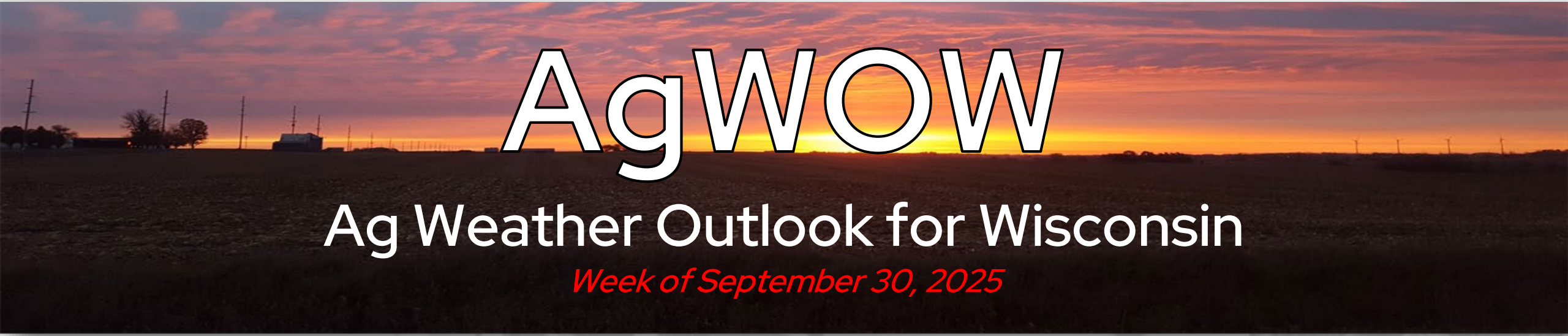
Wisconsin State Climatology Office
Nelson Institute for Environmental Studies

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 September 30, 2025

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Key Points

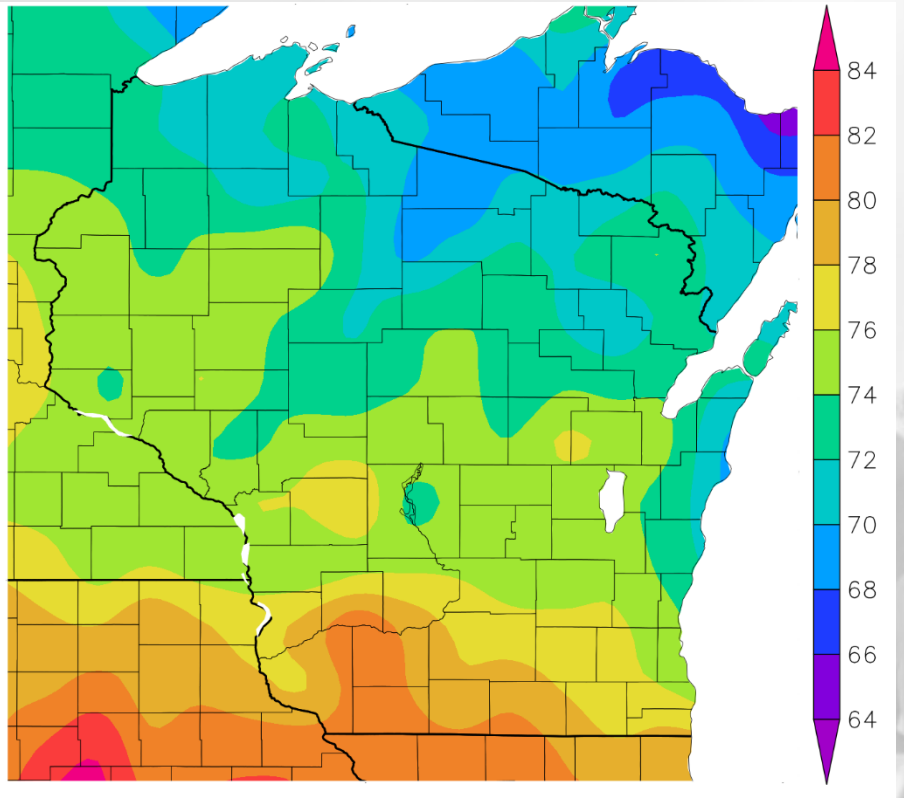
Navigate to select slides by clicking on the links below.

1) The warmth remained over the state with highs in the 70s-80s.
2) Little-to-no precip all week meant a drop in soil moisture levels.
3) Abnormal dryness (D0) now covers >35% of the state.
4) Folks in the south/SW have the best chances for rain over the next 7 days, and outlooks for mid-October indicate continued warmth.

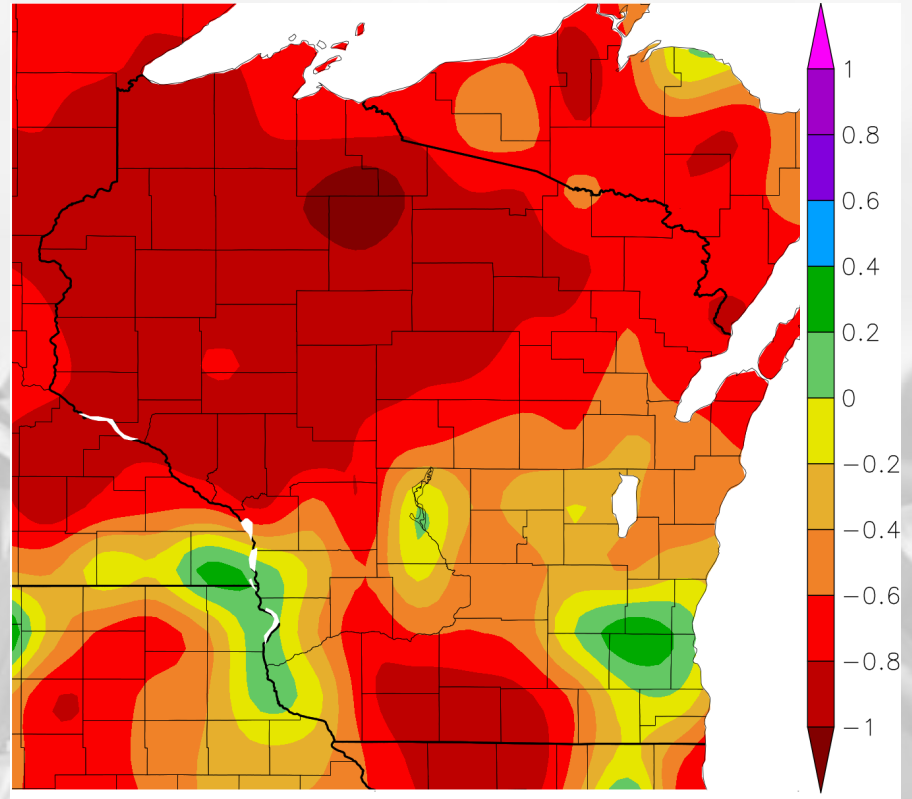
- *For this week's agronomic recommendations from UW Extension, click here.*
- *For this week's crop progress updates from USDA NASS, click here.*

Wx Highlight → Warm & Dry

Average Max Temp (°F)
9/23 through 9/29



Departure from Normal Precip (in)
9/23 through 9/29



Summer-like temperatures remained, with a flip to **dry** after a previously wet week.

Highest Wisconet temp:

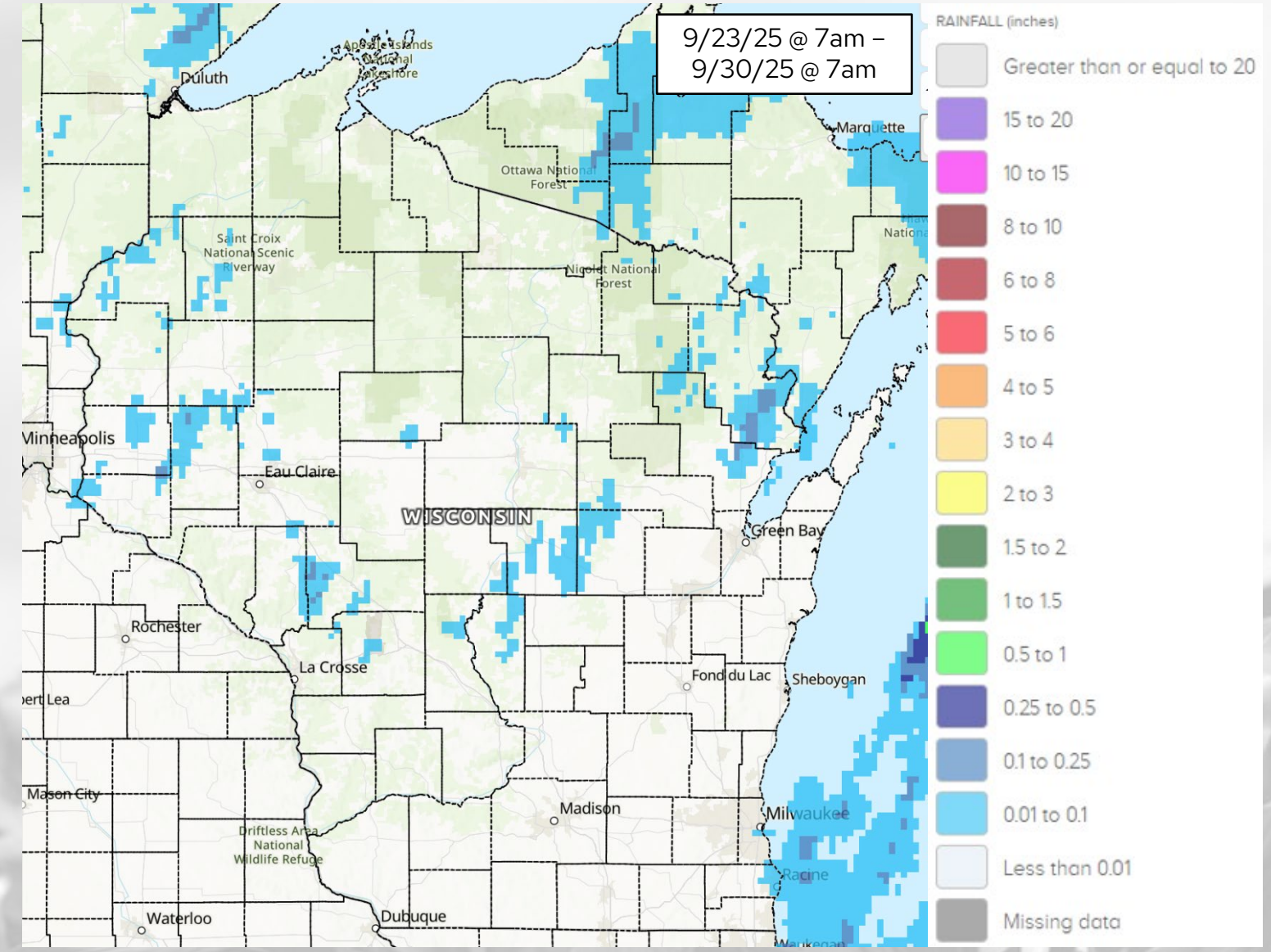
- Bristol, Kenosha Co. → 9/29, **88.5°F**

Highest Wisconet 7-day rain:

- Walworth, Walworth Co. → **0.42”**
  - Most rain fell the early hours of 9/23

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

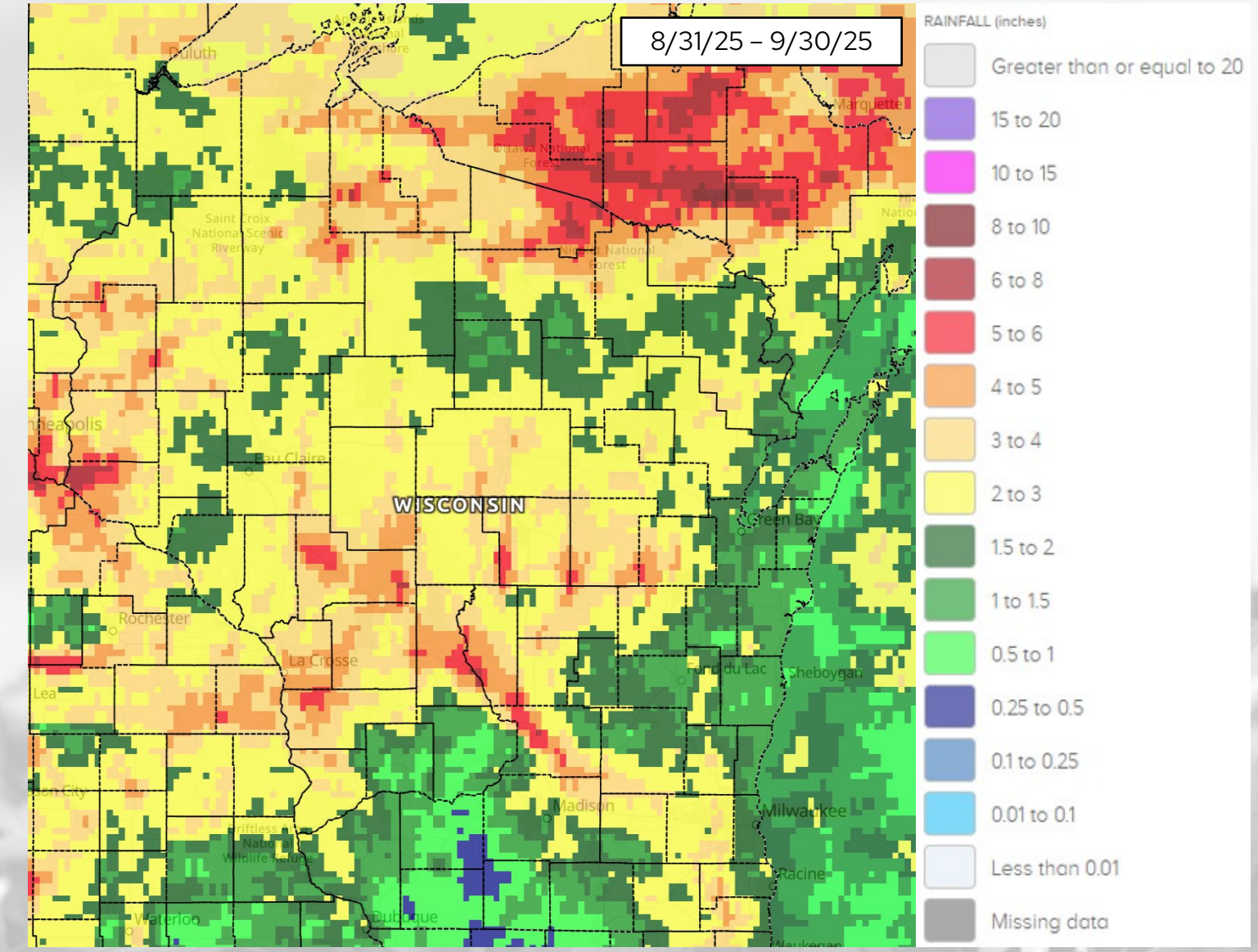
7 Day Precip (radar estimates)



