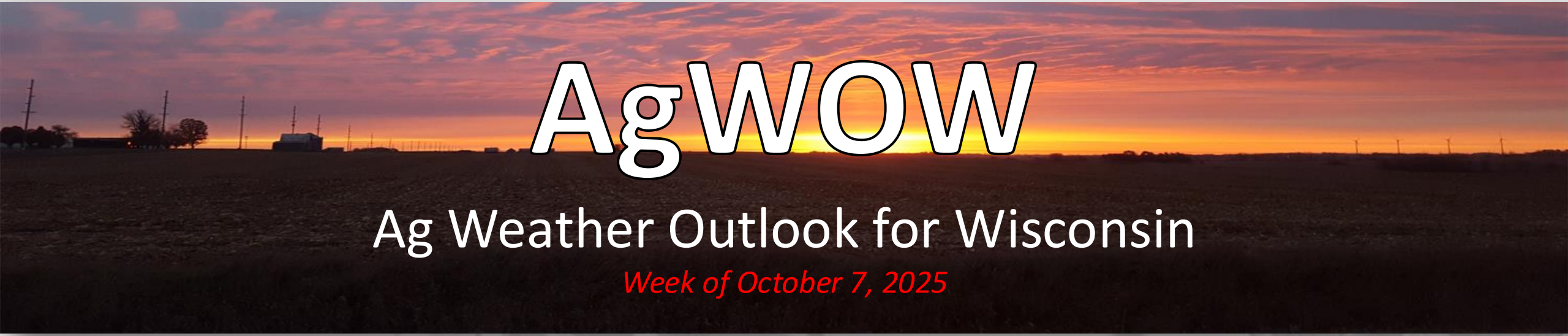
Wisconsin State Climatology Office
Nelson Institute for Environmental Studies

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 October 7, 2025

Josh Bendorf
Climate Outreach Specialist
Wisconsin State Climatology Office
jbendorf@wisc.edu

Bridgette Mason
Assistant State Climatologist
Wisconsin State Climatology Office
bmmason2@wisc.edu

Steve Vavrus
State Climatologist
Wisconsin State Climatology Office
sjvavrus@wisc.edu

Anastasia Kurth
Regional Crops & Soils Educator
Sauk, Juneau, and Richland Counties
UW-Madison Division of Extension
anastasia.kurth@wisc.edu

Emilee Gaulke
Diversified Vegetable Educator
Waukesha County
UW-Madison Division of Extension
emilee.gaulke@wisc.edu

Derrick Raspor
GLRI Field Coordinator
Wisconsin USDA-NRCS
derrick.raspor@usda.gov

Key Points

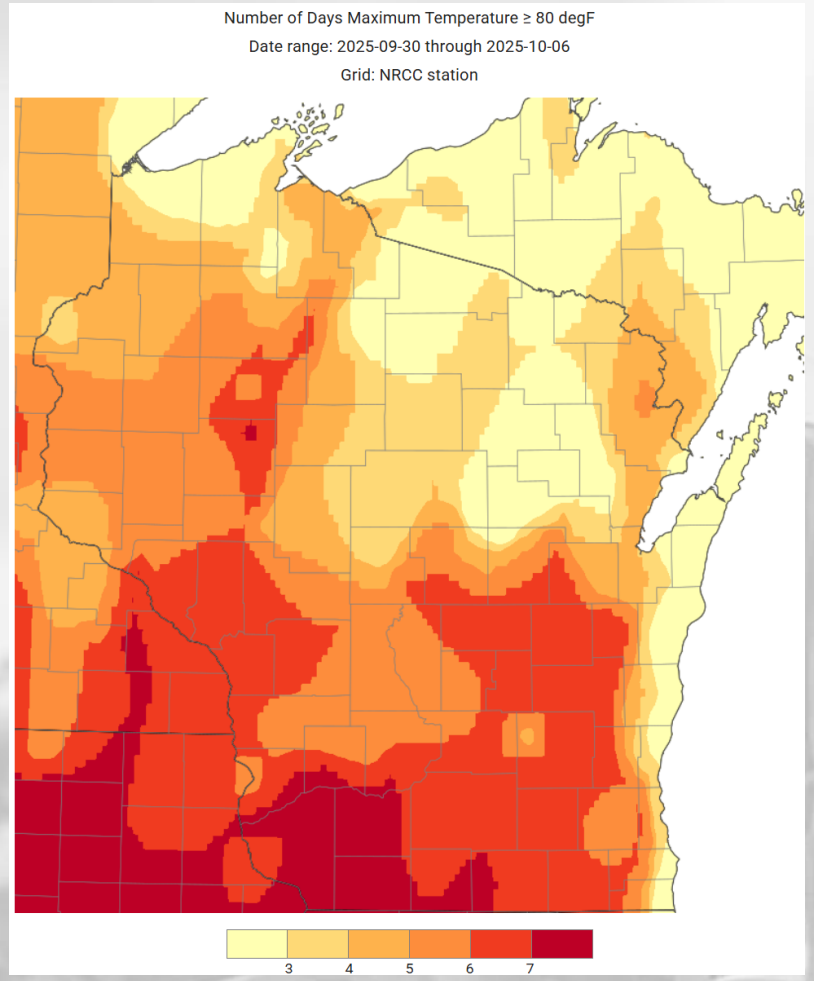
Navigate to select slides by clicking on the links below.

1) Summertime conditions remained in place with temps well above normal.
2) Most received a half inch or less of rain last week, adding to what has been a very dry last 30 days.
3) D1 drought is now showing up in the NW, with large increases in D0 coverage.
4) Outlooks for mid-to-late October indicate slight lean towards a continuation of unseasonable warmth.

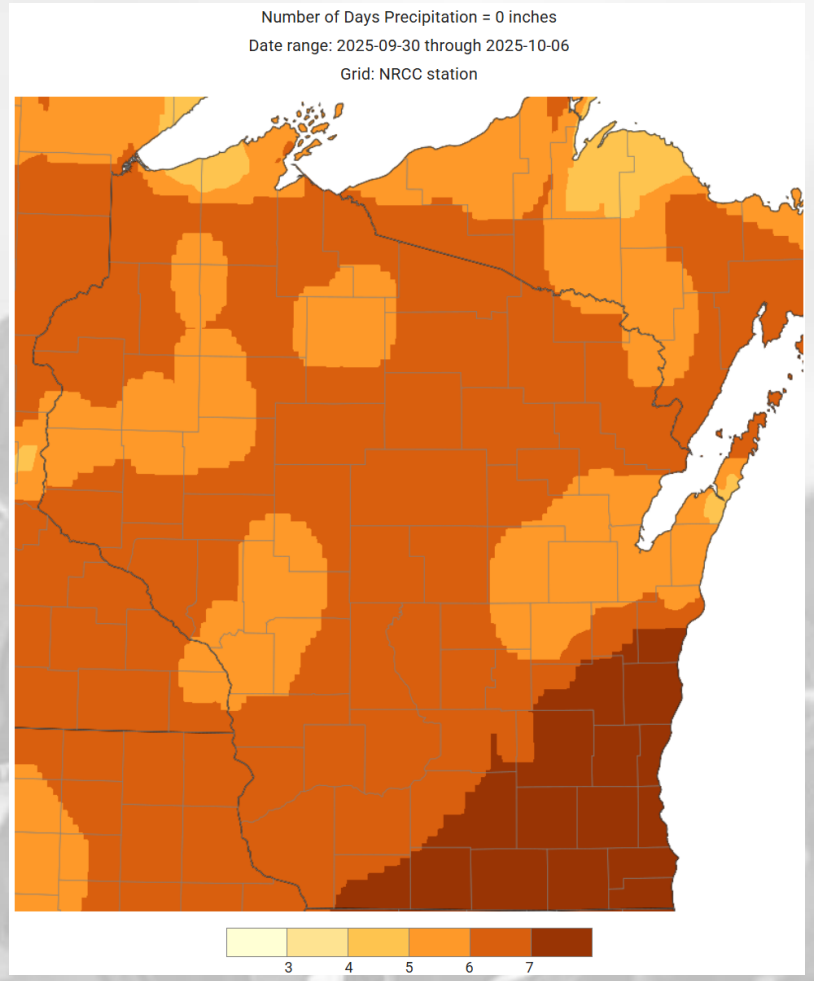
- *For this week's agronomic recommendations from UW Extension, click here.*
- *NOTE: There will be no USDA NASS update this week due to the federal government shutdown.*

Wx Highlight → Warm & Dry (Again)

Days that reached at least 80°F
9/30 through 10/6



Days with no measured rain
9/30 through 10/6



Summer-like temperatures remained in place, with **very little to no rainfall**.

<u>Highest Wisconet temp:</u>

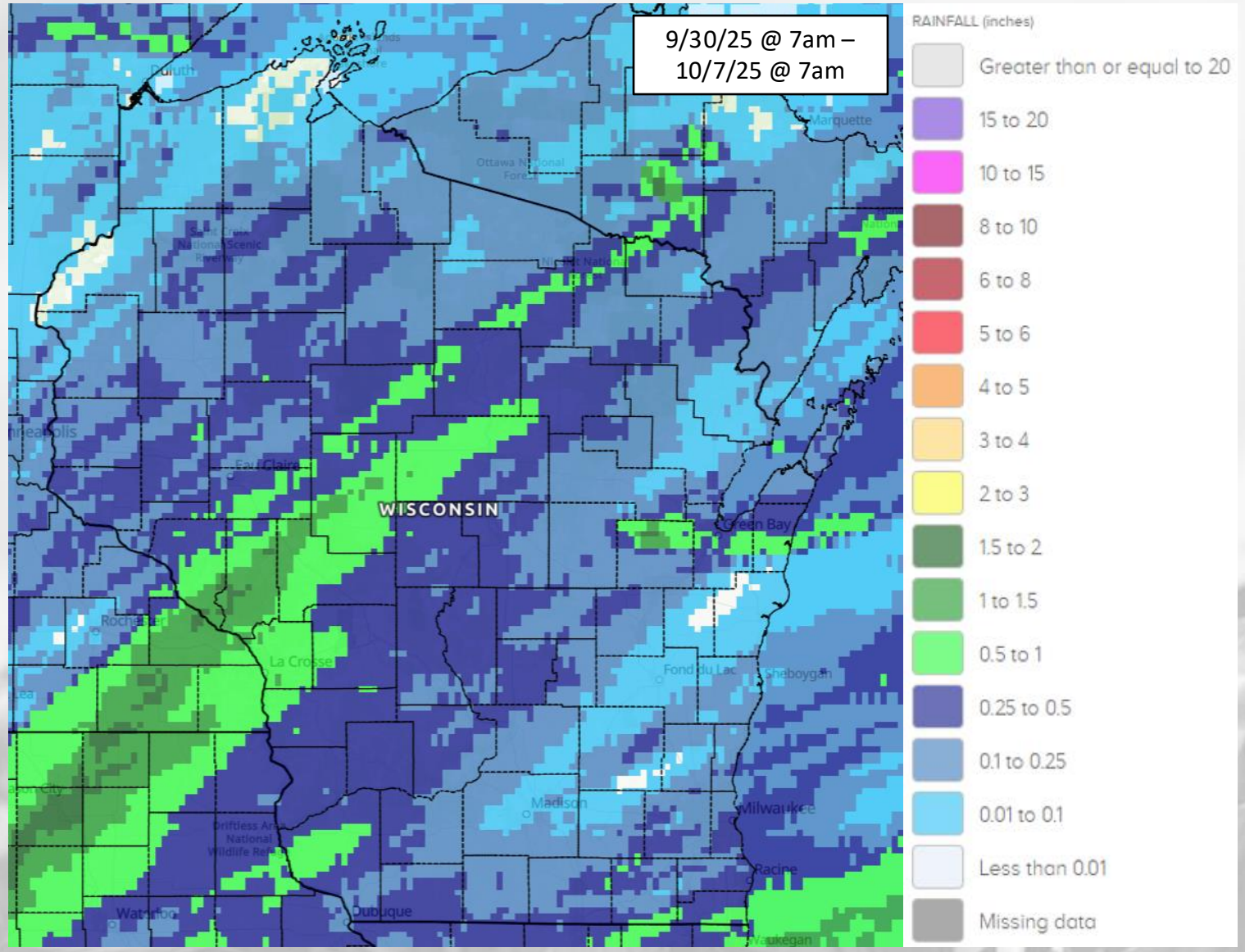
- Ripon, Winnebago Co. → 10/3, **89.1°F**

<u>Highest Wisconet 7-day rain:</u>

- Black Creek, Outagamie Co. → **1.57”**
  - *Most of this rain fell during the evening of 10/3*.

https://scacis.rcc-acis.org/

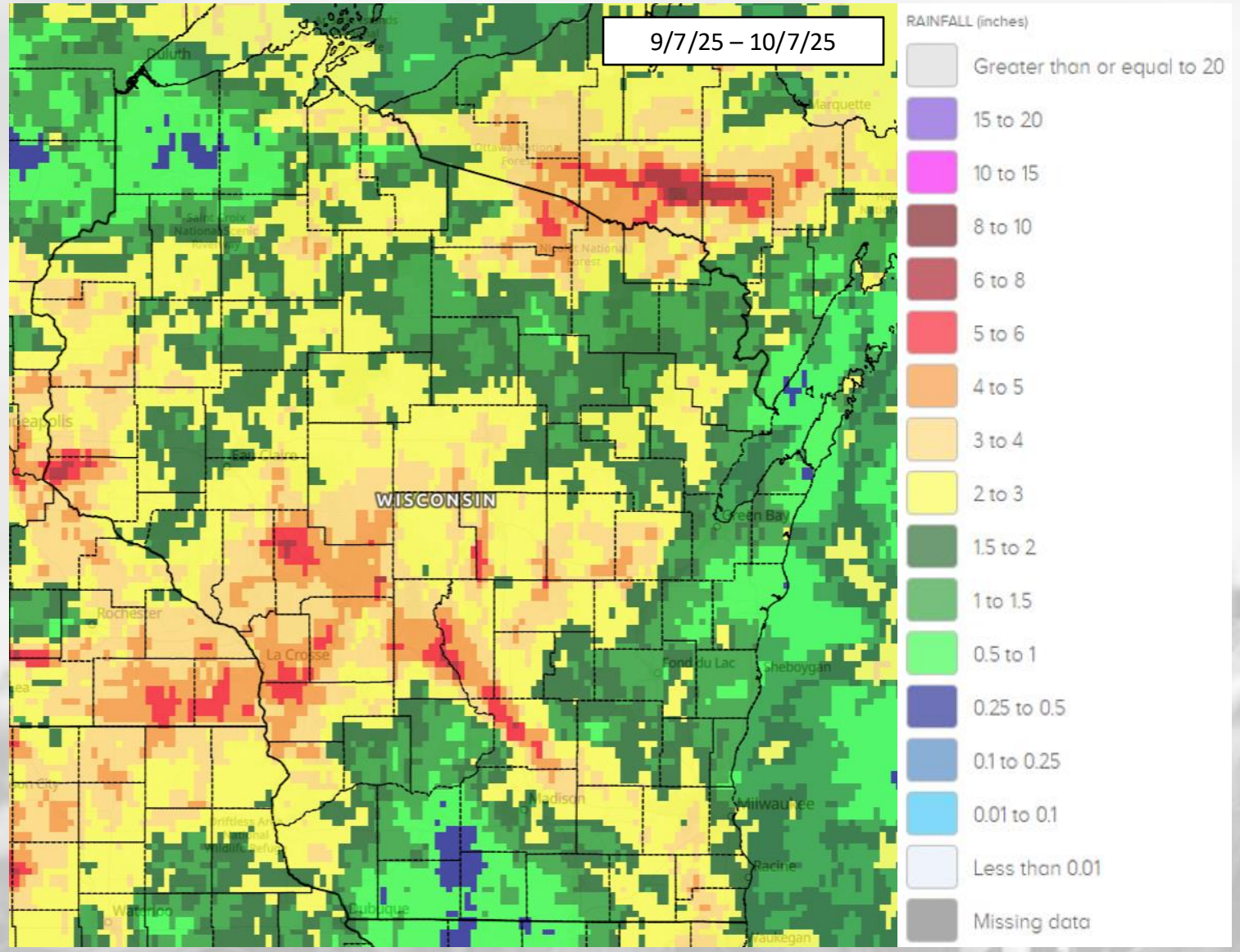
7 Day Precip (radar estimates)



