Wisconsin Ag Climate Outlook

Week of November 12, 2024

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Key Points

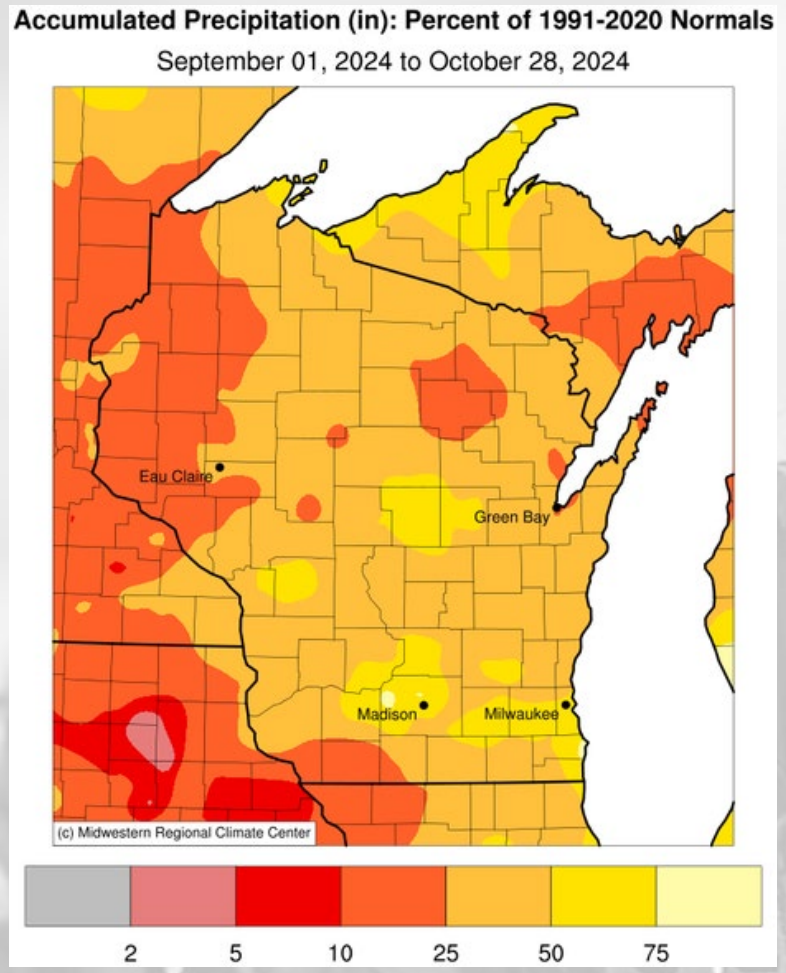
Navigate to select slides by clicking on the links below.

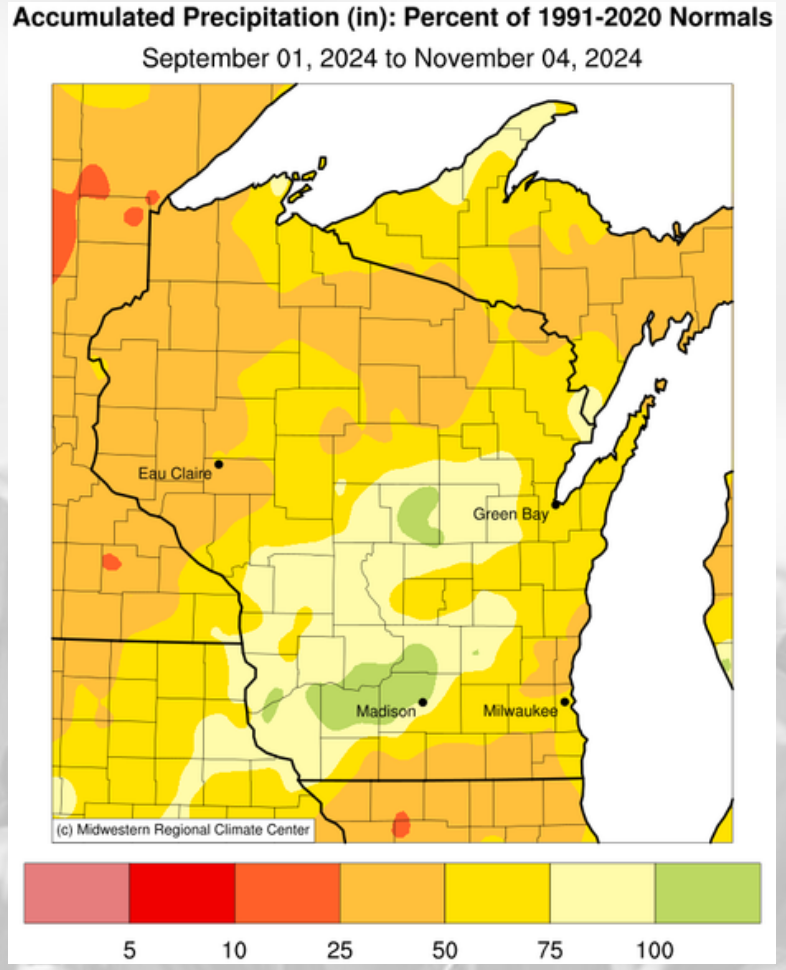
1) Fall precip deficits have been greatly reduced across many counties, thanks to recent rainfall.
2) Soils have been replenished where rains have fallen, reducing the area of WI in drought.
3) The above-normal temps and rainfall are showing a higher probability to continue through mid/late November.

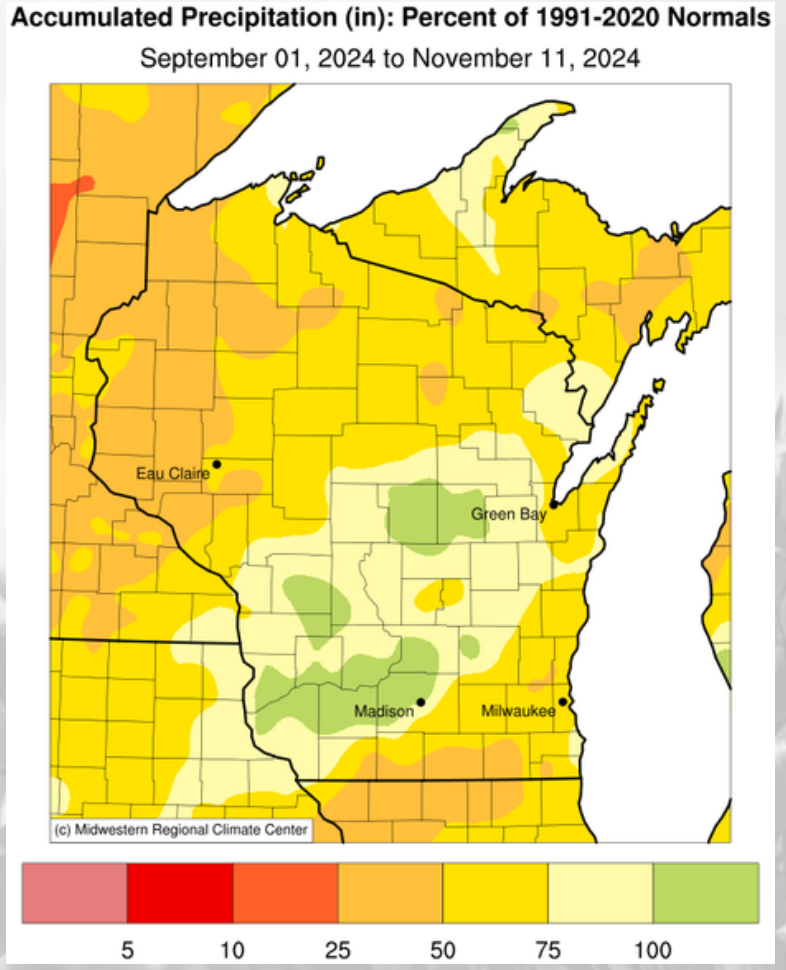
- *For this week's agronomic recommendations from UW Extension, click here.*
- *For NASS crop progress & condition maps, click here.*

Reducing the precip deficit

Over the past 2 weeks, fall precip totals have been brought up to near-normal levels across a large swath of WI (SW to NE).