- **Little-to-no rain** across the entire state.
- The **last rainfall of ≥ 0.1"** occurred the early hours of 9/23.
  - *The northwest quarter of the state missed out on this rainfall, which last saw ≥ 0.1" of rain on 9/22.*

https://water.noaa.gov/

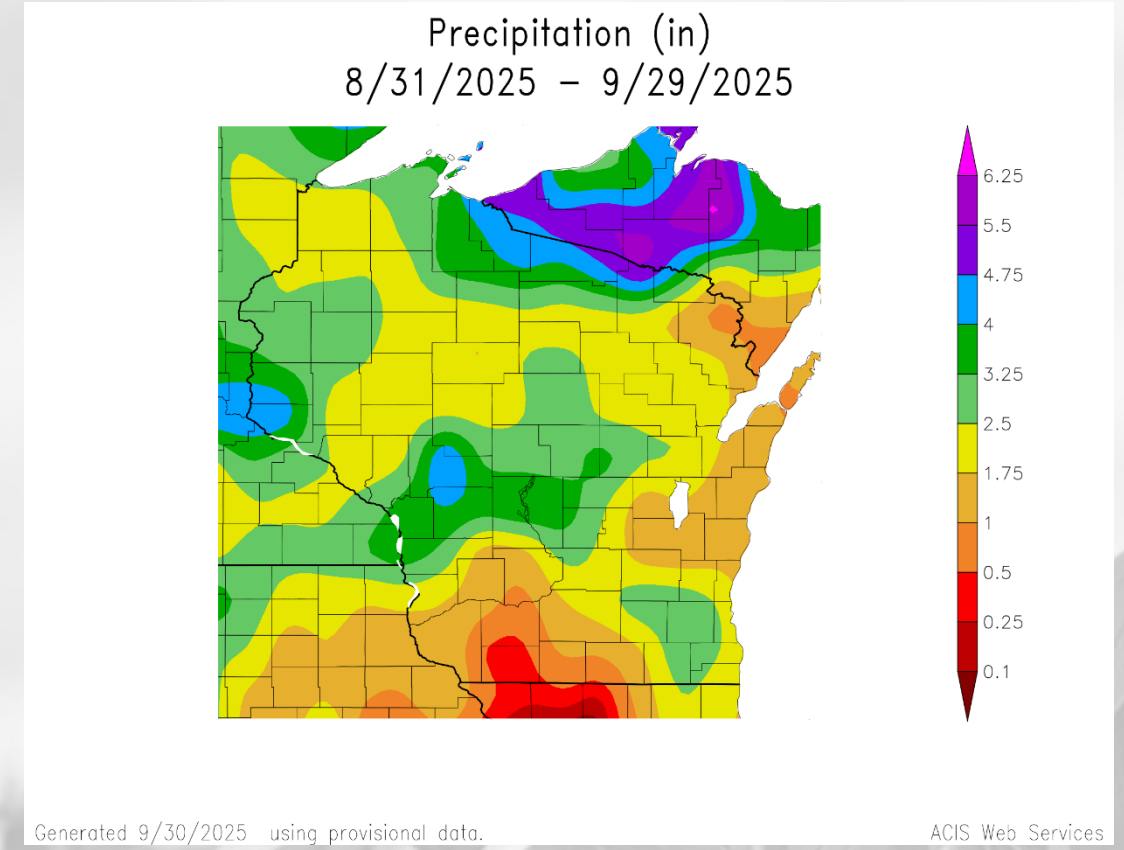
30 Day Precip (radar estimates)

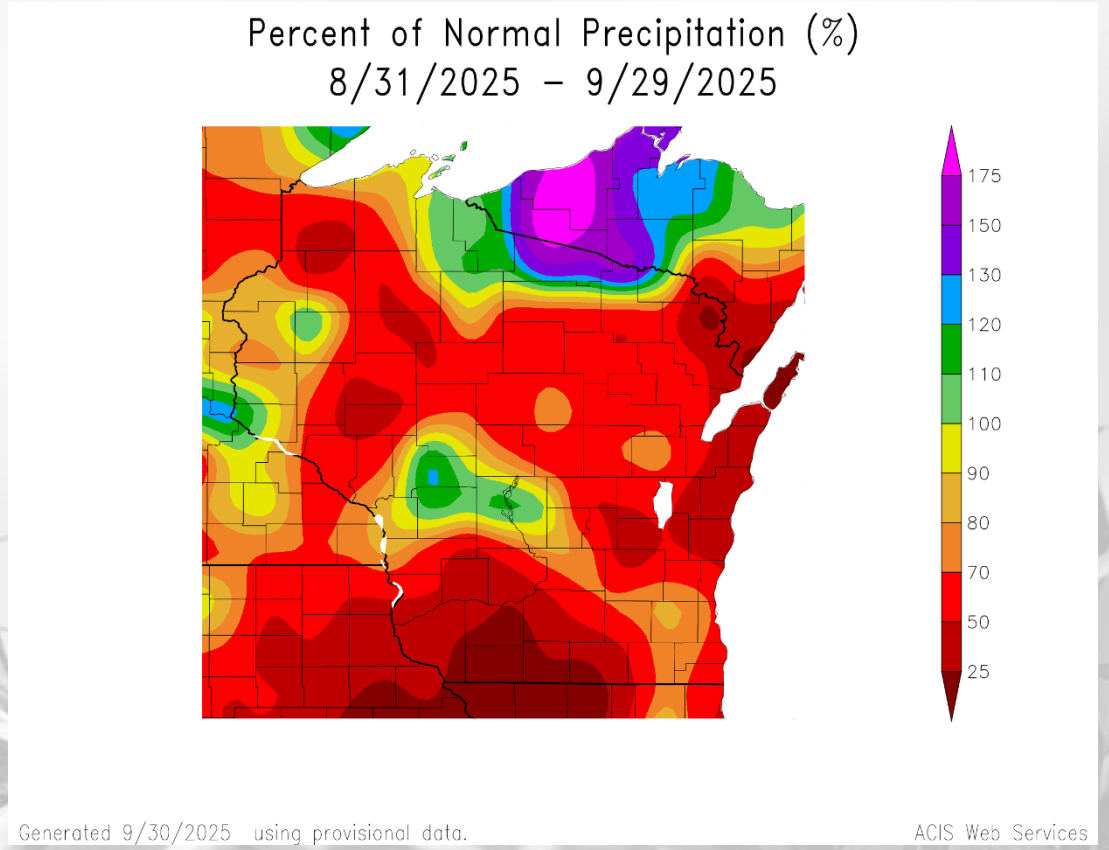


- **2-3”** across most of the state.
- Pockets of **3” or more** in the central region, along the western border, and along the MI border.
- Lowest totals in the southwest and eastern border → **less than 2”**

https://water.noaa.gov/

30 Day Precip Total/Percent Avg.

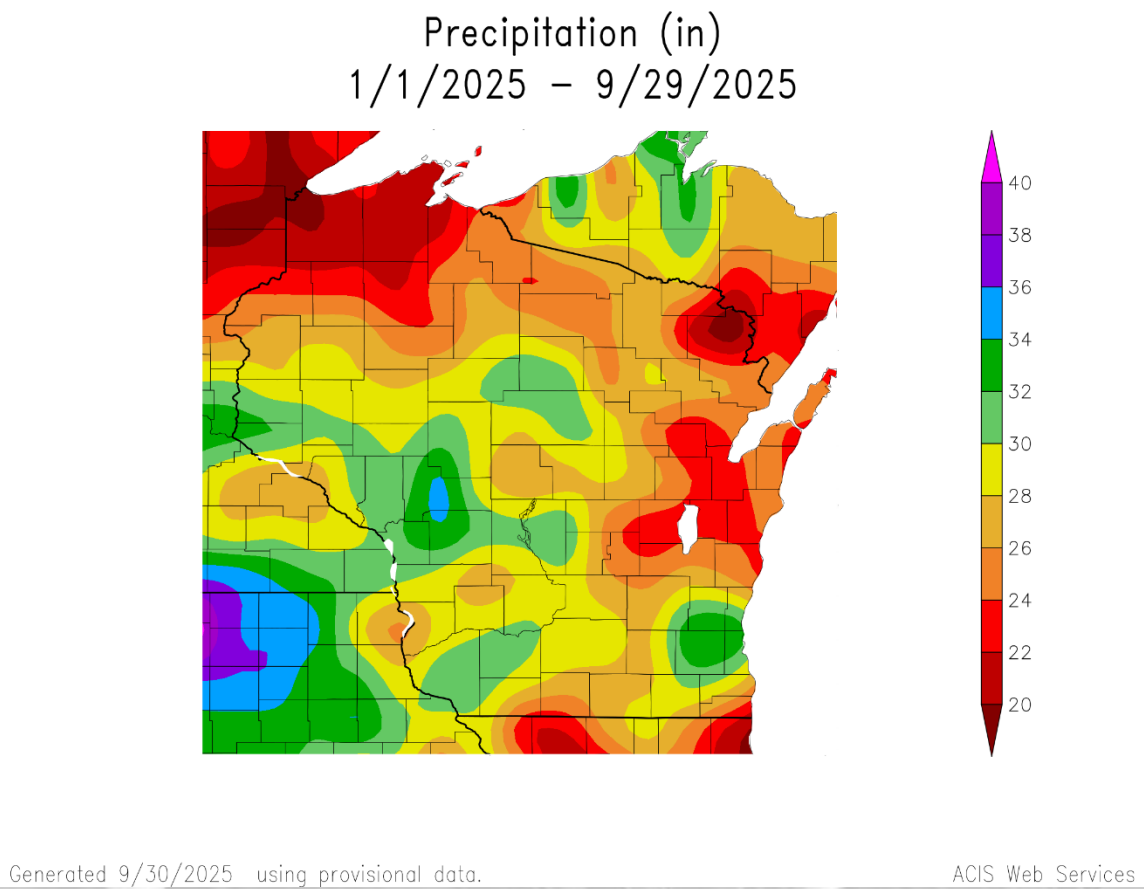


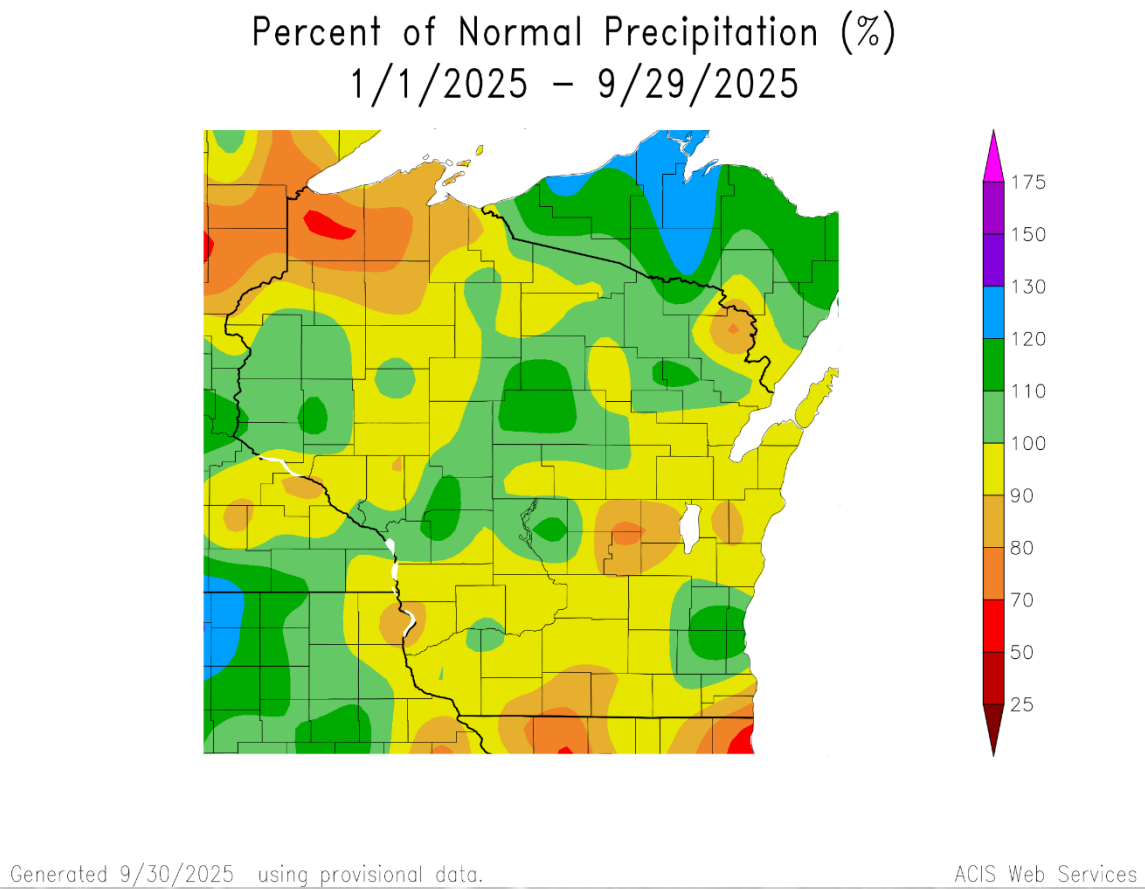


- **Below normal** for most of WI over the past 30 days → **70% or less common**, with 50% or less in the S & E.
  - Southwest → **25% or less** of normal.
- **Localized areas** of above normal precipitation in west-central and northern WI, where totals were **3.25" or more**.

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

2025 Precipitation (so far)





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

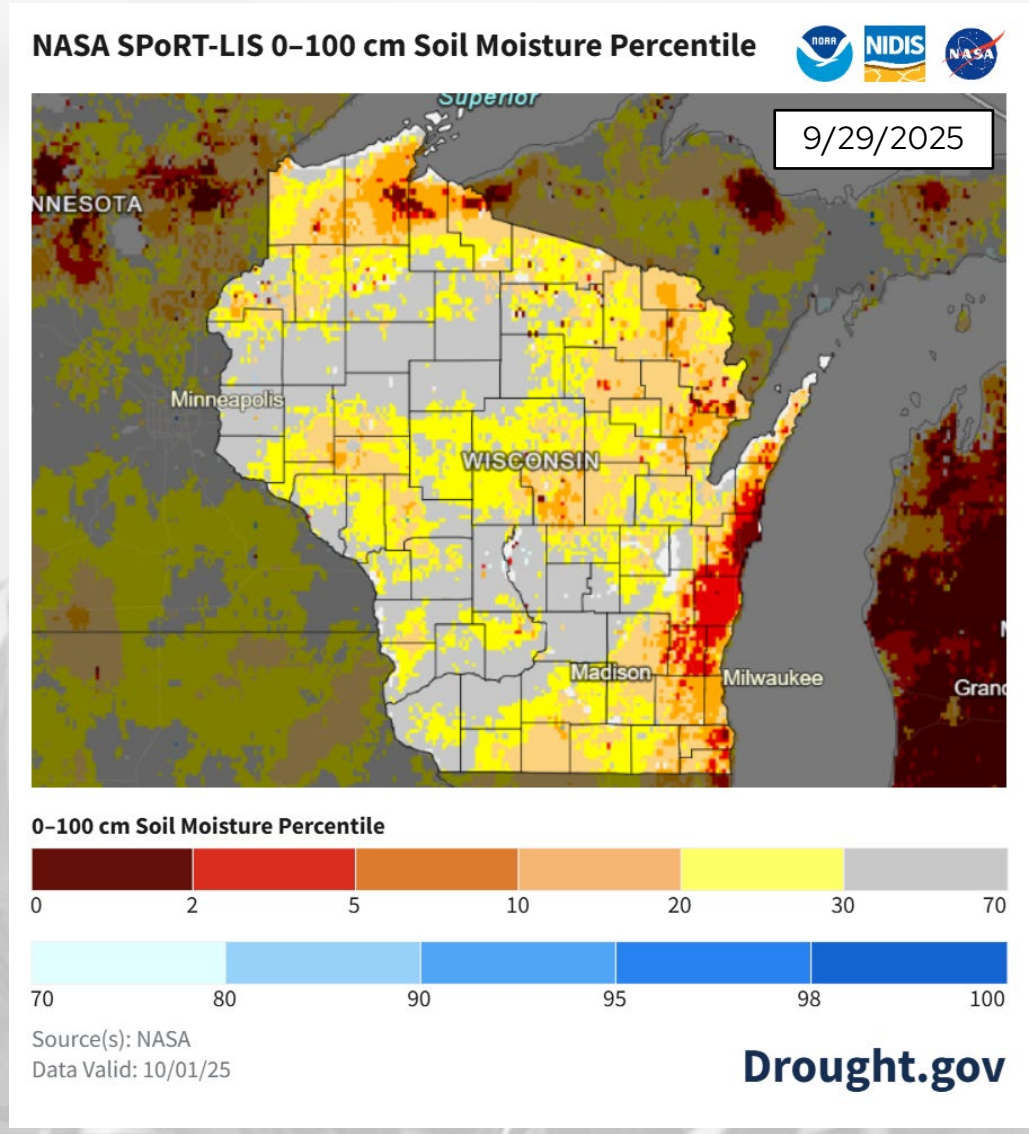
Soil Moisture Models

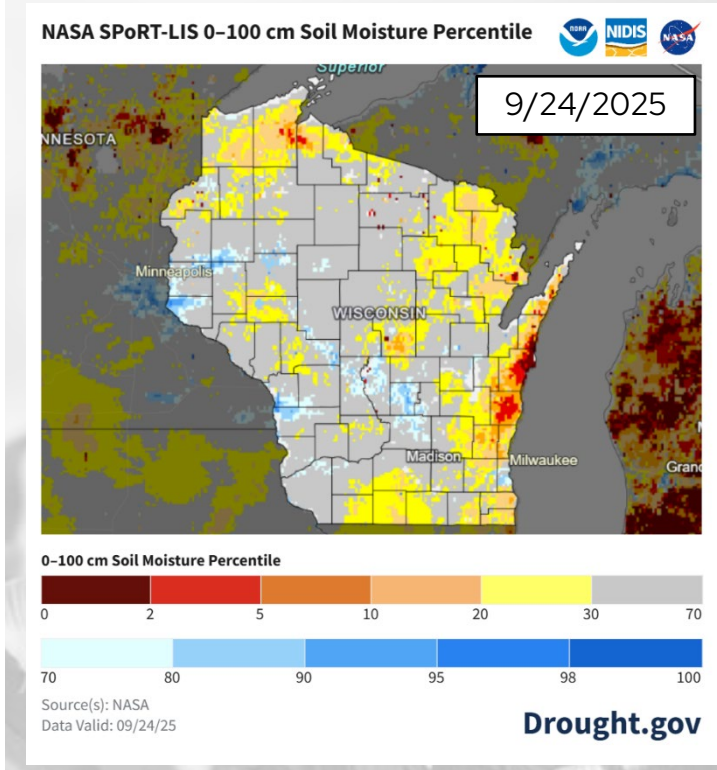
- **Increase** in spatial extent and intensity of **dryness** after receiving minimal precipitation last week.