- Another week of **minimal rainfall** in WI, with most receiving less than a half inch.
- Highest totals between La Crosse and Eau Claire → **1” to 1.5”**
- Lowest totals in the NW and SE → estimates of **less than 0.1”** for some

https://water.noaa.gov/

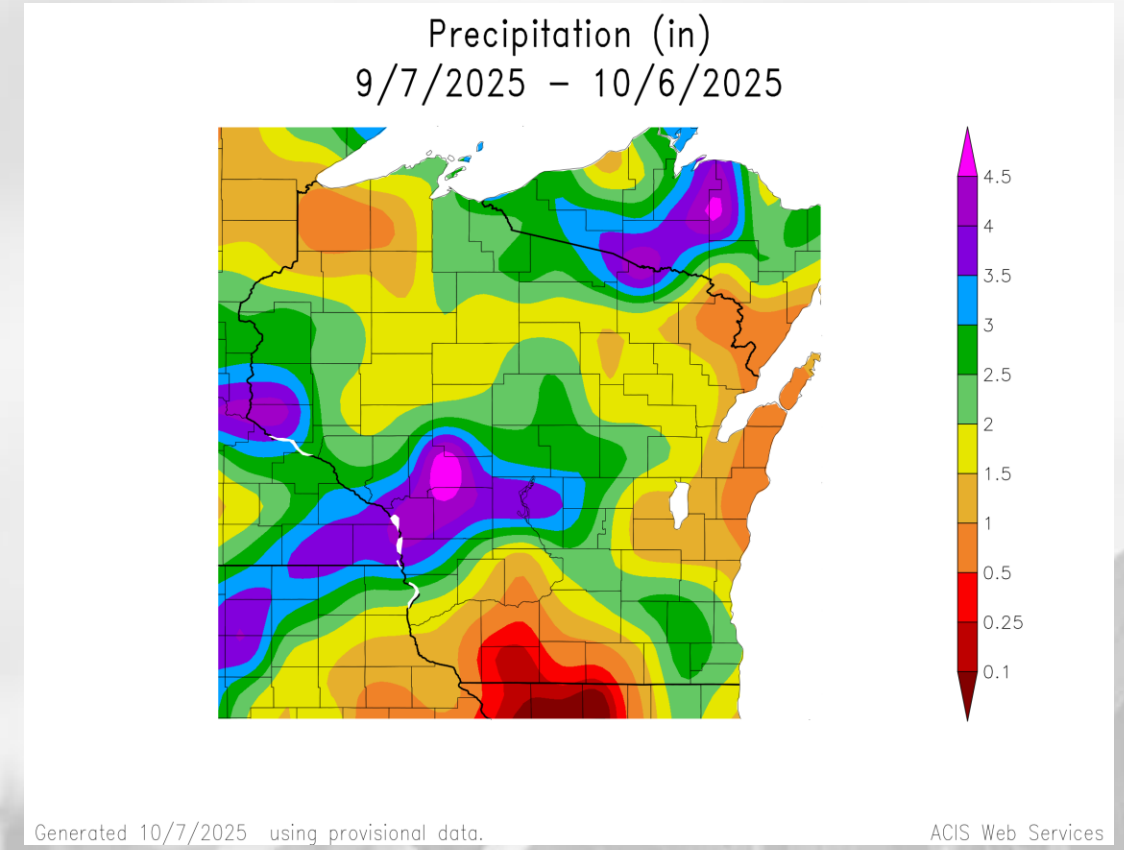
30 Day Precip (radar estimates)

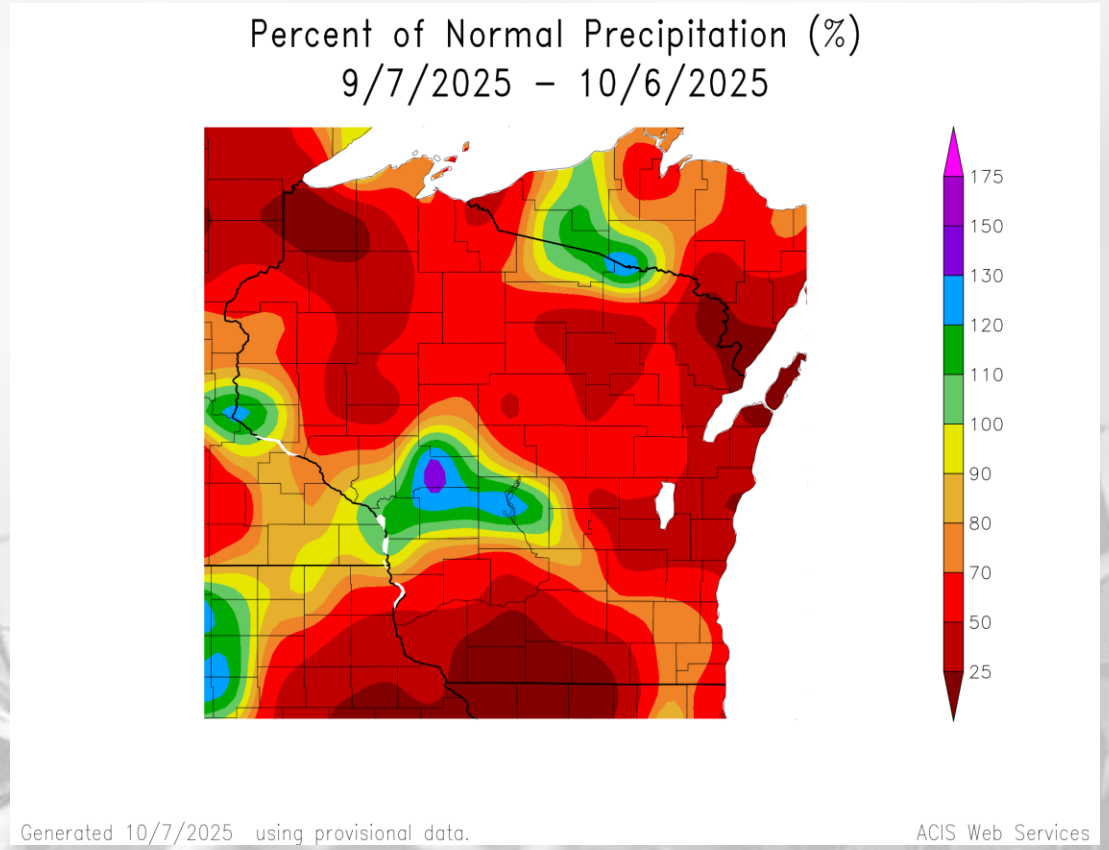


- Large swaths of **2-4+”** across the state, most commonly in the west-central, northwest, and far north.
- Pockets of **5” or more** in several counties (red shading).
- Driest in the SW and far NW, with totals of **<1”** for some.

https://water.noaa.gov/

30 Day Precip Total/Percent Avg.

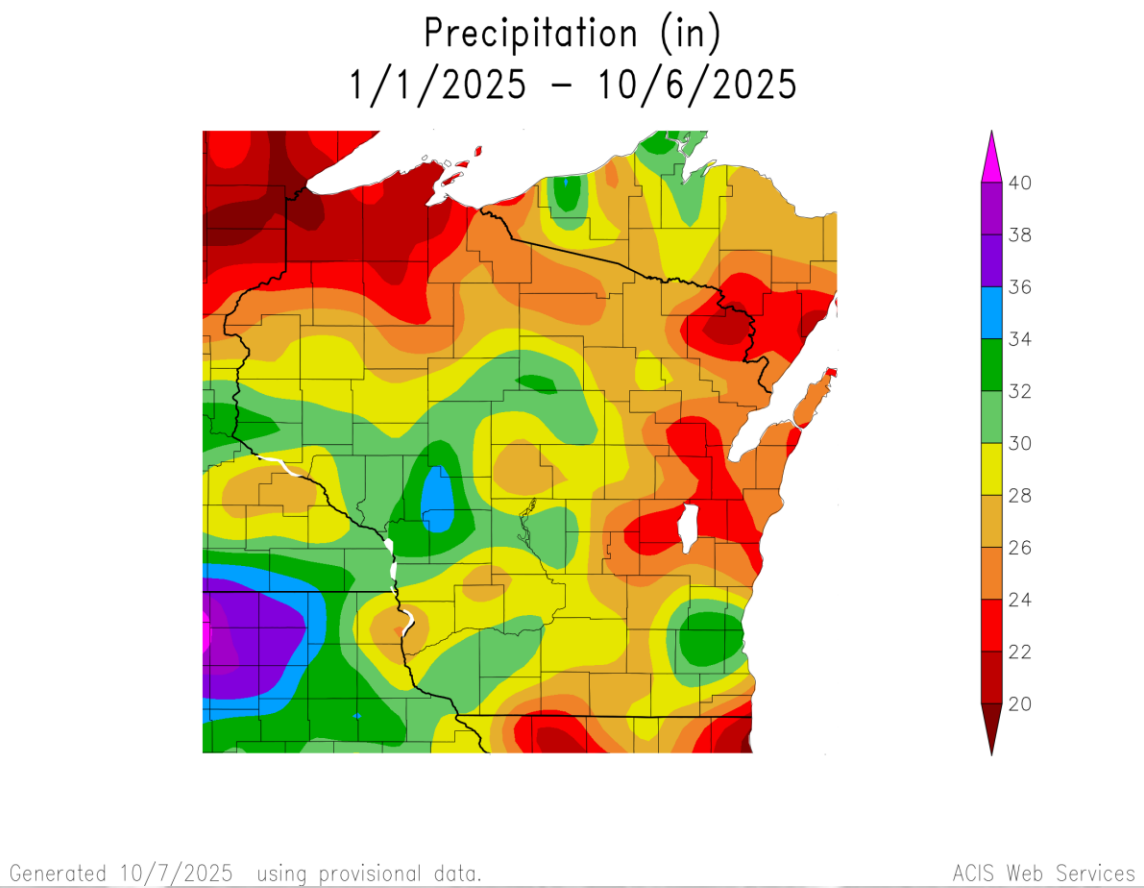


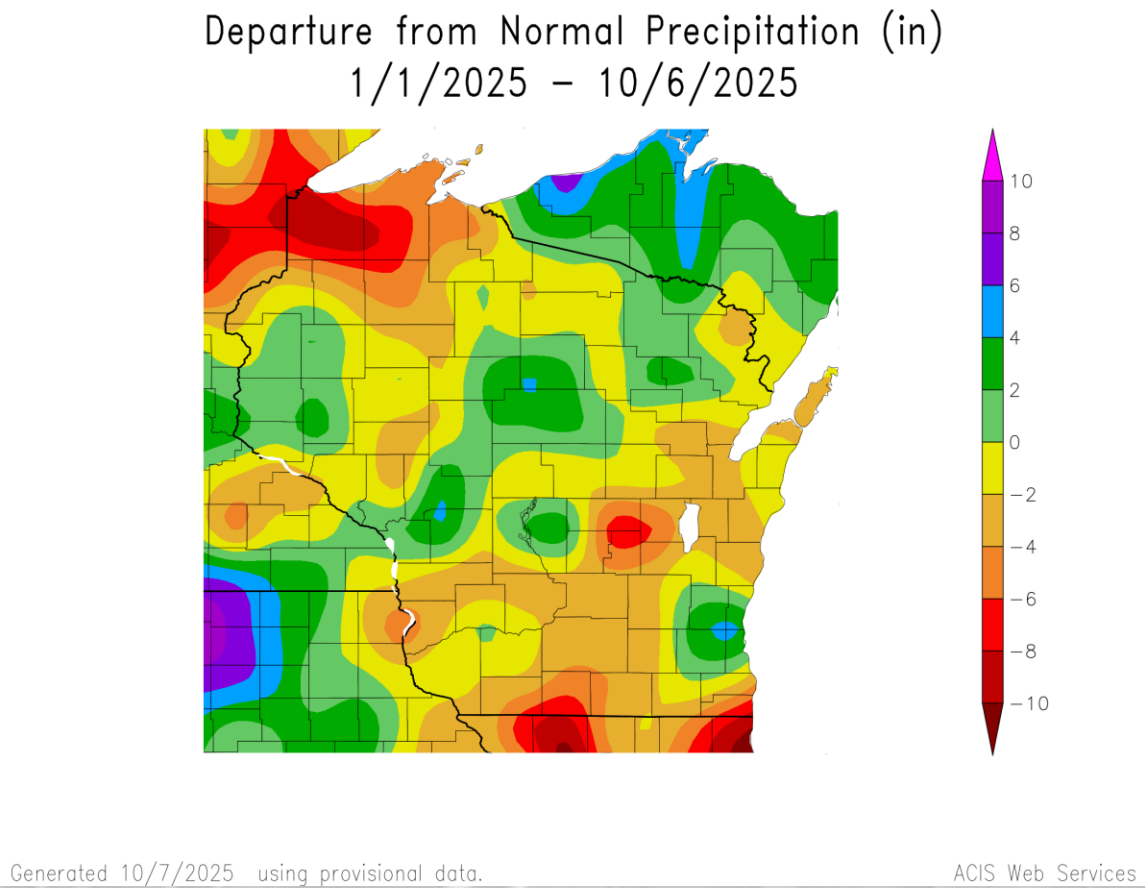


- **Below normal** for most of WI over the past 30 days → **70% or less common**, with 50% or less in the S, E, & NW.
  - **1" or less** for some since Sept. 7.
- **Localized areas** of above normal precipitation in west-central and northern WI, where totals were **3.5" or more**.