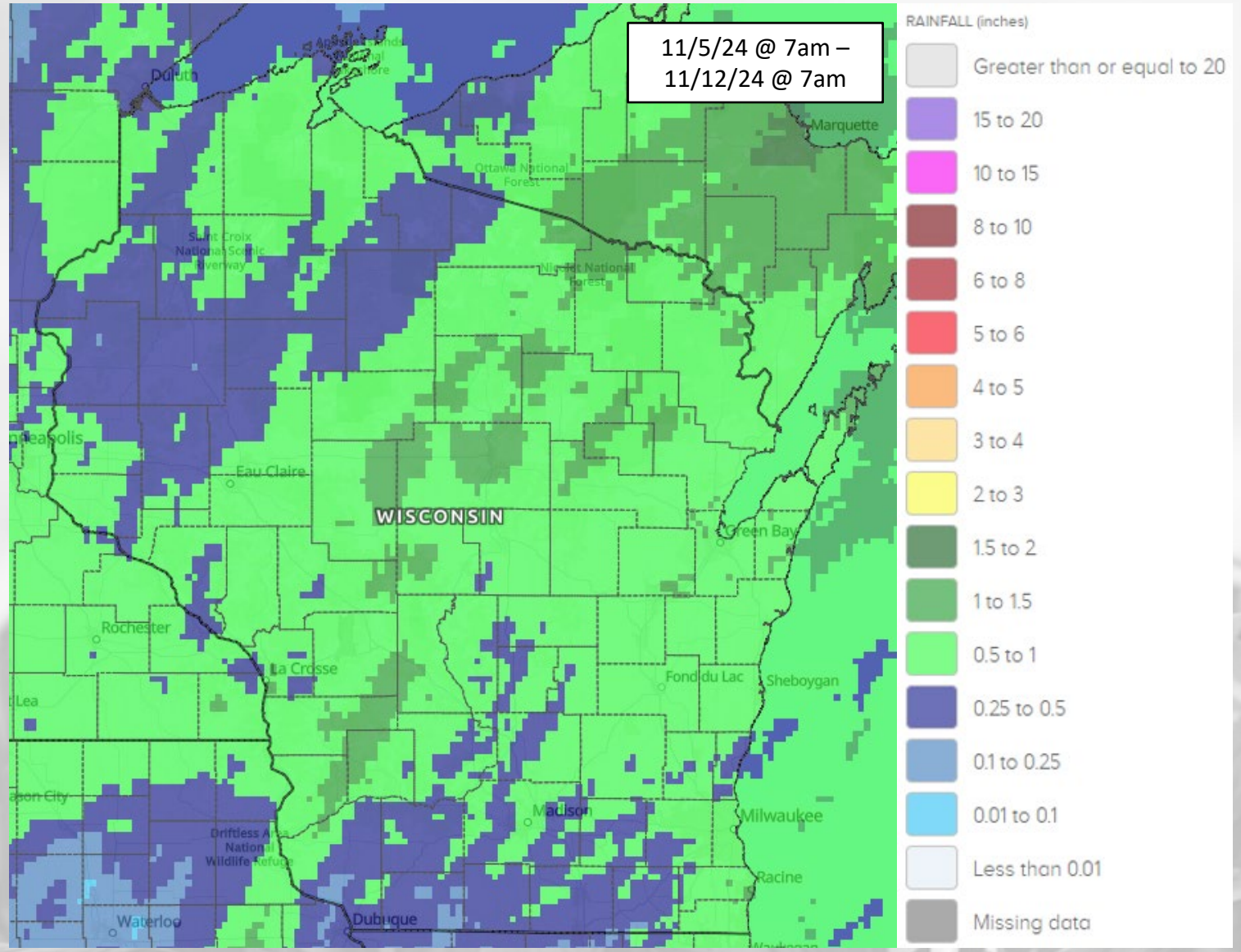






https://mrcc.purdue.edu/CLIMATE

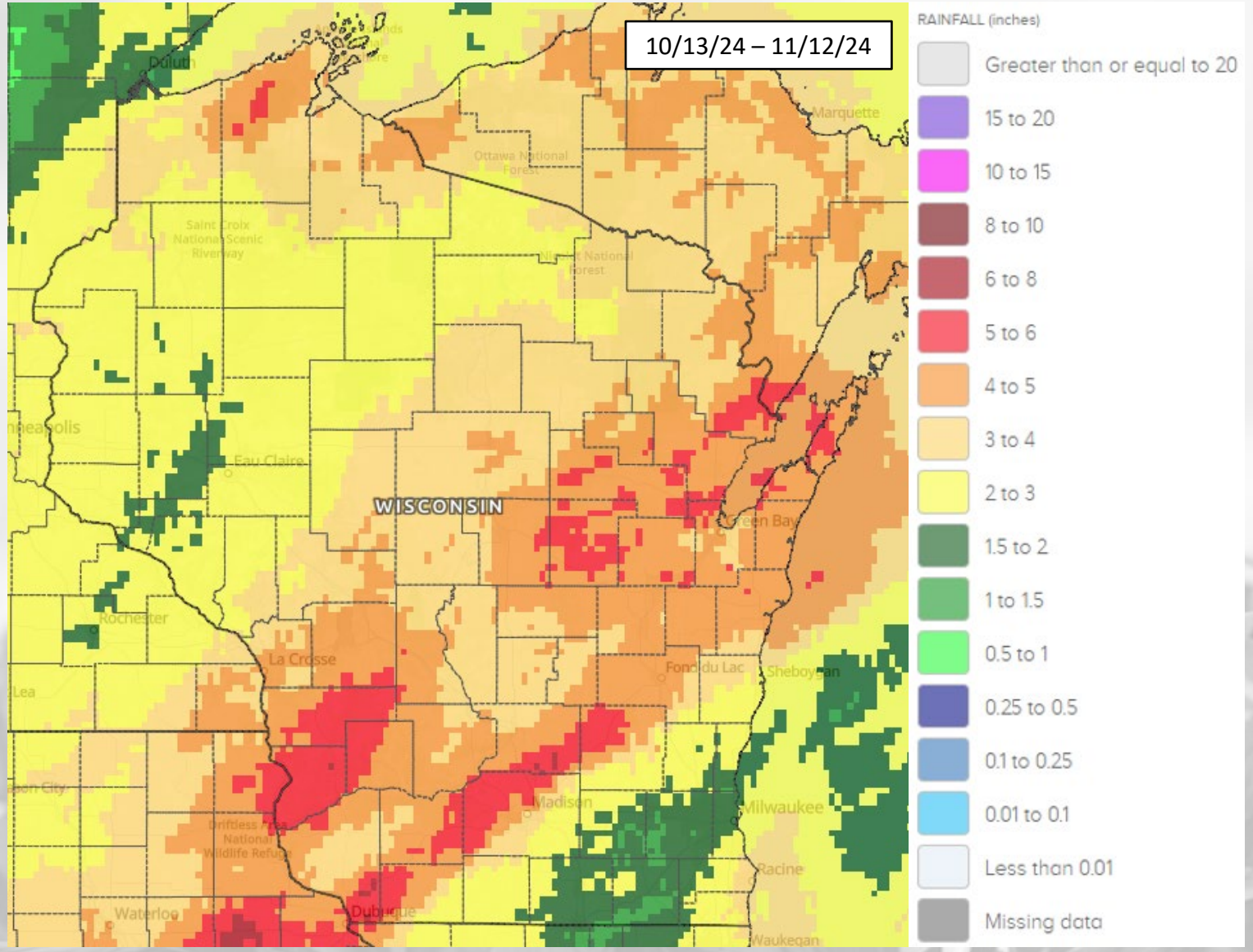
7 Day Precip



- Majority of the state received **0.5” to 1”** over the past week.
- **Localized areas of >1”** stretching from the SW up through the north-central counties.
- **0.5” or less** in the far south and NW corners of the state.

https://water.noaa.gov/

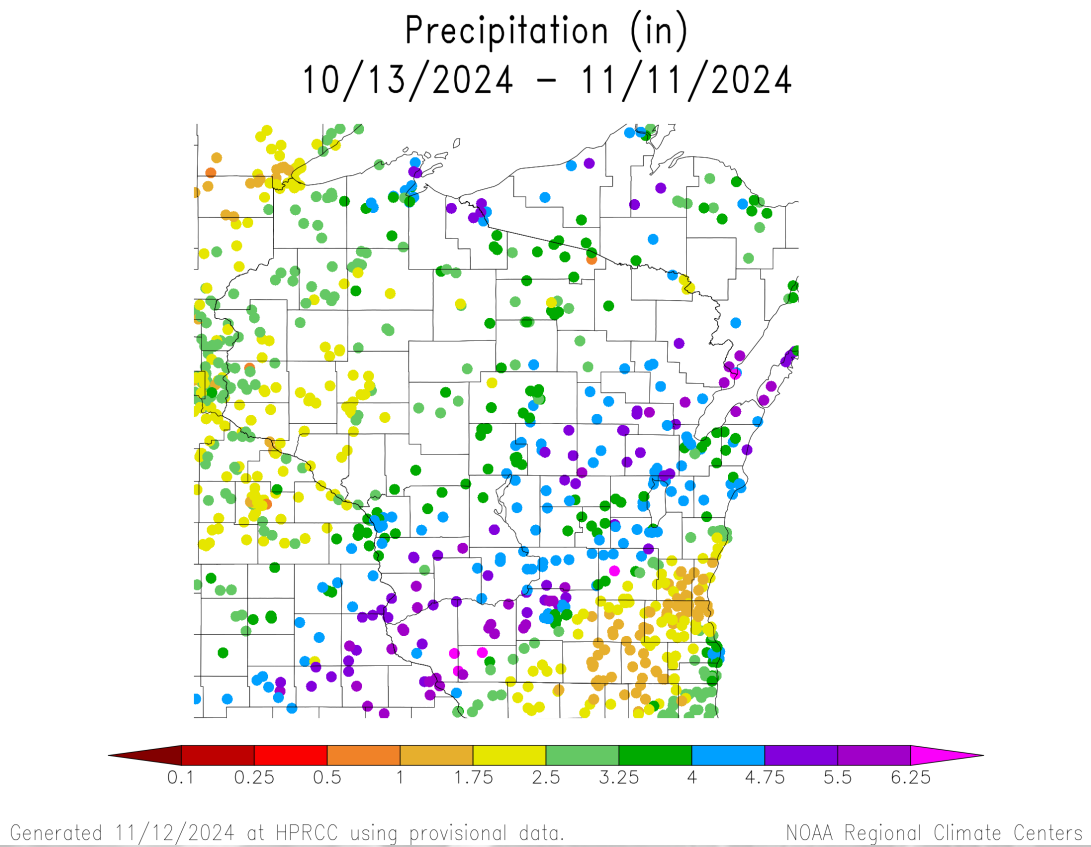
30 Day Precip

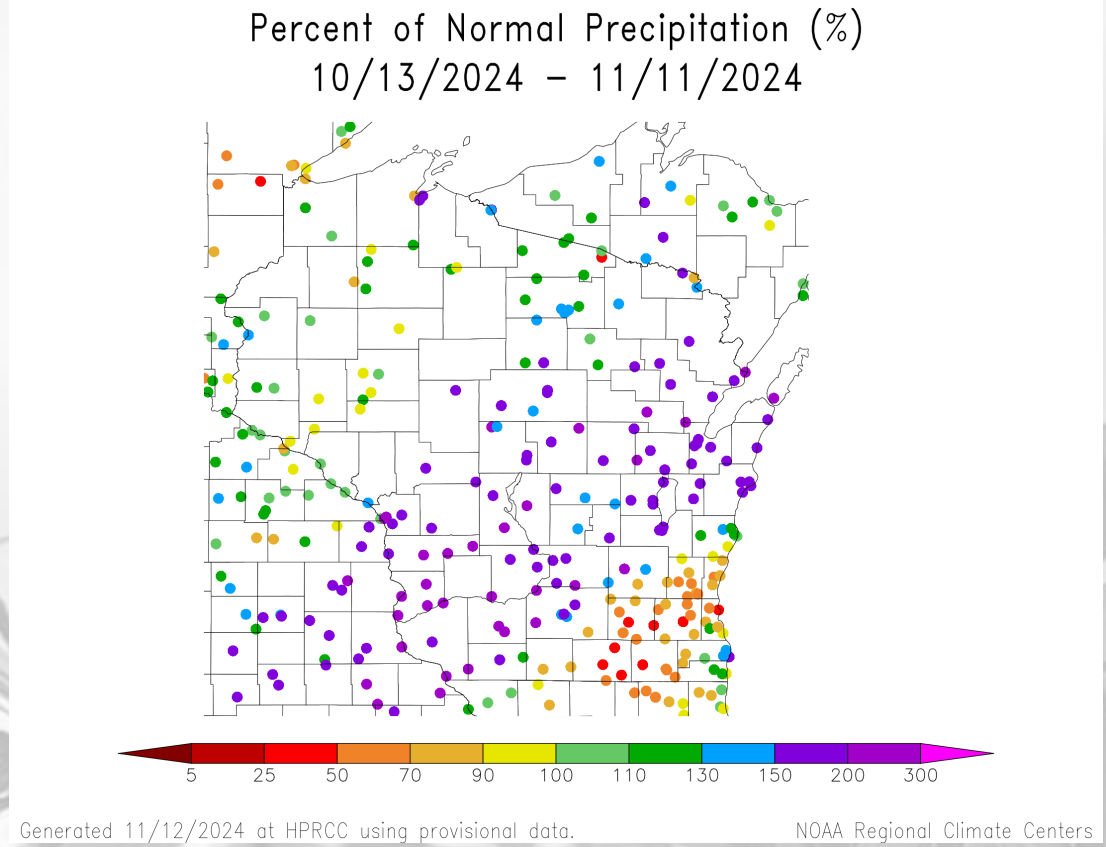


- Most of the 30-day precip total came during the **last 14 days**, except for the far SE and NW.
- **2-5”** for most in the state, with **instances of 5+”** in the SW/SC and around Green Bay.
- 30-day totals across the SW-to-NE belt are **above** the 30-year **climatological average** for most.

