Wisconsin State Climatology Office
Nelson Institute for Environmental Studies

Extension
University of Wisconsin-Madison

USDA Midwest Climate Hub
U.S. DEPARTMENT OF AGRICULTURE

NRCS
Natural Resources Conservation Service

AgWOW

Ag Weather Outlook for Wisconsin

Week of June 23, 2025

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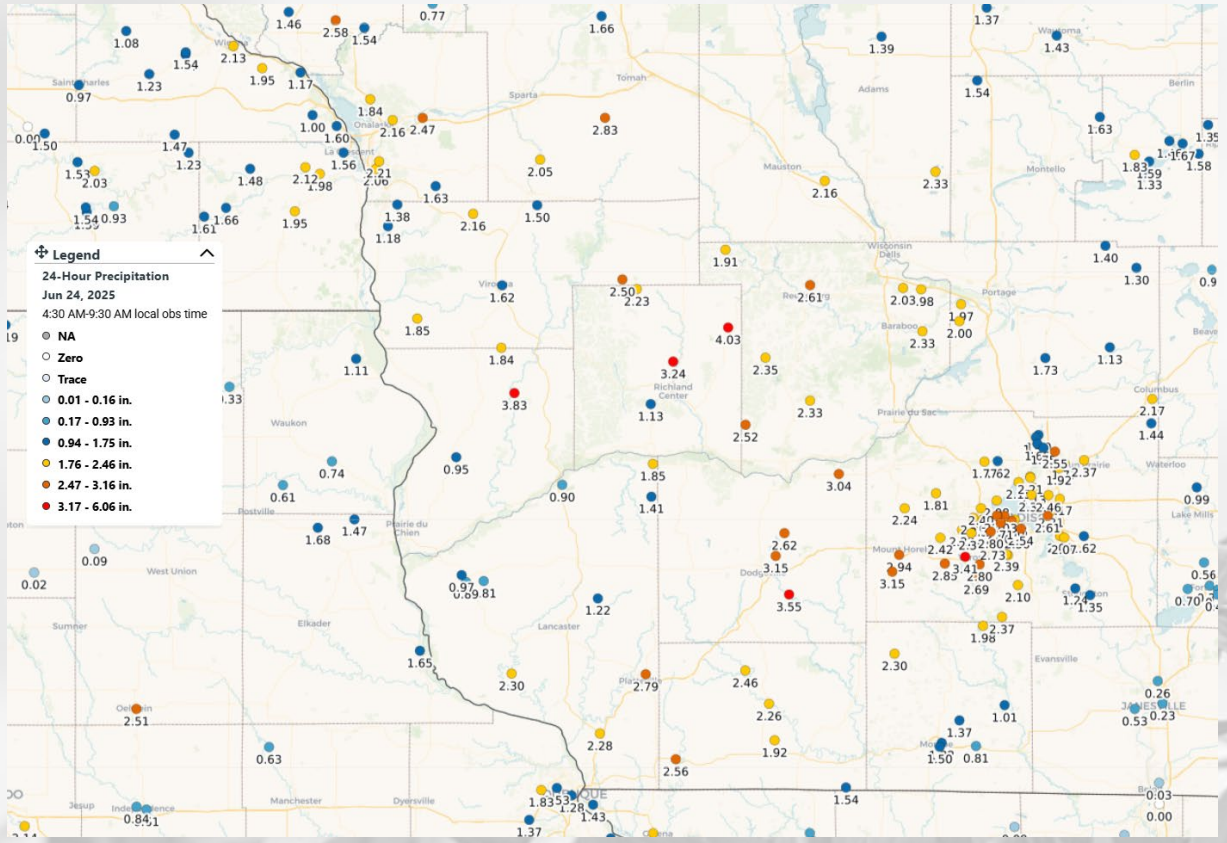
Key Points

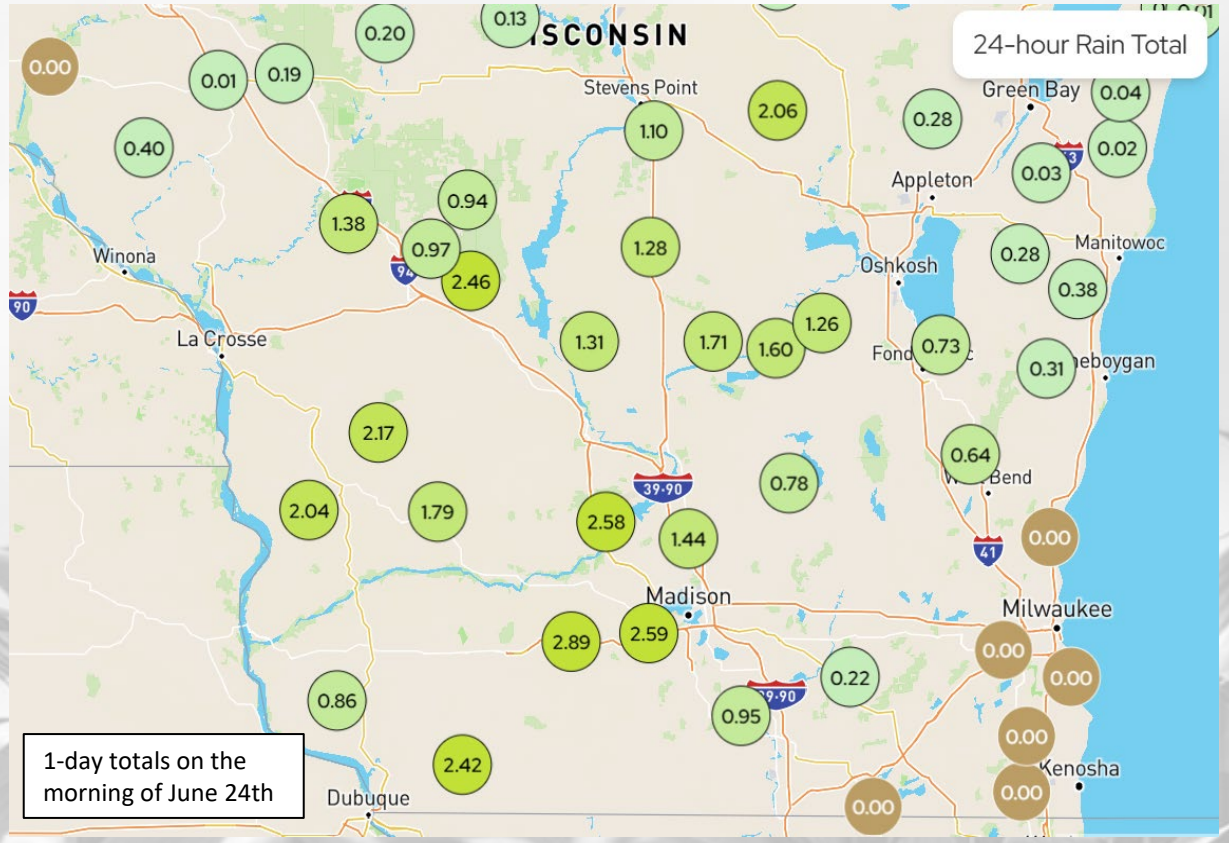
Navigate to select slides by clicking on the links below.

1) Multiple days of rainfall brought 2-4" across the SW and SC regions, with isolated higher totals.
2) Above normal temperatures were reported statewide with high temps topping 90°F on multiple days.
3) Soil moisture levels are running near-normal across most of the state with reductions in D1 drought coverage thanks to rainfall.
4) More rain is forecasted through the weekend, with early July outlooks showing no strong indications of above or below normal conditions.

- *For this week's agronomic recommendations from UW Extension, click here.*
- *For this week's crop progress updates from USDA NASS, click here.*

Rainy Monday



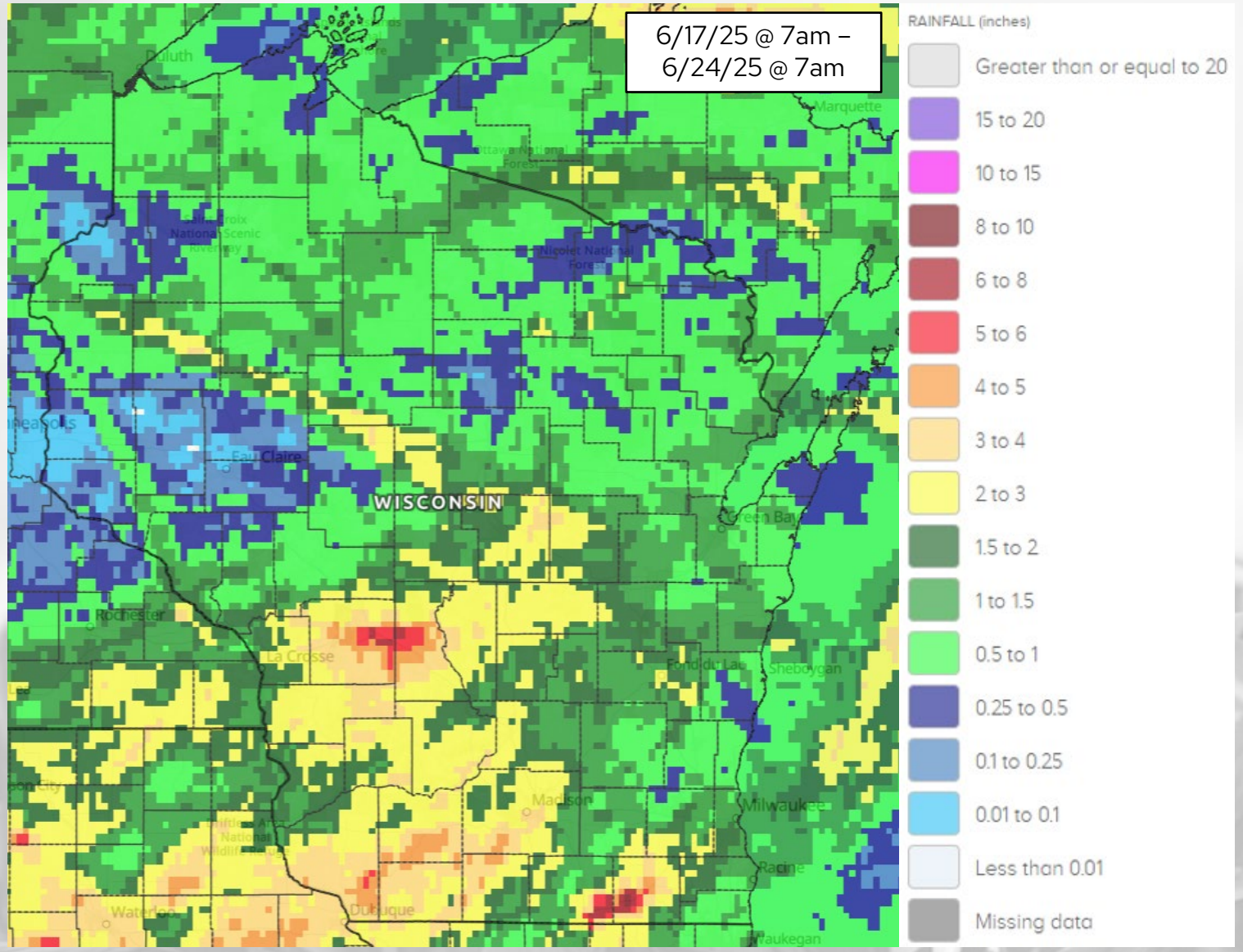


- Storms that rolled through on Monday afternoon and evening brought **heavy rainfall totals** to the southern part of WI, with some receiving **3" or more** in just a few hours!

- Storms also caused **damage via strong winds** – see storm damage reports from Monday night here. This video shows street flooding in the City of Madison.

https://maps.cocorahs.org/

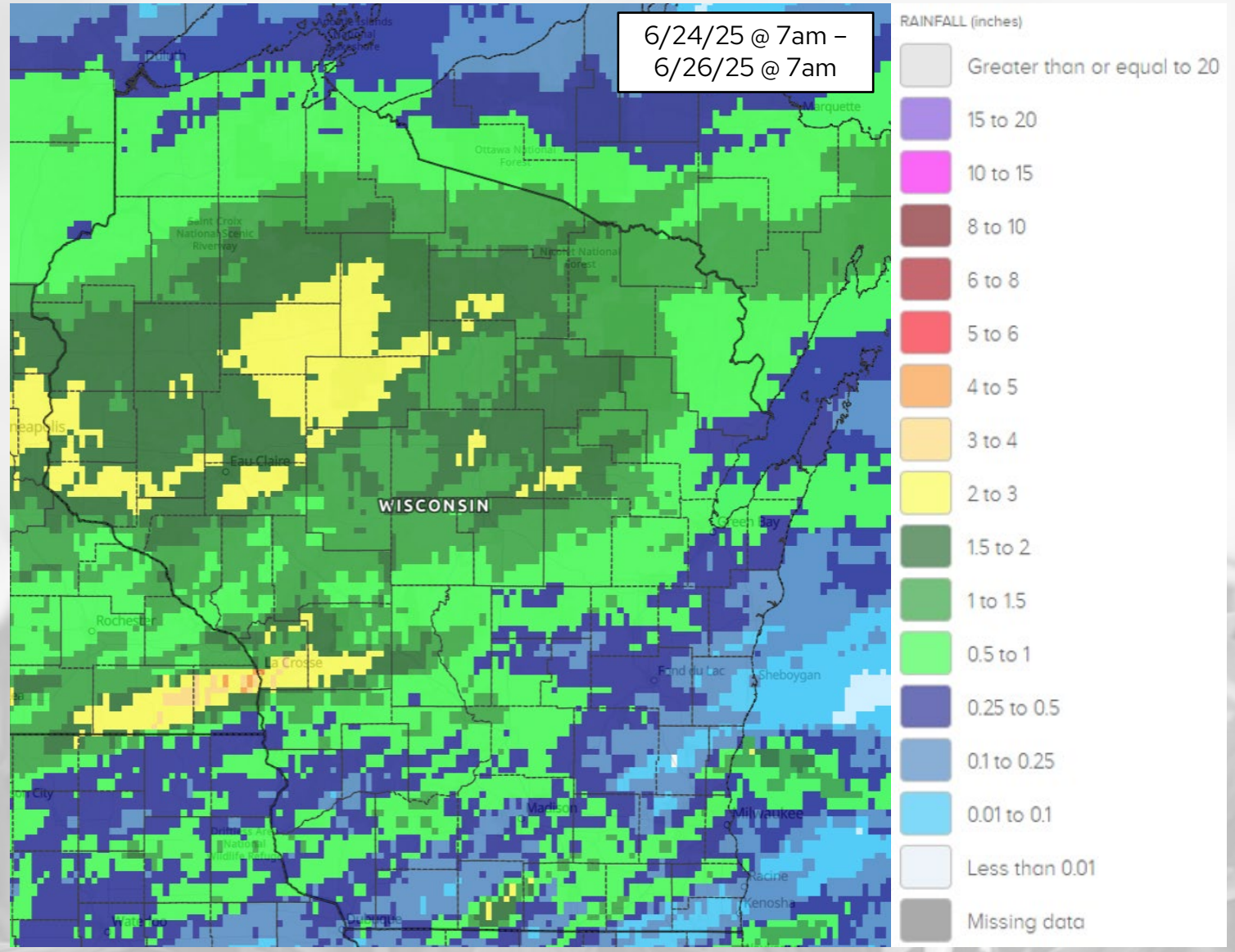
7 Day Precip



- An active week brough **multiple days of rainfall** to most of the state.
  - **5 days or more** of measurable precip was common across the SW and NE. **3-5 days** was common across most of WI.
- **2-4”** common in the SW and SC, with **pockets of >4”**.
- Lowest totals in the NW → **0.5” or less**
- Last week’s maximum total: Clinton WWTP, Rock Co. (COOP) → **6.91”**

https://water.noaa.gov/

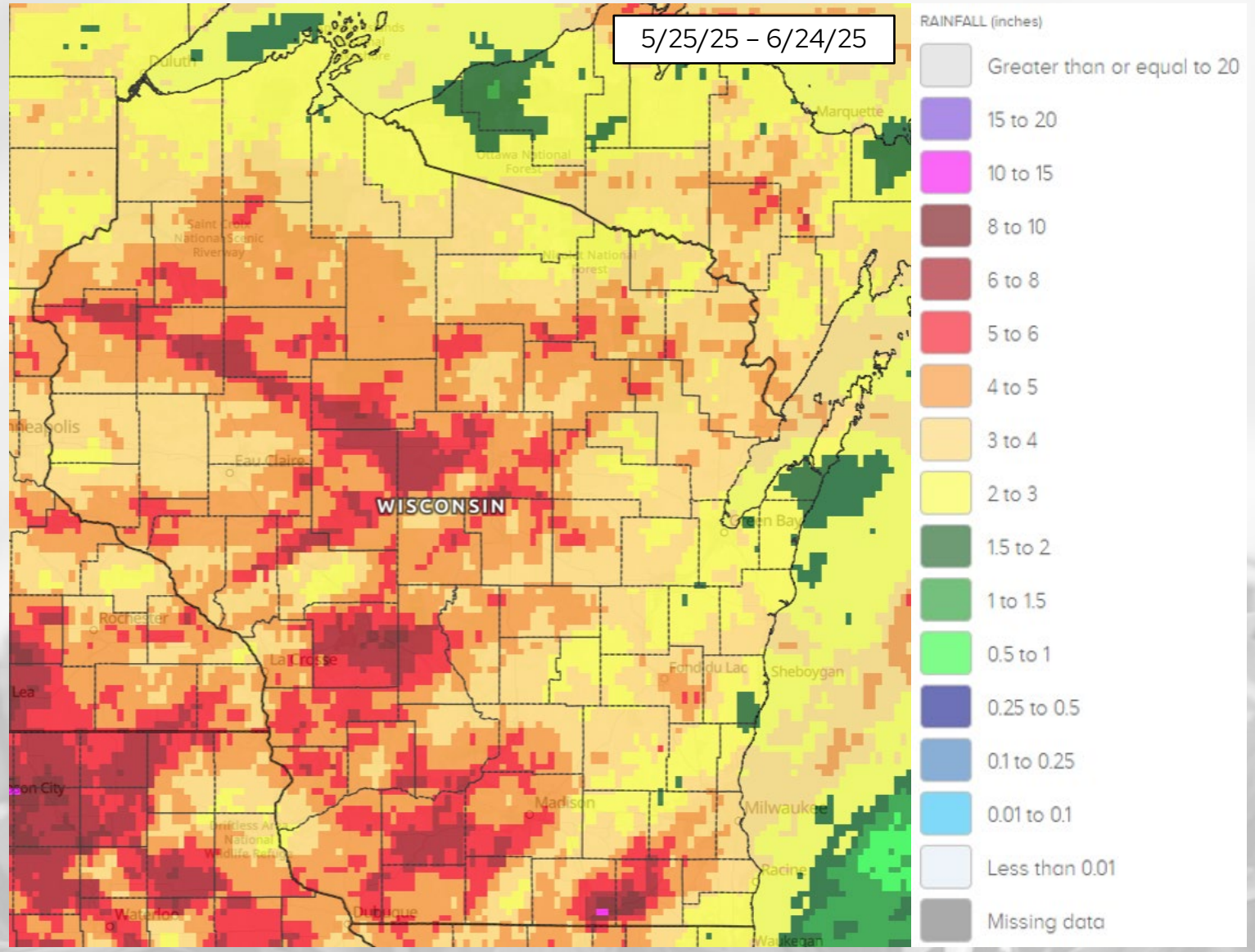
Addition – June 24-25 Rain



- Another **2" or more** has fallen since Tuesday morning across parts of the north and around La Crosse.
- An additional **0.25-1" fell in the SW** after heavy rains fell on 6/23.
- Maximum total: Tomah Ranger Station, Monroe Co. (COOP) → **5.55"**