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

2025 Precipitation (so far)





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

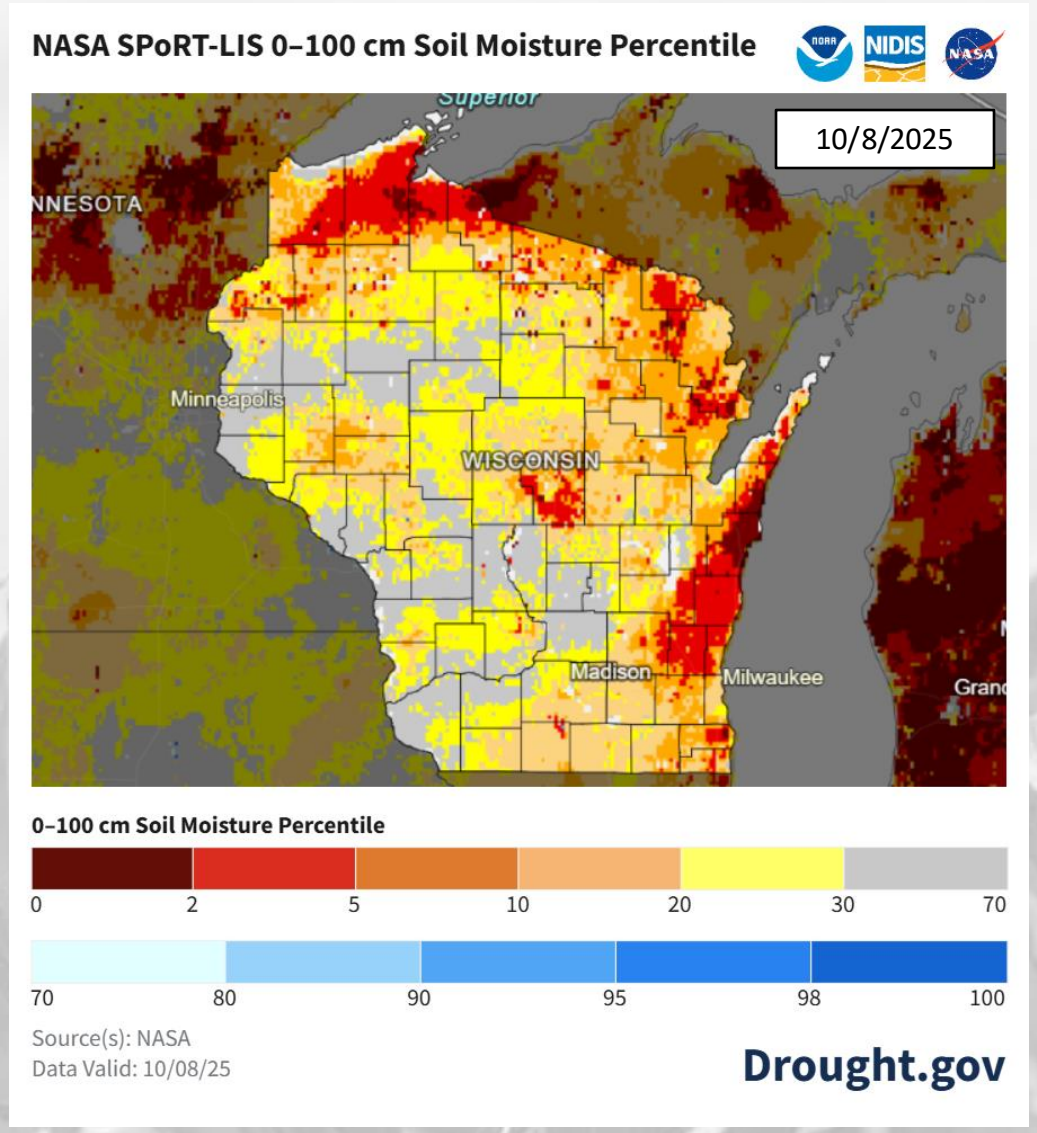
Soil Moisture Models

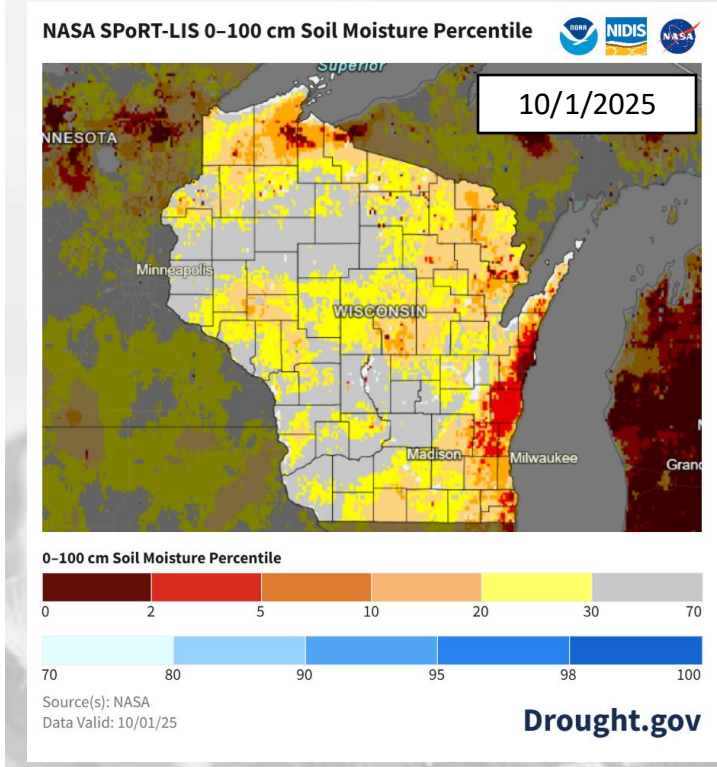
- **Increase** in spatial extent and intensity of **dryness** in the N and E after receiving minimal precipitation last week.

- **Below normal** conditions across most of WI, closer to normal in the past of the W.

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.

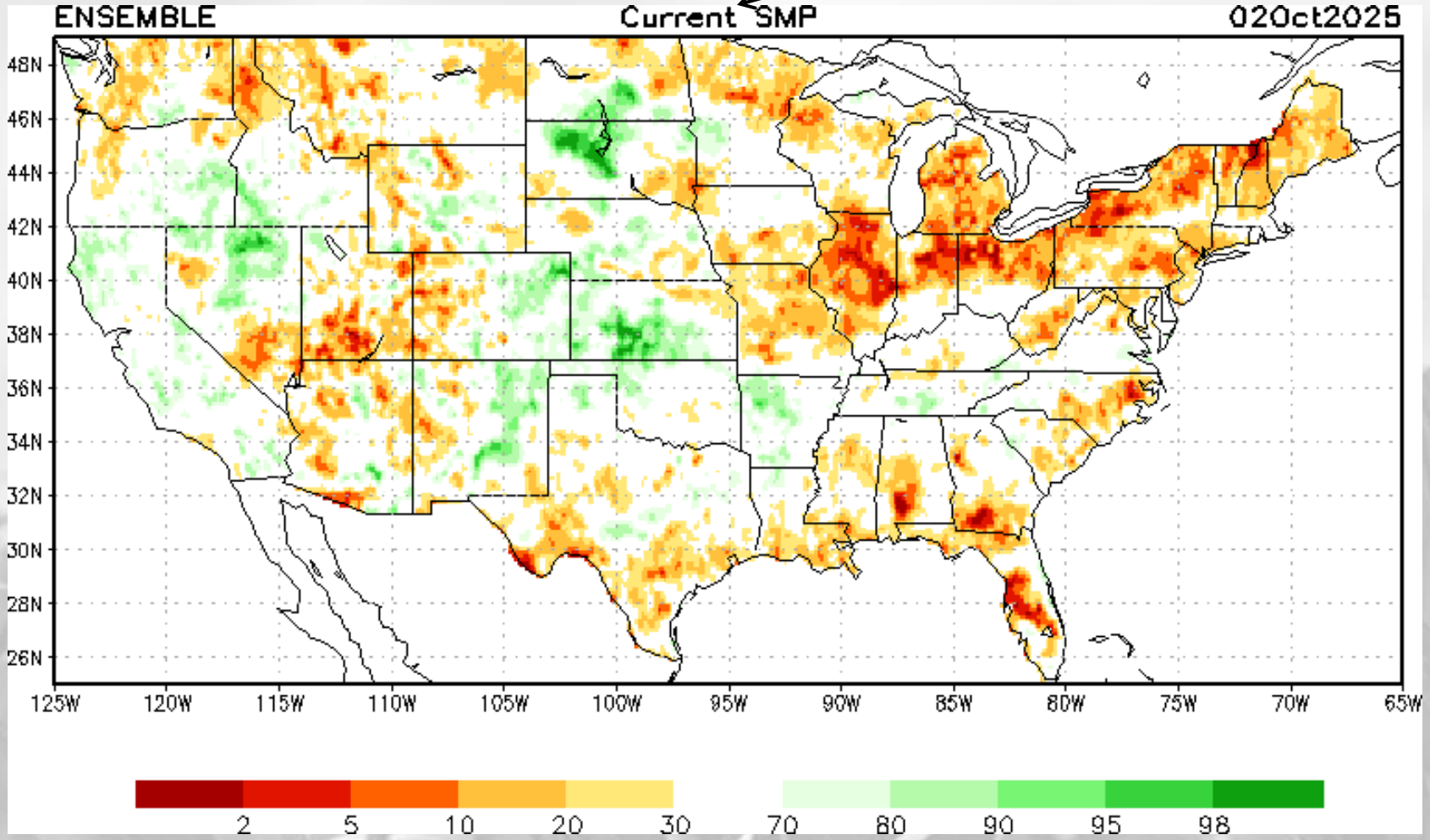




https://weather.ndc.nasa.gov/sport/case_studies/lis_CONUS.html
https://www.drought.gov/states/wisconsin

Soil Moisture Models

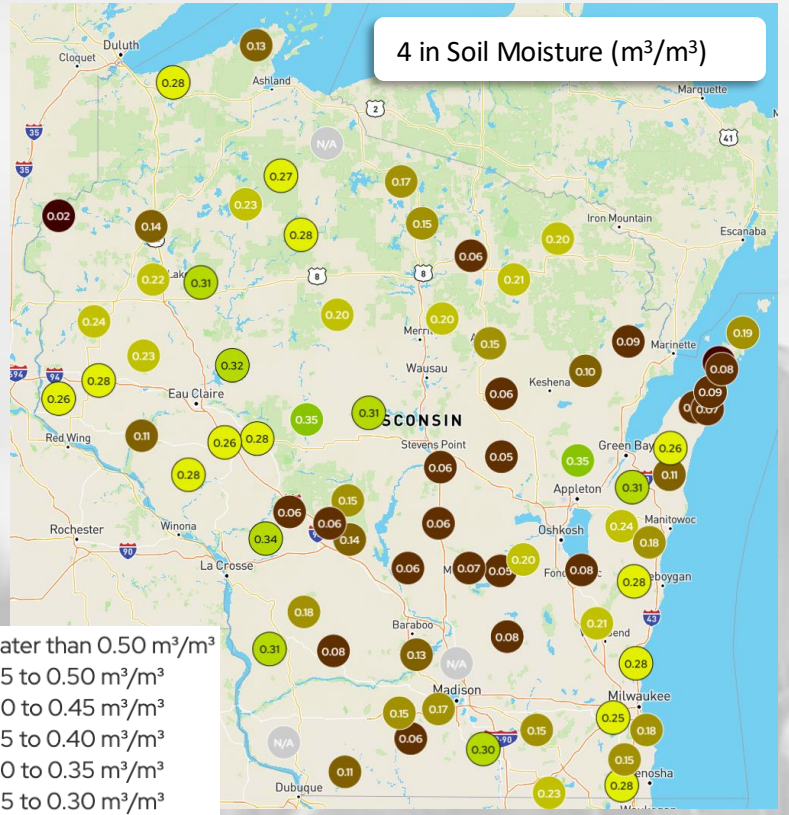
NOTE: this map displays the soil moisture percentile for Oct 2. It was the most recent update as of Oct 7.

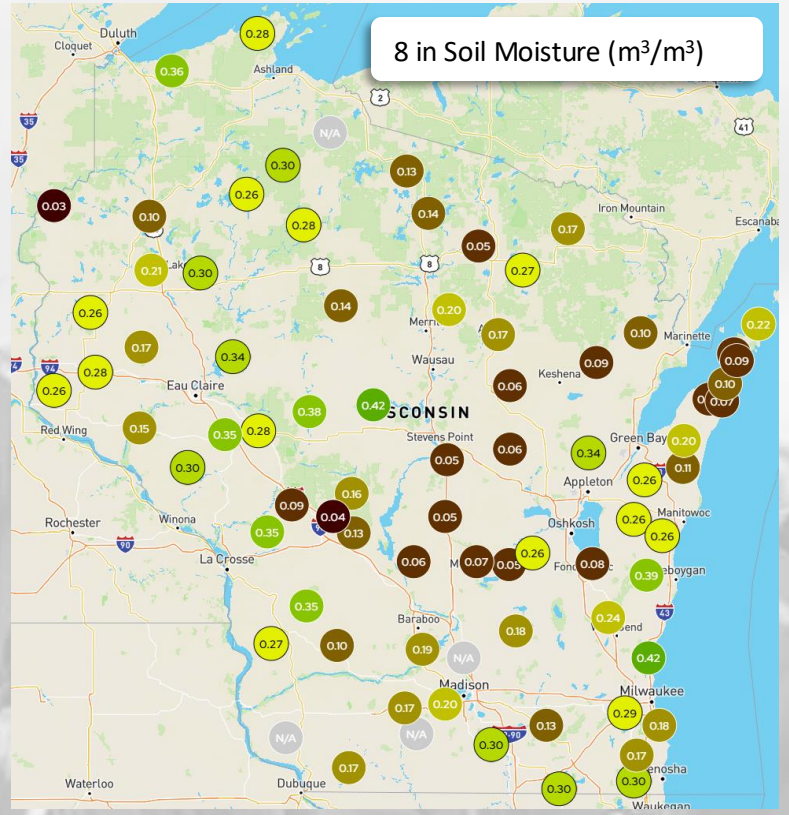


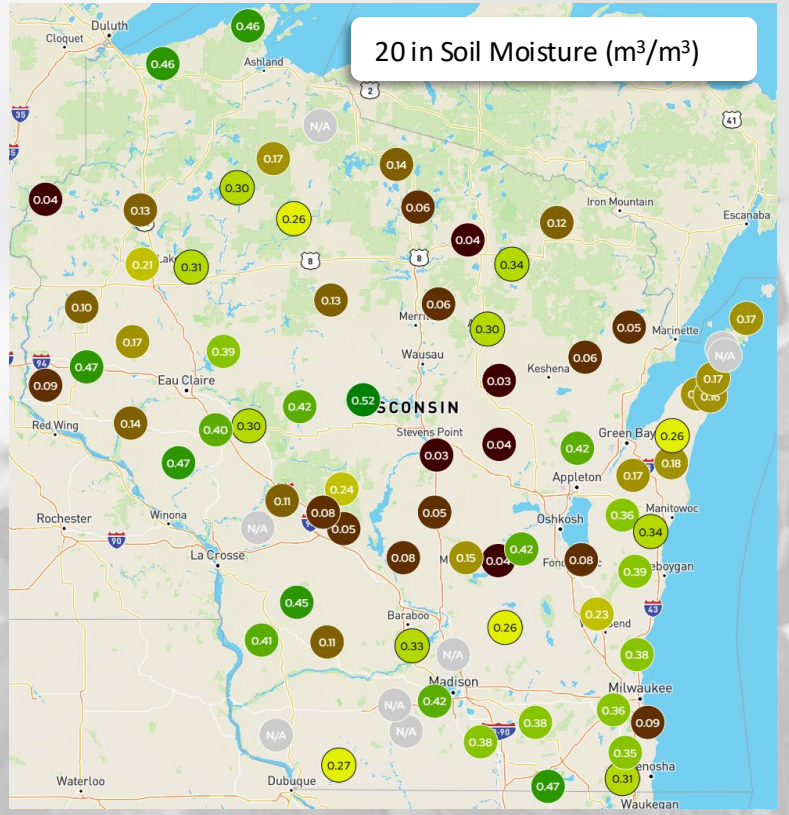
https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml

