

# Wisconsin Ag Climate Outlook

*Week of June 10, 2024*

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Assistant State Climatologist of  
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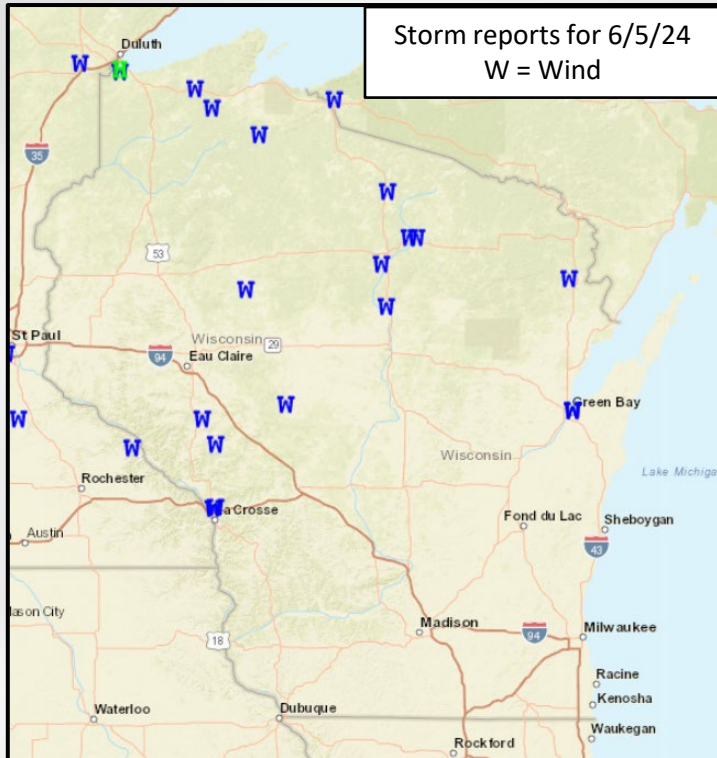
[bmmason2@wisc.edu](mailto:bmmason2@wisc.edu)

# Key Points

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

- 1) Last week was quieter in terms of [rainfall](#), with temperatures near to long-term normals.
  - 2) Soil moisture levels are at [adequate](#) conditions for most, with most [Wisconet](#) stations making gains or holding steady last week.
  - 3) [More rain](#) is forecasted for the next week, with a higher likelihood for [warmer temps](#) into the second half of June.
- For this week's agronomic recommendations from UW Extension, click [here](#).
  - For NASS crop progress maps, click [here](#).
  - For current GDD maps (since April 1<sup>st</sup>), click [here](#).

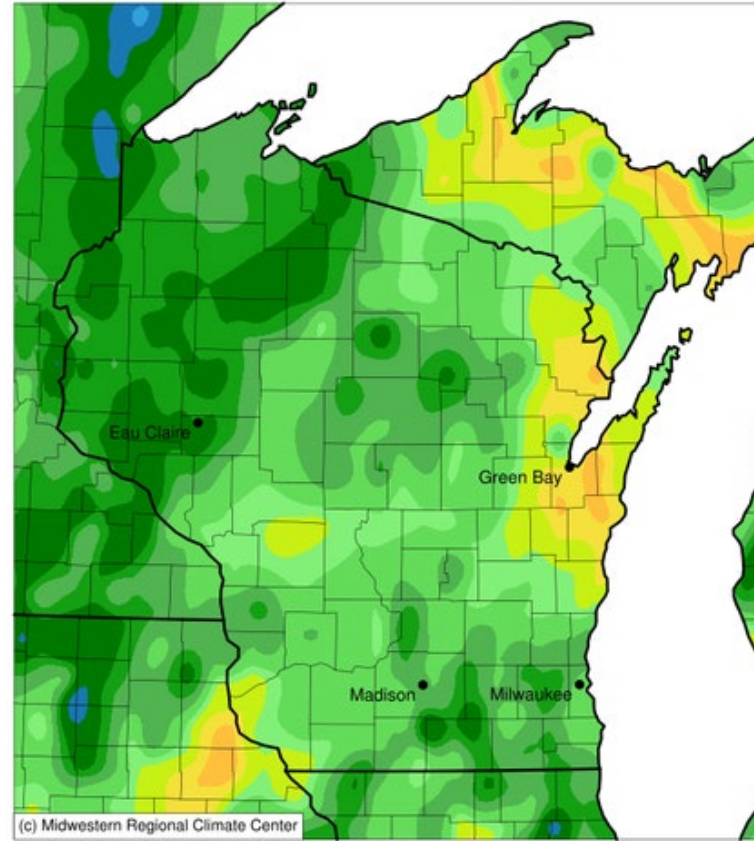
# Drier last week...for most



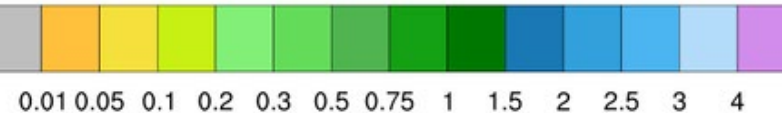
[Link to interactive storm reports map](#)

<https://mrcc.purdue.edu>

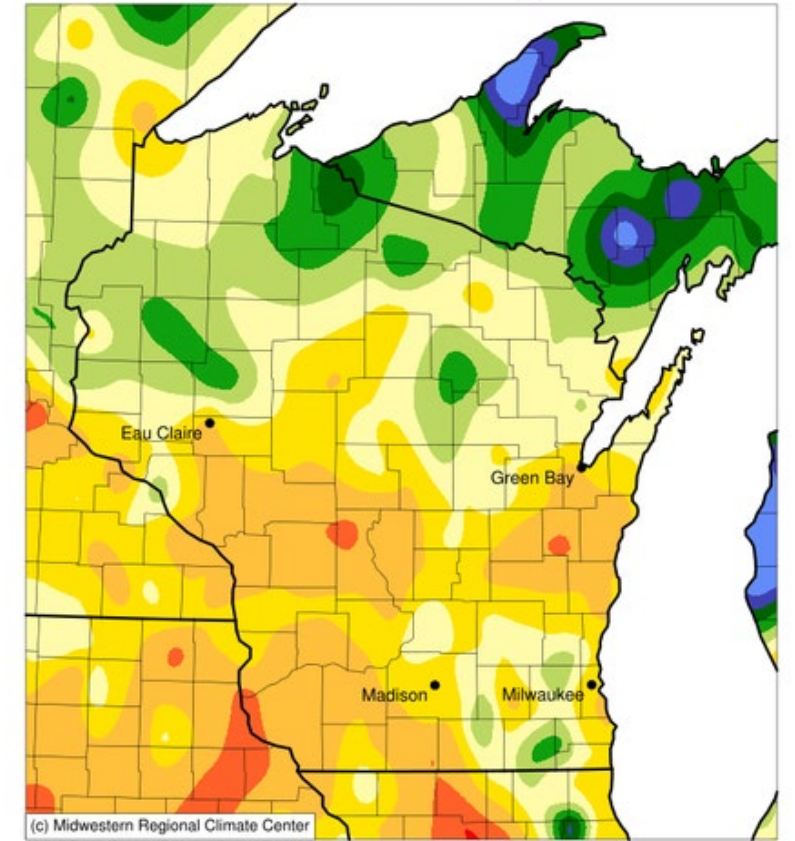
Accumulated Precipitation (in)  
June 05, 2024 to June 05, 2024



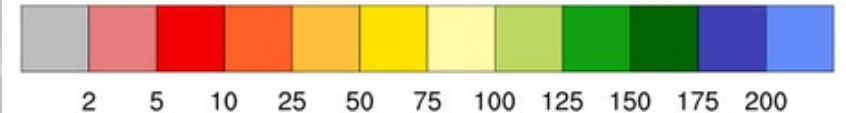
(c) Midwestern Regional Climate Center



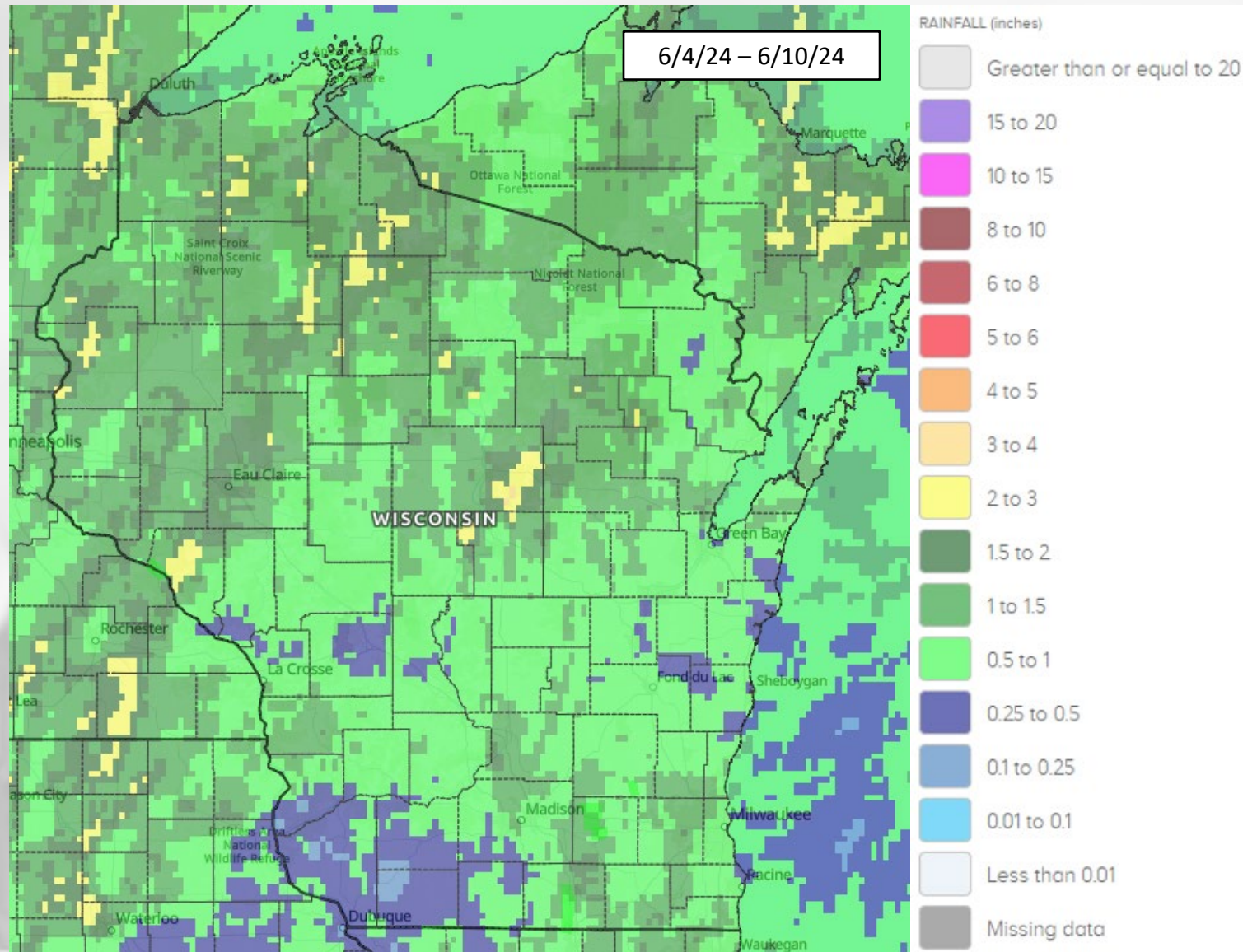
Accumulated Precipitation (in): Percent of 1991-2020 Normals  
June 05, 2024 to June 11, 2024



(c) Midwestern Regional Climate Center

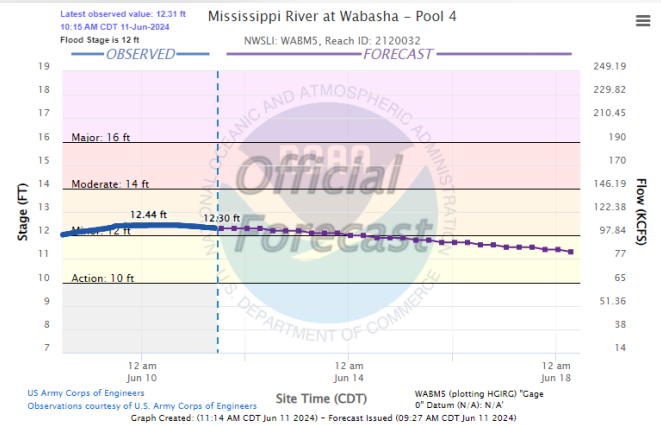


# 7 Day Precip

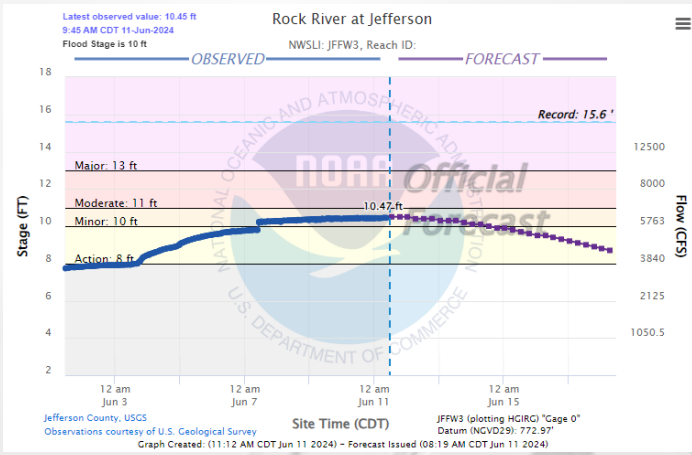
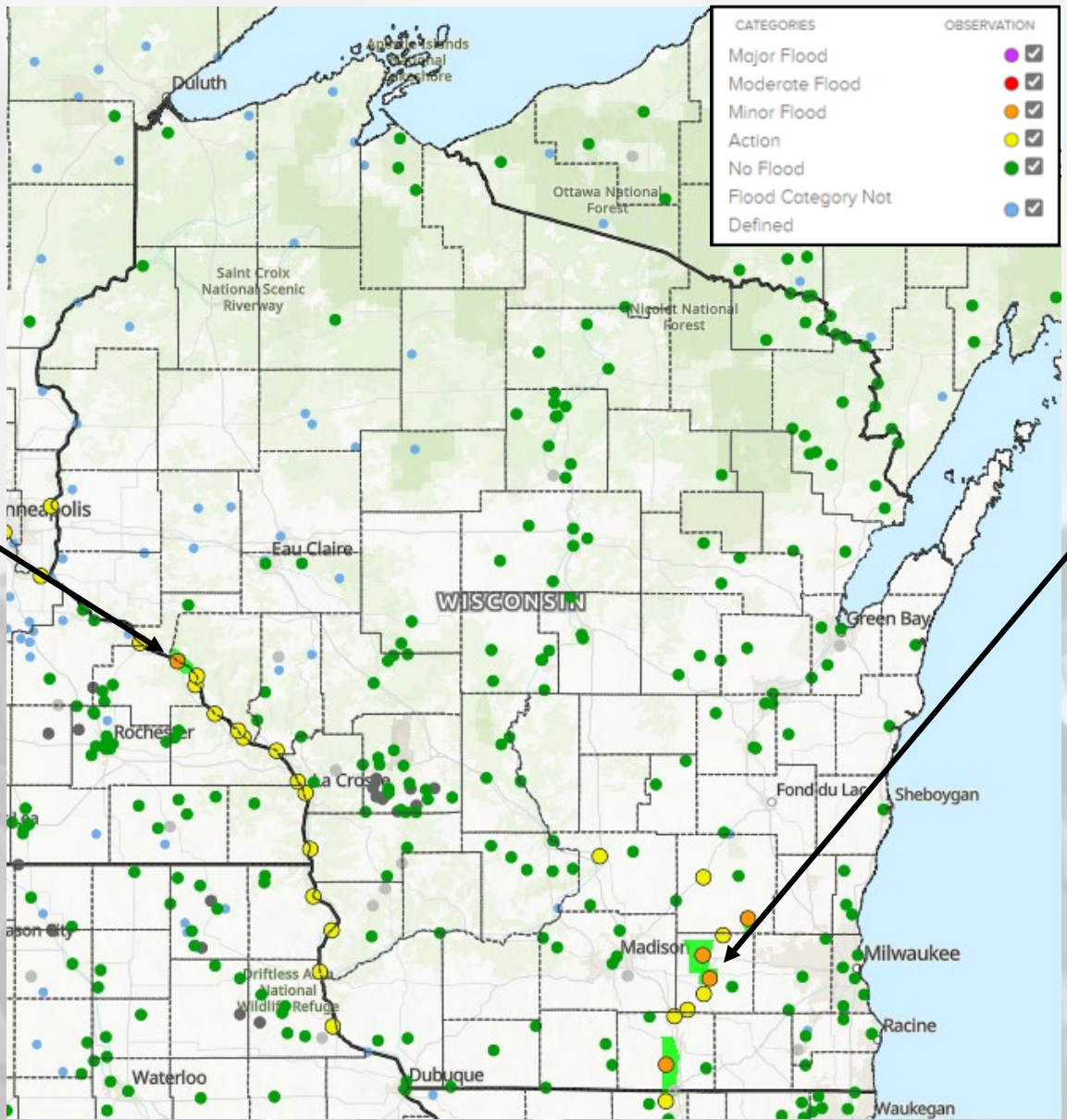