https://water.noaa.gov/

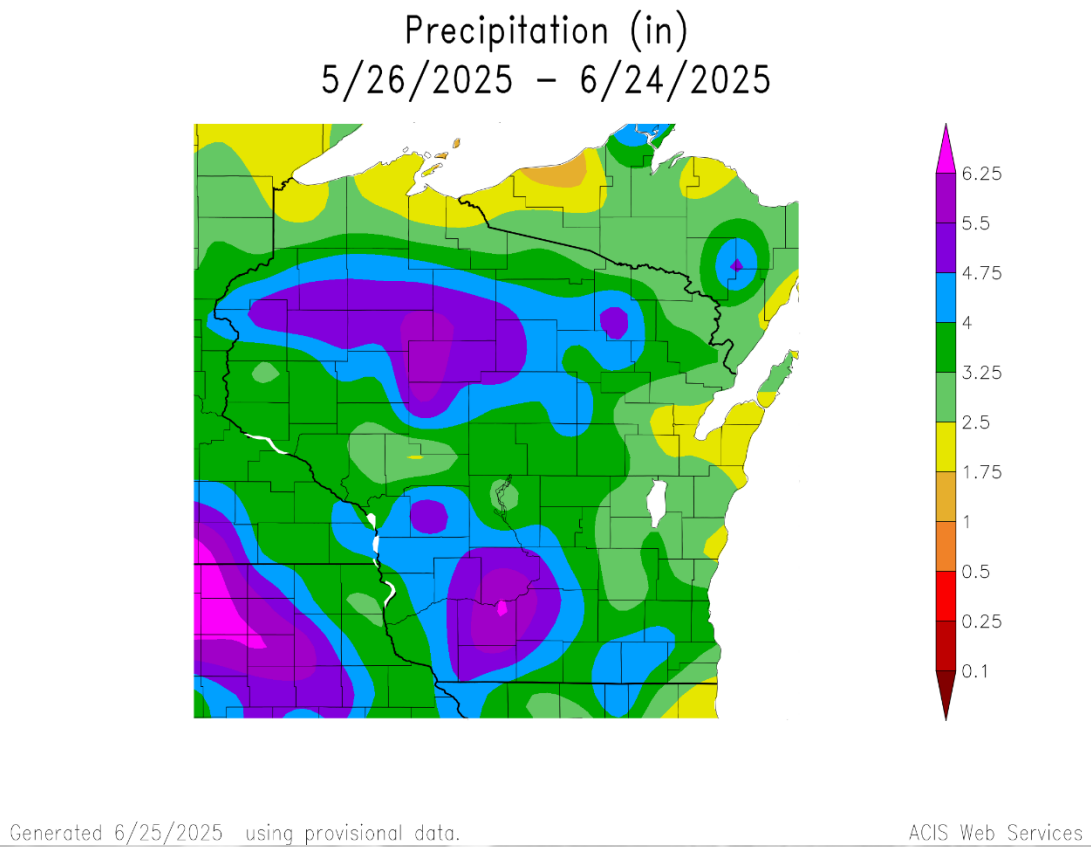
30 Day Precip

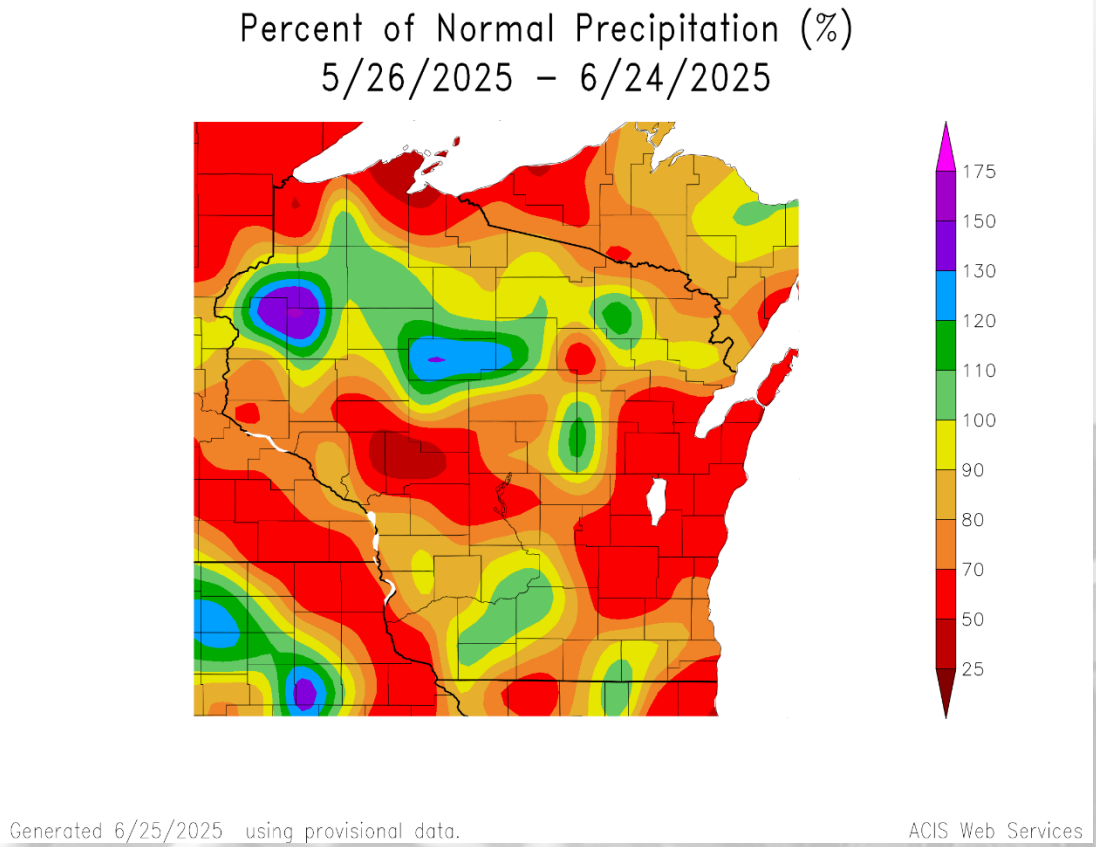


- **3-5” for the majority of WI**, with totals tapering to <3” in the far north and towards Lake Michigan.
- Localized areas of **6” or more** were common in the western half of WI.
- Highest totals (**8” or more**) in parts of Monroe/Juneau and Rock/Walworth Counties.

https://water.noaa.gov/

30 Day Precip Total/% Avg.

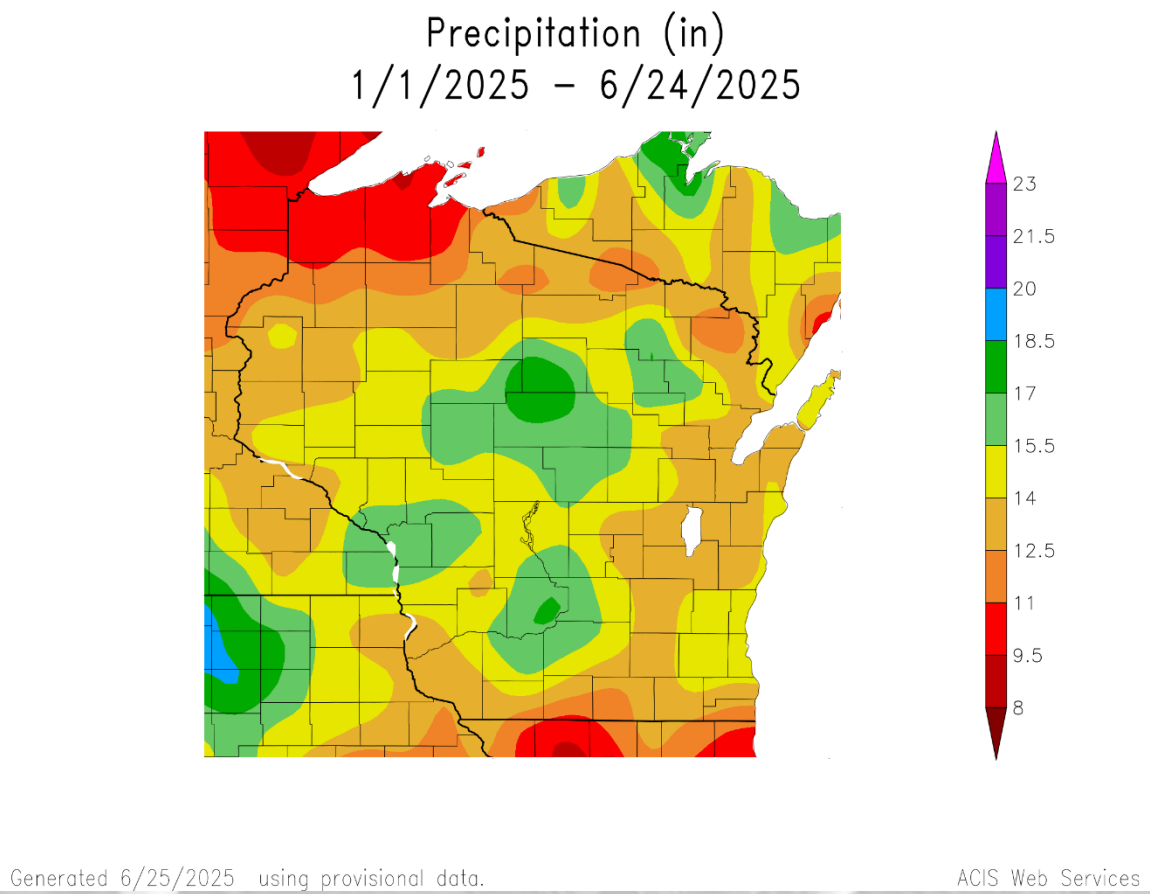


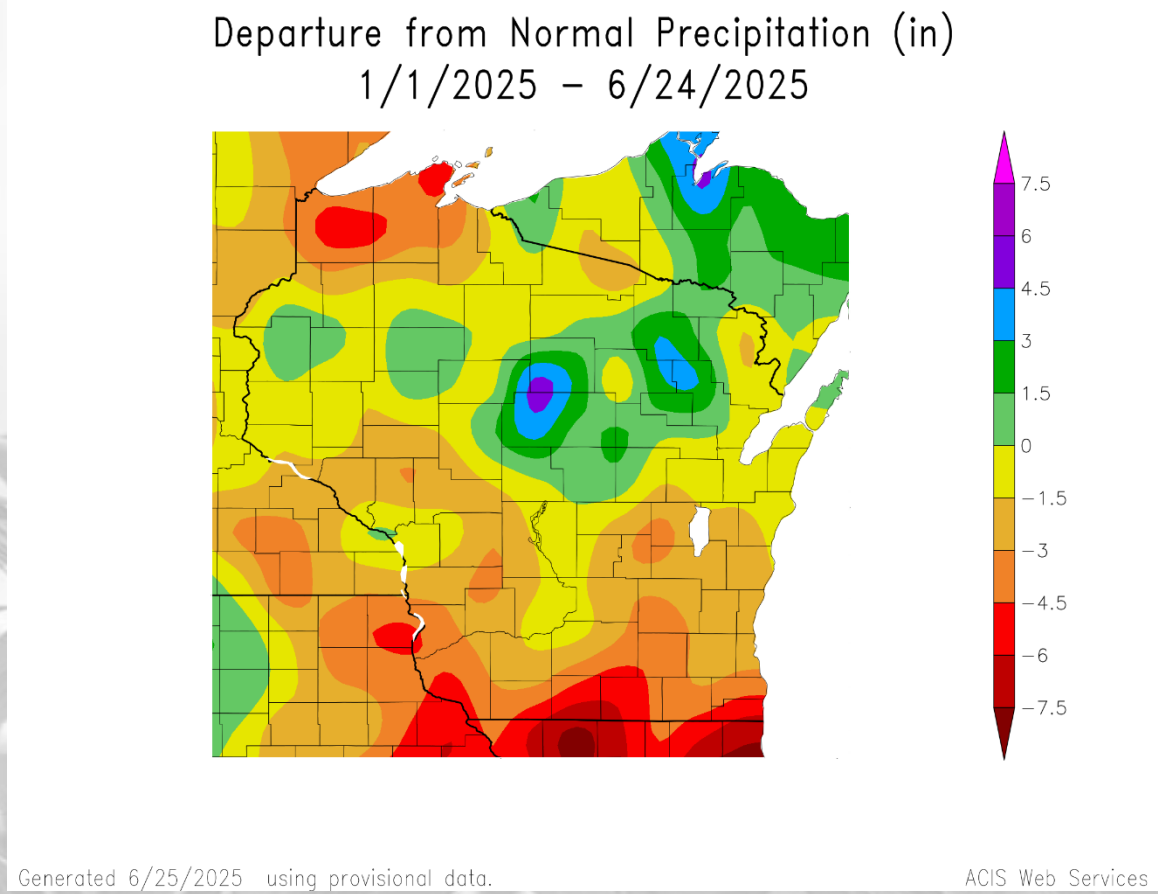


- Two **bullseyes of ~5" or more** in southwest and northwest WI, where totals are now **at or above normal**.
- 3.25"-4.75" common across most of the state, but **many are still 90% or less of normal**.
- **70% or less of normal** in the east, north, and west-central → **3" or less** over the past 30 days

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

2025 Precipitation (so far)





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

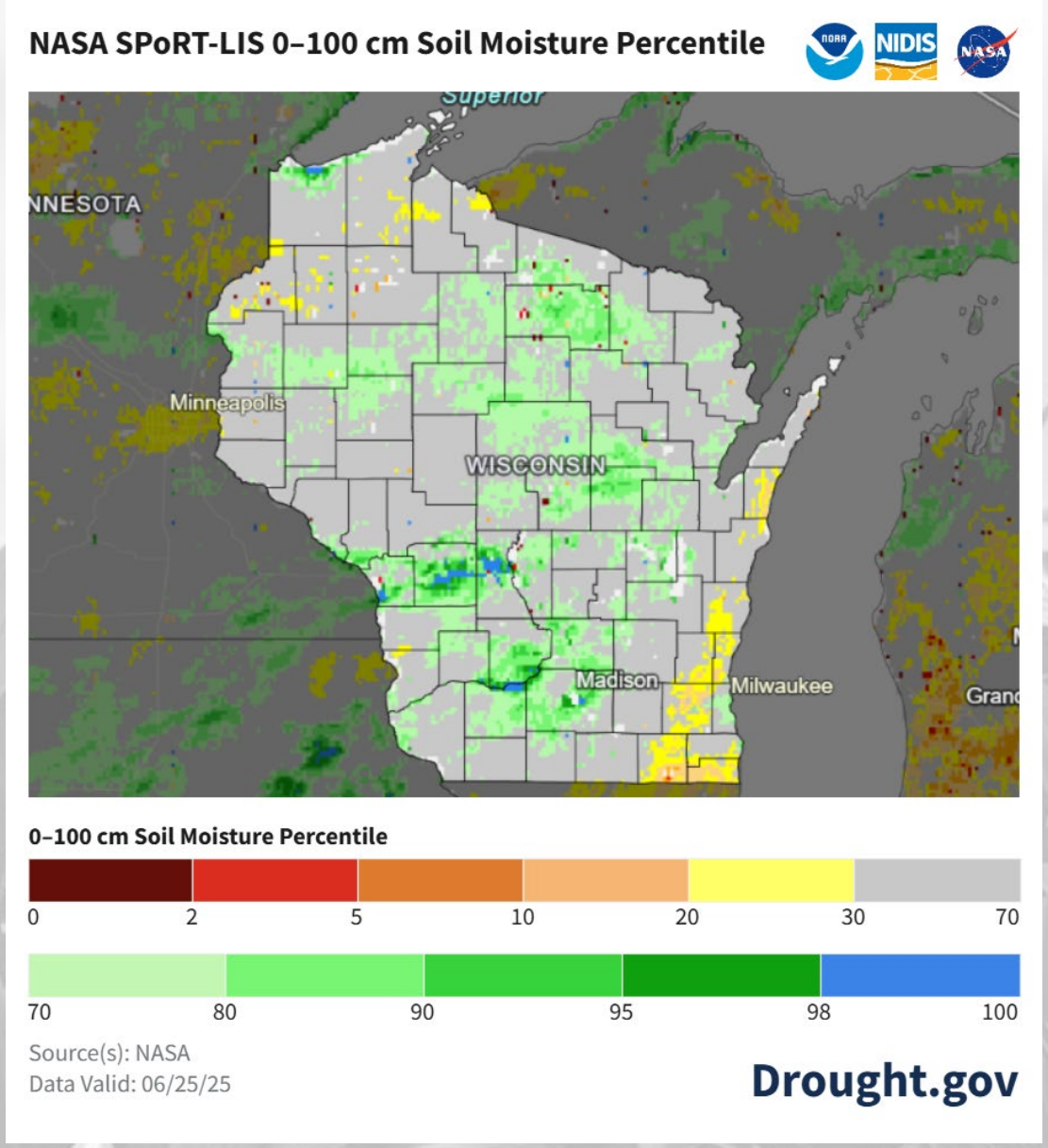
Soil Moisture Models

- Most of Wisconsin is running at **near-normal soil moisture levels** in the top 1 meter of soil.
- There is some **abnormal wetness** scattered across the state particularly where rain totals last week were higher.
- **Reductions in abnormal dryness** in the south following multiple days with rain over the past week.

Model Notes:
Red areas = top 5 driest in 100 years.
Dark red areas = top 2 driest in 100 years.
Blue areas = top 2 wettest in 100 years.

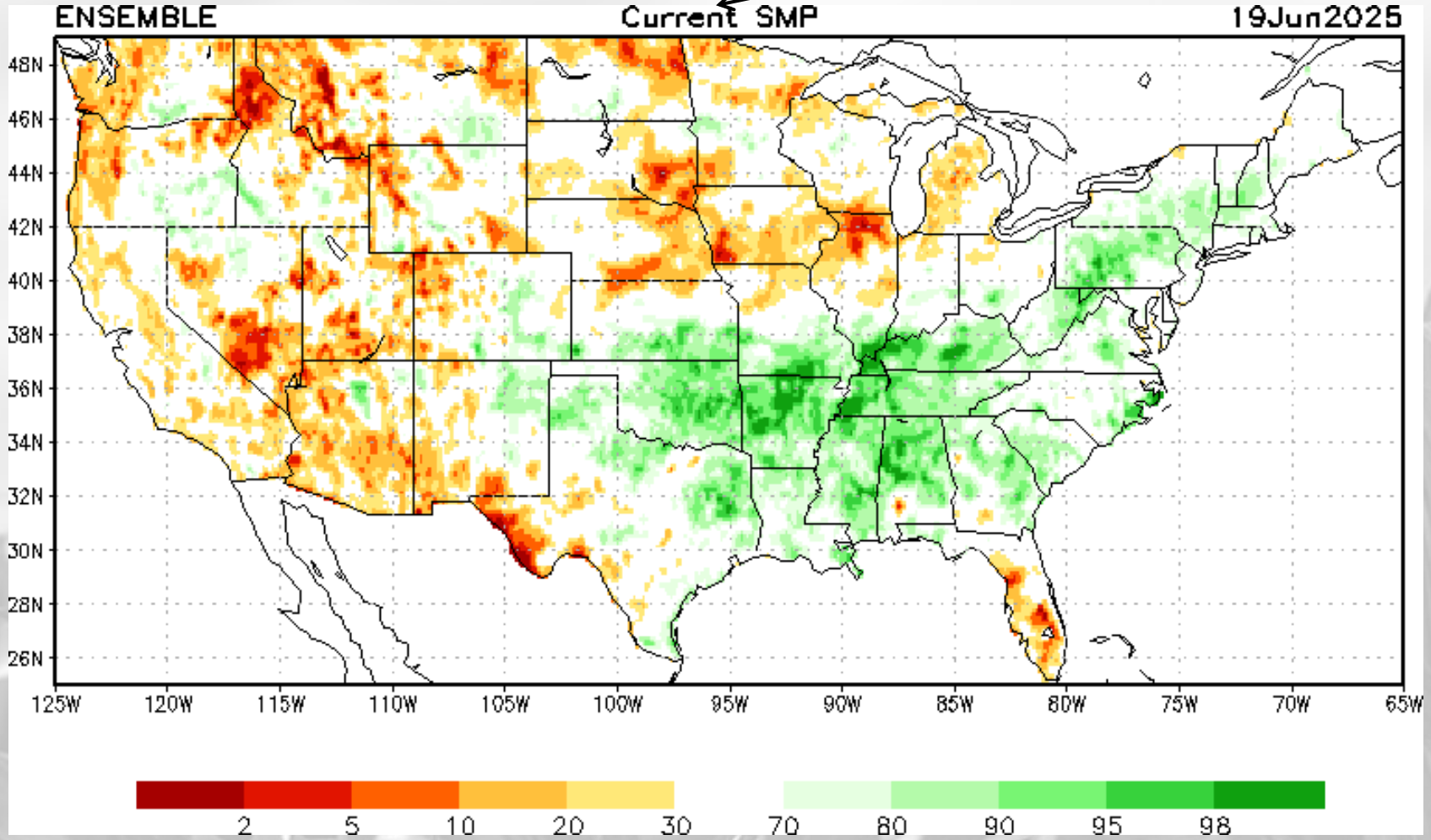
It's worth noting that each soil moisture model has their own characteristics and input variables, so there tends to be variation between models. Thus, it's worthwhile to look at multiple models opposed to just one.