Wisconet Soil Moisture

Maps showing soil temperature conditions on October 7th @ 12:00 pm.
Units of map values are {Volume of water}/{Volume of soil}.







- greater than 0.50 m³/m³
- 0.45 to 0.50 m³/m³
- 0.40 to 0.45 m³/m³
- 0.35 to 0.40 m³/m³
- 0.30 to 0.35 m³/m³
- 0.25 to 0.30 m³/m³
- 0.20 to 0.25 m³/m³
- 0.15 to 0.20 m³/m³
- 0.10 to 0.15 m³/m³
- 0.05 to 0.10 m³/m³
- 0.00 to 0.05 m³/m³

https://wisconet.wisc.edu/

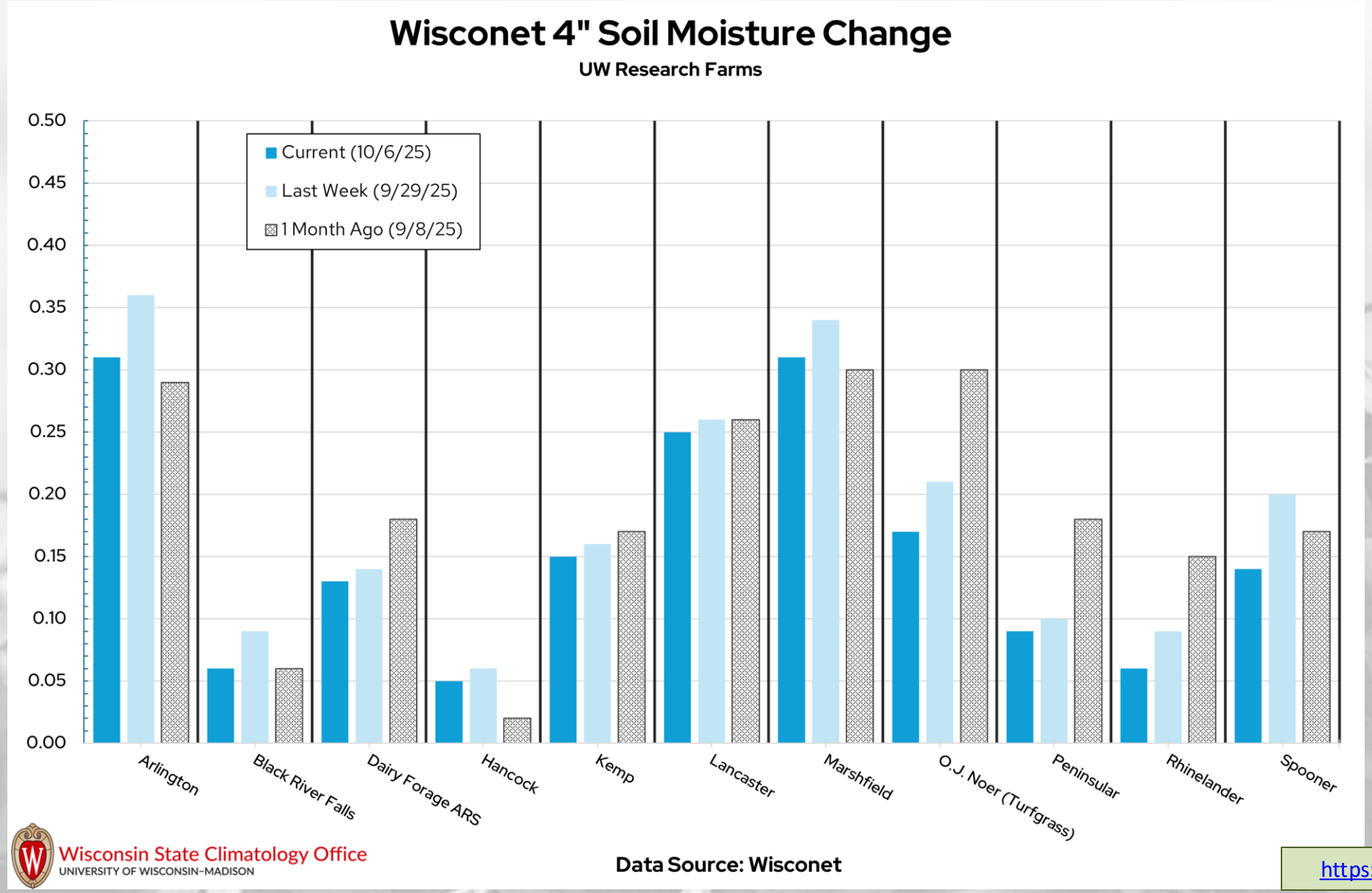
Wisconet Soil Moisture

Change in soil moisture from September 30th (Start) to October 6th (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	0.03	0.35	0.31	0.32	0.28	0.36	0.36
Black River Falls	Jackson	0.41	0.08	0.06	0.10	0.09	0.11	0.10
Dairy Forage ARS	Sauk	0.16	0.14	0.13	0.20	0.19	0.35	0.33
Hancock	Waushara	0.24	0.05	0.05	0.06	0.05	0.06	0.06
Kemp	Oneida	0.31	0.15	0.15	0.15	0.14	0.06	0.06
Lancaster	Grant	0.38	0.26	0.25	0.27	0.25	0.43	0.43
Marshfield	Marathon	0.51	0.34	0.31	0.44	0.42	0.52	0.52
O.J. Noer *(Turfgrass)*	Dane	0.02	0.20	0.17	0.23	0.20	0.44	0.43
Peninsular	Door	0.17	0.09	0.09	0.11	0.10	0.18	0.17
Rhinelander	Oneida	0.32	0.08	0.06	0.08	0.05	0.04	0.04
Spooner	Washburn	0.08	0.20	0.14	0.13	0.10	0.14	0.13

https://wisconet.wisc.edu/

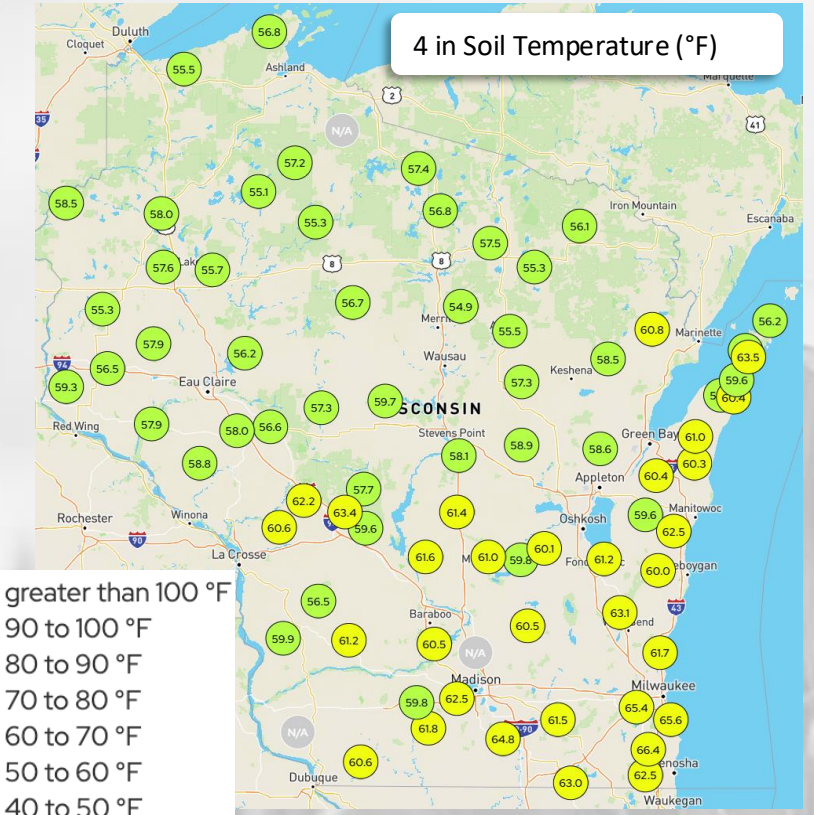
Wisconet Soil Moisture

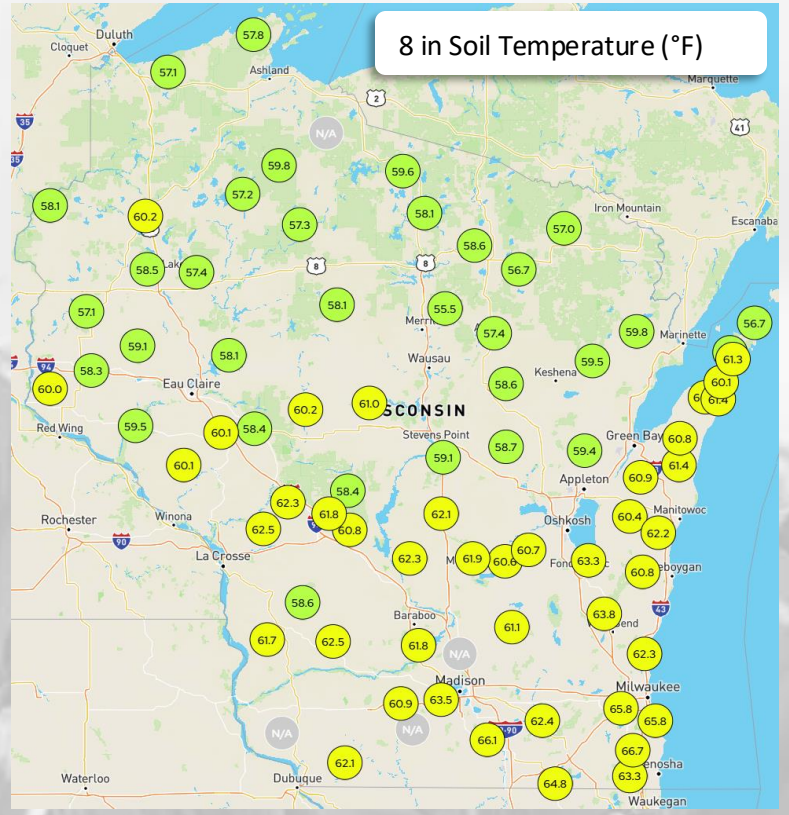


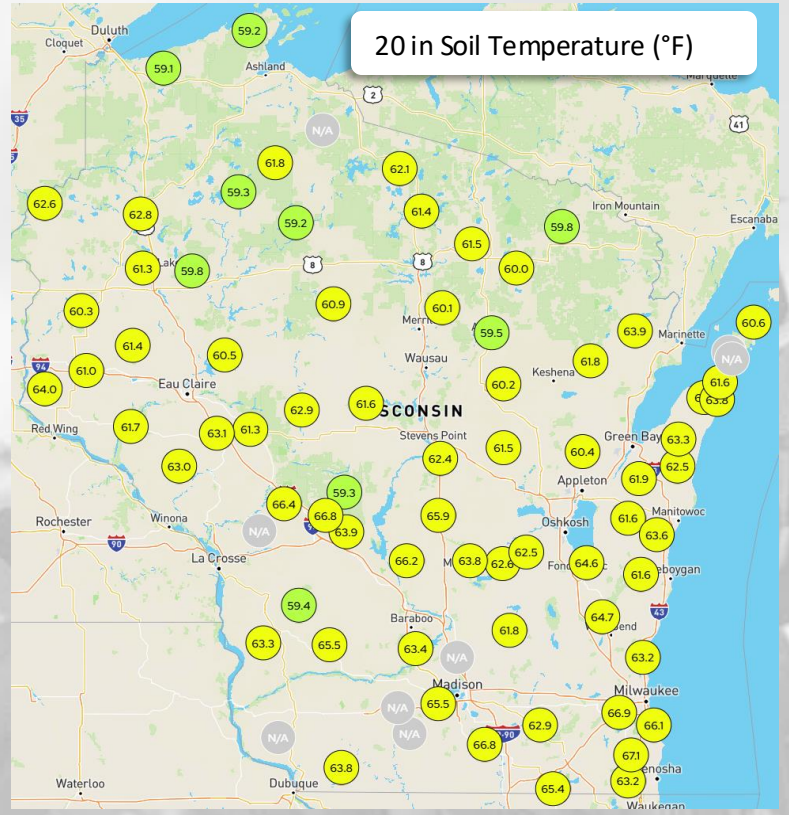
https://wisconet.wisc.edu/

Wisconet Soil Temperature

Maps showing soil temperature conditions on
October 7th @ 12:00 pm.



