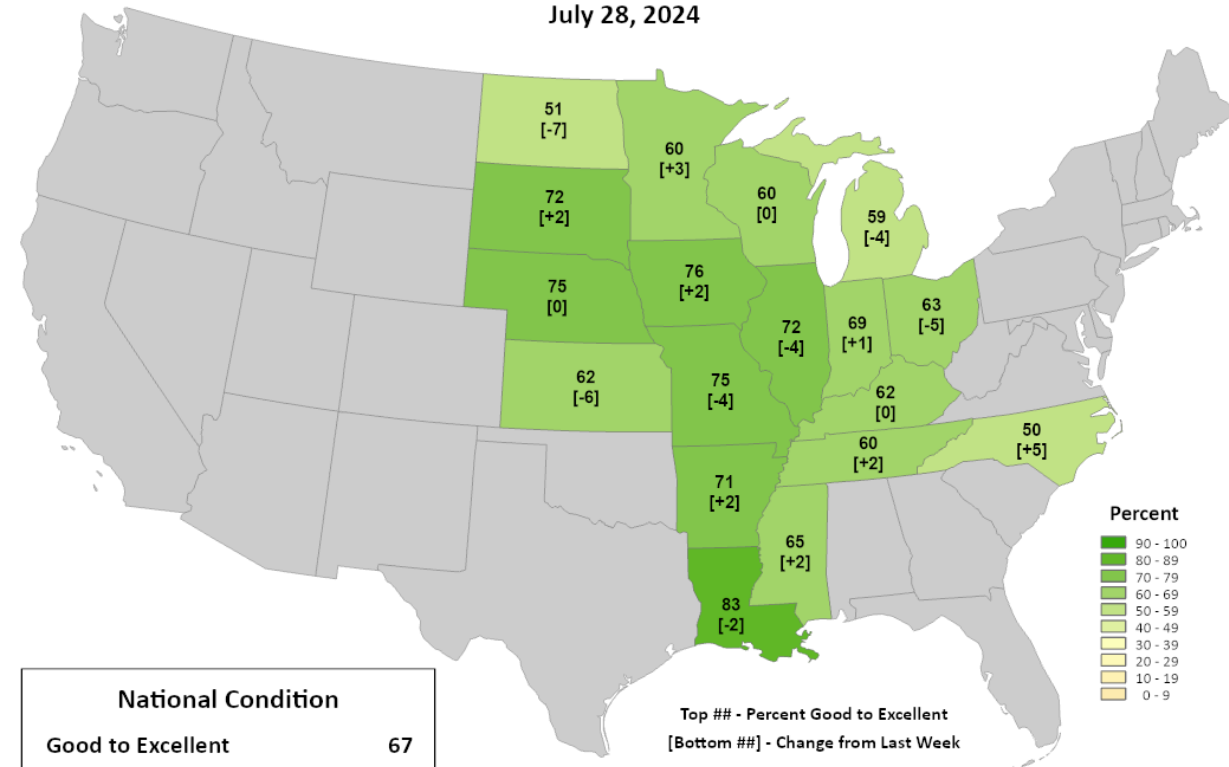


Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.