https://weather.ndc.nasa.gov/sport/case_studies/lis_CONUS.html
https://www.drought.gov/states/wisconsin



Soil Moisture Models

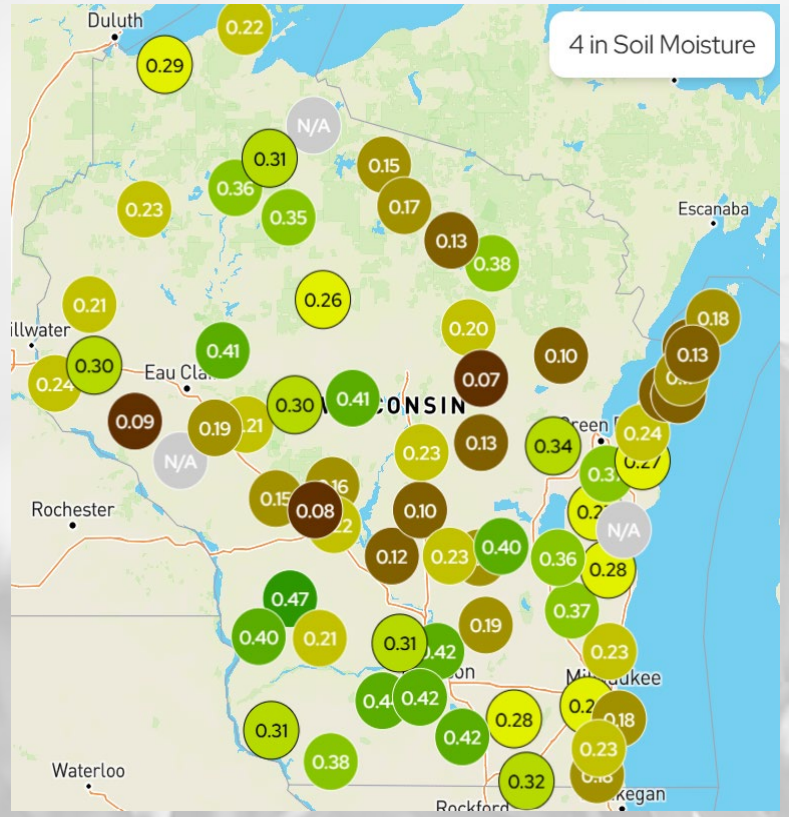
NOTE: this map displays the soil moisture percentile for June 19. It was the most recent update on June 24.

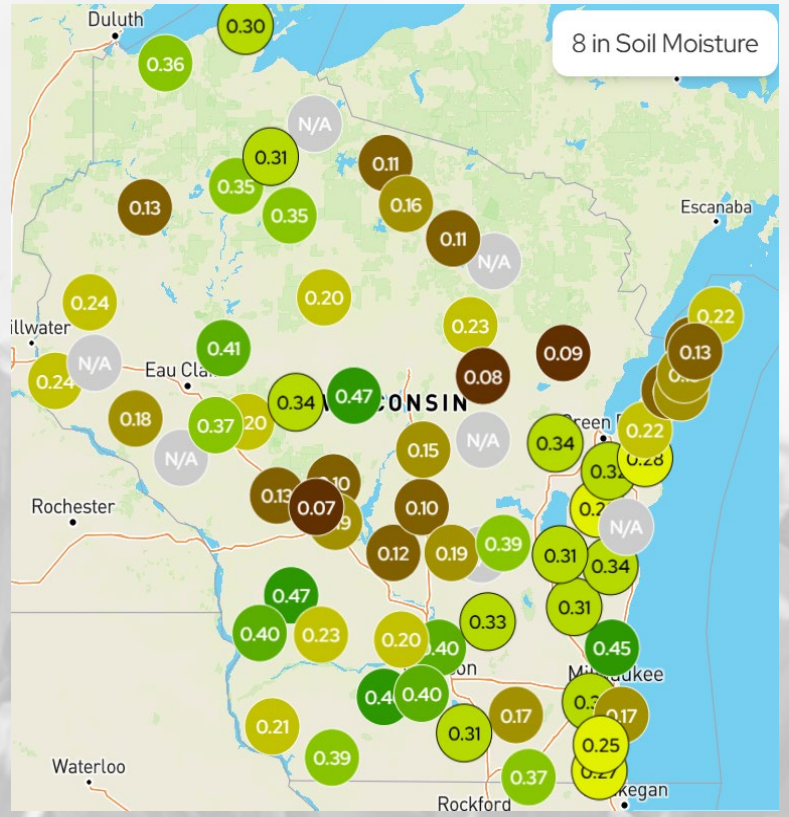


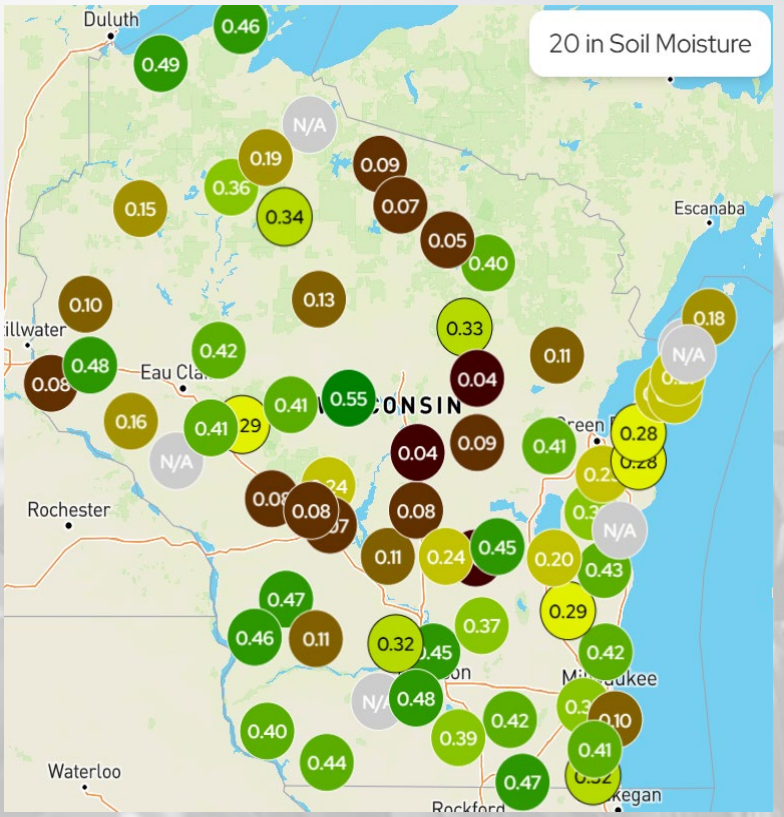
https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml

Wisconet Soil Moisture

Maps showing soil moisture conditions on June 24th @ Mid-morning.
Units of map values are {Volume of water}/{Volume of soil}.







https://wisconet.wisc.edu/

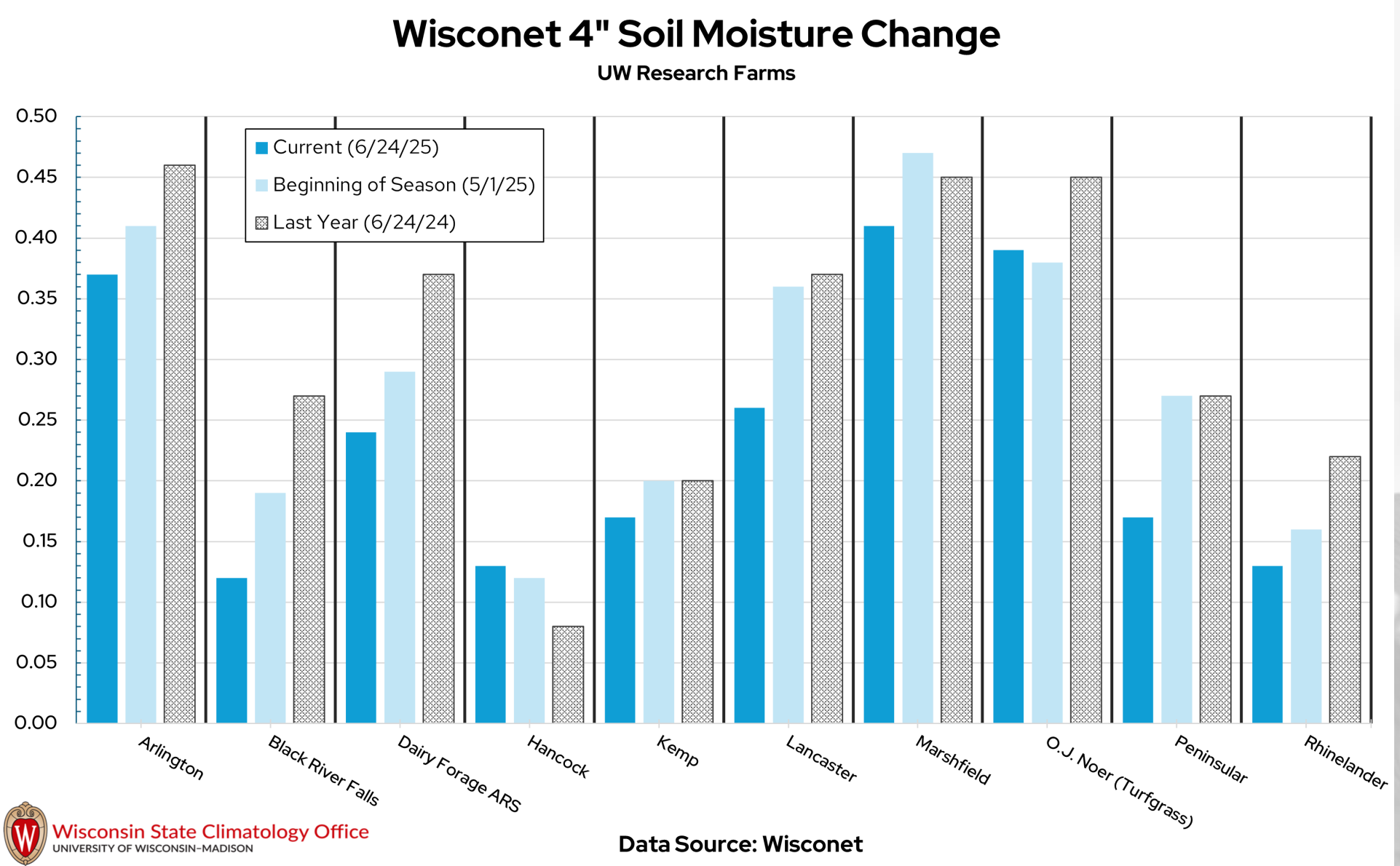
Wisconet Soil Moisture

Change in soil moisture from June 17th (Start) to June 24th (End).
Units of change values are {Volume of water}/{Volume of soil}.

Research Farm	County	Total Precip (in)	4" Change (Start)	4" Change (End)	8" Change (Start)	8" Change (End)	20" Change (Start)	20" Change (End)
Arlington	Columbia	2.06	0.32	0.37	0.36	0.37	0.40	0.40
Black River Falls	Jackson	1.33	0.07	0.12	0.09	0.11	0.08	0.08
Dairy Forage ARS	Sauk	2.70	0.26	0.24	0.20	0.20	0.35	0.33
Hancock	Waushara	1.75	0.07	0.13	0.07	0.11	0.06	0.08
Kemp	Oneida	0.82	0.18	0.17	0.18	0.17	0.08	0.07
Lancaster	Grant	1.48	0.21	0.26	0.19	0.21	0.39	0.40
Marshfield	Marathon	1.87	0.41	0.41	0.48	0.48	0.54	0.55
O.J. Noer *(Turfgrass)*	Dane	3.68	0.30	0.39	0.24	0.38	0.44	0.48
Peninsular	Door	0.17	0.18	0.17	0.17	0.16	0.22	0.22
Rhinelander	Oneida	0.54	0.14	0.13	0.13	0.12	0.06	0.05
Spooner	Washburn	0.34	0.28	0.24	0.19	0.14	0.17	0.16

https://wisconet.wisc.edu/

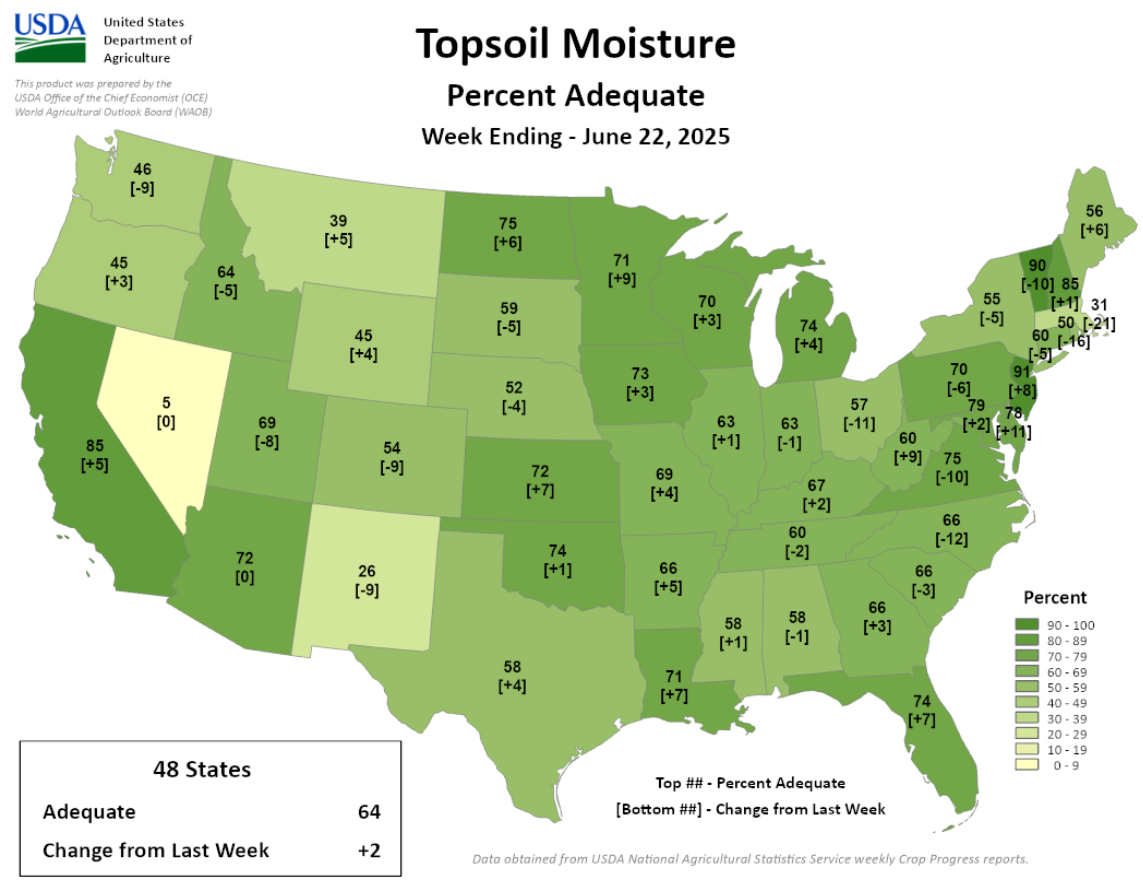
Wisconet Soil Moisture

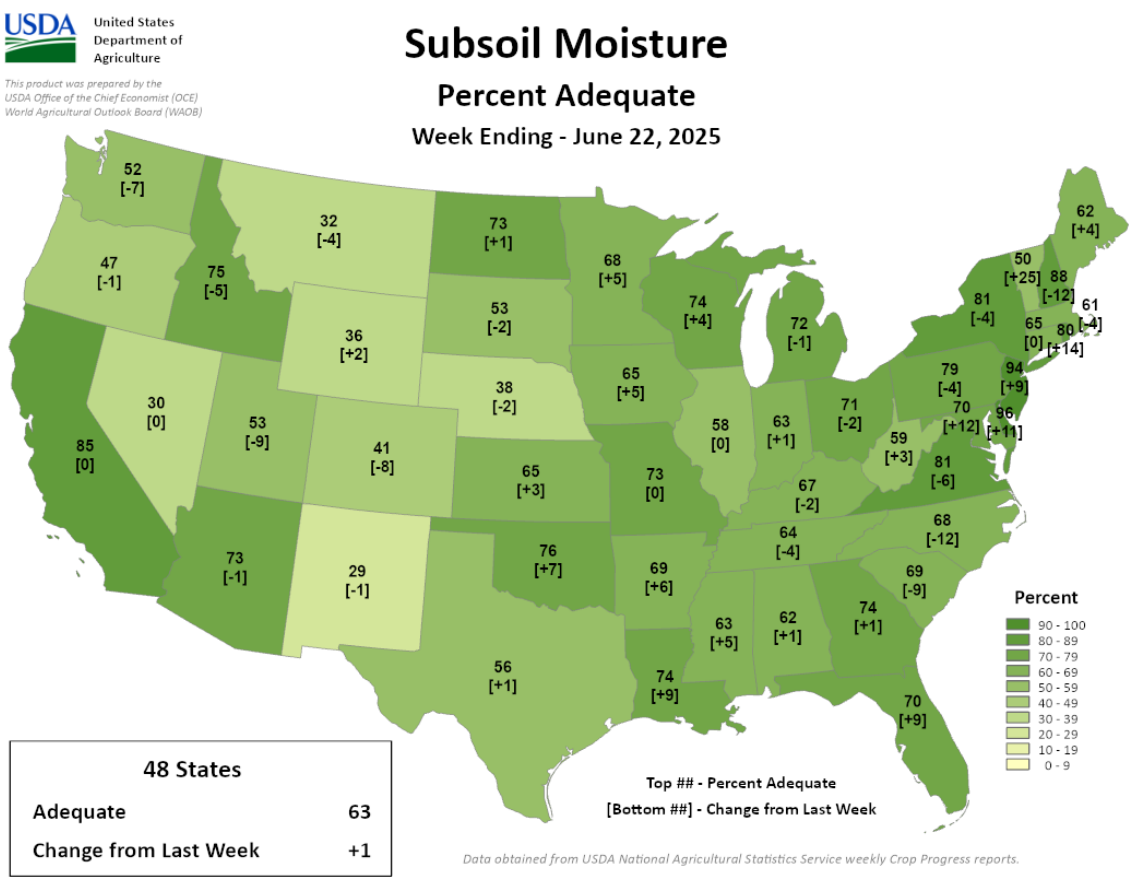


Across most Wisconet research farm stations, soil moisture levels in the top few inches are **lower than at the start of the corn-soybean growing season**, as well as this time last year.

