



Extension

UNIVERSITY OF WISCONSIN-MADISON



Wisconsin State Climatology Office

UNIVERSITY OF WISCONSIN-MADISON



AgWOW

Ag Weather Outlook for Wisconsin

Week of October 21, 2025

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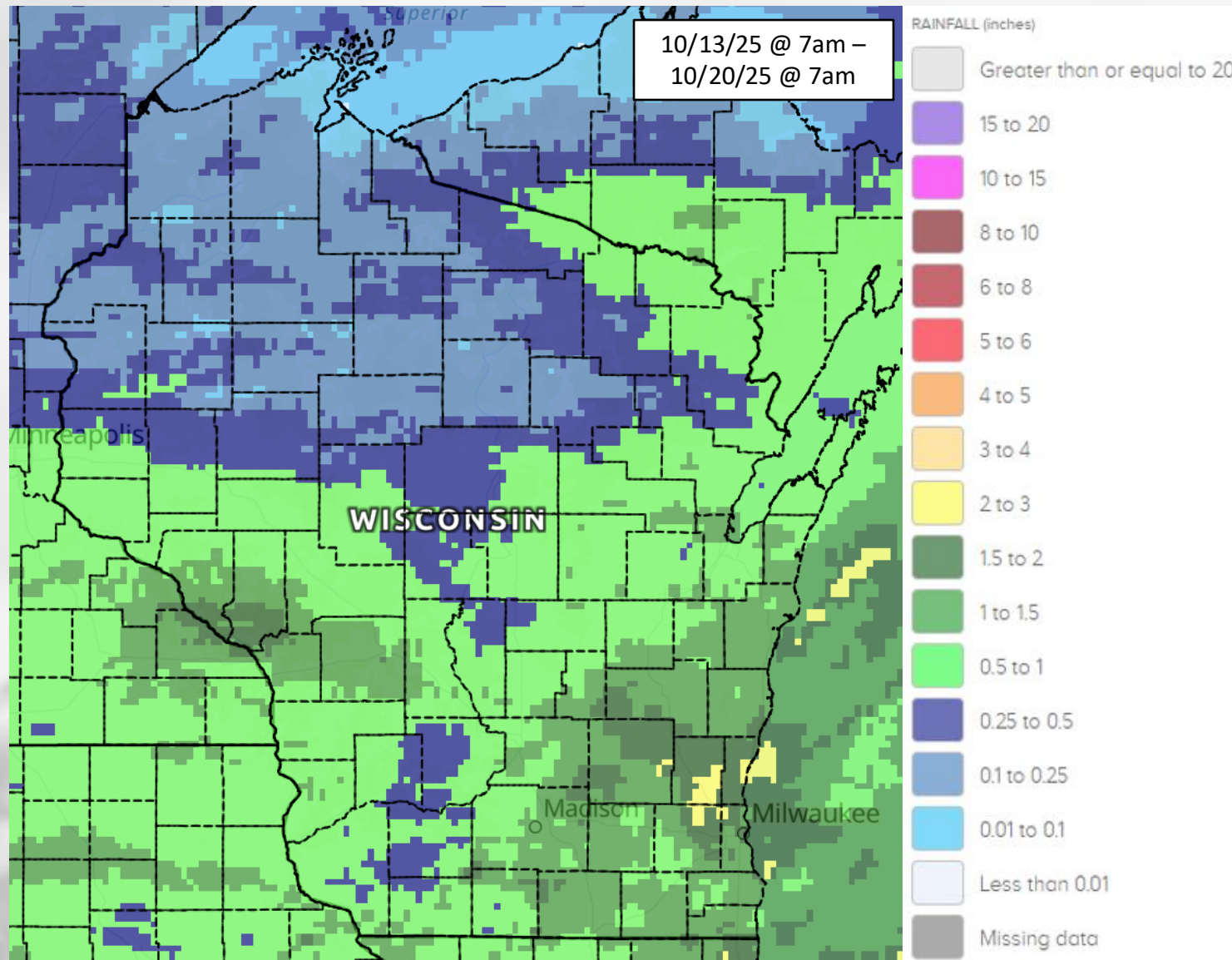
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Key Points

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

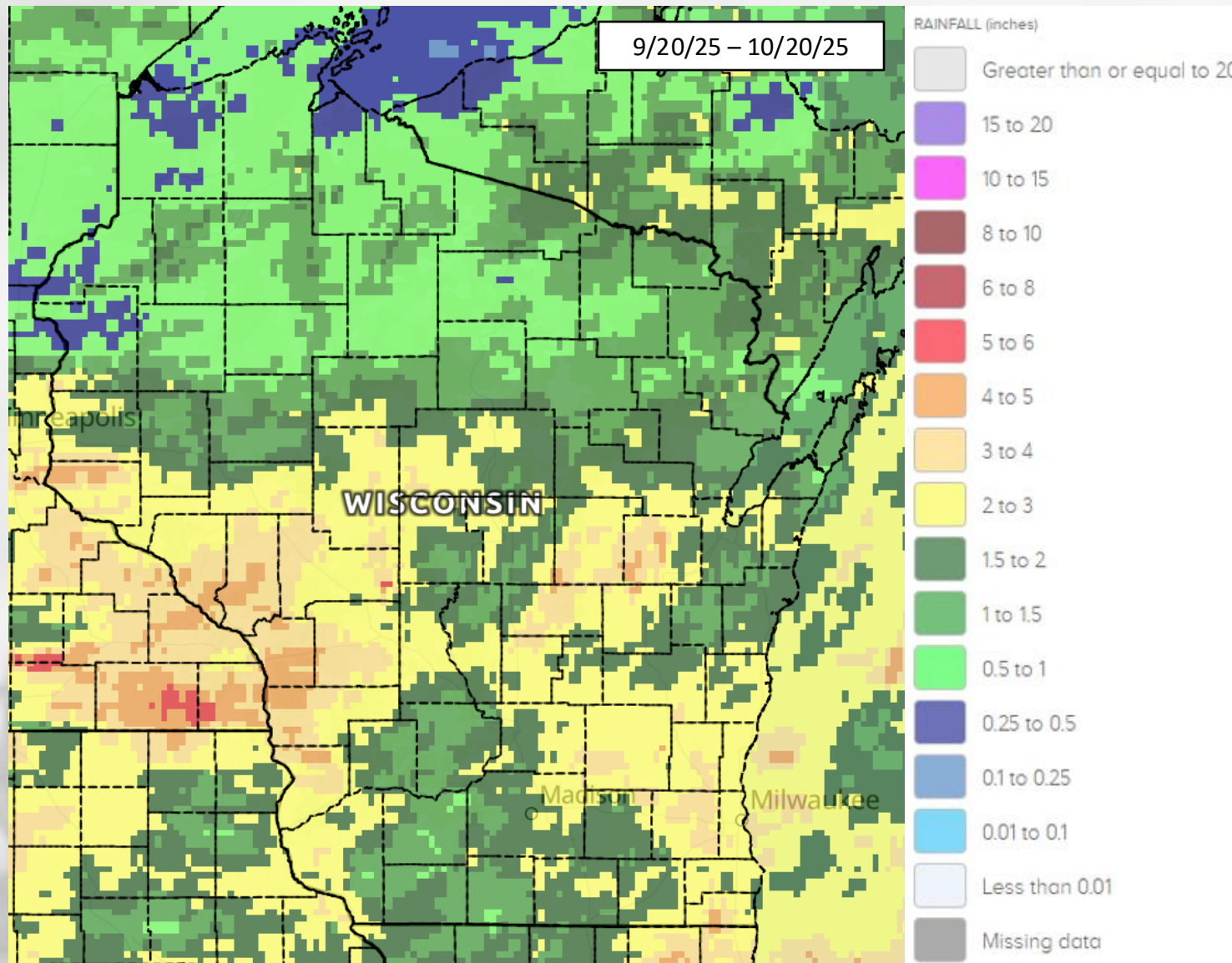
- 1) Most of WI finally saw rain, with 7-day totals of [0.25-3"](#). 30-day totals are still [well below normal](#) for most.
 - 2) Temps were several degrees [above normal](#) last week.
 - 3) Drought coverage was [unchanged](#) from last week, with small changes in [topsoil moisture](#) at Wisconet sites.
 - 4) Outlooks for the [Oct-Nov transition](#) indicate a slight lean towards warmer-than-normal temps.
- *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.***

7 Day Precip (radar estimates)



- **Statewide** rainfall of **more than 0.25"** was seen for the first time in the last month.
- **0.25-0.5"** for north-central and northwest WI.
- **0.5-1"** for NE WI and most of the southern two-thirds.
- Pockets of **2-3"** in SE WI.

