

# Wisconsin Ag Climate Outlook

*Week of June 17, 2024*

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Wisconsin

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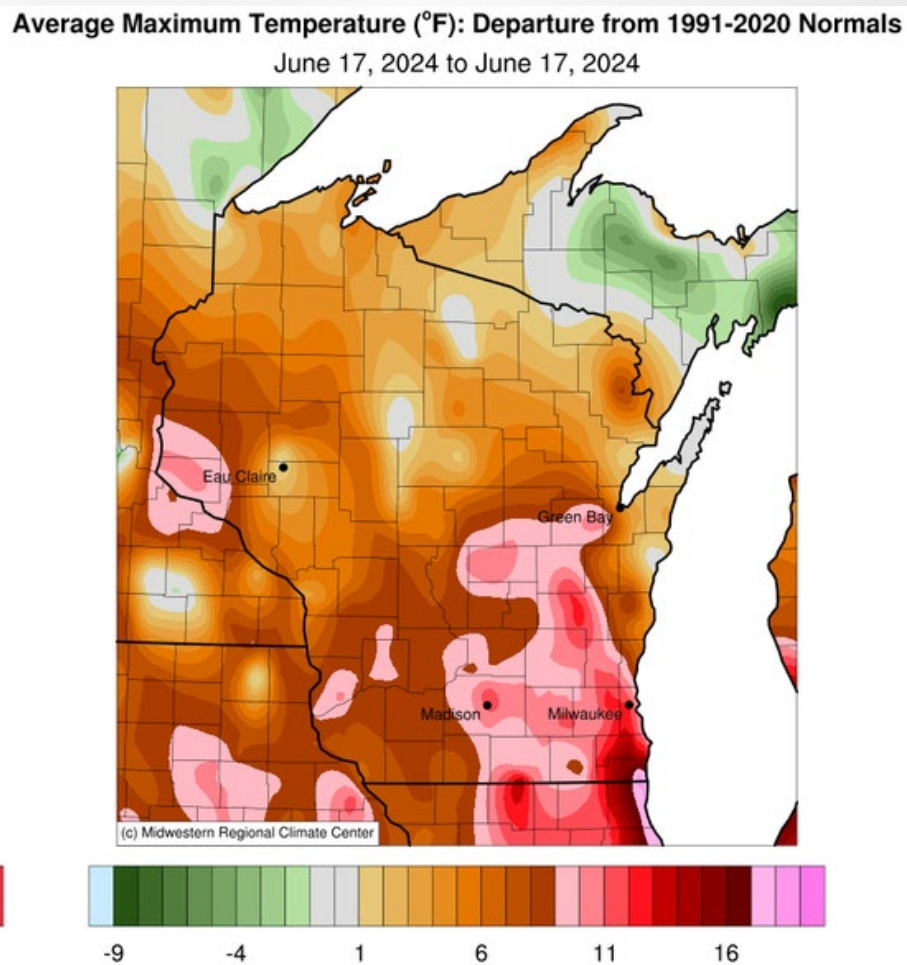
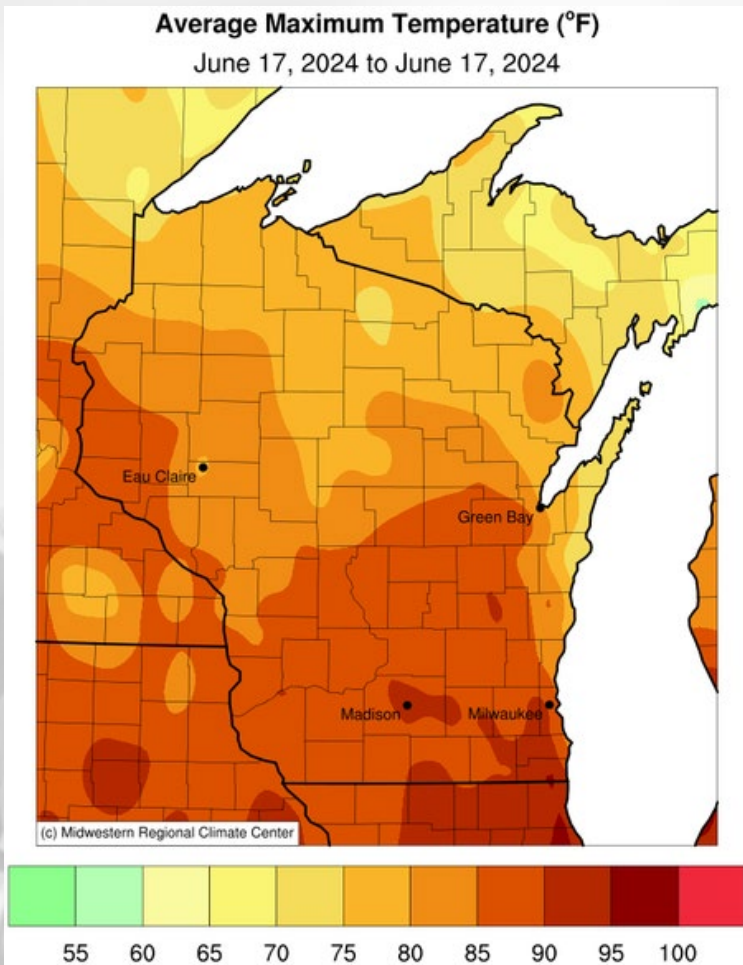
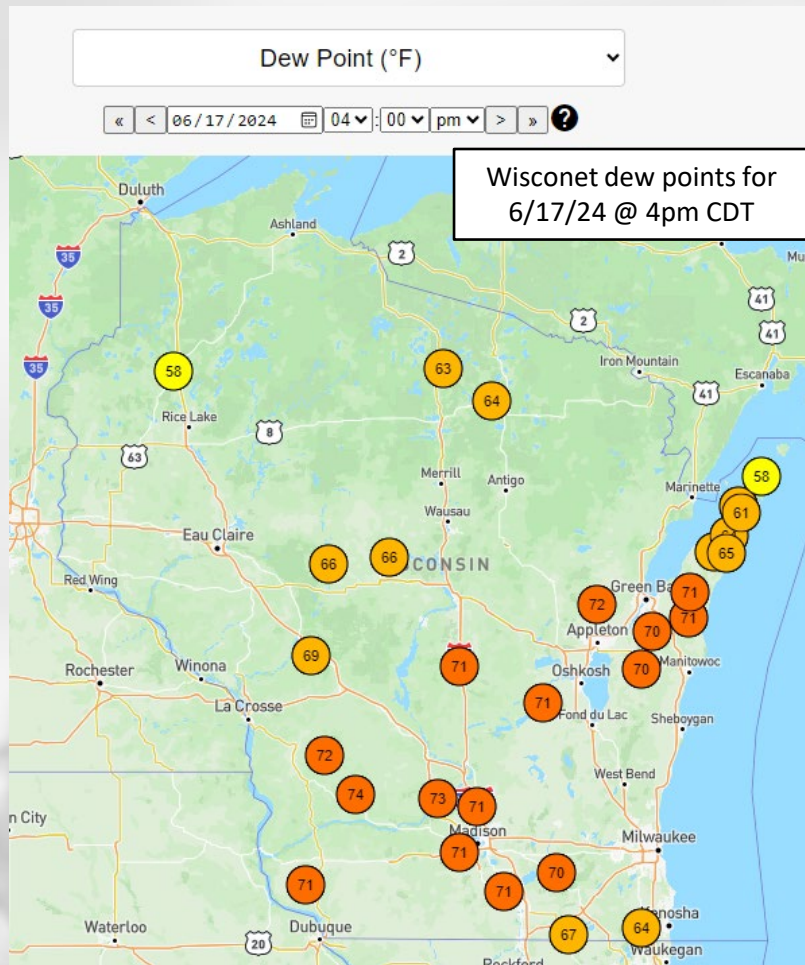
# Key Points

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

- 1) Things turned [much warmer](#) over the weekend and likely will remain [warmer-than-normal](#) to wrap up June.
- 2) Drought has been [eliminated](#) in the state, with gains in [soil moisture](#) levels noted in the N & W.
- 3) The NW received [multiple inches](#) of rain last week, with [more to come](#) over the next week & [beyond](#).

- For this week's agronomic recommendations from UW Extension, click [here](#).
- For NASS crop progress & condition maps, click [here](#).
- For current GDD maps (since April 1<sup>st</sup>), click [here](#).

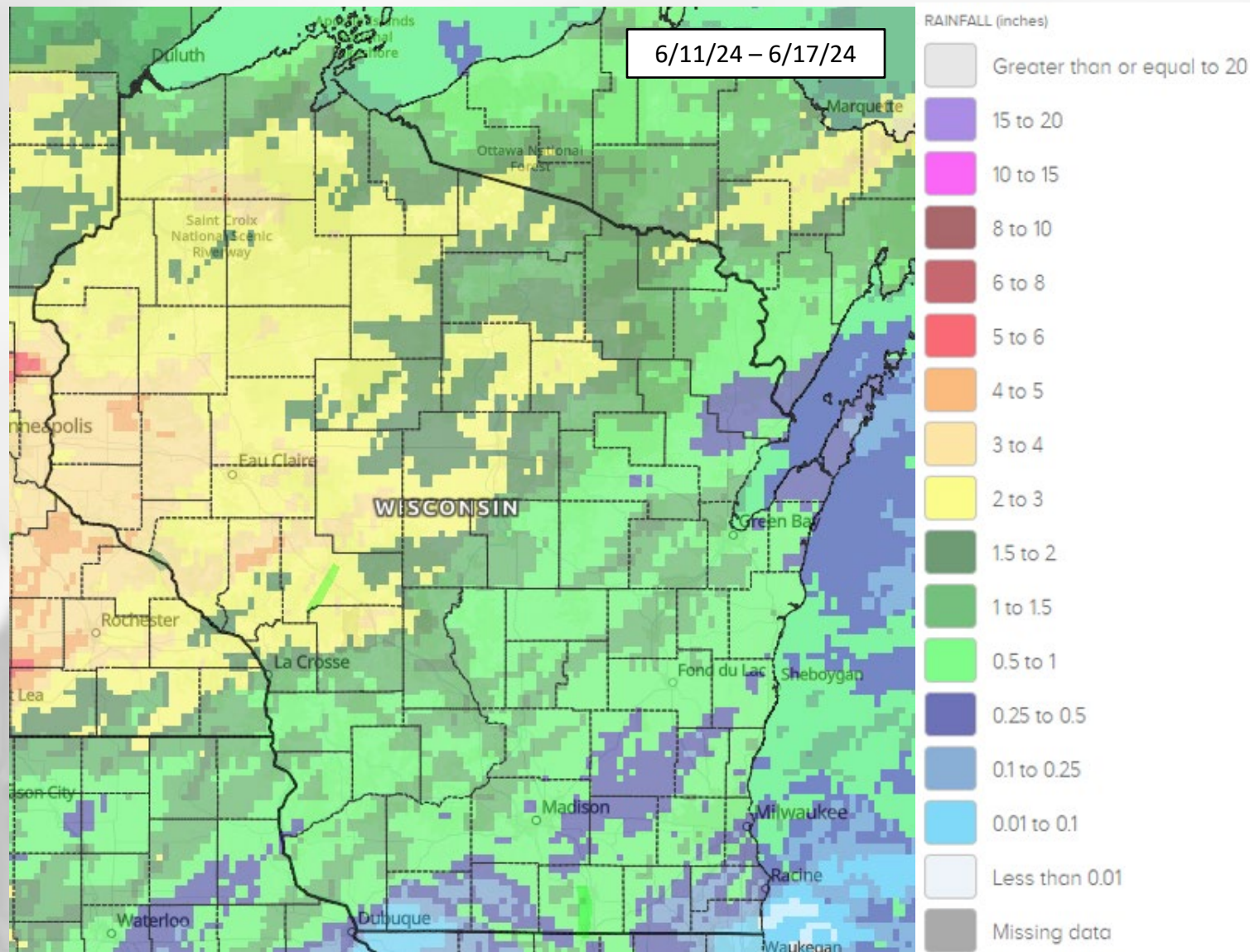
# The heat (& humidity) is on!



NWS HeatRisk Tool:  
<https://www.wpc.ncep.noaa.gov/heatrisk/>

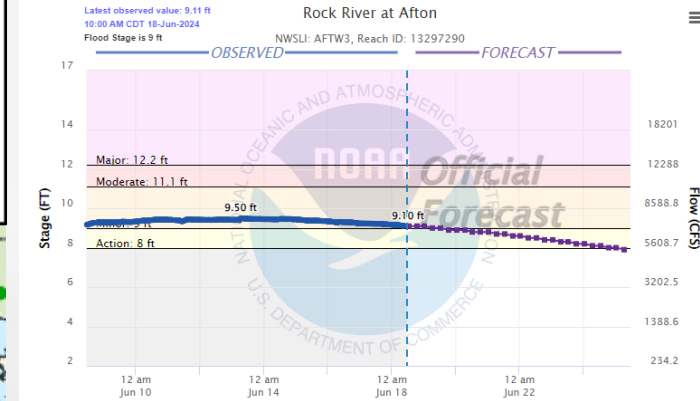
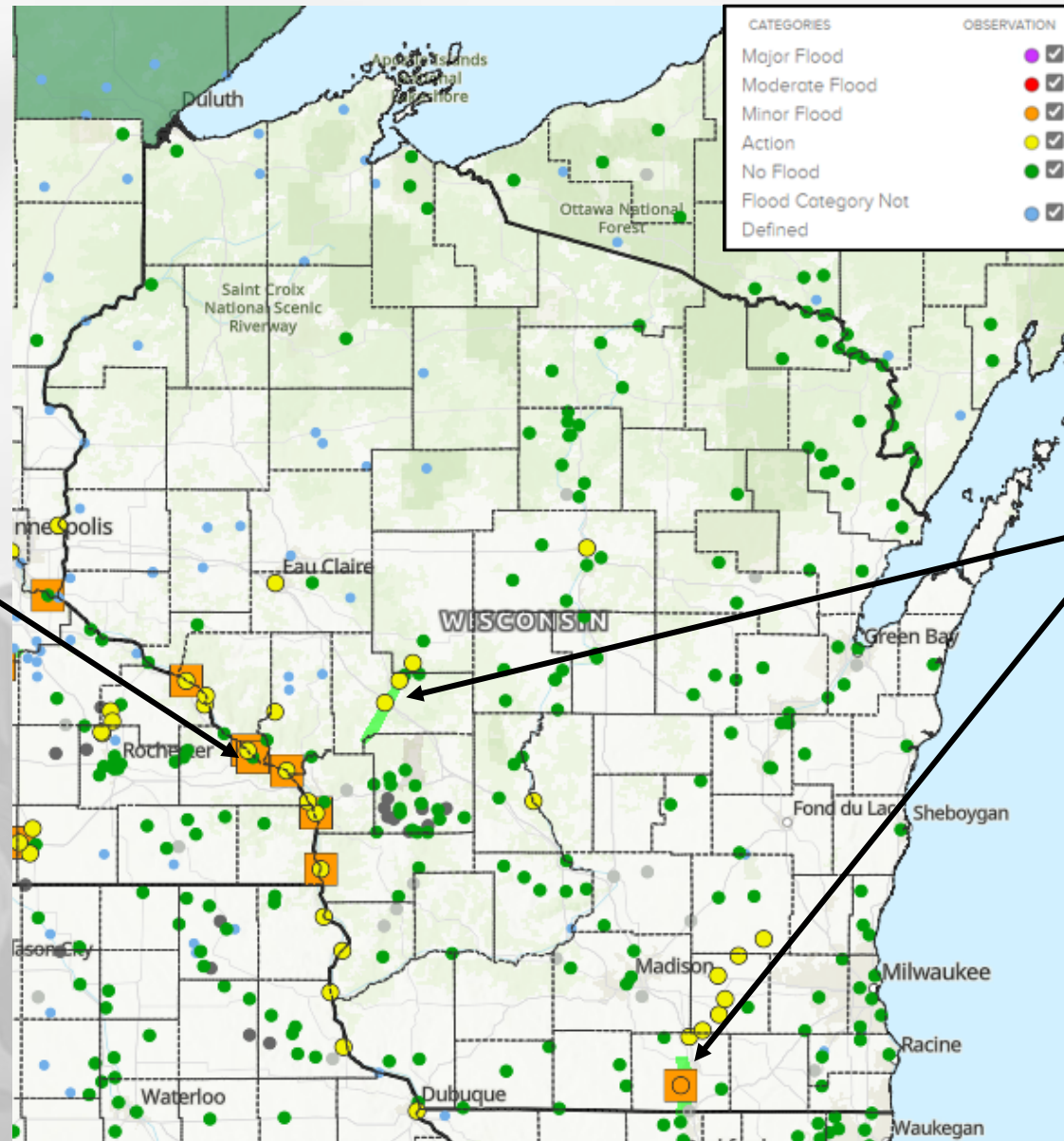
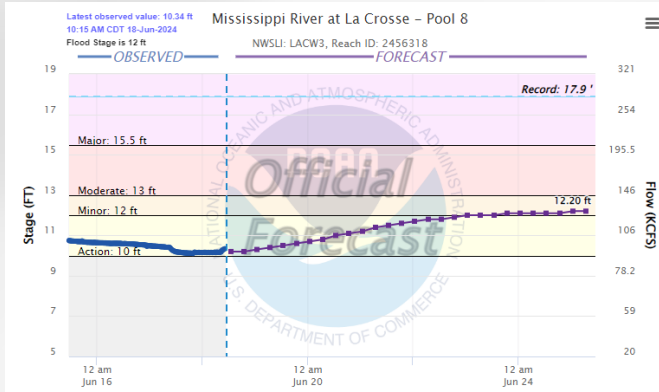
<https://mrcc.purdue.edu>

# 7 Day Precip



- Forecasts were right in that the NW was the wettest region over the past 7 days.
- **3-4+”** common between Eau Claire and the Twin Cities.
- **<1”** was commonplace in the S and E regions.