https://wisconet.wisc.edu/

Adequate Soil Moisture



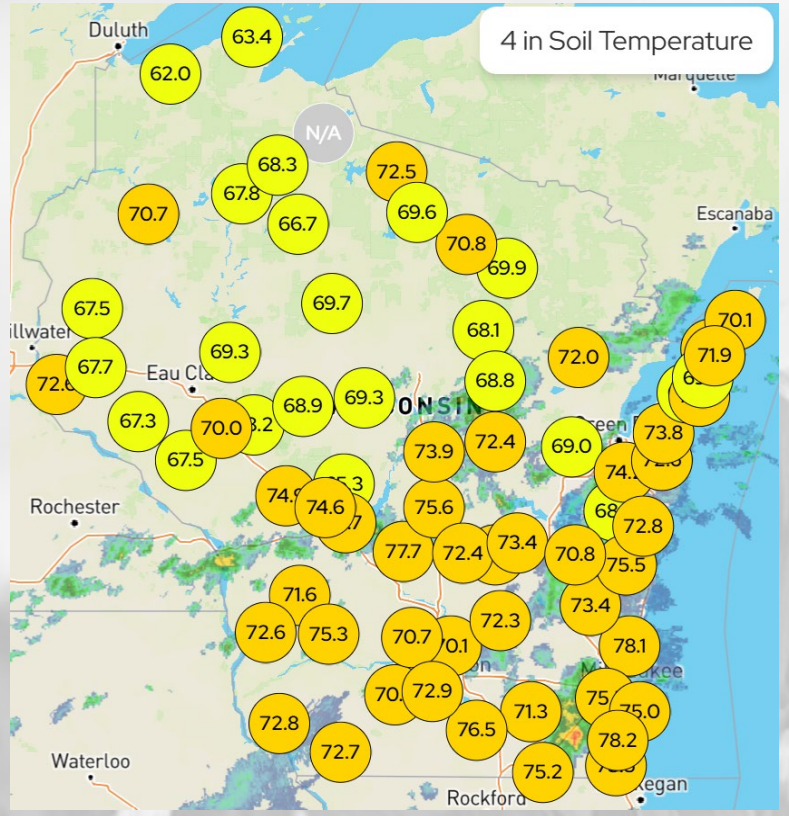


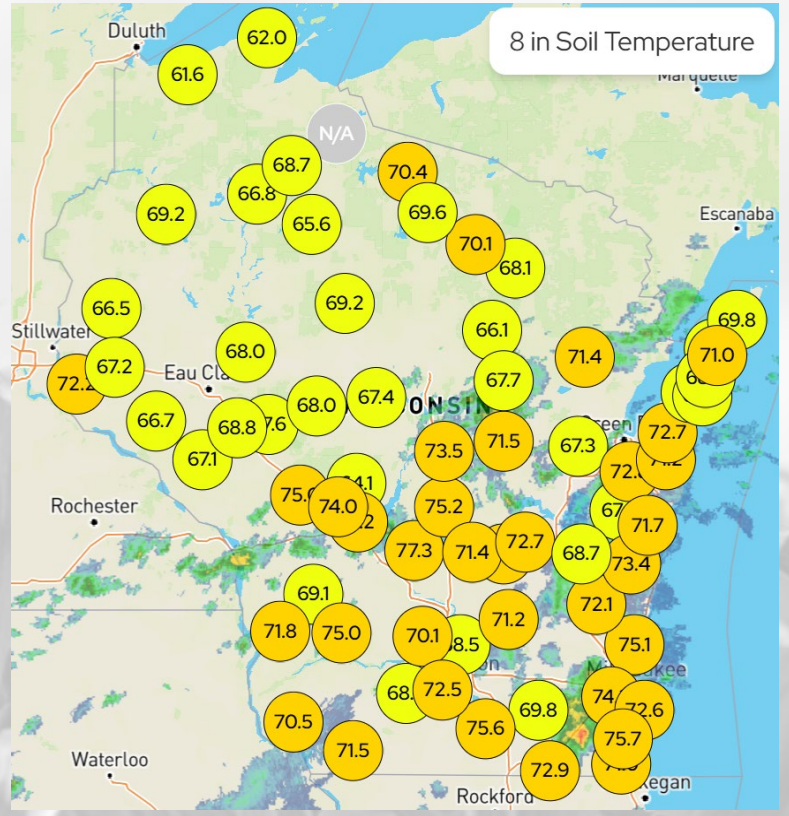
- **70-75%** of agricultural soils in the state with **adequate** topsoil and subsoil moisture.
- **18%** of fields in the state are reported as having **short to very short** topsoil moisture, **down 1%** from last week.

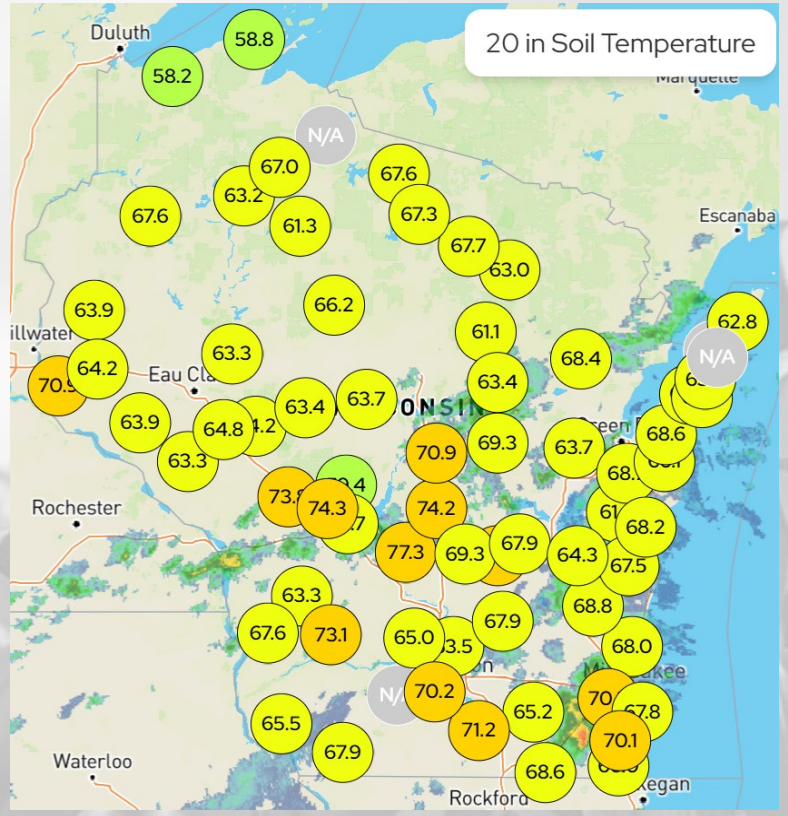
https://agindrought.unl.edu/Other.aspx

Wisconet Soil Temperature

Maps showing soil temperature conditions on
June 24th @ Mid-morning.

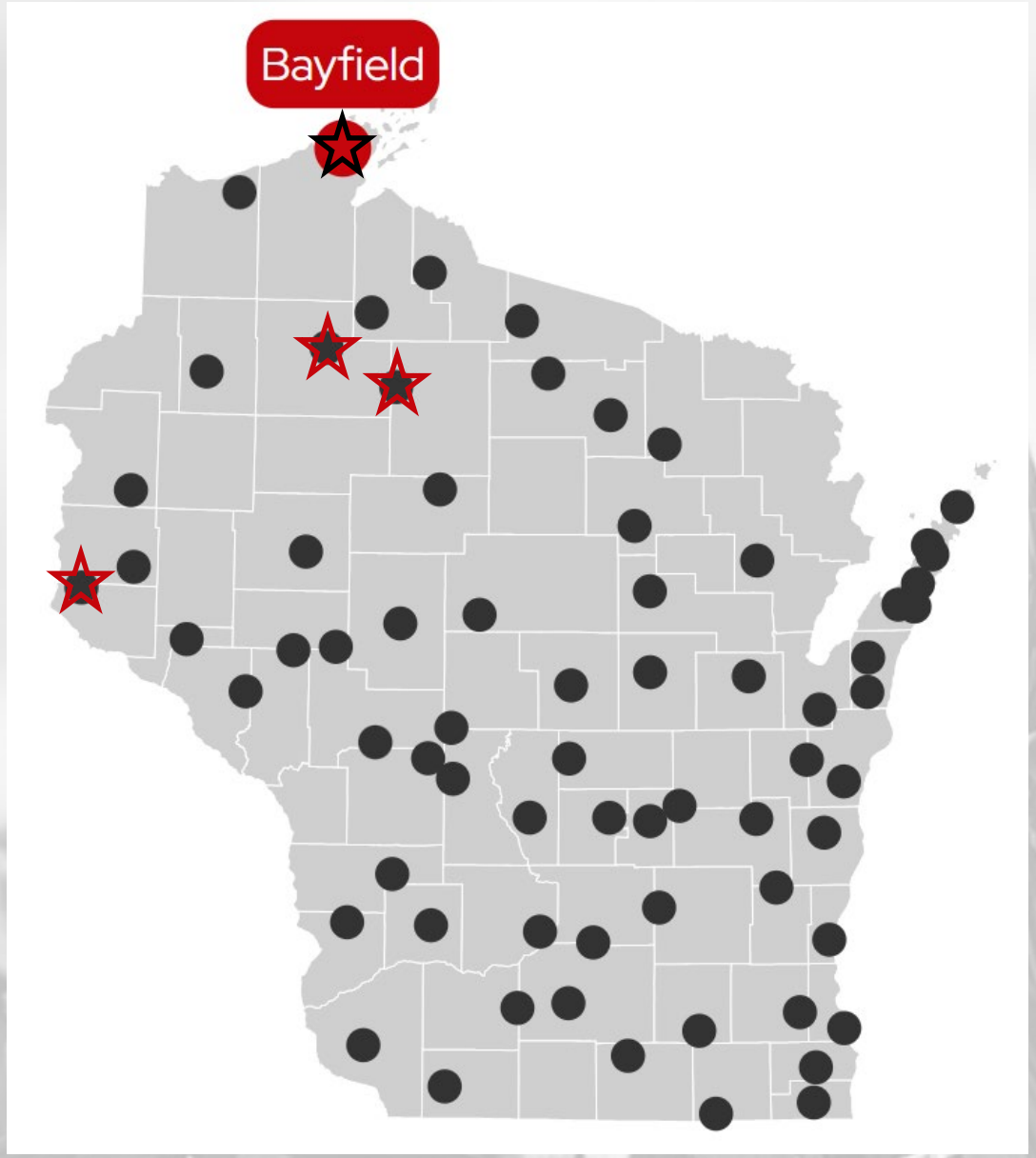






https://wisconet.wisc.edu/

Wisconet Stations



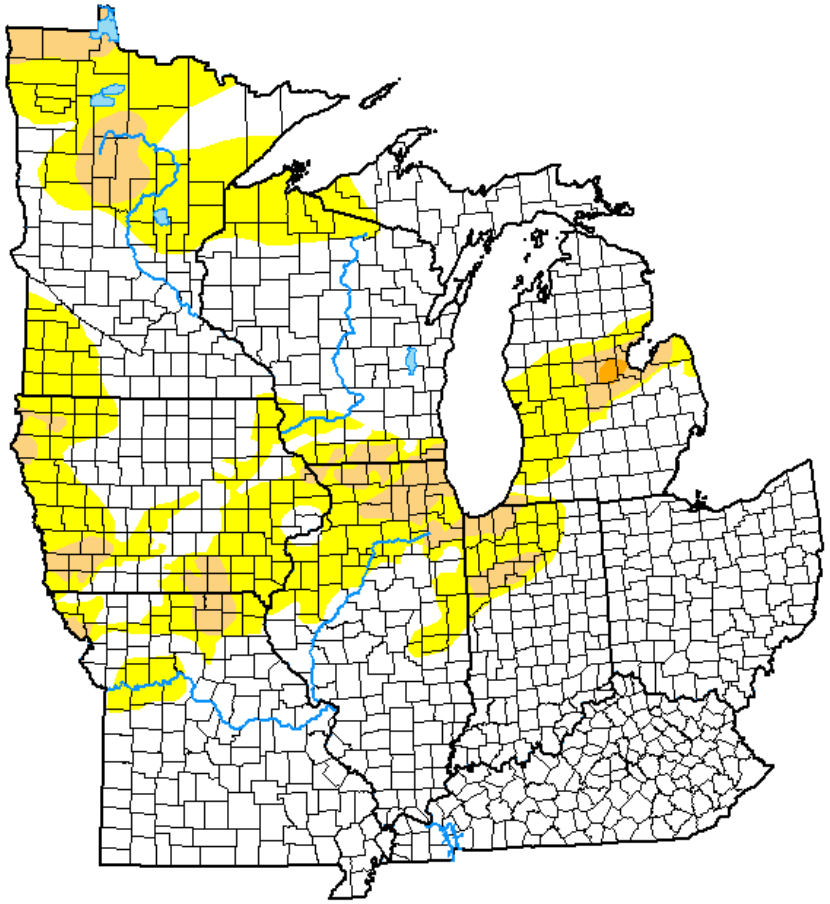
- As of June 24, 2025, there are **69 Wisconet stations** across the state. Stations highlighted in yellow were added since last week's report.

- To find data for the station nearest to you, **click this link** to go to a webpage with an interactive Wisconet station map.

- **Stations added since January 1, 2025**:
  - Taycheedah, Fond du Lac County (4/23/25)
  - Brigham, Iowa County (5/7/25)
  - Westboro, Taylor County (5/13/25)
  - Shanagolden, Ashland County (5/28/25)
  - Darlington, Lafayette County (5/29/25)
  - Grand Marsh, Adams County (6/12/25)
  - River Falls, Pierce County (6/17/25)
  - Flambeau, Price County (6/18/25)
  - Hunter, Sawyer County (6/18/25)
  - Bayfield, Bayfield County (6/19/25)

https://wisconet.wisc.edu/

US Drought Monitor



U.S. Drought Monitor

Midwest

June 24, 2025

(Released Thursday, Jun. 26, 2025)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	70.78	29.22	6.13	0.11	0.00	0.00
Last Week *06-17-2025*	67.11	32.89	7.45	0.11	0.00	0.00
3 Months Ago *03-25-2025*	34.92	65.08	33.13	3.46	0.00	0.00
Start of Calendar Year *01-07-2025*	44.12	55.88	29.47	3.56	0.00	0.00
Start of Water Year *10-01-2024*	21.78	78.22	28.15	6.40	1.46	0.66
One Year Ago *06-25-2024*	72.88	27.12	3.86	0.00	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme 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:

Curtis Riganti

National Drought Mitigation Center

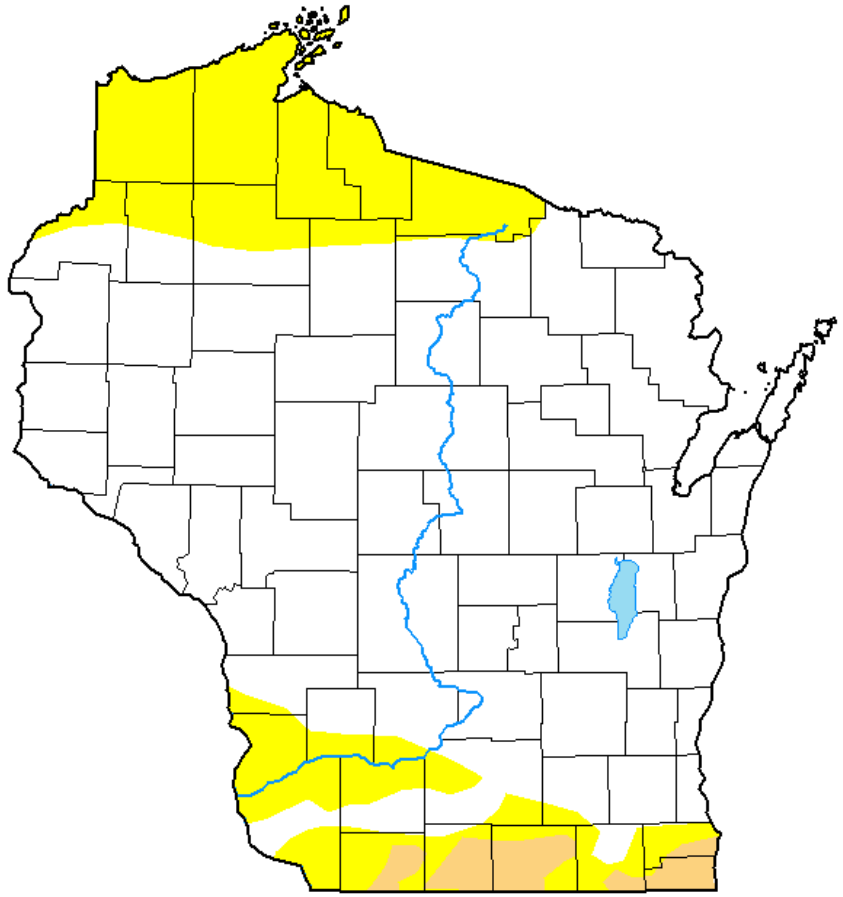
droughtmonitor.unl.edu

- Compared to last week:
  - **Decrease** in D0-D1 coverage.
- **Reduction** in D0-D1 coverage area in southwest WI following multiple inches of rainfall.
- D0 coverage **remains in place** over the northern tier of counties in WI.
- **93.9%** of the Midwest is drought free (6.1% in D1 or D2).

Note: D0 is not considered drought.

http://droughtmonitor.unl.edu/

US Drought Monitor



June 24, 2025
(Released Thursday, Jun. 26, 2025)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	76.29	23.71	2.55	0.00	0.00	0.00
Last Week 06-17-2025	74.12	25.88	4.70	0.00	0.00	0.00
3 Months Ago 03-25-2025	31.55	68.45	40.73	0.00	0.00	0.00
Start of Calendar Year 01-07-2025	36.12	63.88	39.54	0.00	0.00	0.00
Start of Water Year 10-01-2024	18.68	81.32	29.83	8.45	0.00	0.00
One Year Ago 06-25-2024	100.00	0.00	0.00	0.00	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme 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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National Drought Mitigation Center

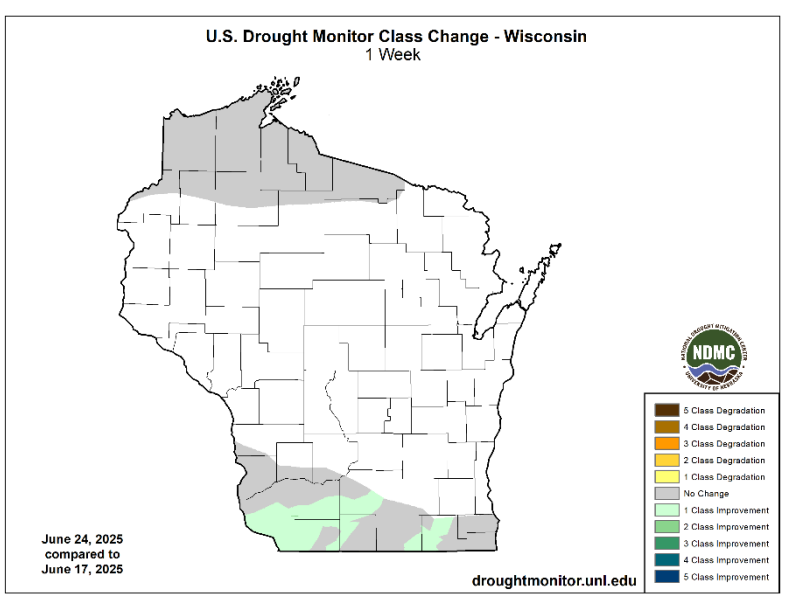
droughtmonitor.unl.edu

http://droughtmonitor.unl.edu/

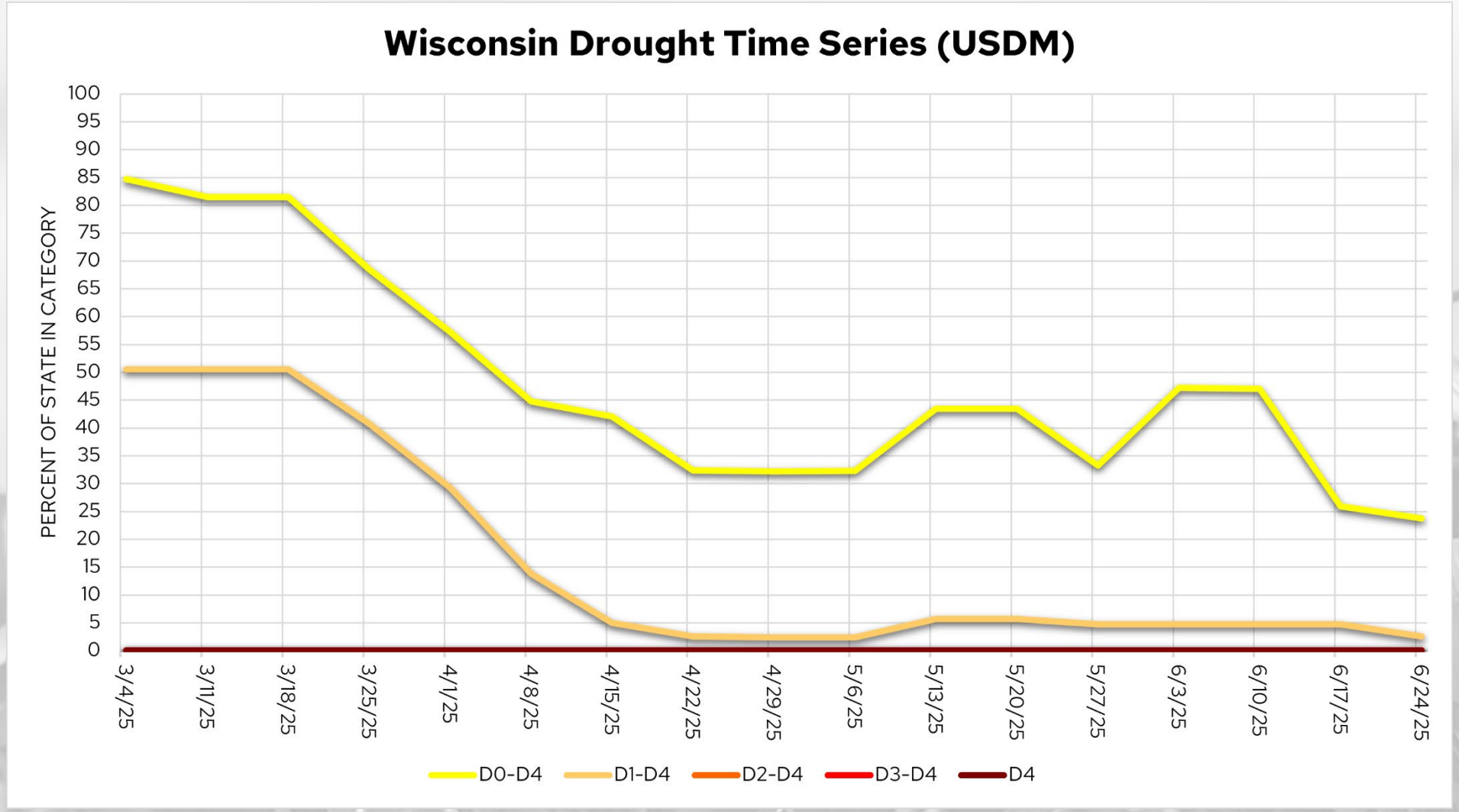
Amount of state in:

- D1-D4 – 2.6% ↓
- 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.