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

Soybean Conditions Percent Good to Excellent July 28, 2024

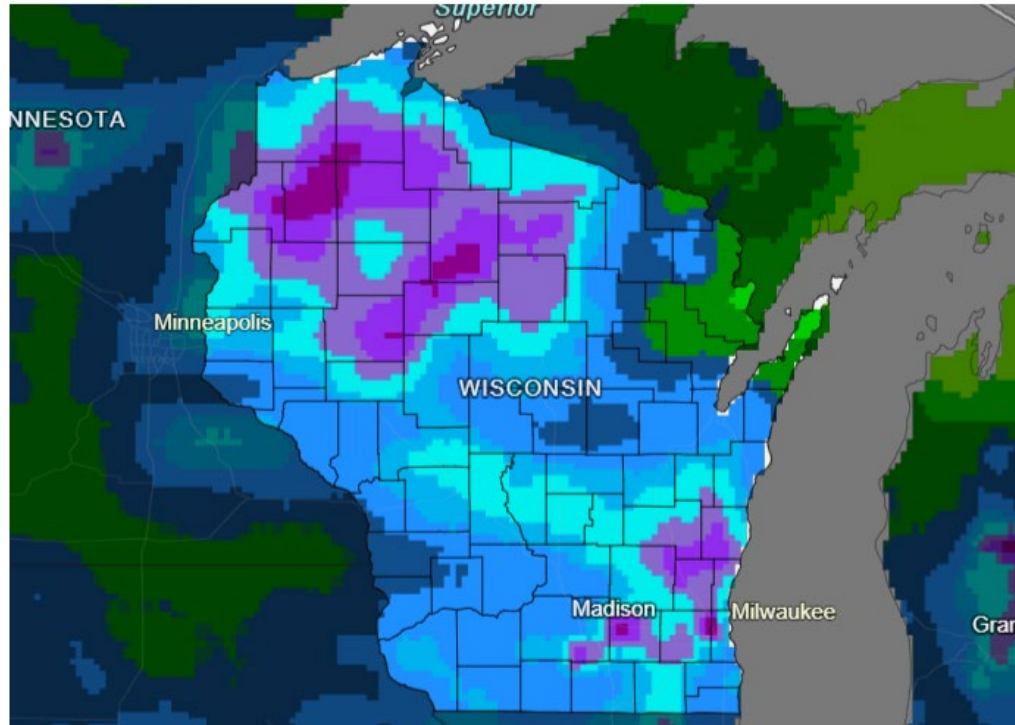


Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

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

7 Day Precip Forecast

7-Day Quantitative Precipitation Forecast for July
29–August 5, 2024



Predicted Inches of Precipitation



Source(s): National Weather Service Weather Prediction Center
Last Updated: 07/29/24

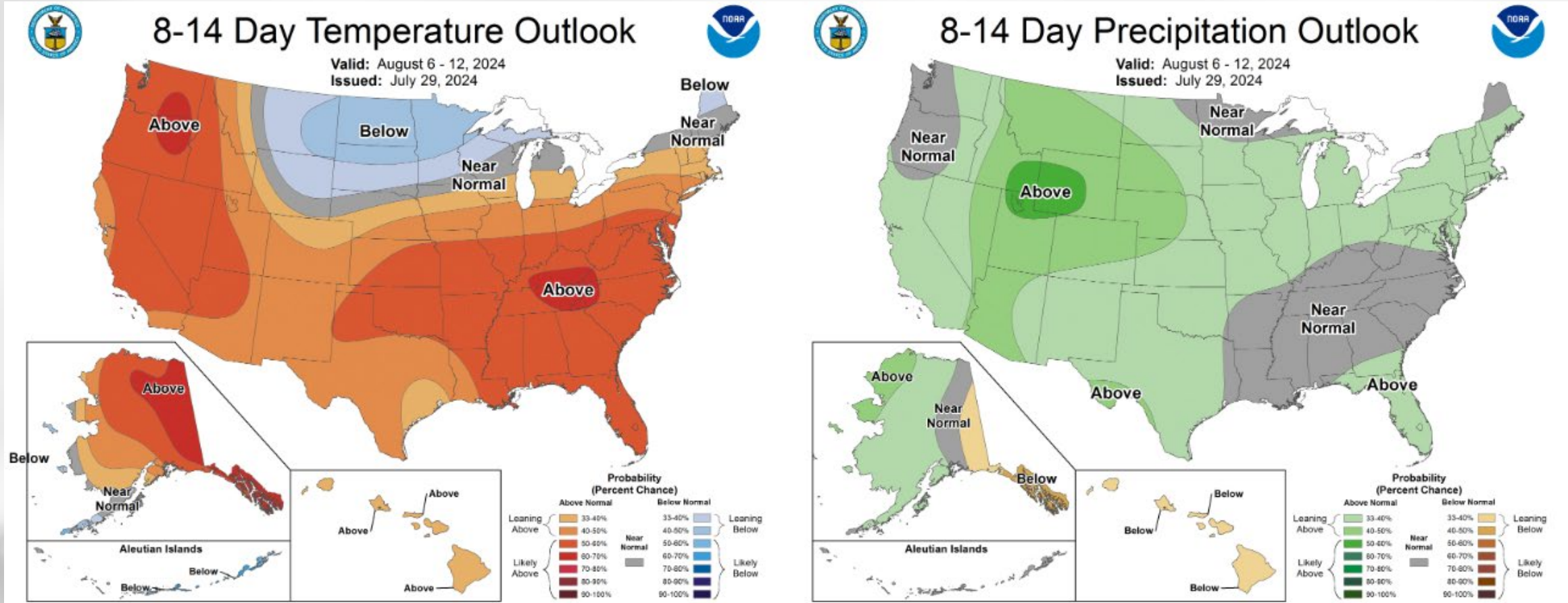
Drought.gov

- **A wetter week** forecasted for WI this next week.
 - **Multiple rain chances** from Tuesday through Friday.
 - Precip most likely in the **NW, NC, & SE**. Lesser in the **NE**.