# River Levels

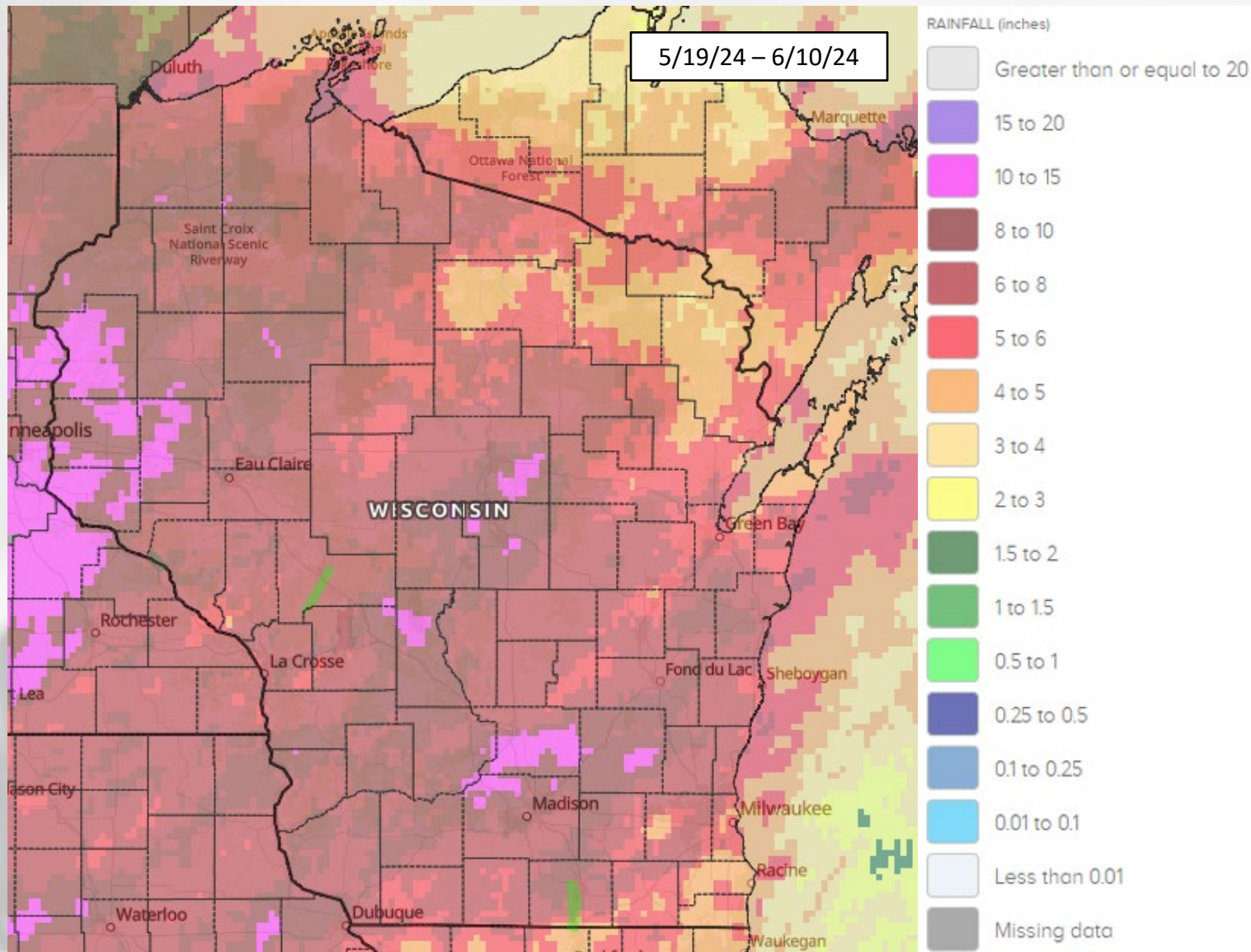


Minor flooding forecasted (orange boxes) along the Mississippi River

Flood Warnings in Rock & Jackson Counties

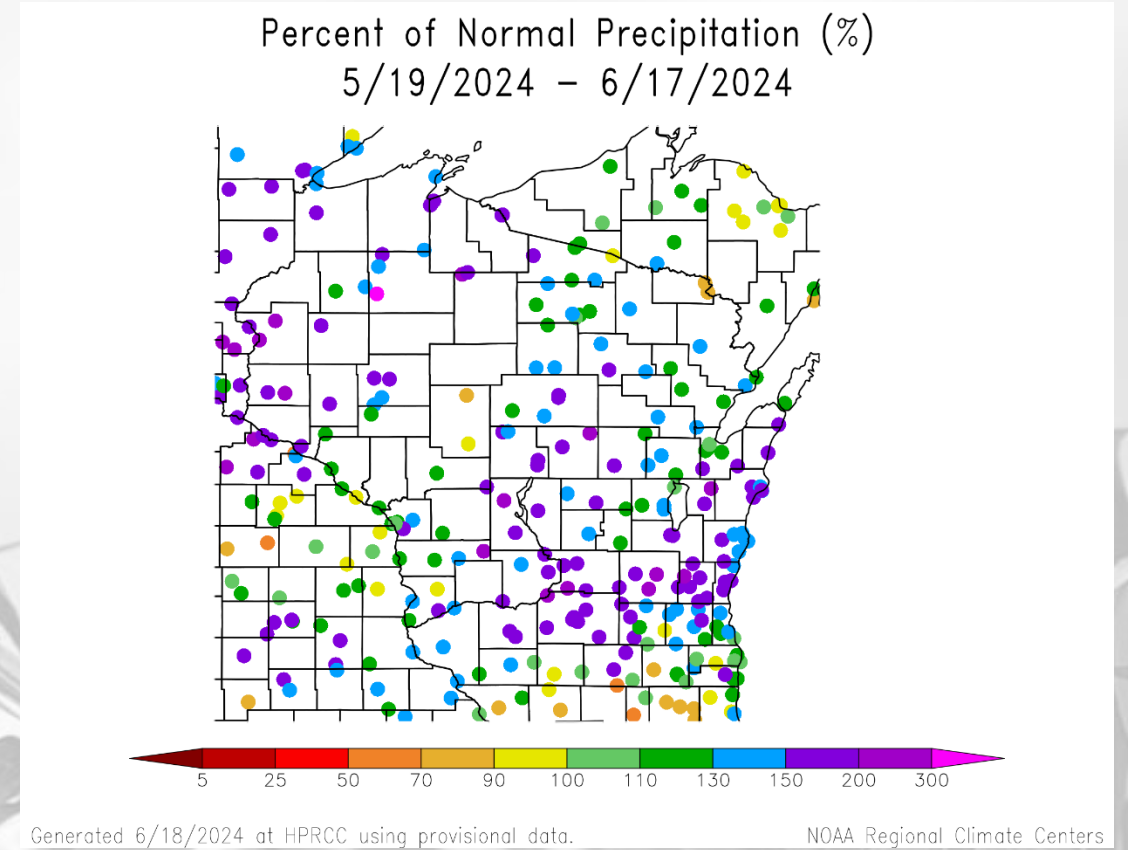
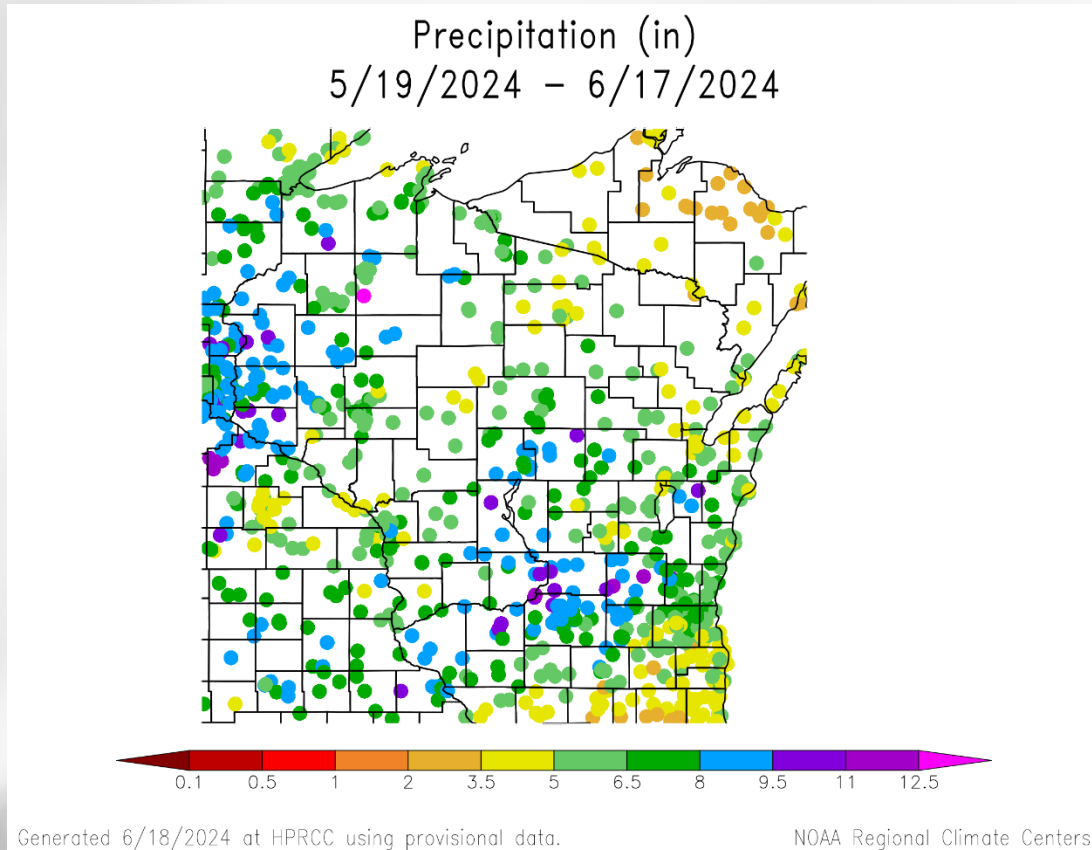
River levels on the morning of June 18, 2024

# 30 Day Precip



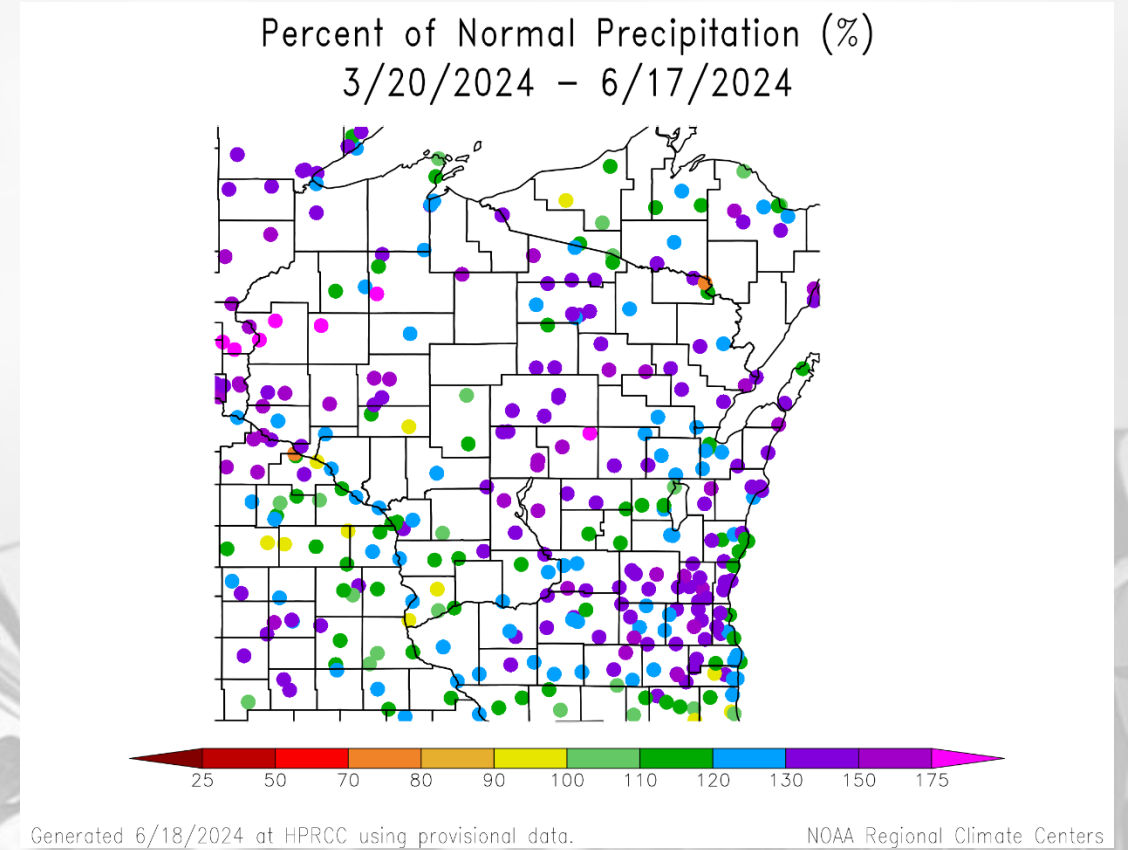
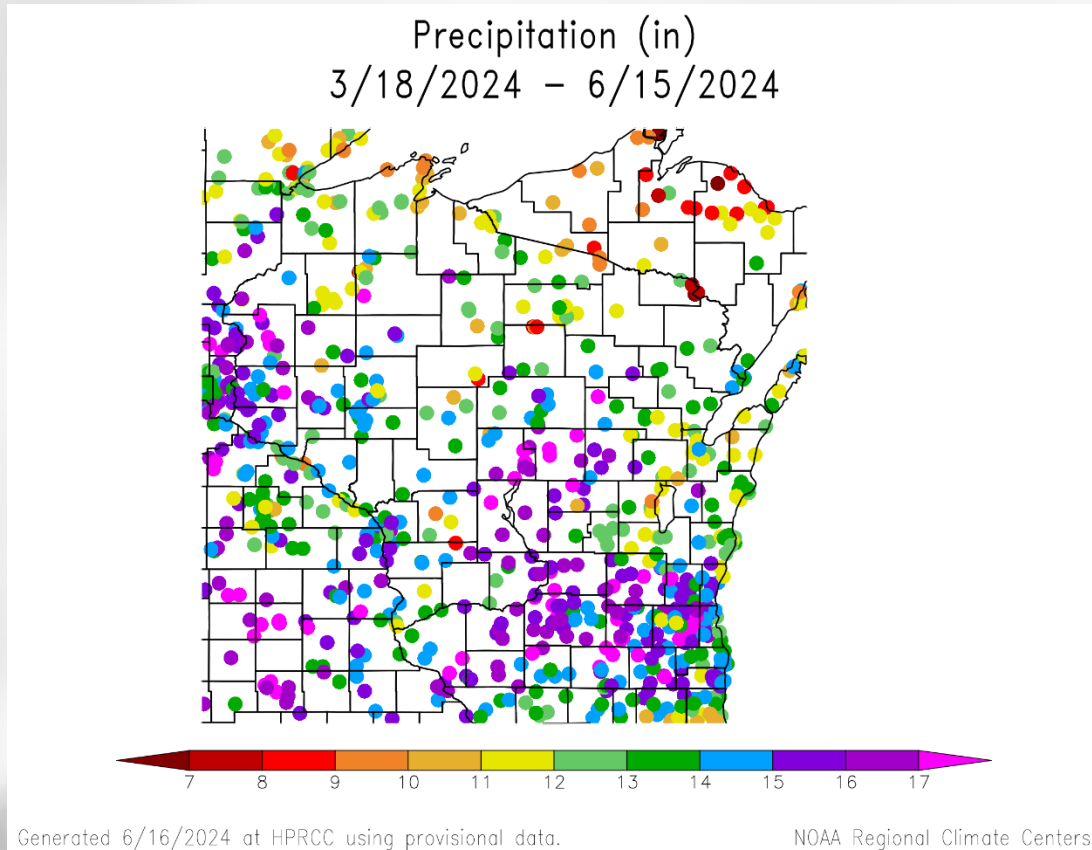
- **>6"** of monthly precip common across most of the state (red/purple shading).
- Driest the far NE counties and Racine/Kenosha → **5" or less**
- **>10"** for some north of Madison, in the Central Sands, and near the Twin Cities.