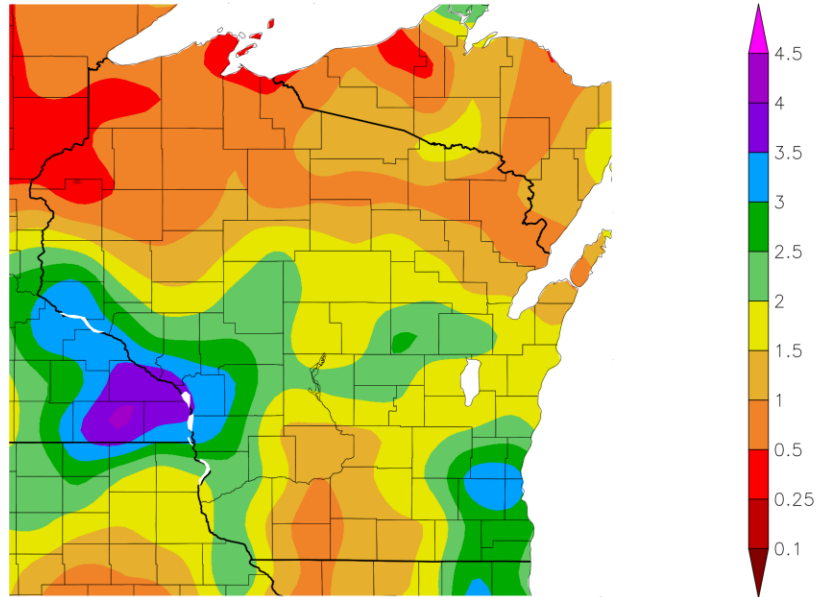
30 Day Precip (radar estimates)



- Large area of **2-5"** across the west-central to SW and parts of east-central to SE regions.
- Driest in south-central, far east-central, and northern WI → **2" or less**

30 Day Precip Total/Percent Avg.

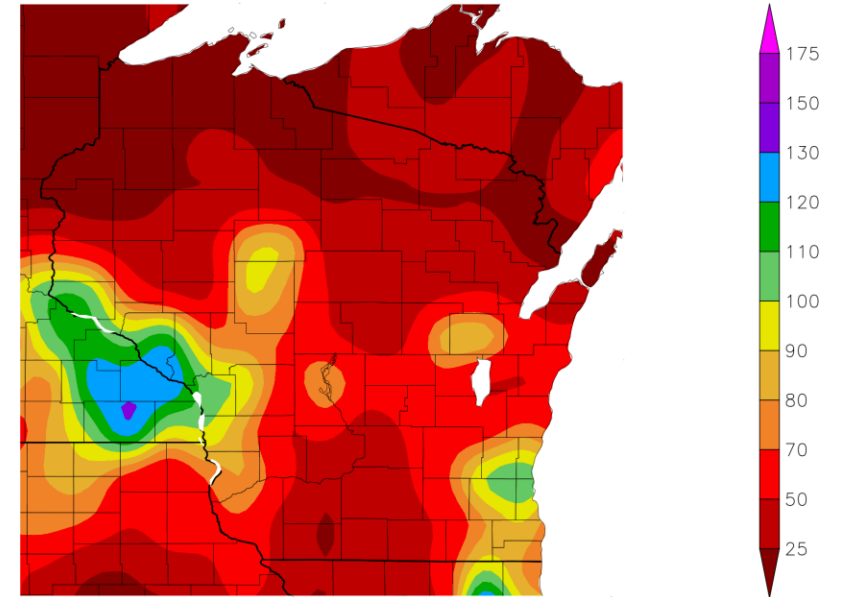
Precipitation (in)
9/21/2025 – 10/20/2025



Generated 10/21/2025 using provisional data.

ACIS Web Services

Percent of Normal Precipitation (%)
9/21/2025 – 10/20/2025



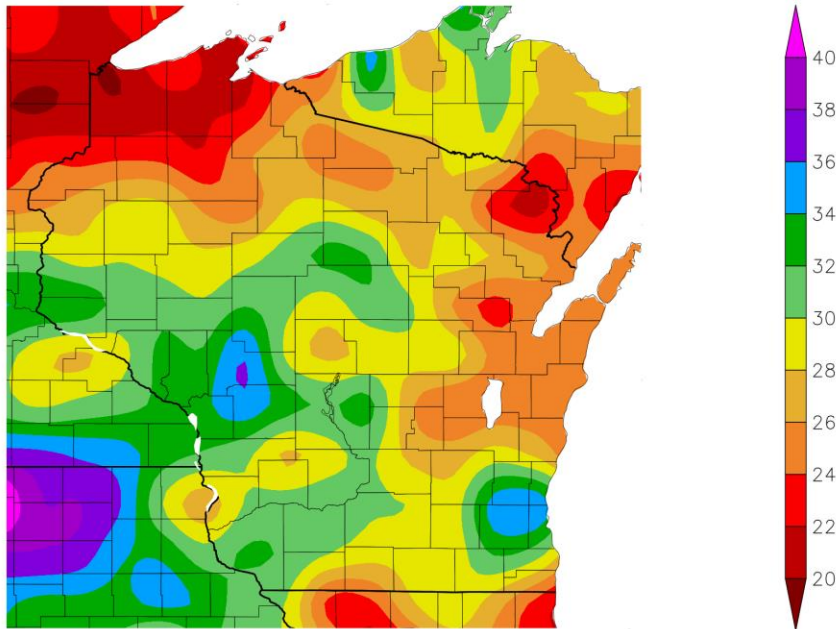
Generated 10/21/2025 using provisional data.

ACIS Web Services

- **Below normal** for most of WI over the past 30 days → **25-70% common**, with regions of **<25%** the N and a small pocket in the S.
 - **1" or less** for many since Sept. 21.
- **Localized areas** of above normal precipitation in west-central and SE WI, where totals were **3" or more**.

2025 Precipitation (so far)

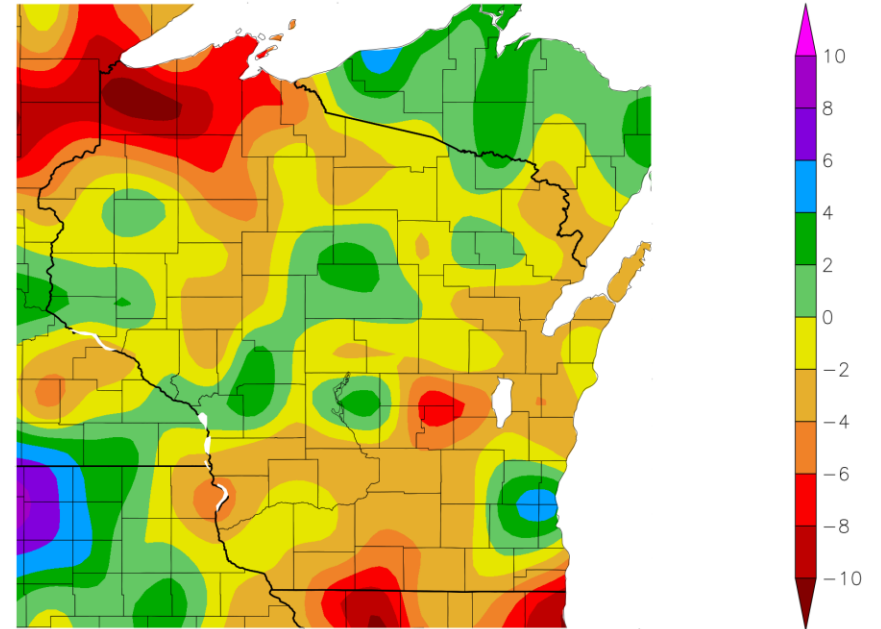
Precipitation (in)
1/1/2025 – 10/20/2025



Generated 10/21/2025 using provisional data.

ACIS Web Services

Departure from Normal Precipitation (in)
1/1/2025 – 10/20/2025



Generated 10/21/2025 using provisional data.

ACIS Web Services

Soil Moisture Models

- **Similar conditions** compared to last week, with the driest soil moisture conditions in the **north and east**.
- **Below-normal** conditions across most of WI, with pockets of near-normal conditions around central and western WI.
- **Above-normal** conditions emerging in Milwaukee County.

Model Notes:

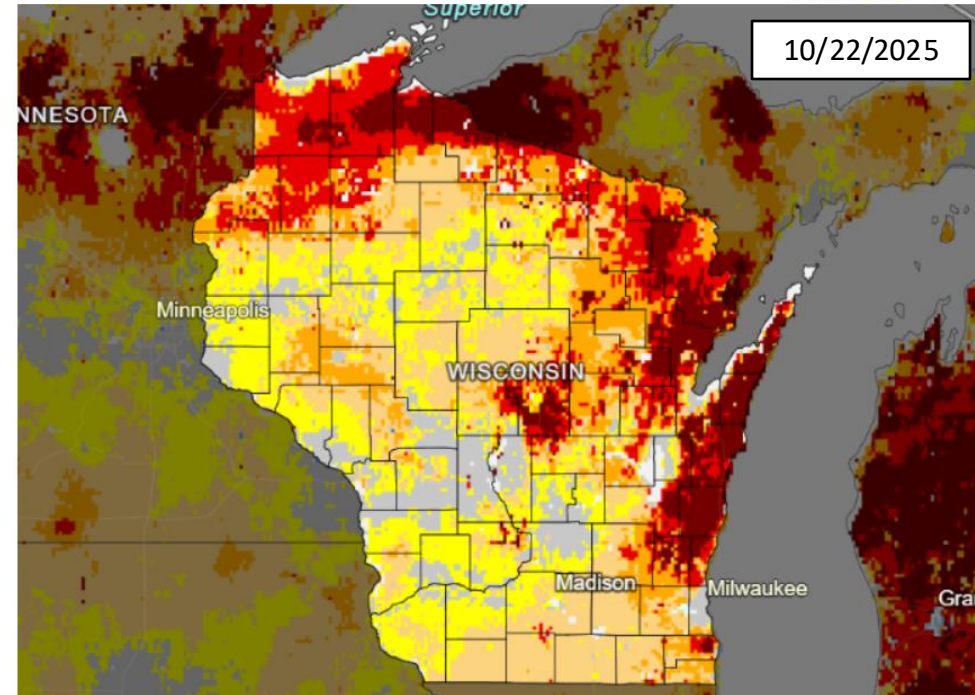
Red areas = top 5 driest in 100 years.

Dark red areas = top 2 driest in 100 years.

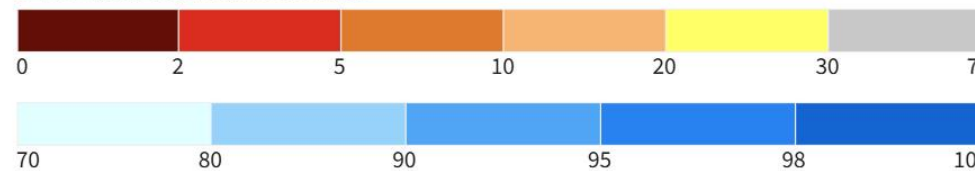
Blue areas = top 2 wettest in 100 years.

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.