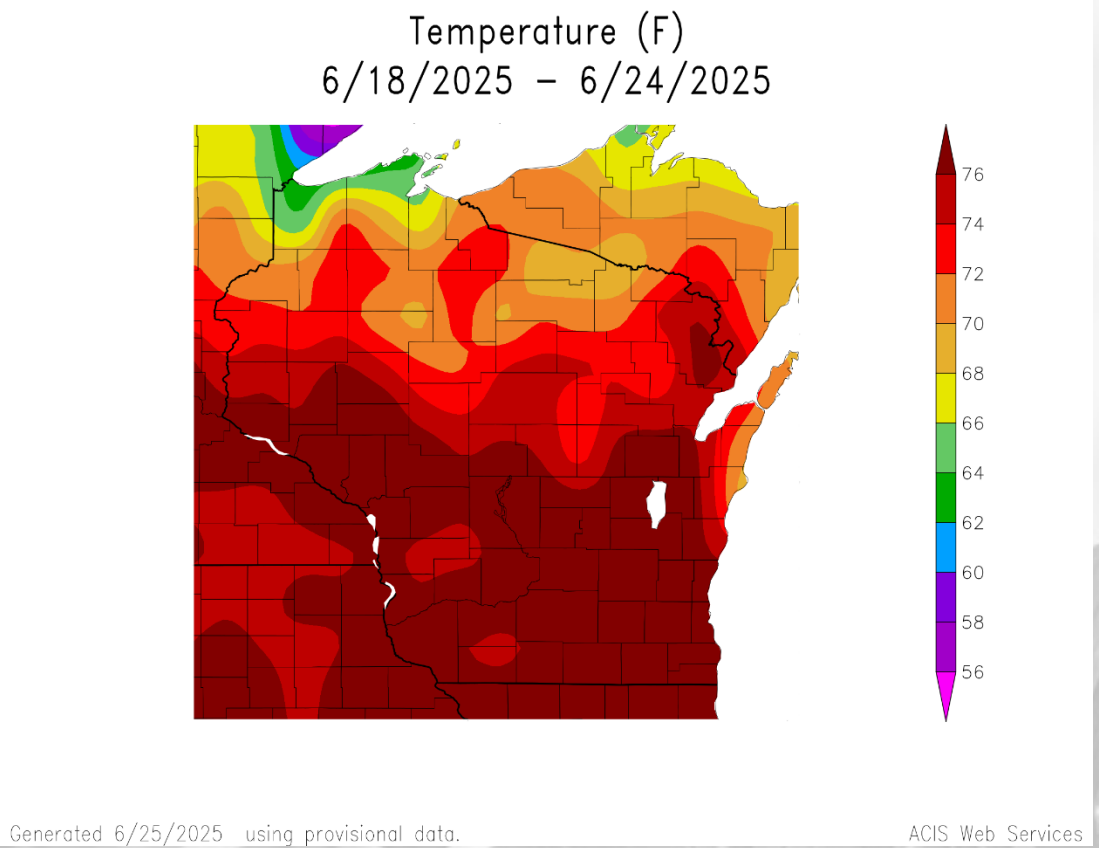


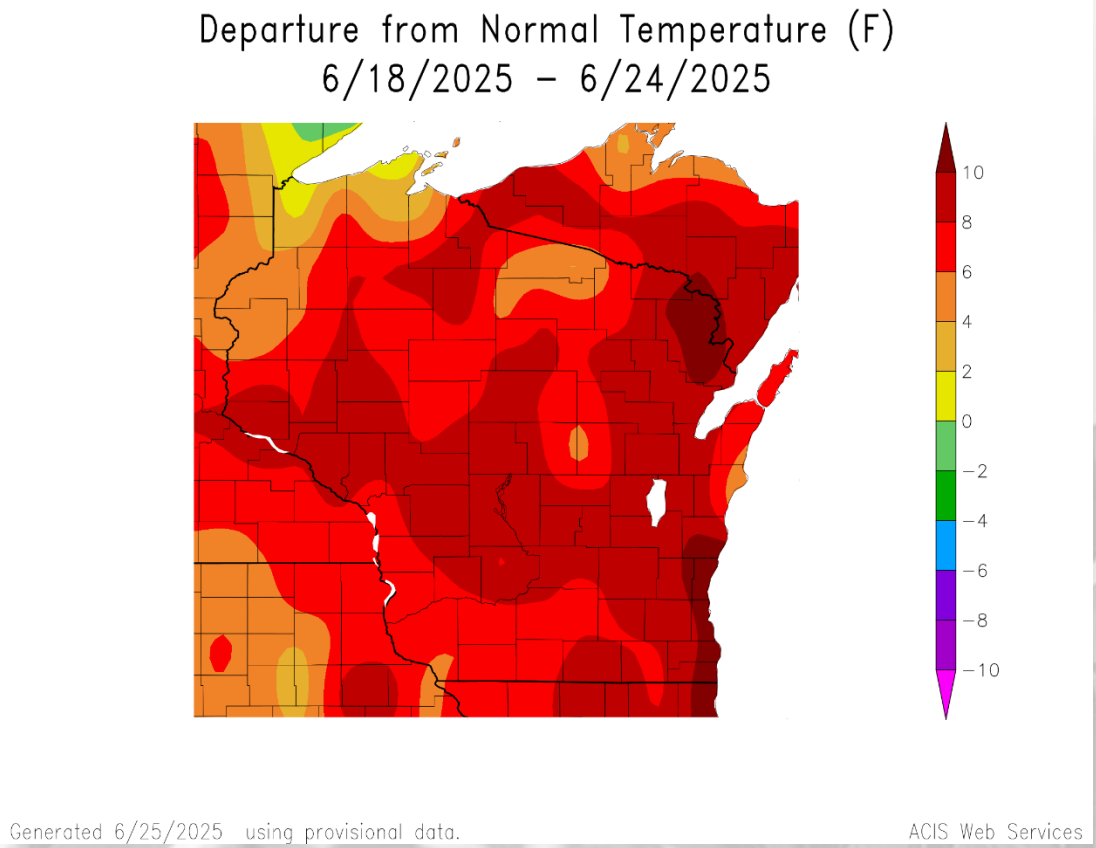
USDM Time Series



http://droughtmonitor.unl.edu/

7 Day Temperatures

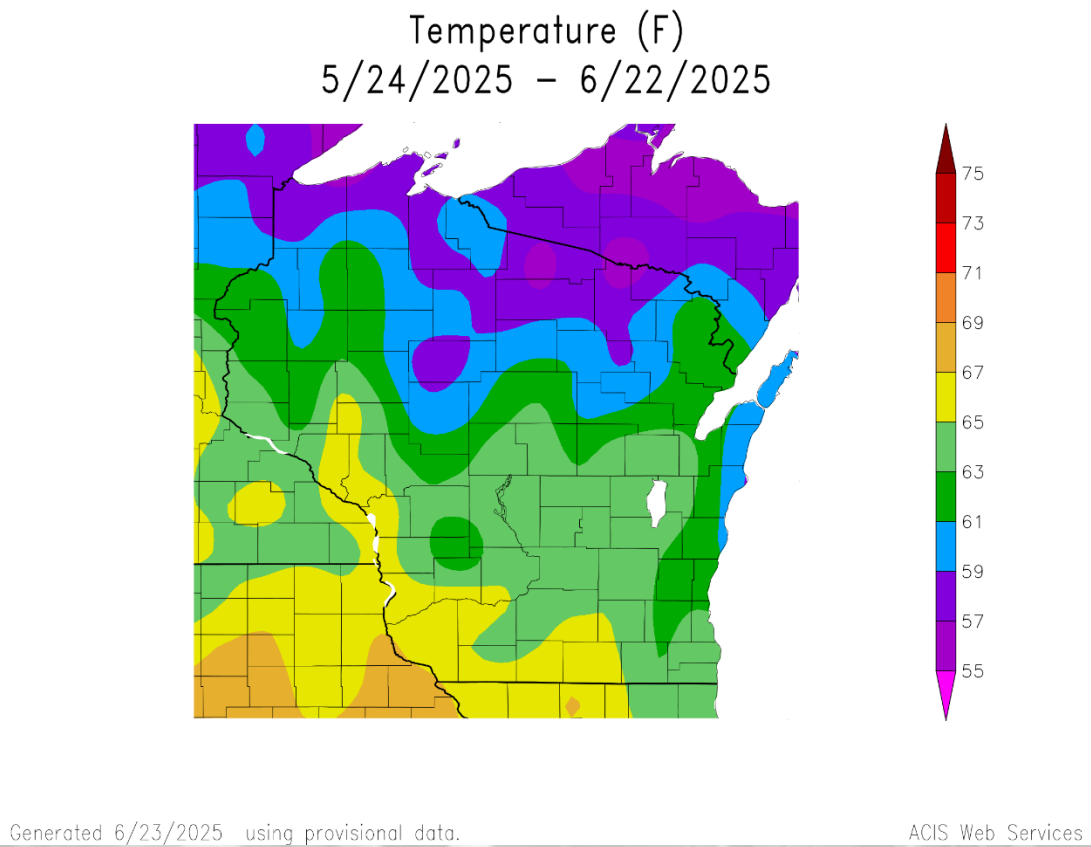


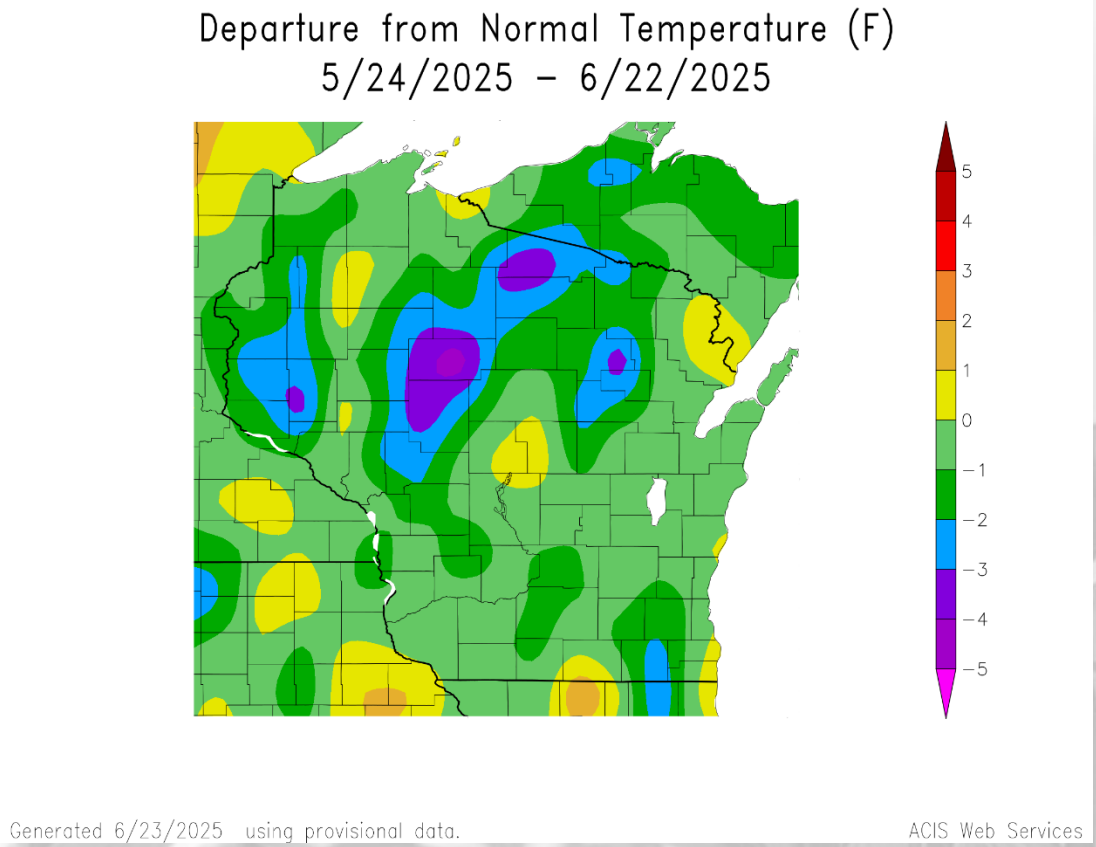


- Average temp. range of **74-76+°F** in the southern 2/3 to **62-66°F** along Lake Superior.
- **Above normal** across the entire state; **6°F or more** above normal for most resulting from an early summer heat wave.
- Daily highs **topped 90°F** on multiple days in the southern 2/3 of WI last week → **4 days** for some in the SE.

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

30 Day Temperatures

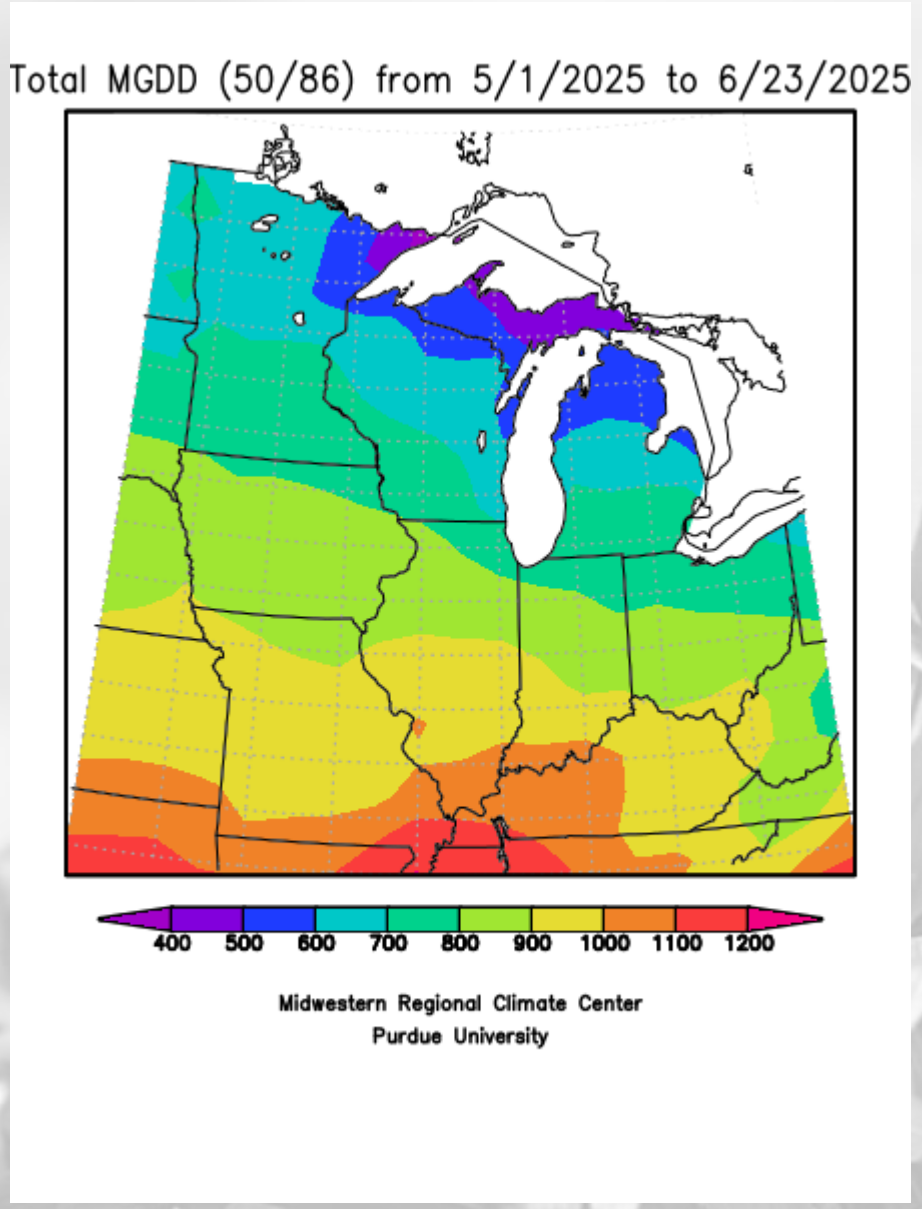


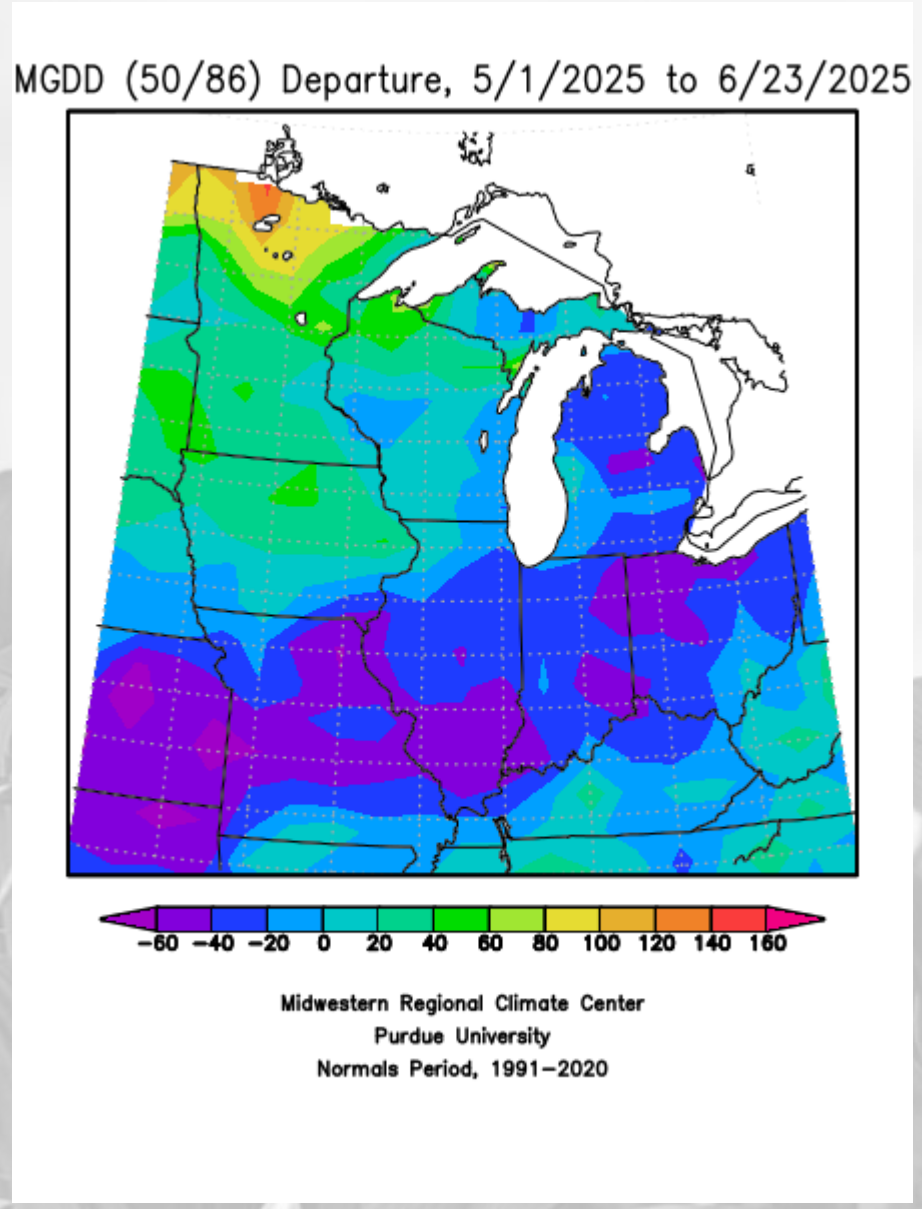


- Average temperatures for the past month ranged from **65-67°F** in the S & W to **55-59°F** in the N.
- **Within -/+1°F or normal** across most of WI, due in part to the early summer heat wave.
- **1-3°F below normal** in the NC and NW regions, with pockets of **>3°F below normal**.