# 30 Day Precip Total/% Avg.



- 30-day totals of **8+”** are common in the SW/SC and near the Twin Cities.
- Only a few isolated stations are **below** the climatological average.
- Monthly totals of **150% or more** of climatological average were very common in the state.

# 90 Day Precip Total/% Avg.

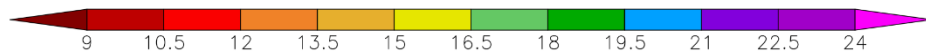
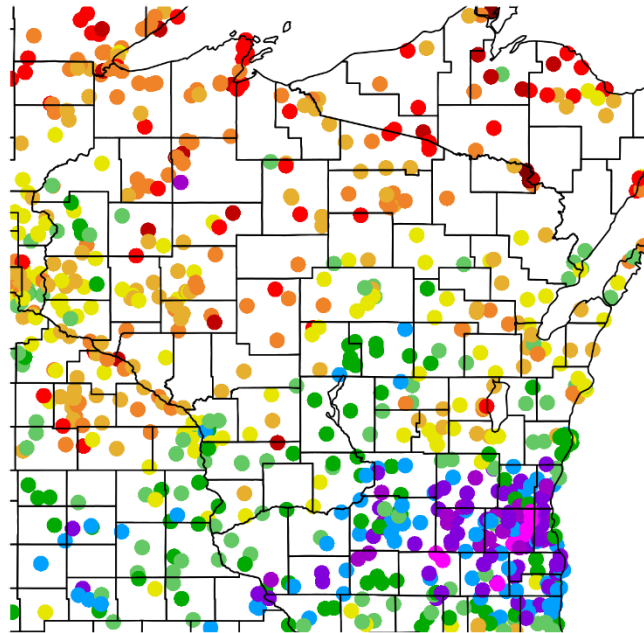


- **15-17"** for many in the S, central sands, and NW; **130+%** of average is common across the state.
- Virtually all the stations are **above** 30-year average.
- 90-day totals of **<12"** common in the north but are **near or slightly above** average.



# 2024 Precipitation (so far)

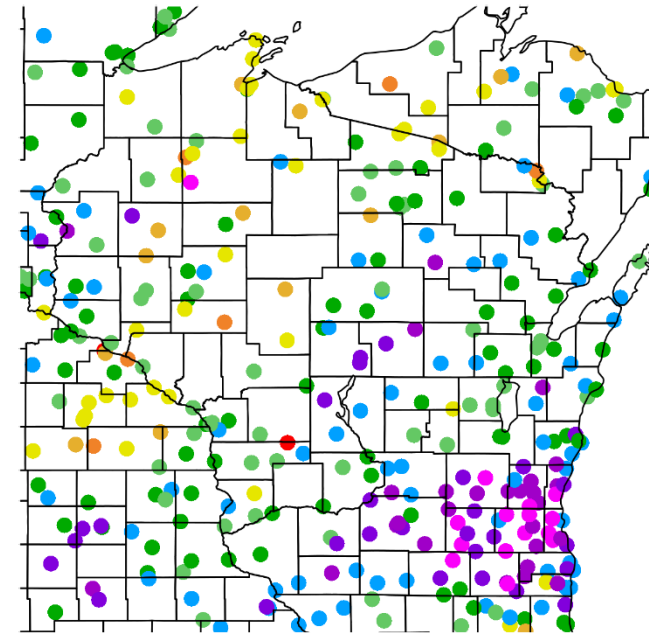
Precipitation (in)  
1/1/2024 - 6/12/2024



Generated 6/13/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Precipitation (in)  
1/1/2024 - 6/12/2024



Generated 6/13/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

# Soil Moisture Models

- **Large gains** in soil moisture conditions across the N/NW parts of the state, according to the NASA SPoRT-LIS model.
  - Highest rainfall observed in the state last week
- Most of the state is in the 70<sup>th</sup> percentile or higher (areas in green).
  - Exception is far S & E counties in grey.

## Model Notes:

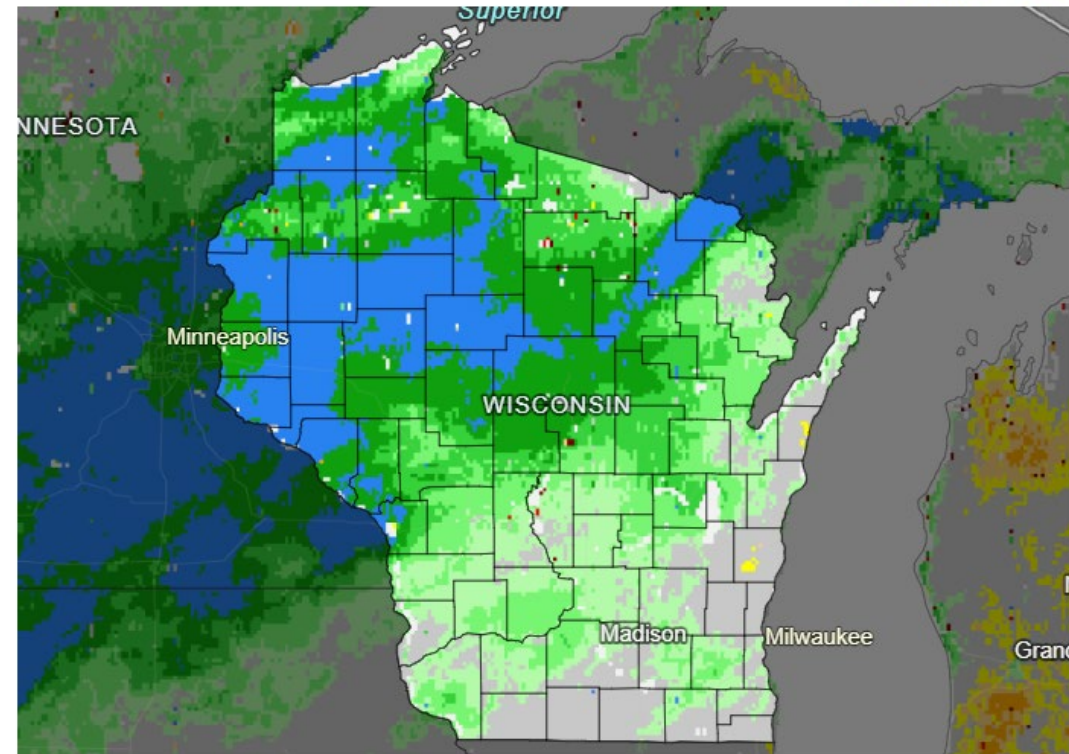
**Red** areas = top 5 driest in 100 years.

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

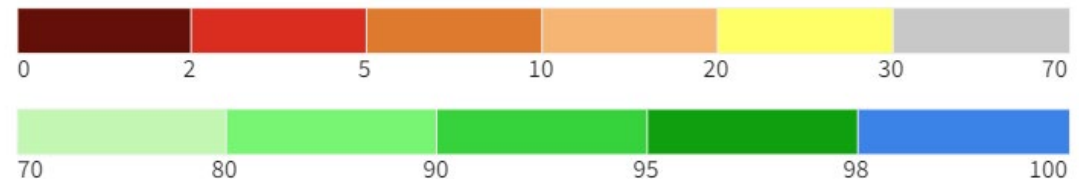
*It's worth noting that each soil moisture model has their own characteristics and input variables, so there tends to be variation between models. Thus, it's worthwhile to look at multiple models opposed to just one.*

[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

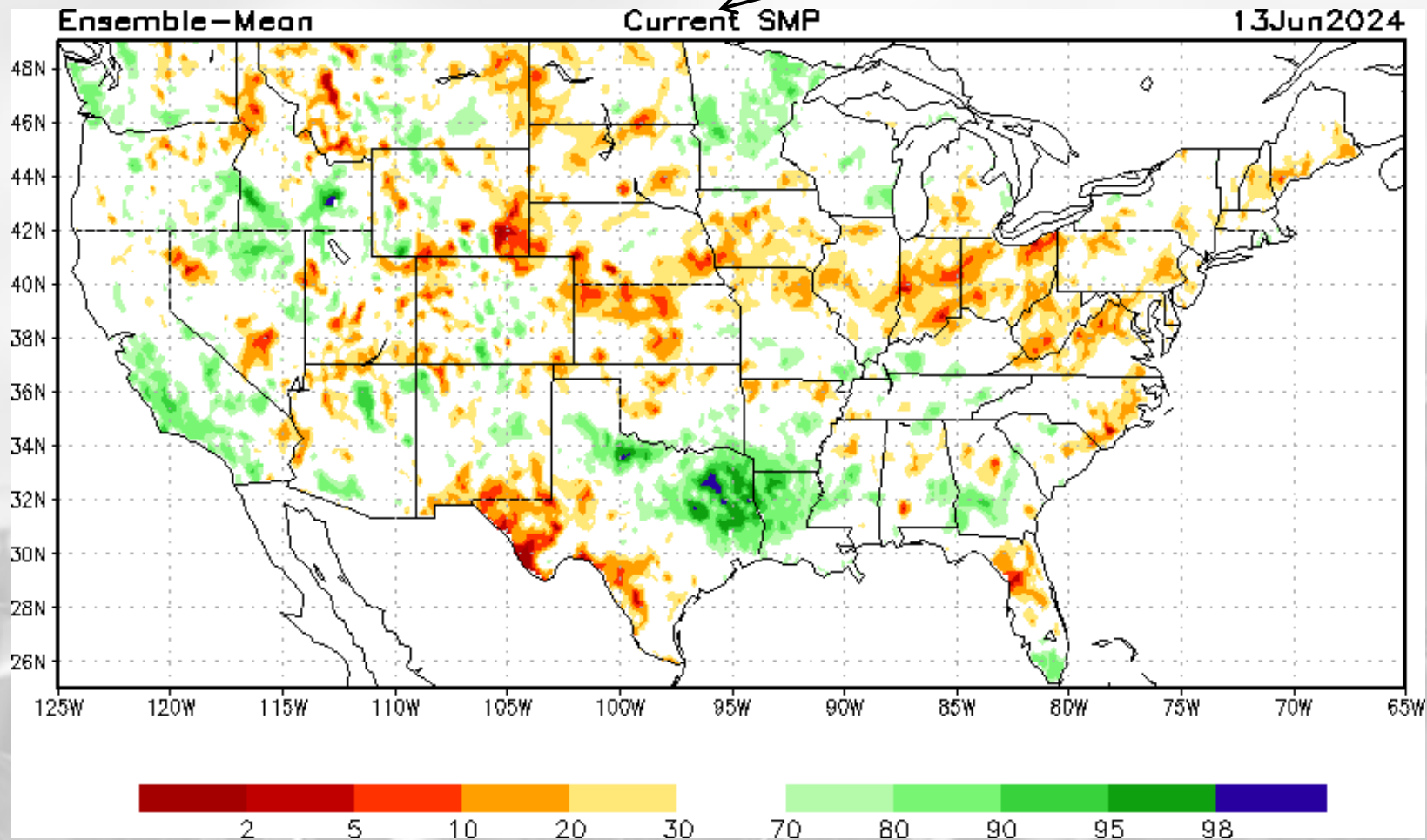


Source(s): NASA  
Data Valid: 06/18/24

**Drought.gov**

# Soil Moisture Models

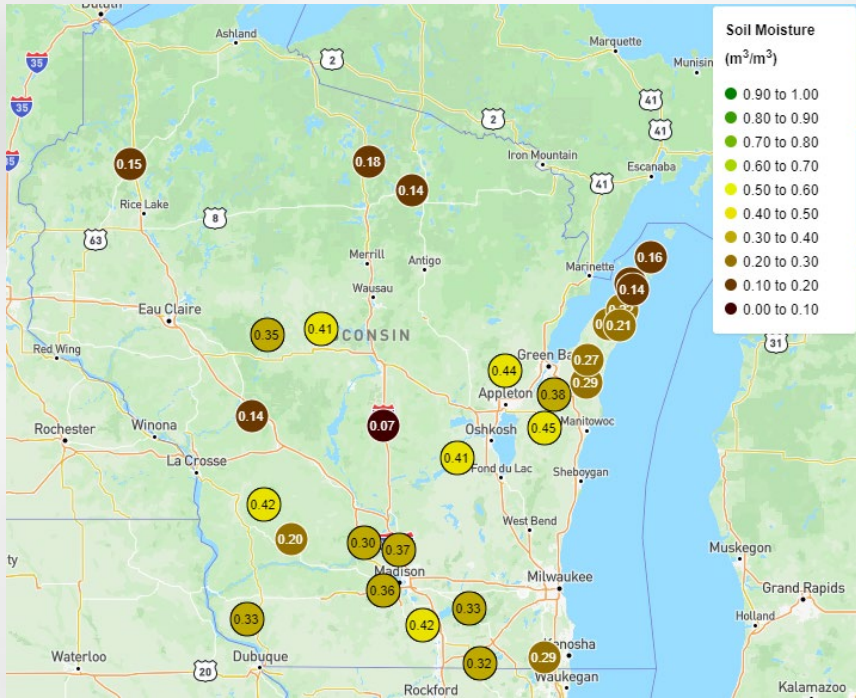
**NOTE:** this map displays the soil moisture percentile for June 13. It was the most recent update on June 18.