NASA SPoRT-LIS 0-100 cm Soil Moisture Percentile



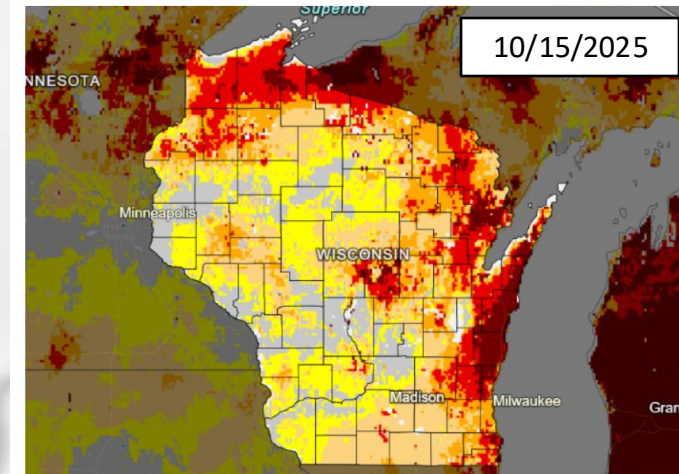
0-100 cm Soil Moisture Percentile



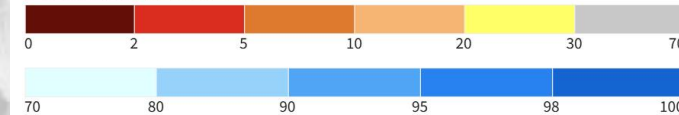
Source(s): NASA
Data Valid: 10/22/25

Drought.gov

NASA SPoRT-LIS 0-100 cm Soil Moisture Percentile



0-100 cm Soil Moisture Percentile

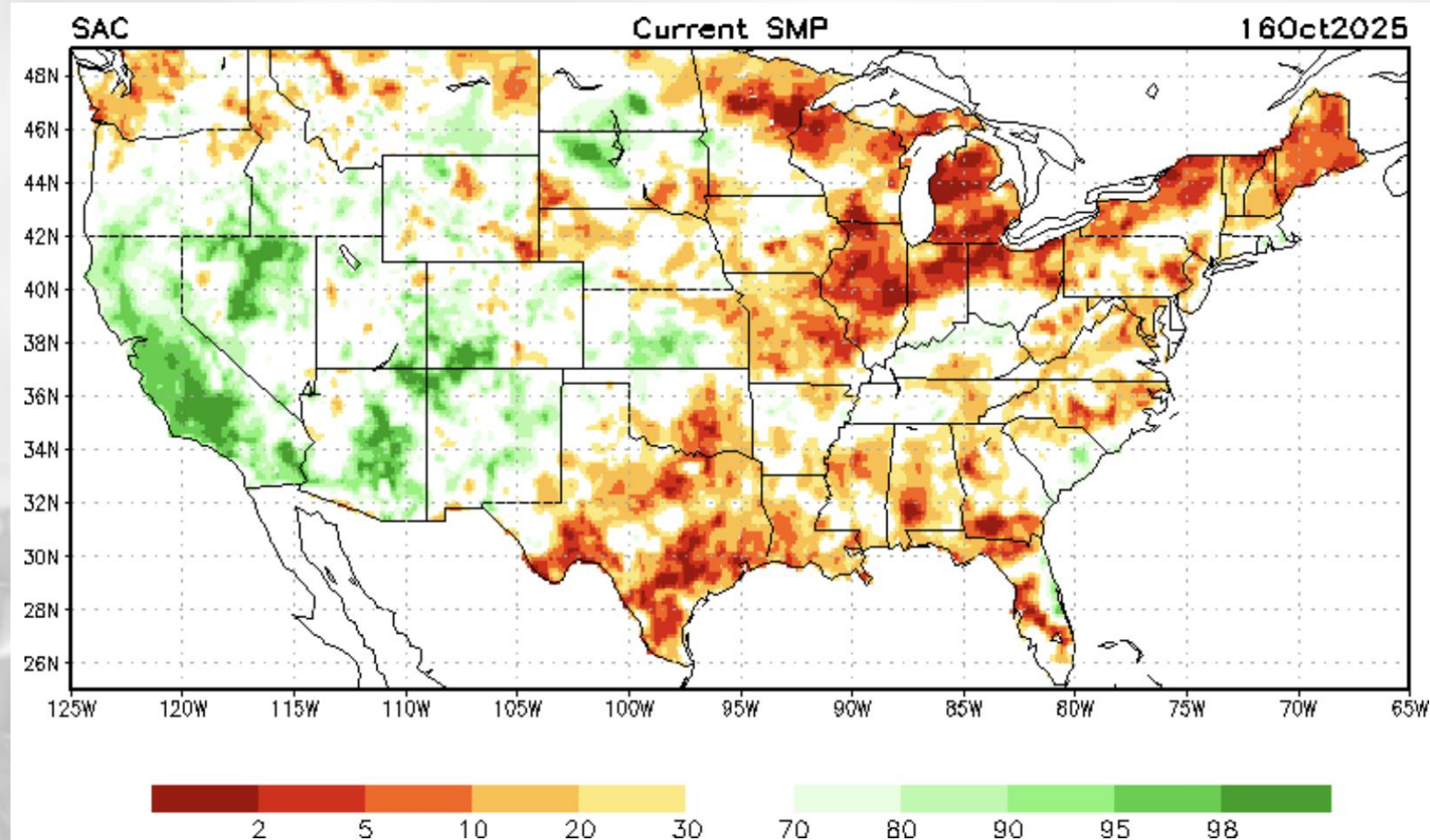


Source(s): NASA
Data Valid: 10/15/25

Drought.gov

Soil Moisture Models

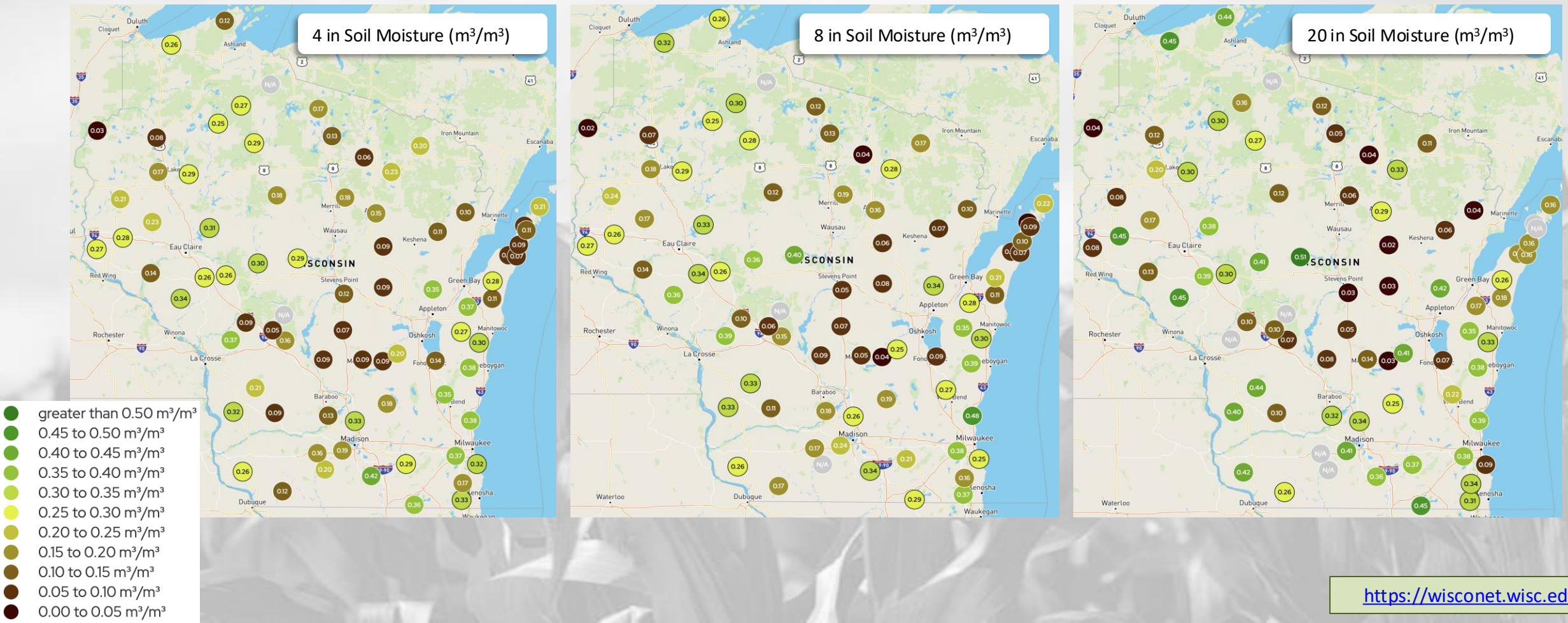
NOTE: this map displays the soil moisture percentile for Oct 16. It was the most recent update as of Oct 21.



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

Wisconet Soil Moisture

Maps showing soil temperature conditions on October 20th @ 12:00 pm.
Units of map values are {Volume of water}/{Volume of soil}.