- A drier week compared to the previous few weeks.
- **1.5+”** common in the NW as well as in scattered pockets.
- Totals **>2”** in localized areas in the N and W.

# River Levels



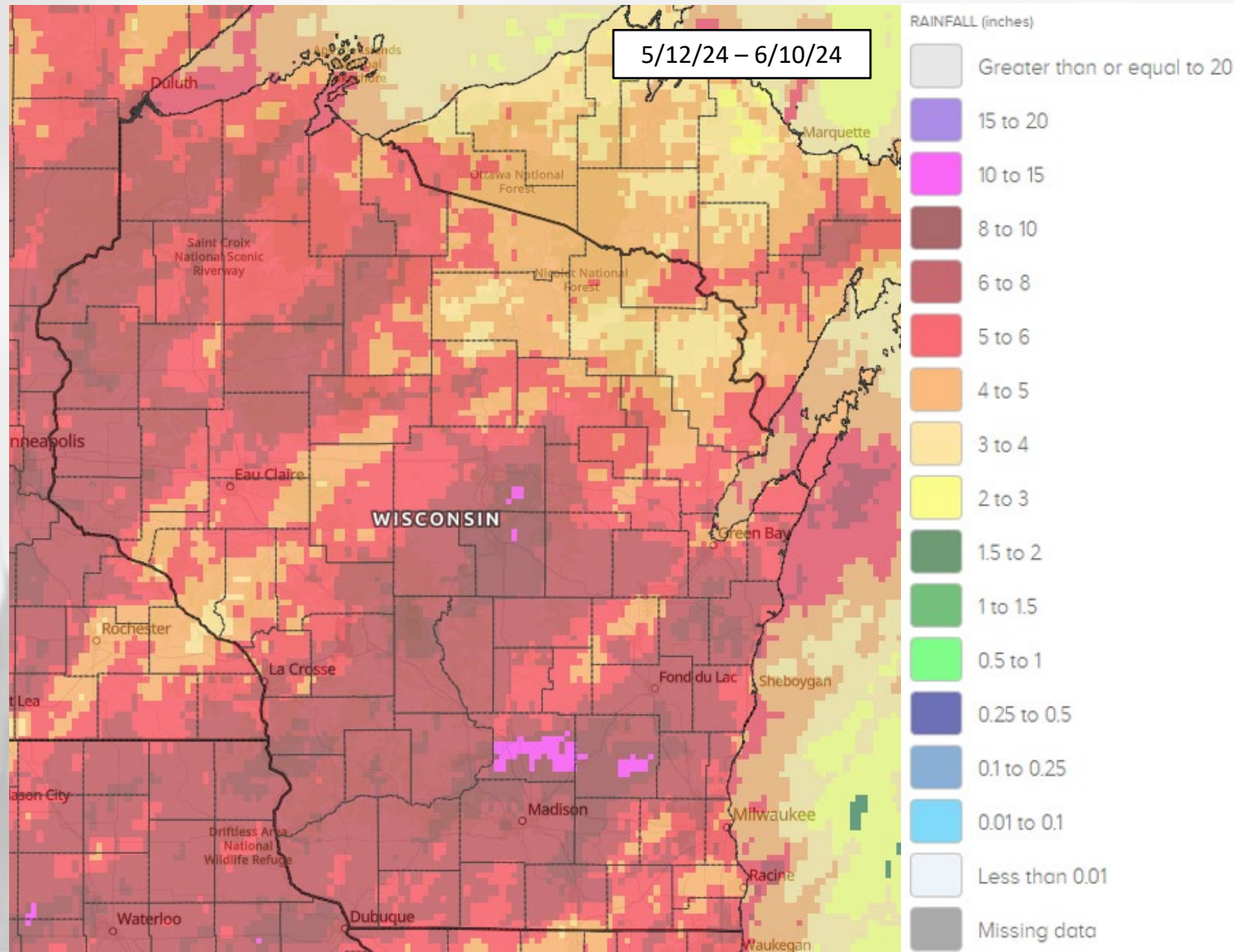
Flood Warnings along the Mississippi River



Flood Warnings along the Rock River

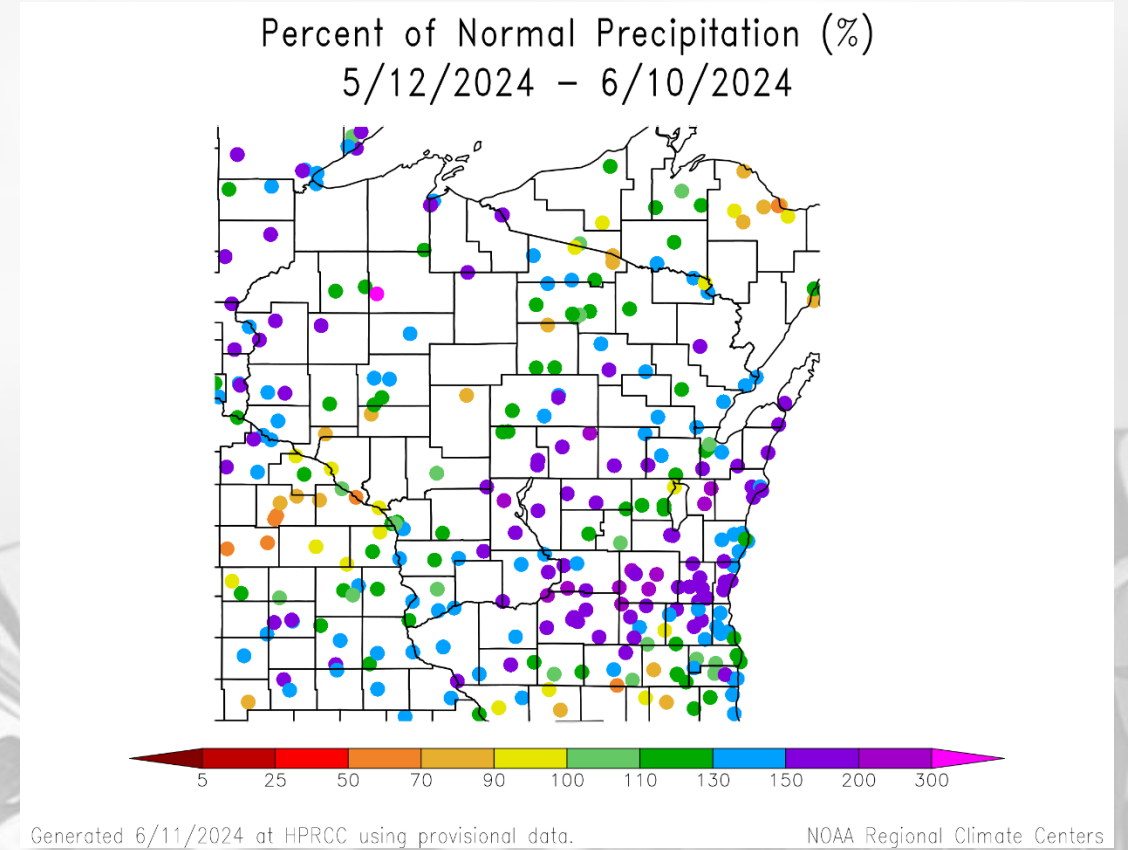
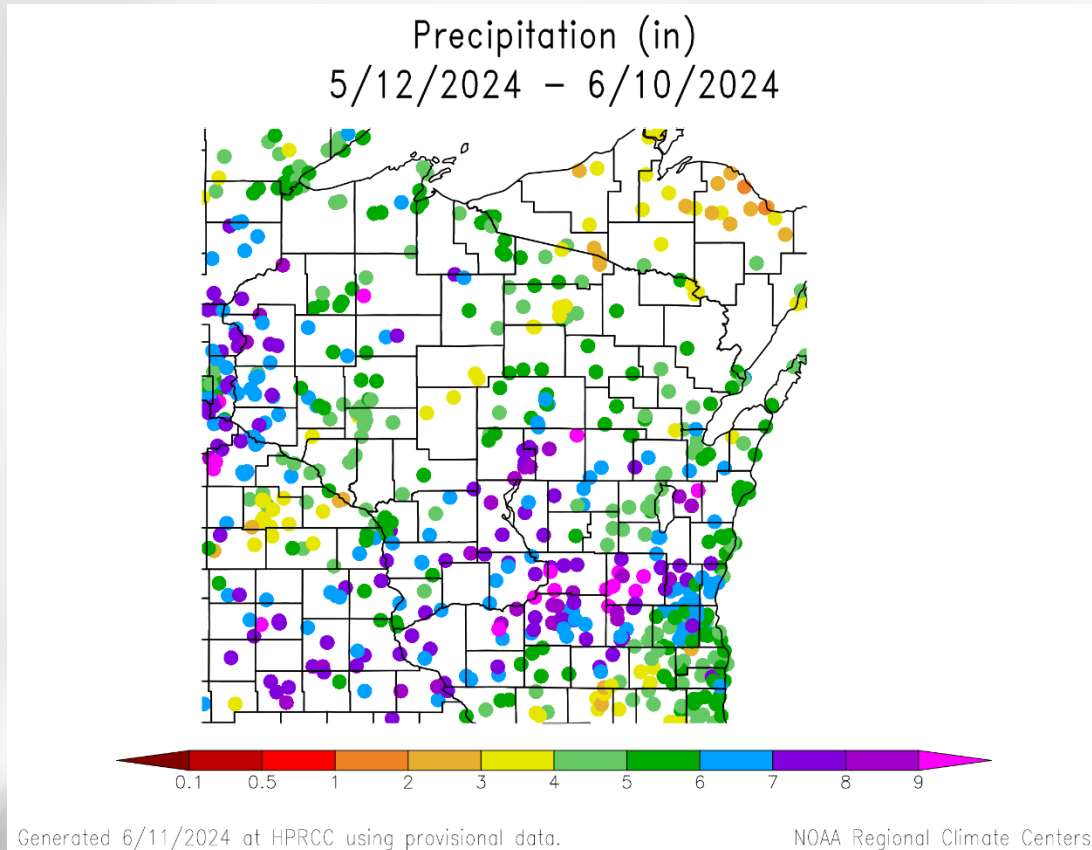
River levels on the morning of June 11, 2024