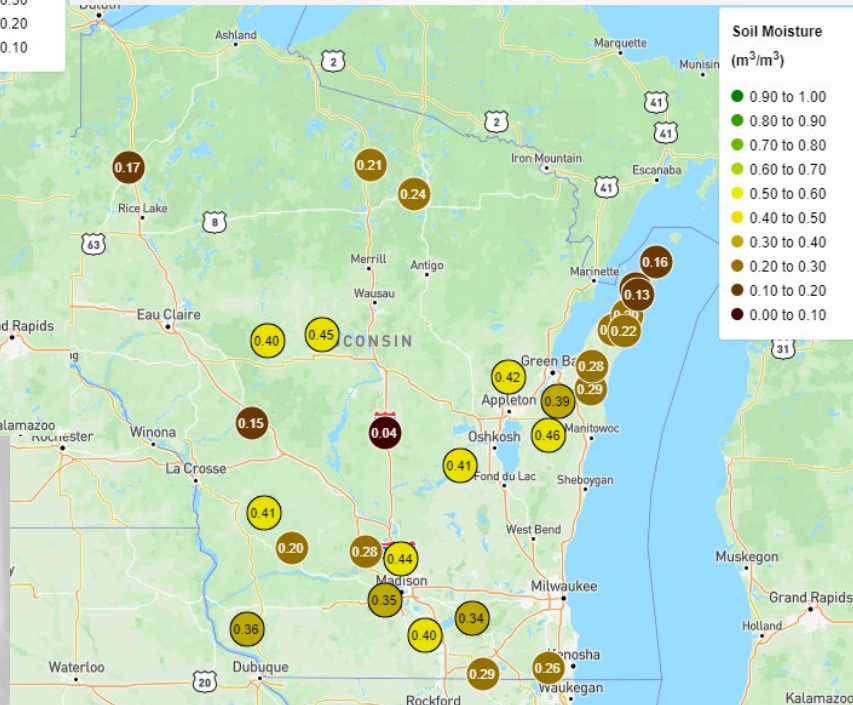
[https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp\\_new.shtml](https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml)

# Wisconet Soil Moisture – 4" Depth

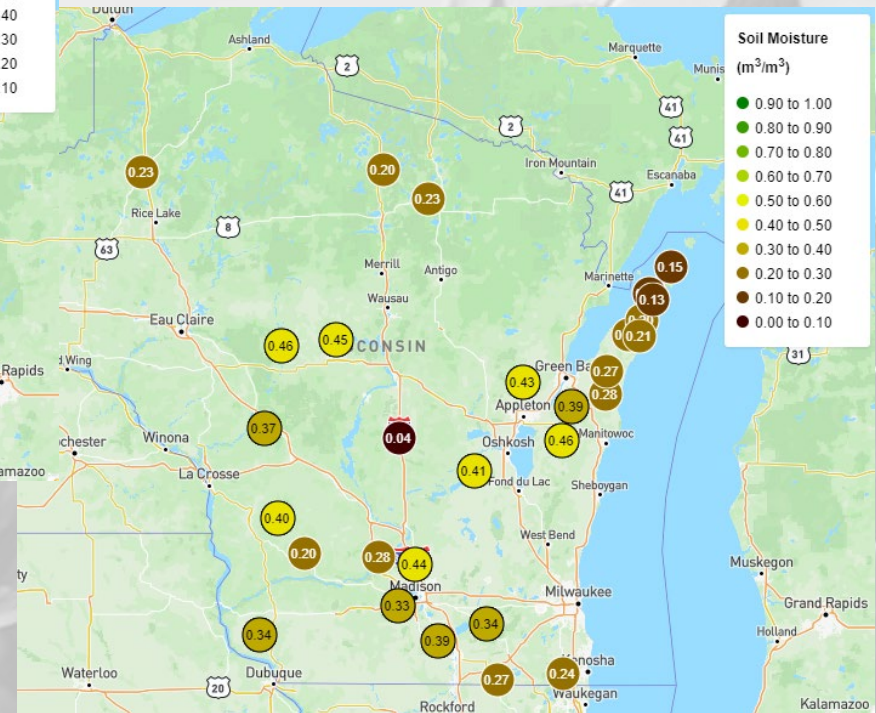
<https://wisconet.wisc.edu/>



Midday on June 14



Midday on June 16

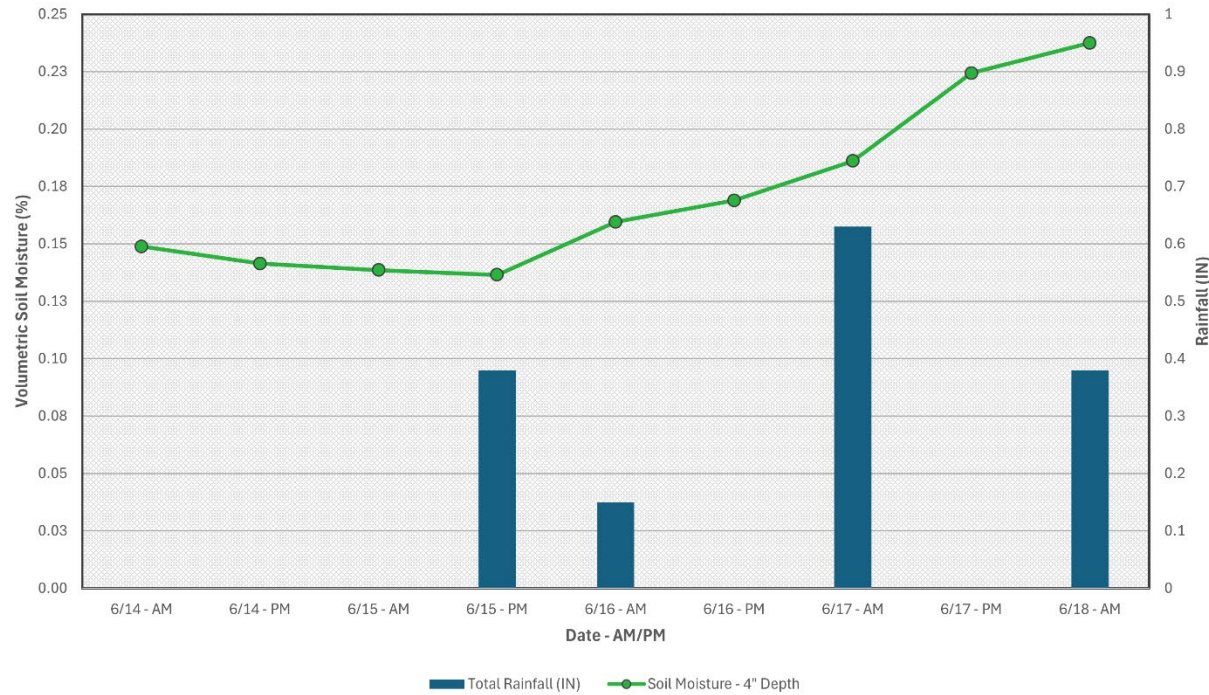


Midday on June 18

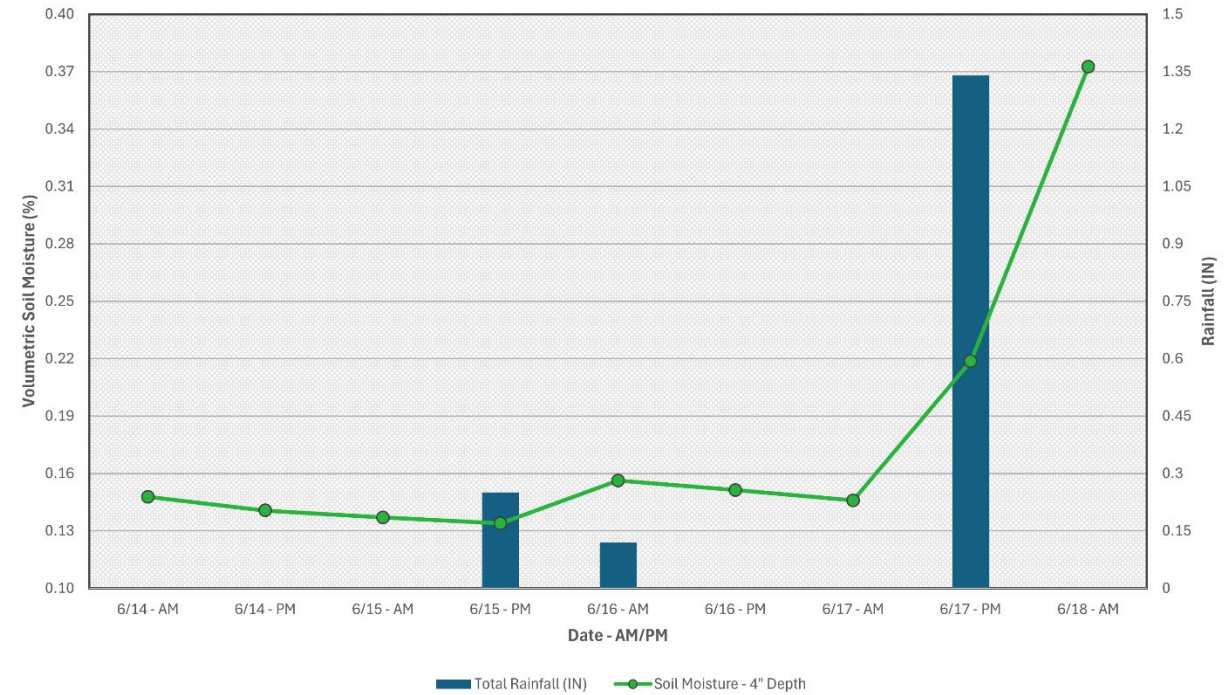
# Wisconet Soil Moisture – 4” Depth

Soil moisture gains at select Wisconet stations

Rain & Soil Moisture - Spooner, WI (SPNR)



Rain & Soil Moisture - Black River Falls, WI (WCRS)

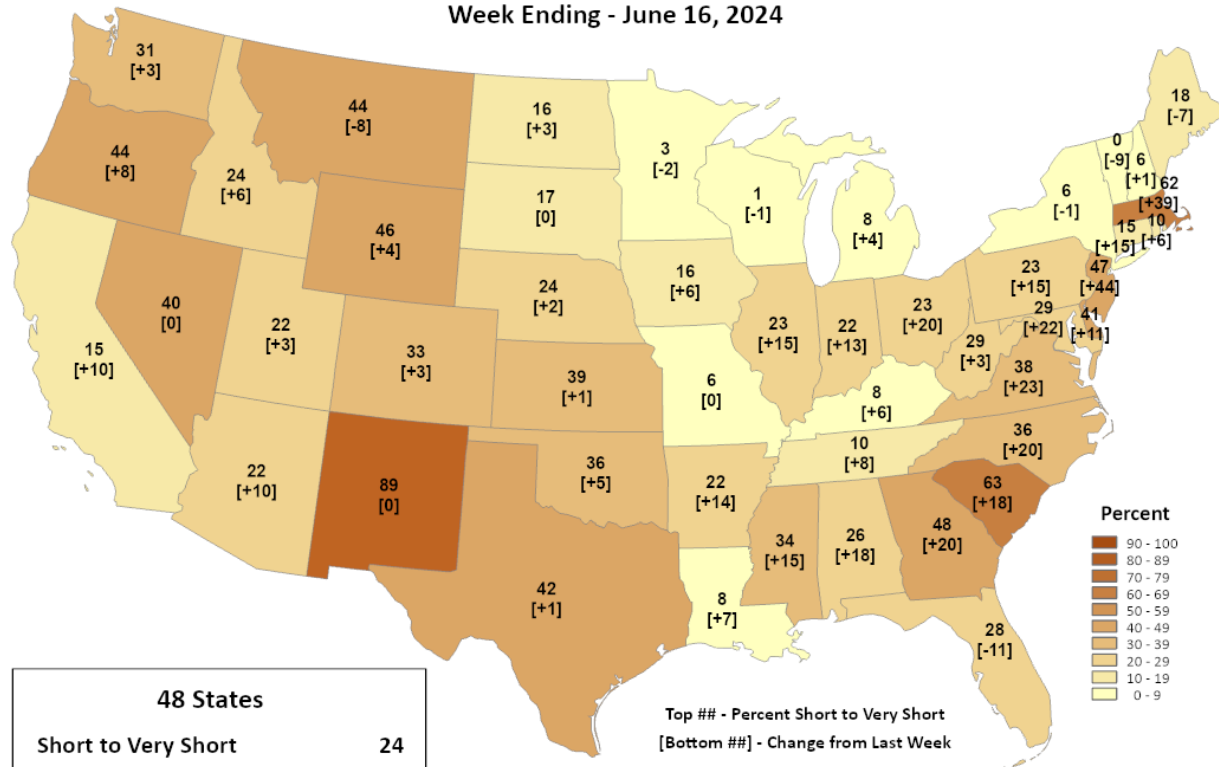


# NASS Subsoil Moisture



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 16, 2024

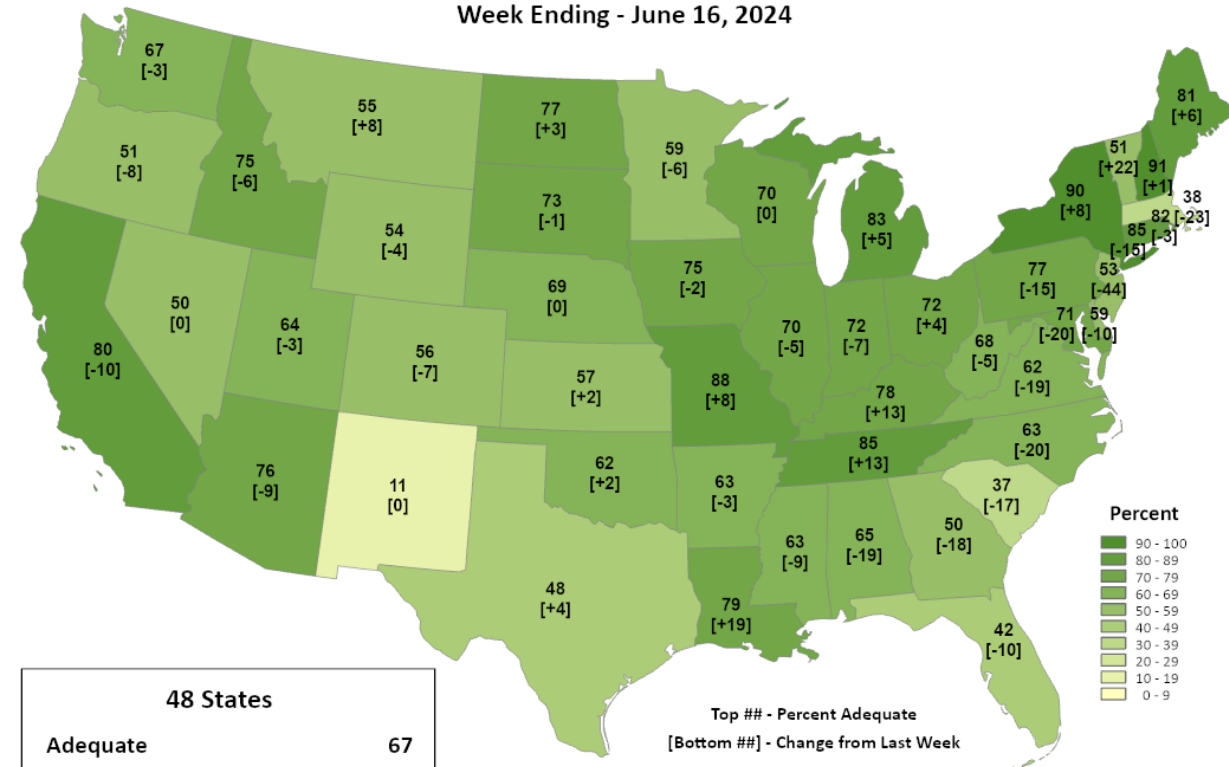


Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.