Wisconet Soil Moisture

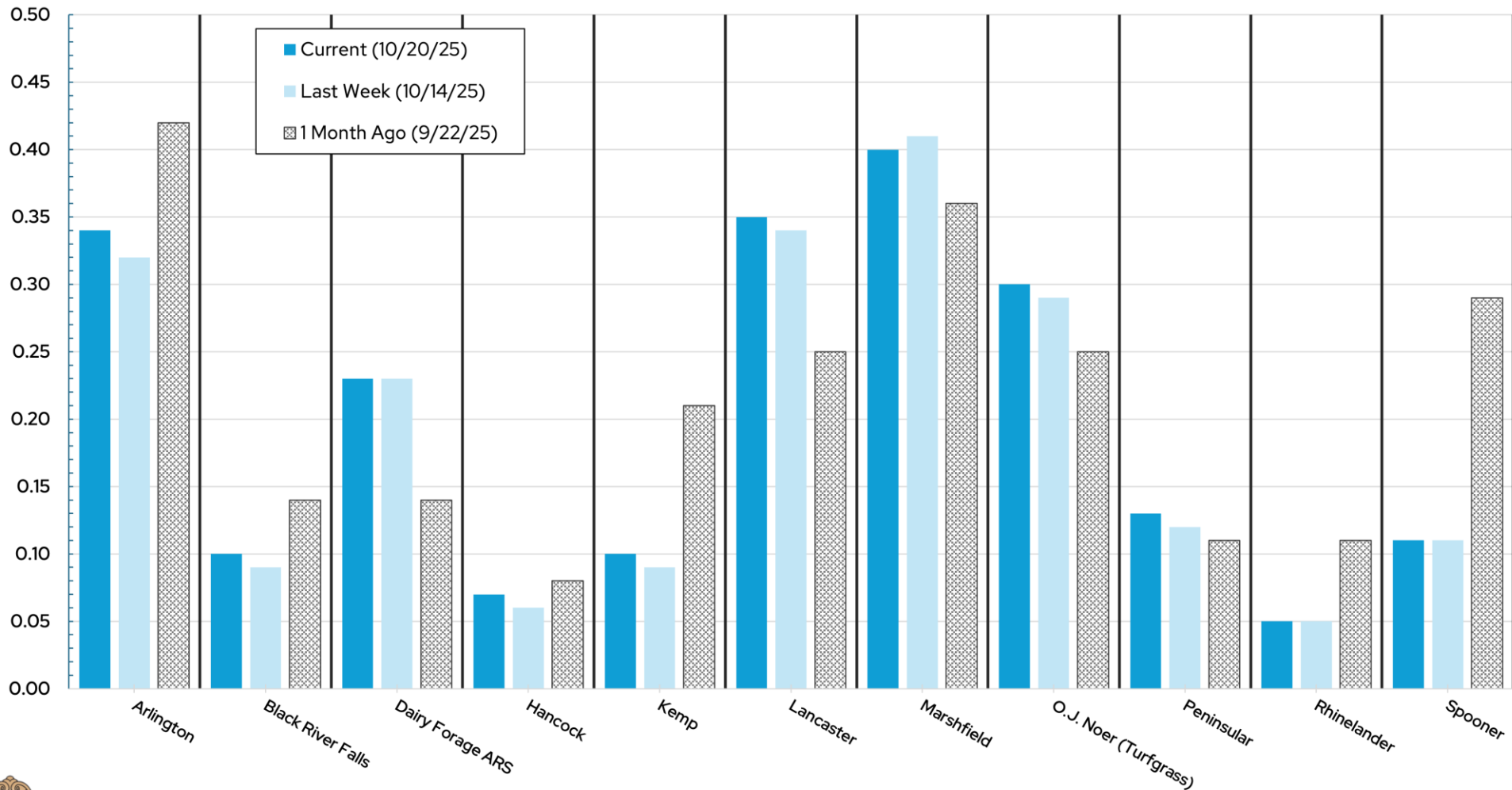
Change in soil moisture from October 14th (Start) to October 20th (End).
Units of change values are {Volume of water}/{Volume of soil}.

Research Farm	County	Total Precip (in)	4" Change (Start) (End)		8" Change (Start) (End)		20" Change (Start) (End)	
Arlington	Columbia	0.76	0.32	0.34	0.27	0.30	0.30	0.30
Black River Falls	Jackson	0.82	0.09	0.10	0.08	0.10	0.10	0.10
Dairy Forage ARS	Sauk	0.58	0.23	0.23	0.16	0.15	0.25	0.25
Hancock	Waushara	0.51	0.06	0.07	0.05	0.07	0.05	0.05
Kemp	Oneida	0.34	0.09	0.10	0.13	0.13	0.09	0.09
Lancaster	Grant	0.54	0.34	0.35	0.25	0.26	0.33	0.34
Marshfield	Marathon	0.58	0.41	0.40	0.35	0.35	0.47	0.46
O.J. Noer (<i>Turfgrass</i>)	Dane	1.04	0.29	0.30	0.18	0.22	0.30	0.33
Peninsular	Door	0.37	0.12	0.13	0.09	0.10	0.13	0.13
Rhinelanders	Oneida	0.43	0.05	0.05	0.05	0.05	0.04	0.04
Spooner	Washburn	0.26	0.11	0.11	0.09	0.08	0.10	0.10

Wisconet Soil Moisture

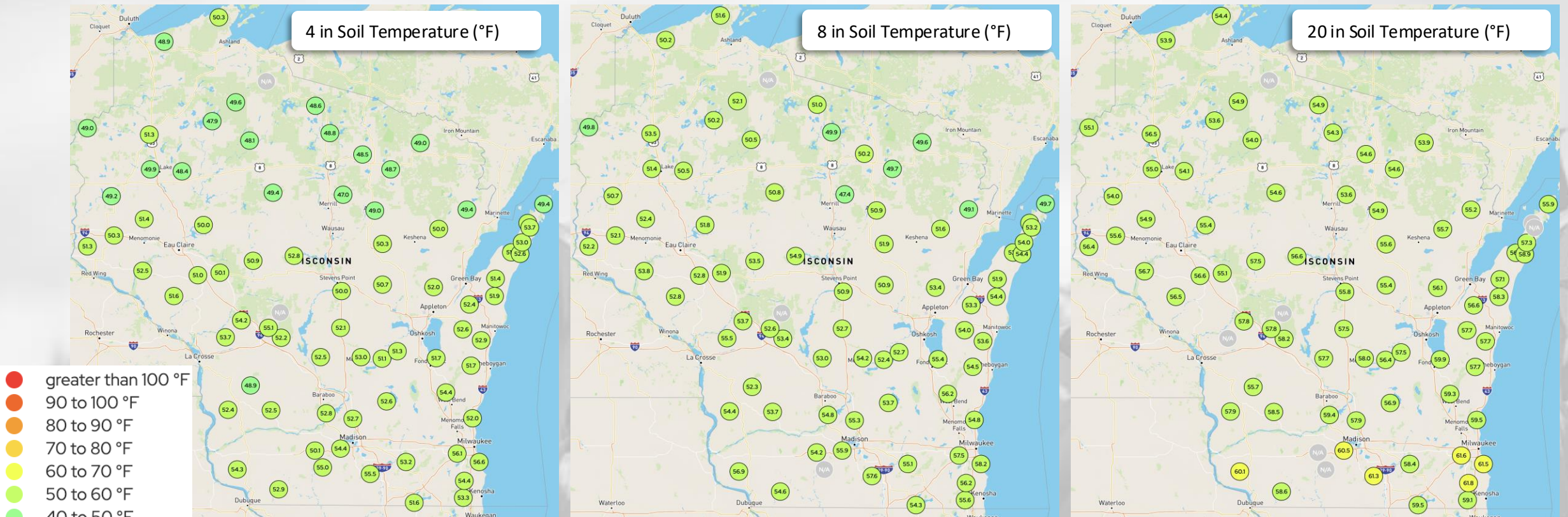
Wisconet 4" Soil Moisture Change

UW Research Farms



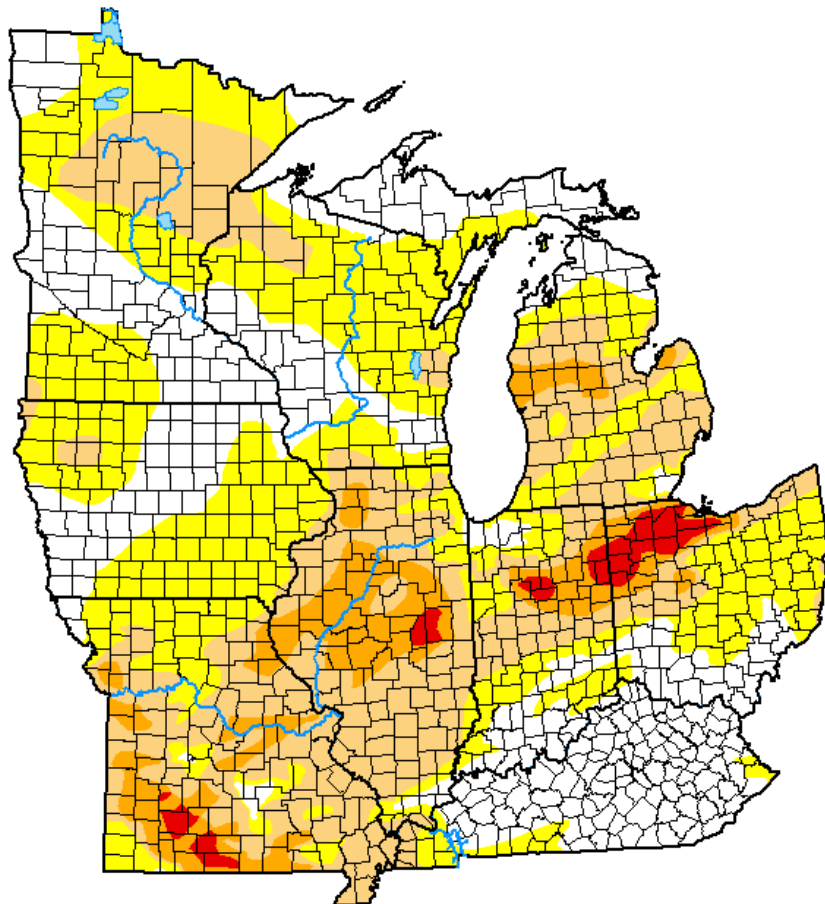
Wisconet Soil Temperature

Maps showing soil temperature conditions on
October 20th @ 12:00 pm.