- **Near normal** conditions remain for northwest to north-central and southwest to central.

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.

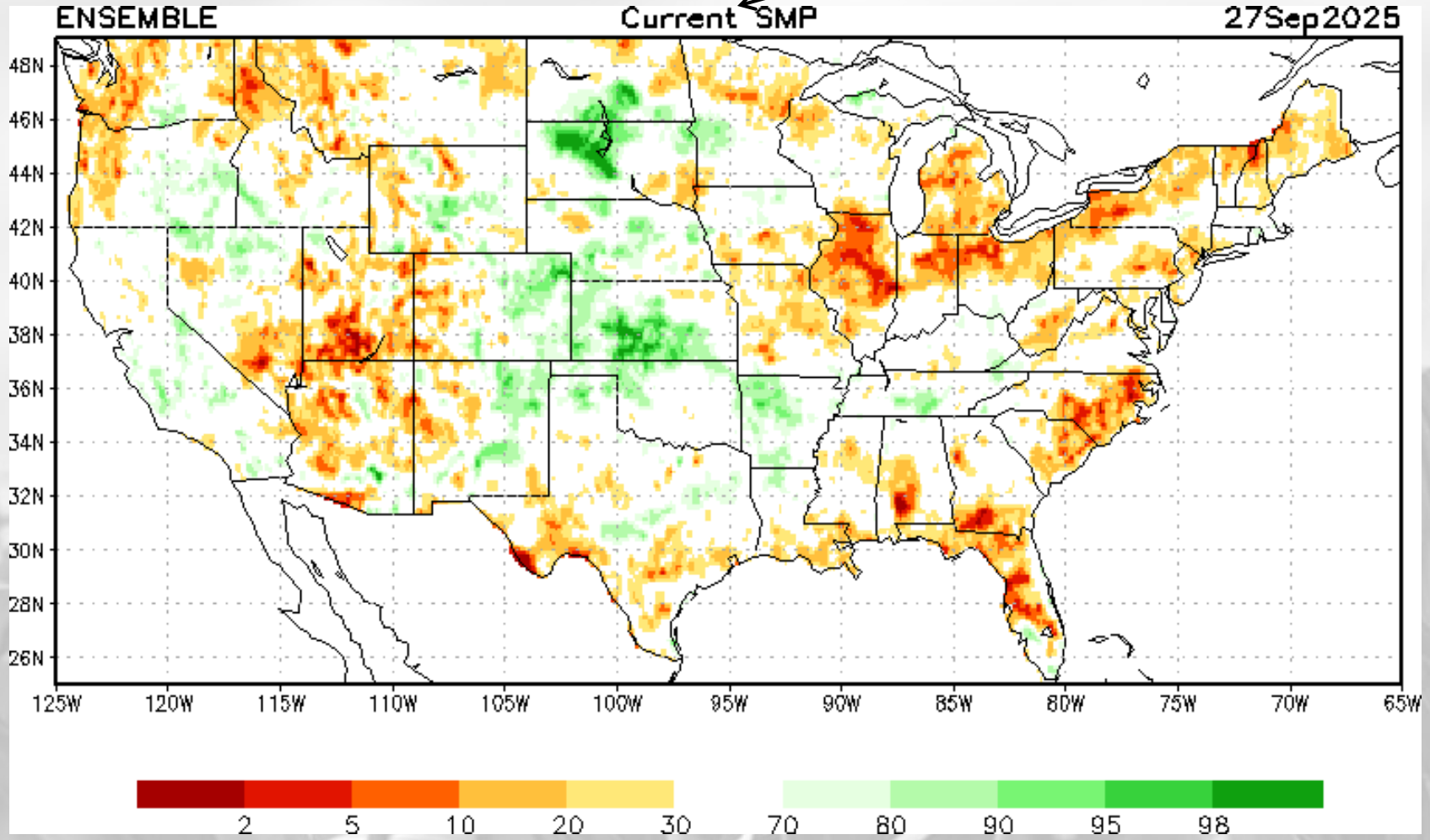




https://weather.ndc.nasa.gov/sport/case_studies/lis_CONUS.html
https://www.drought.gov/states/wisconsin

Soil Moisture Models

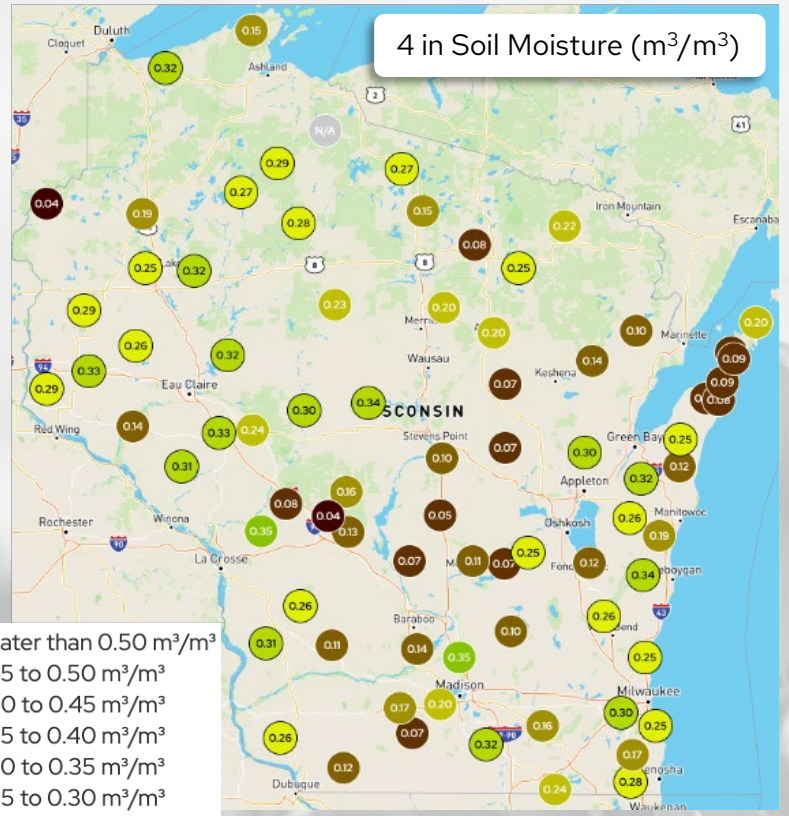
NOTE: this map displays the soil moisture percentile for Sep 27. It was the most recent update as of Oct 2.

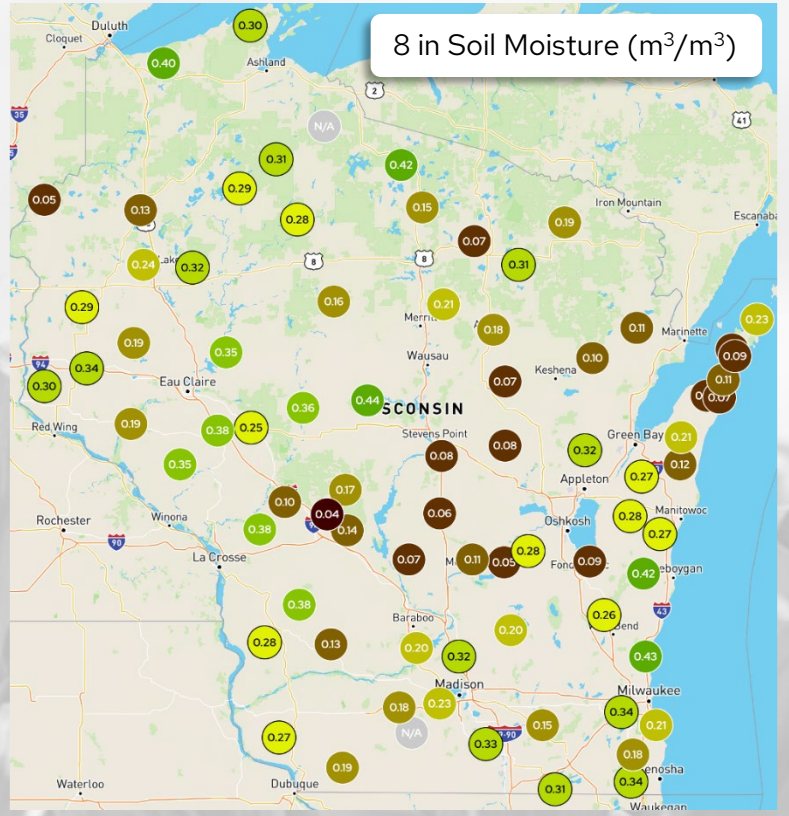


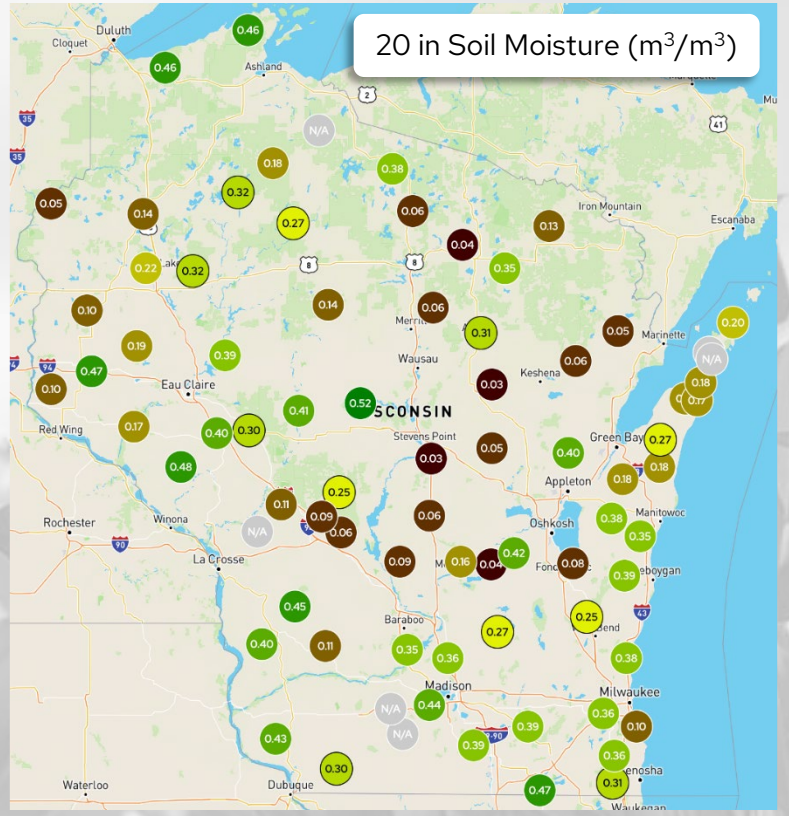
https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml

Wisconet Soil Moisture

Maps showing soil temperature conditions on September 30th @ 9:00 am.
Units of map values are {Volume of water}/{Volume of soil}.







- greater than 0.50 m^3/m^3
- 0.45 to 0.50 m^3/m^3
- 0.40 to 0.45 m^3/m^3
- 0.35 to 0.40 m^3/m^3
- 0.30 to 0.35 m^3/m^3
- 0.25 to 0.30 m^3/m^3
- 0.20 to 0.25 m^3/m^3
- 0.15 to 0.20 m^3/m^3
- 0.10 to 0.15 m^3/m^3
- 0.05 to 0.10 m^3/m^3
- 0.00 to 0.05 m^3/m^3

https://wisconet.wisc.edu/

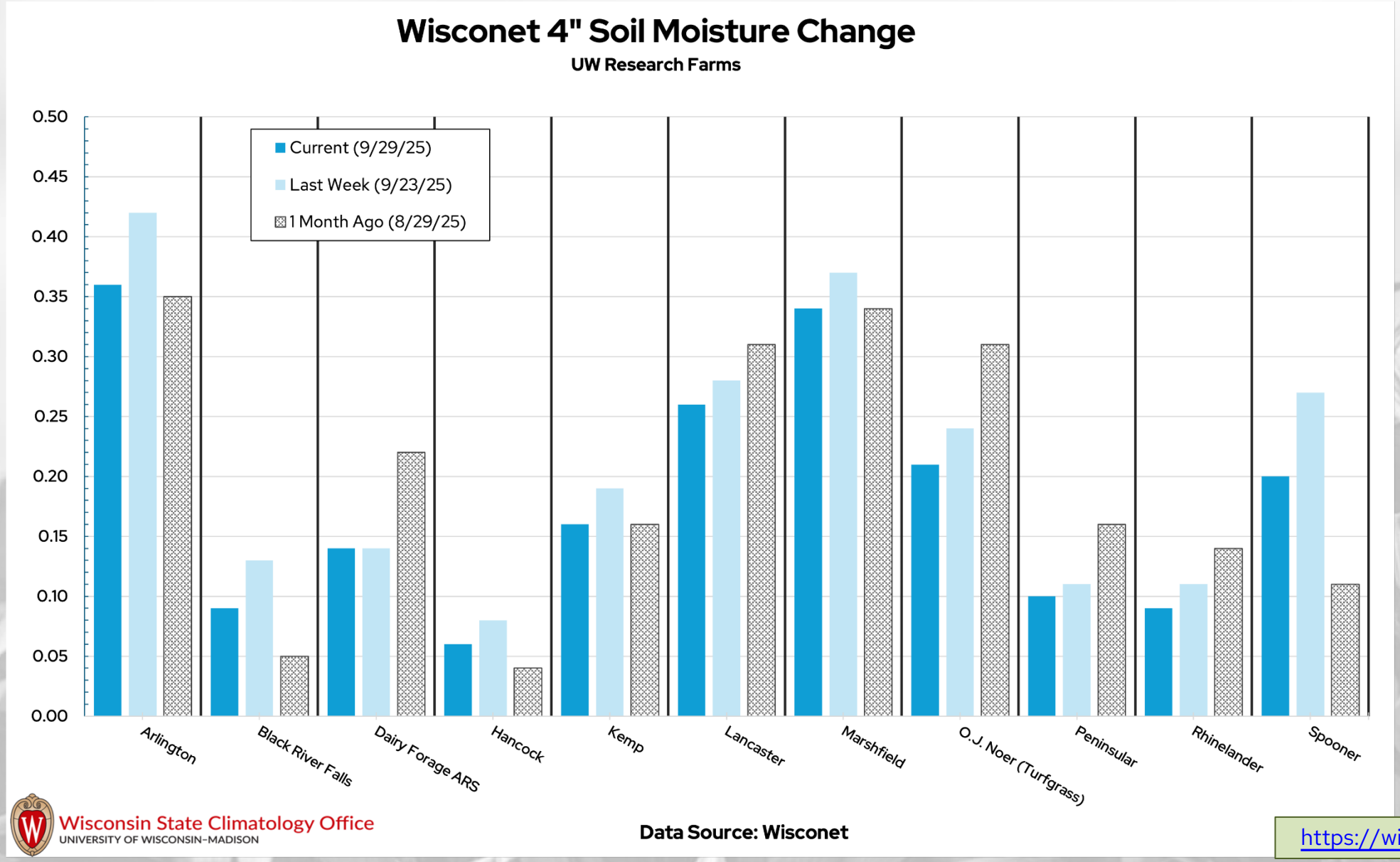
Wisconet Soil Moisture

Change in soil moisture from September 23rd (Start) to September 29th (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	0.00	0.42	0.36	0.38	0.32	0.36	0.36
Black River Falls	Jackson	0.01	0.13	0.09	0.15	0.10	0.14	0.11
Dairy Forage ARS	Sauk	0.05	0.14	0.14	0.21	0.21	0.36	0.35
Hancock	Waushara	0.00	0.08	0.06	0.08	0.07	0.07	0.06
Kemp	Oneida	0.00	0.19	0.16	0.19	0.15	0.09	0.06
Lancaster	Grant	0.00	0.28	0.26	0.26	0.27	0.43	0.43
Marshfield	Marathon	0.00	0.37	0.34	0.45	0.44	0.53	0.53
O.J. Noer *(Turfgrass)*	Dane	0.03	0.24	0.21	0.26	0.24	0.45	0.44
Peninsular	Door	0.00	0.11	0.10	0.12	0.11	0.19	0.18
Rhinelander	Oneida	0.01	0.11	0.09	0.10	0.08	0.05	0.04
Spooner	Washburn	0.00	0.27	0.20	0.17	0.13	0.15	0.14