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 16, 2024

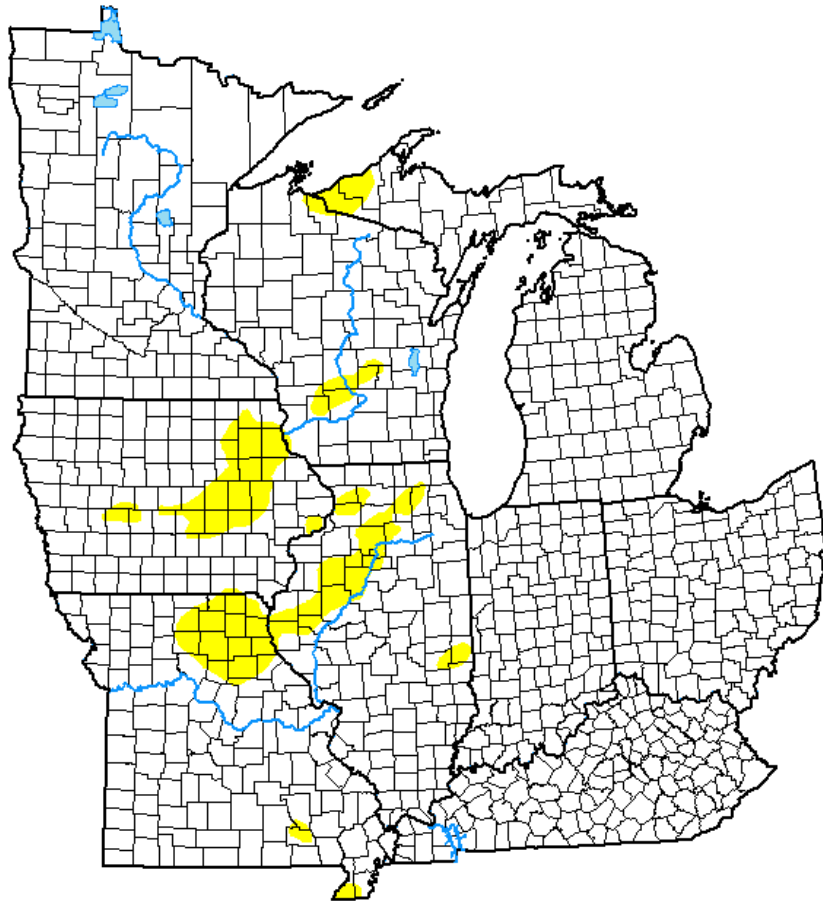


Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

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

# US Drought Monitor

## U.S. Drought Monitor Midwest



**June 11, 2024**  
(Released Thursday, Jun. 13, 2024)  
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	94.18	5.82	0.00	0.00	0.00	0.00
<b>Last Week</b> <small>06-04-2024</small>	93.32	6.68	0.43	0.00	0.00	0.00
<b>3 Months Ago</b> <small>03-12-2024</small>	28.03	71.97	42.19	11.49	2.32	0.00
<b>Start of Calendar Year</b> <small>01-02-2024</small>	22.92	77.08	50.25	20.76	4.20	0.00
<b>Start of Water Year</b> <small>09-26-2023</small>	16.82	83.18	54.98	23.81	6.21	0.13
<b>One Year Ago</b> <small>06-13-2023</small>	10.72	89.28	48.72	7.96	1.21	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:

Richard Tinker  
CPC/NOAA/NWS/NCEP



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

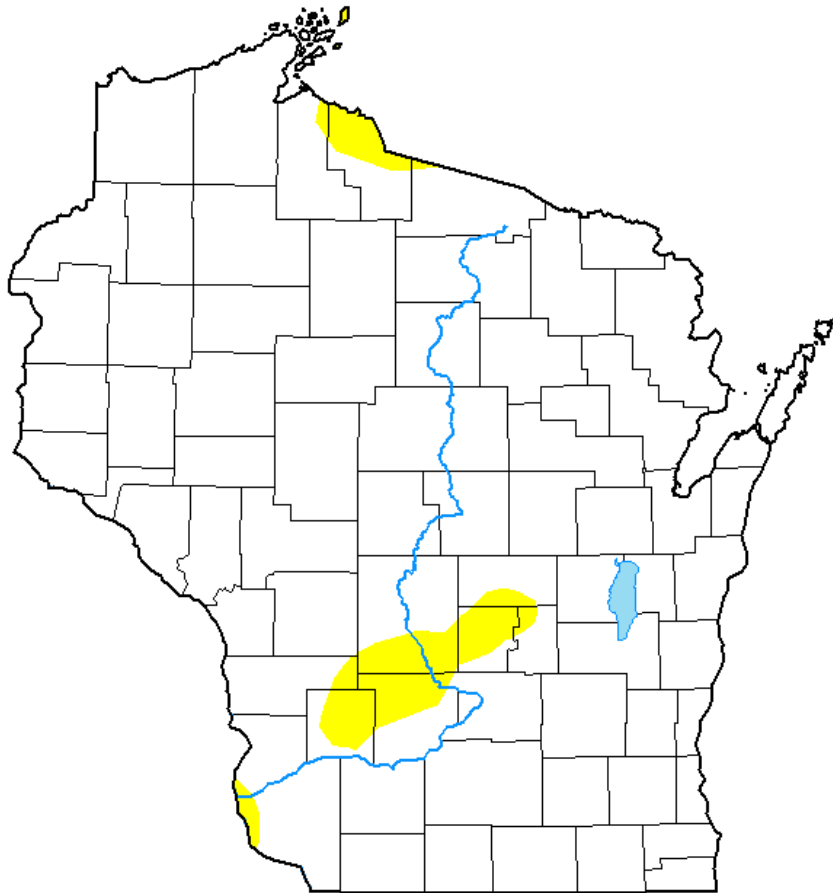
- Compared to last week:
  - Continued decreases in drought category area.
- **0% of the Midwest is categorized in drought (D1-D4)!**
- **<6% of the Midwest remains in D0 (abnormally dry) conditions.**

*Note: D0 is not considered drought.*

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

# US Drought Monitor

## U.S. Drought Monitor Wisconsin



June 11, 2024

(Released Thursday, Jun. 13, 2024)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	95.75	4.25	0.00	0.00	0.00	0.00
Last Week 06-04-2024	92.96	7.04	0.77	0.00	0.00	0.00
3 Months Ago 03-12-2024	11.51	88.49	72.37	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 06-13-2023	9.21	90.79	46.16	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:

Richard Tinker  
CPC/NOAA/NWS/NCEP



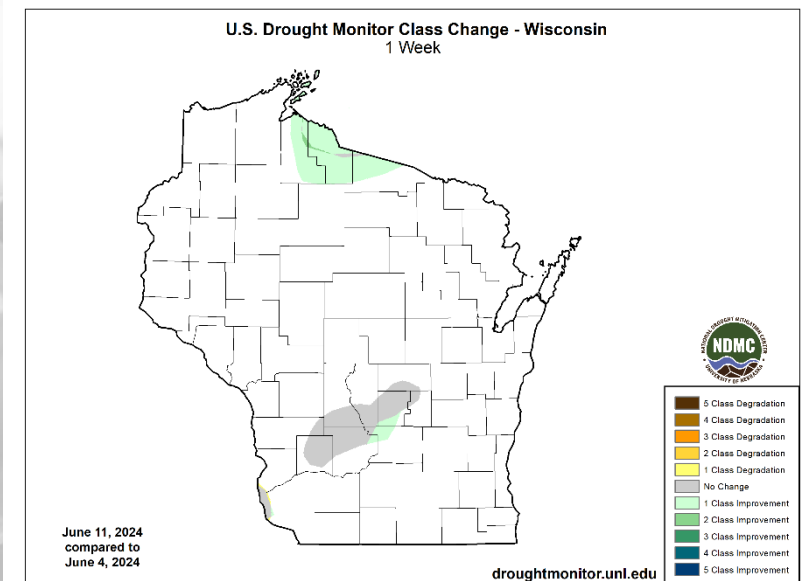
[droughtmonitor.unl.edu](http://droughtmonitor.unl.edu)

<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.

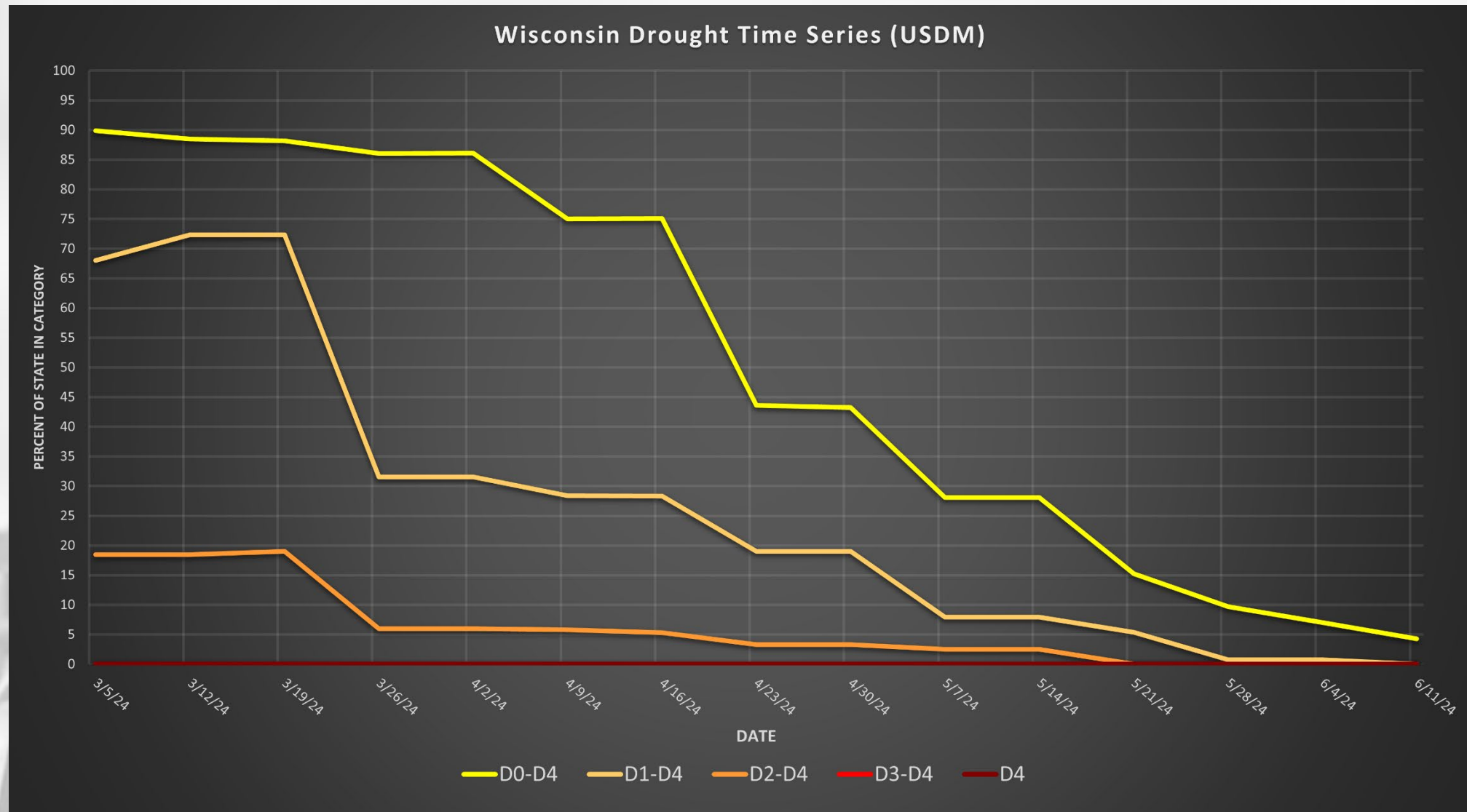


June 11, 2024  
compared to  
June 4, 2024

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



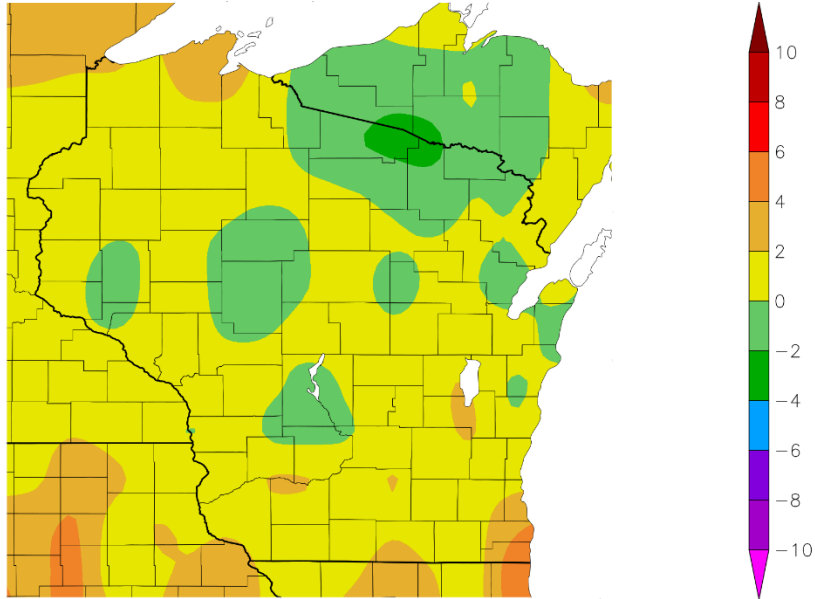
# USDM Time Series



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

# 7 Day Temperatures

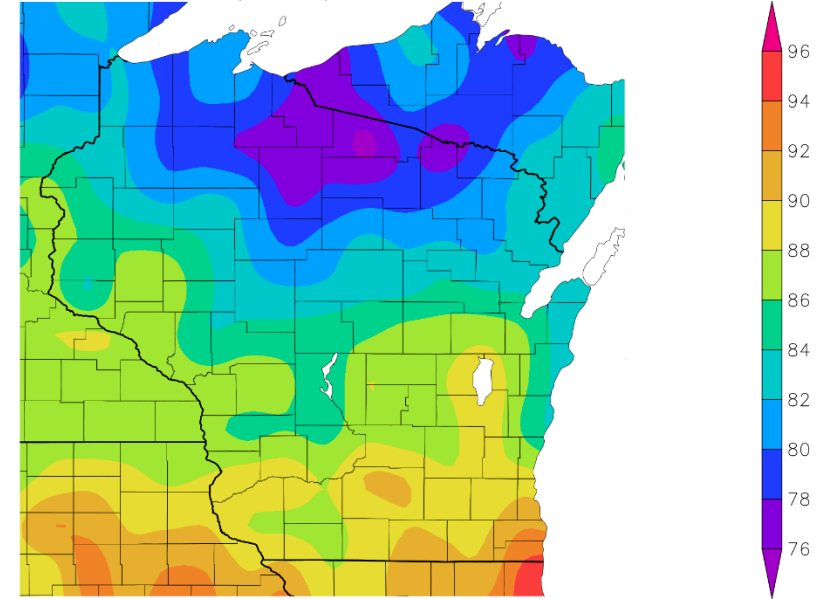
Departure from Normal Temperature (F)  
6/11/2024 – 6/17/2024



Generated 6/18/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Highest 1-Day Maximum Temperature (F)  
6/11/2024 – 6/17/2024



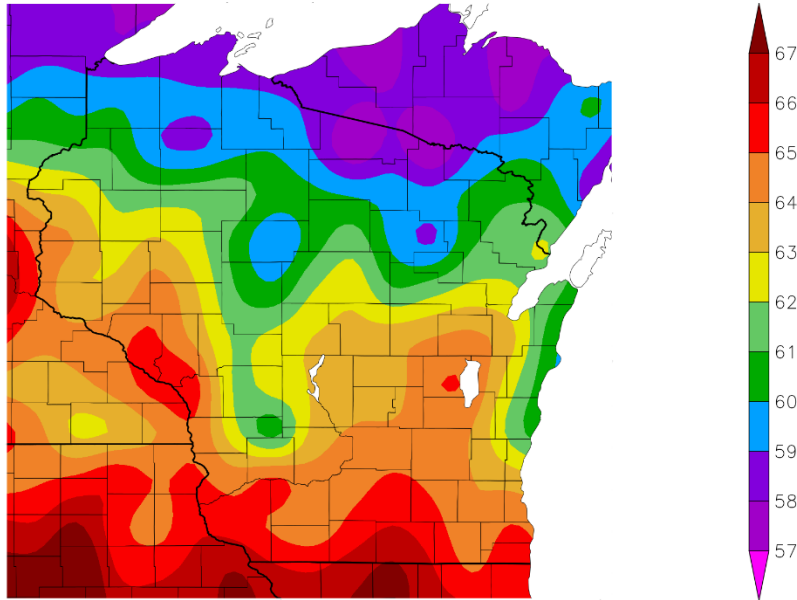
Generated 6/18/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Temps were seasonal,  $\leq 2^{\circ}\text{F}$  above normal for most last week.
- $>2^{\circ}\text{F}$  above normal in by Racine/Kenosha, Lake Superior, & in isolated pockets.
- Things turned much warmer by 6/16-17, with highs reaching near to above  $90^{\circ}\text{F}$  in the S.