US Drought Monitor

U.S. Drought Monitor Midwest



October 21, 2025
(Released Thursday, Oct. 23, 2025)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	28.80	71.20	36.35	9.74	1.71	0.00
Last Week 10-14-2025	27.68	72.32	37.72	14.59	2.08	0.00
3 Months Ago 07-22-2025	88.84	11.16	4.23	0.21	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 09-30-2025	34.12	65.88	34.69	10.17	0.37	0.00
One Year Ago 10-22-2024	11.85	88.15	65.96	24.06	2.45	0.66

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:

Richard Tinker
CPC/NOAA/NWS/NCEP



droughtmonitor.unl.edu

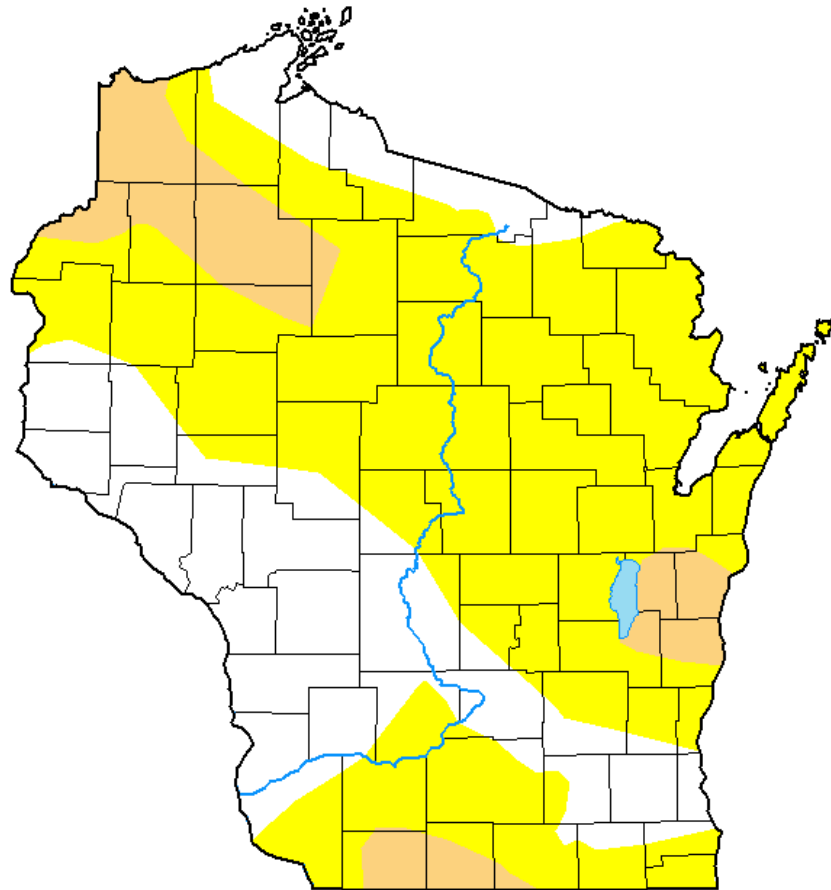
- Midwest: Compared to last week:
 - Small decrease in coverage at all drought levels.
- Midwest: **1 class improvements** across southern IL into southeast MO. **D1 expansion** in northern MN.
- Wisconsin: **Unchanged** from last week.
- **63.6%** of the Midwest is drought free (~36.4% in D1-D4).

Note: D0 is not considered drought.

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

US Drought Monitor

U.S. Drought Monitor Wisconsin



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

October 21, 2025

(Released Thursday, Oct. 23, 2025)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	30.71	69.29	10.85	0.00	0.00	0.00
Last Week 10-14-2025	30.71	69.29	10.86	0.00	0.00	0.00
3 Months Ago 07-22-2025	99.24	0.76	0.00	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 09-30-2025	64.44	35.56	0.00	0.00	0.00	0.00
One Year Ago 10-22-2024	0.00	100.00	77.11	30.39	0.00	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>

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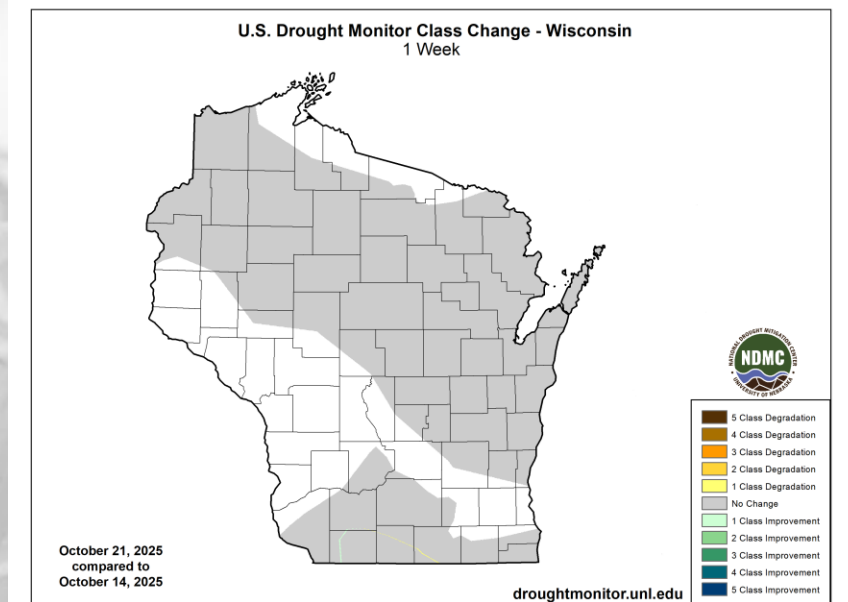


droughtmonitor.unl.edu

Amount of state in:

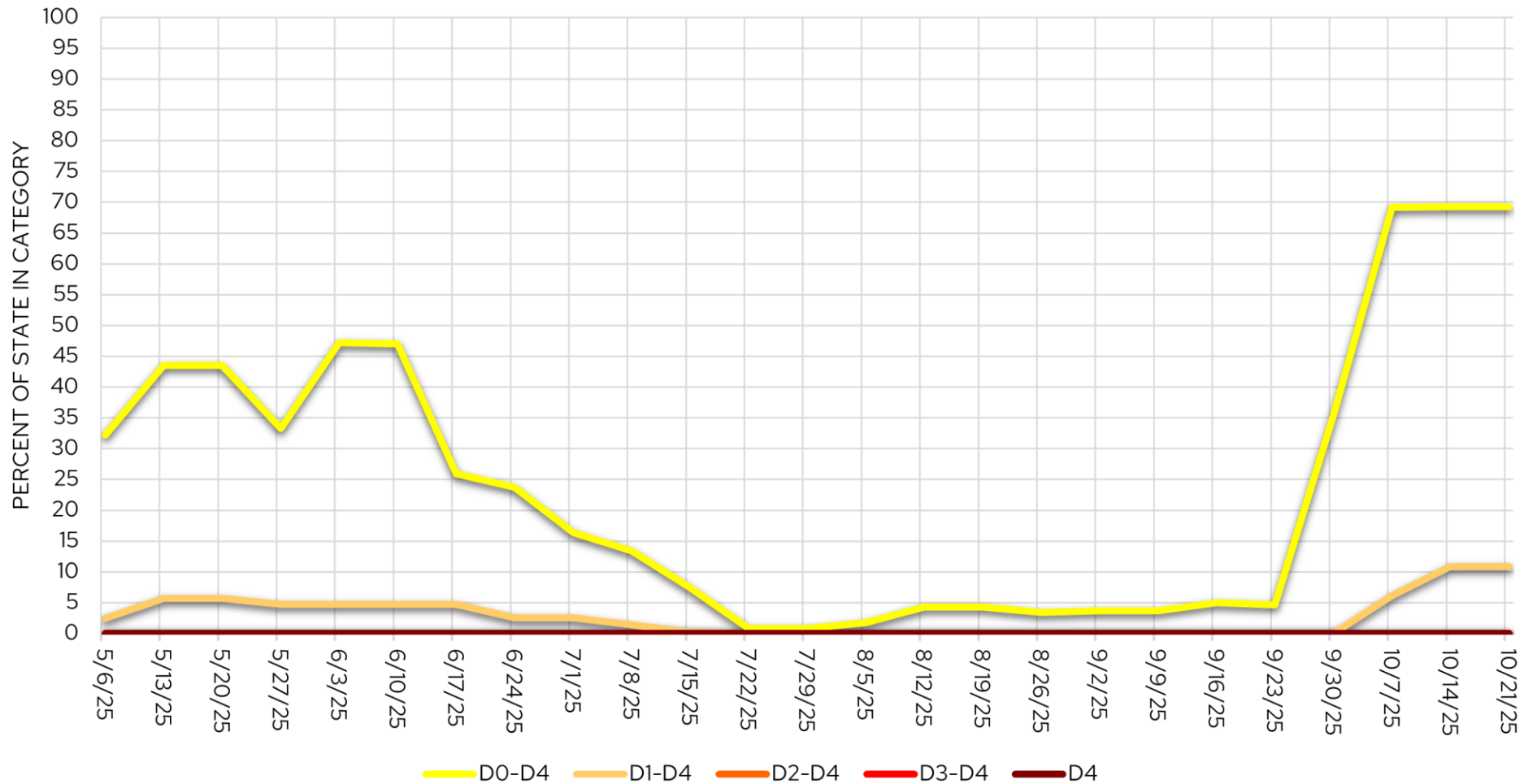
- D1-D4 – 10.9% --
- D2-D4 – 0.0% --
- D3-D4 – 0.0% --
- D4 – 0.0% --

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

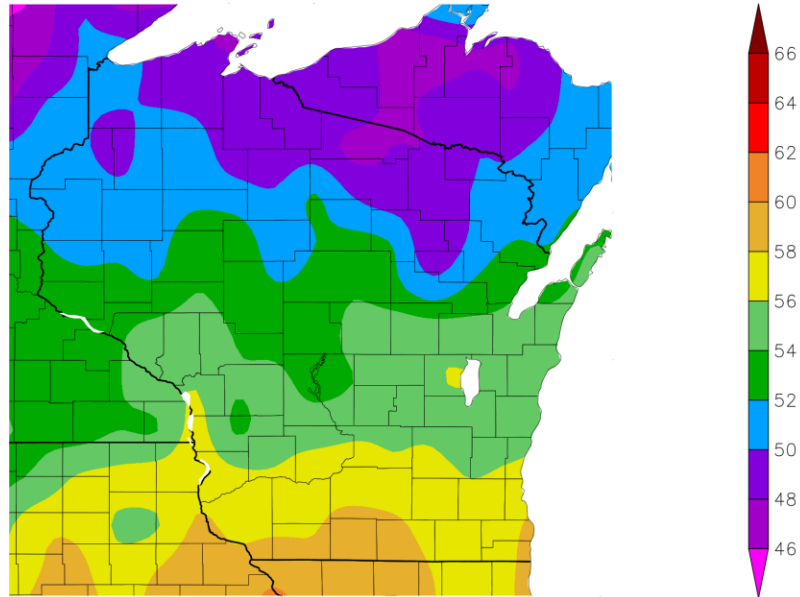
Wisconsin Drought Time Series (USDM)



No change in drought coverage from last week.