Forecast for 7/29/24 thru 8/5/24
(Begins at 7am CDT)

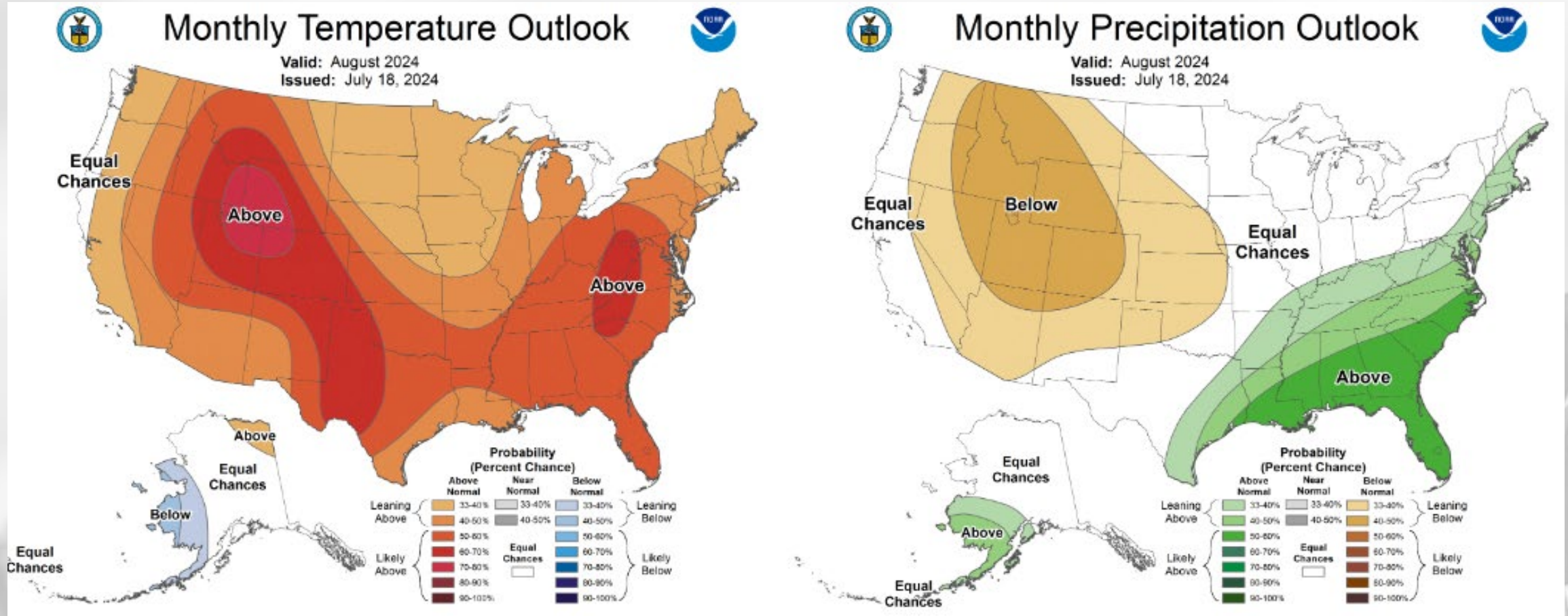
<https://www.wpc.ncep.noaa.gov/qpf/p168i.gif>
<https://www.drought.gov/states/wisconsin>