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

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





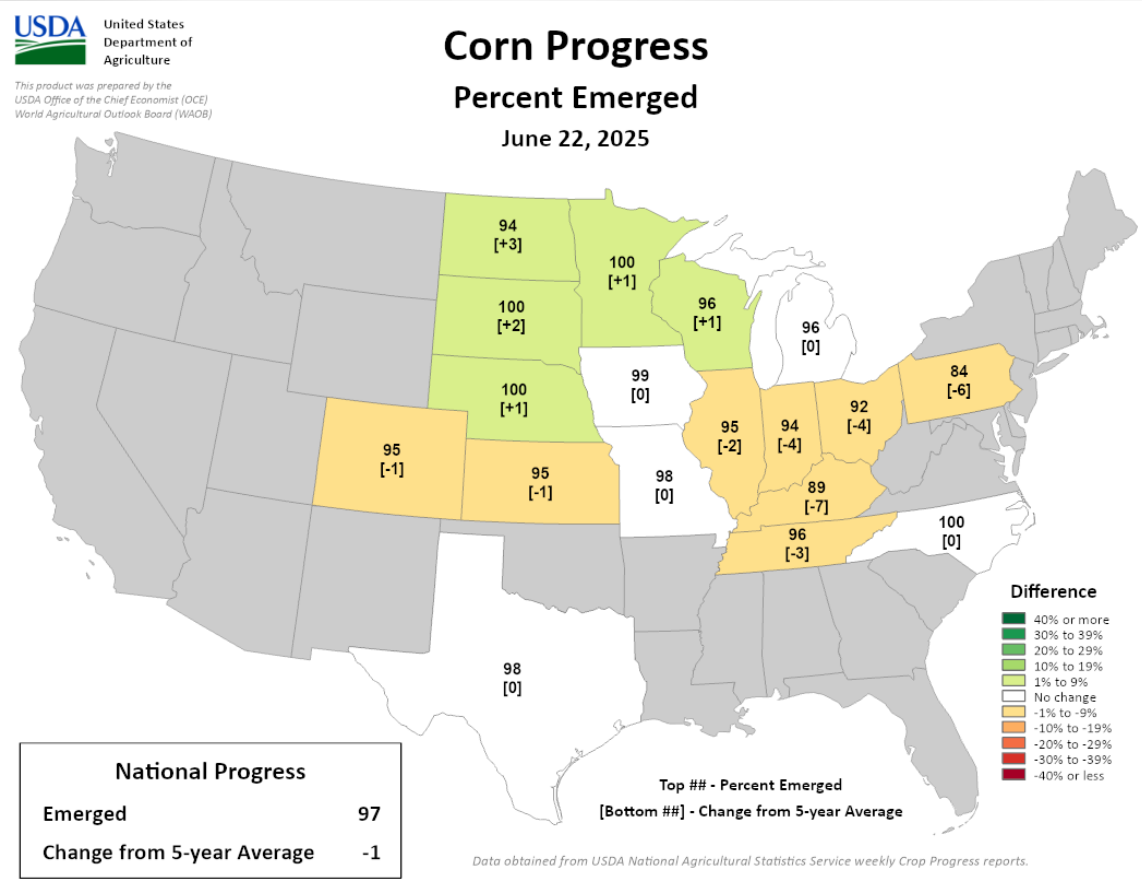
- **500-700** GDD in the N & E. **700-800** GDD in the S & W.
- GDD accumulation is **within -/+20 GDD of normal**, having made up ground due to the recent heat. **20 GDD or more ahead of schedule** in the north.

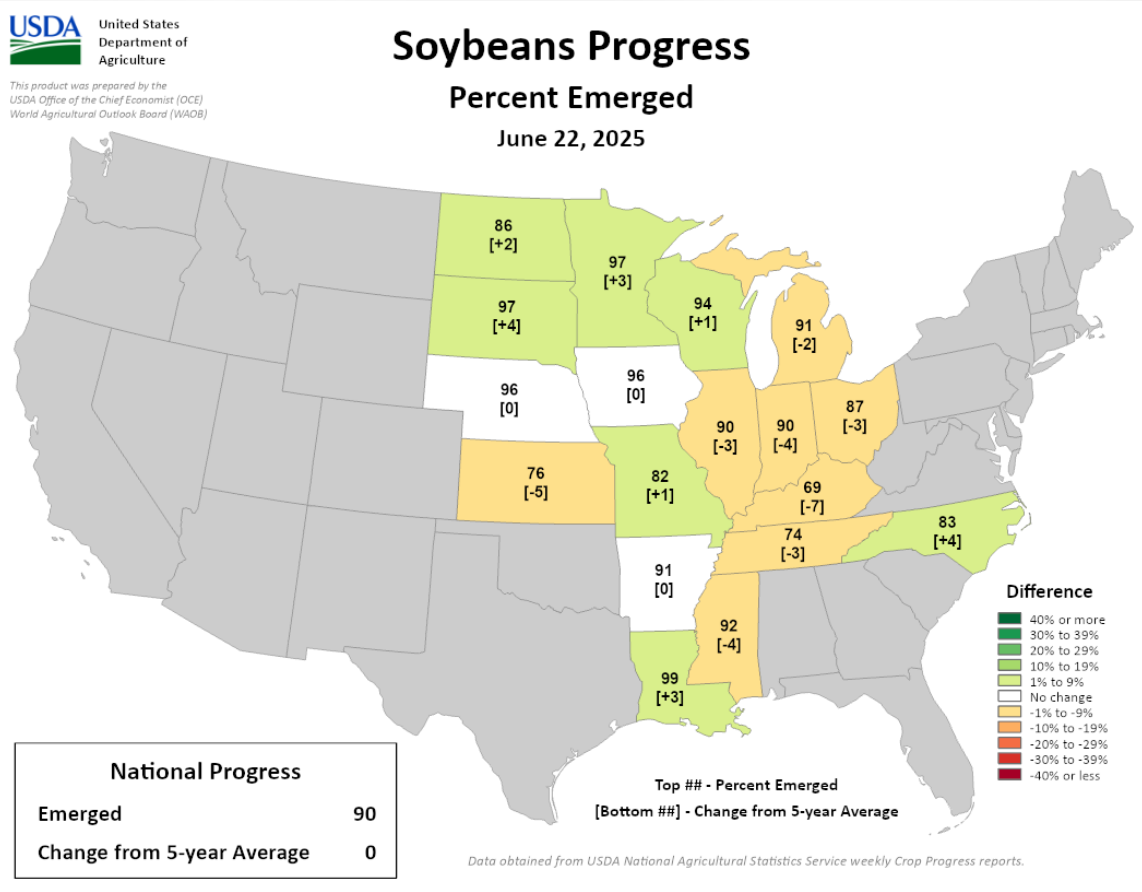
To calculate GDD for your corn variety and planting date, use this tool.

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

https://mrcc.purdue.edu/climate_watch

Corn & Soybean Progress

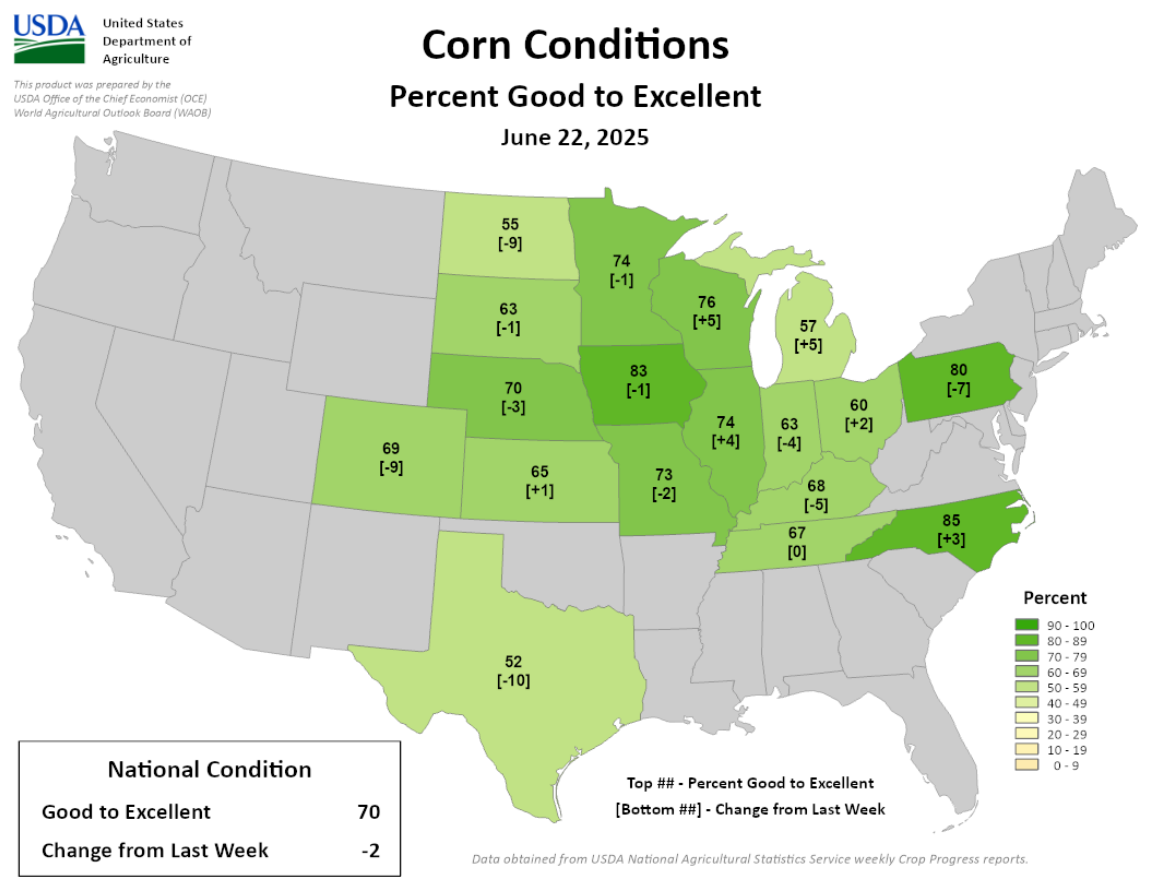


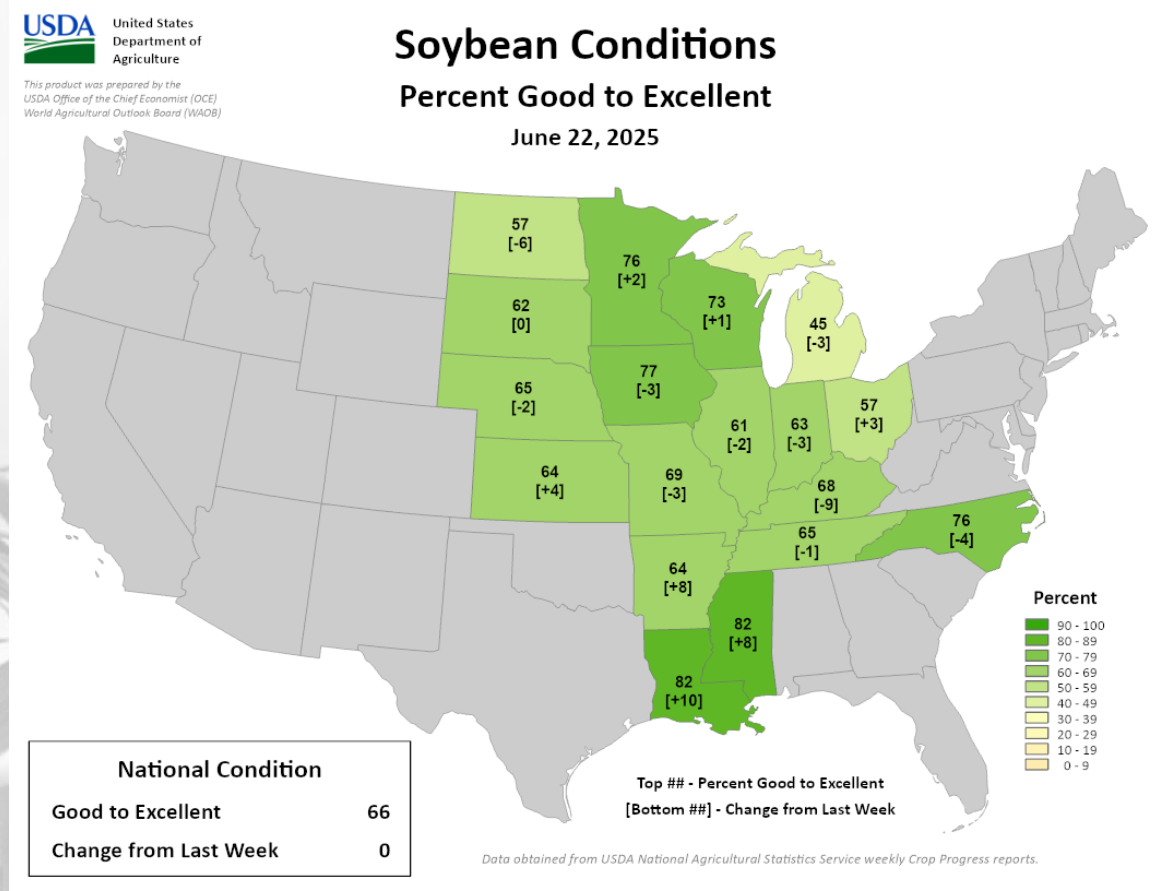


- Corn and soybeans are both nearing emergence completion **(~95% complete)**.
- Soybean blooming is being reported in Wisconsin **(3% complete)**, which is normal for late June.
- Corn silking is being reported to the south in Iowa and Illinois.

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

Corn & Soybean Condition





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

Crop Progress Report

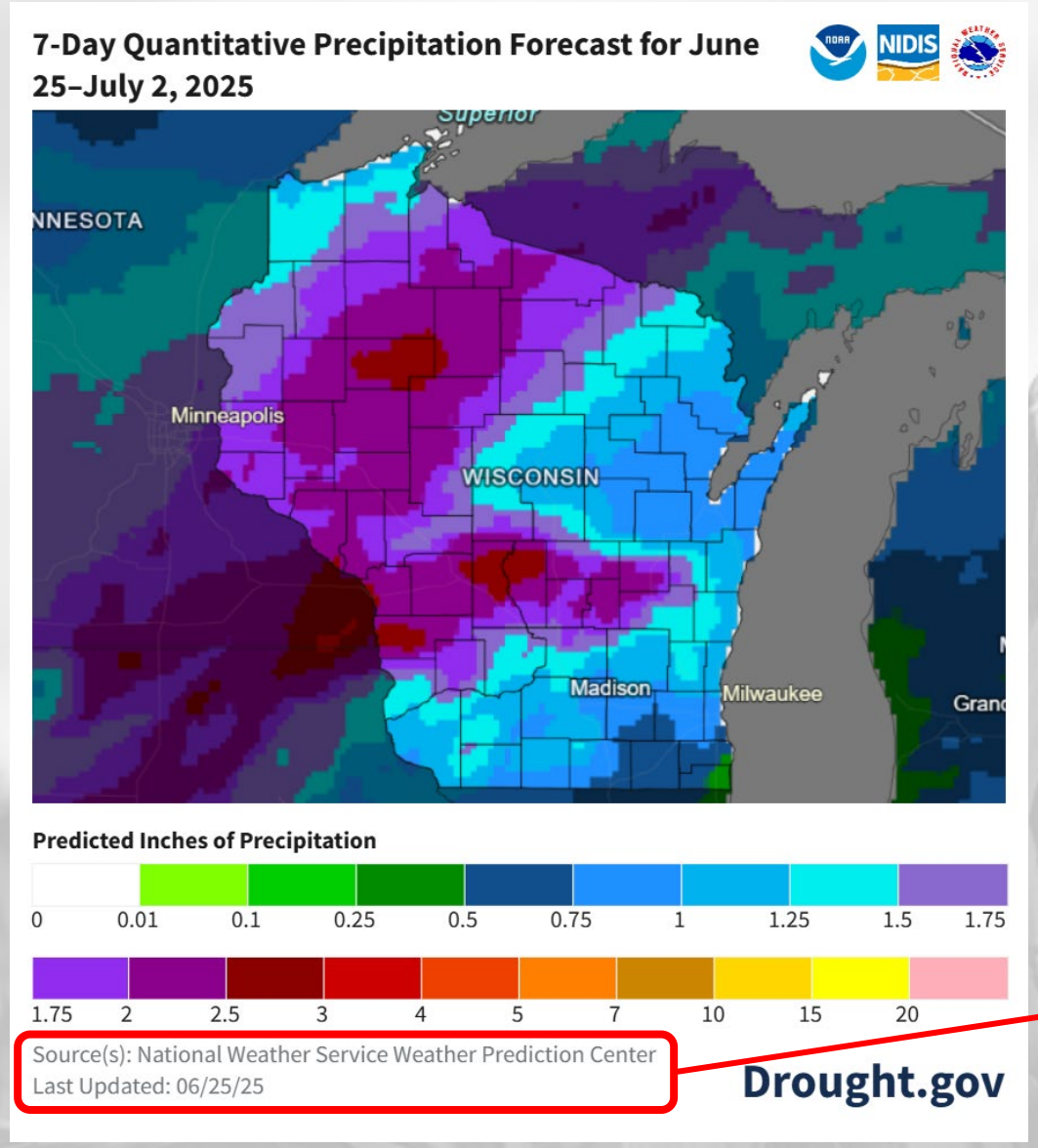
Crop progress report for Wisconsin for the week ending on June 22nd

- Corn emergence is **96%** complete, **1 day ahead of** the 5-year average pace.
  - Condition was rated **76%** good to excellent.
- Soybean emergence is **94%** complete, **1 day ahead of** the 5-year average pace.
  - Condition was rated **73%** good to excellent.
  - Reports of soybeans blooming were received in **limited areas**.
- Winter wheat is **91%** headed and is rated **75%** good to excellent.
- The first cutting of alfalfa hay was **90%** complete, with the second cutting at **10%** complete.
- Pasture and range conditions are rated **73%** good to excellent (**down 1%** from last week).
- Oats are **96%** emerged and **47%** headed.