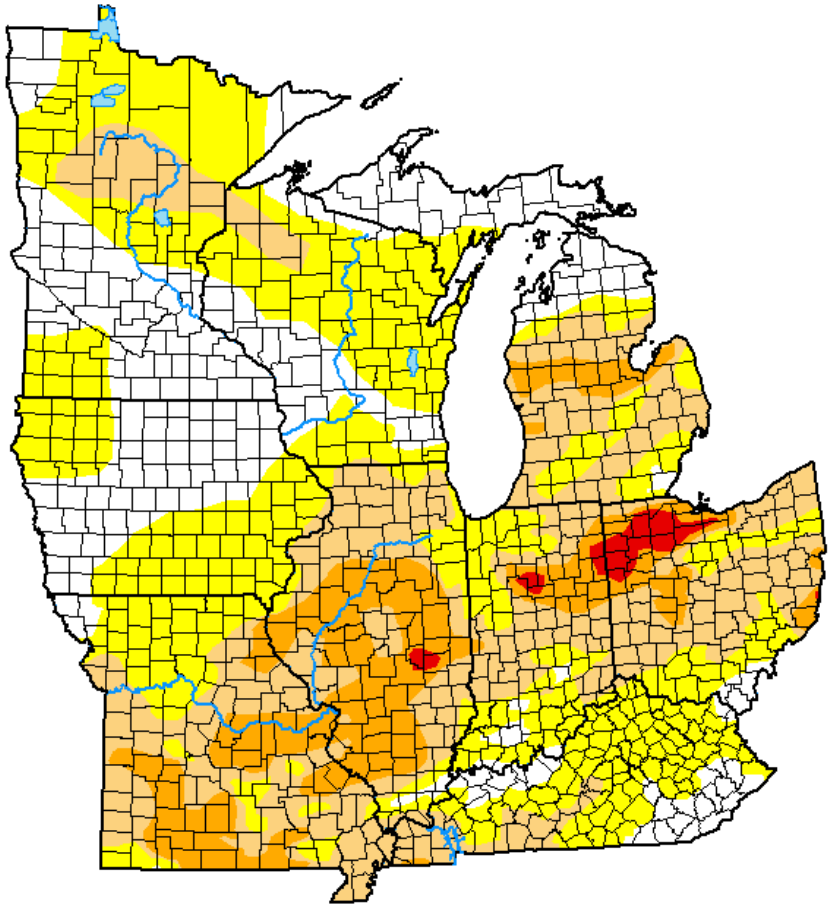




- greater than 100 °F
- 90 to 100 °F
- 80 to 90 °F
- 70 to 80 °F
- 60 to 70 °F
- 50 to 60 °F
- 40 to 50 °F
- 30 to 40 °F
- 20 to 30 °F
- 10 to 20 °F
- less than 10 °F

https://wisconet.wisc.edu/

US Drought Monitor



U.S. Drought Monitor

Midwest

October 7, 2025

(Released Thursday, Oct. 9, 2025)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	23.82	76.18	38.82	12.69	1.05	0.00
Last Week *09-30-2025*	34.12	65.88	34.69	10.17	0.37	0.00
3 Months Ago *07-08-2025*	75.02	24.98	5.31	0.66	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 *10-08-2024*	18.38	81.62	41.55	12.60	2.12	0.66

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

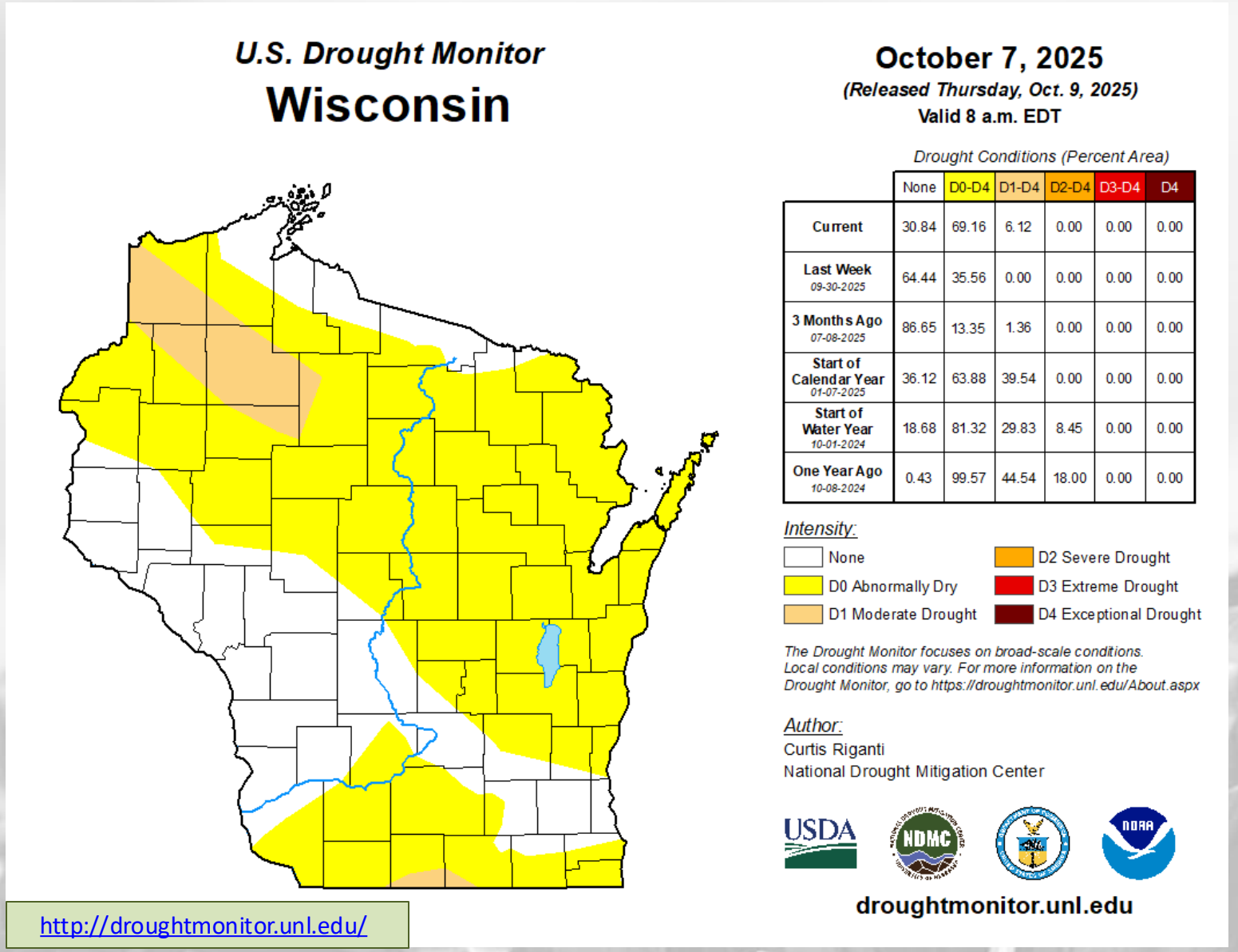
droughtmonitor.unl.edu

- Midwest: Compared to last week:
  - **Widespread increase** in D0-D3 coverage.
- Midwest: **1 class degradation** across most states, especially north and west. **Improvements** along the Ohio River.
- Wisconsin: The state is no longer drought-free with **D1 added in the NW and far S**. Widespread expansion of D0.
- **61.2%** of the Midwest is drought free (~38.8% in D1-D3).

Note: D0 is not considered drought.

http://droughtmonitor.unl.edu/

US Drought Monitor

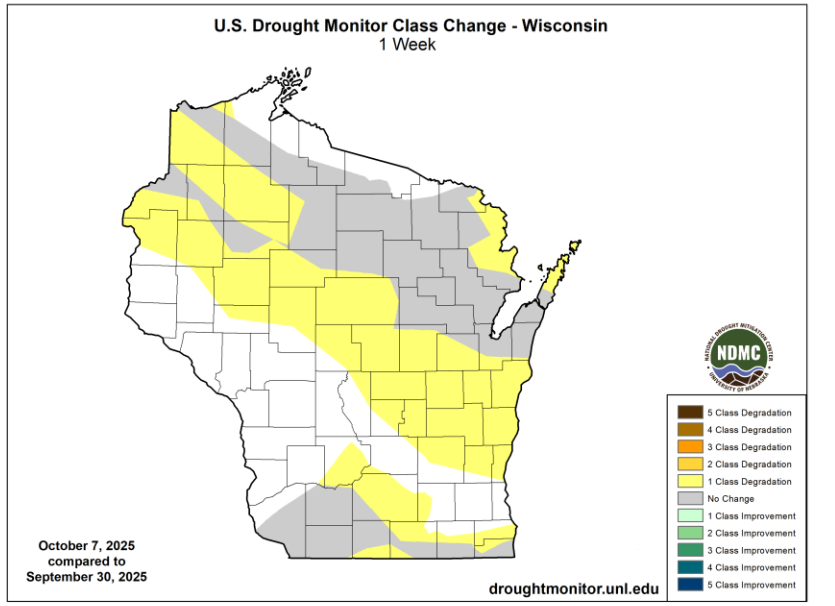


http://droughtmonitor.unl.edu/

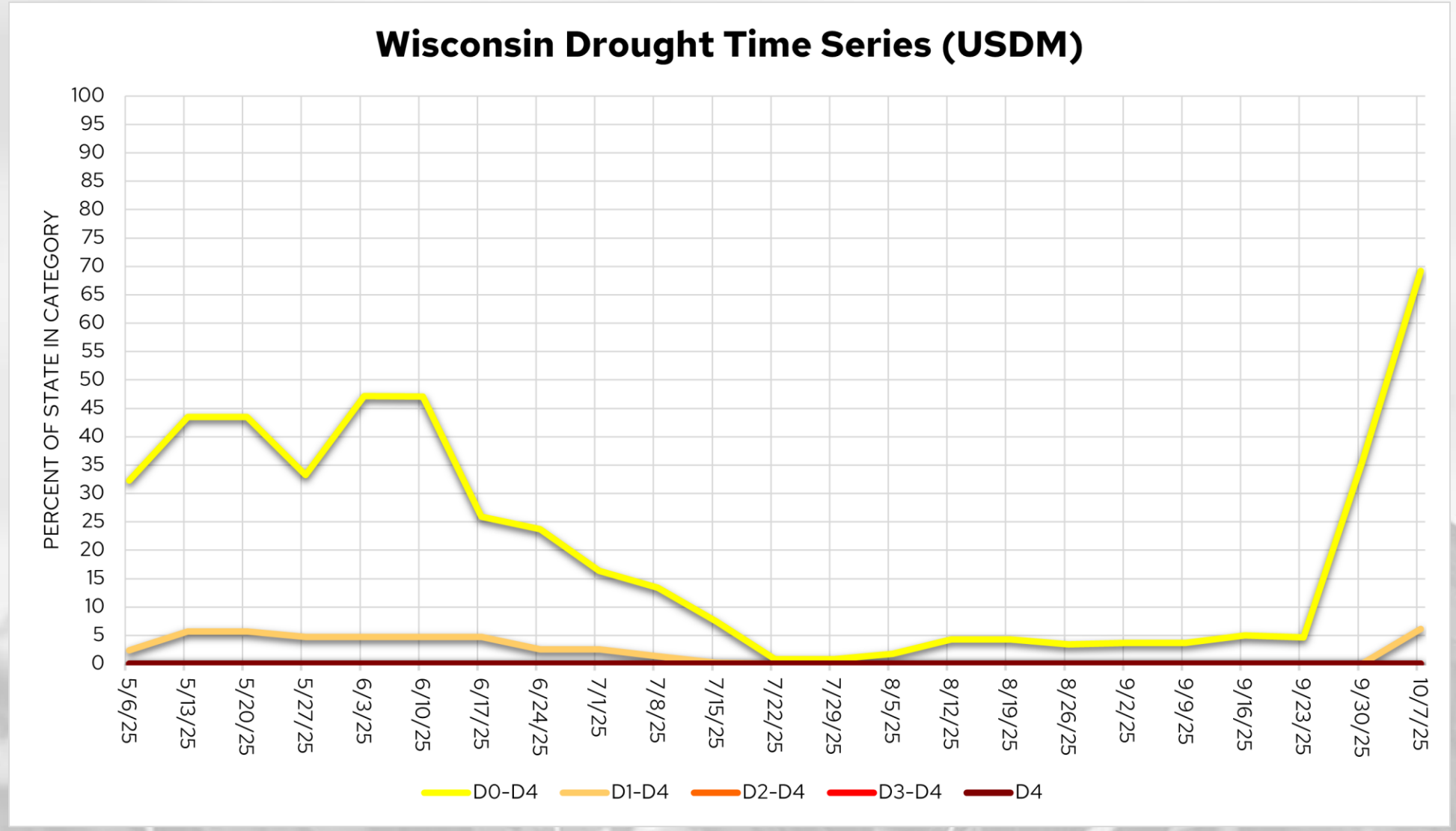
Amount of state in:

- D1-D4 – 6.1% ↑
- 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. -- indicates no change from last week.