7 Day Temperatures

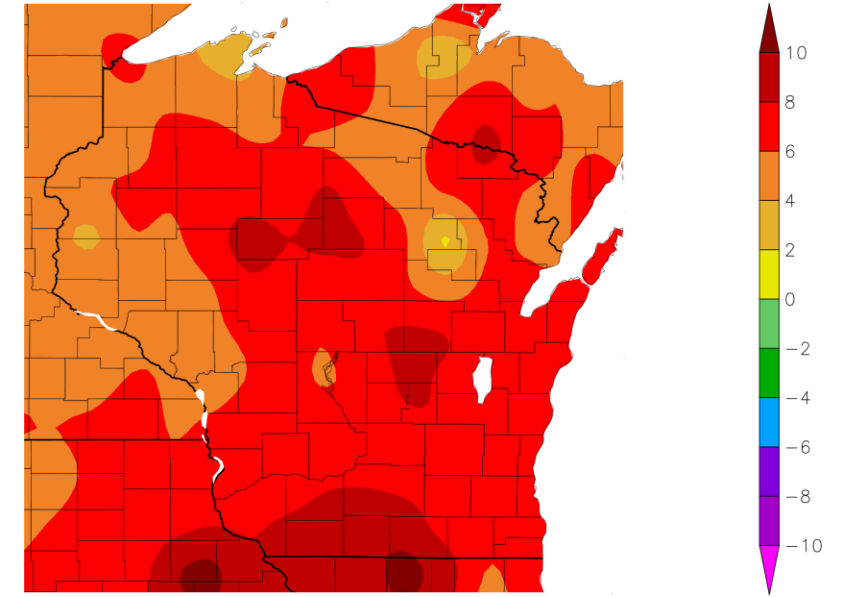
Temperature (F)
10/14/2025 – 10/20/2025



Generated 10/21/2025 using provisional data.

ACIS Web Services

Departure from Normal Temperature (F)
10/14/2025 – 10/20/2025



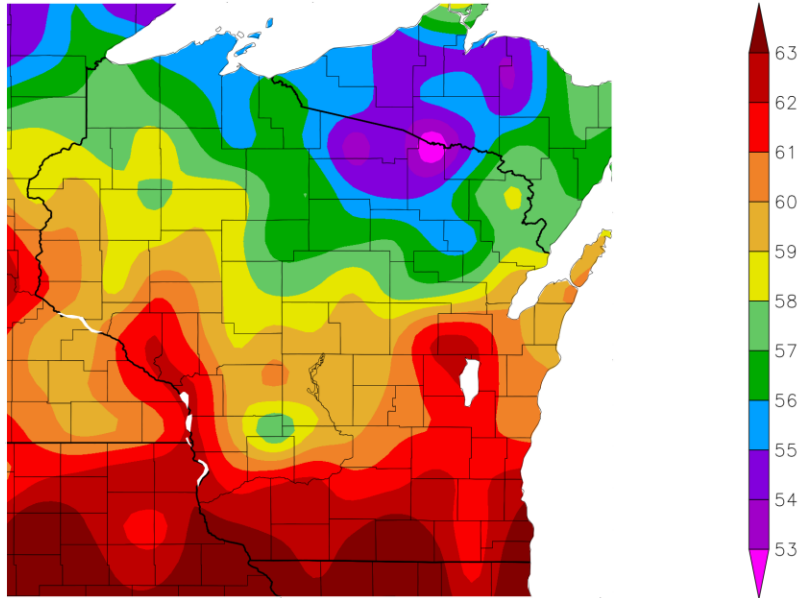
Generated 10/21/2025 using provisional data.

ACIS Web Services

- Average temp. range of **56-60°F** in the south; **46-50°F** in the far north.
- **4-8°F above normal** for most; pockets of **8-10°F** above normal in southern and central WI.

30 Day Temperatures

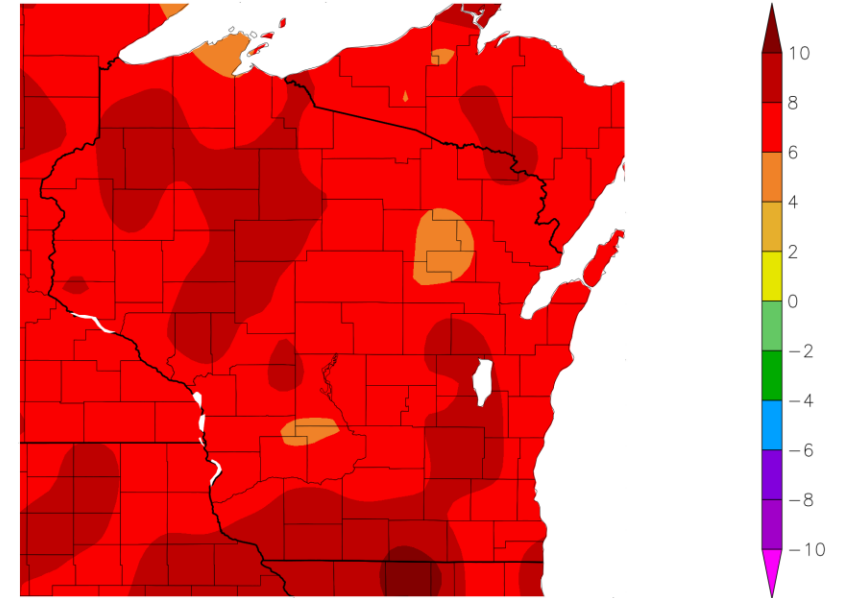
Temperature (F)
9/21/2025 - 10/20/2025



Generated 10/21/2025 using provisional data.

ACIS Web Services

Departure from Normal Temperature (F)
9/21/2025 - 10/20/2025



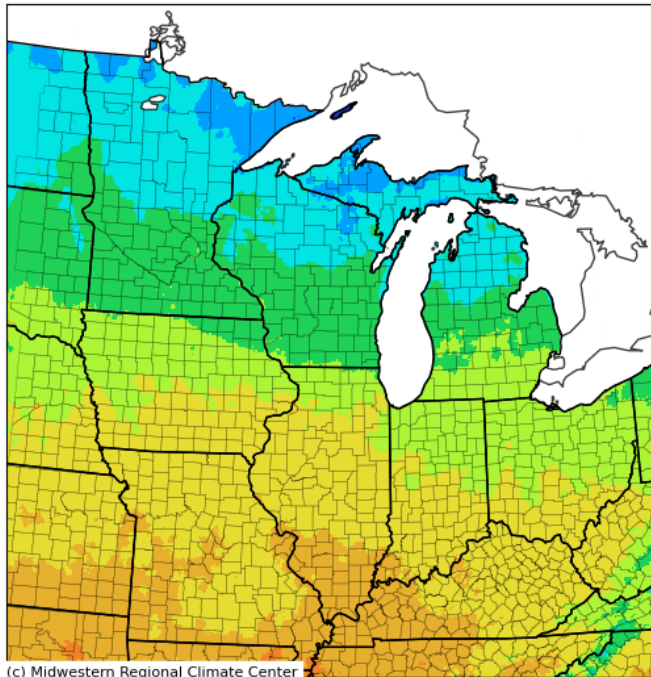
Generated 10/21/2025 using provisional data.

ACIS Web Services

- Average temps. ranged from **61-63°F** in the south, west-central, and east-central regions; **53-57°F** for the north.
- **6-8°F above normal** across most of the state.

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

Total MGDD (50°F/86°F)
May 01, 2025 to October 17, 2025

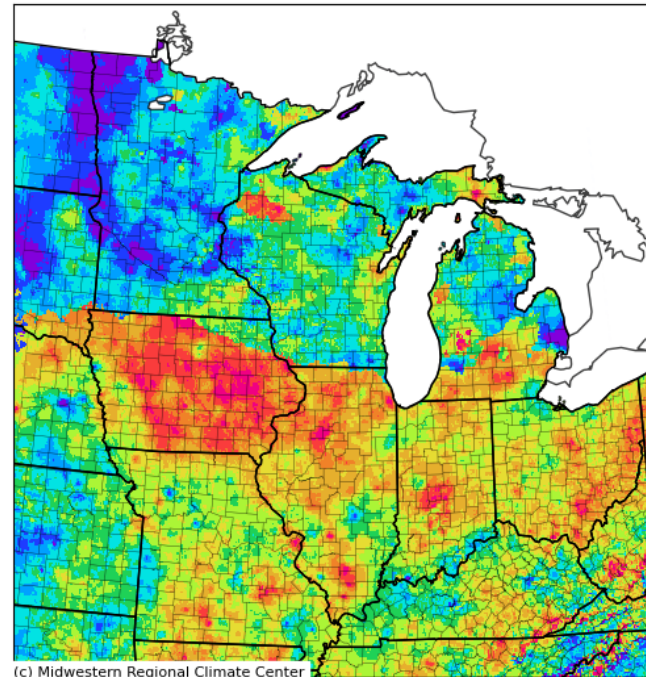


(c) Midwestern Regional Climate Center

Source: PRISM Weather Data

Generated on: Sat Oct 18, 2025 20:10:40 EDT

Total MGDD (50°F/86°F): Departure from 1991-2020 Normals
May 01, 2025 to October 17, 2025