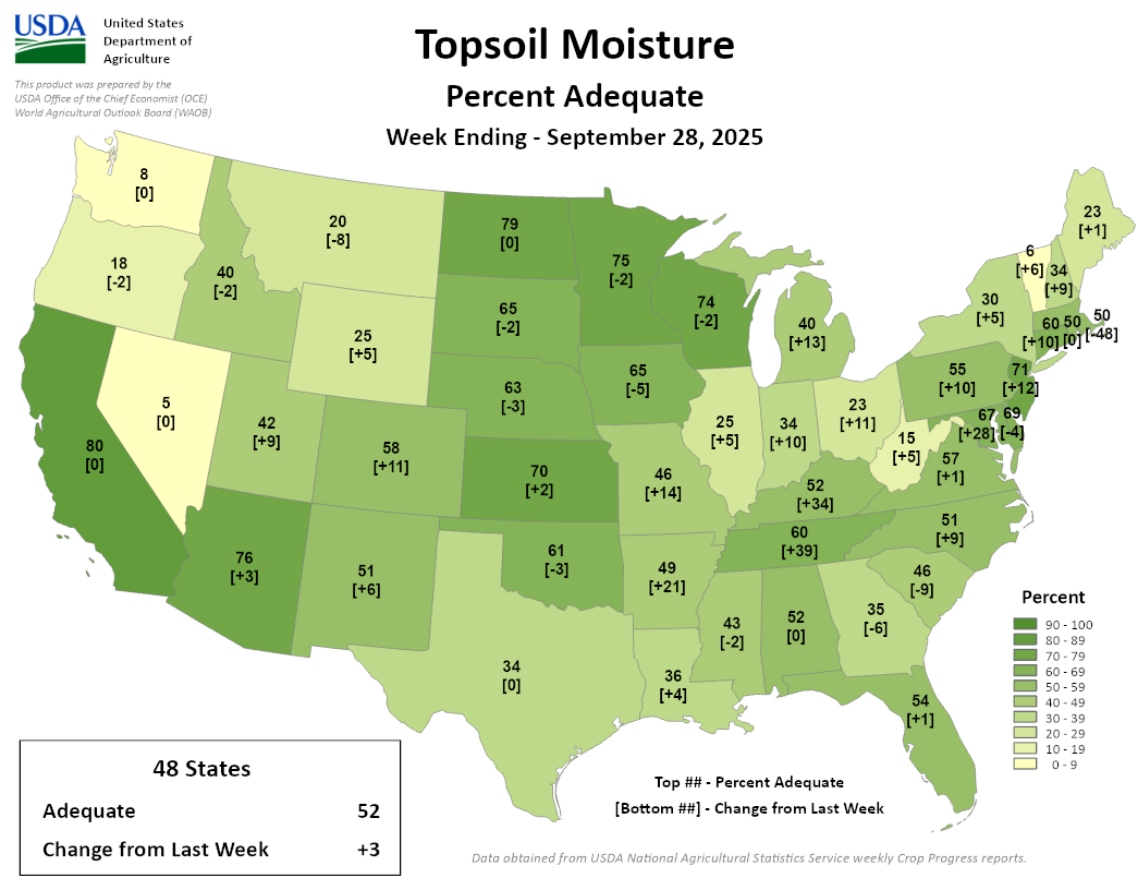
https://wisconet.wisc.edu/

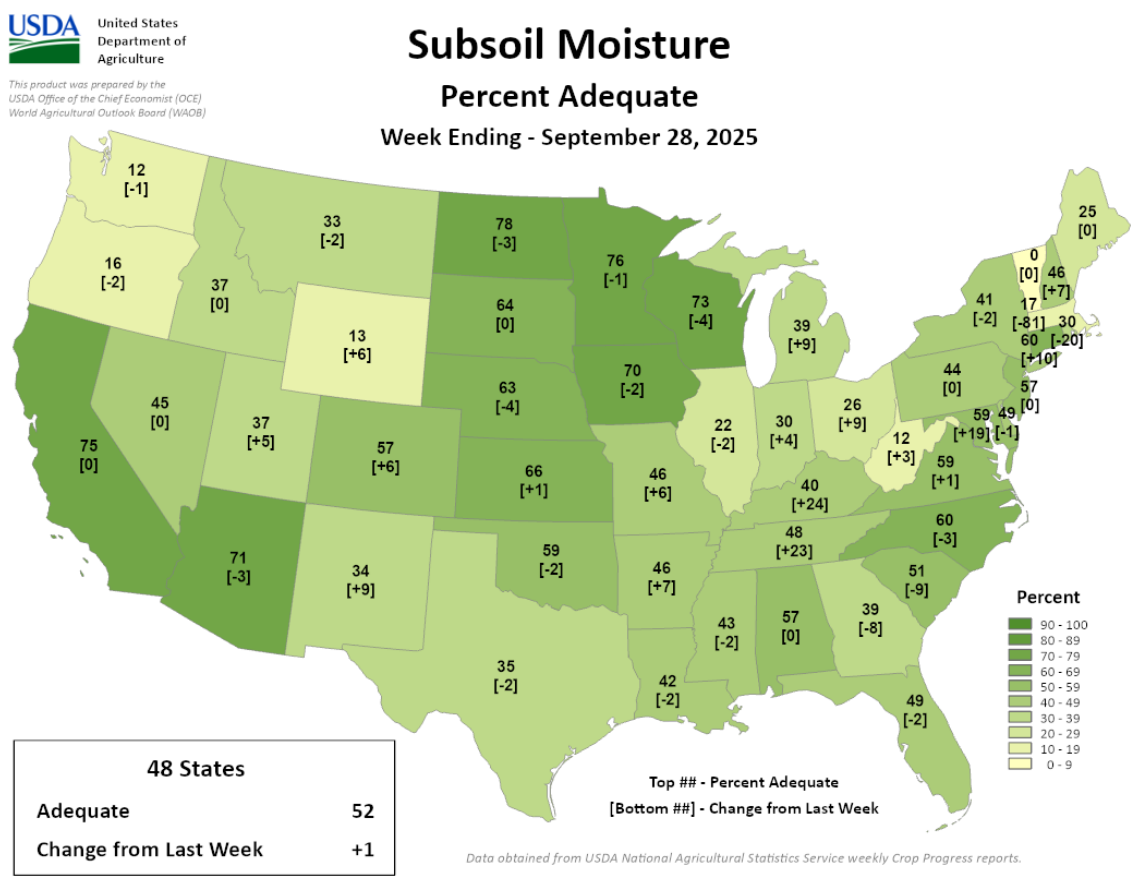
Wisconet Soil Moisture



https://wisconet.wisc.edu/

Adequate Soil Moisture



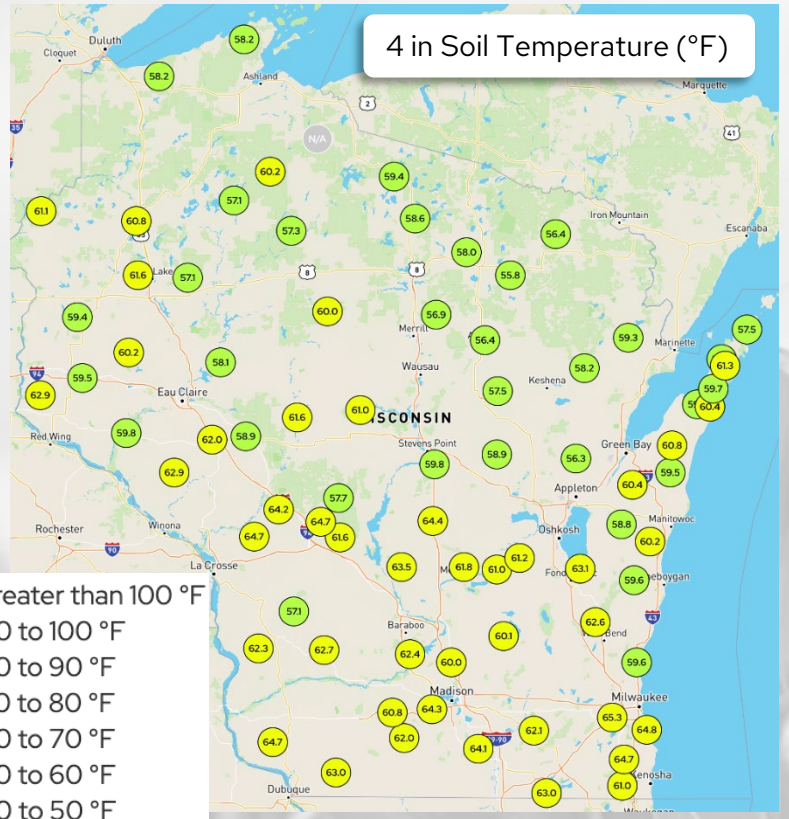


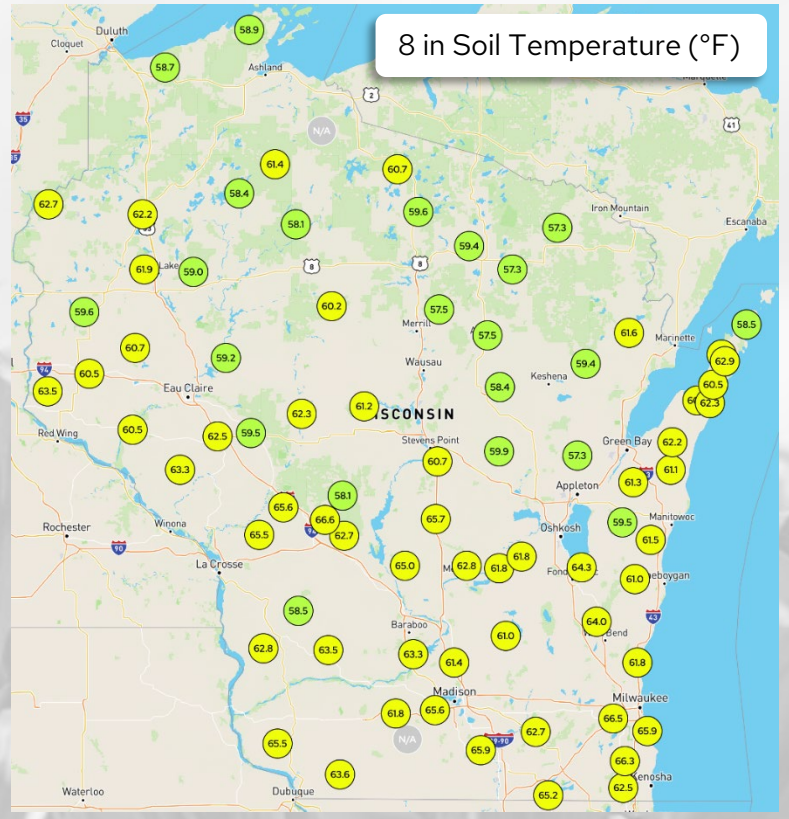
- **73-74%** of agricultural soils in the state reporting adequate topsoil and subsoil moisture.
- **23-24%** of fields in the state are reported as having short to very short topsoil moisture, a **3-4% increase** from last week.

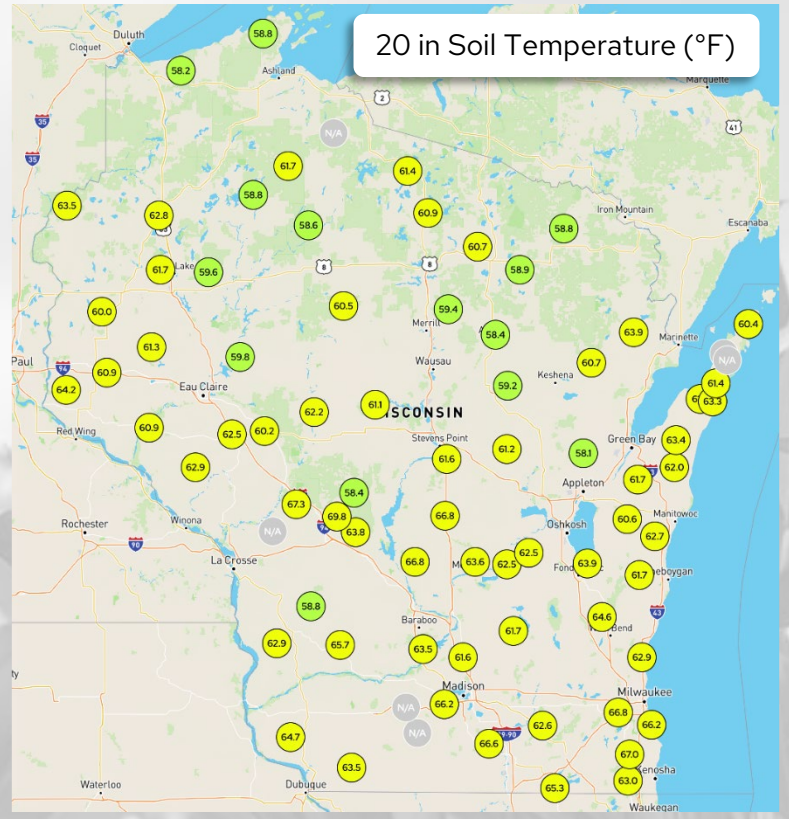
https://agindrought.unl.edu/Other.aspx

Wisconet Soil Temperature

Maps showing soil temperature conditions on
September 30th @ 9:00 am.