# 30 Day Temperatures

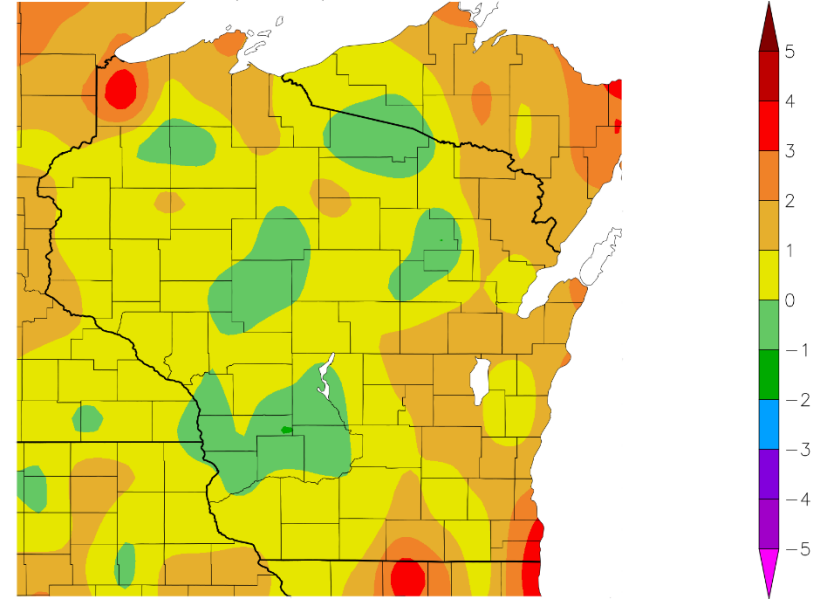
Temperature (F)  
5/19/2024 – 6/17/2024



Generated 6/18/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Temperature (F)  
5/19/2024 – 6/17/2024



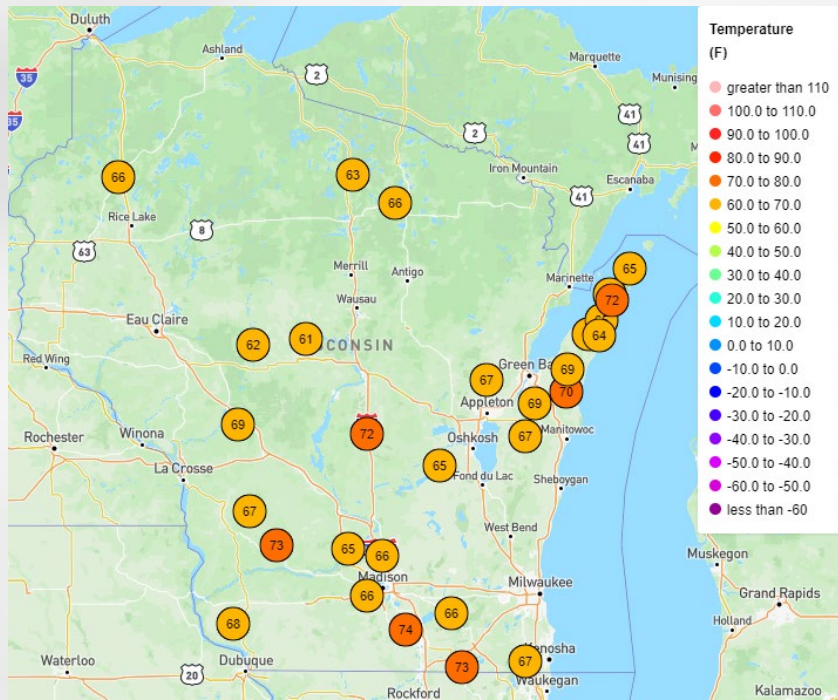
Generated 6/18/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

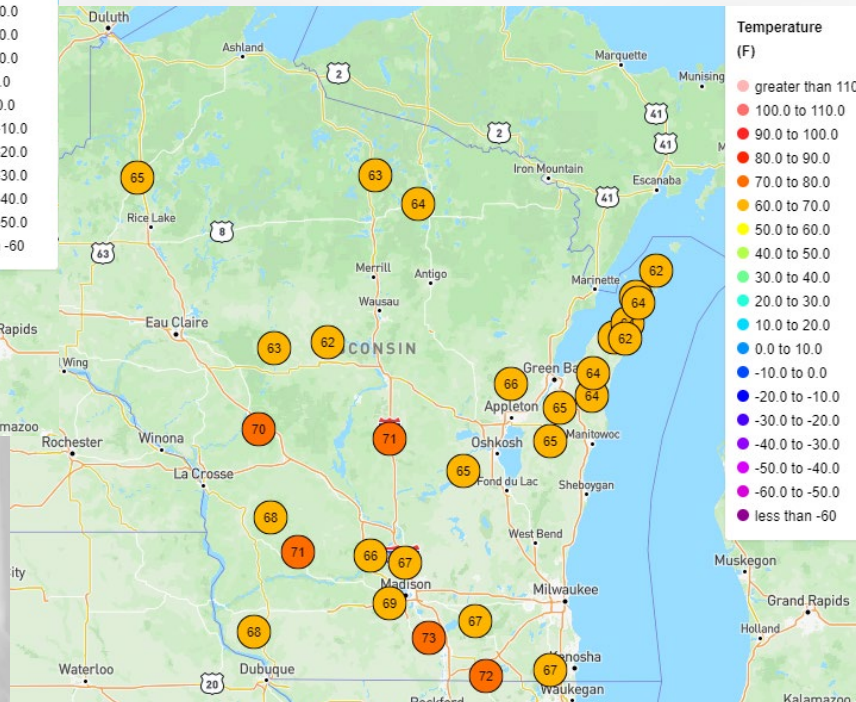
- Temperatures for the past month ranged from **65-67°F** in the S & W to **57-59°F** in the far N.
  - **Within  $\pm 1^\circ\text{F}$**  of climatological average was common across the state.
  - **$>2^\circ\text{F}$**  above normal for some near the IL line and in Douglas County.

# Wisconet Soil Temp – 4" Depth

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

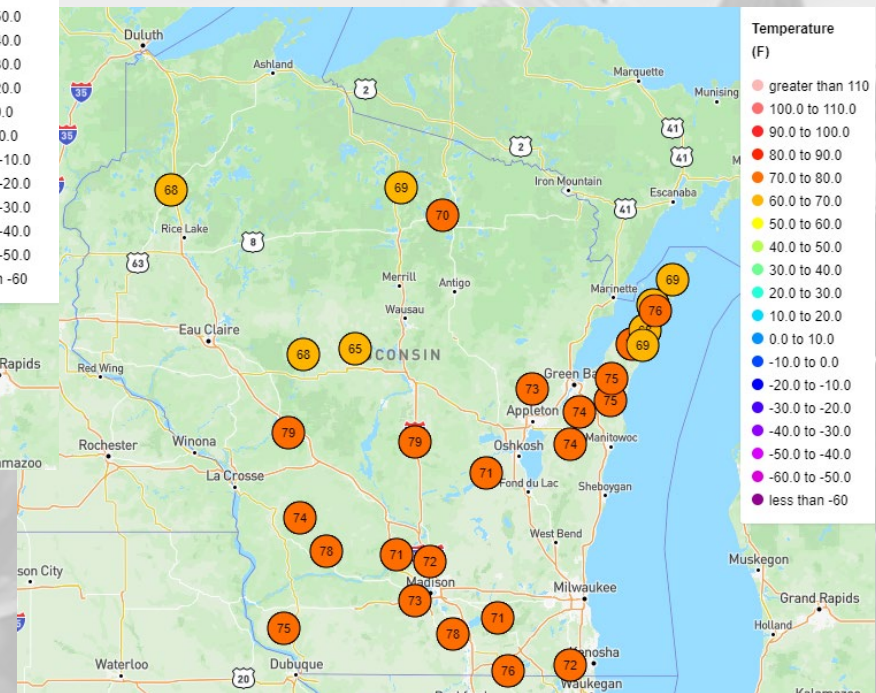


Midday on June 14



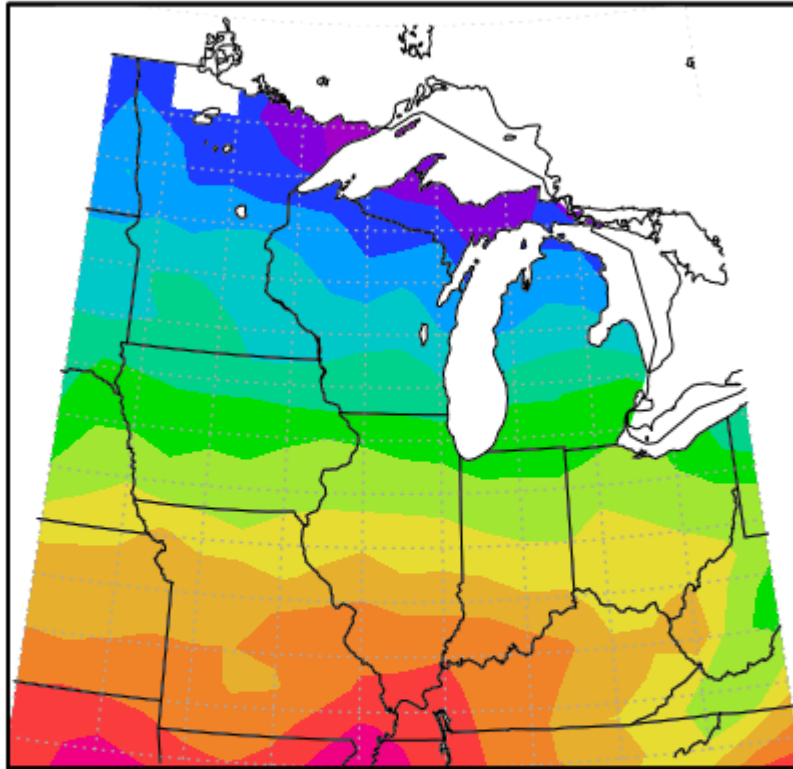
Midday on June 16

Midday on June 18



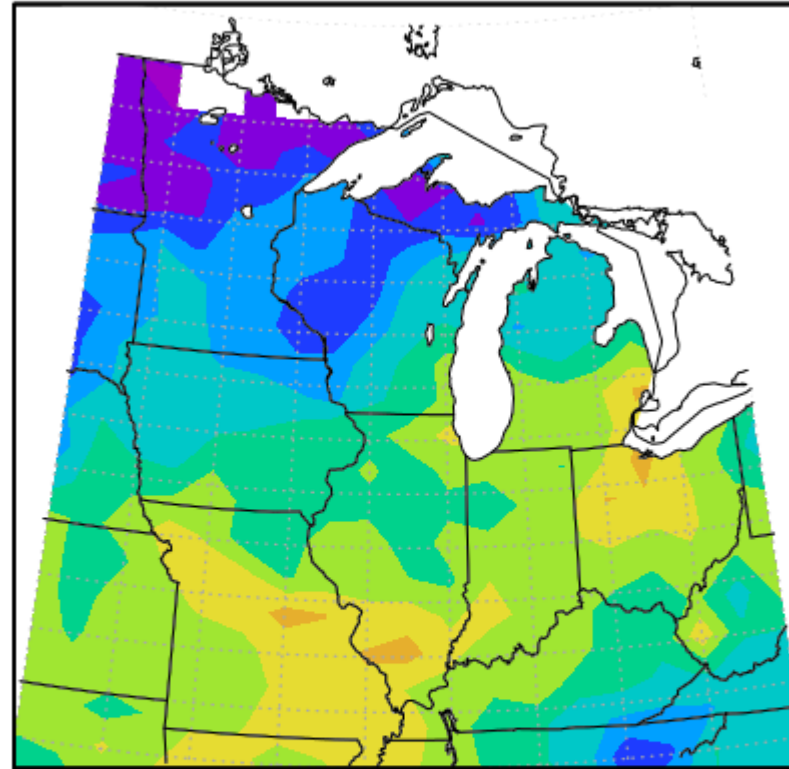
# Growing Degree Days (Base = 50°F; Since April 1)

Total MGDD from 4/1/2024 to 6/17/2024



Midwestern Regional Climate Center  
Purdue University

MGDD Departure, 4/1/2024 to 6/17/2024



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

- **800-900** GDD in the S to **500-600** GDD in the N.
- SE WI is 120-150 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