In the news: https://www.brownfieldagnews.com/news/weather-systems-are-not-bringing-rain-to-everyone/
Full report: https://www.nass.usda.gov/Statistics_by_State/Wisconsin/Publications/Crop_Progress_&_Condition/2025/WI-Crop-Progress-06-23-25.pdf

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

7 Day Precip Forecast

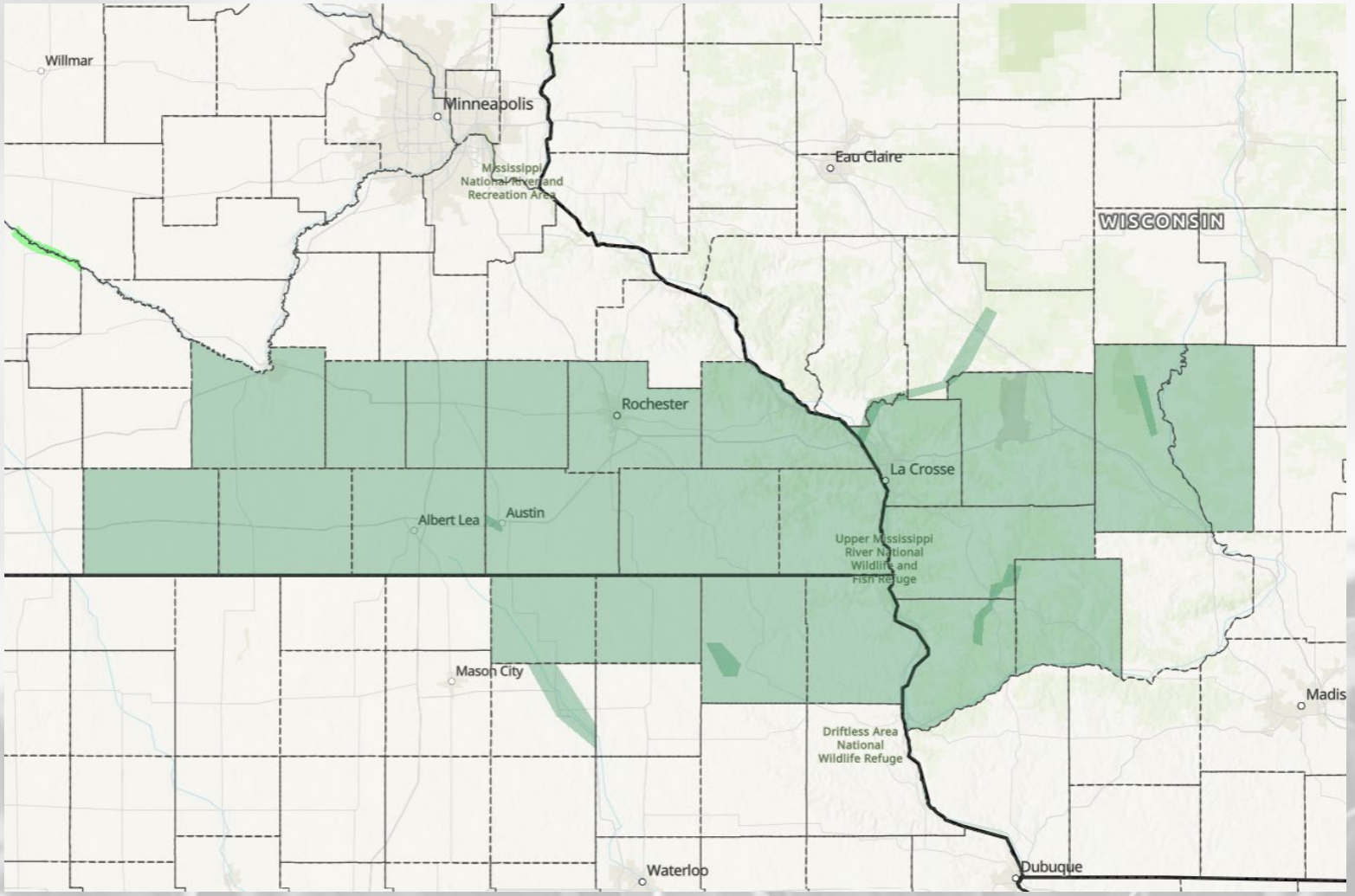


- **Multiple rounds** of rain are expected to impact WI over the next 7 days.
  - When? → Thursday, Saturday, and Sunday are the most likely days for rain.
  - Where? → highest chances in the **west-central and northwest counties**.
  - Check your local forecast for details on totals and timing.

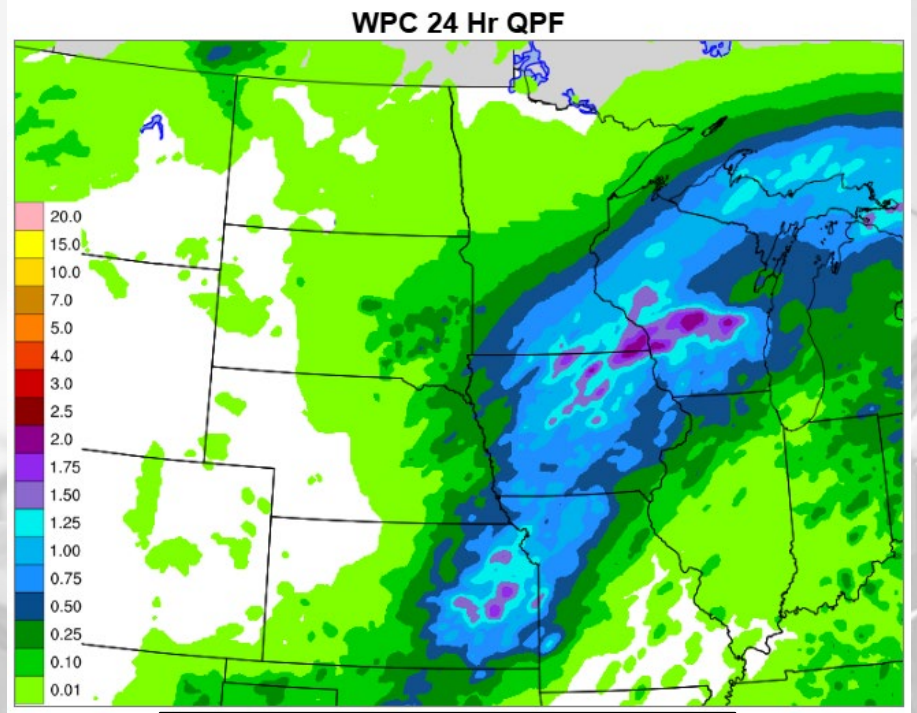
Forecast for 6/26/25 thru 7/3/25
(Begins at 7am CDT)

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

Flood Watch



Flood Watch in effect from NOON CDT (June 26) through LATE TONIGHT
(Counties in green)

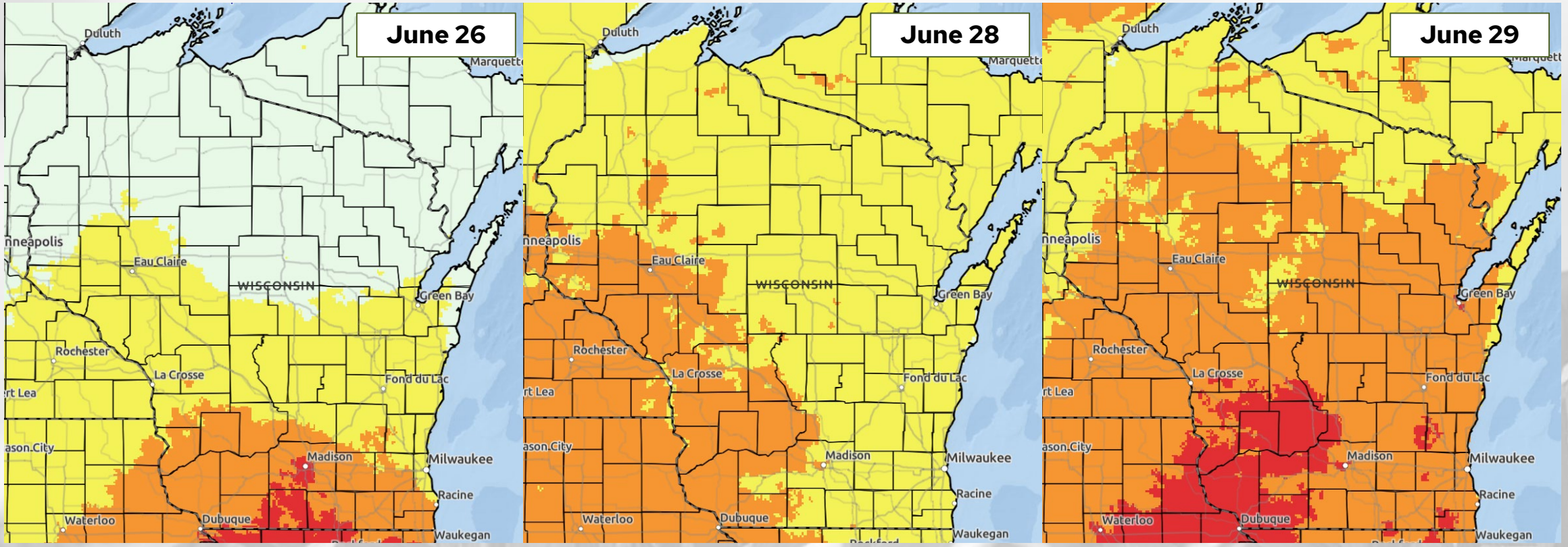


QPF Time Frame: June 26-27
(7am to 7am CDT)

https://www.wpc.ncep.noaa.gov/
https://water.noaa.gov/

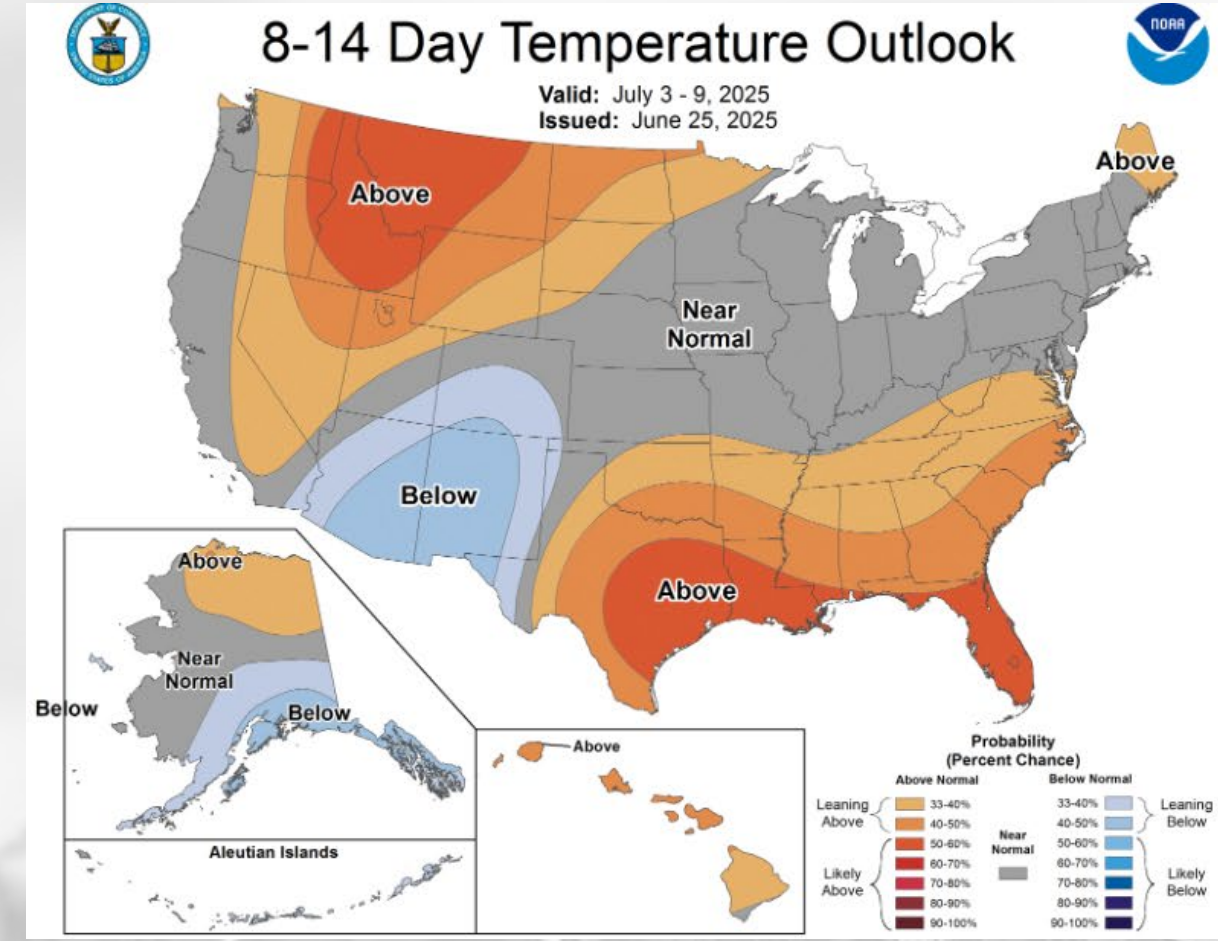
Heat Risk

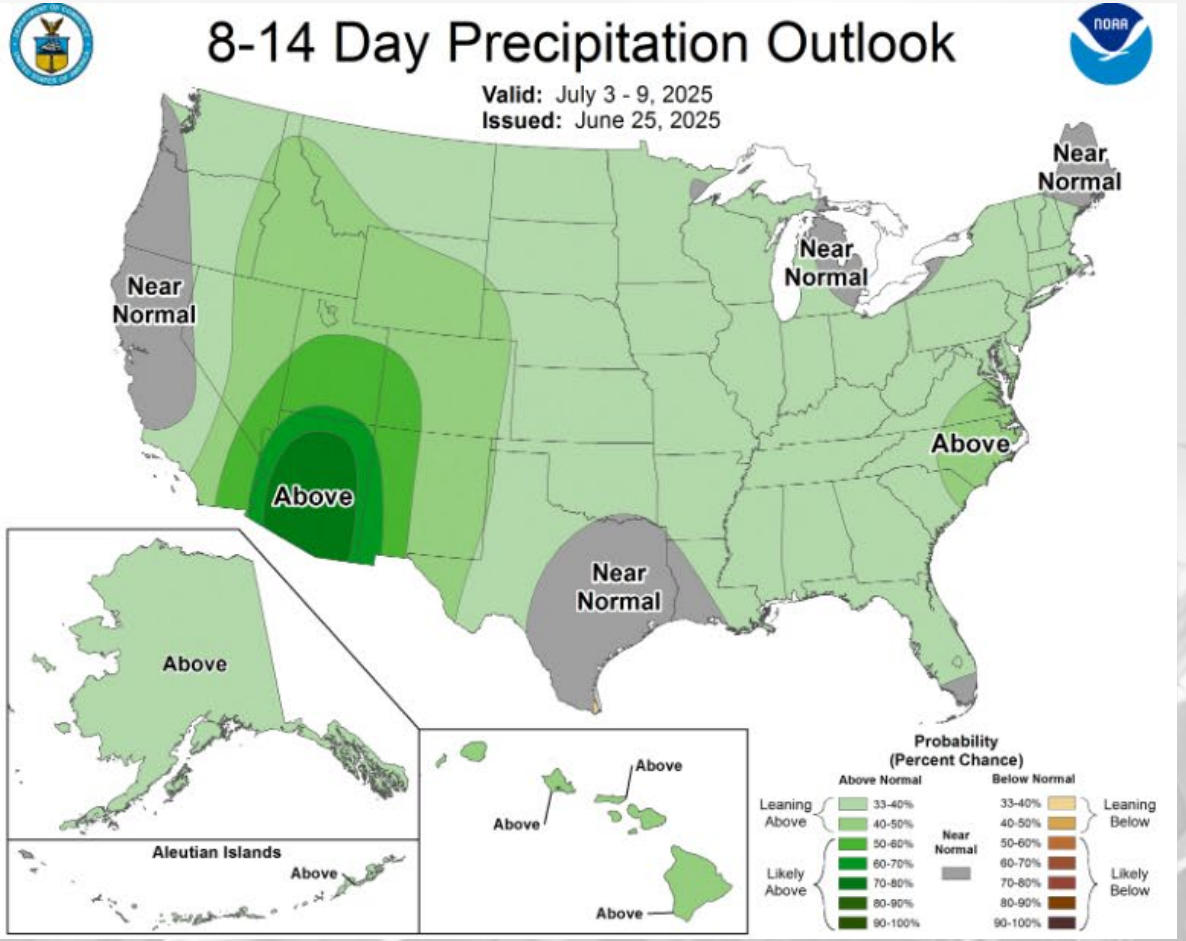
https://www.wpc.ncep.noaa.gov/heatrisk/



Little to no risk from expected heat.	**Minor** - This level of heat affects primarily those individuals extremely sensitive to heat, especially when outdoors without effective cooling and/or adequate hydration.	**Moderate** - This level of heat affects most individuals sensitive to heat, especially those without effective cooling and/or adequate hydration. Impacts possible in some health systems and in heat-sensitive industries.	**Major** - This level of heat affects anyone without effective cooling and/or adequate hydration. Impacts likely in some health systems, heat-sensitive industries and infrastructure.	**Extreme** - This level of rare and/or long-duration extreme heat with little to no overnight relief affects anyone without effective cooling and/or adequate hydration. Impacts likely in most health systems, heat-sensitive industries and infrastructure.