https://water.noaa.gov/

30 Day Precip Total/% Avg.

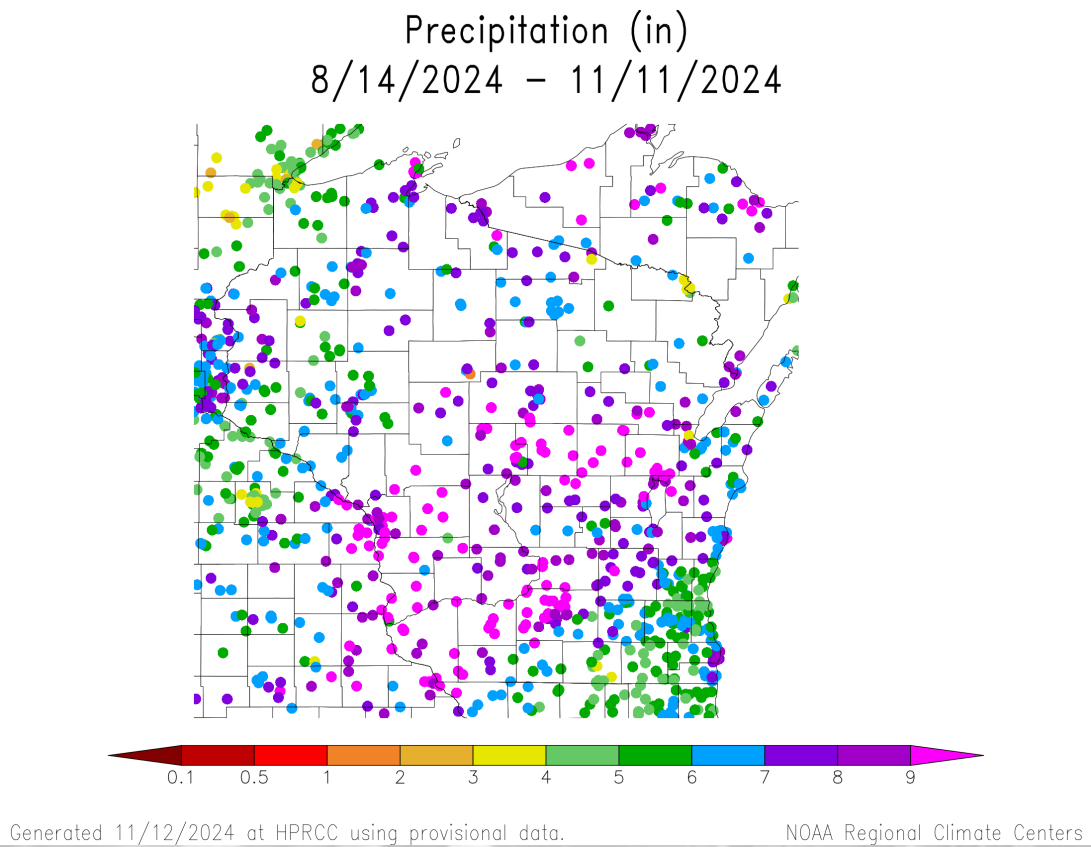


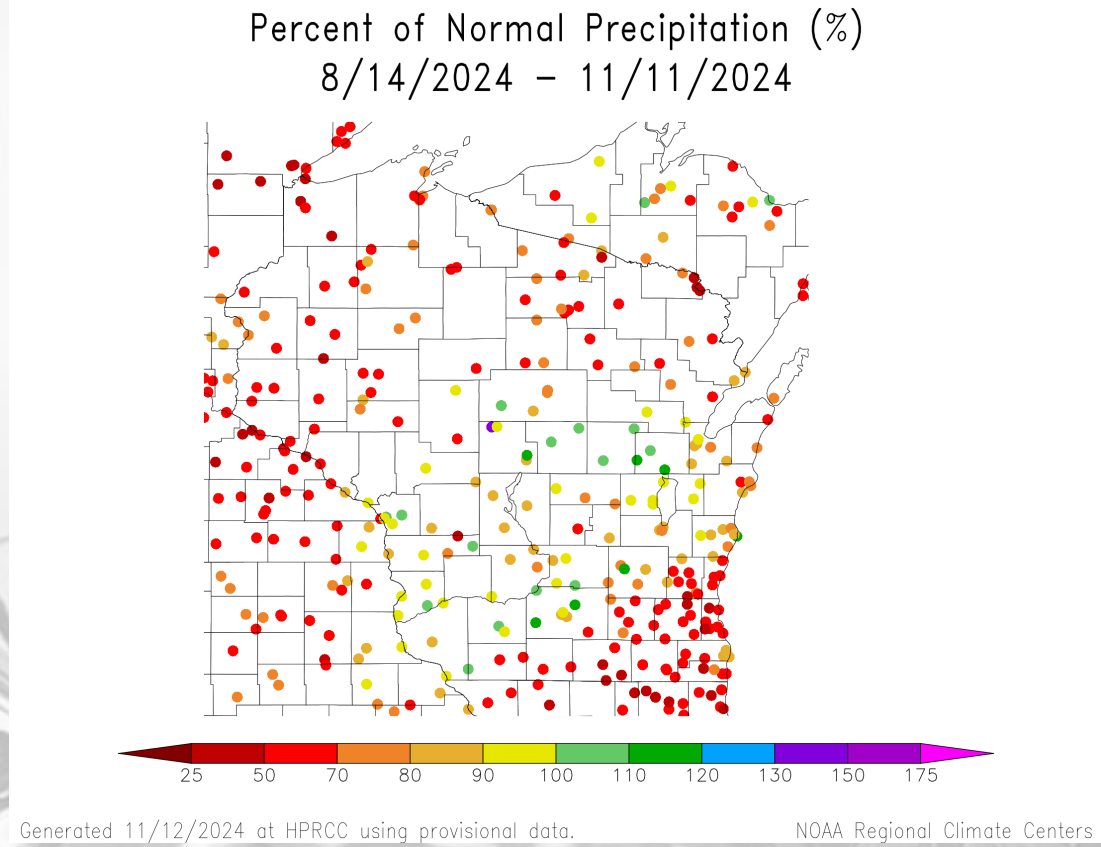


- **Band of 4-6+”** from Prairie du Chien to Green Bay → monthly totals now at **150+% of 30-year normal**.
- **Near-to above normal** in NW Wisconsin → **~2-3”** of precip over the past 30 days
- **2.5” or less** in the SE → most stations are **below the 30-year normal**.

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

90 Day Precip Total/% Avg.

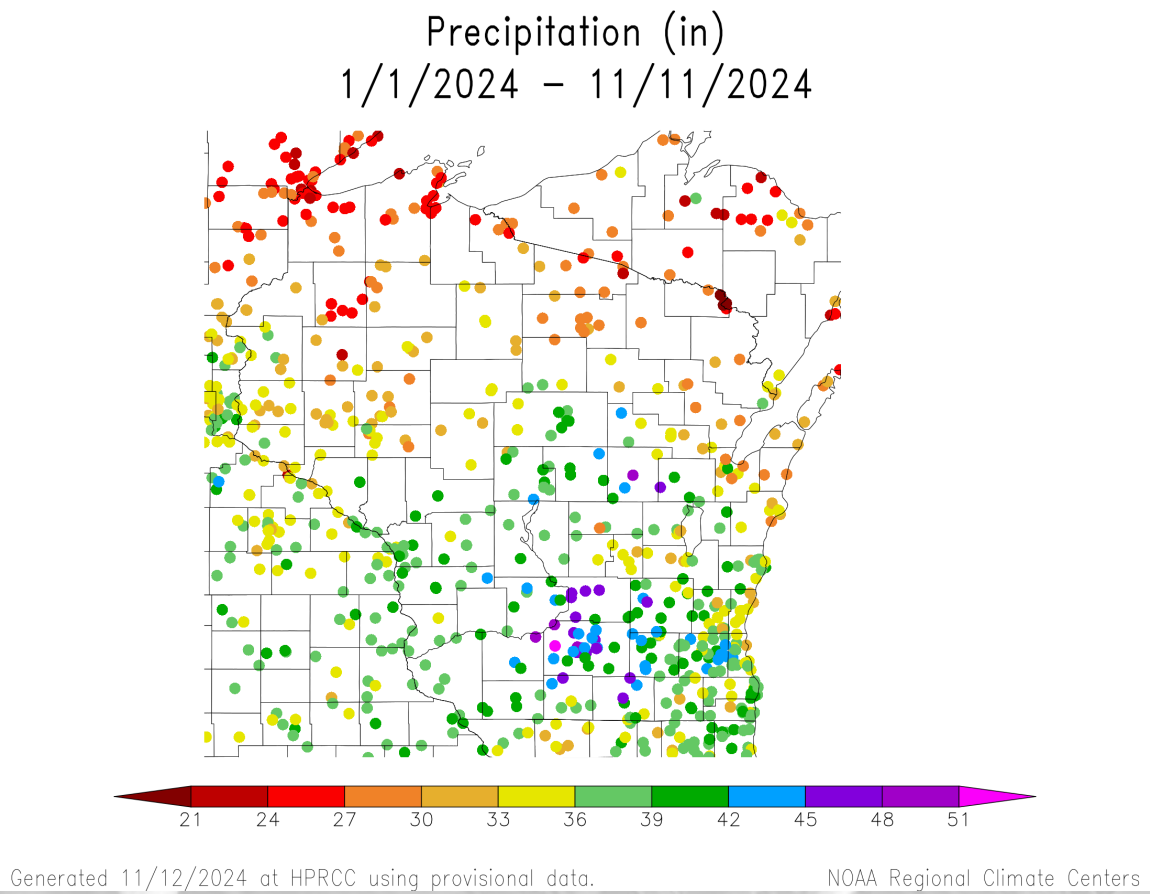


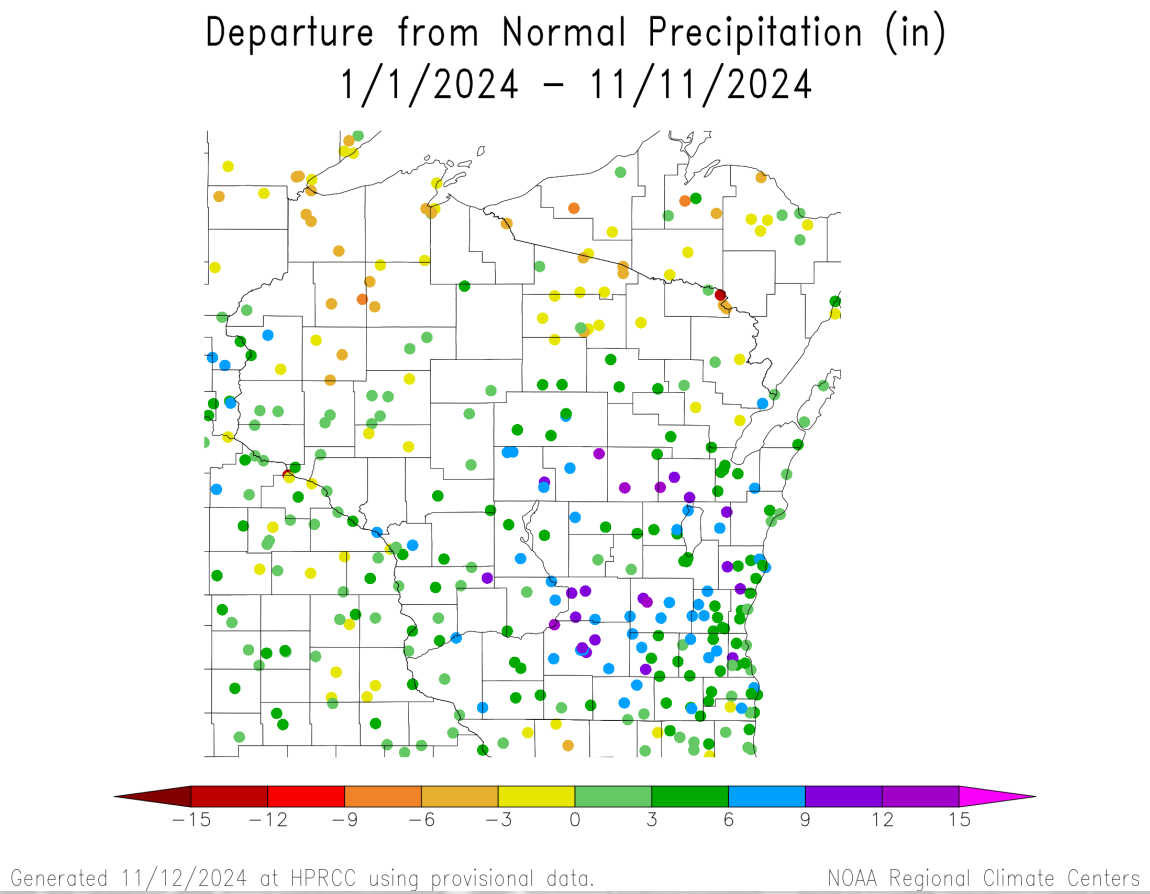


- **6” or more** across most of WI, excluding the SE and parts of the NW.
  - Stations from the SW up thru the NE are now **>80% of climatological normal** since Aug. 14.
- **25-70% of normal** across most stations in the SE and N/NW where rains were lesser over the past 2 weeks.

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

2024 Precipitation (so far)





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

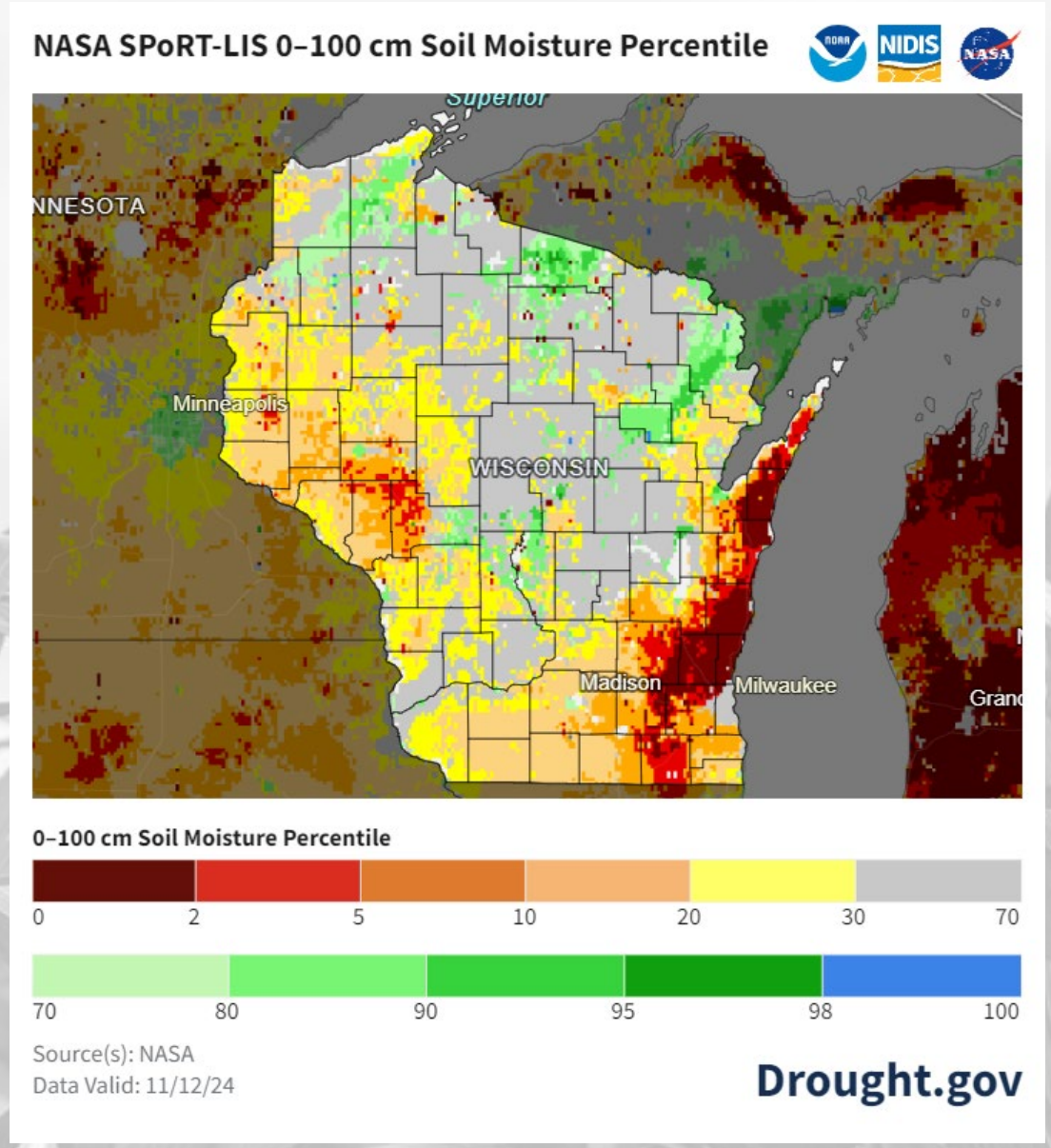
Soil Moisture Models

- **10th-30th percentiles** still in place in the south and west, but areas in red have been **greatly diminished** since late October.
- **Near-normal conditions** common in the central and northern counties
- The eastern shore is still **trending very dry.**

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.