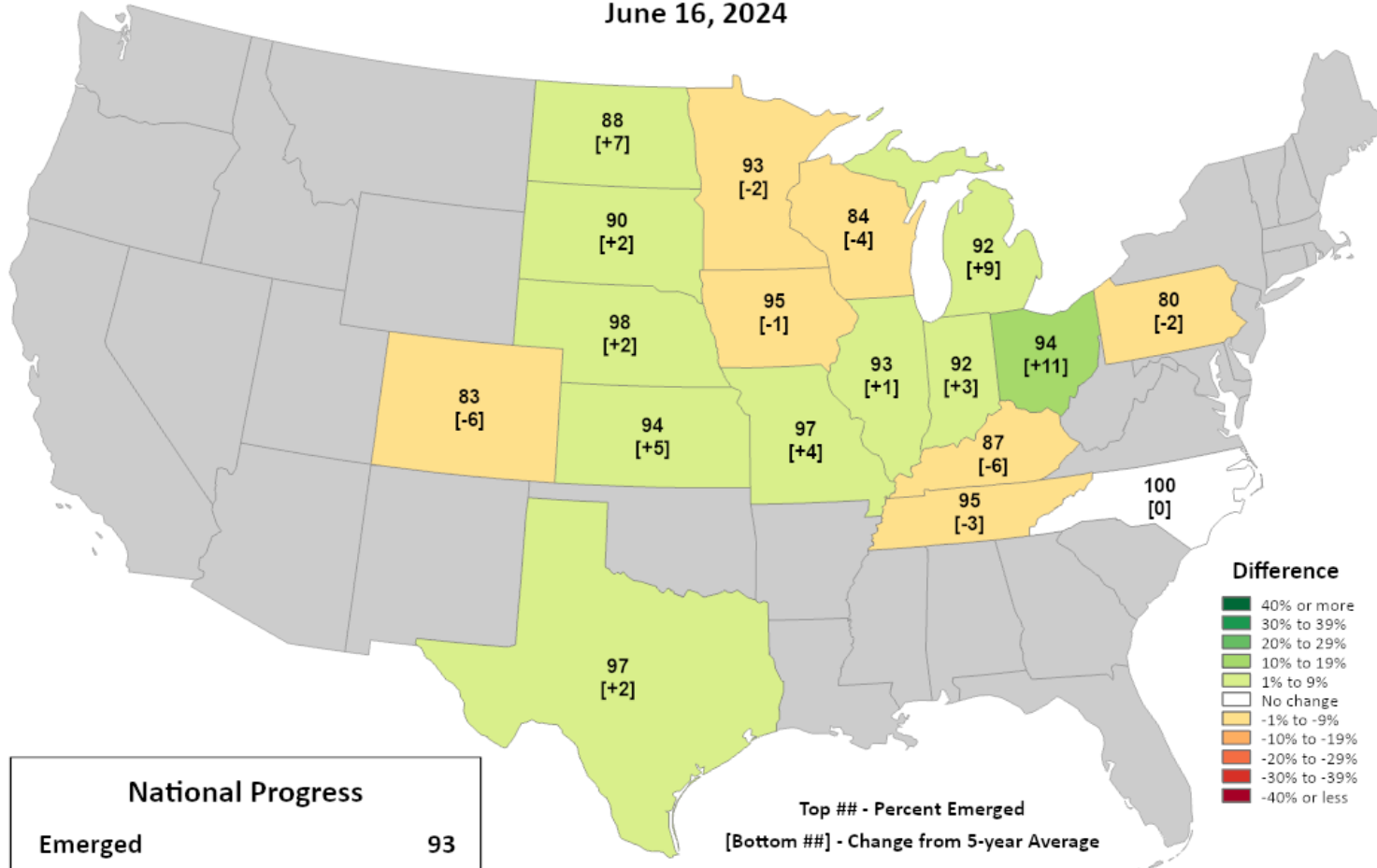


This product was prepared by the  
USDA Office of the Chief Economist (OCE)  
World Agricultural Outlook Board (WAOB)

## Corn Progress

### Percent Emerged

June 16, 2024



National Progress	
Emergenced	93
Change from 5-year Average	+1

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

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 in the rest of the Midwest.
- Wisconsin → **84% complete**; 4% behind of the 5-year average pace. **6% increase** from last week.

# NASS Crop Progress – Soybean

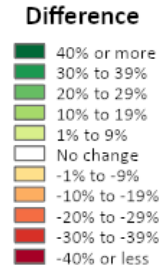
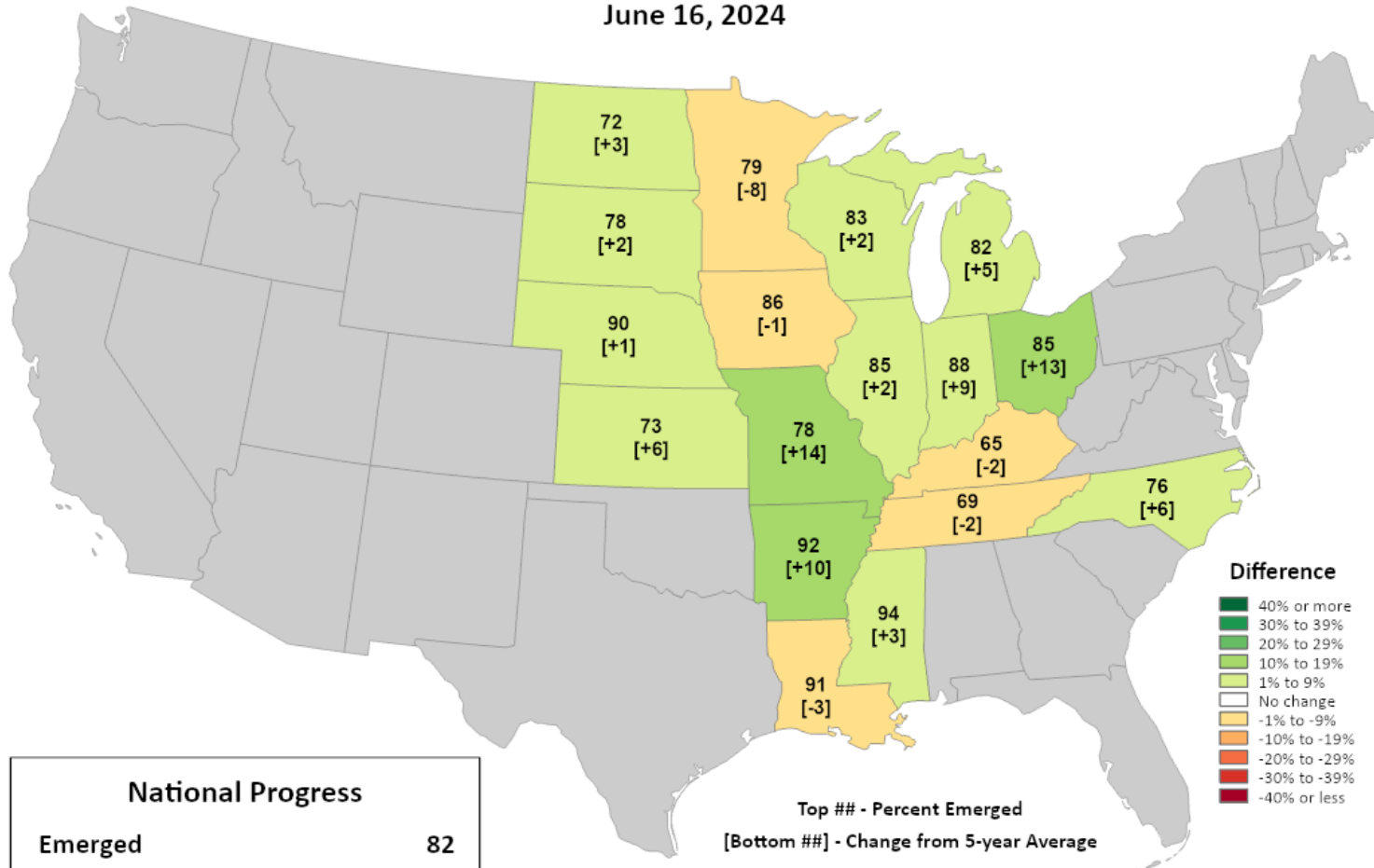


This product was prepared by the  
USDA Office of the Chief Economist (OCE)  
World Agricultural Outlook Board (WAOB)

## Soybeans Progress

### Percent Emerged

June 16, 2024



National Progress	
Emergenced	82
Change from 5-year Average	+3

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

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

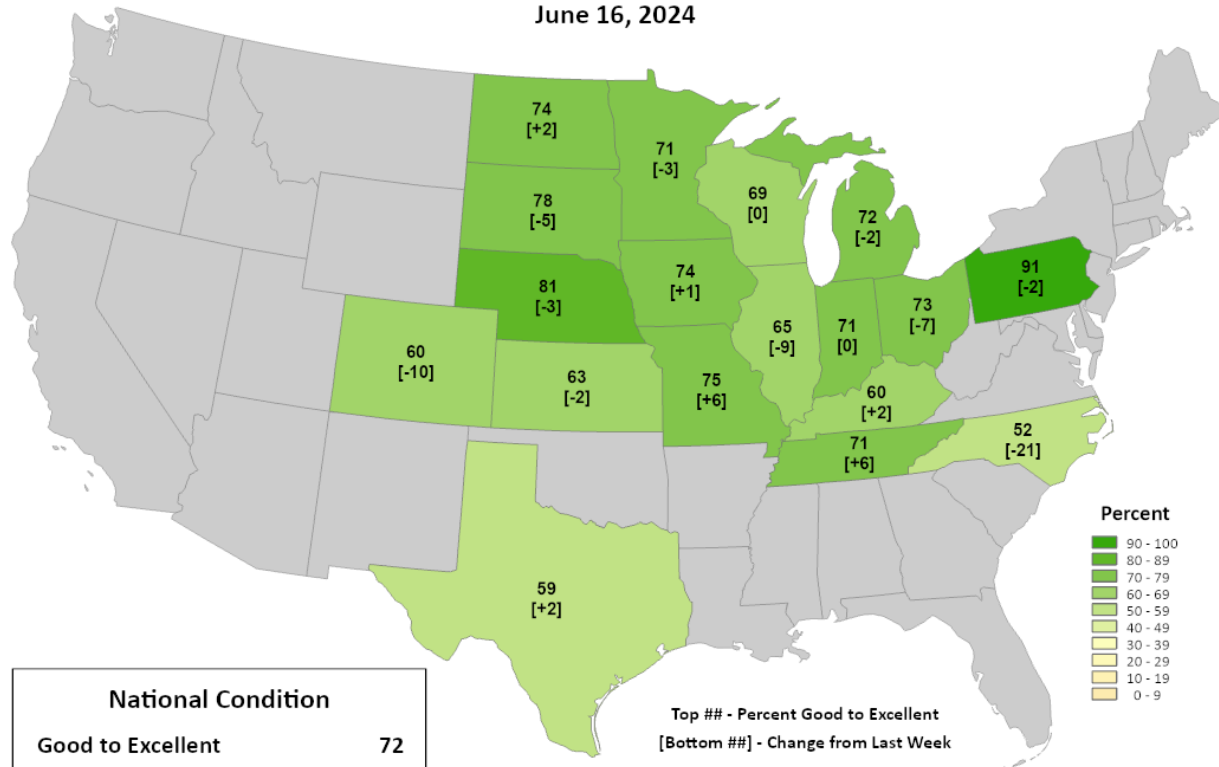
- Emergence is running **ahead** of the 5-year average in WI and states to the E. **Behind** average pace in IA, MN, & IL.
- Wisconsin → **83% complete**; 2% ahead of the 5-year average pace. **8% increase** from last week.
- Planting → **93% planted**

# 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 16, 2024



National Condition	
Good to Excellent	72
Change from Last Week	-2

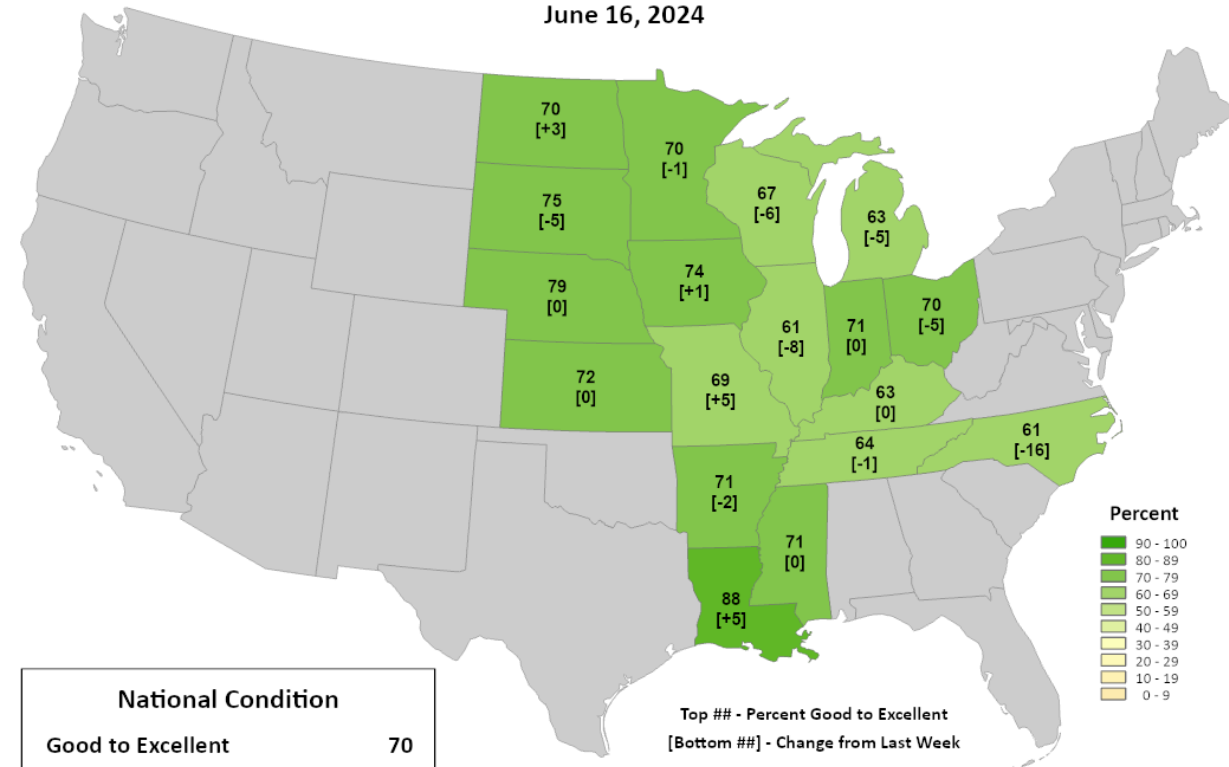
Top ## - Percent Good to Excellent  
[Bottom ##] - Change from Last Week

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 16, 2024



National Condition	
Good to Excellent	70
Change from Last Week	-2

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

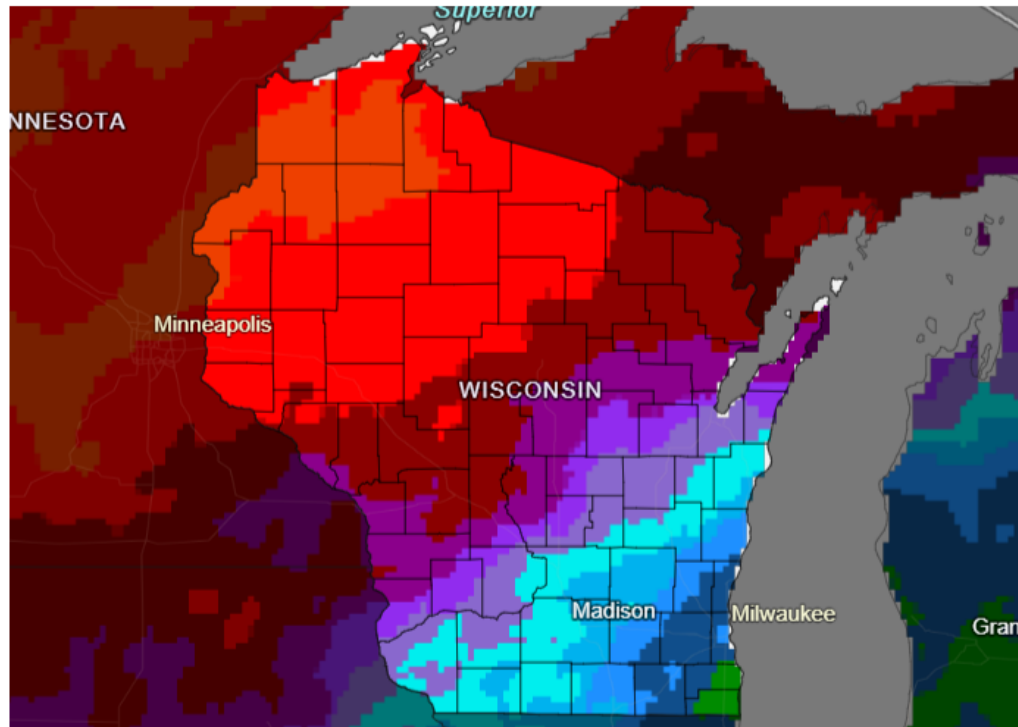
Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