(c) Midwestern Regional Climate Center

Source: PRISM Weather Data

Generated on: Sat Oct 18, 2025 20:13:42 EDT

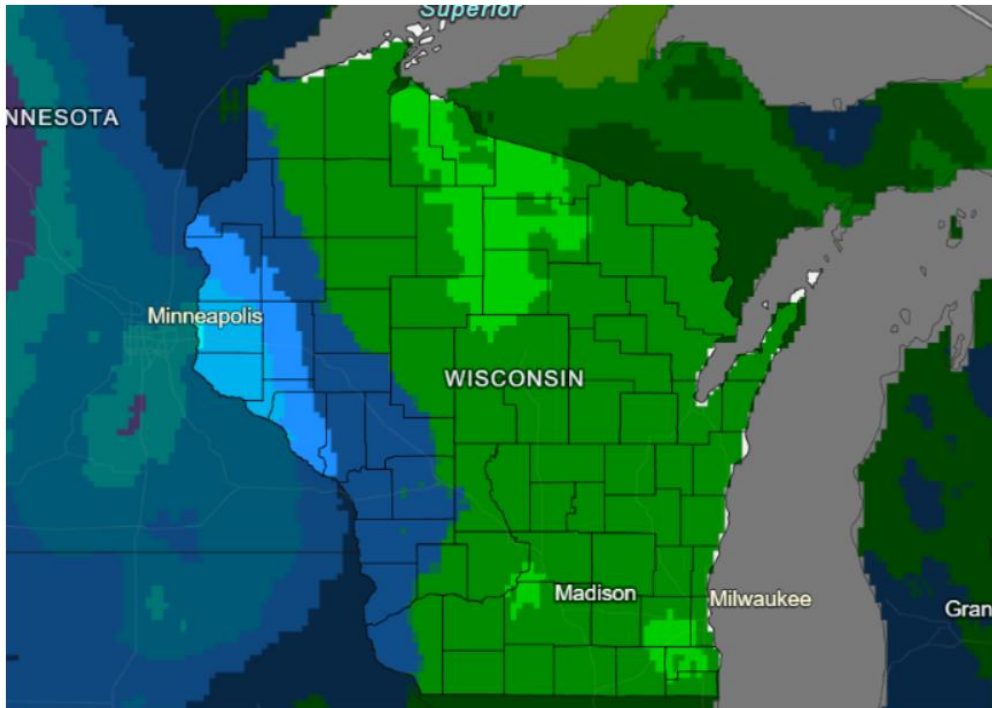
- Range from **2300-2800 GDD** in the southern two-thirds of WI to **1800-2300 GDD** in the N.
- GDD accumulation is running **10-180 GDD ahead of schedule** across most of WI. Some areas **below normal**.

To calculate GDD for your corn variety and planting date, use this [tool](#).

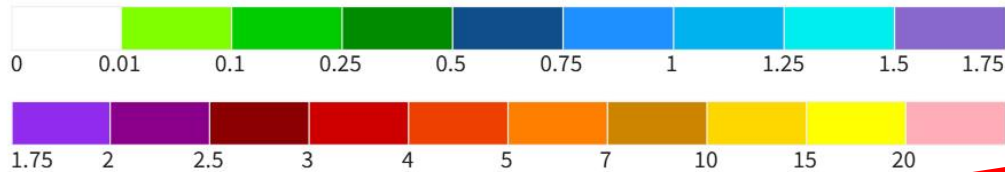
To see specific degree models for pests in your location, use the [Vegetable Disease & Insect Forecasting Network](#).

7 Day Precip Forecast

7-Day Quantitative Precipitation Forecast for October
23-30, 2025



Predicted Inches of Precipitation



Source(s): National Weather Service Weather Prediction Center
Last Updated: 10/23/25

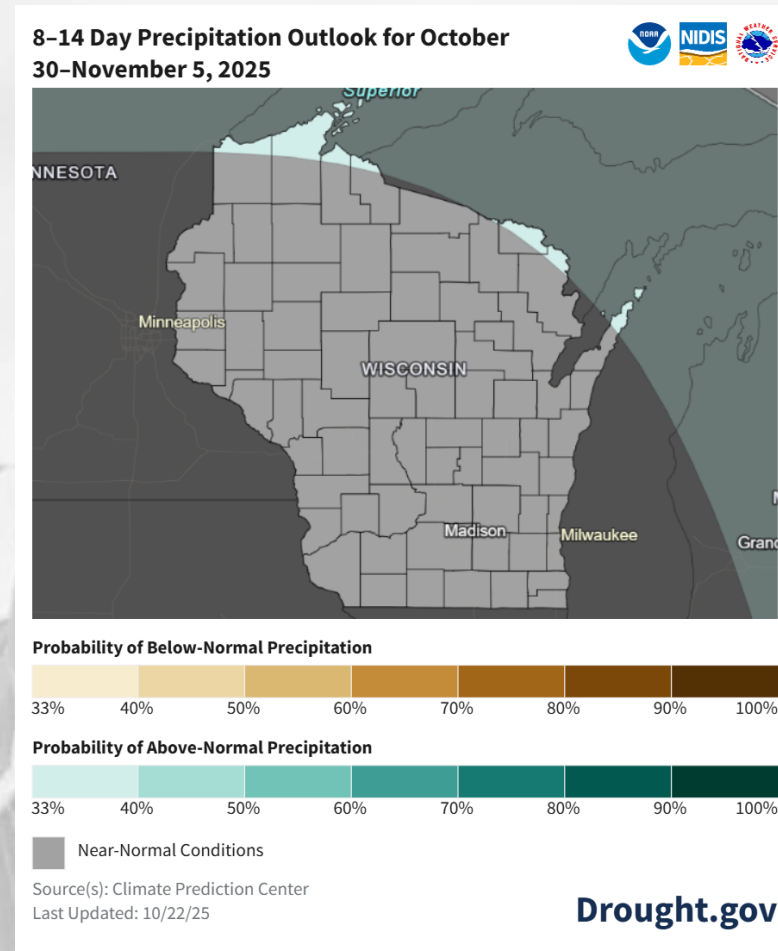
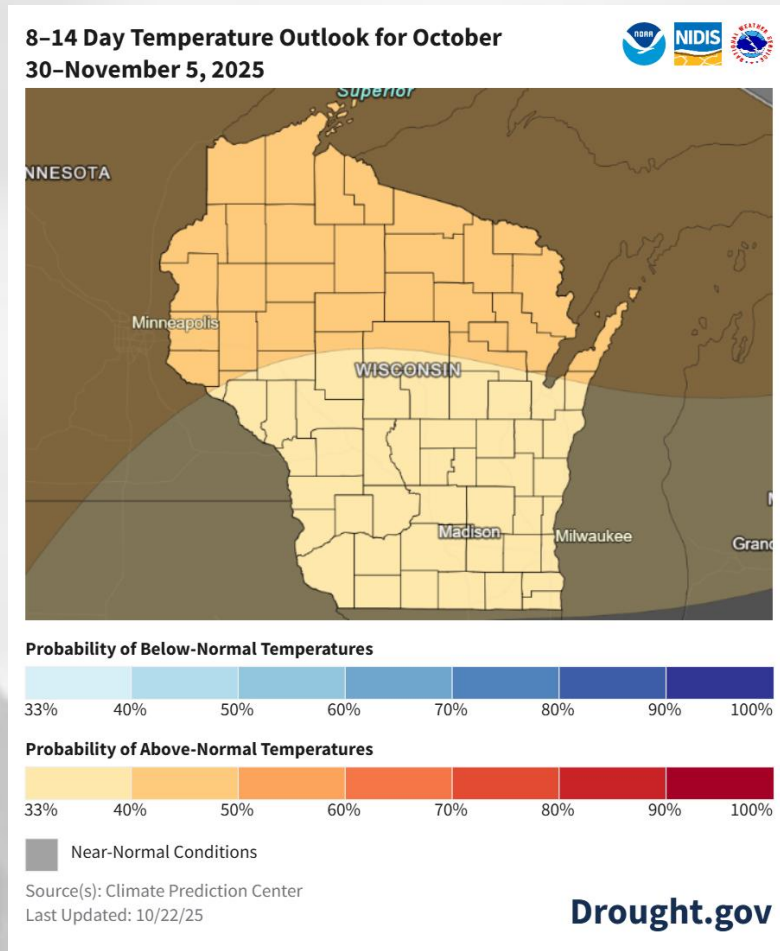
Drought.gov

- When? → best chances for rain are on Monday and Tuesday of next week.
- Where? → higher chances in the **west/northwest**
- Check your local forecast for details on totals and timing.
- Average precip (1991-2020) for this week: **0.59"**

Forecast for 10/23/25 thru 10/30/25
(Begins at 6am CST)