# 30 Day Precip



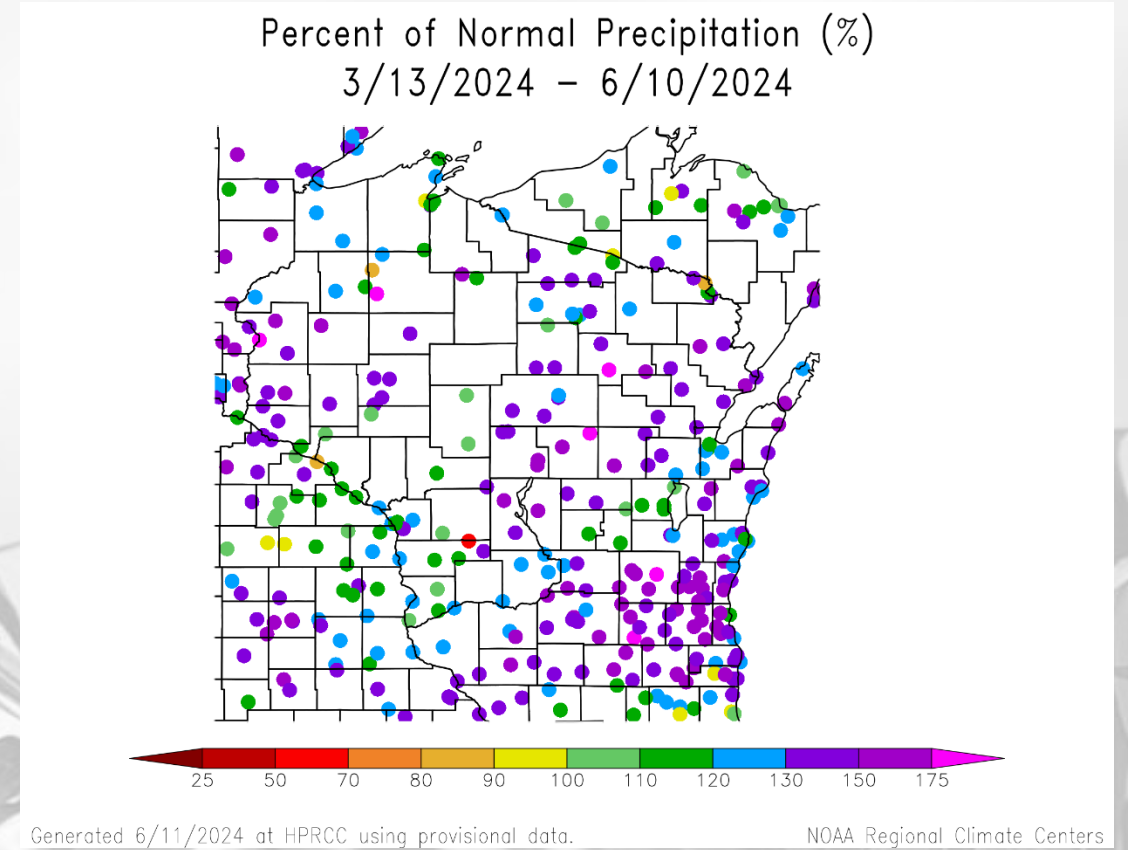
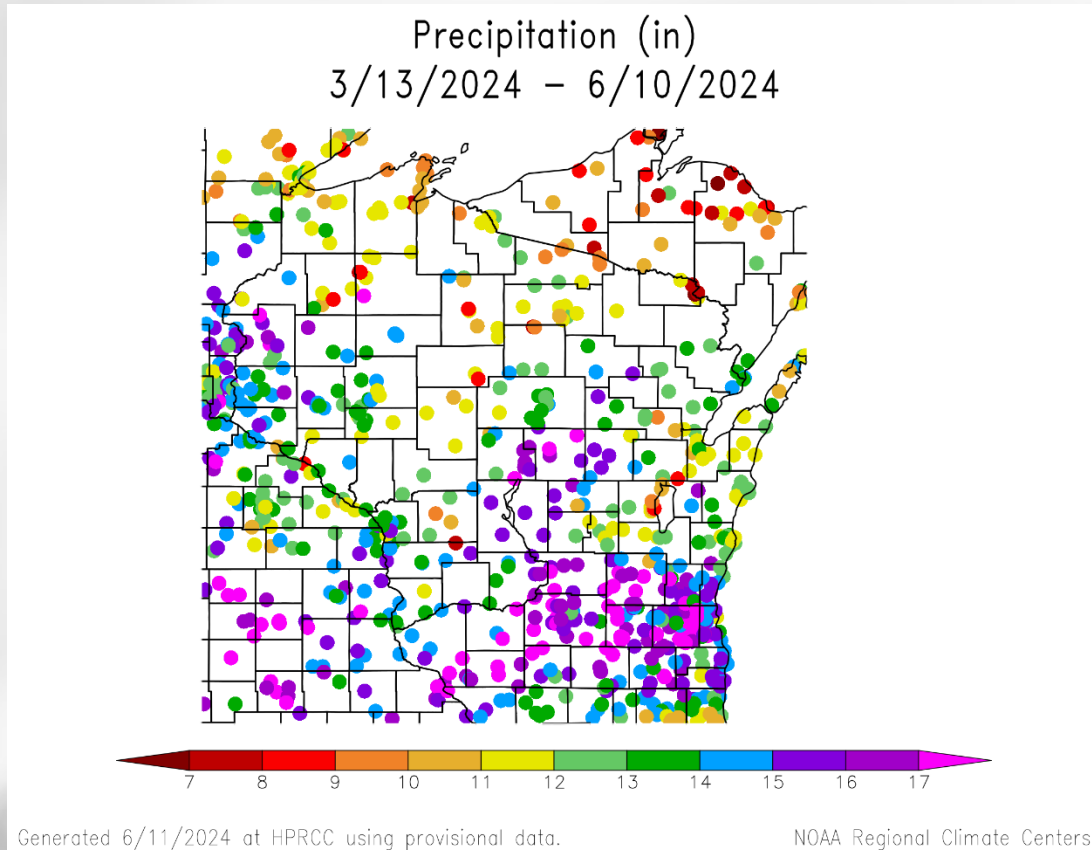
- **>6"** of monthly precip common across the southern half of the state and the NW.
- Driest between Eau Claire & La Crosse and in the far NE → **<5"** common.
- Wettest in Columbia & Dodge Counties → **>10"** for some.

# 30 Day Precip Total/% Avg.



- 30-day totals of **7+”** are common across the S & NW, with some stations receiving **>9”**.
- Only a handful of stations are **below** the climatological average (WC, NC regions).
- Monthly totals of **150% or more** of climatological average were very common in the S, C, and E.

# 90 Day Precip Total/% Avg.

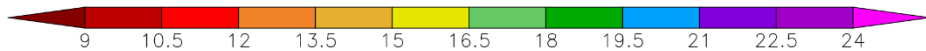
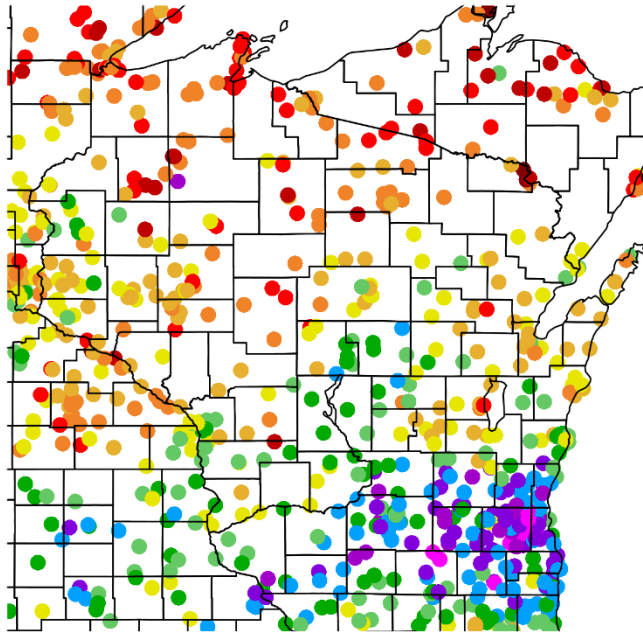


- **15-17"** for many in the S, central sands, and NW; **130+%** of average is common across the state.
- Virtually all the stations are **above** 30-year average.
- 90-day totals of **<11"** common in the north but are **near or slightly above** average.



# 2024 Precipitation (so far)

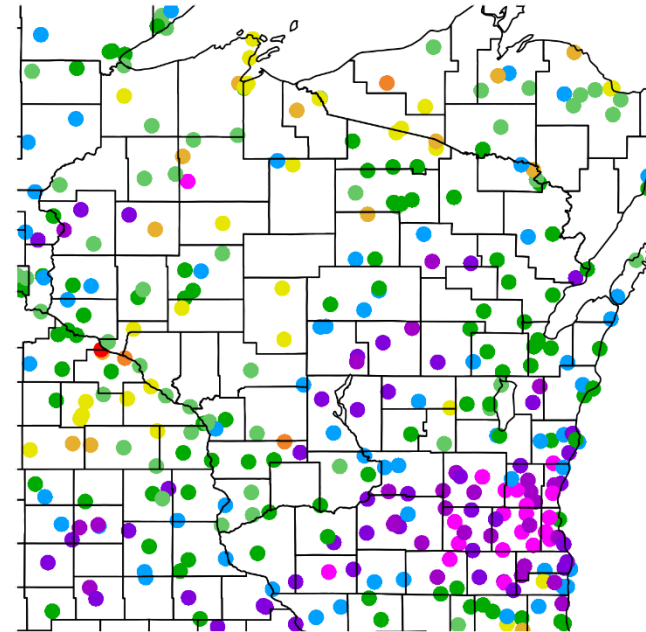
Precipitation (in)  
1/1/2024 - 6/9/2024



Generated 6/10/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Precipitation (in)  
1/1/2024 - 6/9/2024



Generated 6/10/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

# Soil Moisture Models

- **Wetter-than-normal** soil moisture conditions across most of the state, according to the NASA SPoRT-LIS model.
  - However, many areas saw a decrease in percentile ranking with the week of lower rainfall.
- Most of the state is in the 70<sup>th</sup> percentile or higher (areas in green).

## Model Notes:

**Red** areas = top 5 driest in 100 years.

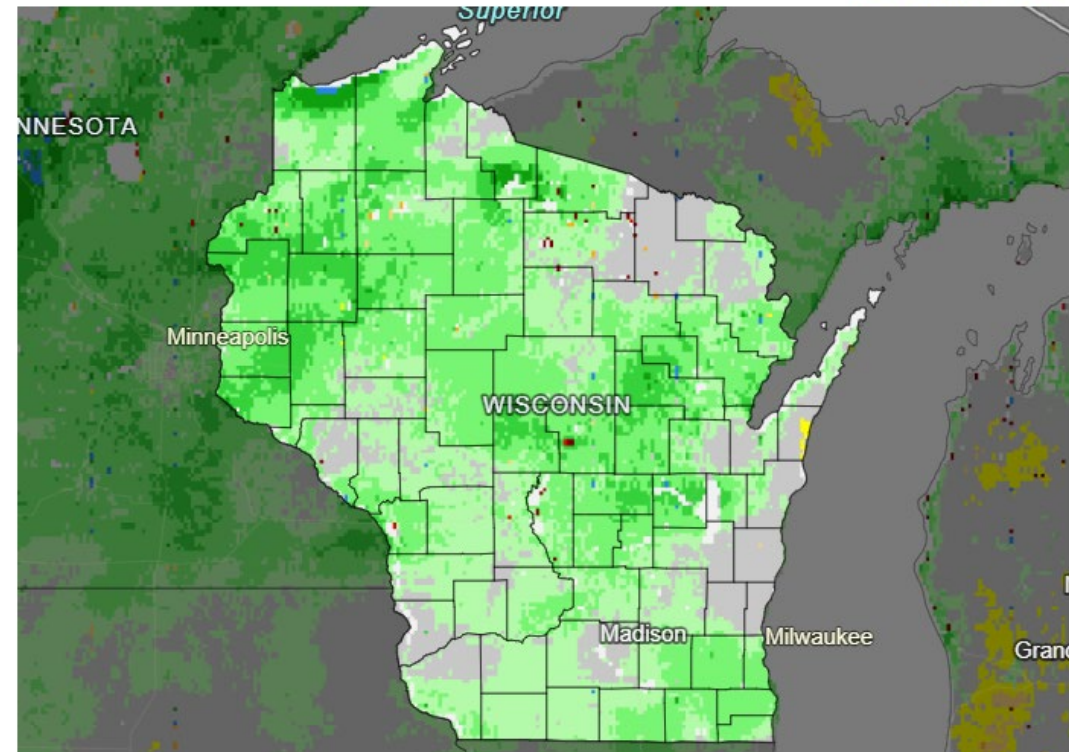
**Dark red** areas = top 2 driest in 100 years.

*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.*

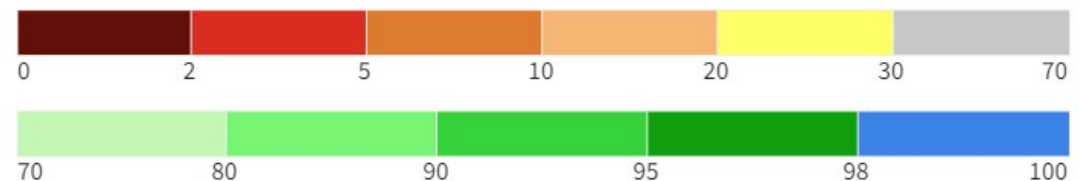
[https://weather.msfc.nasa.gov/sport/case\\_studies/lis\\_CONUS.html](https://weather.msfc.nasa.gov/sport/case_studies/lis_CONUS.html)