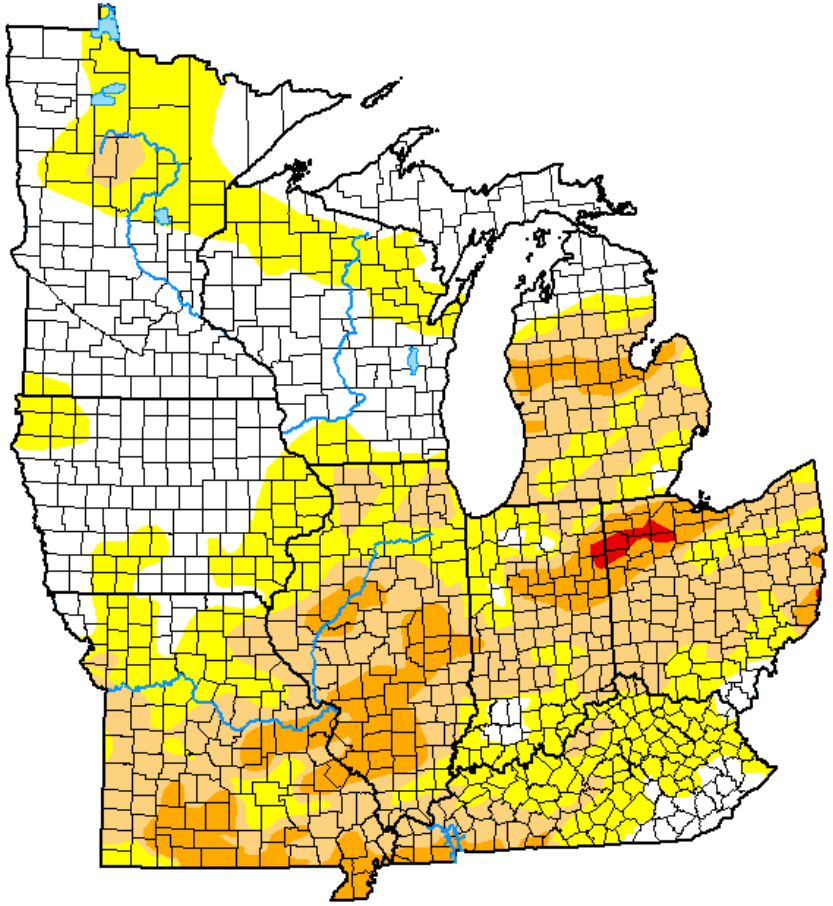




- greater than 100 °F
- 90 to 100 °F
- 80 to 90 °F
- 70 to 80 °F
- 60 to 70 °F
- 50 to 60 °F
- 40 to 50 °F
- 30 to 40 °F
- 20 to 30 °F
- 10 to 20 °F
- less than 10 °F

https://wisconet.wisc.edu/

US Drought Monitor



U.S. Drought Monitor

Midwest

September 30, 2025

(Released Thursday, Oct. 2, 2025)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	34.12	65.88	34.69	10.17	0.37	0.00
Last Week 09-23-2025	41.43	58.57	37.81	10.70	0.95	0.00
3 Months Ago 07-01-2025	75.11	24.89	5.60	0.48	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 10-01-2024	21.78	78.22	28.15	6.40	1.46	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

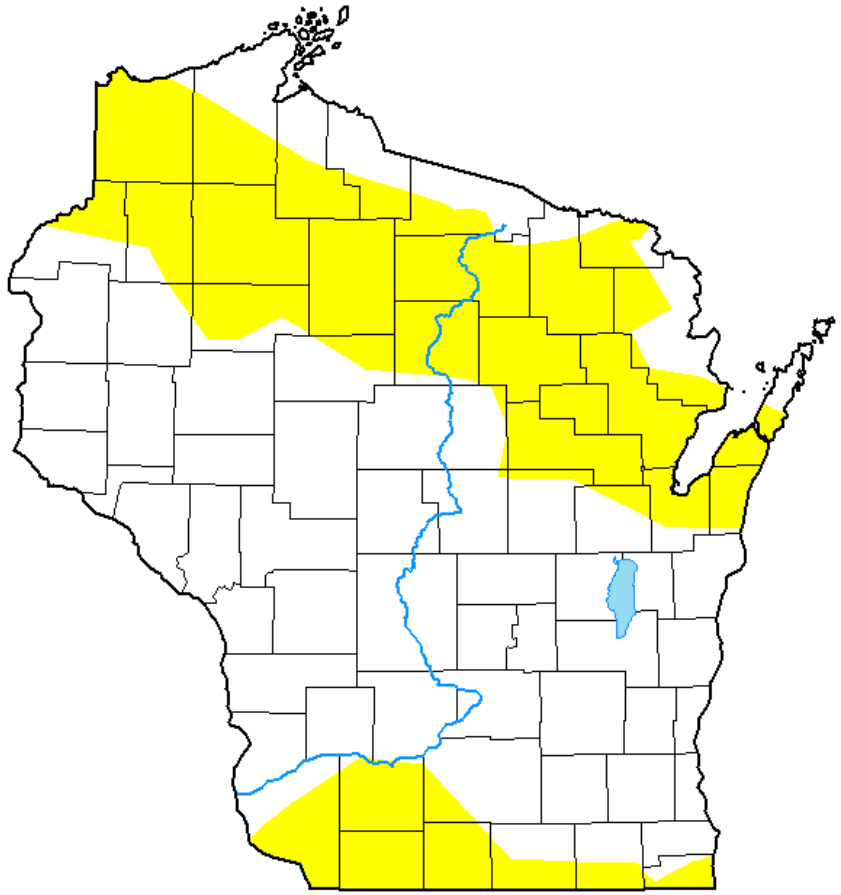
droughtmonitor.unl.edu

- Midwest: Compared to last week:
  - **Minor decreases** in D1-D3 coverage.
  - **D0** expanding by 7%.
- Midwest: **Addition of D3** in NW Ohio and D2 across central IL. **1-2 class improvements** along the Ohio River.
- Wisconsin: The state is still **drought-free**, but D0 coverage expanded in the north and SW.
- **65.3%** of the Midwest is drought free (~34.7% in D1-D3).

Note: D0 is not considered drought.

http://droughtmonitor.unl.edu/

US Drought Monitor



U.S. Drought Monitor

Wisconsin

September 30, 2025

(Released Thursday, Oct. 2, 2025)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	64.44	35.56	0.00	0.00	0.00	0.00
Last Week *09-23-2025*	95.36	4.64	0.00	0.00	0.00	0.00
3 Months Ago *07-01-2025*	83.61	16.39	2.55	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 *10-01-2024*	18.68	81.32	29.83	8.45	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

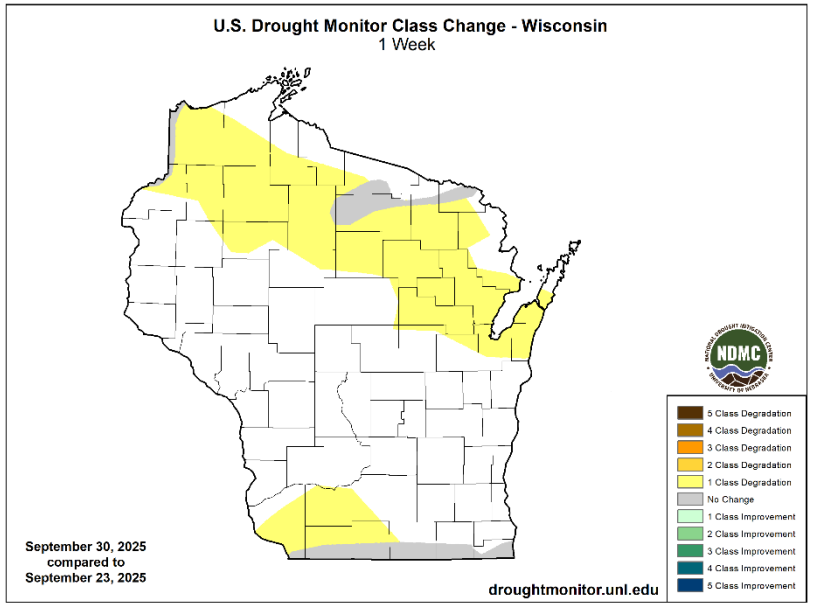
droughtmonitor.unl.edu

http://droughtmonitor.unl.edu/

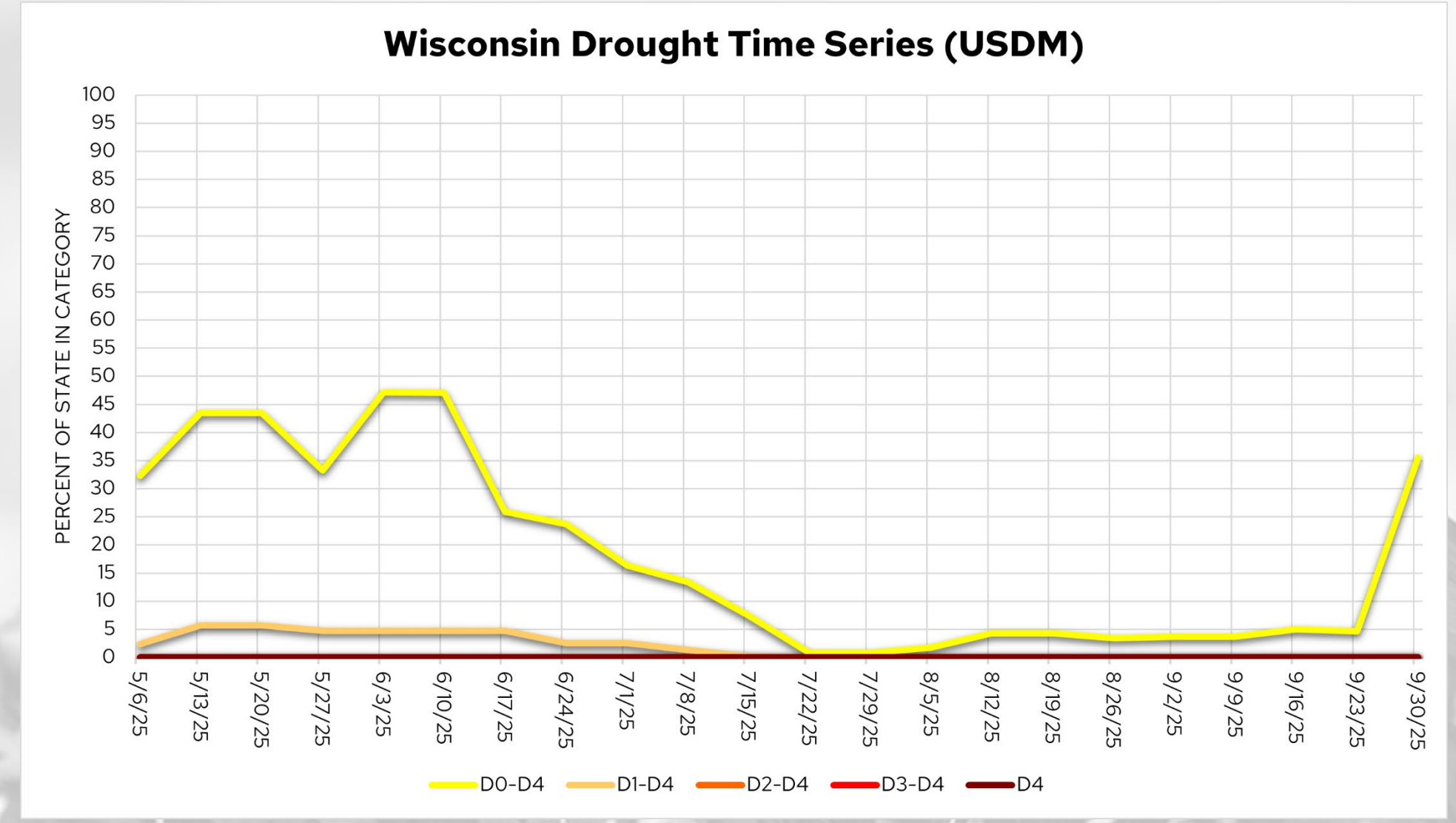
Amount of state in:

- D1-D4 – 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. -- indicates no change from last week.



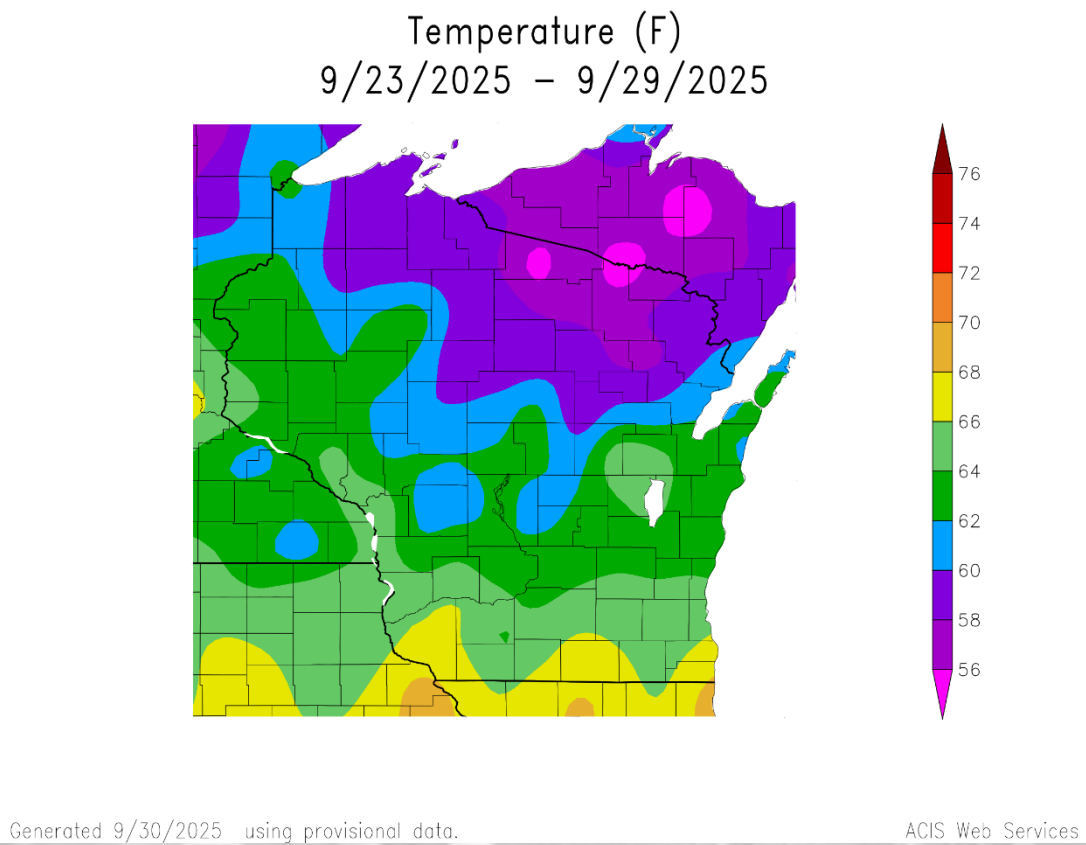
USDM Time Series

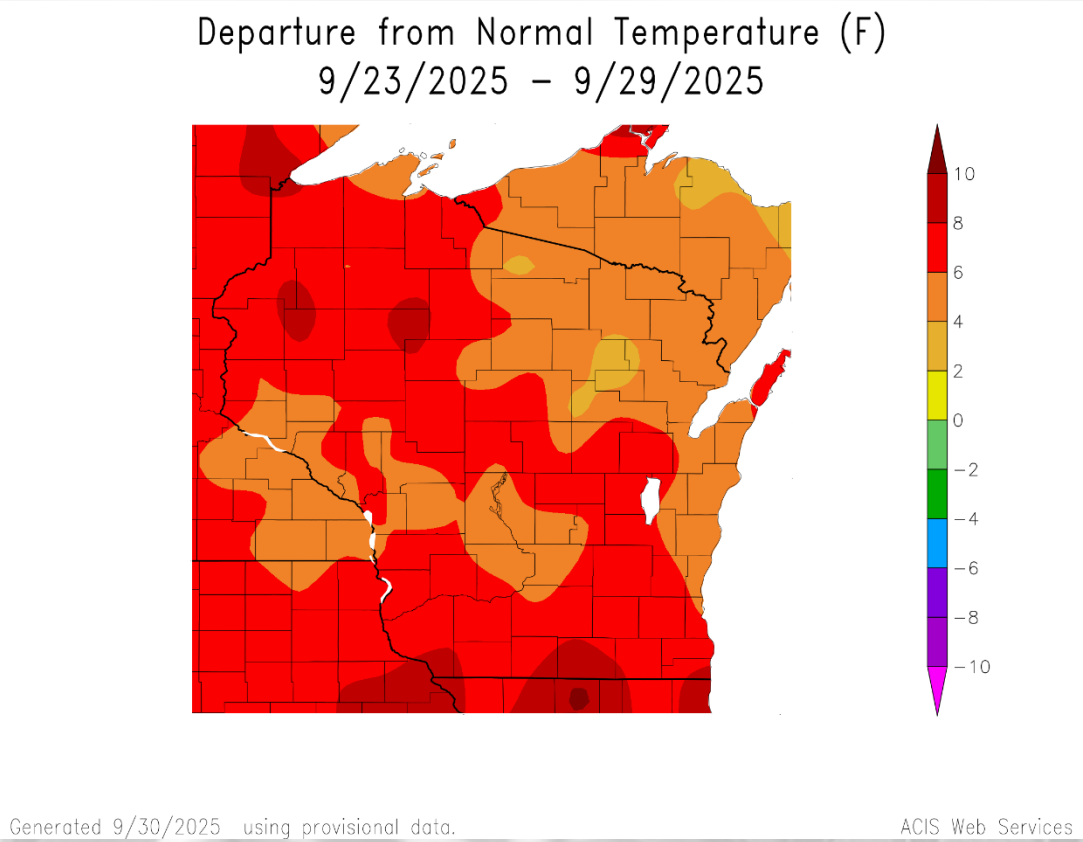


>30% increase in D0 coverage since last week, mainly in the north and southwest.