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

8-14 Day Temp & Precip Outlook

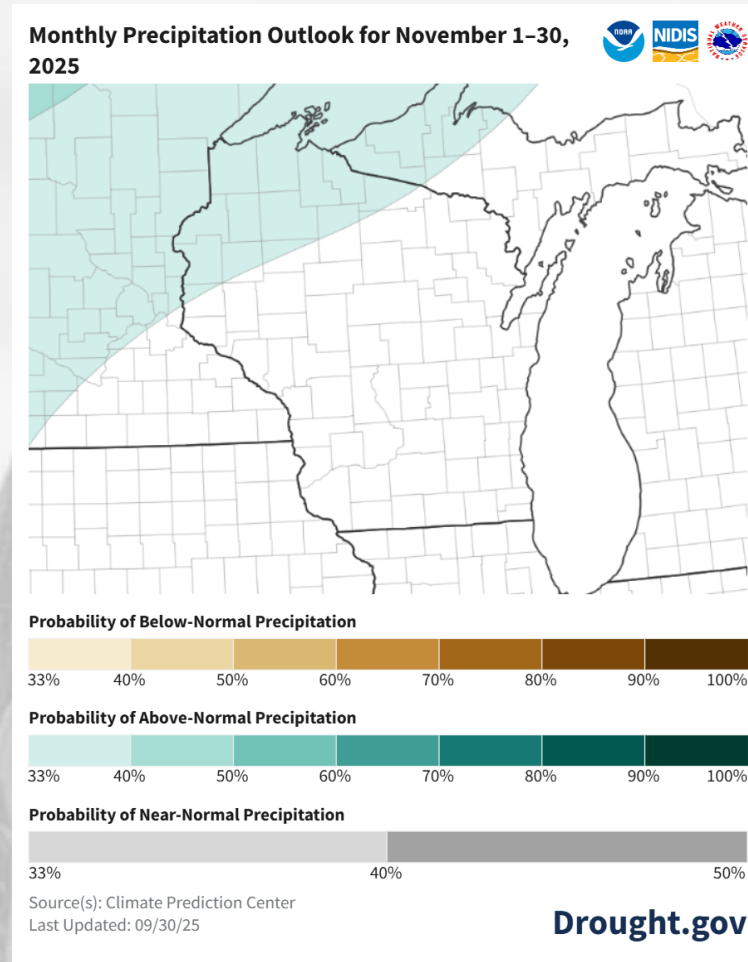
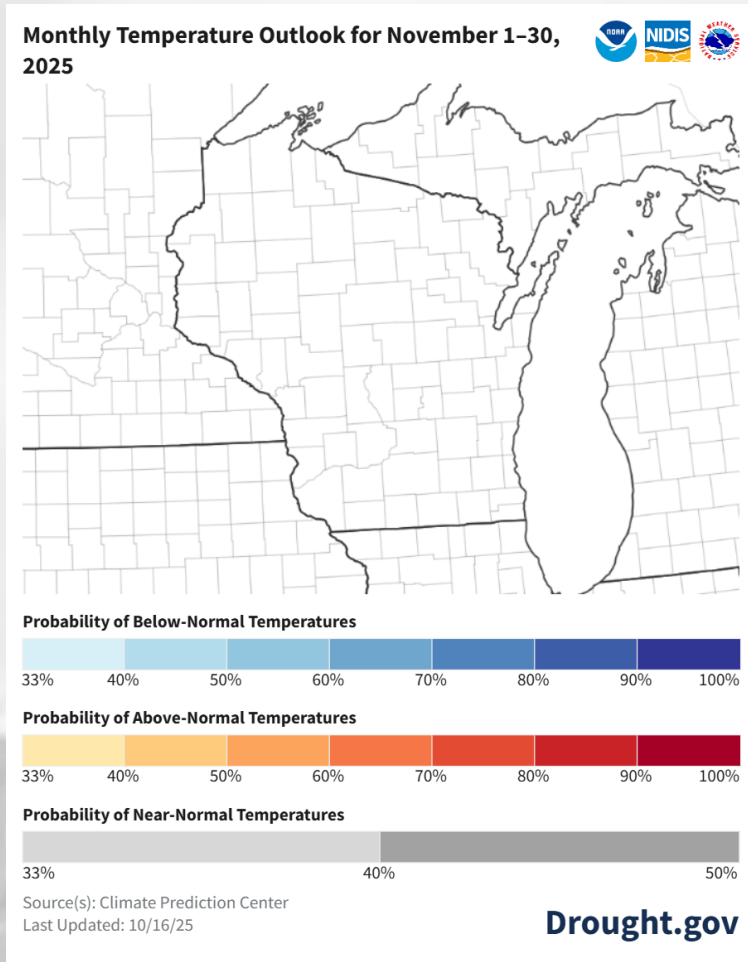


<http://www.cpc.ncep.noaa.gov/>
<https://www.drought.gov/states/wisconsin>

Oct-Nov Transition: A statewide lean towards above normal temperatures, more so in the N (**40-50%** chance). Precip is leaning towards near normal for most; above normal in the very far N.

➤ Statewide normals (1991-2020) for Oct 30-Nov 5 are **39.5°F** and **0.54"**.

30 Day Temp & Precip Outlook



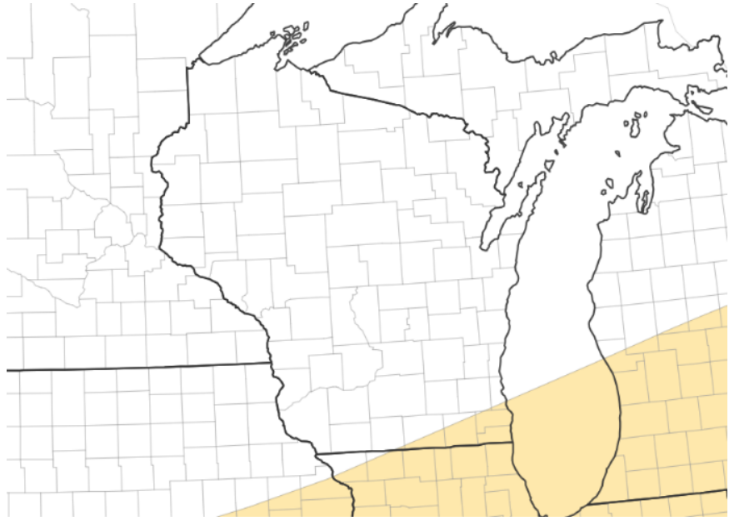
<http://www.cpc.ncep.noaa.gov/>
<https://www.drought.gov/states/wisc>
[onsin](#)

Month of November: Uncertainty for temperatures with equal chances statewide. Northern WI is showing a lean towards above normal precip, with uncertainty elsewhere.

- Statewide normals (1991-2020) for November are **33.4°F** and **1.99"**.

90 Day Temp & Precip Outlook

Seasonal (3-Month) Temperature Outlook for
November 1, 2025–January 31, 2026



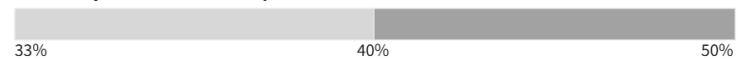
Probability of Below-Normal Temperatures



Probability of Above-Normal Temperatures



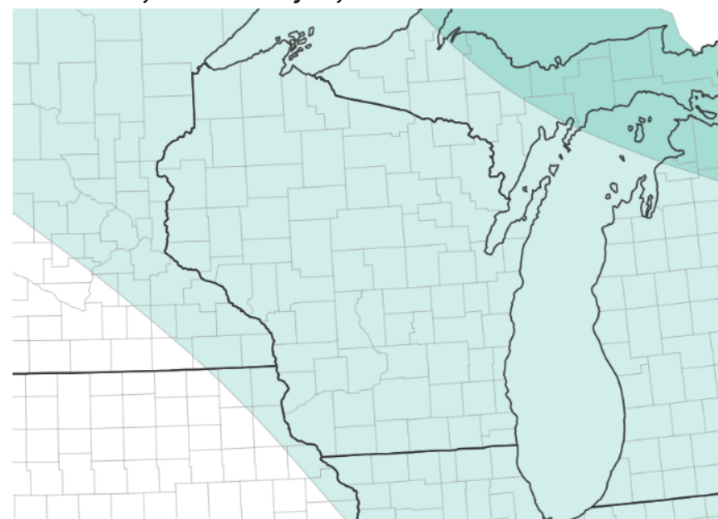
Probability of Near-Normal Temperatures



Source(s): Climate Prediction Center
Last Updated: 10/16/25

Drought.gov

Seasonal (3-Month) Precipitation Outlook for
November 1, 2025–January 31, 2026



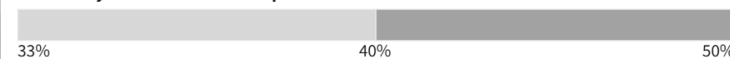
Probability of Below-Normal Precipitation



Probability of Above-Normal Precipitation



Probability of Near-Normal Precipitation



Source(s): Climate Prediction Center
Last Updated: 09/18/25

Drought.gov

<http://www.cpc.ncep.noaa.gov/>
<https://www.drought.gov/states/wisc>
[onsin](#)

Late Fall into Winter '25/'26: Equal chances for temperatures statewide, with a slight lean towards above normal in the far SE. Slight lean towards above normal precip statewide.

- Statewide normals (1991-2020) for Nov-Jan are **23.2°F** and **4.72"**.

Take-Home Points

Current Conditions

- Temperatures were several degrees **above normal** last week, which has been the case for Wisconsin for most of this fall season. However, overnight lows did **approach or drop below freezing** on the night of October 22-23.
- Rainfall totals were **relatively high** across S WI last week, with most receiving **more than a half inch**, while NW to north-central WI saw only **0.25-0.5"**.

Impact

- Topsoil moisture at most Wisconet research farm stations were slightly **higher than last week's levels** due to higher rainfall totals for most. Satellite-based soil moisture products indicate **soils are still drier than normal in the east and north**, but closer to normal in the west.
- Drought coverage was **unchanged** from last week's report.
- **NASS crop progress reports are unavailable this week due to the federal government shutdown.**

Outlook

- The best chances for rain over the next 7 days are on the **west/northwest side of the state**.
- Climate probabilities for the Oct-Nov transition indicate a **slight lean towards above normal temperatures** (33-50% chance for most; higher odds in the north).
- The outlooks for the month of November (*updated on 10/16*) indicate **uncertainty** for temperatures and precip for most of WI. There is a slight lean towards **above normal precip in the north**.

Agronomic Considerations

Field Work and Conditions

- Check cover crop growth as recent rain may have allowed static seeds to germinate.
- 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

- 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.
- 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.
- After corn is harvested, you may consider grazing corn stalks or harvesting corn stover, based on livestock needs.

Fruit and Vegetable Considerations

Fruit:

- **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 limit potential for disease inoculum and any overwintering pests.
- Remember to note observable fruit damage at harvest to make adjustments in next year's pest management plan.
- 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](#).
- **Reminder:** Always read and follow directions on the label and keep in mind pre-harvest intervals (PHI) as we move through harvest!

Vegetables:

- [Fall is a great time to test your soil](#) in part because it gives you more time to make management decisions based on your results. Although remember it is best to be consistent about the time of year you test to allow for comparisons over time. A list of certified labs can be found [here](#).
- 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**. Additional info can be found [here](#).
- **Pests**
 - **Aphids** are a common high tunnel pest on fall and winter greens. The common species in high tunnels- [green peach aphid](#), [potato aphid](#), and [fox glove aphid](#)- are able to [survive temperatures as low as 5°F](#). Population control will only become more difficult as temperatures drop so make sure to monitor and, when necessary, manage aphids this fall. Management options include biological controls such as [parasitoid wasps](#) and [lady beetles](#), [insecticides](#), and weed management to reduce alternative hosts.
 - Also be on the lookout for [cabbage aphids](#) and [green peach aphids](#) on fall brassicas. Signs of aphids include 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).

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

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Photo Credit: USDA



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