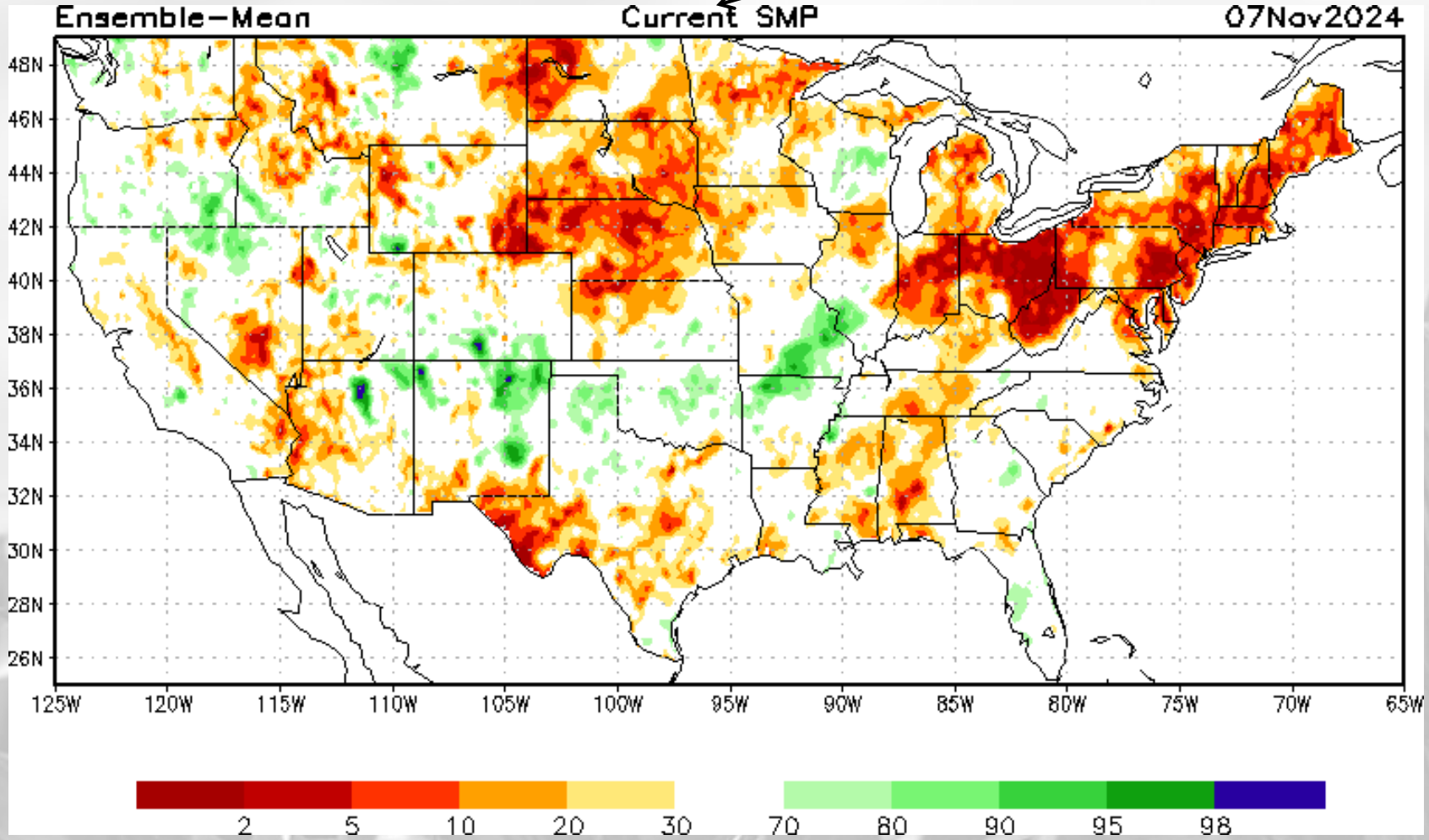
It's worth noting that each soil moisture model has their own characteristics and input variables, so there tends to be variation between models. Thus, it's worthwhile to look at multiple models opposed to just one.

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



Soil Moisture Models

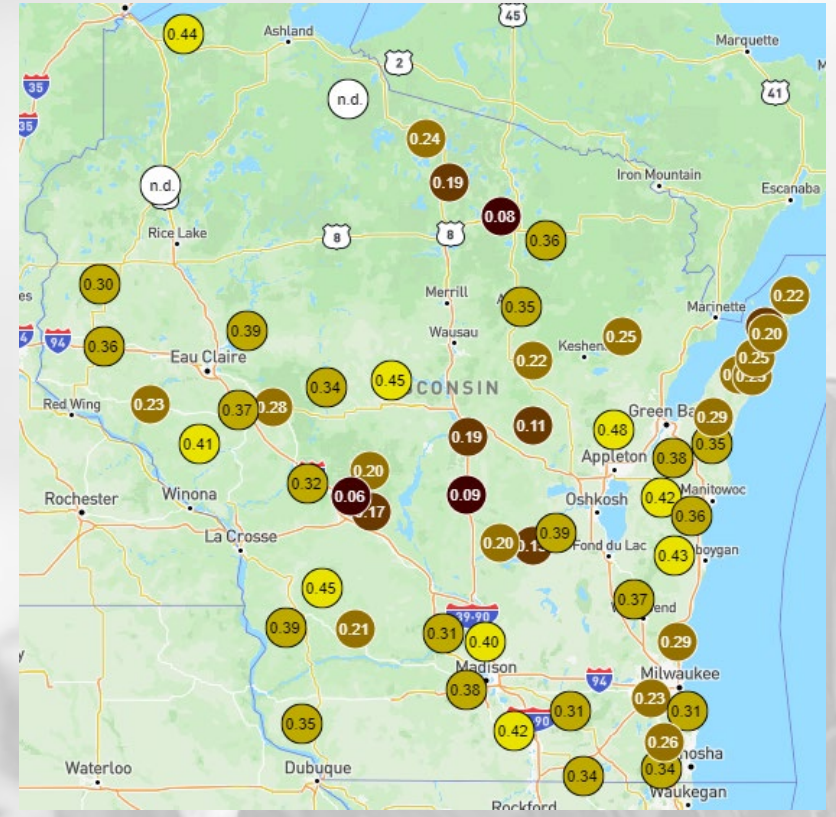
NOTE: this map displays the soil moisture percentile for Nov. 7. It was the most recent update on Nov. 12.



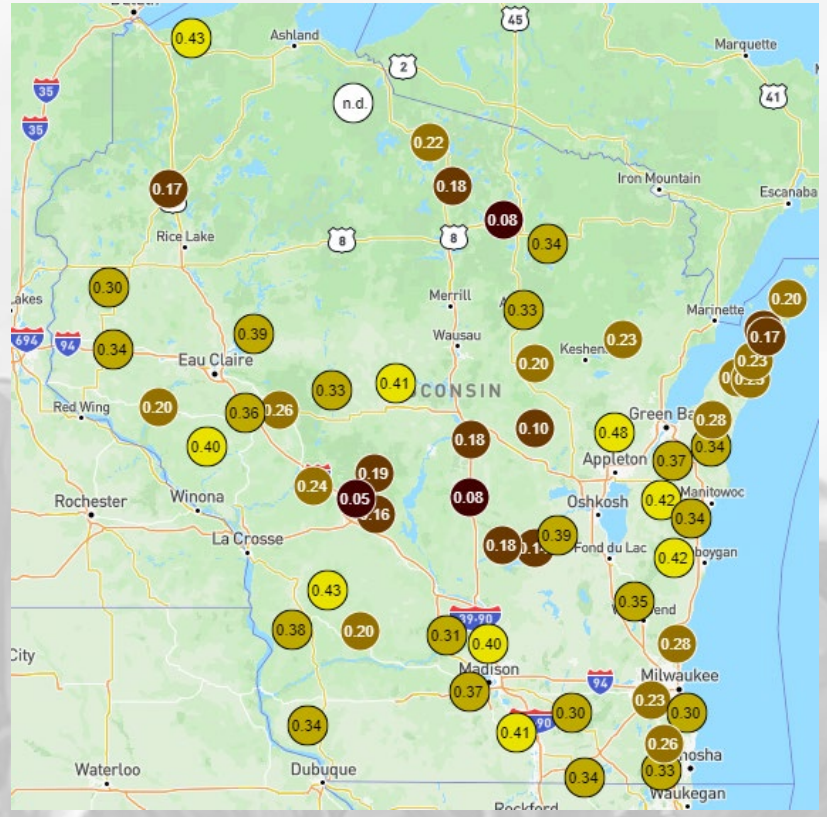
https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml

Wisconet Soil Moisture (4” Depth)