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

## 0-100 cm Soil Moisture Percentile



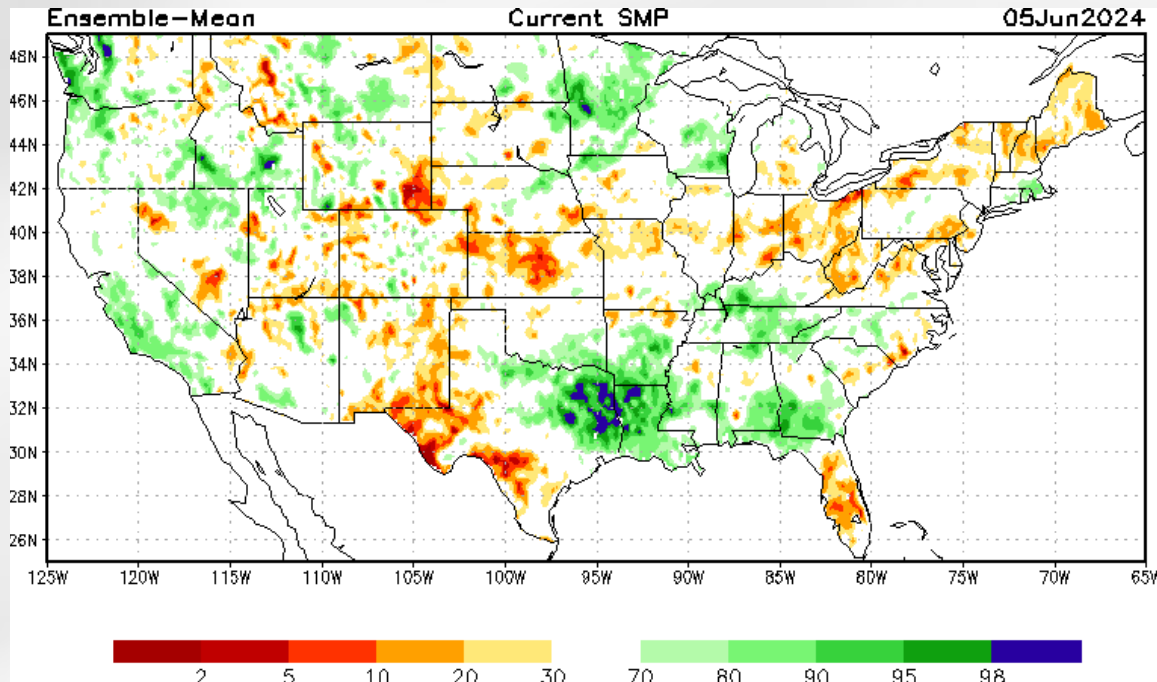
## 0-100 cm Soil Moisture Percentile



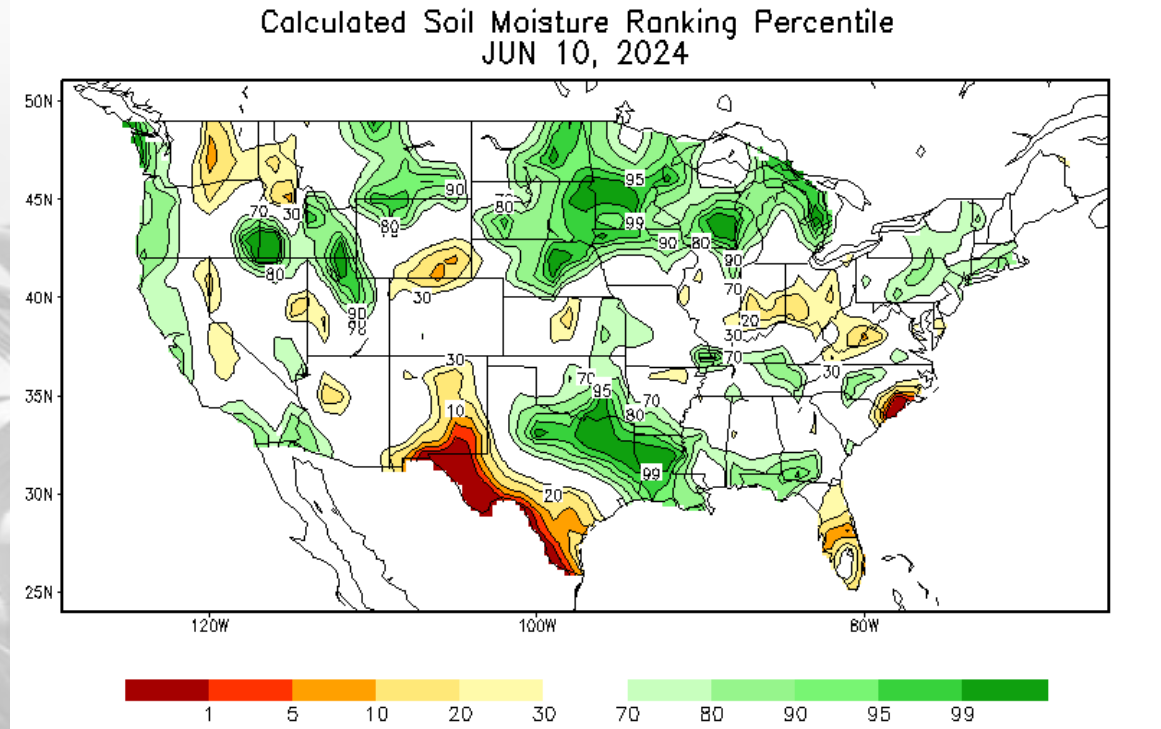
Source(s): NASA  
Data Valid: 06/11/24

**Drought.gov**

# Soil Moisture Models



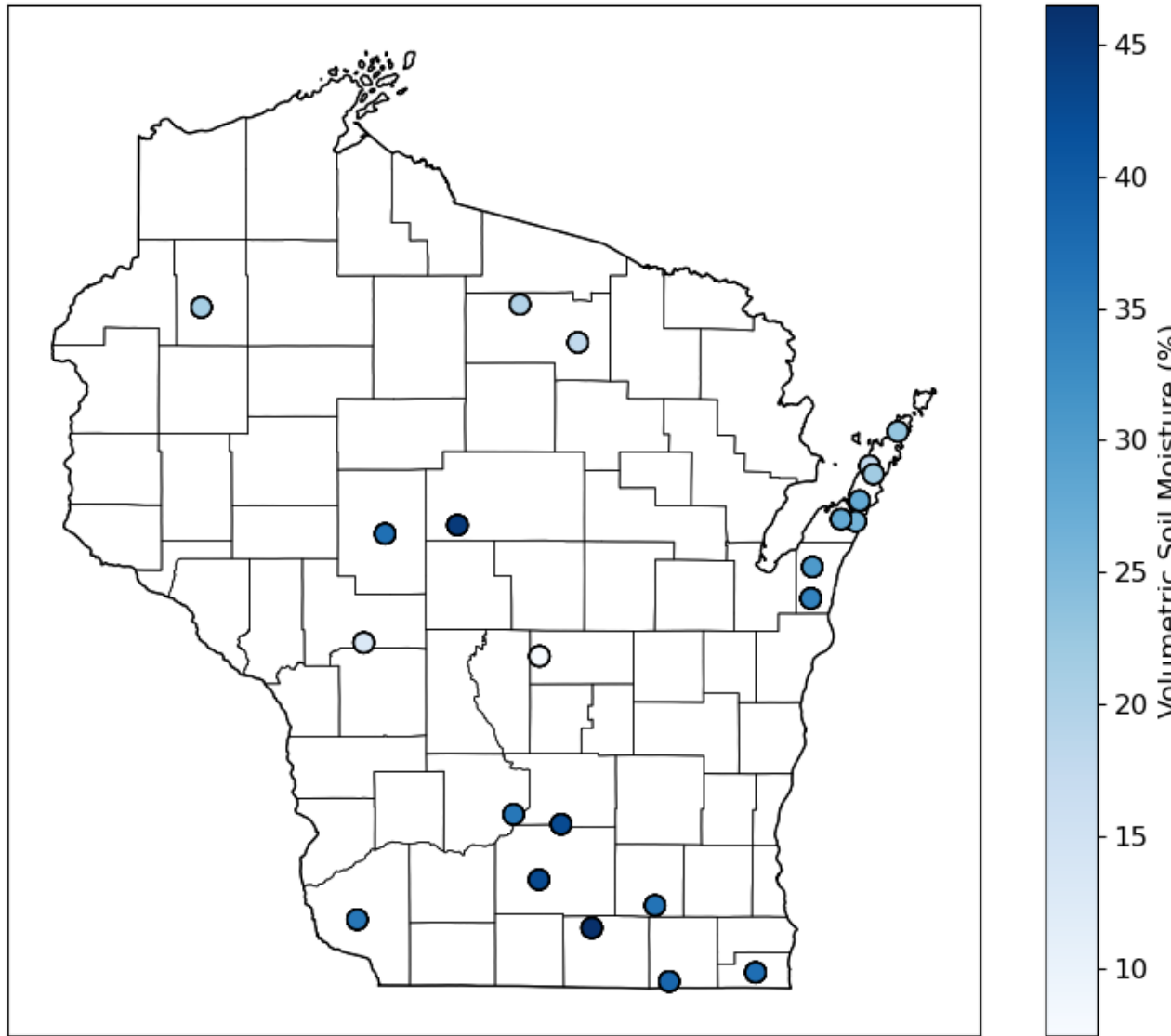
**NOTE:** this map displays the soil moisture percentile for June 5. It was the most recent update on June 11.



[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)

# Soil Moisture - Wisconet

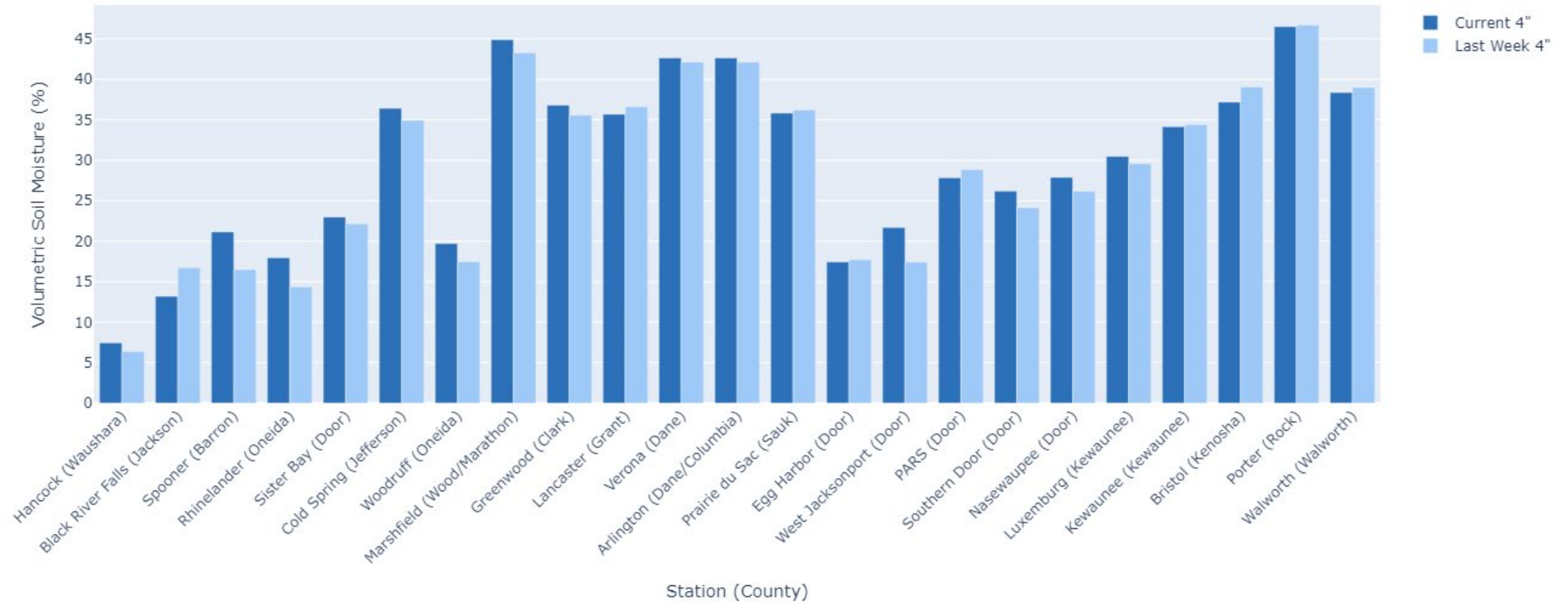
Wisconet 4" Soil Moisture



7-day average soil moisture @ 4"  
depth –June 4-10

# Soil Moisture - Wisconet

Wisconet 4" Soil Moisture



**Current:** 7-day average ending on 6/10

**Last Week:** 7-day average ending on 6/3

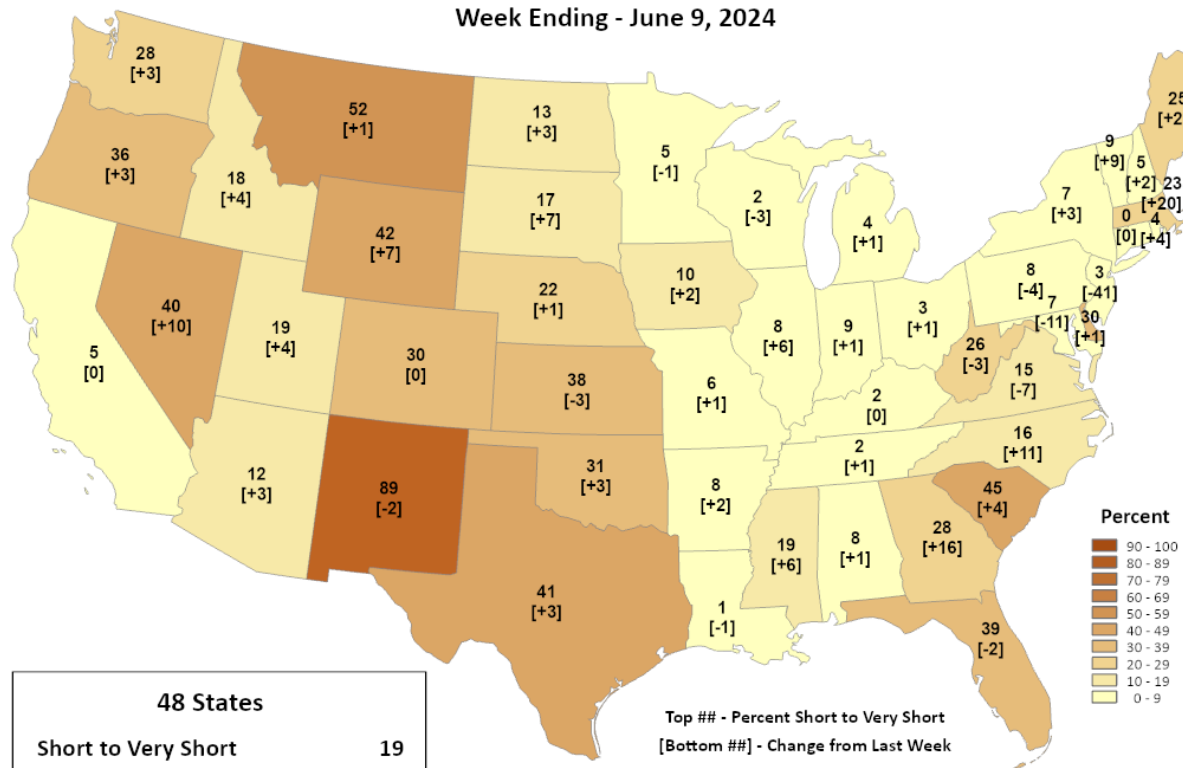
<https://wisconet.wisc.edu/>

# NASS Subsoil Moisture



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

## Subsoil Moisture Percent Short to Very Short Week Ending - June 9, 2024

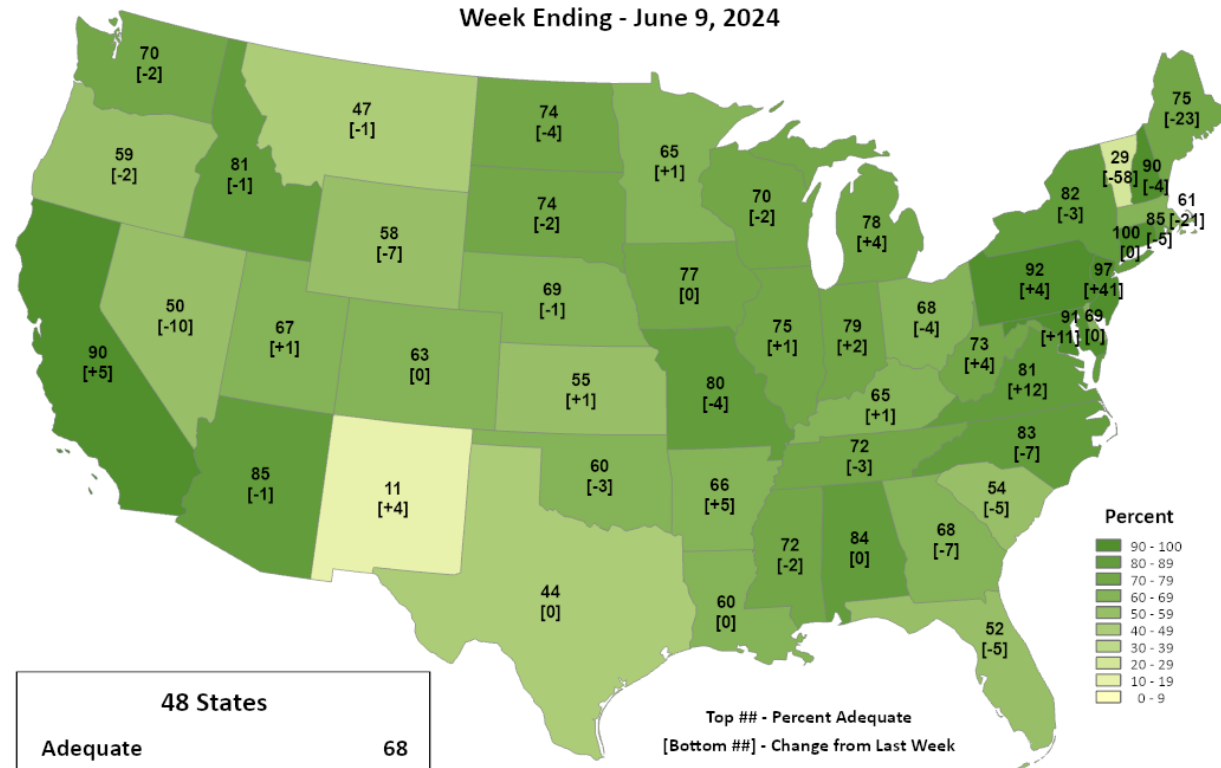


Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.