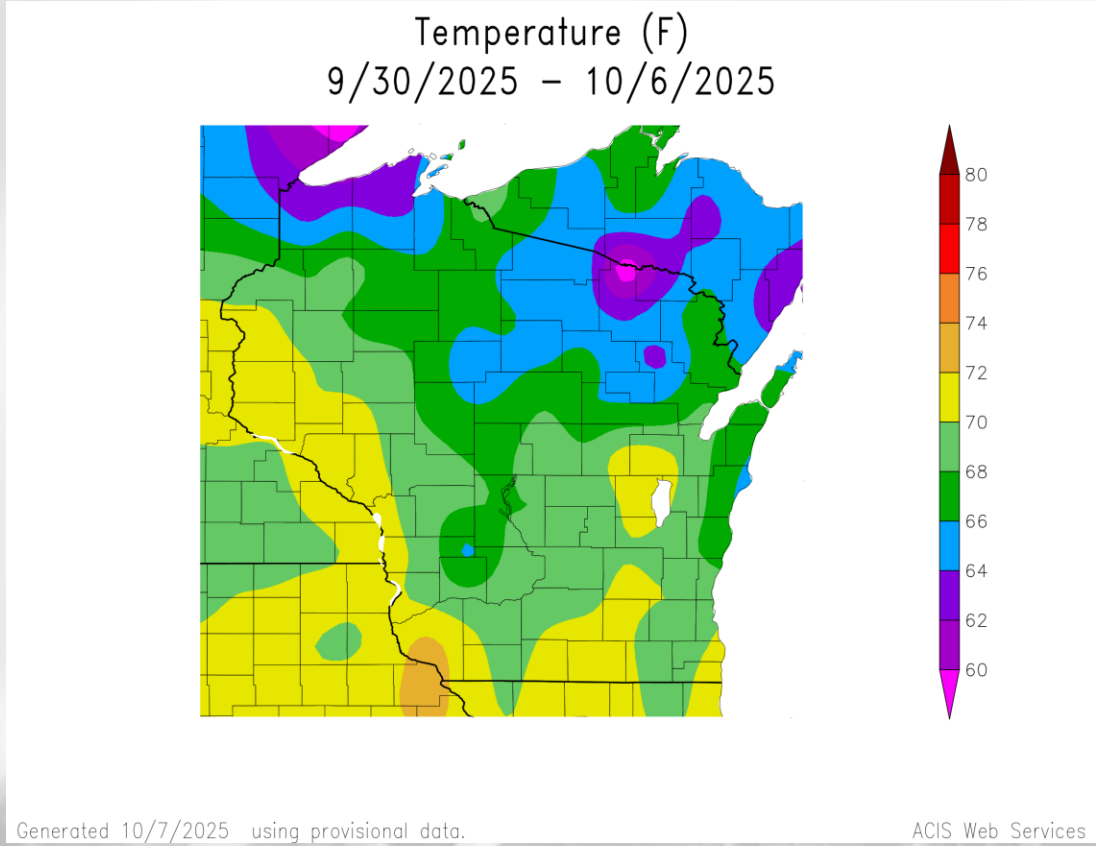
USDM Time Series

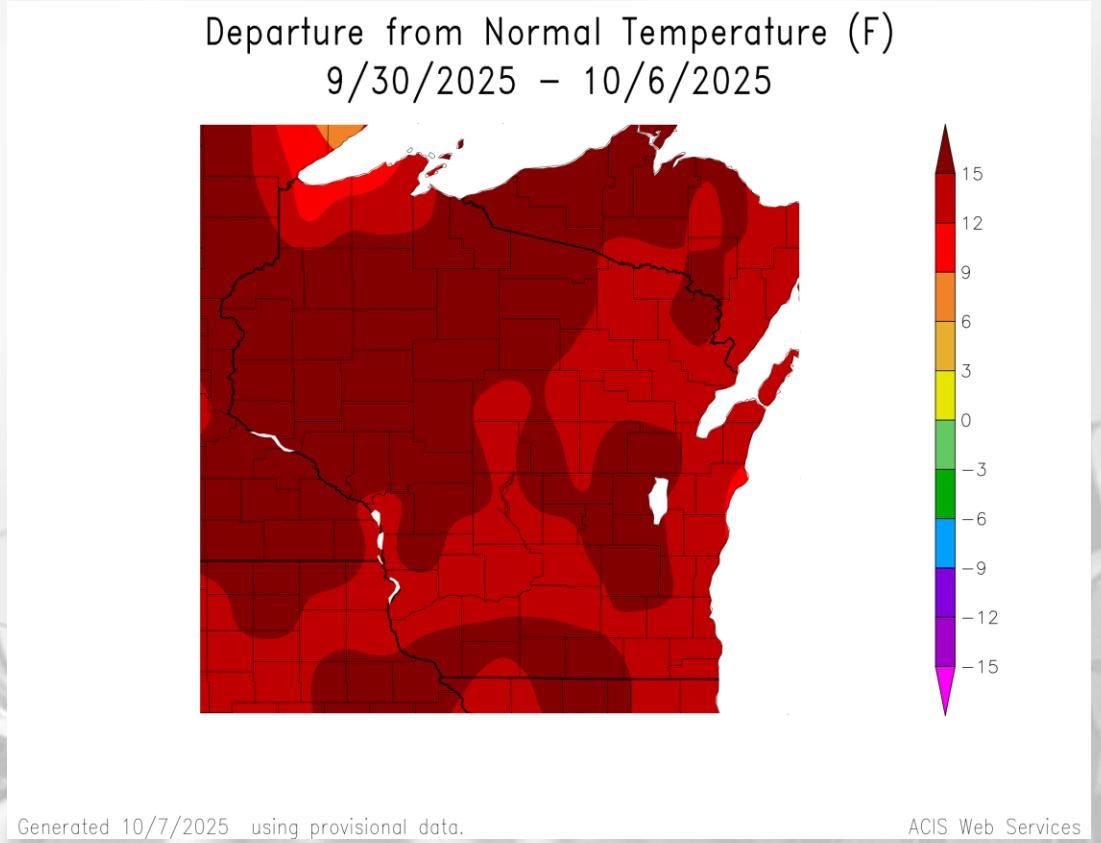


>30% increase in D0 coverage since last week, along with the **addition of D1 drought** in the NW.

http://droughtmonitor.unl.edu/

7 Day Temperatures

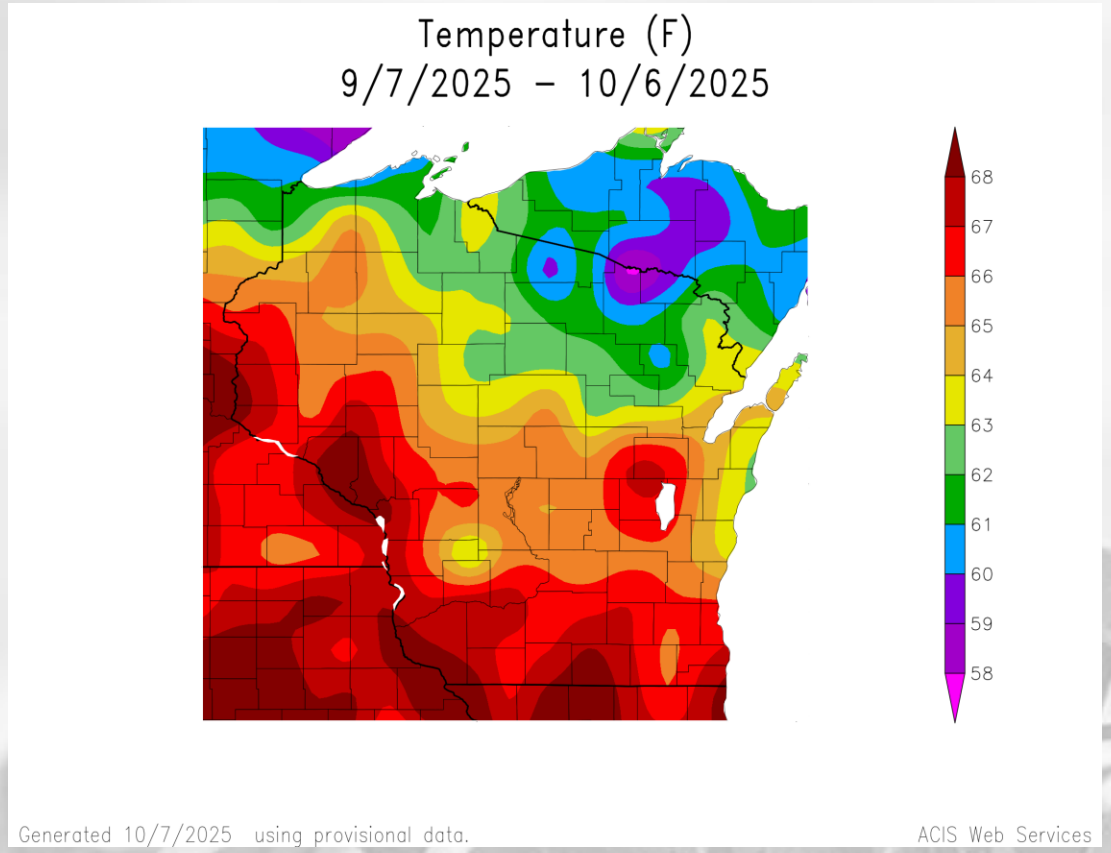


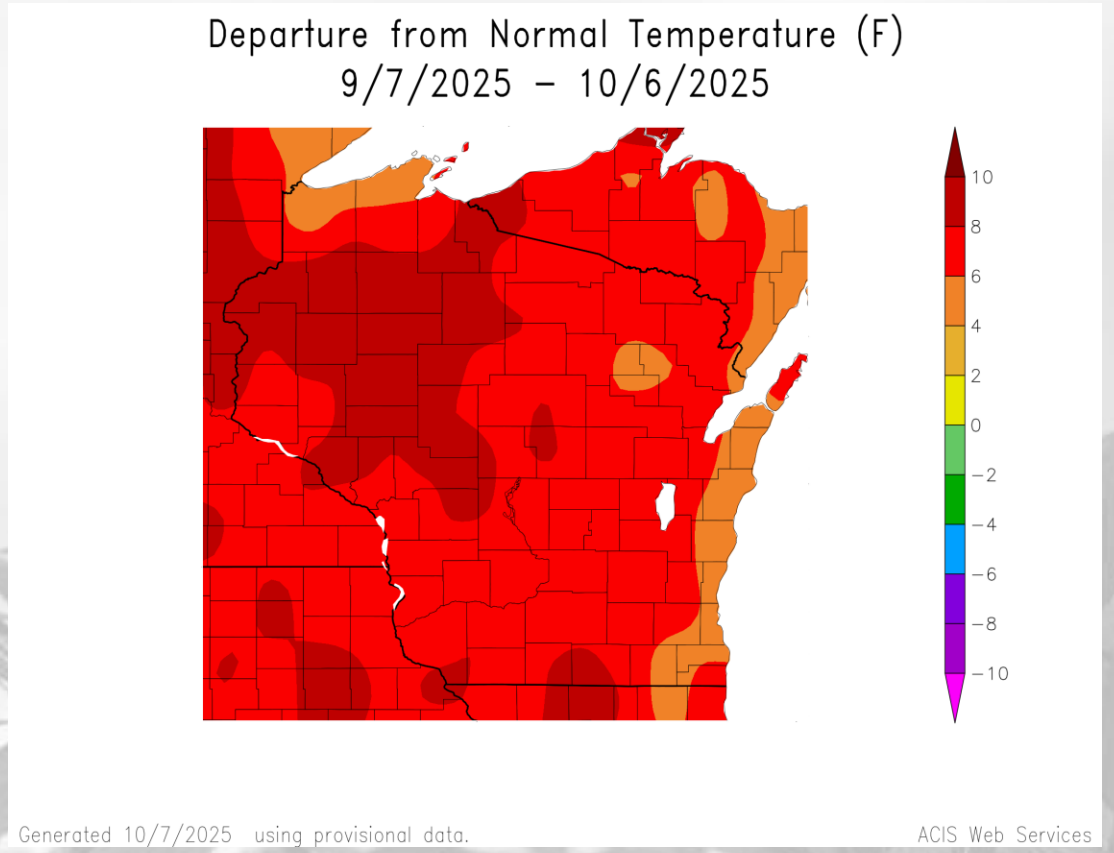


- Average temp. range of **70-74°F** in the south; **60-64°F** in the far north.
- **12°F or more above normal** for almost all of WI; lesser so along Lake Superior.

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

30 Day Temperatures

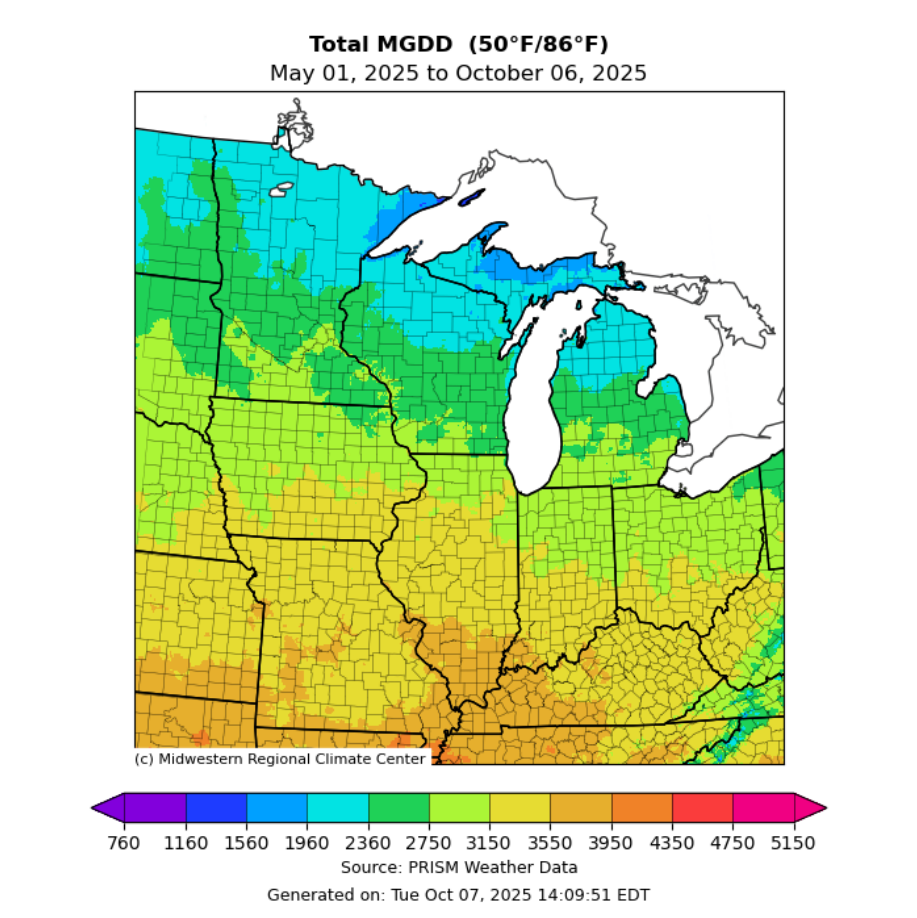


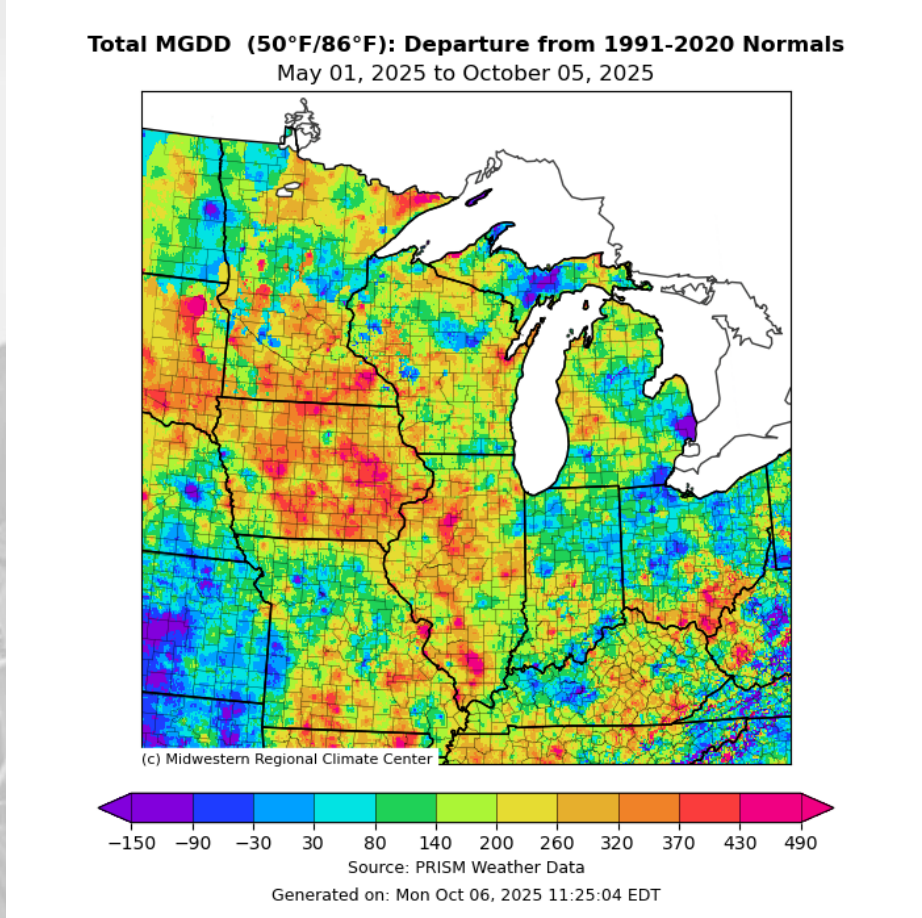


- Average temps. ranged from **66-68+°F** in the south and west; to **58-61°F** for the far north.
- **Above average** temperatures across the state.
  - **4-6°F** above normal along Lake Michigan; to **8-10°F** above normal in the NW and pockets in southern WI.