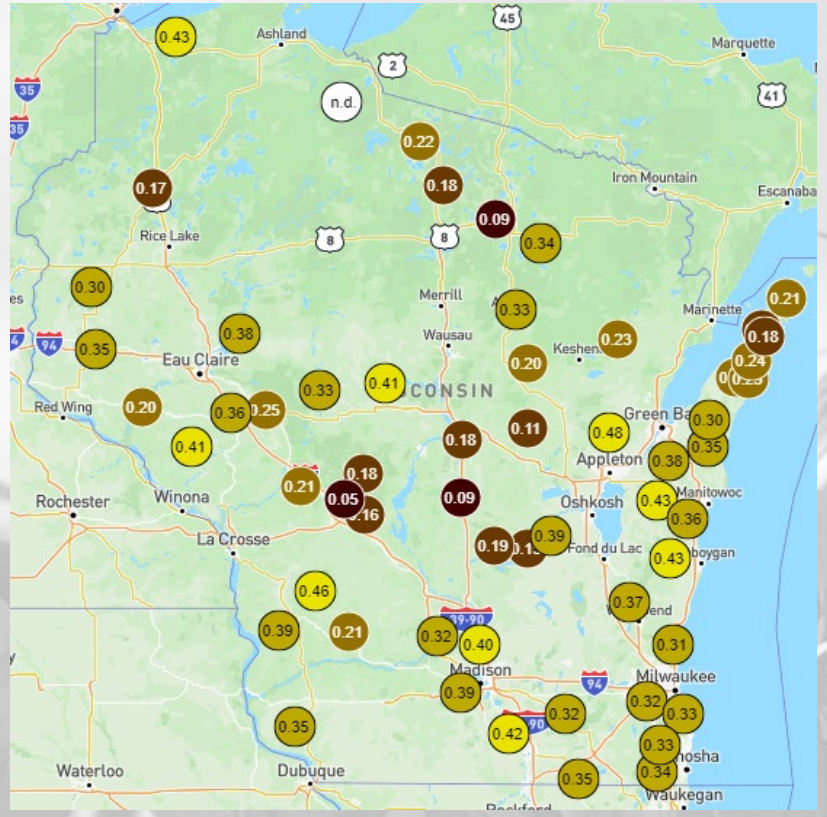
Thursday Nov. 7th @ Midday



Saturday Nov. 9th @ Midday

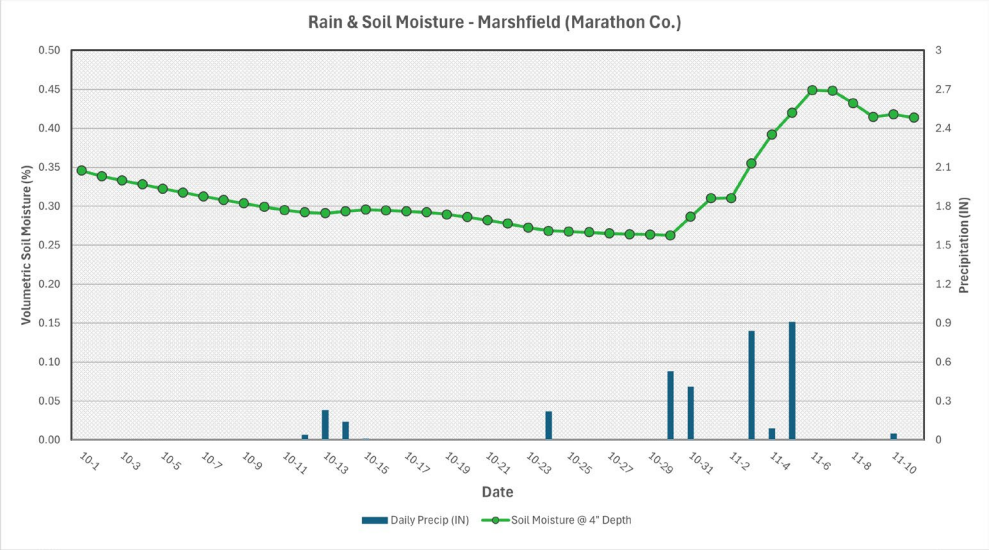


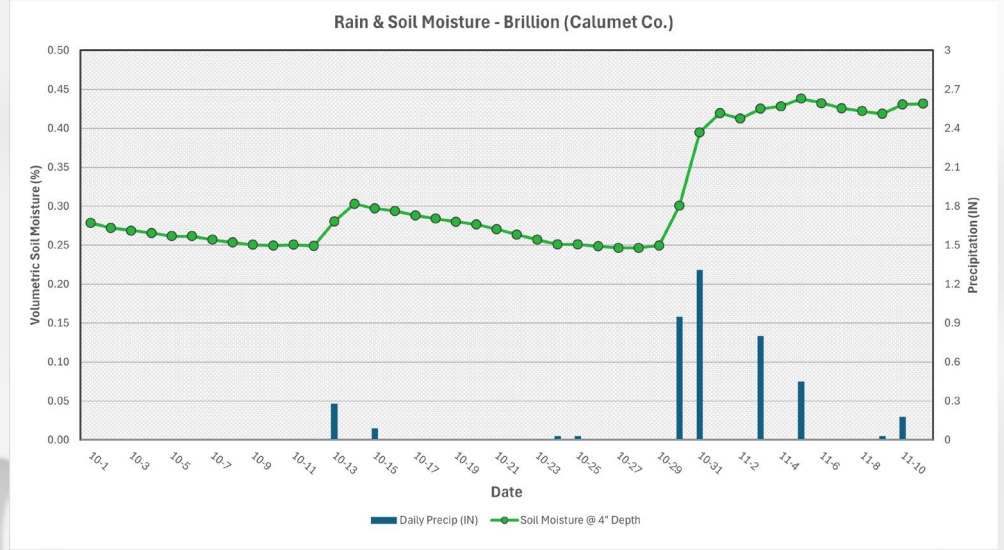
Monday Nov. 11th @ Midday

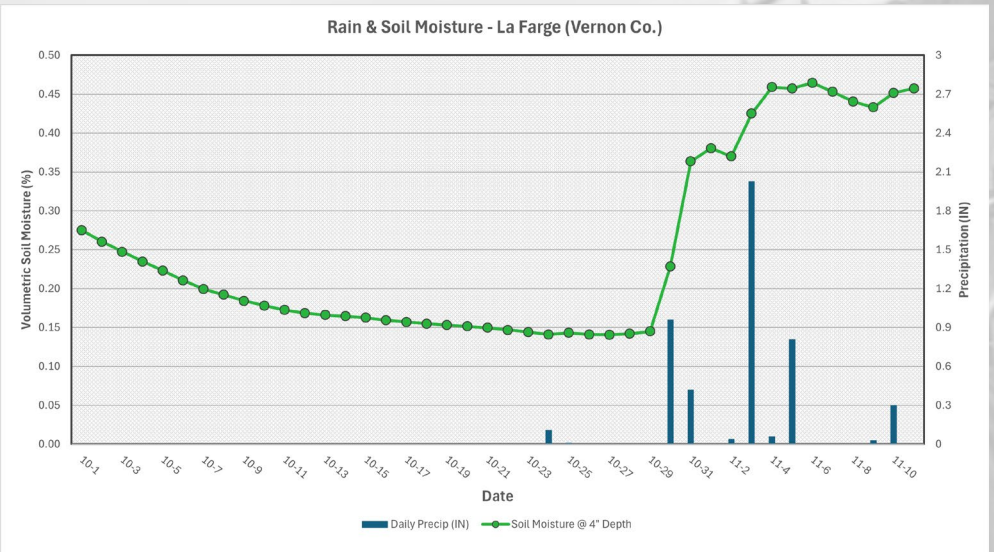


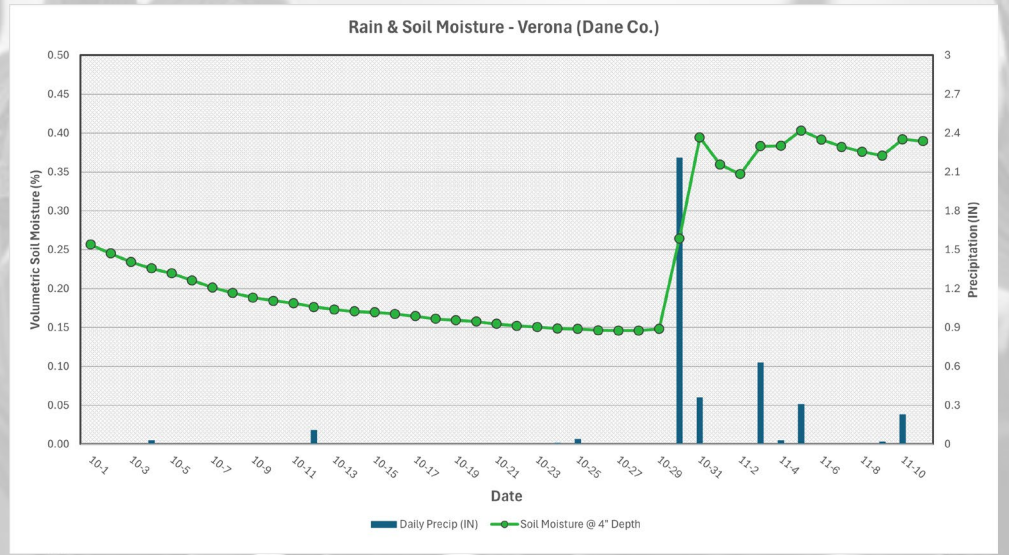
https://wisconet.wisc.edu/

Wisconet Soil Moisture – 4” Depth







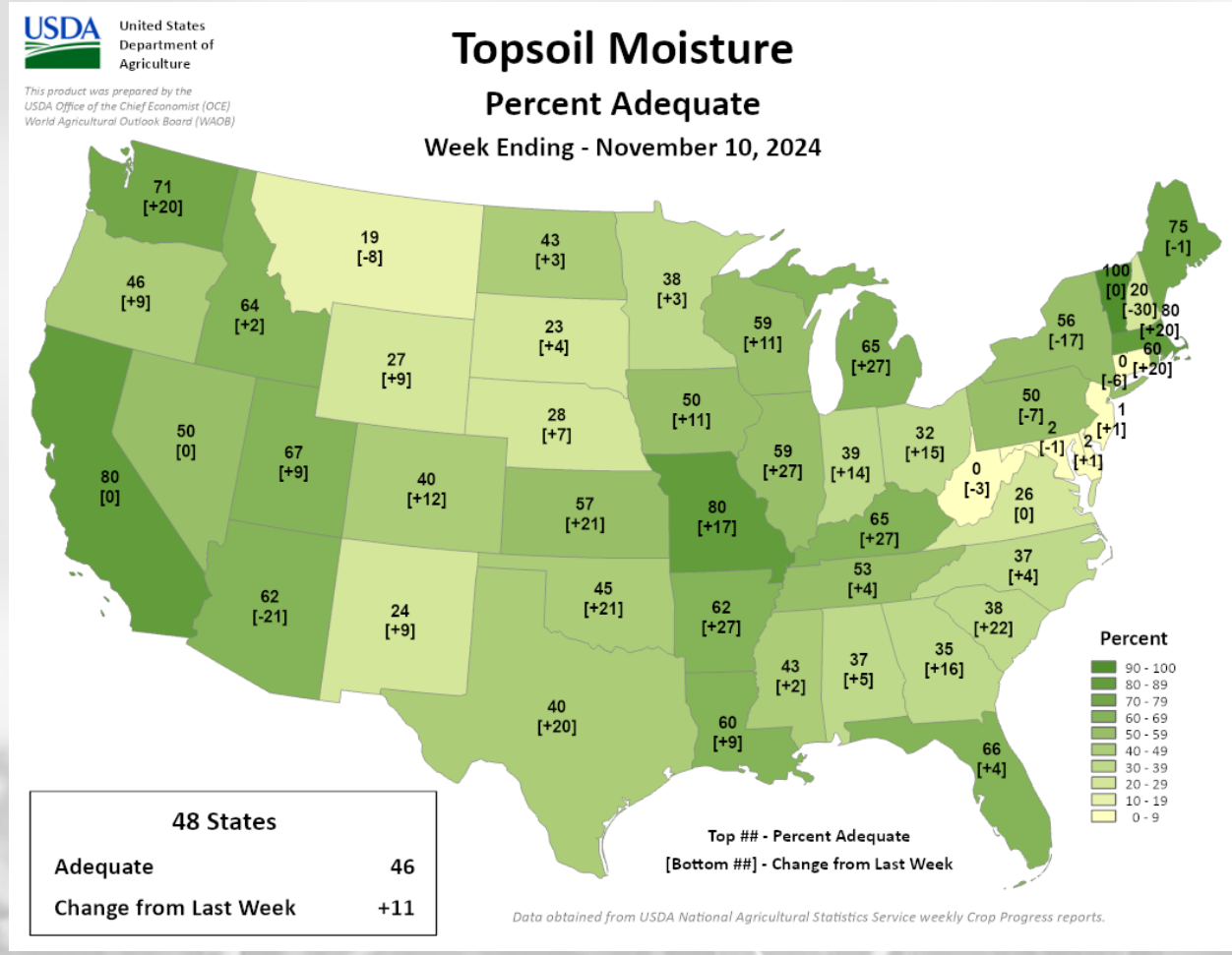


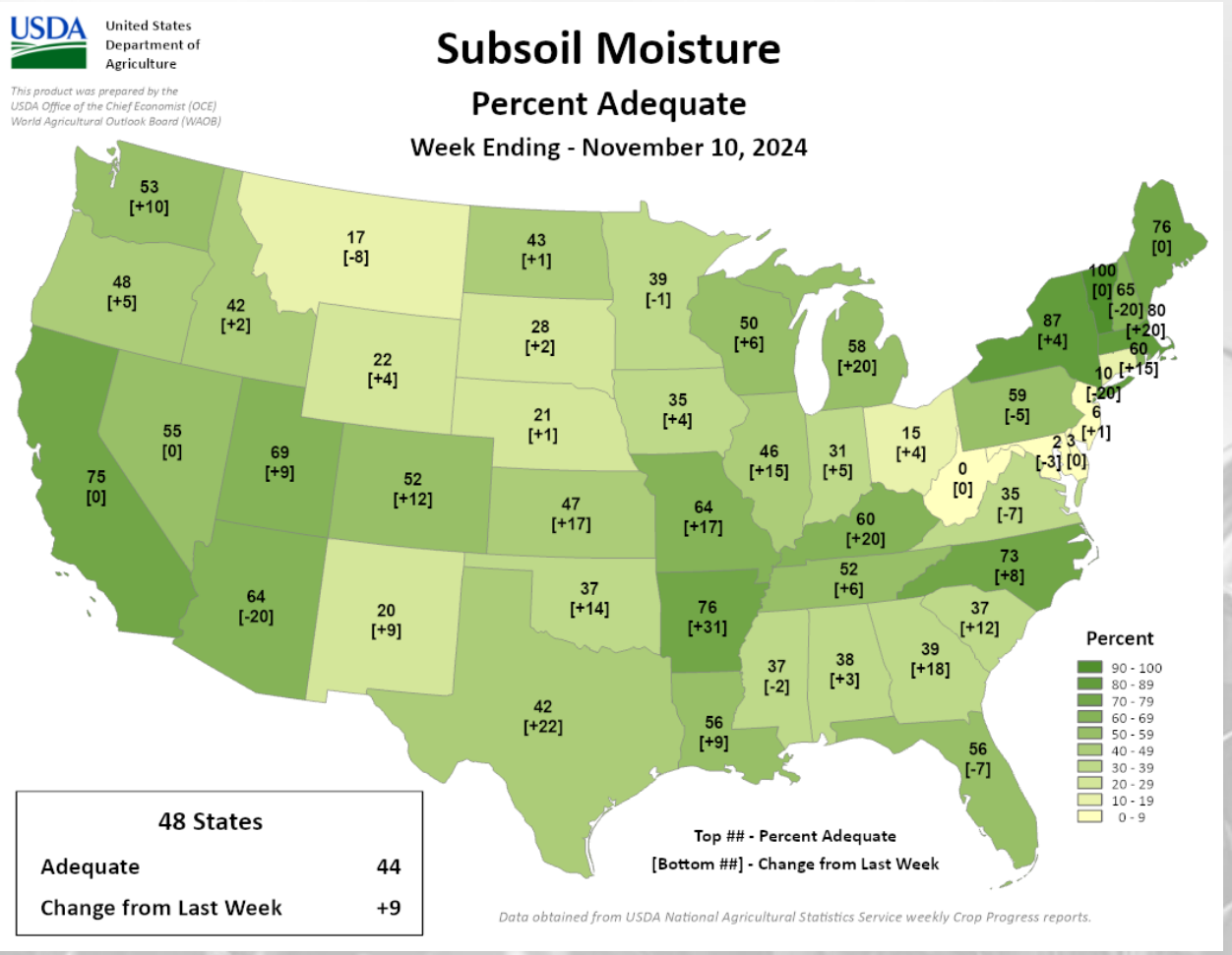
6-week trend in soil moisture (4”) & precip at Wisconet stations

Major jumps in soil moisture after additional rainfall last week (following a rainy previous week).