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

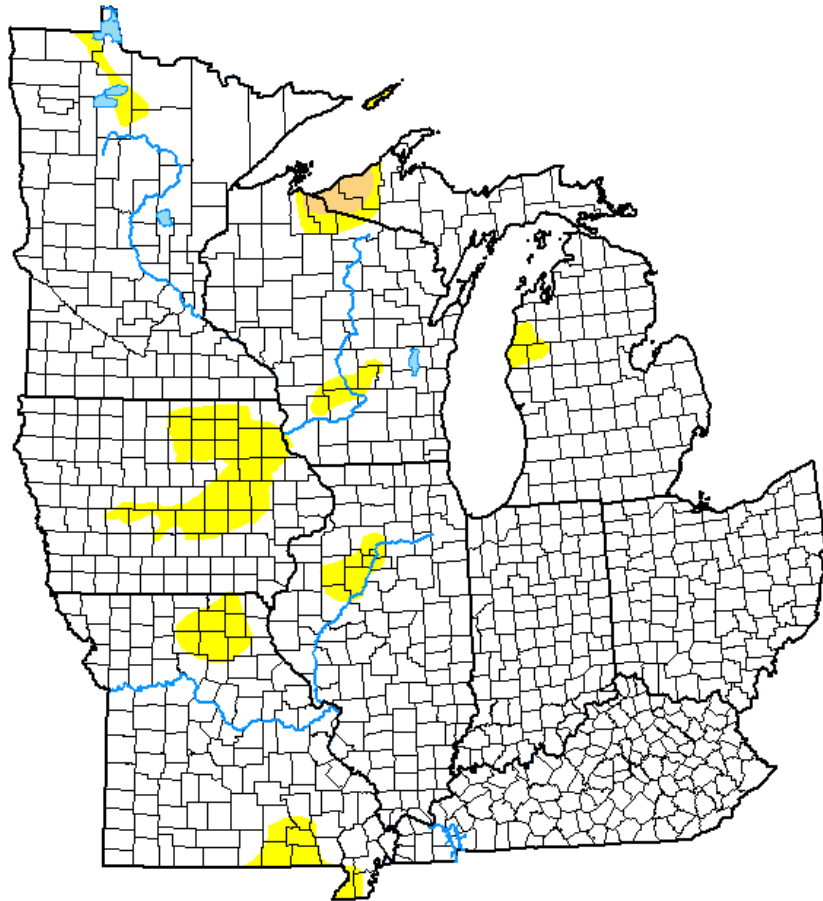
## Subsoil Moisture Percent Adequate Week Ending - June 9, 2024



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

# US Drought Monitor

## U.S. Drought Monitor Midwest



**June 4, 2024**

(Released Thursday, Jun. 6, 2024)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	93.32	6.68	0.43	0.00	0.00	0.00
<b>Last Week</b> <i>05-28-2024</i>	92.73	7.27	0.83	0.00	0.00	0.00
<b>3 Months Ago</b> <i>03-05-2024</i>	22.85	77.15	37.70	11.72	2.32	0.00
<b>Start of Calendar Year</b> <i>01-02-2024</i>	22.92	77.08	50.25	20.76	4.20	0.00
<b>Start of Water Year</b> <i>09-26-2023</i>	16.82	83.18	54.98	23.81	6.21	0.13
<b>One Year Ago</b> <i>06-06-2023</i>	15.29	84.71	32.06	4.81	1.16	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:

Brad Pugh  
CPC/NOAA



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

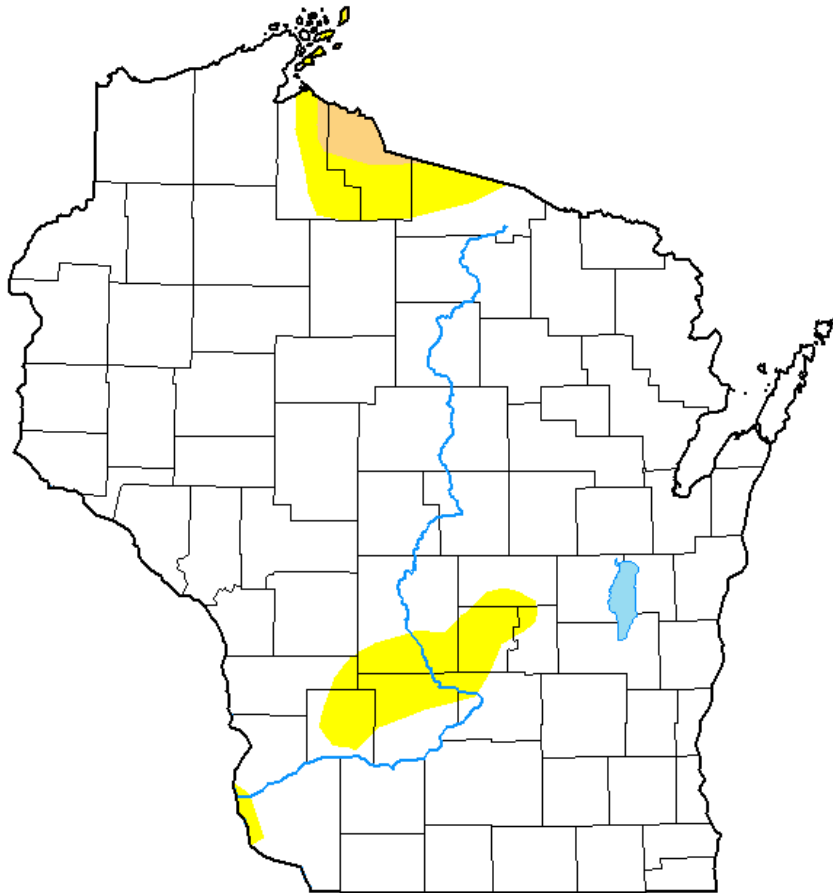
- Compared to last week:
  - Continued decreases in drought category area.
- **>93%** of the Midwest is outside of D0-D4.
- D2-D4 drought are non-existent in the Midwest.
- **<0.5%** of the Midwest remains in D1 drought.

*Note: D0 is not considered drought.*

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

# US Drought Monitor

## U.S. Drought Monitor Wisconsin



June 4, 2024

(Released Thursday, Jun. 6, 2024)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	92.96	7.04	0.77	0.00	0.00	0.00
Last Week 05-28-2024	90.31	9.69	0.77	0.00	0.00	0.00
3 Months Ago 03-05-2024	10.10	89.90	67.99	18.45	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 06-06-2023	11.29	88.71	25.34	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:

Brad Pugh  
CPC/NOAA



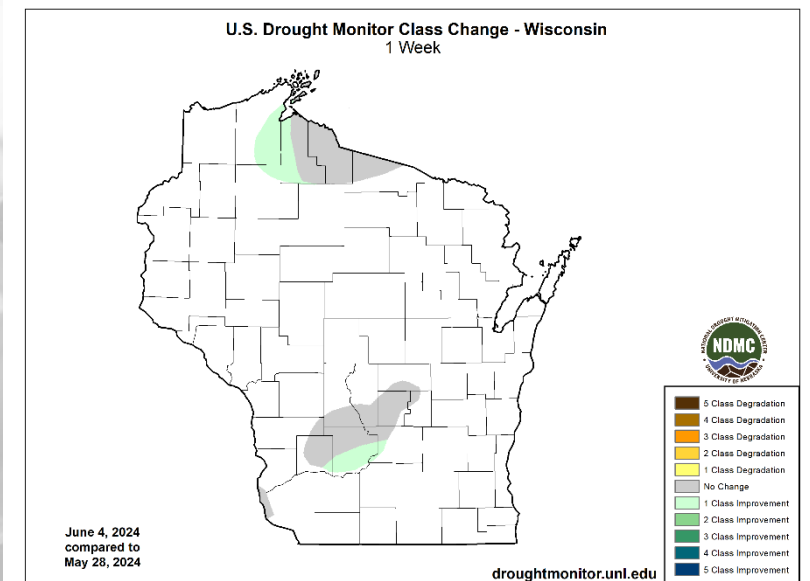
[droughtmonitor.unl.edu](http://droughtmonitor.unl.edu)

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

Amount of state in:

- D1-D4 – 0.8% --
- 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.

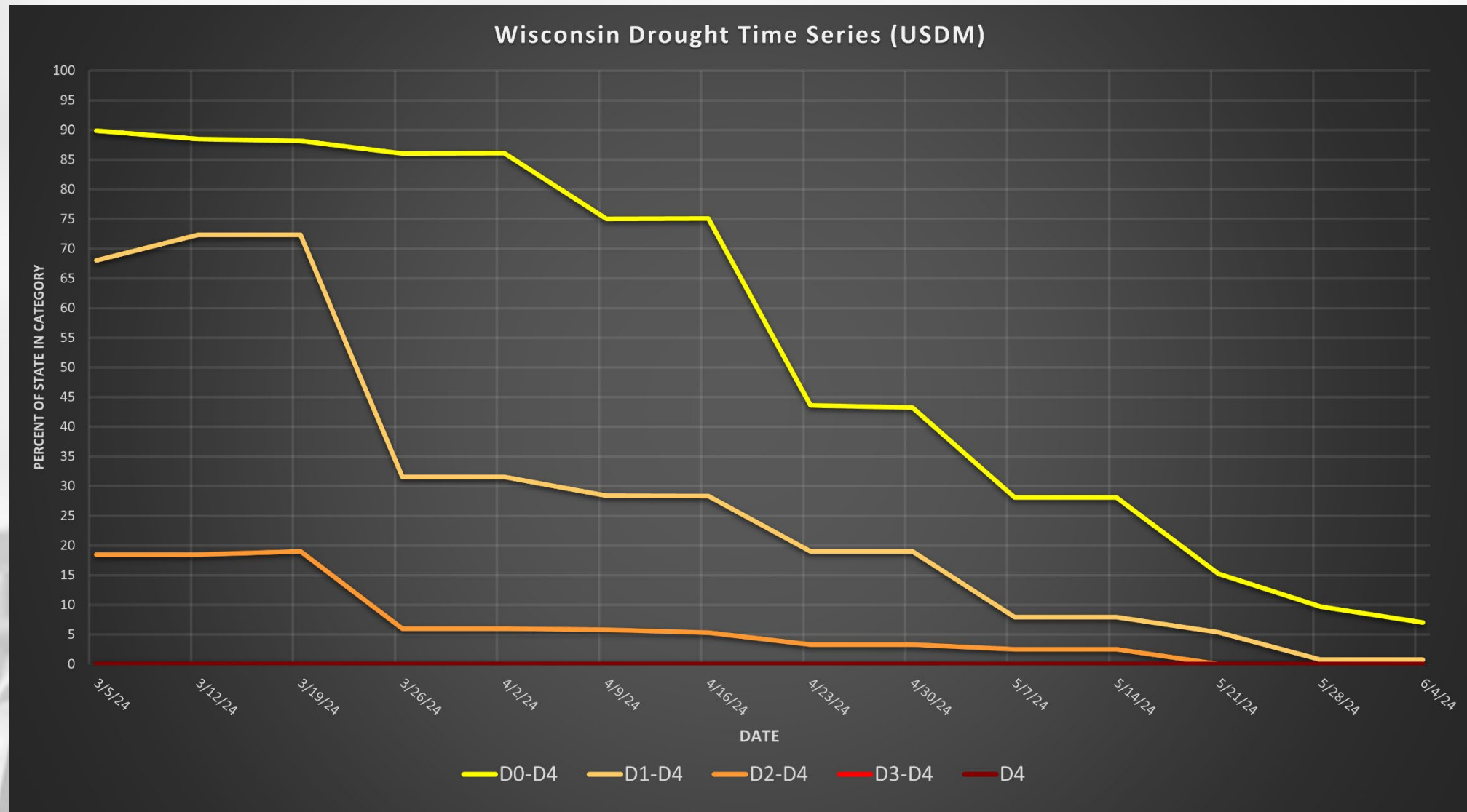


June 4, 2024  
compared to  
May 28, 2024

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



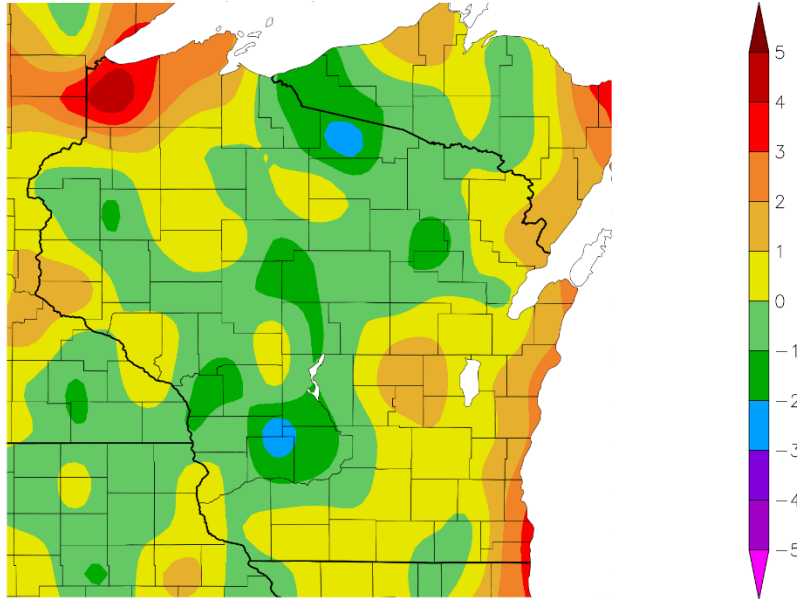
# USDM Time Series



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

# 7 Day Temperatures

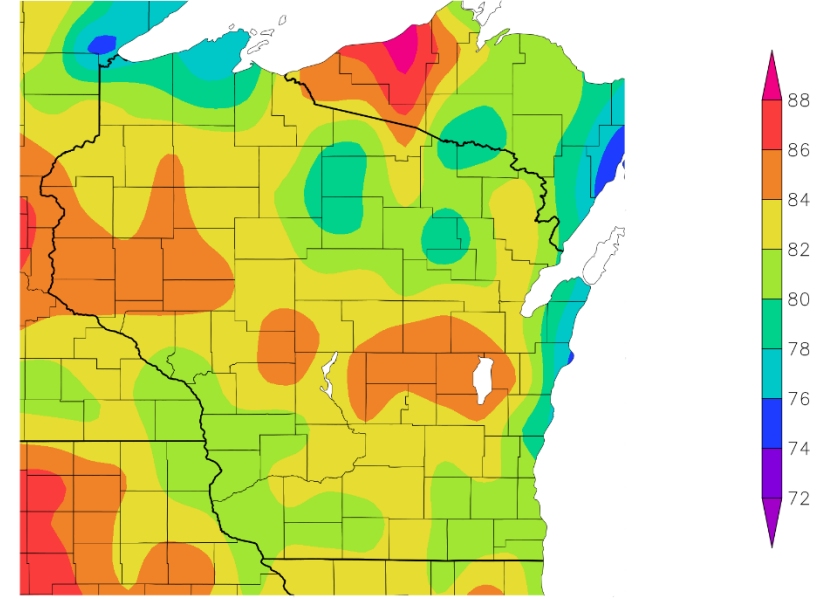
Departure from Normal Temperature (F)  
6/4/2024 - 6/10/2024



Generated 6/11/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Highest 1-Day Maximum Temperature (F)  
6/4/2024 - 6/10/2024



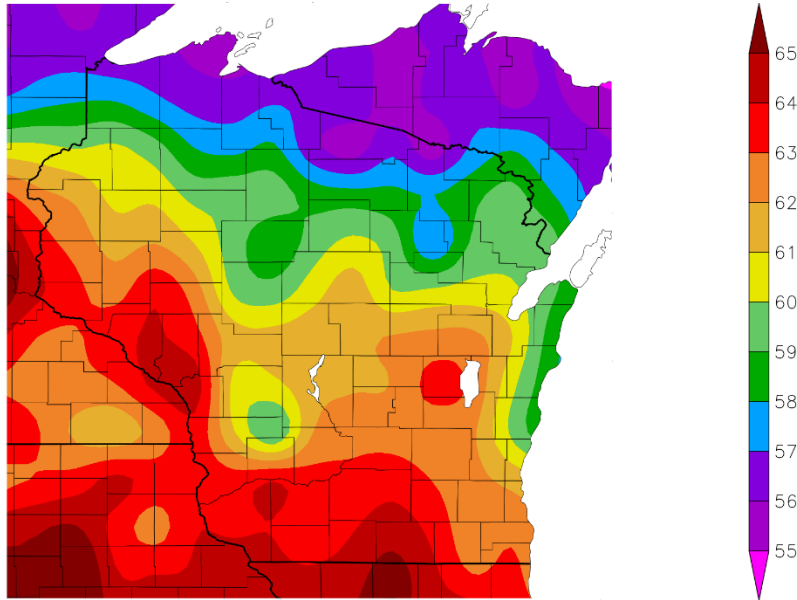
Generated 6/11/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Temps were seasonal, **within  $\pm 1^\circ\text{F}$**  for most last week;  **$> 2^\circ\text{F}$**  above normal in Douglas/Bayfield Cos. & along the Lake Michigan shore.
- Maximum temps last week reached the **mid 80's** in the central and NW, with **low 80's** for most others.