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

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





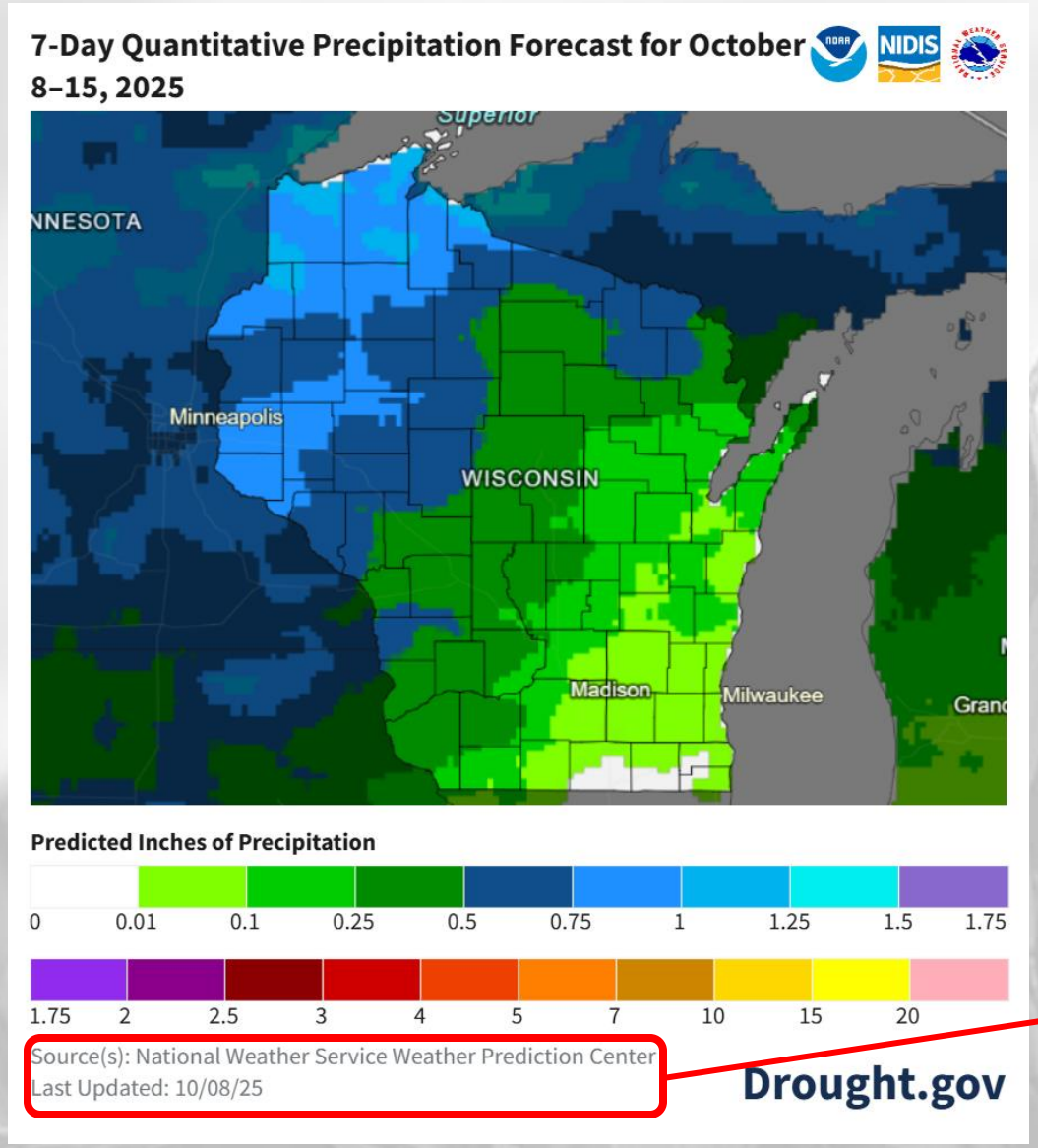
- Range from **2800-3100 GDD** in the SW to **2000-2300 GDD** in the N.
- GDD accumulation is running **140-260 GDD ahead of schedule** across most of WI.

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/ag-climate-dashboard

7 Day Precip Forecast

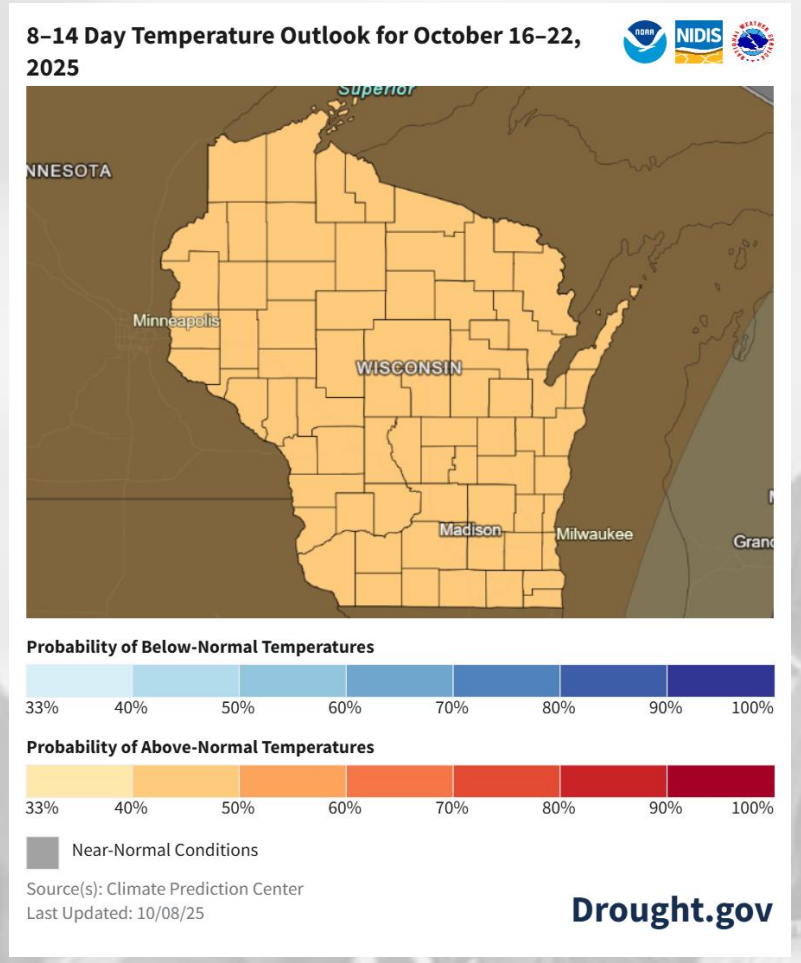


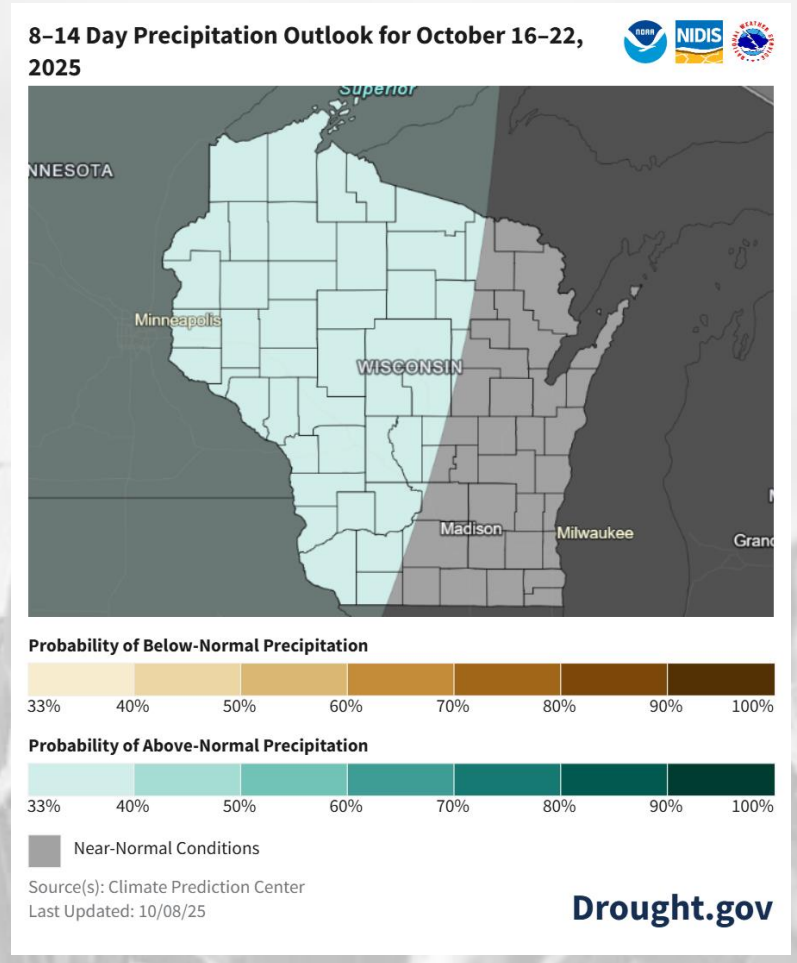
- **When?** → quiet end to this week with multiple chances for rain into next week.
- **Where?** → highest chances in the northwest, tapering to the south and east.
- Check your local forecast for details on totals and timing.
- Average precip (1991-2020) for this week: **0.72”**

Forecast for 10/9/25 thru 10/16/25
(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



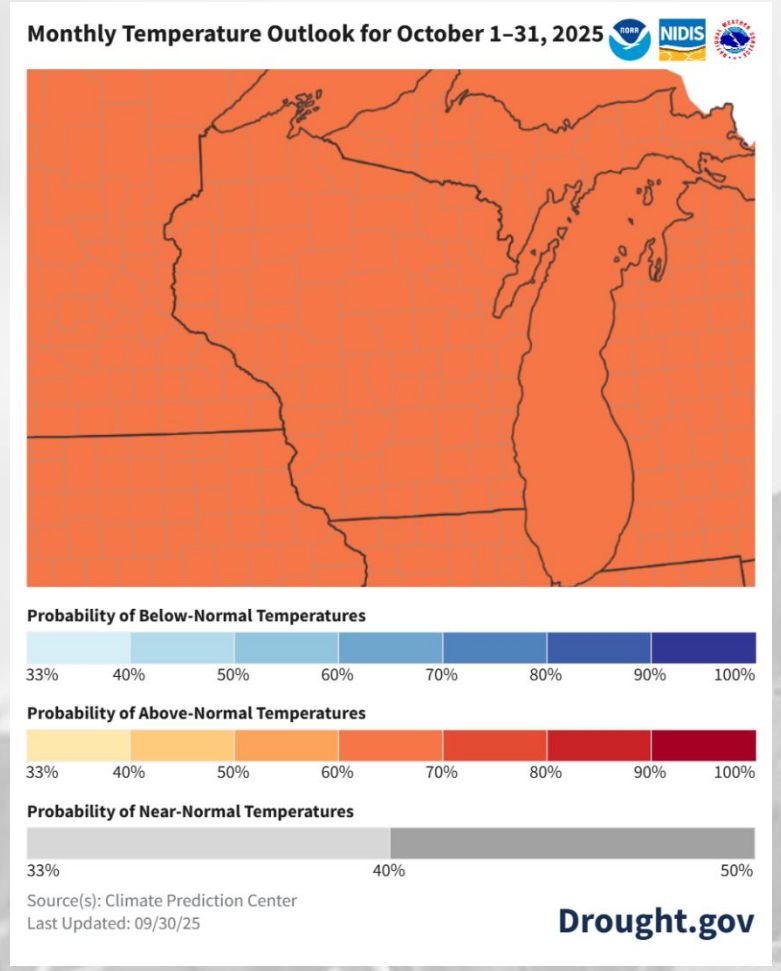


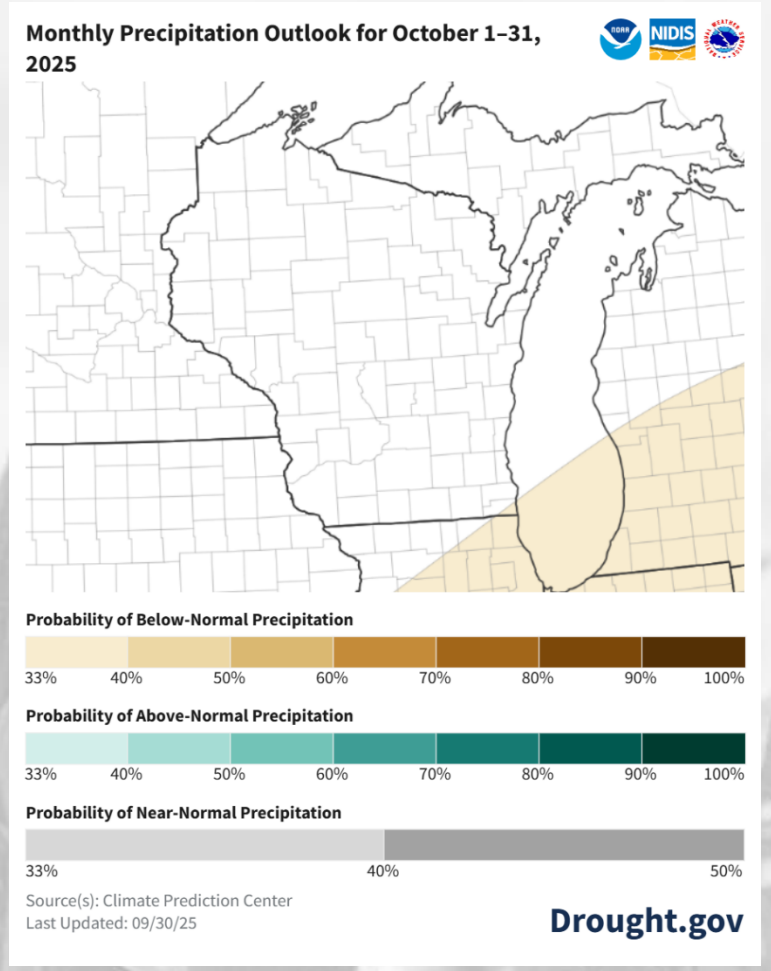
http://www.cpc.ncep.noaa.gov/
https://www.drought.gov/states/wisconsin

Mid-to-Late October: A slight lean (40-50% chance) towards above normal temps. A slight lean towards above normal precip in the west, and near normal in the east.