http://droughtmonitor.unl.edu/

7 Day Temperatures

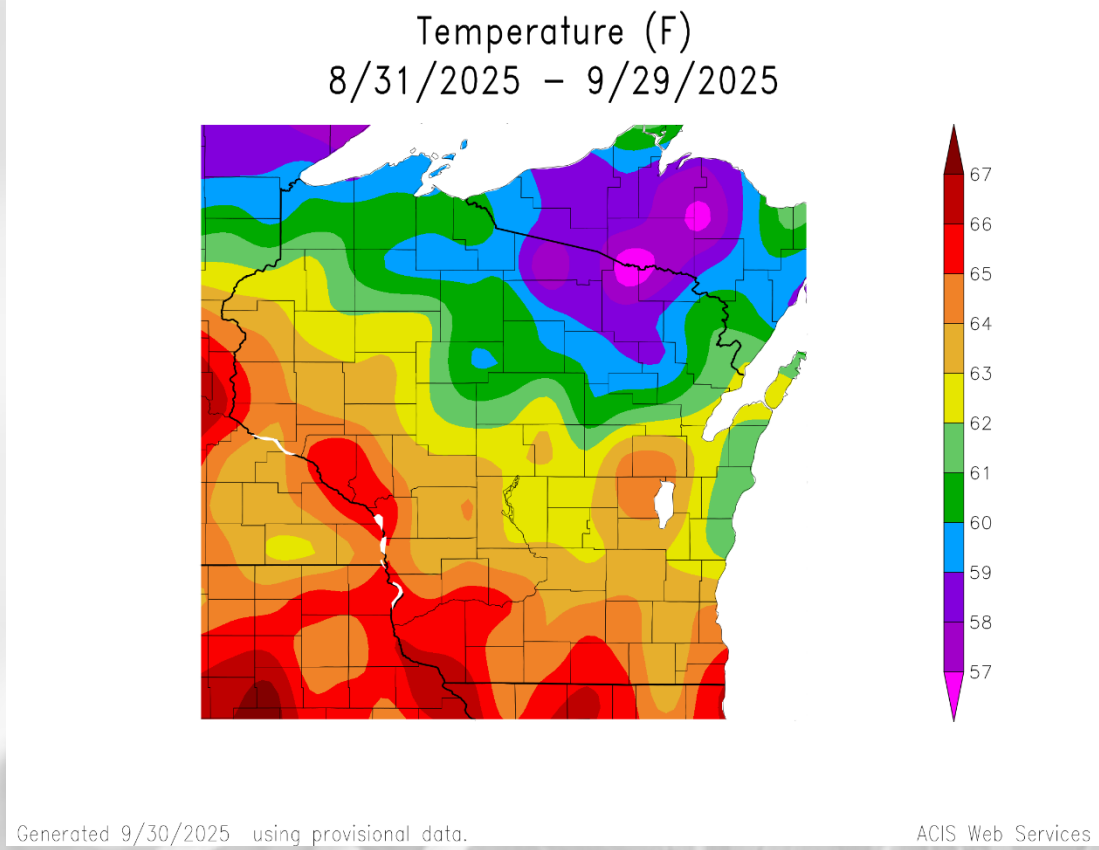


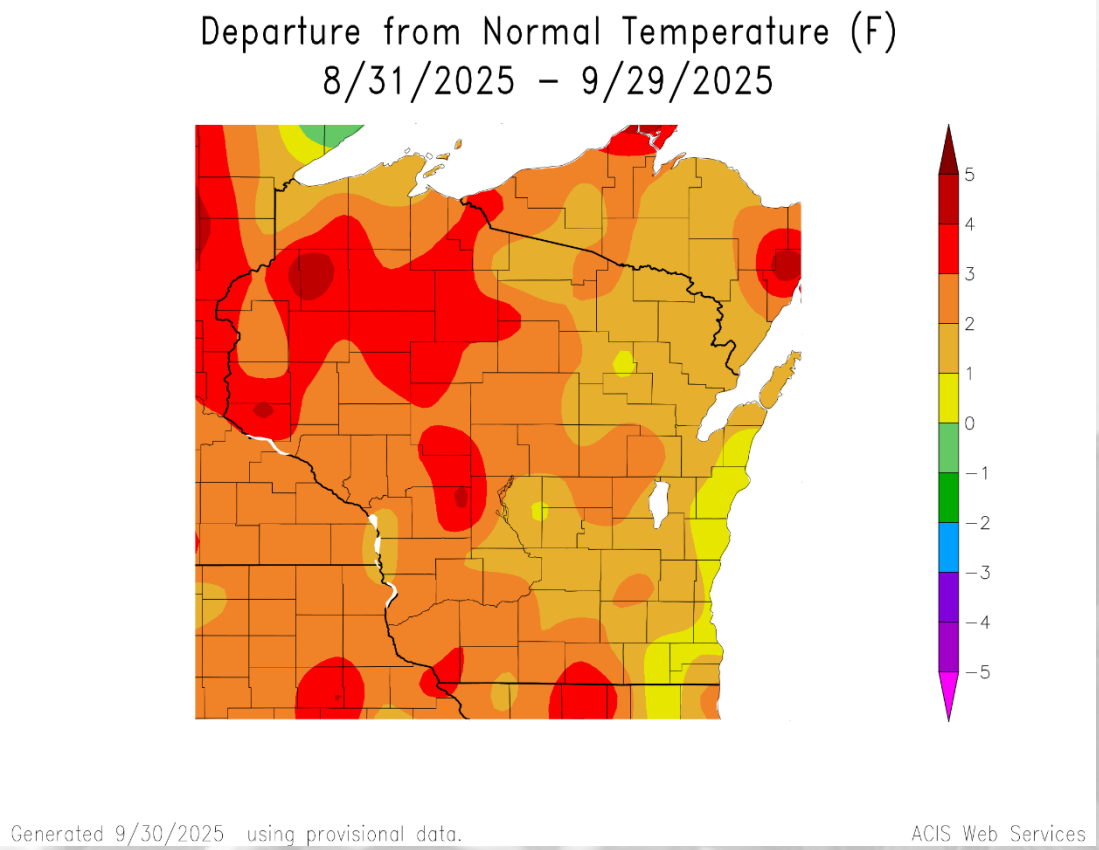


- Average temp. range of **62-68°F** in the south; **56-62°F** in the north.
- **4-8°F above normal** for most of WI; pockets of **2-4°F** and **8-10°F** above normal.

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

30 Day Temperatures

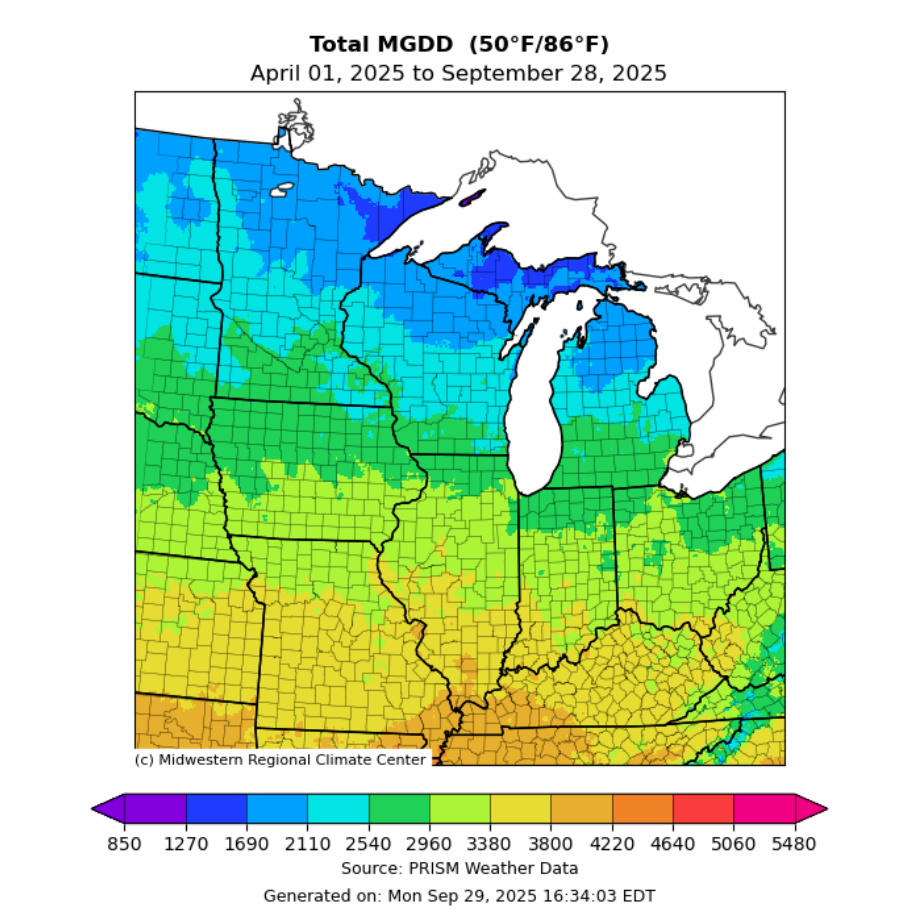


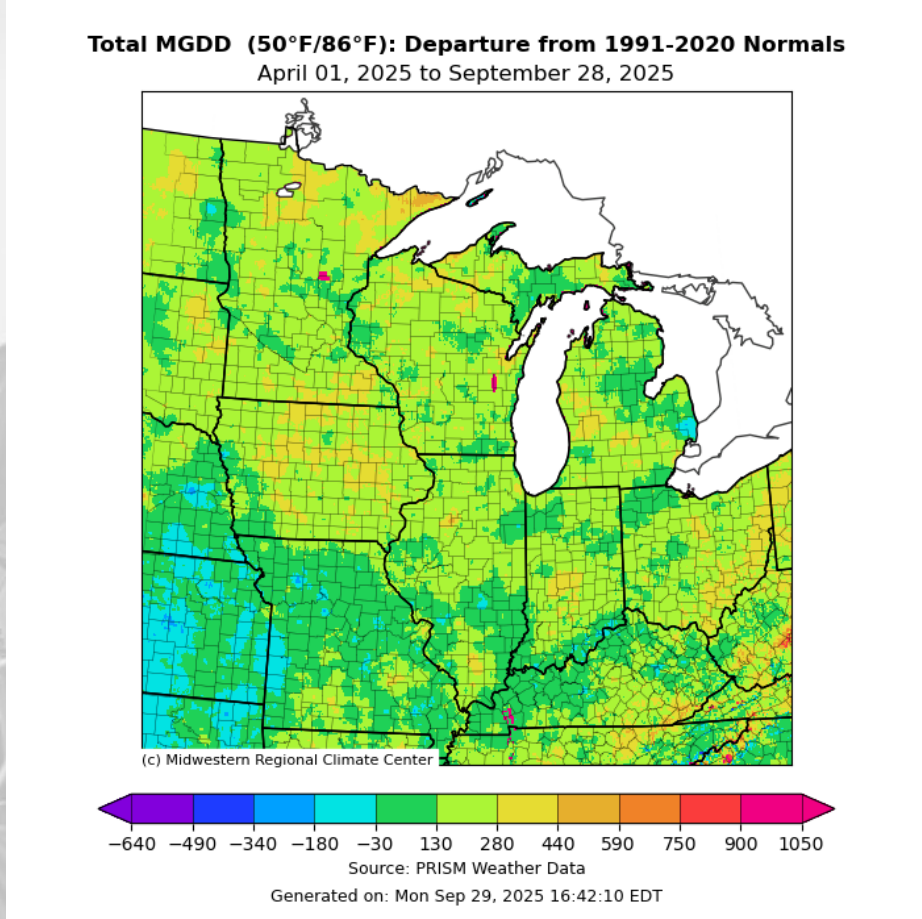


- Average temps. ranged from **63-66°F** in the south and west; to **57-59°F** for the far north.
- **Above average** temperatures across the state.
  - **1-2°F** above normal along Lake Michigan; **3-4°F** above normal in the NW and pockets in central and southern WI.

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

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





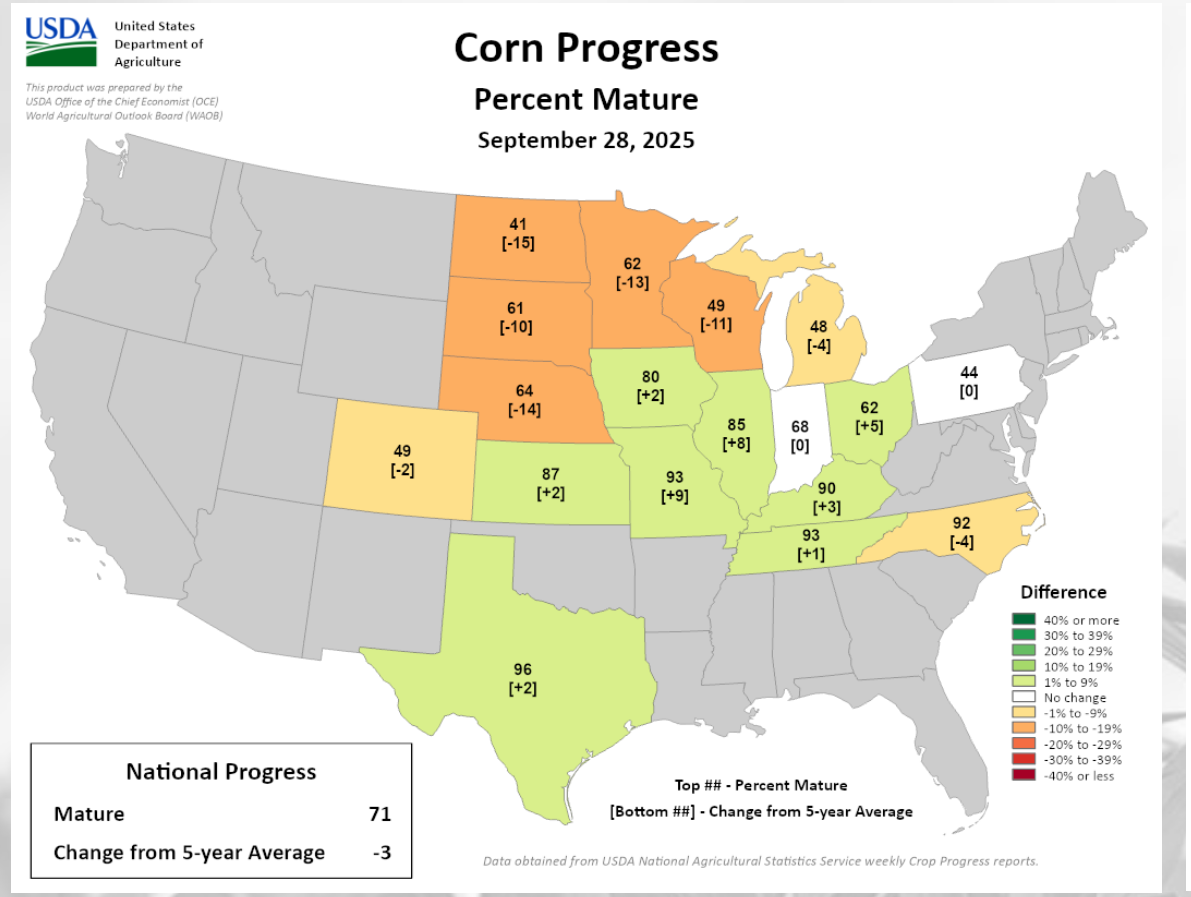
- Range from **2500-2900 GDD** in the SW to **1700-2100 GDD** in the N.
- GDD accumulation is running **130-280 GDD ahead of schedule** across most of WI.