# 30 Day Temperatures

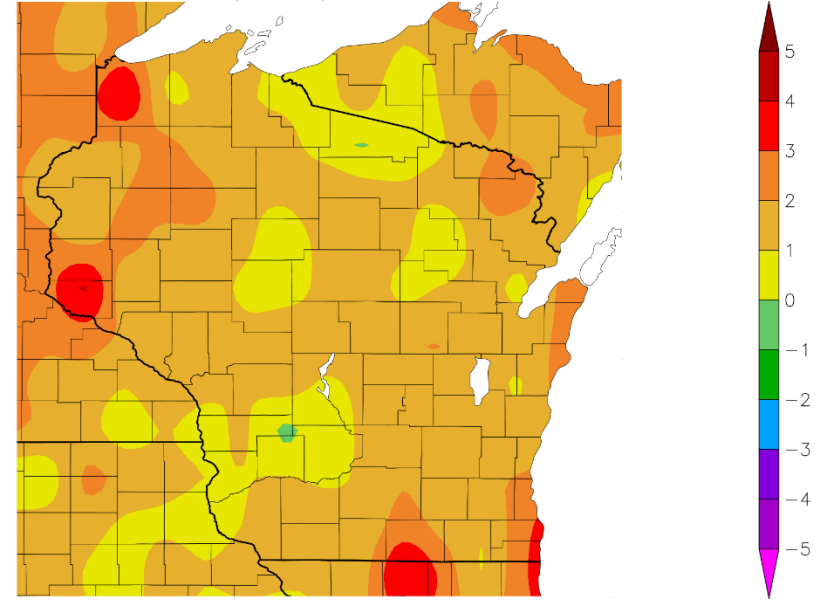
Temperature (F)  
5/12/2024 – 6/10/2024



Generated 6/11/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Temperature (F)  
5/12/2024 – 6/10/2024



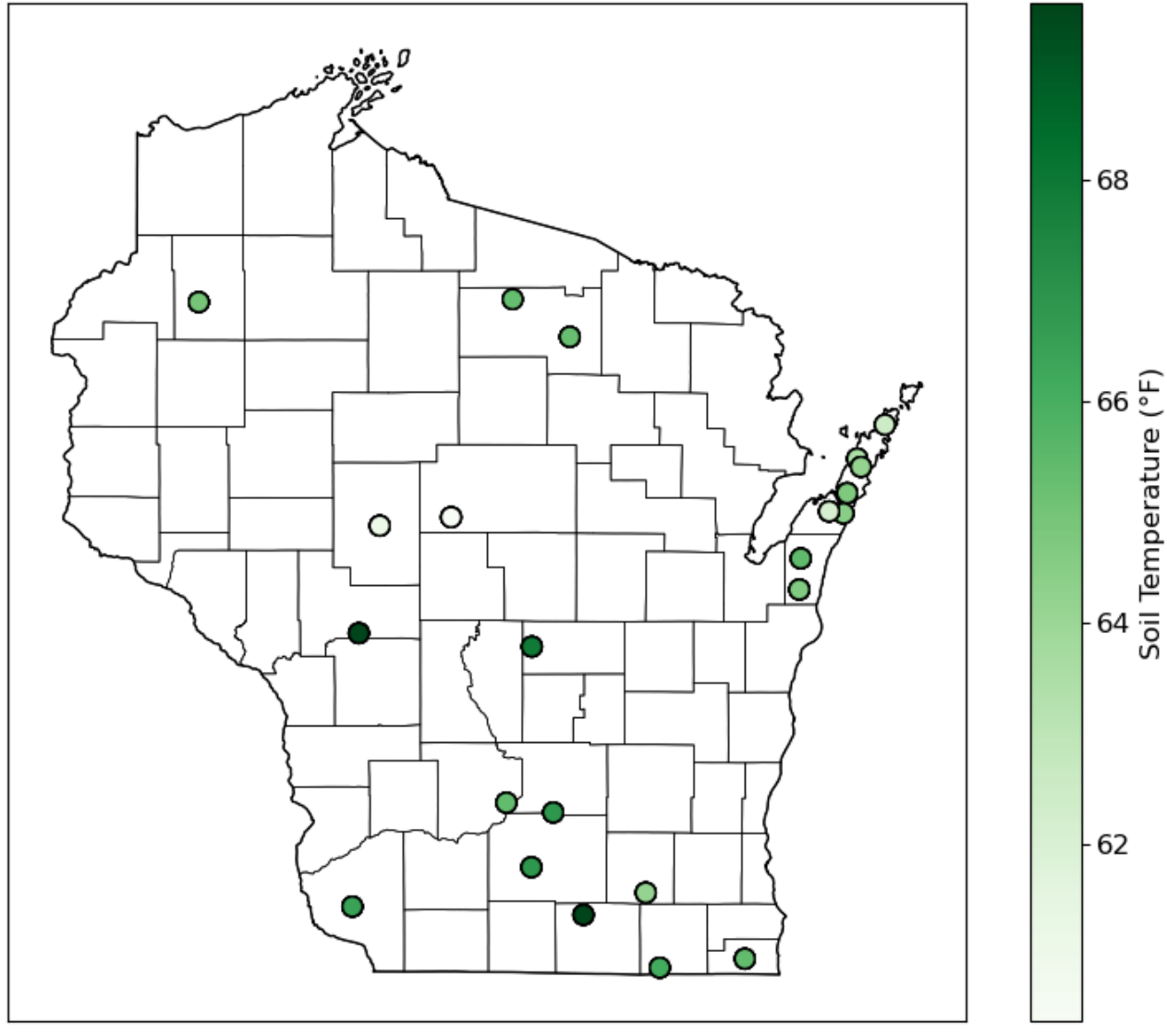
Generated 6/11/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Temperatures for the past month ranged from **63-65°F** in the S & W to **55-57°F** in the far N.
  - **≤2°F** above normal common across the state.
  - **>3°F** above normal for some near the IL line, east of the Twin Cities, and in Douglas County.

# Soil Temperature - Wisconet

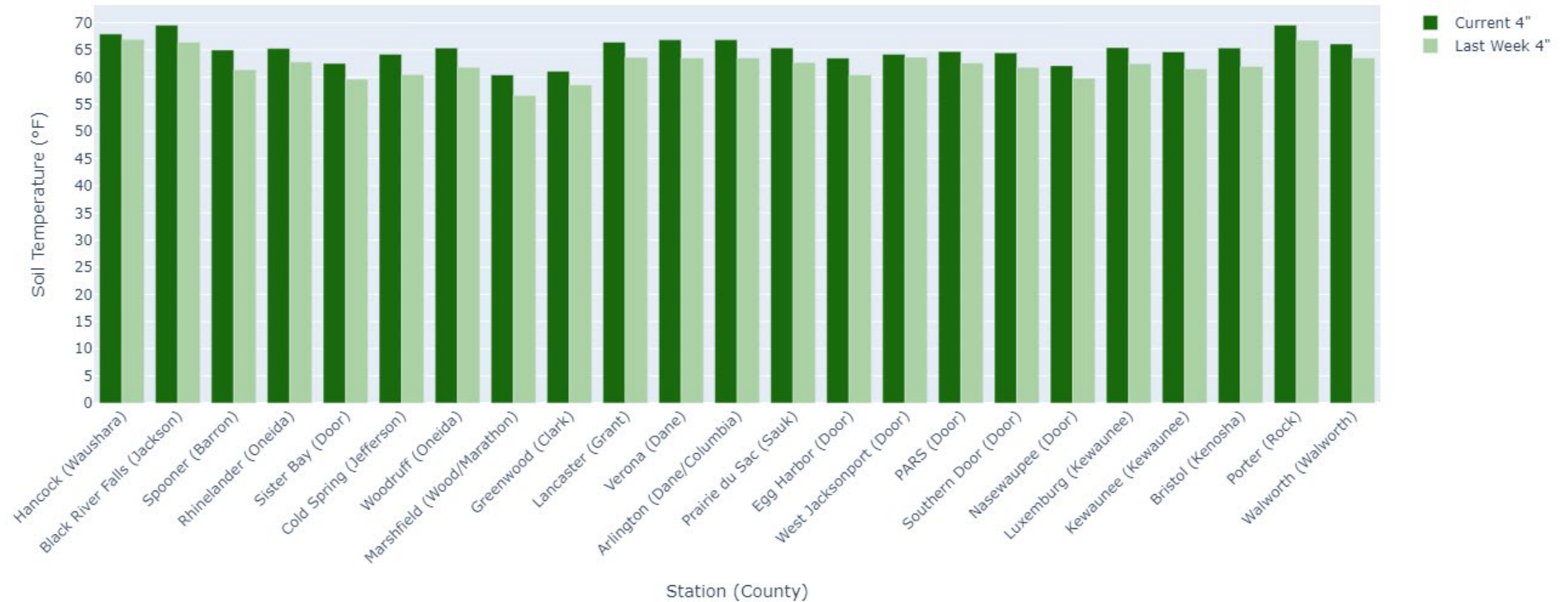
Wisconet 4" Soil Temperature



7-day average soil temperature  
@ 4" depth – June 4-10

# Soil Temperature - Wisconet

Wisconet 4" Soil Temperature



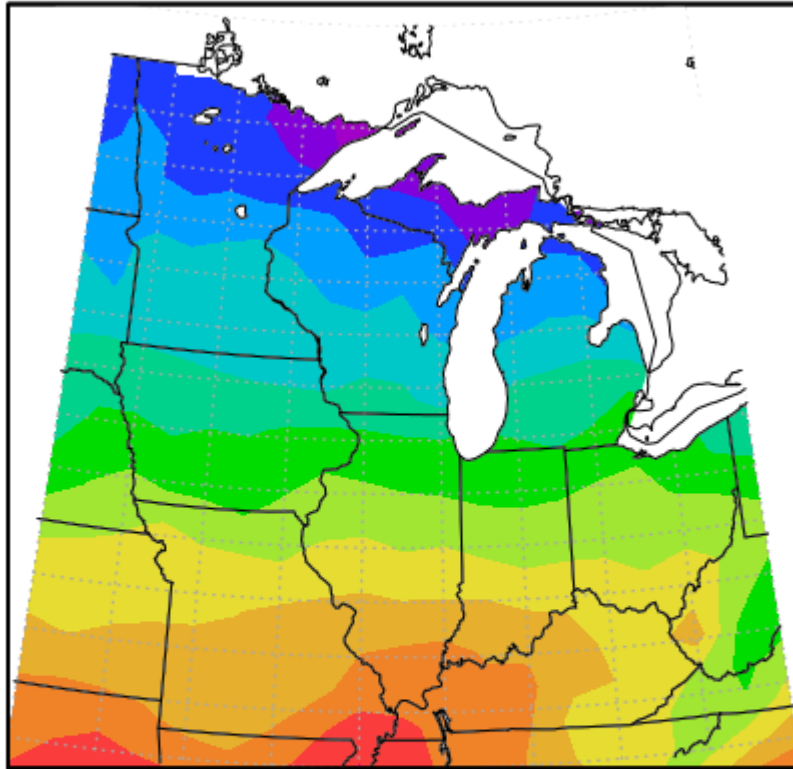
**Current:** 7-day average ending on 6/10

**Last Week:** 7-day average ending on 6/3

<https://wisconet.wisc.edu/>

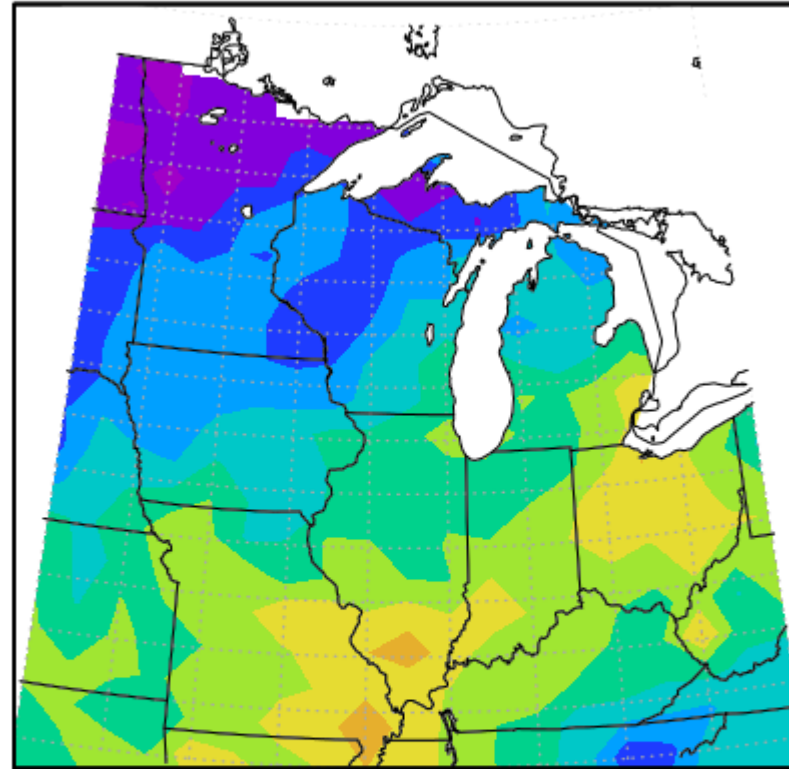
# Growing Degree Days (Since April 1)

Total MGDD from 4/1/2024 to 6/10/2024



Midwestern Regional Climate Center  
Purdue University

MGDD Departure, 4/1/2024 to 6/10/2024



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

- **700-800** GDD in the S to **400-500** GDD in the N.
- SE WI is 90-120 GDD further **ahead of the average**; <60 ahead of average in the W/NW.