- Statewide normals (1991-2020) for October 16-22 are **45.5°F** and **0.67”**.

30 Day Temp & Precip Outlook



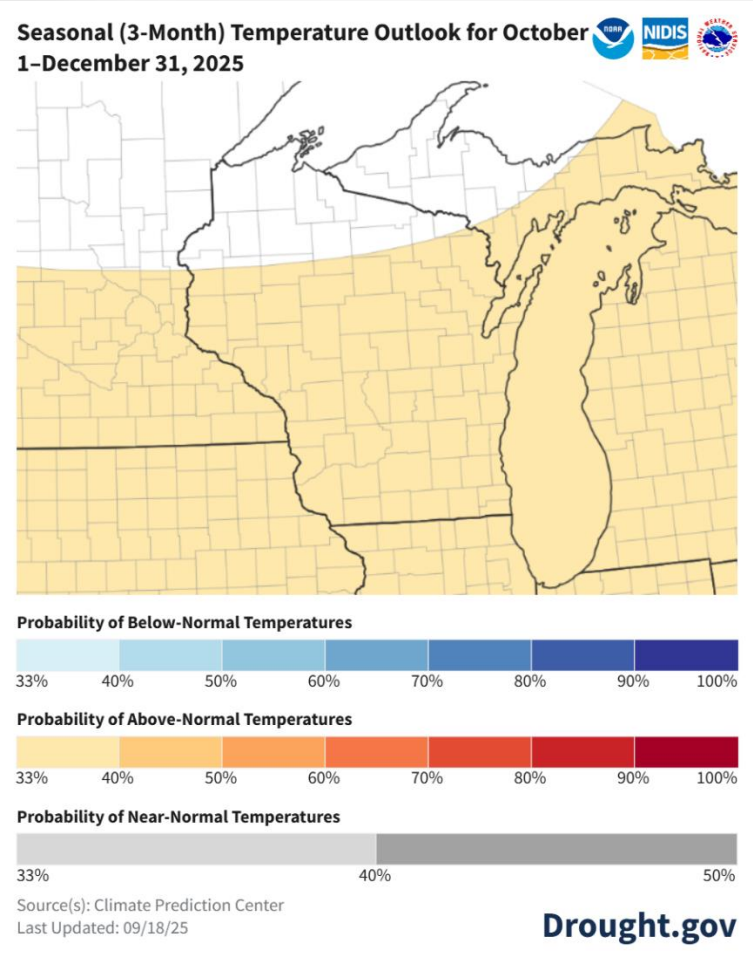


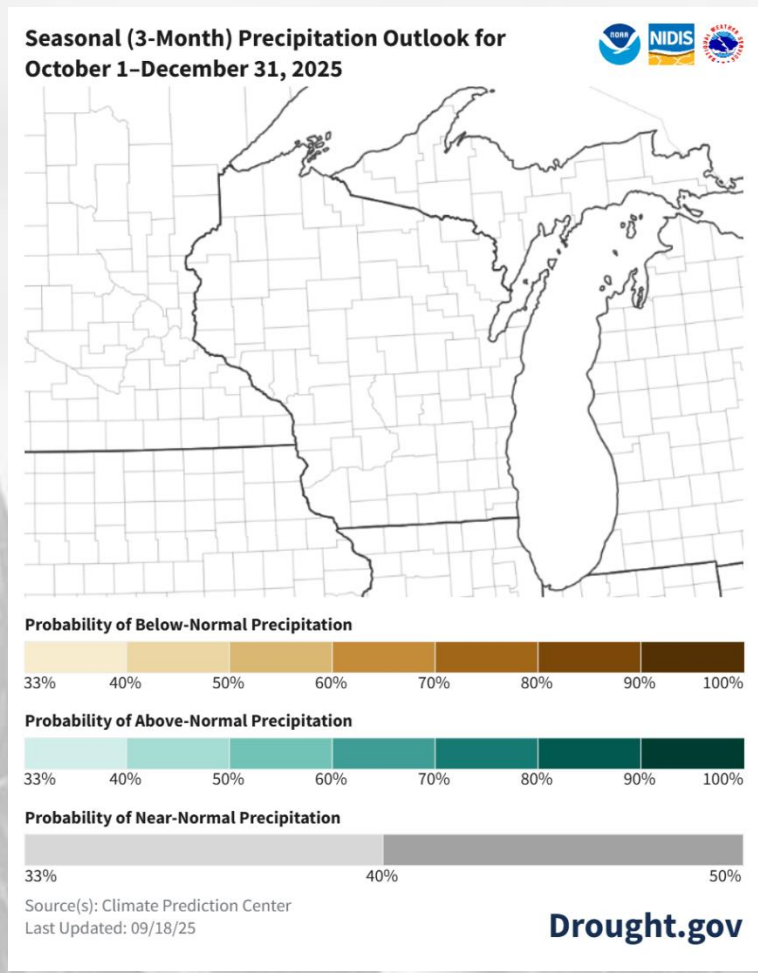
http://www.cpc.ncep.noaa.gov/
https://www.drought.gov/states/wisconsin

Month of October: Strong likelihood (60-70% chance) for above normal temps statewide. Uncertainty for precipitation (equal chances).

- Statewide normals (1991-2020) for October are **46.8°F** and **3.01”**.

90 Day Temp & Precip Outlook





http://www.cpc.ncep.noaa.gov/
https://www.drought.gov/states/wisconsin

Fall to Early Winter 2025: Equal chances for precipitation statewide. Slight lean towards above normal temps for most of WI (uncertainty in the far N).

- Statewide normals (1991-2020) for Oct-Dec are **33.9°F** and **6.52”**.

Take-Home Points

Current Conditions

- **Summertime warmth** remained over the state last week, with temps that were 12°F or more above normal. Multiple days **topped 80°F** statewide, with some in the SW topping 80°F on all days last week.
- Rainfall totals were **relatively low** last week, with most receiving less than a half inch. Totals were **highest in the west-central region**, while some in the SW have received **less than 1" since early September**.

Impact

- Topsoil moisture at most Wisconet research farm stations were **near or below last week's levels** due to lower rainfall totals for most. Satellite-based soil moisture products indicate **increasing dryness statewide**, closer to normal in the west.
- The state is no longer drought-free with the **addition of D1 in the NW and far S**, along with a **>30% increase in D0 coverage**.
- NASS crop progress reports are unavailable this week due to the federal government shutdown.

Outlook

- The best chances for precip over the next 7 days is in the **northwest**, with multiple chances for rain into early next week.
- Climate probabilities for mid-to-late October indicate a **slight lean towards above normal temps** (40-50% chance), with precip leaning **above normal in the west**.
- The outlooks for the month of October *(updated 9/30)* indicate a **strong likelihood** (60-70% chance) for **above normal temps**. Precip is uncertain.

Agronomic Considerations

Field Work and Conditions

- The lack of rainfall has been challenging for cover crop establishment.
- After crop harvest is an ideal time to take soil samples and plan ahead for next year's crop nutrient needs.
- Use the WI Frost Freeze Decision Page as overnight temperatures are dropping.

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.
- Fall is a great time to have manure samples analyzed for nutrient content before spreading. Here is a list of Wisconsin certified labs.
- As you conduct fall spreading, keeping field records is important to estimate nutrient credits for next year's crop and avoid over-application. A2809 can provide guidance on these nutrient estimates.

Pest Management

- Southern Rust has been reported across the state. Heavy disease pressure can cause premature dry down, reduced kernel weight, and lower yield potential.
- In order to prevent weed seed spread from field to field, combine cleaning is essential for reducing seed travel between fields. There have also been many combine fires this year. Keeping combines clean will help minimize risk.

Forage Management

- Silo gas has been present around a variety of silage storage structures this year. Be aware of the dangers of silo gas and stay away from recently filled structures, particularly when the weather is calm with no wind.
- Use the alfalfa cutting tool if you will make a final cut in October to manage for stand persistence.
- Begin sampling and estimating moisture as silage matures. Read corn silage harvest management considerations.
- Foliar disease presence can make silage harvest timing critical. Read these considerations for managing disease at chopping.
- Explore the new Corn Silage Dry Down Monitoring Tool to see what samples are measuring at in your region as well as read regional reports.
- Consider planting a cover crop after silage. This will aid in reducing soil erosion going into winter.
- Avoid immediately grazing frost-damaged sorghum as the risk of prussic acid toxicity is high.

Small Grains

- The window to plant winter wheat is nearing the end (September 20-October 10). Review planting and management guidelines as well as Top 9 suggestions for 2025 establishment.

Fruit Considerations

General

- **Fall Sanitation:** Clean up weeds around trees and vines, mow aisles to allow for better light penetration to aid in decomposition of leaf/plant material.
- **Fall Sanitation:** After leaf drop, chop, compost, remove or burn (where permitted) fallen leaf and plant material to to limit potential for disease inoculum and any overwintering pests.
- **Sanitation**: remove and destroy (chop/compost) fallen fruit ~weekly to prevent any internally developing larvae from reaching maturity, and to limit the spread of disease.
- Wisconsin fruit growers can reference the **Midwest Fruit Pest Management Guide** (MFPMG) for a list of registered products and recommended best practices. View the MFPMG Online or order a hard copy here: MFPMG Hard Copy.
- Brown marmorated stink bug has been observed at West Madison. Keep an eye out for large populations. Hosts include apple, cherry, peach, pear, raspberry, and cranberry.
- **Reminder:** Always read and follow directions on the label and keep in mind pre-harvest intervals (PHI) as we move through harvest!

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).

Grapes

- Table and wine grape harvest is completed at West Madison Ag. Research Station and the Peninsular Ag. Research Station. Check out the September 24 WI Fruit Crop Scouting Report for the most recent update on grape maturity testing.
- Grape growers dealing with uneven ripening may reference this 2024 WI Fruit News article: Understanding and Addressing Uneven Ripening in Grapes.

Vegetable Considerations

General

- As crops finish up for the season, there is still time to **establish a winter rye cover crop** across the state. Rye has many potential benefits including prevention of erosion and holding nutrients in the soil, but keep in mind that cover crop benefits are strongly related to biomass. Knowing the planting window for your county can help you predict the amount of biomass and thus the likely cover crop benefits. If you are planting towards the end of the window, it is recommended to increase seeding rate to achieve more biomass. More management suggestions can be found here.
- Pest management for next year's crops starts this fall as many insects and diseases overwinter on crop residue. **Residue management** (either removing or tilling in residue) **can help reduce next year's pest and disease pressure**. Pests include asparagus beetles, crucifer flea beetles, imported cabbage worms, squash bugs, onion maggots and more. Diseases include angular leaf spot, early blight, stemphylium leaf blight, brassica alternaria, and phytophthora blight of cucurbits. Additional info can be found here.

Pests

- If you are noticing distorted & stunted leaves or russeting on your high tunnel peppers, you might have **broad mites or cyclamen mites**. These mites also feed on a wide range of flowers including dahlias and snapdragons. They can be difficult to control as they hide in developing buds and the distorted leaves. Management options include releasing predatory mites if pest populations are not too high and chemical controls.
- Be on the lookout for **cabbage aphids** and **green peach aphids** in fall brassicas & greens. They can be difficult to see so look for yellowing & wilting leaves, deformed heads, & drops of honeydew aka aphid poop which is a thick, sticky liquid. Their populations can explode quickly in the fall as reproduction rates actually increase in cool temps (50-68°F).
- The risk of damage from **western flower thrips** remains high across northern WI and along lake Michigan. Management options include promoting more beneficial insects such as minute pirate bugs, using reflective mulch, and chemical control. More details on control options can be found here.

Diseases

- Brassica **alternaria** was recently identified in Dane County. Leaf spots are grey or black in color and have concentric rings as they enlarge. Spores can be spread by rain, wind, and insects like flea beetles. Although due to their larger size, spores cannot travel as far on the wind as downy or powdery mildew spores. If your brassicas are infected, be sure to remove or till in the infected plant tissue to reduce overwintering sites in your field. Other management options include planting resistant varieties, removing alternative hosts such as shepherd's purse and field mustard, and fungicides.
- While **powdery mildew** will not infect the fruit of pumpkins, the stems can be infected resulting in shriveled and weak stems for Halloween pumpkins. It is recommended to cut the stems even if the pumpkins are not fully mature as they will ripen off the vine. Additionally, if vines die back from powdery mildew, the fruit can be susceptible to sunscald so be sure to monitor your crop in the field.
- This year's moisture stress combined with high temperatures can increase the risk of potato tuber diseases during this time of year. Test dig potatoes to look for pink eye, enlarged lenticels, and other physiological conditions. If you notice any of these abnormalities, make sure you are carefully monitoring for disease in storage. Diseases to be monitoring for include **pink rot**, **late blight**, **pythium leak**, and **bacterial soft rot**. More information on symptoms and management options can be found here.

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 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

Contact Info

Josh Bendorf
Climate Outreach Specialist
Wisconsin State Climatology Office
jbendorf@wisc.edu

Bridgette Mason
Assistant State Climatologist
Wisconsin State Climatology Office
bmmason2@wisc.edu

Steve Vavrus
State Climatologist
Wisconsin State Climatology Office
sjvavrus@wisc.edu

Anastasia Kurth
Regional Crops & Soils Educator
Sauk, Juneau, and Richland Counties
UW-Madison Division of Extension
anastasia.kurth@wisc.edu

Emilee Gaulke
Diversified Vegetable Educator
Waukesha County
UW-Madison Division of Extension
emilee.gaulke@wisc.edu

Derrick Raspor
GLRI Field Coordinator
Wisconsin USDA-NRCS
derrick.raspor@usda.gov