8-14 Day Temp & Precip Outlook



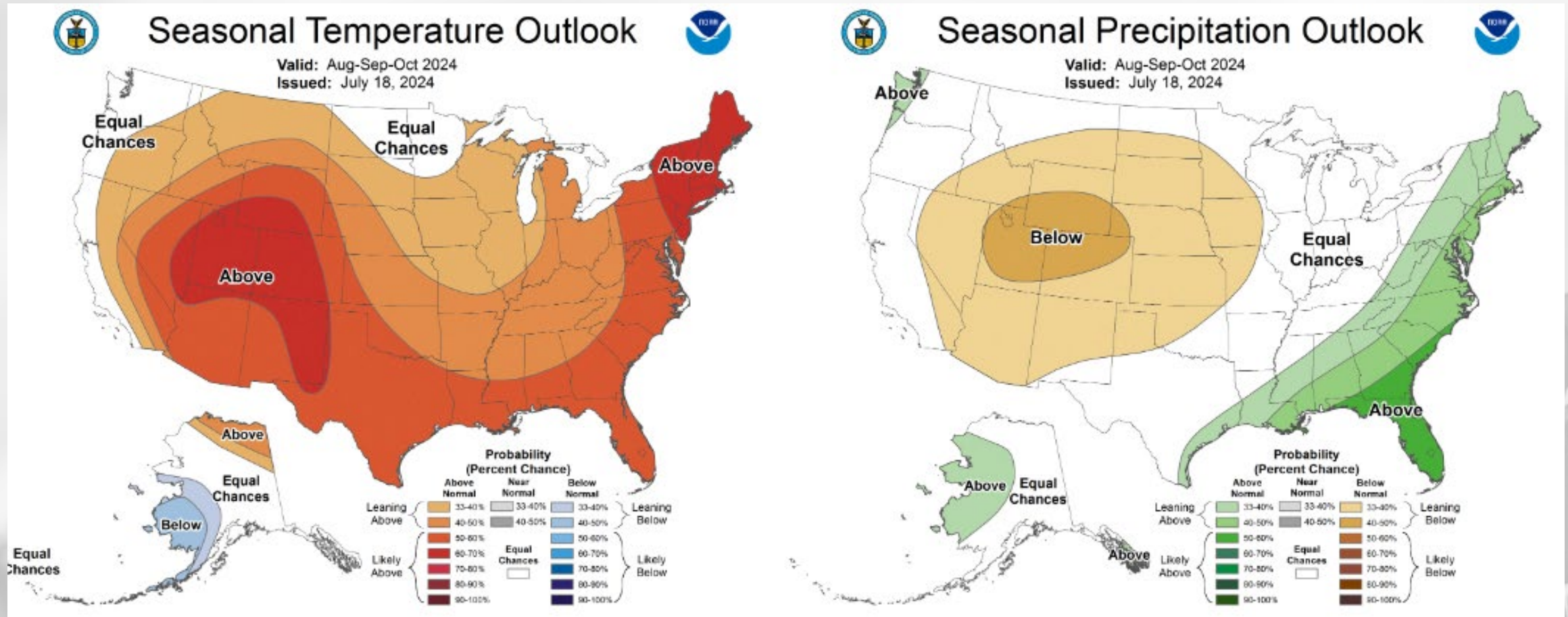
Early to Mid August: Temperatures leaning above normal in the S, near normal in the C, & below normal in the N. Precipitation leaning above normal except for the far N (near normal).

30 Day Temp & Precip Outlook



Month of August: Temperatures leaning above normal. Precipitation uncertainty with equal chances.

90 Day Temp & Precip Outlook



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

Take-Home Points

Current Conditions:

- Late July has been **cooler-than-normal** for the majority of WI, particularly in the E/NE.
- Weekly precip totals were **<1" for most** locations in WI, with some **scattered pockets of 2" or more**.

Impact:

- Soil moisture levels remain at **~80% adequate** in the state, with no USDM drought categories in the state.
 - **Corn** is at 62% good to excellent, over 50% silking, and has begun to dough in some fields.
 - **Soybeans** are at 60% good to excellent, 65% blooming, and has begun to set pods (30% pod setting complete).
- GDDs are approaching **1800 (1400) units** in the southern (northern) counties, running **ahead of normal pace** in the S & E.

Outlook:

- **Multiple rain chances** across WI this next week, with a higher likelihood in the **N/NW & SE**.
- Temperatures leaning **above (below) normal** in the south (north) heading into the first full week of August, with most in the state leaning towards **above normal** precip.
- The warmer-than-normal conditions have a higher probability to **continue** through August into early fall with a La Niña pattern taking shape.

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.

Manure Applications

- Runoff risk is severe in parts 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](#).

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.

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:

<https://cocorahs.org/Content.aspx?page=application>

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Photo Credit: USDA



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