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](https://mrcc.purdue.edu/climate_watch)

# NASS Crop Progress – Corn

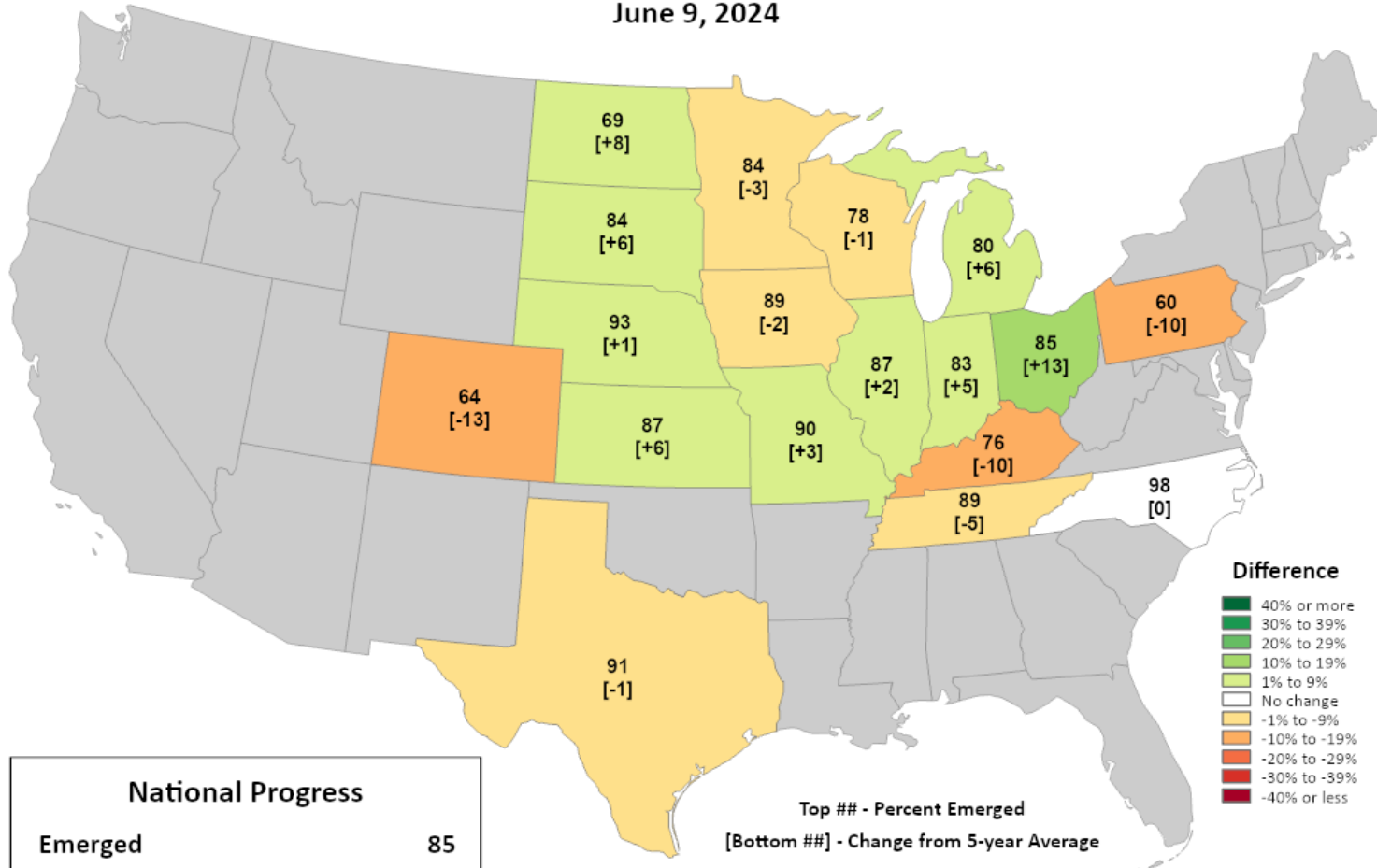


This product was prepared by the  
USDA Office of the Chief Economist (OCE)  
World Agricultural Outlook Board (WAOB)

## Corn Progress

### Percent Emerged

June 9, 2024



National Progress	
Emergence	85
Change from 5-year Average	+1

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

- Emergence is running **behind** the 5-year average in WI and to the W in IA and MN. **Ahead** of normal to the S and E.
  - Wisconsin → **78% complete**; 1% behind of the 5-year average pace. **10% increase** from last week.
  - Planting → **87% planted**

# NASS Crop Progress – Soybean

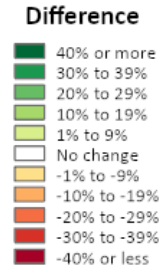
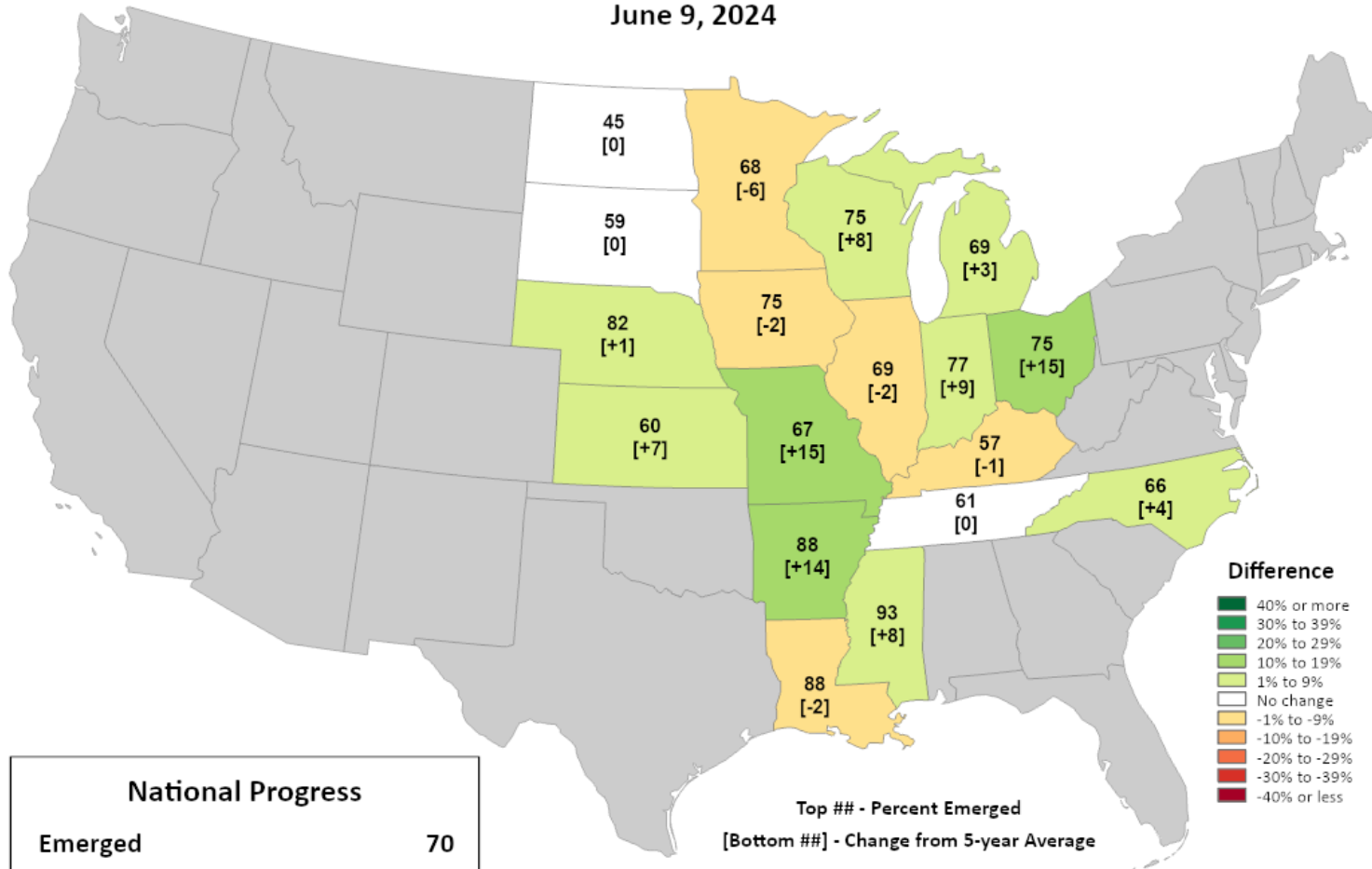


This product was prepared by the  
 USDA Office of the Chief Economist (OCE)  
 World Agricultural Outlook Board (WAOB)

## Soybeans Progress

Percent Emerged

June 9, 2024



National Progress	
Emerged	70
Change from 5-year Average	+4

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

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

- Emergence is running **ahead** of the 5-year average in WI and states to the E. **Behind** average pace in IA, MN, & IL.
- Wisconsin → **75% complete**; 8% ahead of the 5-year average pace. **14% increase** from last week.
- Planting → **87% planted**

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



# NASS Crop Condition

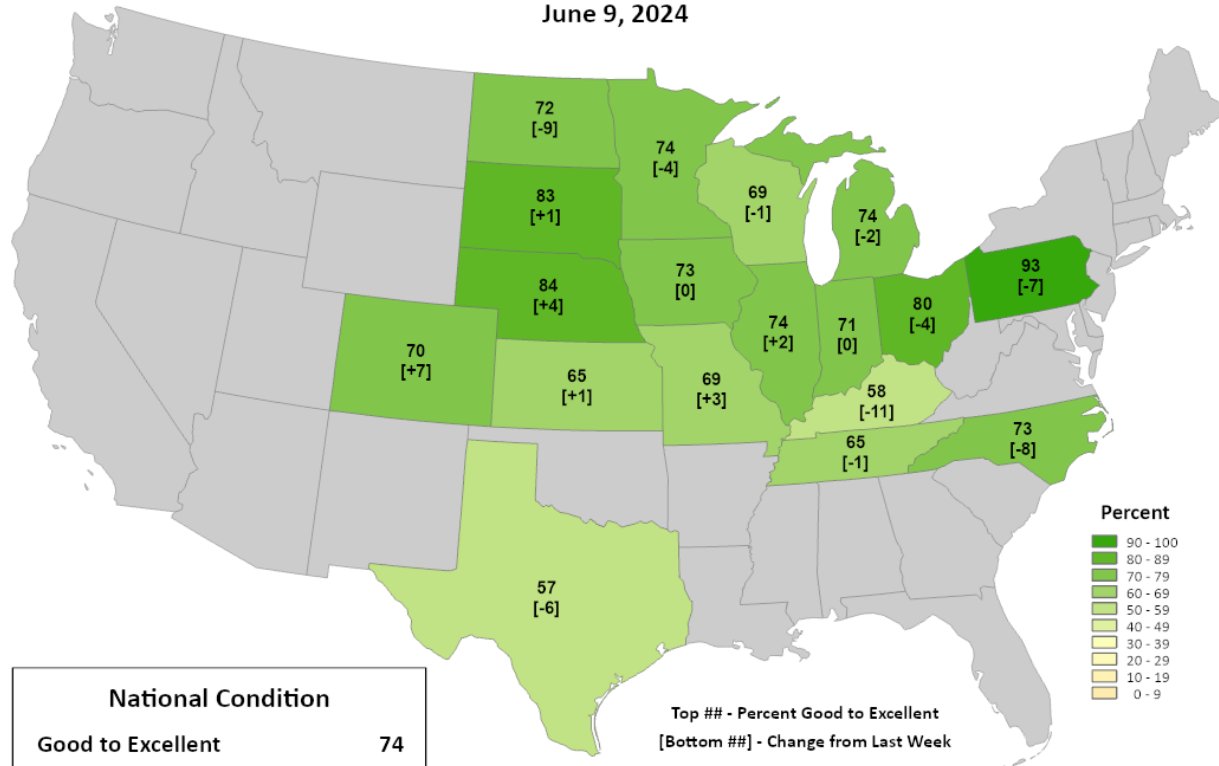


This product was prepared by the  
USDA Office of the Chief Economist (OCE)  
World Agricultural Outlook Board (WAOB)

## Corn Conditions

### Percent Good to Excellent

June 9, 2024



National Condition	
Good to Excellent	74
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.

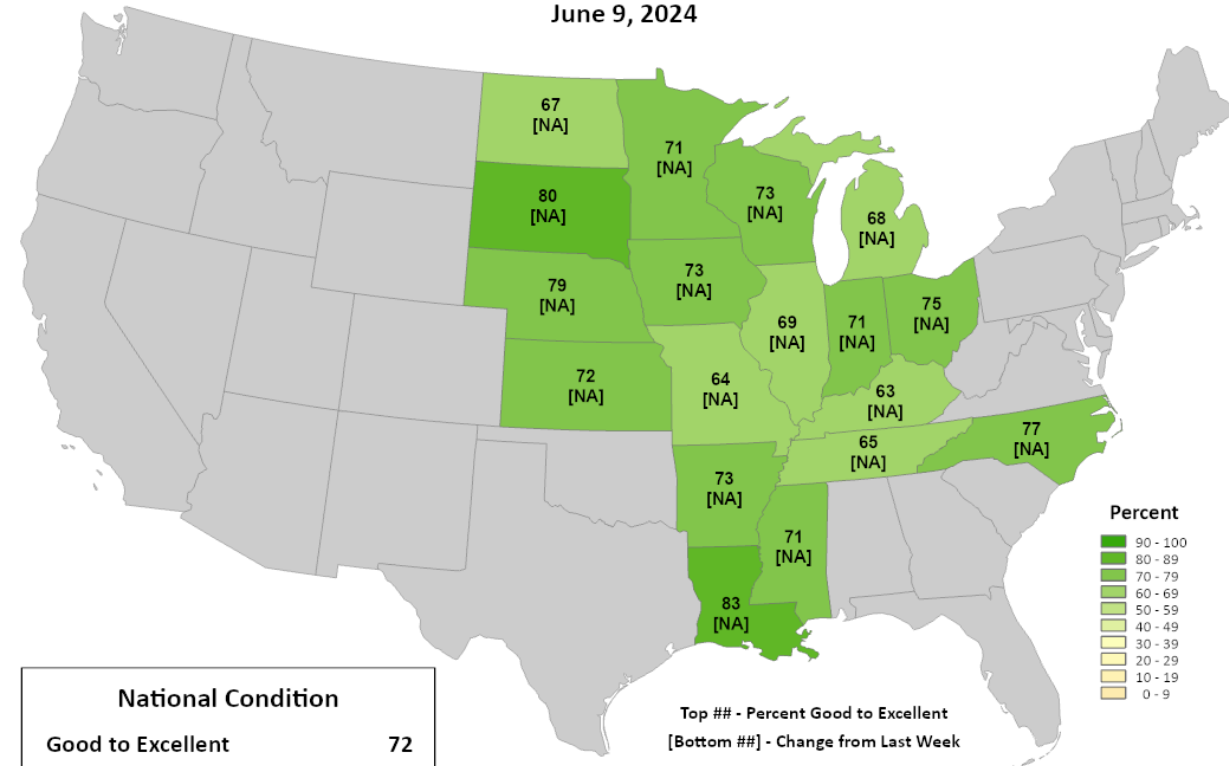


This product was prepared by the  
USDA Office of the Chief Economist (OCE)  
World Agricultural Outlook Board (WAOB)