8-14 Day Temp & Precip Outlook

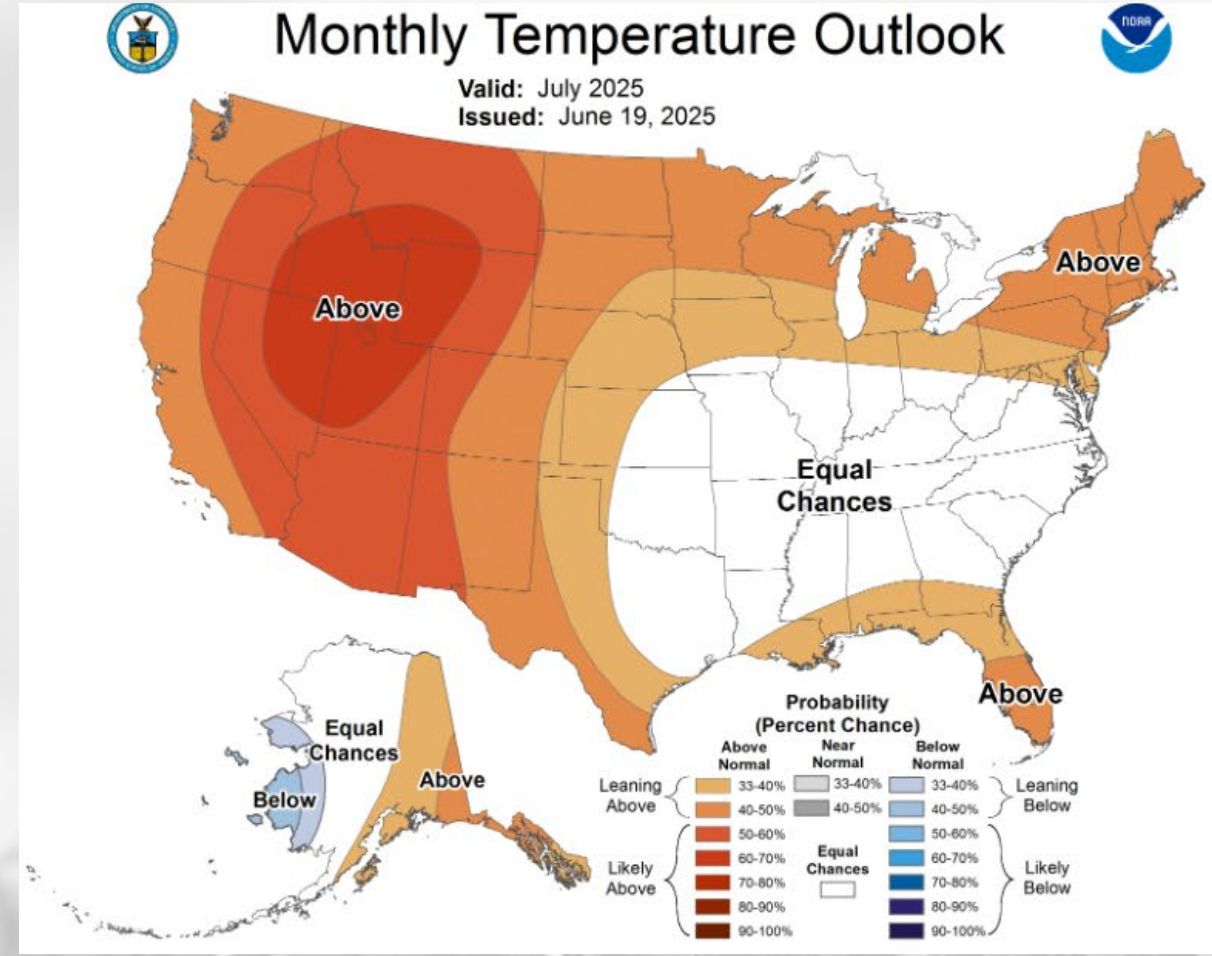


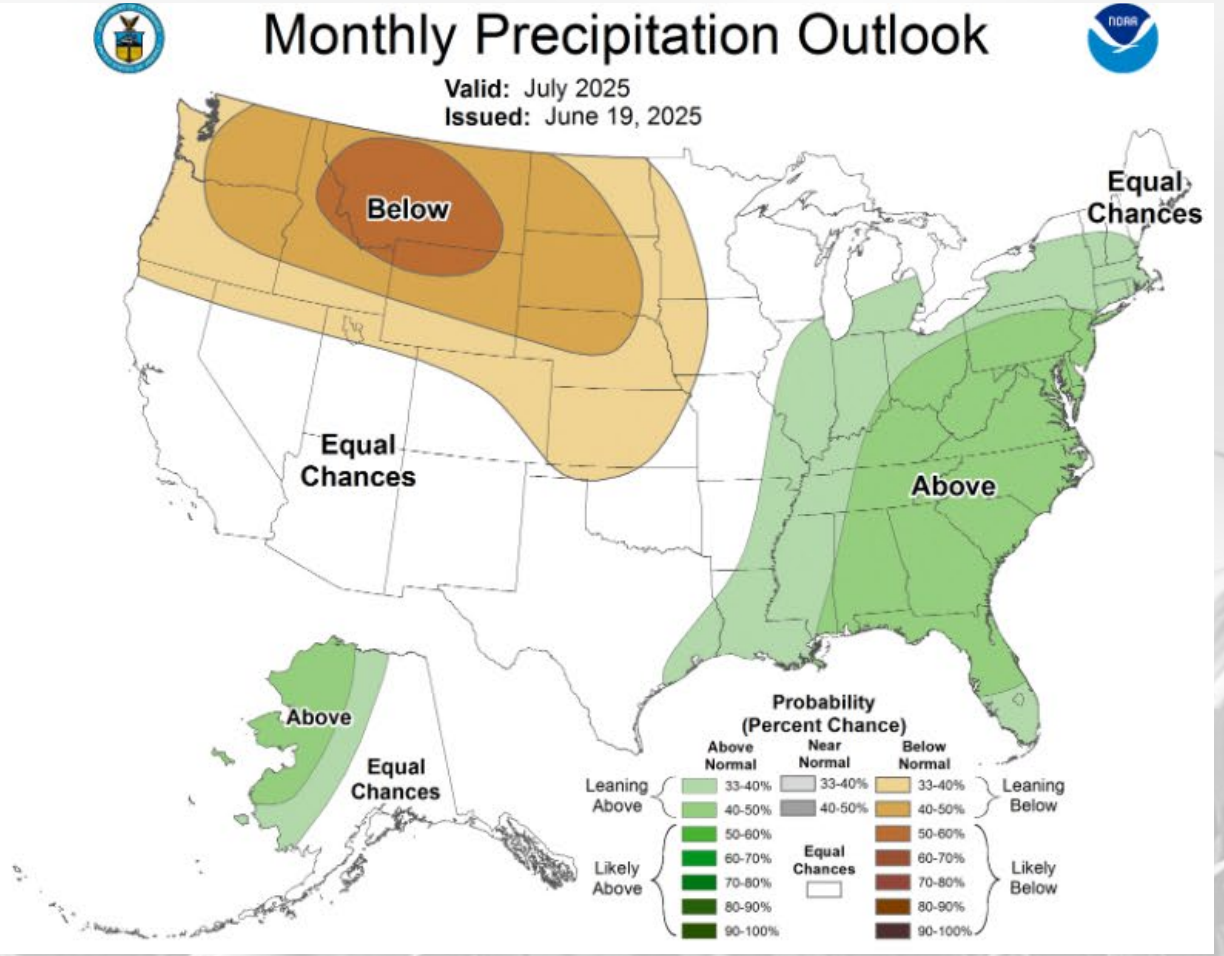


Early July: Temperatures are leaning towards near normal, with precipitation leaning towards above normal statewide.

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

30 Day Temp & Precip Outlook

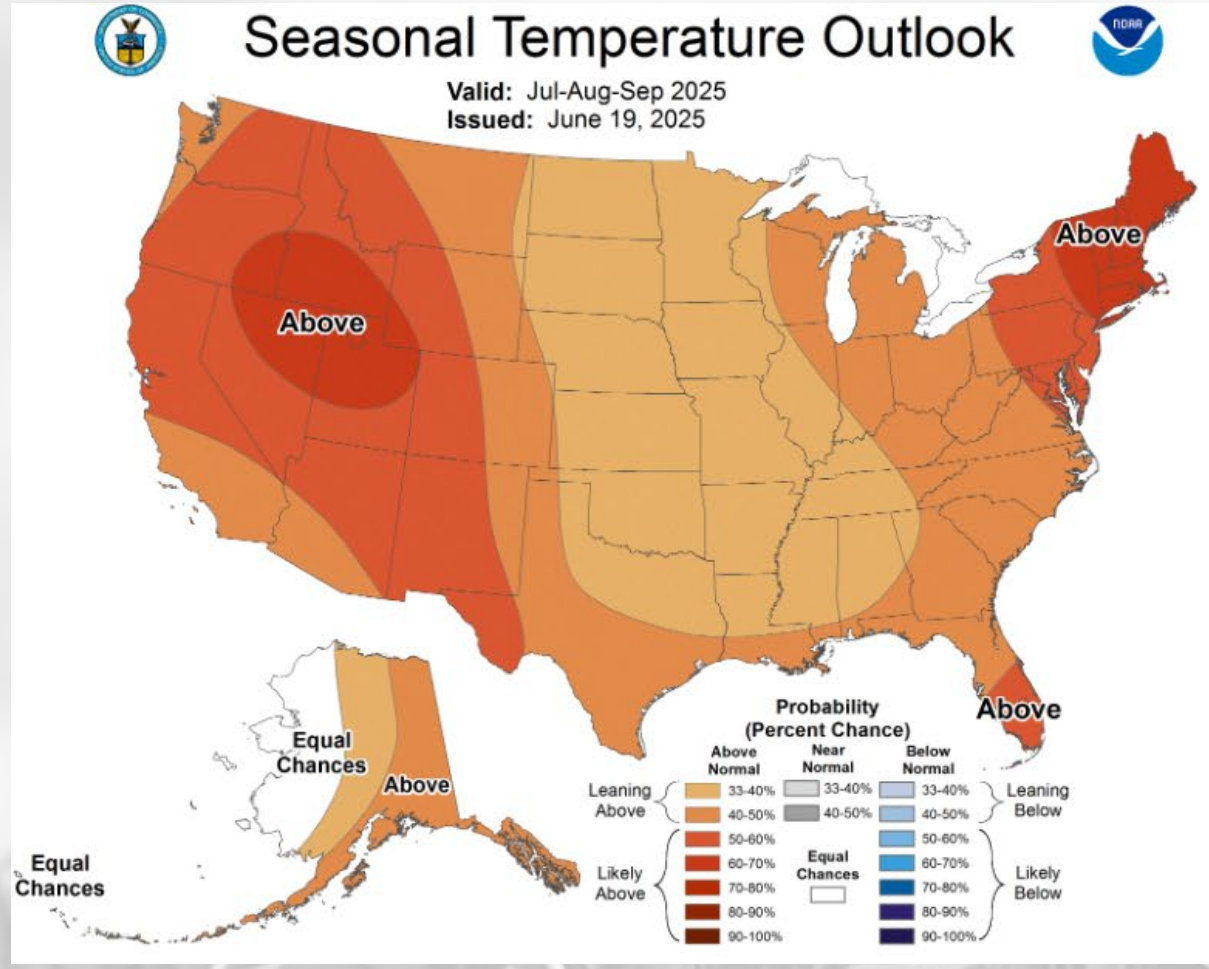


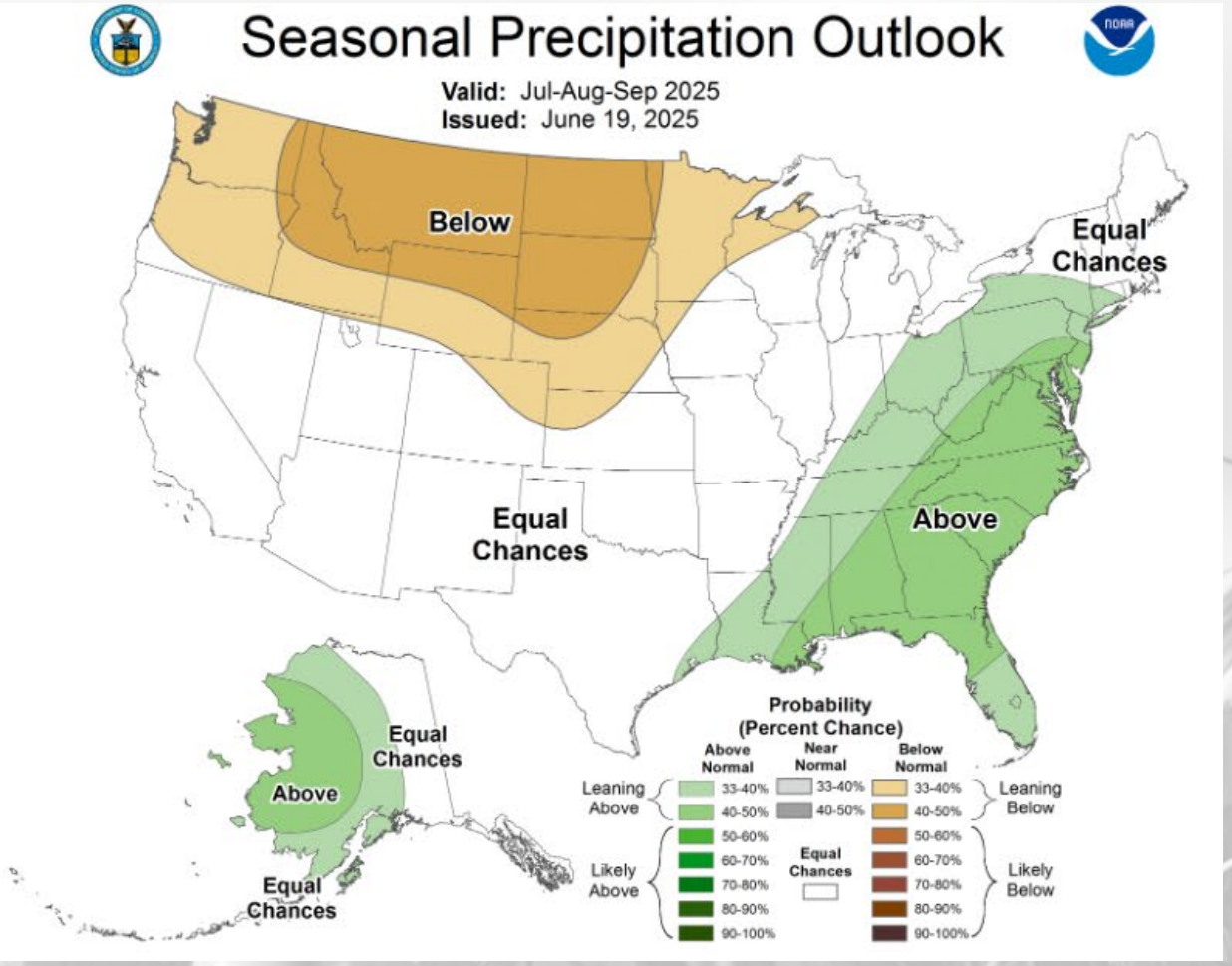


Month of July: Temperatures leaning towards being above normal, more strongly in the north. There is uncertainty for precip with equal chances for above, near, and below normal.

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

90 Day Temp & Precip Outlook





Summer into Early Fall: Temperature chances lean toward above normal, with uncertainty (equal chances) for precipitation except for the NW & far NC (below normal lean).

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

Take-Home Points

Current Conditions

- Multiple days of precipitation impacted the state last week, bringing **2-4" for the southwest and south-central**. There were **pockets of 4" or more** in this region as well. Totals were **lower to the north** (0.5"-1" common).
- An early summer heat wave brought **multiple days with highs over 90°F** and **above-normal average temps statewide**. This has helped bring GDD accumulation (since May 1) to near normal across most of WI.

Impact

- Soil moisture conditions **are near normal for most of WI**. Abnormal wetness is in place across the north, and there are localized areas of abnormal dryness in the south despite the rains on Monday. Wisconet research farm stations show **lower topsoil moisture** compared to May 1st levels as well as one year ago.
- The heavier rainfall in the south led to a reduction in **D1 drought coverage**, with just over 2.5% coverage in WI now.
- Corn and soybean emergence are **nearing completion**, with development running at a pace **near to the 5-year normal** for both crops. Crop condition for corn, soybeans, and wheat **improved from last week**, with localized reports of soybeans blooming (Source: NASS).

Outlook

- A **flood watch** is in place for **another round of substantial rain** in the SW counties on 6/27, with **more rain forecasted through Sunday**.
- Early July climate probabilities are showing a **lean towards near-normal temperatures and above-normal precip** statewide. Be aware of a **moderate to major level of heat risk** heading into the weekend.
- The outlook for July indicates a lean towards **warmer than normal** with **precip uncertainty** (*outlook updated on 6/19*).

Agronomic Considerations

Field Work and Conditions

- Avoid trafficking fields in moist conditions to prevent compaction.
- See these considerations for early season corn management.
- Crop growth rebounded this week with warm temperatures and a gain of GDD this past weekend.
- Corn is reaching the growth stage appropriate for taking presidedress soil nitrate tests (PSNT).

Manure Applications

- Reminder of Wisconsin's NR 151 Runoff Rules with the timing of manure spreading and current runoff levels. Check DATCP Runoff Risk Advisory Forecast.

Pest Management

- Scout fields to note which weed species are emerging and/or which species escaped herbicide application.
- As corn and soybean crops grow, note growth stages to time future applications and sampling.
- While slug issues have not been as severe this year, UW is monitoring populations weekly across the state with SlugNet. Slug pressure will decrease with increasing temperatures and crop maturity.
- Check moth trap catches in your region with the DATCP Pest Survey. Sign up for insect pest alerts specific to your region.
- Routine scouting in corn to watch for: true armyworm, stalk borer, and European corn borer.
- Alfalfa weevil populations are coming to an end. Potato leafhopper numbers are increasing; keep an eye on populations the next several weeks.
- Use the VDIFN model to see risk in your region for several economically important pests.
- Scout for tar spot as it has been reported in 5 states close to Wisconsin.

Forage Management

- Alfalfa stands are at or nearing second harvest in Southern Wisconsin. Scout for potato leafhopper.
- Consider annual forage options depending on your situation and forage goals.

Small Grains

- Scout for stripe rust and any signs of disease with recent cool and wet weather. Cephalosporium stripe is showing up in Wisconsin.
- Fusarium Head Blight risk is increasing across the northern part of state. Consider spraying fungicide, especially to susceptible varieties if your wheat has yet to reach Feekes 10.5.1. Scab alerts and risk forecast can be found here.

Fruit Considerations

Apples

- Apple and grape growers can reference the NEWA weather station network to monitor for disease infection periods in their area. Check out your nearest weather station: NEWA Weather Station Network (Cornell).
- Apple scab fruit lesions have been observed in Southern WI, likely pushed along by recent rains. Continue scouting scab susceptible varieties. A reminder that protectants will typically wash off after ~1inch of rain.
- Apple growers should continue monitoring degree-day (base 50°F) accumulation for Codling moth. First generation larvae will emerge after ~250 degree-days (base 50°F) have accumulated from the biofix date. Second generation larvae will typically emerge at ~1250 degree-days (base 50°F) from the biofix date.
- Apple growers should keep track of degree-day (base 50°F) accumulation from petal fall to determine the end of plum curculio movement into the orchard. Plum curculio will typically cease movement into the orchard after ~308 degree-days (base 50°F) have accumulated from the petal fall date.

Grapes

- Recent rain events have driven infection periods for grape diseases. Check out this article that overviews signs/symptoms of phomopsis, black rot, downy mildew and powdery mildew: Grape Scouting Report, June 2021 (UW Fruit News).

Berries

- Strawberry growers have reported signs of spittlebugs, which typically cause little damage unless large populations are present (~1/plant).
  - Wisconsin fruit growers can reference the Midwest Fruit Pest Management Guide for a list of registered products and recommended best practices. View the MFPMG Online or order a hard copy here: MFPMG Hard Copy.

Vegetable considerations can be found on the next slide -->

Vegetable Considerations

Pests

- Squash vine borer is now in southern WI and will move into central and northern portions of the state over the next week. Monitor for activity of these orange and black moths. Row covers can be used to exclude adults early in the season but must be removed for flowering. If you use insecticides, the timing of treatment is key. Treatment must occur before eggs hatch and larva enter stems where they are well protected. More information on organic control methods can be found here.
- Scout for cabbage loopers, diamondback moths, and imported cabbage worms as risk is now high across most of the state.
- Continue monitoring for aster leafhoppers. Aster leafhoppers transmit aster yellows to a wide variety of crops including carrots, lettuce, celery, garlic, and many types of flowers. The best way to control aster yellows is by controlling the leafhoppers. Once plants are infected, they will not recover and must be removed to reduce the spread of this disease. Use the aster yellows index (page 19) in the Commercial Vegetable Production guide to help determine when to spray. You can also sign up for text alerts from Michigan State University on infectivity rates from their trapping network. Reports out of Michigan indicate elevated infectivity levels so far this year.
- Potato leafhopper, a pest of snap beans and potatoes, continue to increase in population size.

Diseases

- The recent hot and wet weather are prime conditions for many diseases to develop:
    - Black rot of brassicas prefers temps over 77°F and high humidity. The bacteria is easily spread by water and enters the leave either through natural openings along the leaf edge or through injuries caused by insects or equipment.
    - Early detection of alternaria leaf blight of cucurbits will help you control this disease before major damage occurs. Symptoms start as small, water-soaked lesions that can develop concentric rings. The fungus can survive on plant debris for up to two years so be sure to remove and destroy any infected plant tissue at the end of the season.
    - Alternaria leaf blight can sometimes be confused with anthracnose and angular leaf spot which thrive in similar conditions. Angular leaf spot can be distinguished by angular lesions often confined by veins and the whitish liquid that forms on the underside of leaves when wet and forms a crust when dry. The most distinguishing symptom of Anthracnose is the dark, sunken lesions on fruit that have salmon-colored spores under damp conditions.
    - Early blight risk is high in southern and central WI and moderate in the north. Early blight infects tomatoes, potatoes, eggplants, and peppers. Prevention is key and includes limiting periods of leaf wetness (when possible!) and increasing air flow through pruning.
- Downy mildew spores were detected in air samples in 5 counties in Michigan and SE Michigan has a **confirmed case** on cucumbers. Spores are detected a few days to a few weeks before symptoms are seen. Keep an eye on cucumbers and melons. Find management information here.
- While removing garlic scapes, be on the lookout for symptoms of fusarium basal rot, botrytis neck rot, white rot, and stem and bulb nematodes. This chart from the Ontario Vegetable report can help distinguish between symptoms.

User Survey

Are you a regular user of the Ag Weather Outlook for Wisconsin (AgWOW)? 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-weather data needs through AgWOW.

If you have any trouble accessing or filling out the survey, please email Josh Bendorf at jbendorf@wisc.edu.

Thank you!!
-The AgWOW 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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