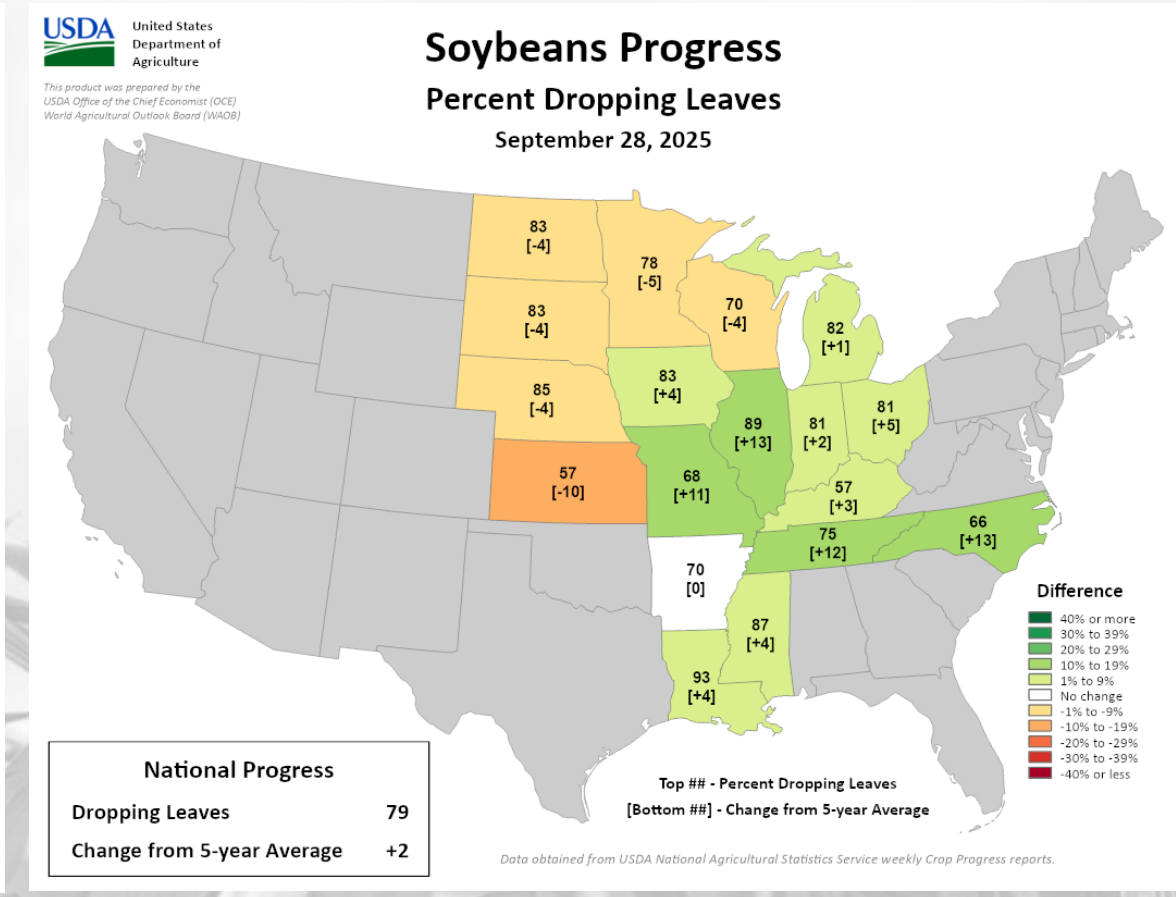
To calculate GDD for your corn variety and planting date, use this tool.

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

https://mrcc.purdue.edu/ag-climate-dashboard-recent#recent-degreedays
https://mrcc.purdue.edu/ag-climate-dashboard

Corn & Soybean Progress

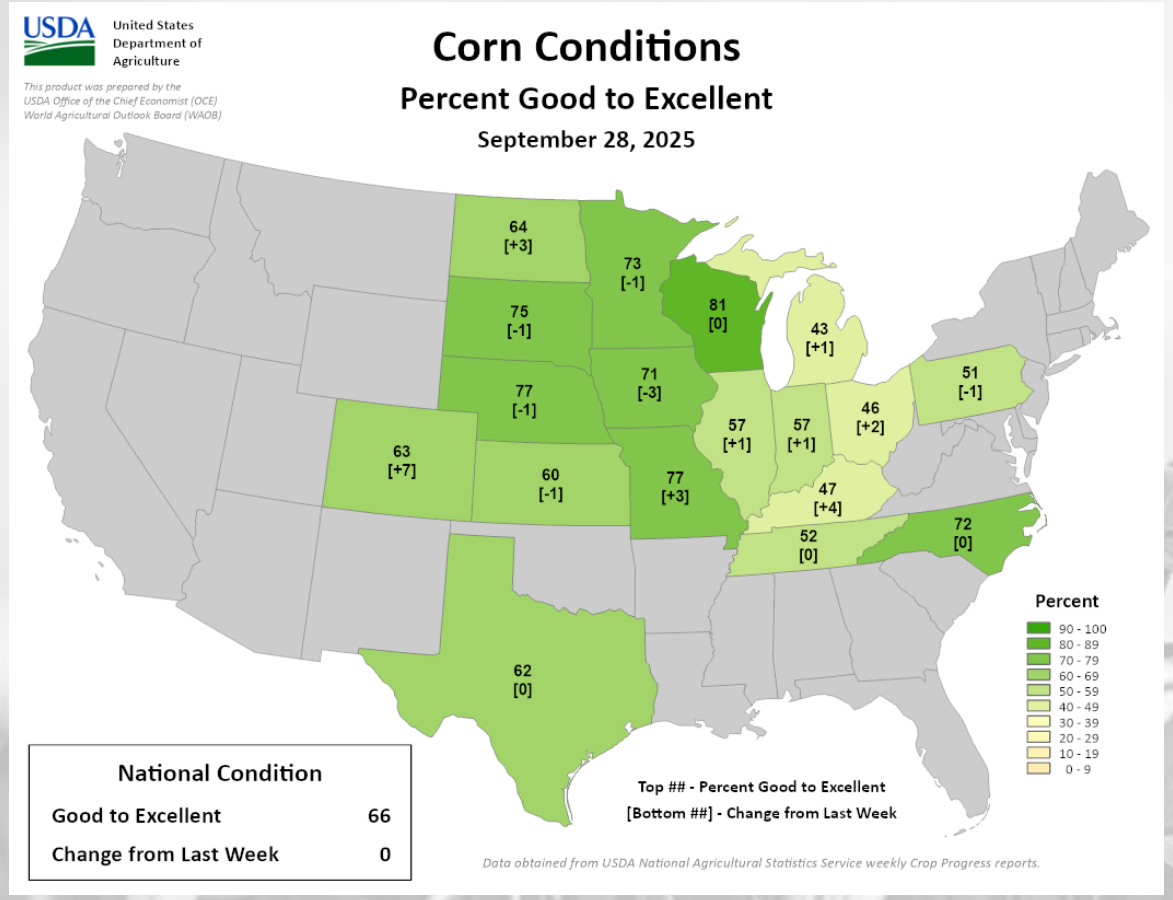


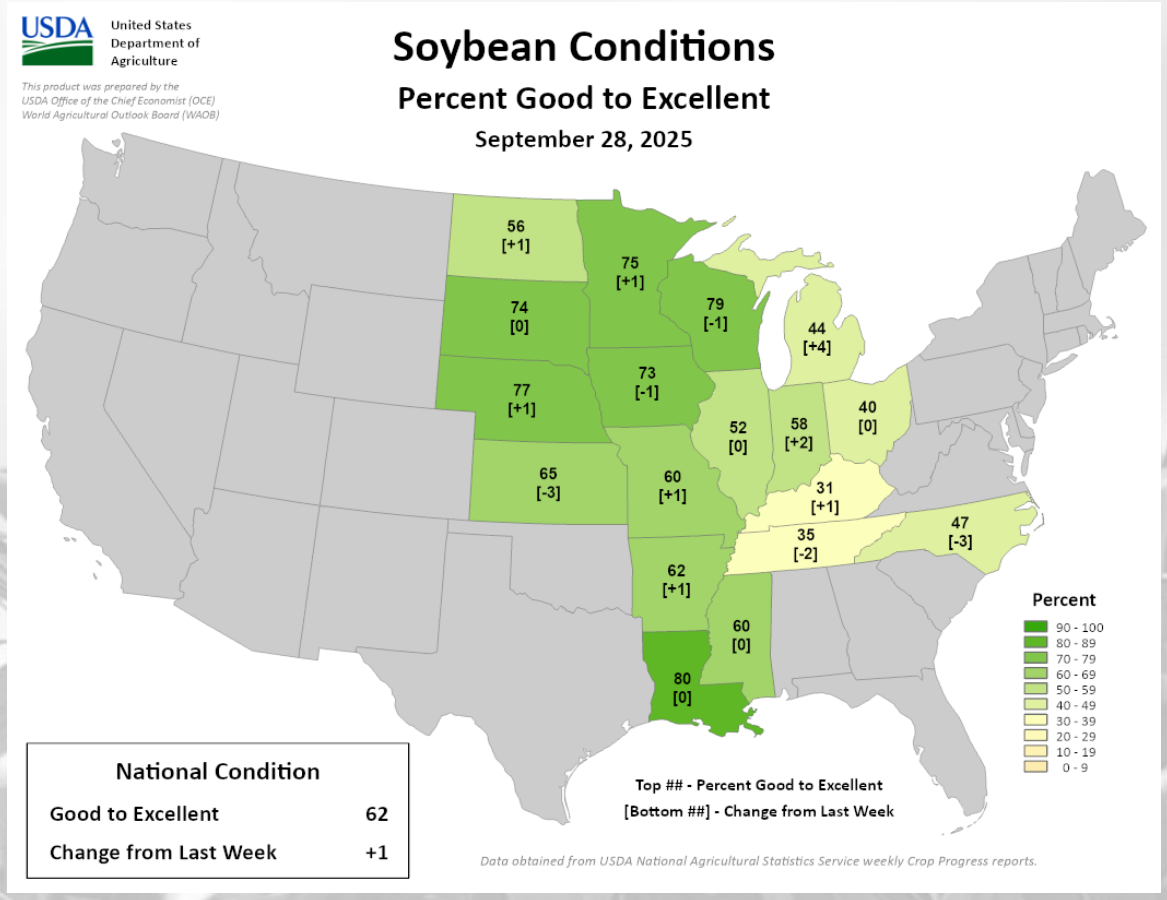


- Corn is mature in **49%** of WI fields which is behind the normal pace for late September.
  - **4%** of the corn crop in WI is harvested.
- Soybean leaf dropping is **70% complete** in WI fields which is behind the normal pace for late September.
  - Harvest is **6%** complete.

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

Corn & Soybean Condition





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

Crop Progress Report

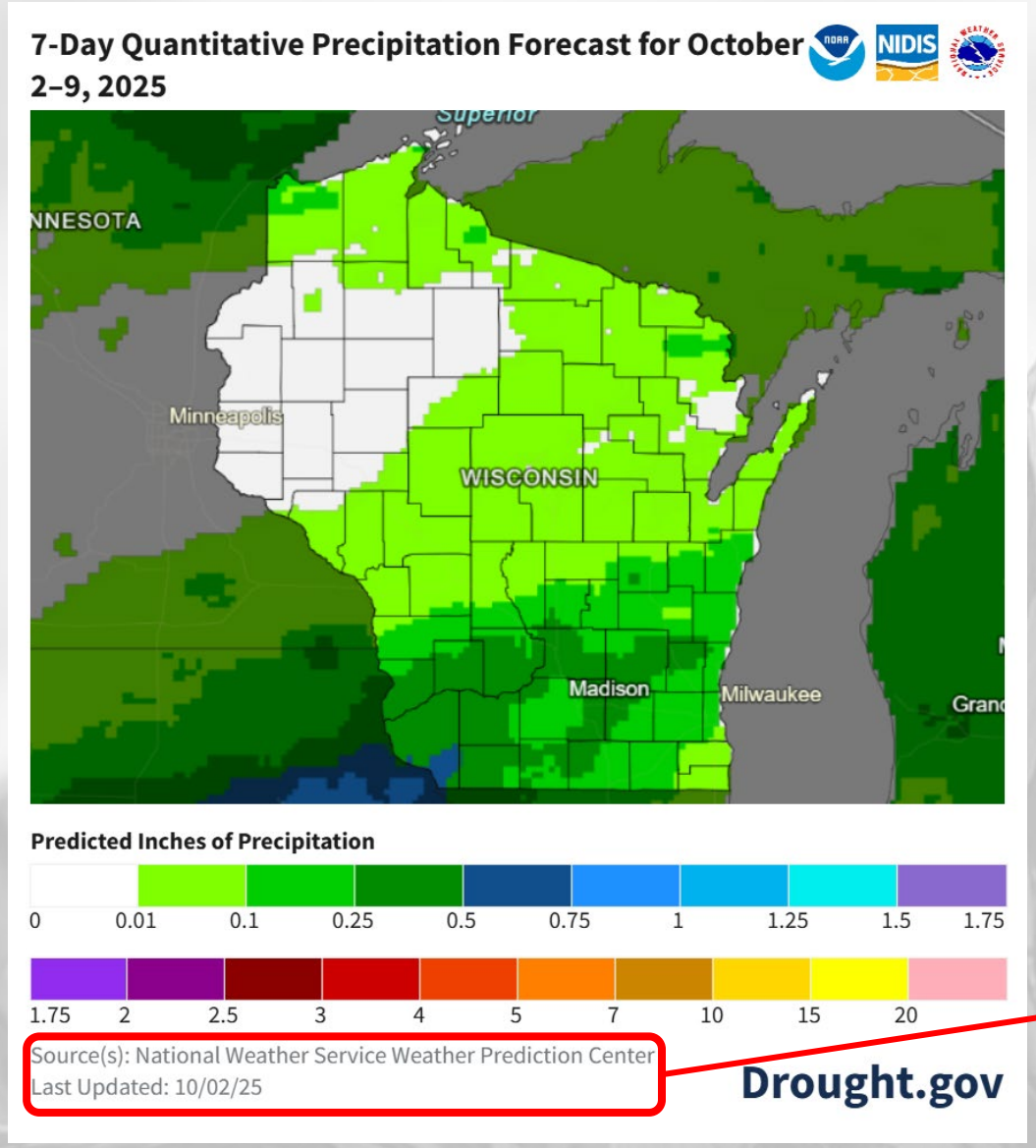
Crop progress report for Wisconsin for the week ending on Sep 28th

- Corn denting is **93%** complete and **49%** of the crop is mature (4 days behind the 5-year average).
  - Condition was rated **81%** good to excellent.
  - Corn silage is **66%** harvested and corn for grain is **4%** harvested.
- Soybean coloring is running at **94%** complete, with **70%** of the crop dropping leaves (2 days behind the 5-year average).
  - Condition was rated **79%** good to excellent.
  - Soybeans were **6%** harvested.
- Winter wheat seeding for next year is **43%** complete, with emergence at **20%**.
- The fourth cutting of alfalfa hay was **90%** complete.
- Pasture and range conditions are rated **61%** good to excellent (**down 2%** from last week).
- Potato harvest is at **72%** complete.

Full report: https://www.nass.usda.gov/Statistics_by_State/Wisconsin/Publications/Crop_Progress_&_Condition/2025/WI-Crop-Progress-09-29-25.pdf

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

7 Day Precip Forecast

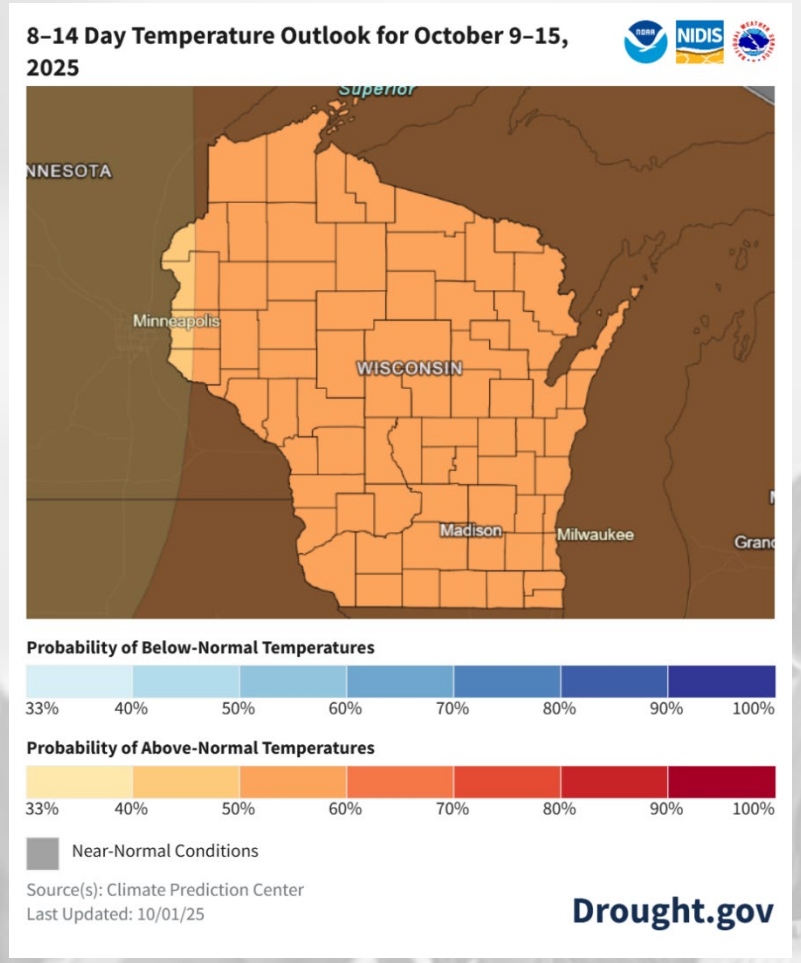


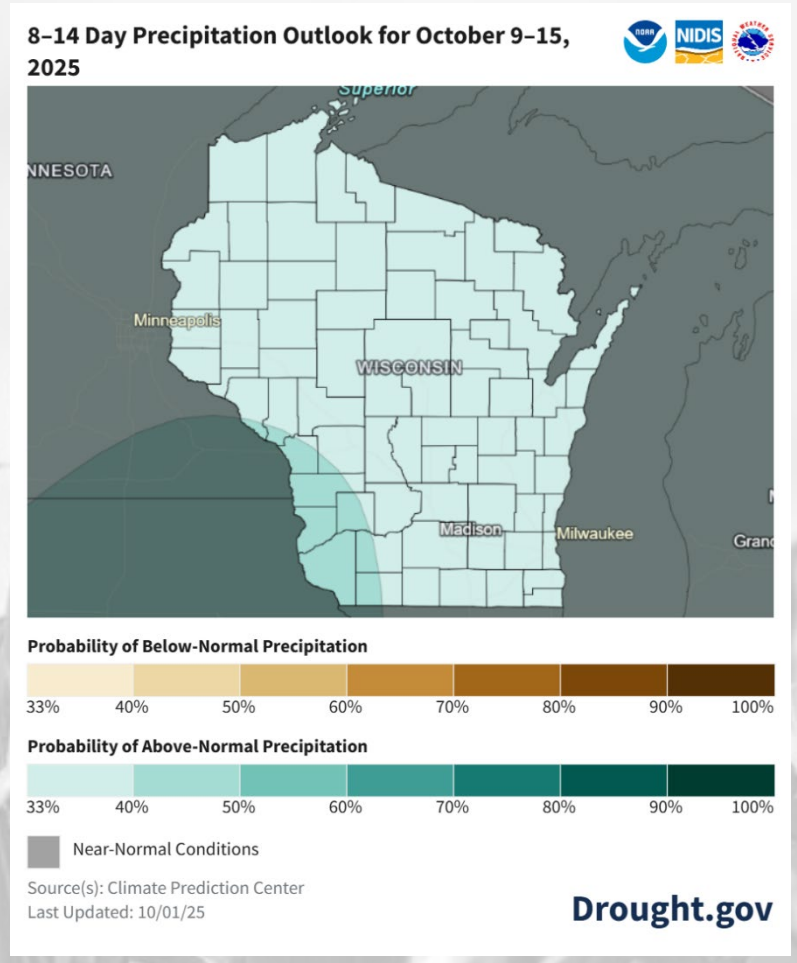
- **When?** → rain in the south on Monday & Tuesday of next week, with chances in the north on Thursday.
- **Where?** → best chances in the south-central and southwest.
- Check your local forecast for details on totals and timing.
- Average precip (1991-2020) for this week: **0.76"**