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

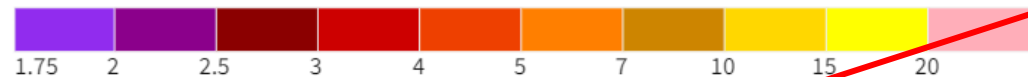


# 7 Day Precip Forecast

7-Day Quantitative Precipitation Forecast for June 18-2024



Predicted Inches of Precipitation



Source(s): National Weather Service Weather Prediction Center  
Last Updated: 06/18/24

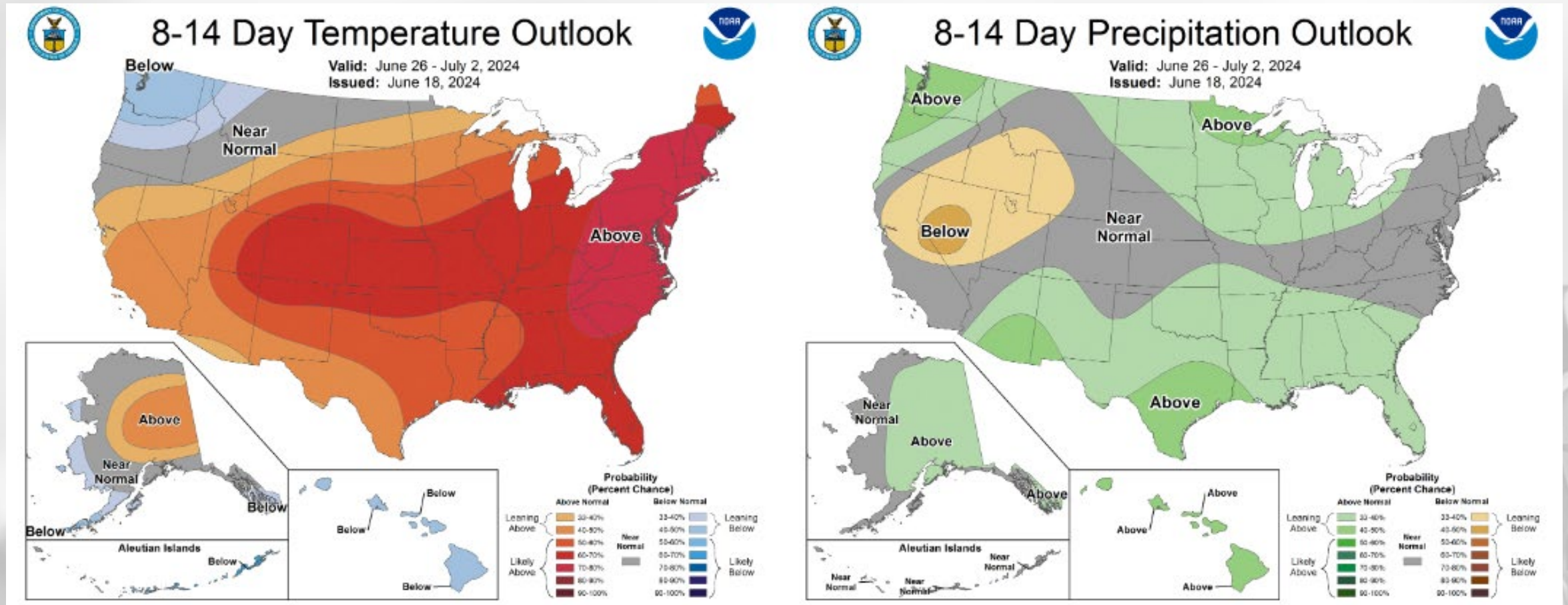
Drought.gov

- **Multiple rain chances** are forecasted over the next week, once again with higher chances in the **north/northwest**.
- Risk of excessive rainfall in the N/NW.
- Lesser to the S & E.

Forecast for 6/18/24 thru 6/25/24  
(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



**End of June:** Temperatures likely above normal. Precipitation leaning above normal.

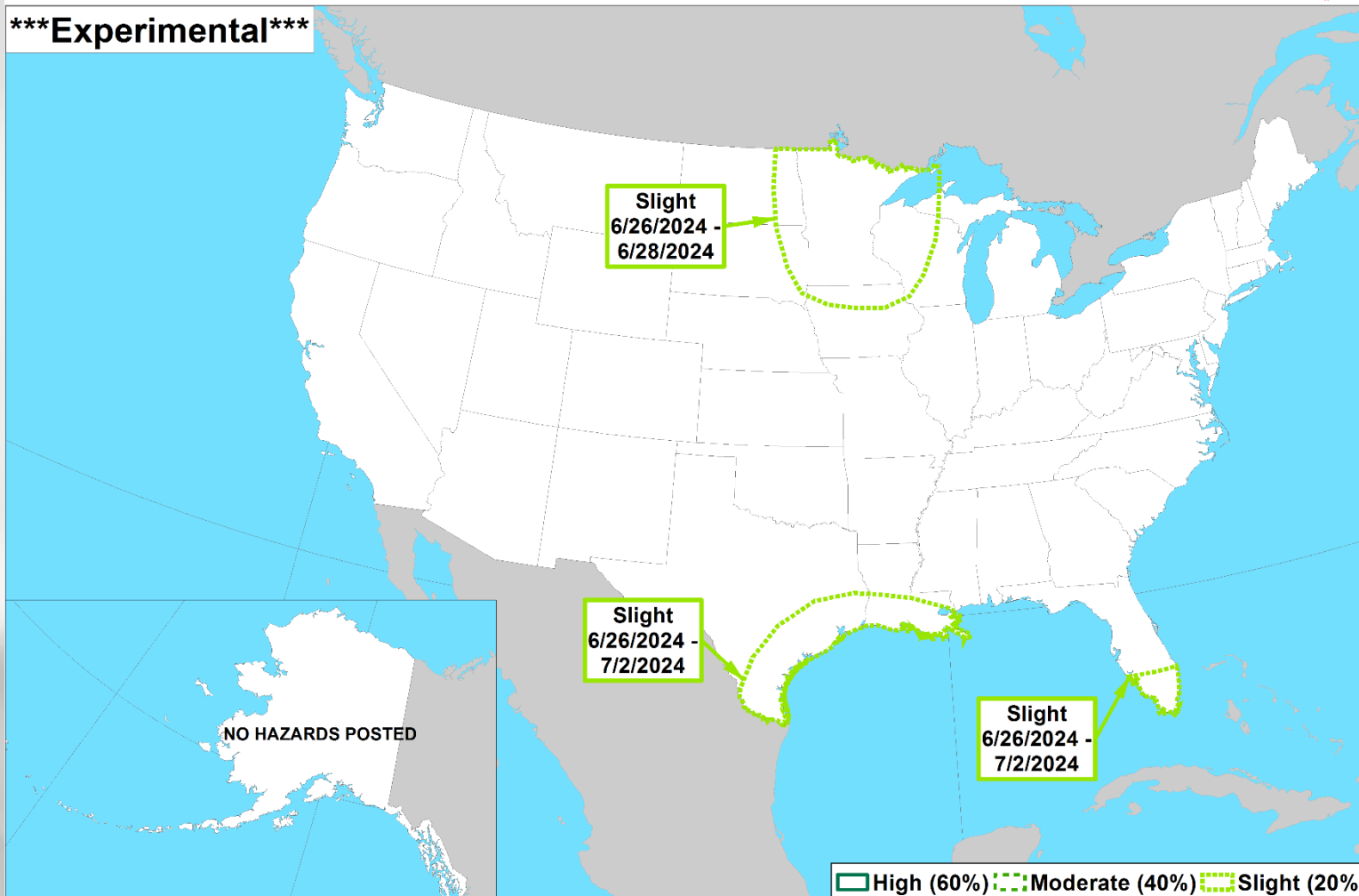
# 8-14 Day Temp & Precip Outlook



Risk of Heavy Precipitation  
Valid: 06/26/2024-07/02/2024



\*\*\*Experimental\*\*\*



Climate Prediction Center

Made: 06/18/2024 3PM EDT

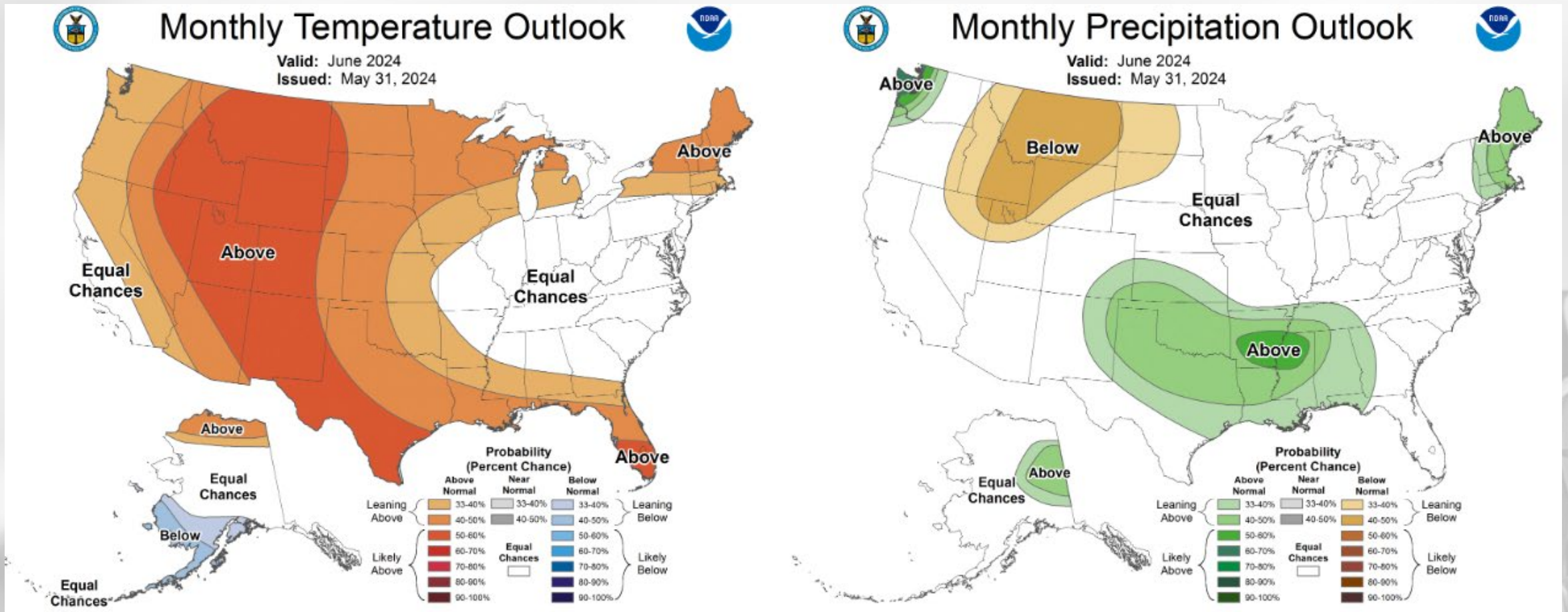
Follow us:

[www.cpc.ncep.noaa.gov](http://www.cpc.ncep.noaa.gov)

- **Excessive rainfall risk** is in place in the W & N parts of the state for next week.
- Rain on top of what is forecasted over the next 7 days.
- *Be aware of possible flooding.*

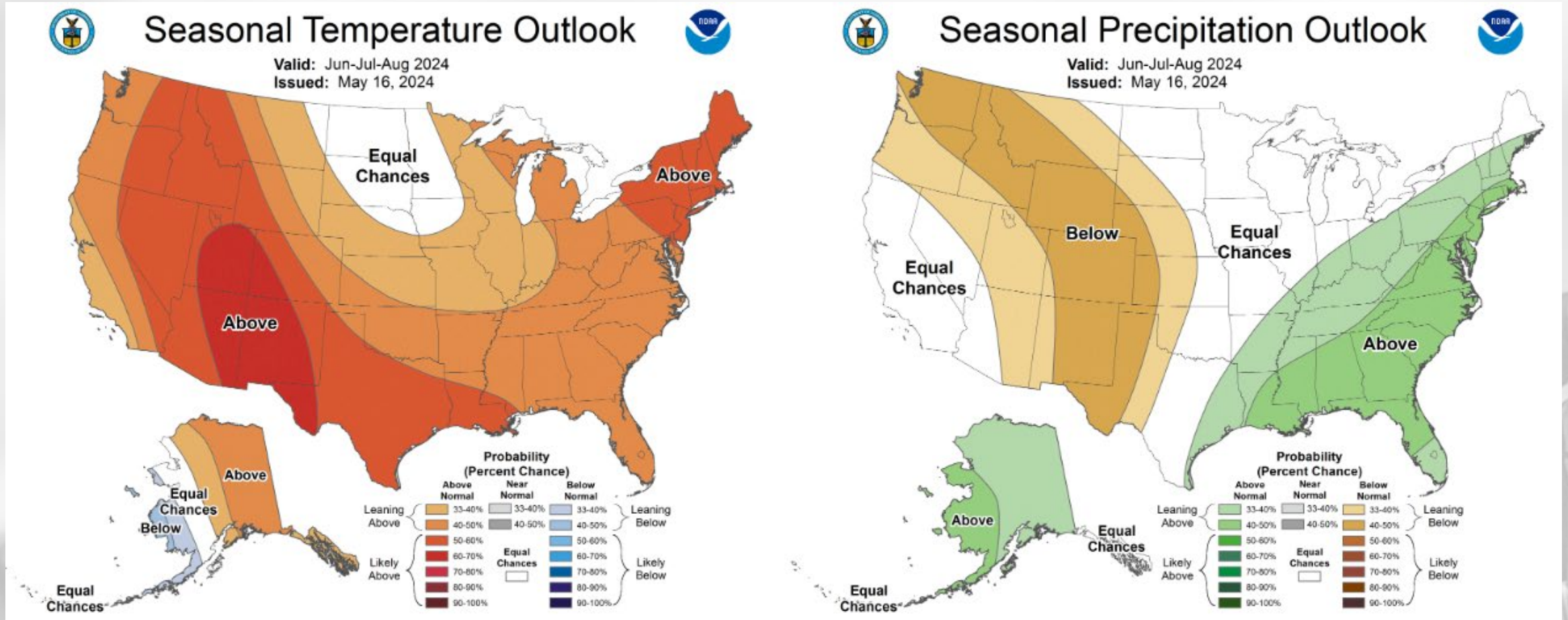
<http://www.cpc.ncep.noaa.gov/>

# 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 were highest in the NW last week, bringing 30-day totals **up above** the climatological normal.
- Temperatures last week were seasonal up until Sunday, when **heat and humidity** moved in.

## Impact:

- Soil moisture levels made notable gains in the N/NW, with **70%** of the state reporting good or adequate conditions.
- **Drought has been eliminated in the state, thanks to continued rainfall!**
- Growing degree days are approaching **900 (600)** units in the southern (northern) counties.
- Corn & soybeans are **≥80%** emerged, with conditions for both crops at **~70%** good to excellent.

## Outlook:

- The forecast is calling for **multiple inches** of rain in the NW next week. **Excessive rainfall risk** is in place.
- Higher likelihood to stay **warmer-than-normal** as we wrap up 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

## Crop Development

- 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](#)
- Hot days mean accumulations of 20+ GDUs per day. Keep on top of your growth stages to time other applications.

## Nutrient & Herbicide Applications

- Consider doing tissue testing and pre-sidedress nitrate testing after crop has emerged to assess fertilizer need.

## 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](#).

## 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>

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Photo Credit: USDA



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