https://wisconet.wisc.edu/

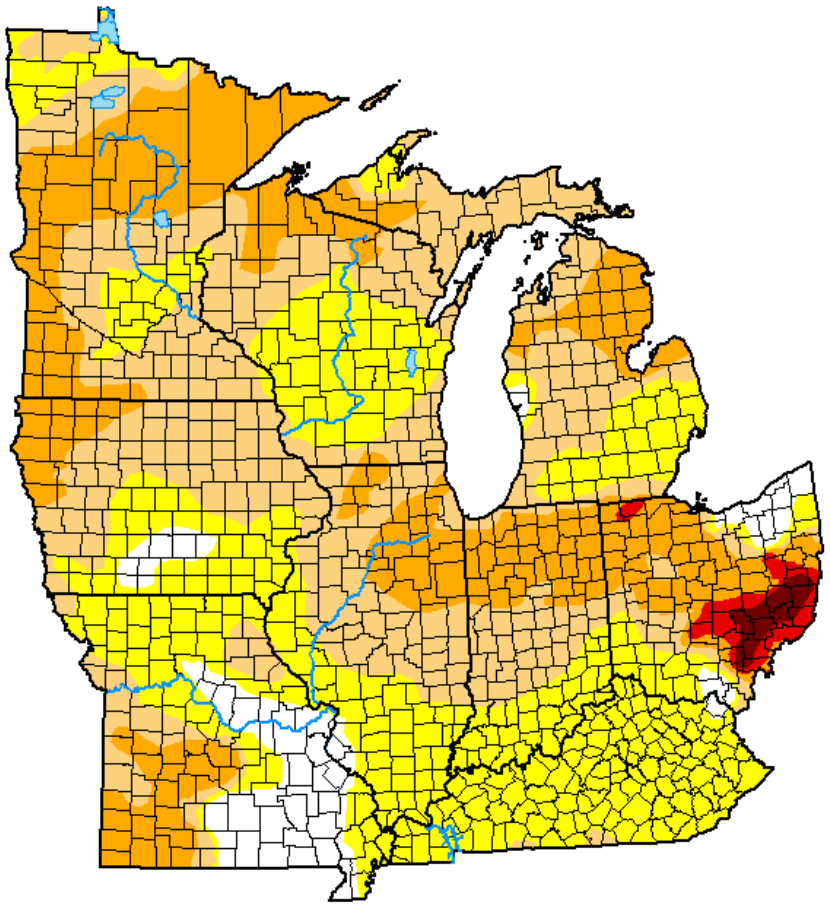
NASS Topsoil & Subsoil Moisture





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

US Drought Monitor



U.S. Drought Monitor

Midwest

November 5, 2024

(Released Thursday, Nov. 7, 2024)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	6.27	93.73	59.45	25.49	1.69	0.66
Last Week *10-29-2024*	3.46	96.54	74.51	37.89	4.14	0.66
3 Months Ago *08-06-2024*	82.04	17.96	3.36	1.15	0.00	0.00
Start of Calendar Year *01-02-2024*	22.92	77.08	50.25	20.76	4.20	0.00
Start of Water Year *10-01-2024*	21.78	78.22	28.15	6.40	1.46	0.66
One Year Ago *11-07-2023*	35.18	64.82	34.80	13.54	2.87	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:

Brian Fuchs

National Drought Mitigation Center

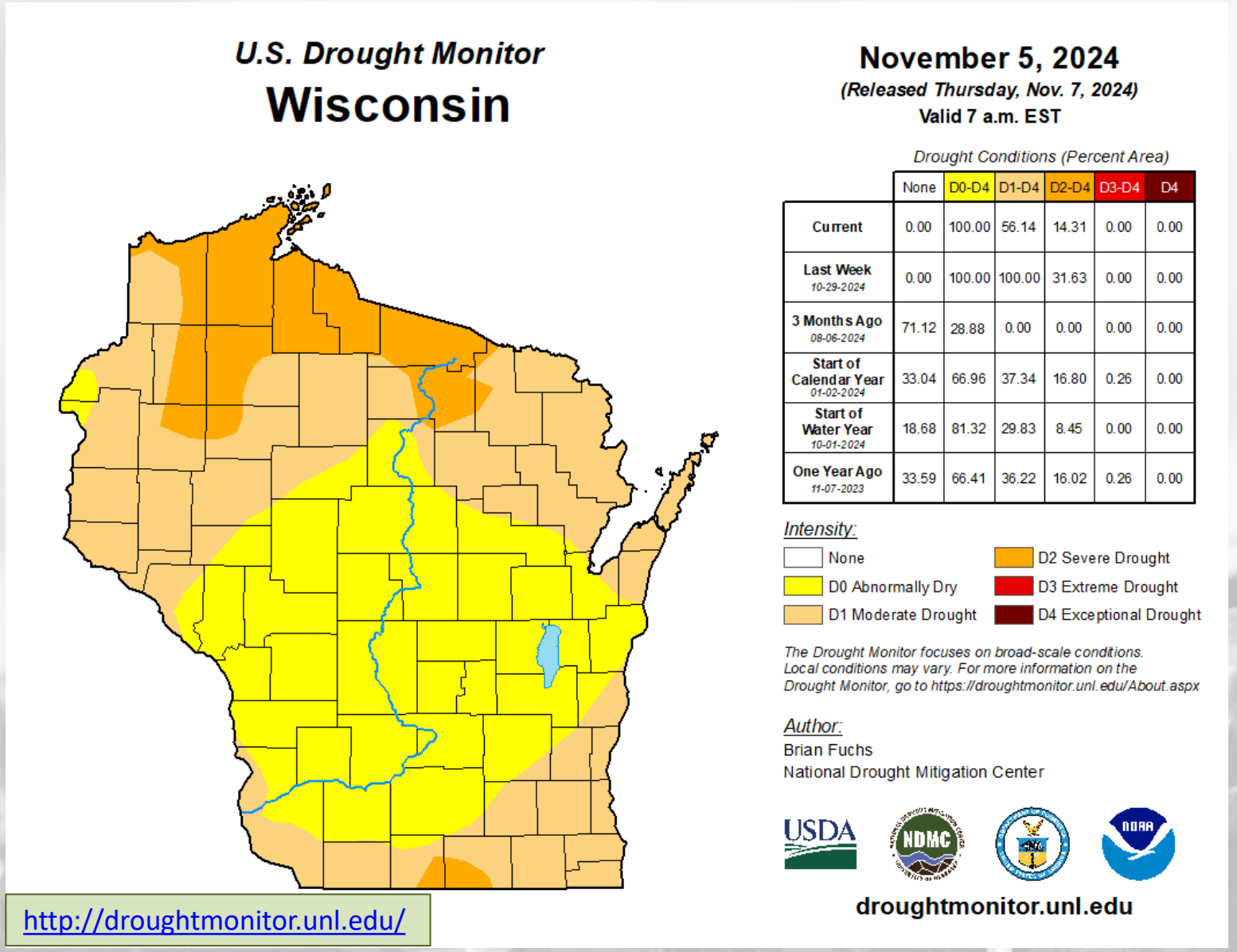
droughtmonitor.unl.edu

- Compared to last week:
  - **>10% decrease in D1 & D2 coverage** from last week. Area of improvement from MO up through IA, WI, and the UP of MI.
  - **Extreme to exceptional drought (D3-D4)** remains in place over SE Ohio. No longer in SW Missouri, however.

Note: D0 is not considered drought.

http://droughtmonitor.unl.edu/

US Drought Monitor

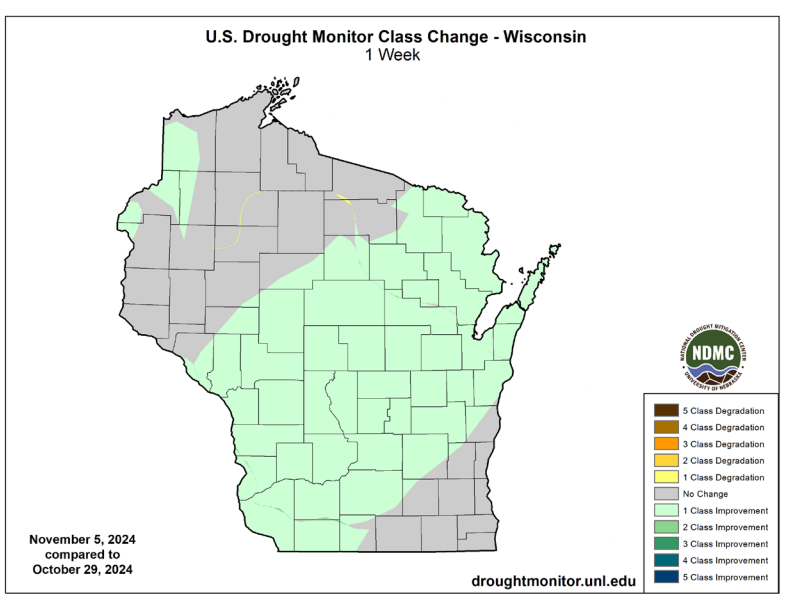


http://droughtmonitor.unl.edu/

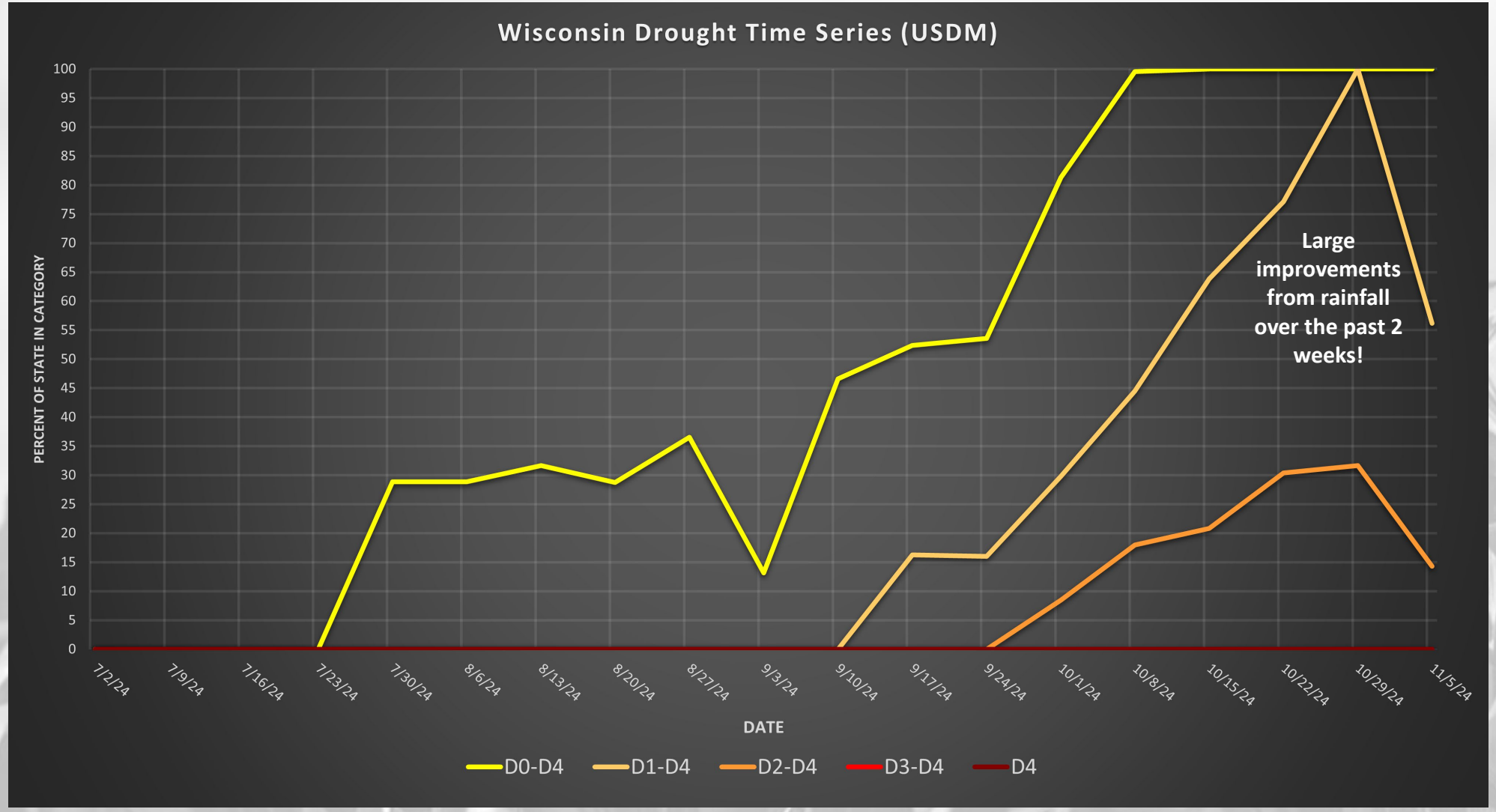
Amount of state in:

- D1-D4 – 56.1% ↓
- D2-D4 – 14.3% ↓
- 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.