Forecast for 10/2/25 thru 10/9/25
(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



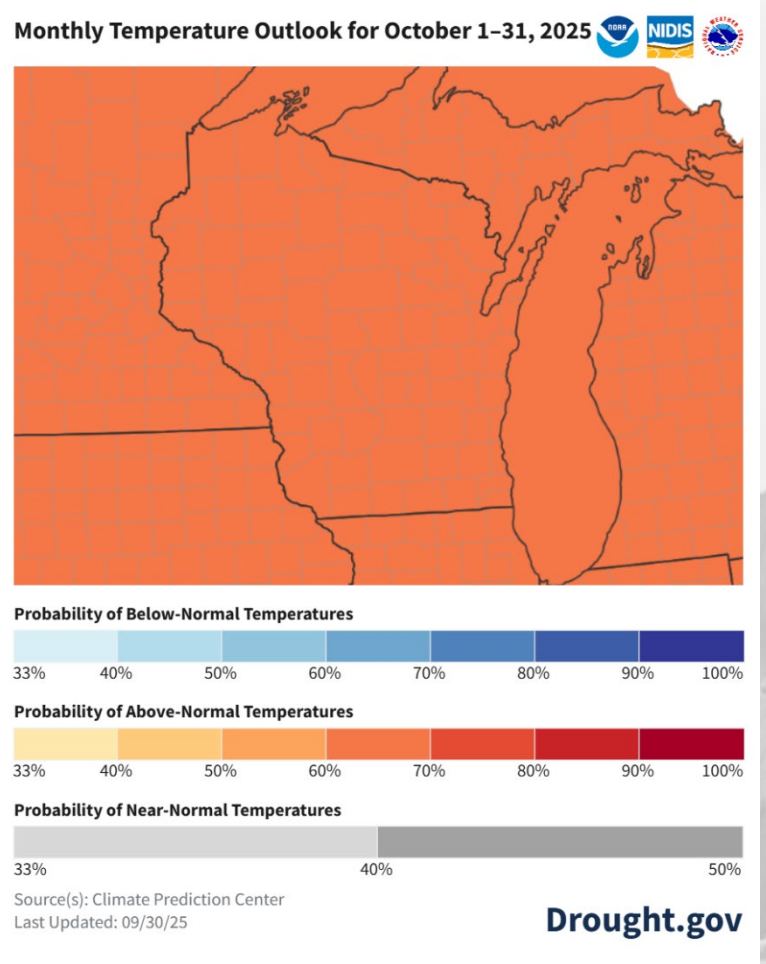


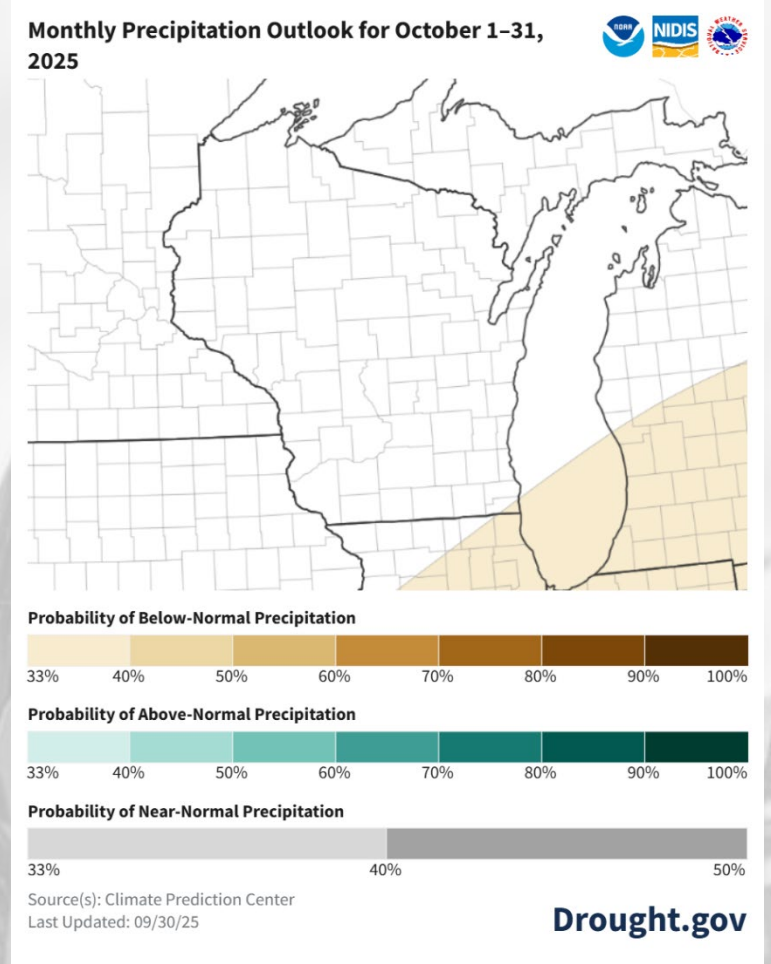
http://www.cpc.ncep.noaa.gov/
https://www.drought.gov/states/wisconsin

Mid October: Temperatures are likely (50-60% chance) to be above normal. Precip is leaning towards above normal, more so in the SW.

- Statewide normals (1991-2020) for October 9-15 are **48.5°F** and **0.72”**.

30 Day Temp & Precip Outlook



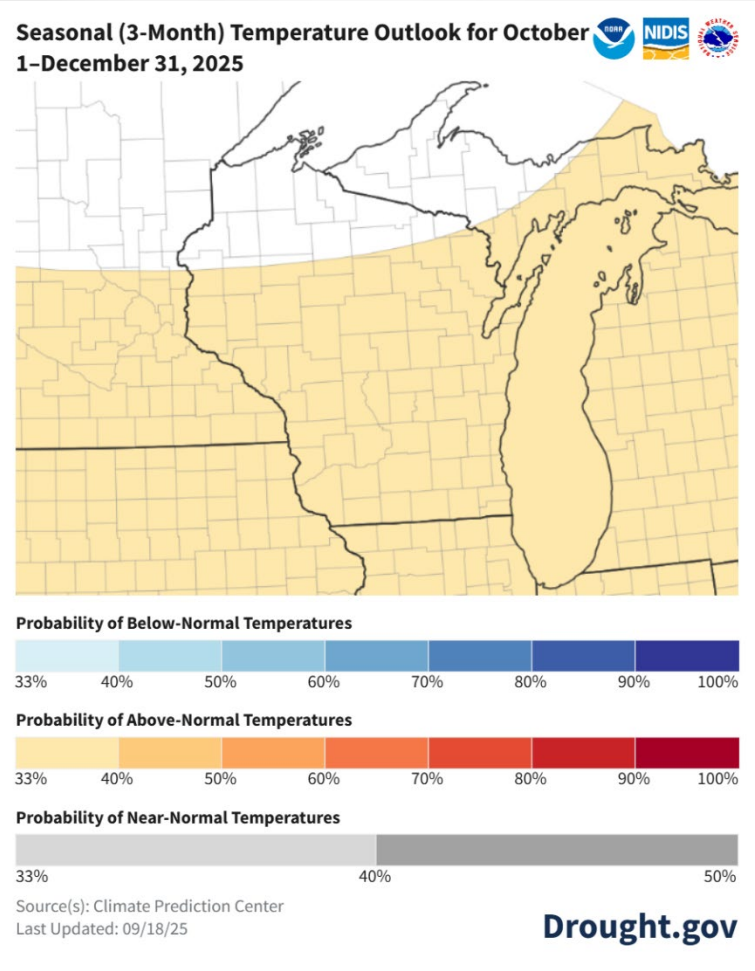


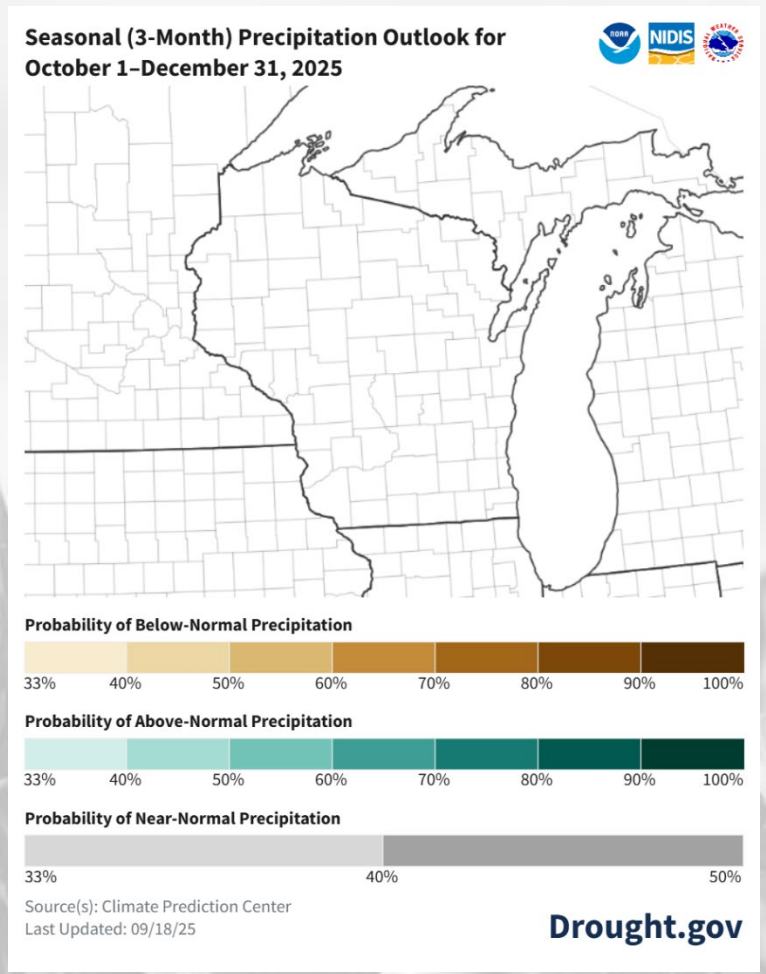
http://www.cpc.ncep.noaa.gov/
https://www.drought.gov/states/wisconsin

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 **average highs in the 70s to 80s**. A large portion of WI was **4-8°F above normal**.
- **Rainfall was sparse** over the last week, with most of the week's rain falling the early hours of 9/23. 7-day totals were largely **less than 0.1".**

Impact

- Topsoil moisture at most Wisconet research farm stations were **below last week's levels** due to little-to-no rainfall. The latest NASS report indicates a **3-4% increase** in the percentage of agricultural soils that are dry to very dry.
- Wisconsin remains drought free, but abnormal dryness (D0) expanded to now cover **>35% of the state** (north, SW).
- Corn and soybean crops are **near maturity or at maturity** in most WI fields, with conditions remaining **good to excellent for most** (NASS). Soybean and corn harvest have begun, with corn silage harvest at two-thirds complete. Winter wheat is beginning to emerge as the fourth cutting of alfalfa is nearing completion.

Outlook

- The best chances for precip over the next 7 days in the **south/southwest**, and lowest in the northwest.
- Climate probabilities for mid October indicate an increased **likelihood** (50-60% chance) to be **warmer than normal**, with a lean towards **above normal precipitation**.
- 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

- Corn and soybean grain harvest has begun, driven by dry 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.

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

- The DATCP Pest Survey has concluded for the season as pest pressure is winding down.
- 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.

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.

Small Grains

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

Fruit Considerations

General

- **Reminder:** Always read and follow directions on the label and keep in mind pre-harvest intervals (PHI) as we move through harvest!
- Sun scald and southwest injury to trunks and branches have been observed across many orchards and vineyards this summer, likely due to wide variations in winter temperatures that can cause trunk and branch cracking. Growers may consider flagging trees and branches while harvesting, then return this winter to prune out impacted branches and take a closer look at injury.
- Fruit sunburn continues to be observed across many fruit crops in southern WI. Consider removing this fruit while out picking to prevent other pests attracted to the volatiles (scent).
- **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.
- WI fruit growers can reference the Midwest Fruit Pest Management Guide (MFPMG) for a list of registered products and recommended best practices. (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.

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 growers should continue monitoring pheromone traps and degree-day (base 50°F) accumulation for Codling moth through harvest.
- Apple maggot pressure is variable across the state. Growers should continue to use red sphere traps to monitor populations.
- Check out the WI DATCP Orchard Insect Pest Bulletin for more information on current insect trap captures across the state.

Grapes

- Table and wine grape harvest is officially completed at West Madison Research Station, harvesting Petite Pearl, La Crescent and Frontenac this week. Check out last week's WI Fruit Crop Scouting Report for updates 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.
- Black rot and fruit rot symptoms continue to be reported in vineyards around WI. Review this 2022 article by Dr. Leslie Holland on Fruit and Cluster Rots for more information on black rot and fruit rot management around harvest.
- Downy mildew may impact grape quality at harvest. Read more about signs/symptoms and management in this 2024 WI Fruit News article on late-season downy mildew.

Berries

- Grape and berry growers monitoring spotted wing drosophila should continue checking and refreshing traps weekly through harvest.

Vegetable Considerations

General

- As crops finish up for the season, there is still time to establish winter rye across the state as well as winter wheat and winter barley in southern WI. Use the Midwest Cover Crop Council's cover crop selector tool to determine the latest planting date for each species in your specific county.
- 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 information 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. Thrips can be difficult to control as a result of their small size and their tendency to hide. However, there are many tactics that can be combined for better 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

- 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.
- Scout for symptoms of **alternaria and cercospora** on carrot leaves. These diseases can be difficult to tell apart as both cause brown lesions often surrounded by a yellow halo. One distinguishing factor can be the timing of infection. Cercospora often occurs on young, rapidly growing plants while alternaria often occurs on older plants although can occur on young plants as well. Both can cause yield loss due to petioles breaking off during mechanical harvest if disease pressure is high.
- **Cercospora** can also cause losses during mechanical harvest of table beet. While we have received little rain in recent weeks, the dewy mornings provide favorable conditions for this disease. Management options include control of alternative weed hosts (lambsquarters and pigweed), fungicides, and minimizing leaf wetness with overhead irrigation.

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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