## Soybean Conditions

### Percent Good to Excellent

June 9, 2024



National Condition	
Good to Excellent	72
Change from Last Week	NA

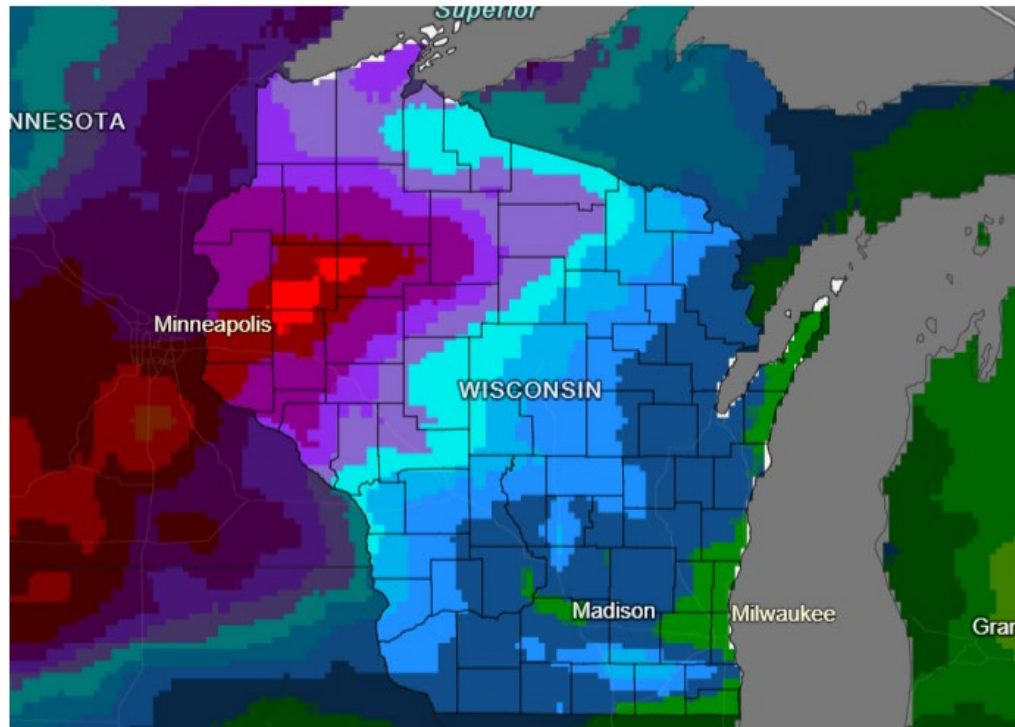
Top ## - Percent Good to Excellent  
[Bottom ##] - Change from Last Week

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 June  
11-18, 2024



Predicted Inches of Precipitation



Source(s): National Weather Service Weather Prediction Center  
Last Updated: 06/11/24

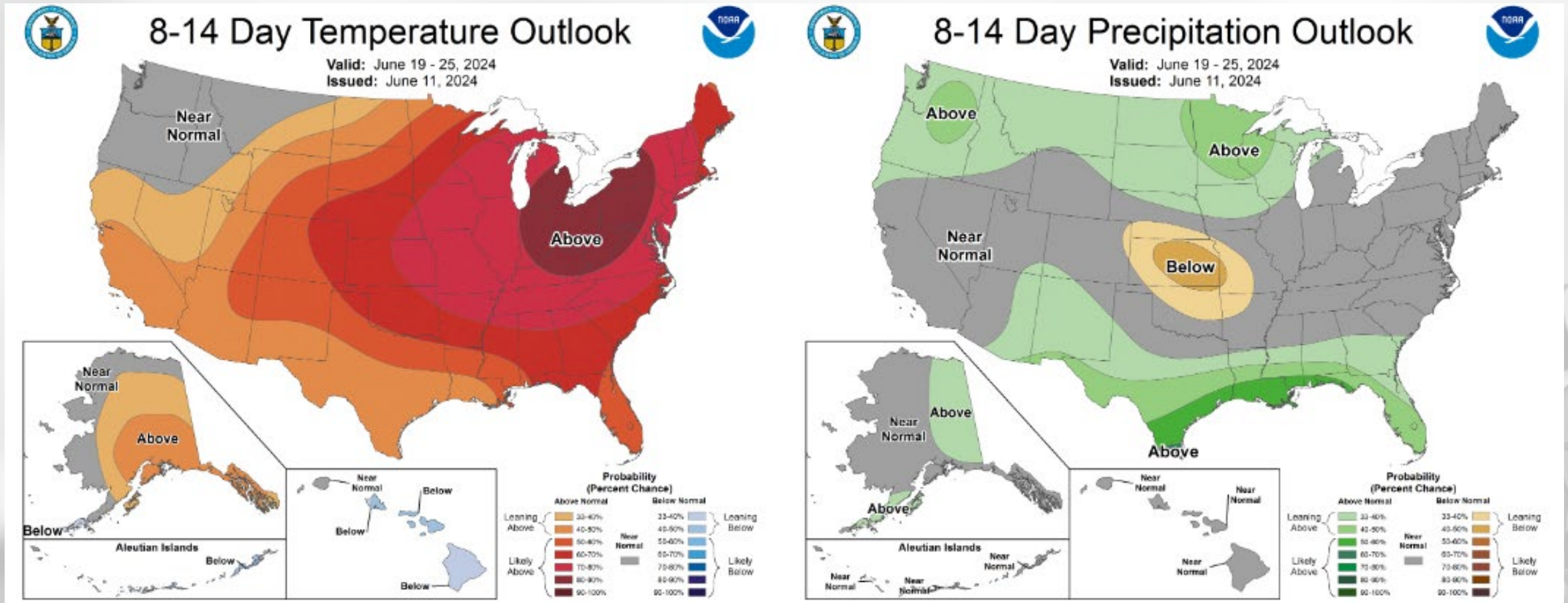
Drought.gov

- **Multiple rain chances** are forecasted over the next week, with higher chances in the **north/northwest**.
- Multiple inches are possible in the NW; <1" to the east.

Forecast for 6/11/24 thru 6/18/24  
(Begins at 7am CDT)

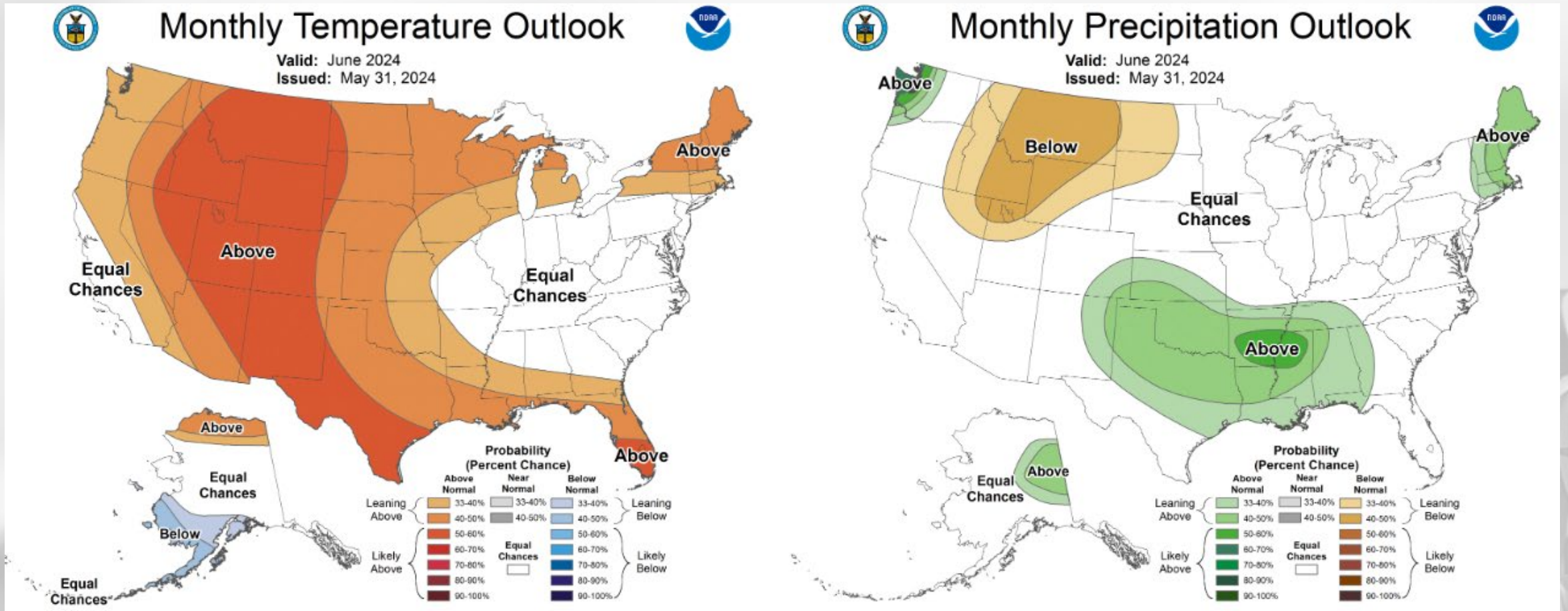
<https://www.wpc.ncep.noaa.gov/qpf/p168i.gif>  
<https://www.drought.gov/states/wisconsin>

# 8-14 Day Temp & Precip Outlook



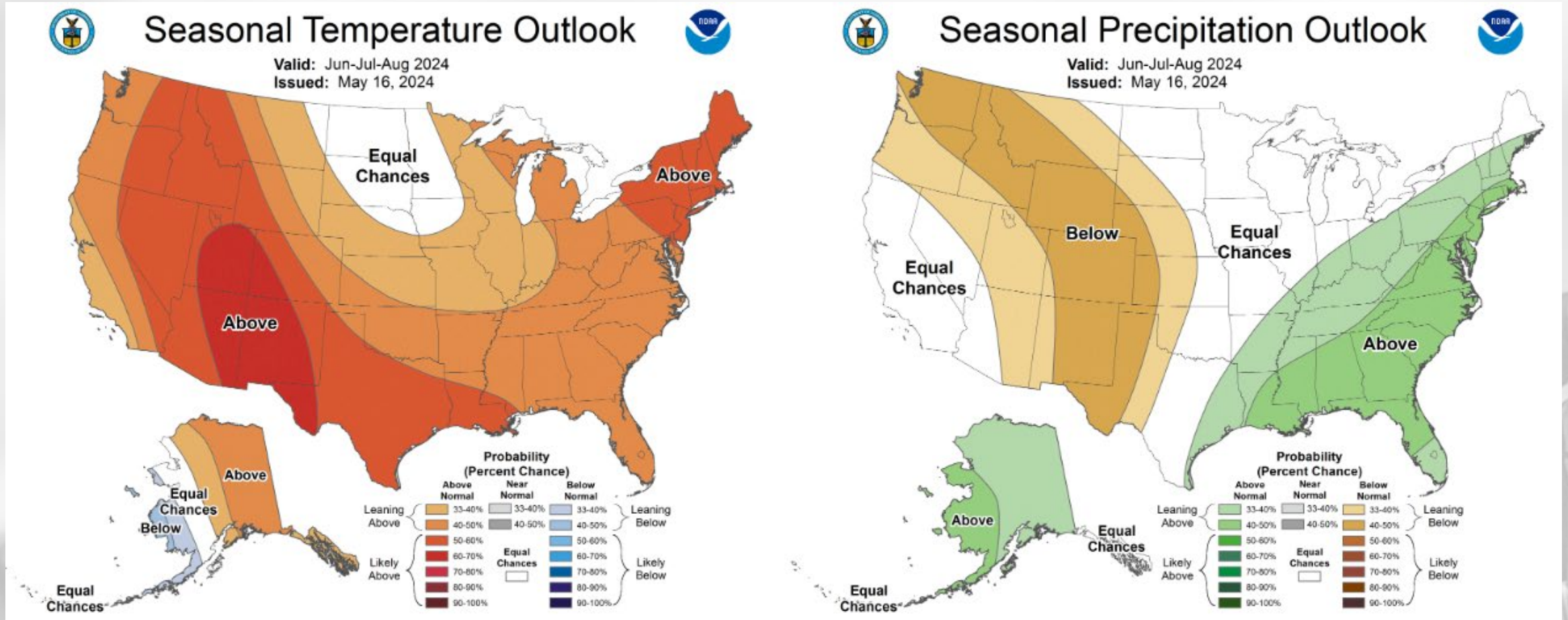
**Middle to late June: Temperatures likely above normal. Precipitation leaning above normal.**

# 30 Day Temp & Precip Outlook



**Month of June:** Temperature is leaning above normal. Precipitation is showing equal chances.

# 90 Day Temp & Precip Outlook



**Summer 2024:** Temperatures leaning towards above normal. Precipitation indications are for equal chances of above/at/below average.

# Take-Home Points

## Current conditions:

- Rainfall totals from last week were lesser than in prior weeks, with higher totals in the NW.
- Temperatures last week were seasonal, reaching up into the low to mid 80's for most in the state.

## Impact:

- Soil moisture remains at wetter-than-normal levels for most, with **70%** of the state reporting good or adequate conditions.
  - **<1%** of the state is in D1 drought, with **0%** in D2 or higher.
- Average soil temperatures are in the **mid-to-upper 60's**, warming by a few degrees from last week
- Corn & soybeans are **≥75%** emerged, with conditions for both crops at **~70%** good to excellent.

## Outlook:

- The forecast is calling for more rain statewide next week; highest in the NW.
- Higher likelihood for above normal temperatures as we head into the second half of June.
  - This period is also leaning wetter-than-normal.
- The warmer-than-normal conditions have a higher probability to continue through the summer.
  - *A transition to La Niña is expected over the summer months.*

# Agronomic Considerations

## Planting Considerations

- Soil moisture is adequate or even high in most places. Be cautious about planting into muddy conditions, especially with more rain forecasted.
- In the event of poor soybean emergence, consider replanting using [these tools](#) to aid your decision
- As we near the end of planting season, consult your crop insurance agent before making decisions regarding prevent plant or replant
  - Cover crops(non-corn) on prevent plant acres may now be harvested as forage at any time during the season
    - See info on [alternative forages](#) and [cover crops](#)

## Nutrient & Herbicide Applications

- Consider doing tissue testing and pre-sidedress nitrate testing after crop has emerged to assess fertilizer need.
- Most corn and soybeans have emerged. Properly staging your crop assists with timing future applications. Growth stage guides available for corn, soybean and wheat at [Growing Guides – Integrated Pest and Crop Management – UW–Madison \(wisc.edu\)](#)

## Manure Applications

- Runoff risk is sporadic across 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](#).

## Pest Management

- Variegated cutworm is showing up in parts of the state. Sign up to receive text alerts when pests are in your region [here](#).
- Alfalfa weevil damage is present throughout the state, with the main feeding area moving North this week.
- Start to monitor for potato leafhopper pressure in alfalfa
- Consider applying a fungicide on winter wheat as conditions have been right for Fusarium Head Blight and vomitoxin development, read more [here](#).

## Forage Management

- Warm temperatures may bring opportunities for haylage in a day for those still taking first cut. Ensure wide swaths to increase dry down rate.
- Monitor regrowth for weevil damage, warm temperatures should lead to quick regrowth of alfalfa.

# 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



# 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>

# Contact Info

Photo Credit: USDA



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