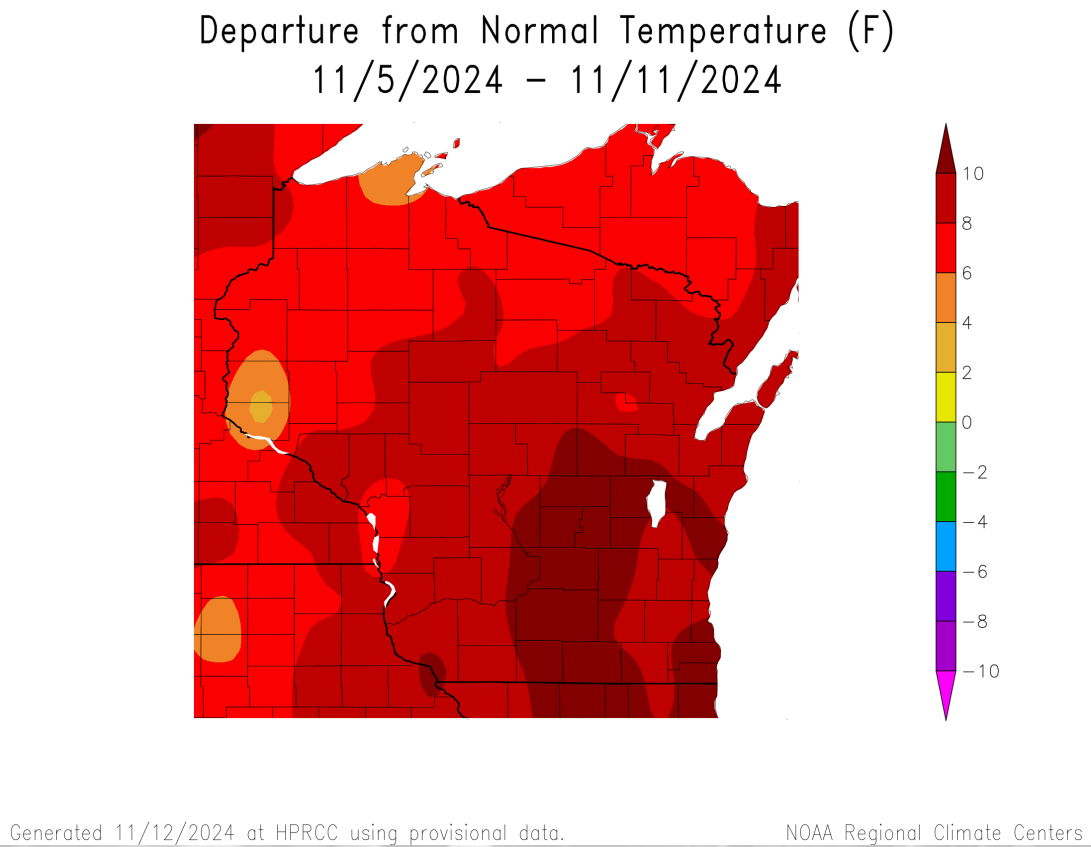


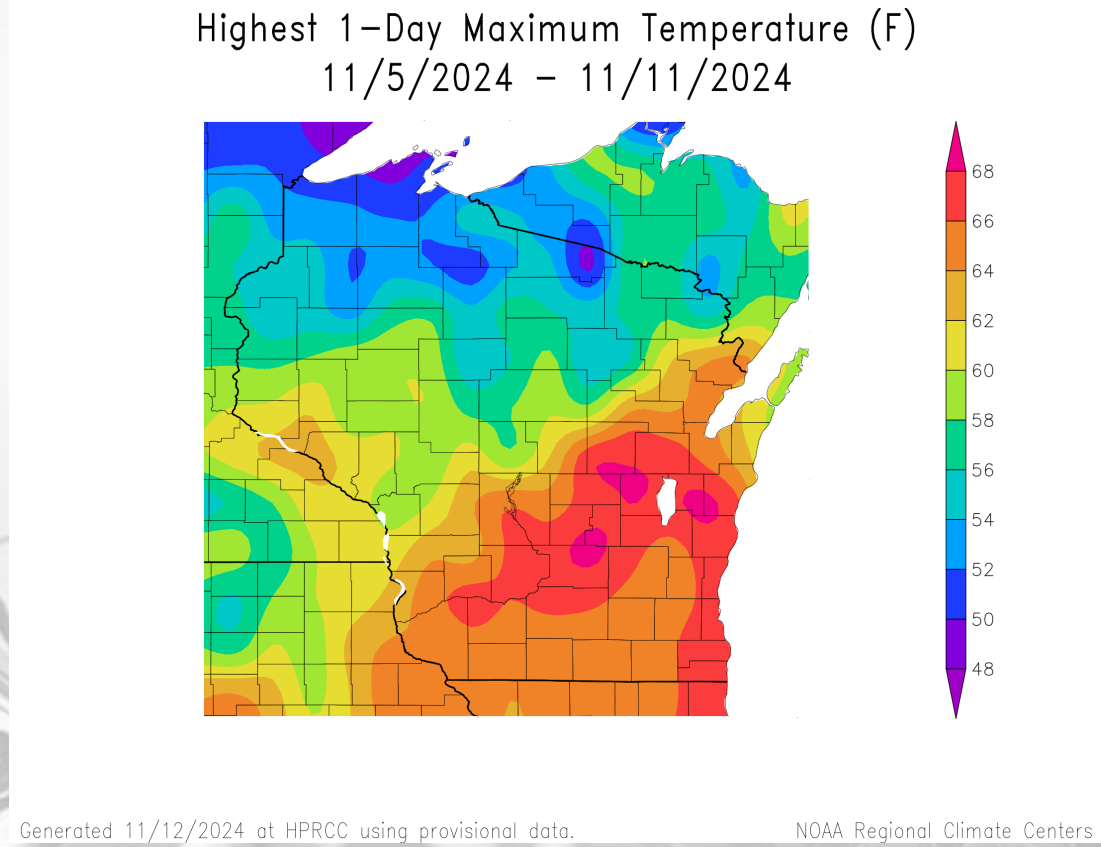
USDM Time Series



http://droughtmonitor.unl.edu/

7 Day Temperatures



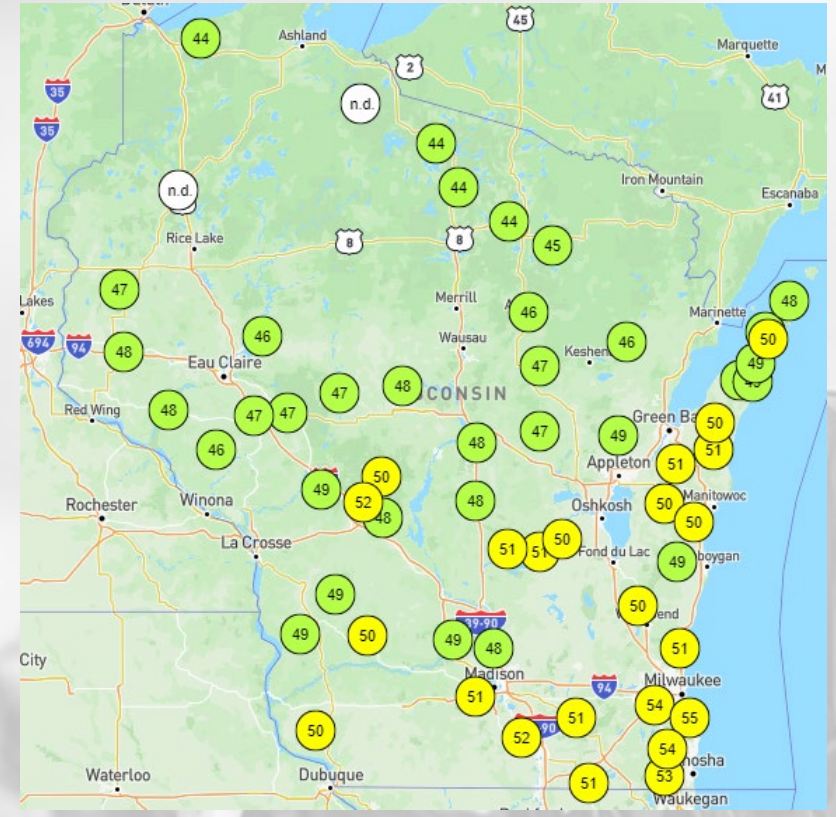


- **8+°F above** climatological normal for the southern 2/3 of the state last week.
- **4-8°F above** normal in the NC/NW counties.
- Weekly maximums were **mid to upper 60's i**n the south and east last week, with **50's in the north**.

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

Wisconet Soil Temp (4” Depth)

Thursday Nov. 7th @ Midday



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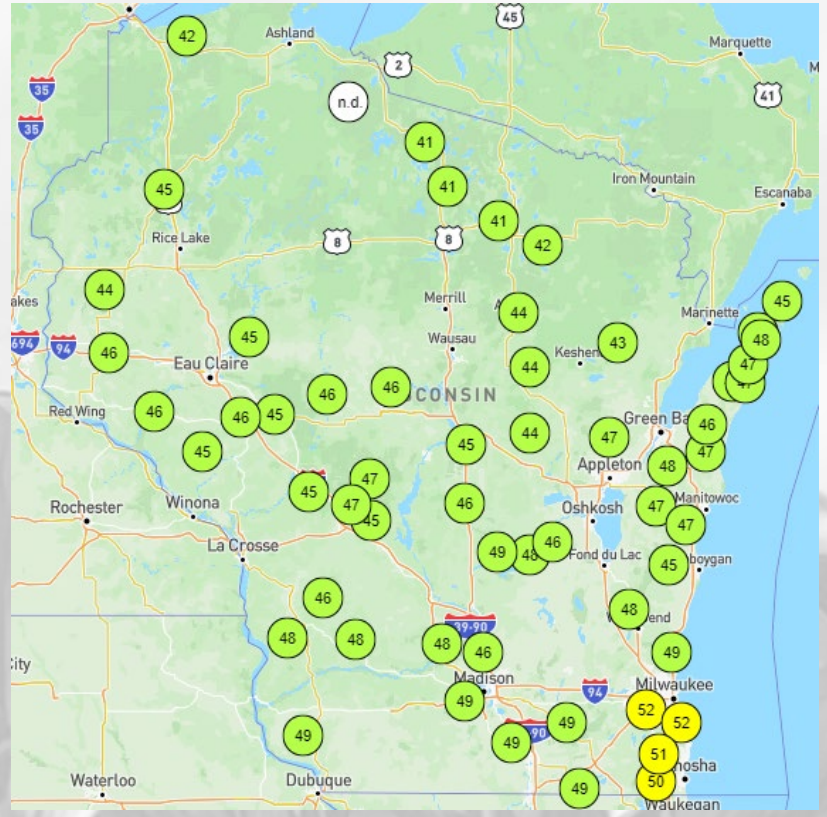

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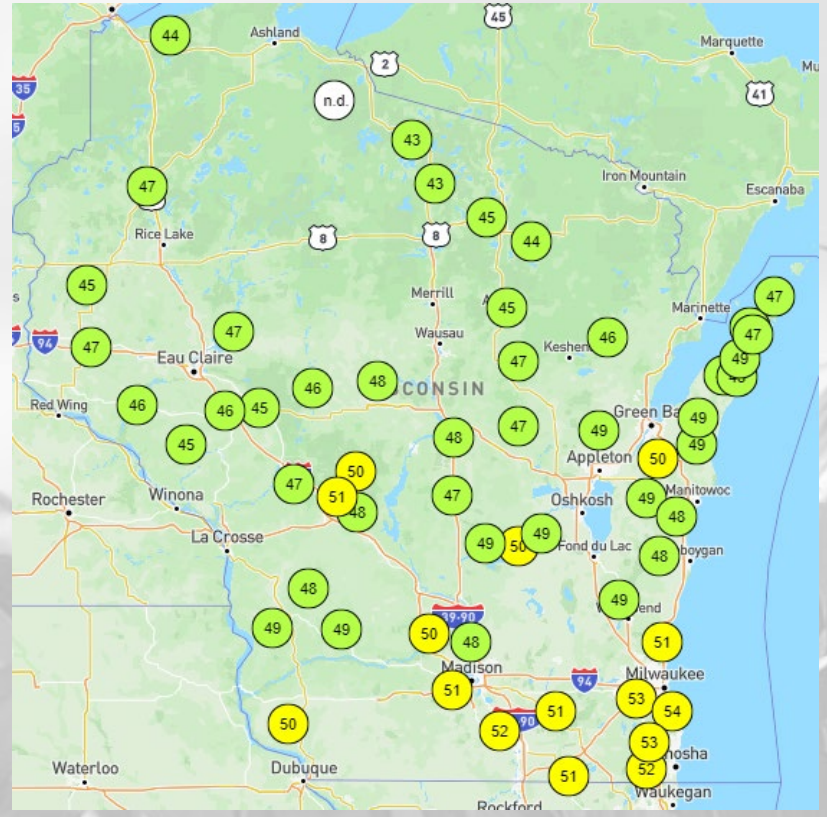
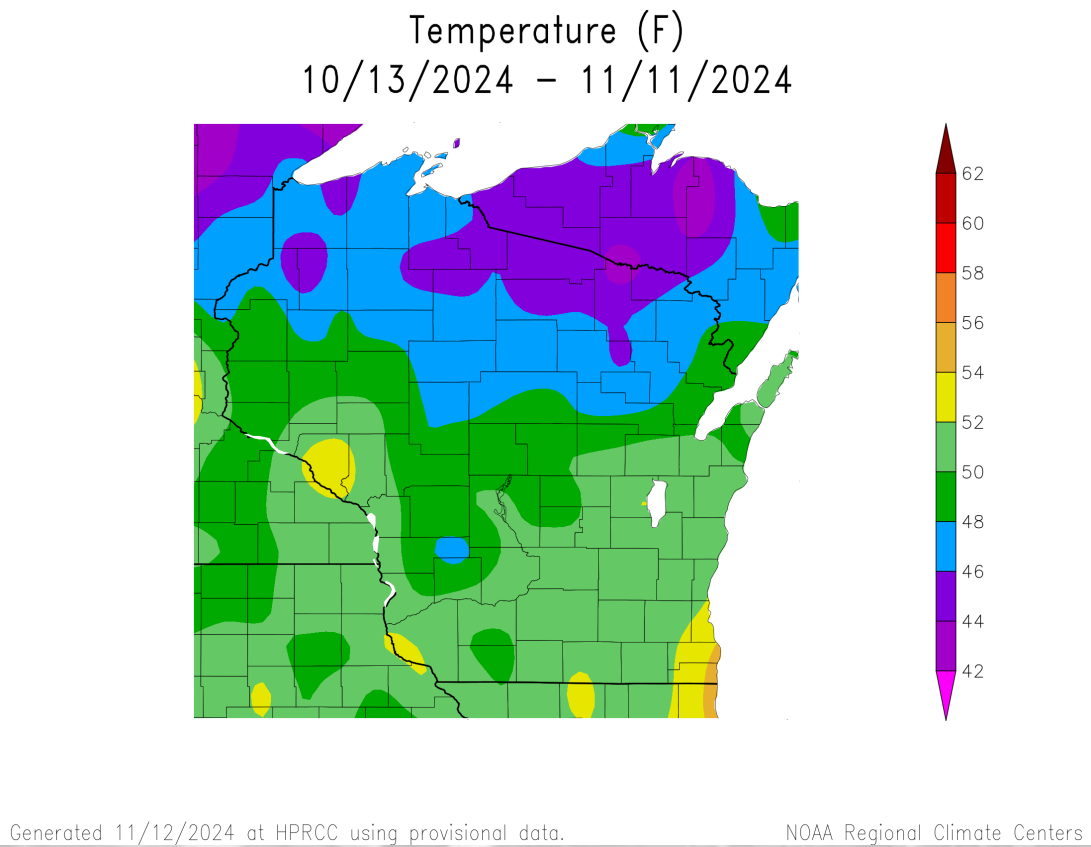
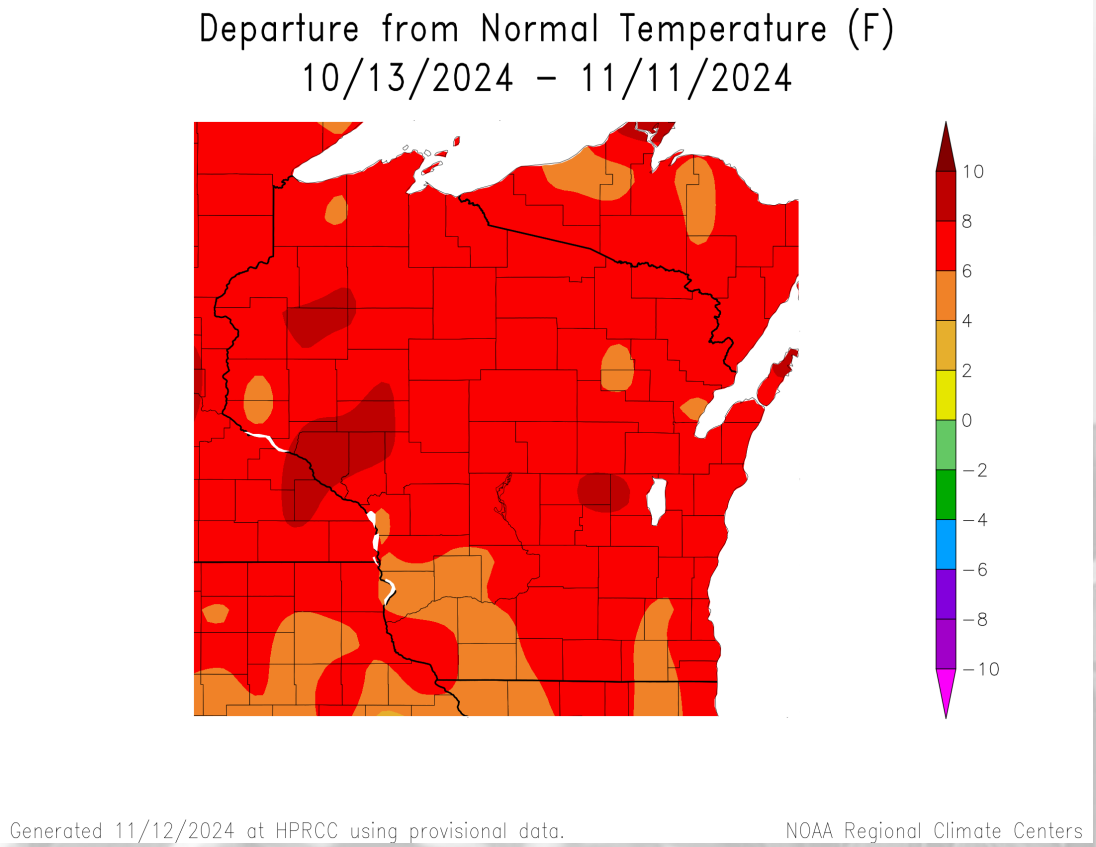


https://wisconet.wisc.edu/

30 Day Temperatures

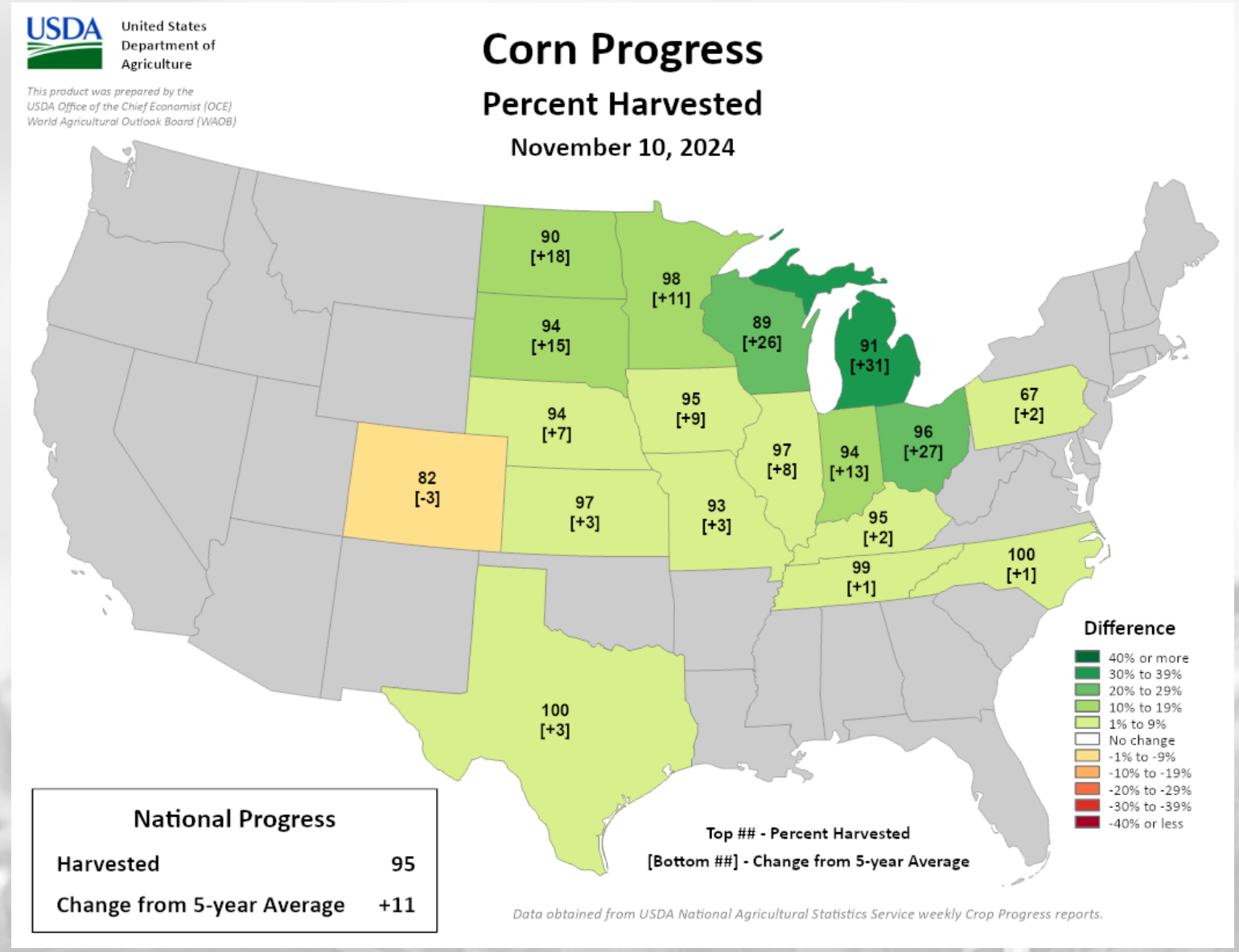




- Temperatures for the past month ranged from **50-54°F** in the S & W to **44-48°F** in the far NC.
  - **6-8°F above normal** for most of the state compared to climatological (1991-2020) average.

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

NASS Crop Progress – Corn

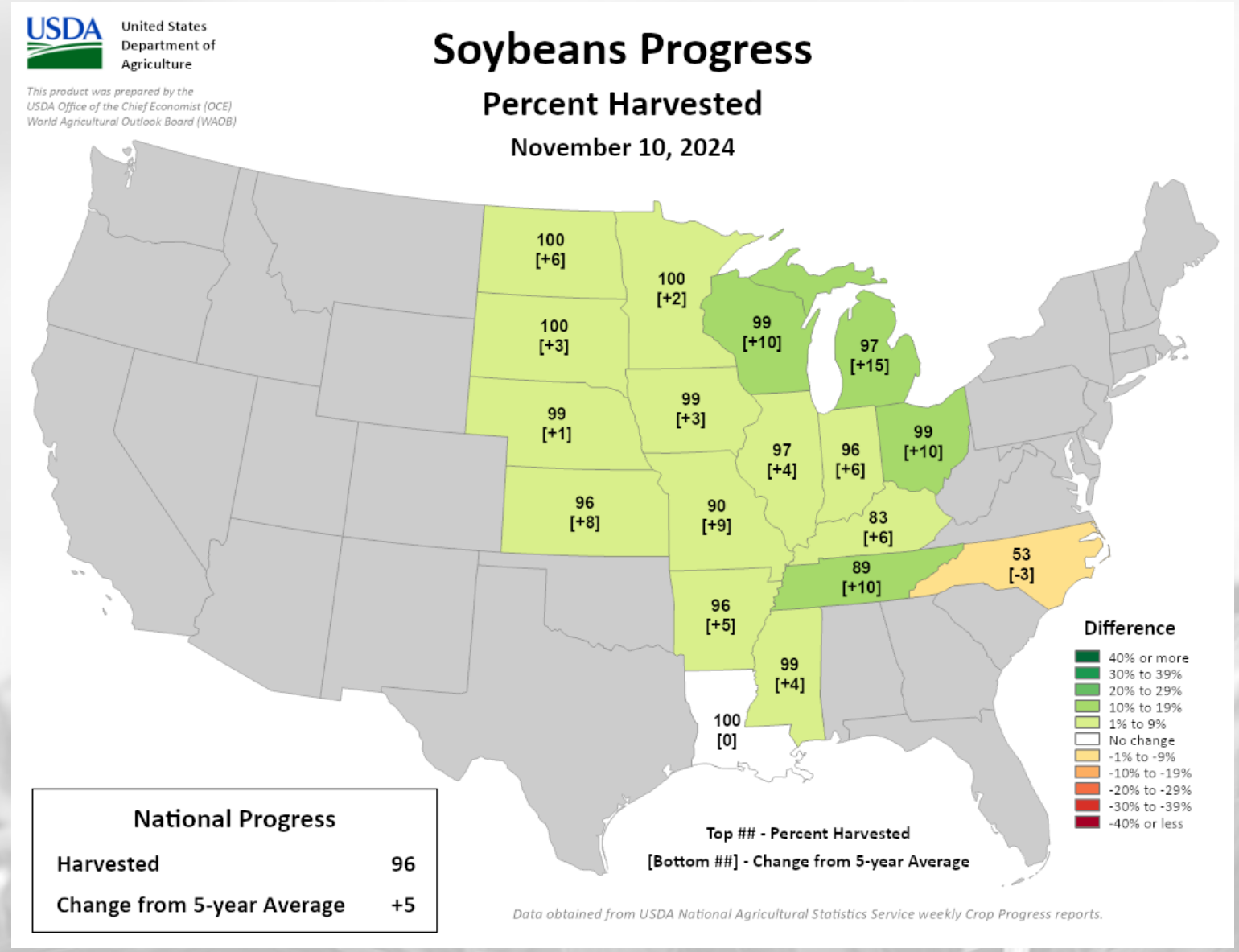


From the November 12 Wisconsin Crop Progress & Condition Report:

- Corn for grain was **89 percent** harvested, remaining **well ahead** of last year and the 5-year average.
- Moisture content of corn harvested for grain was **16 percent**.

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

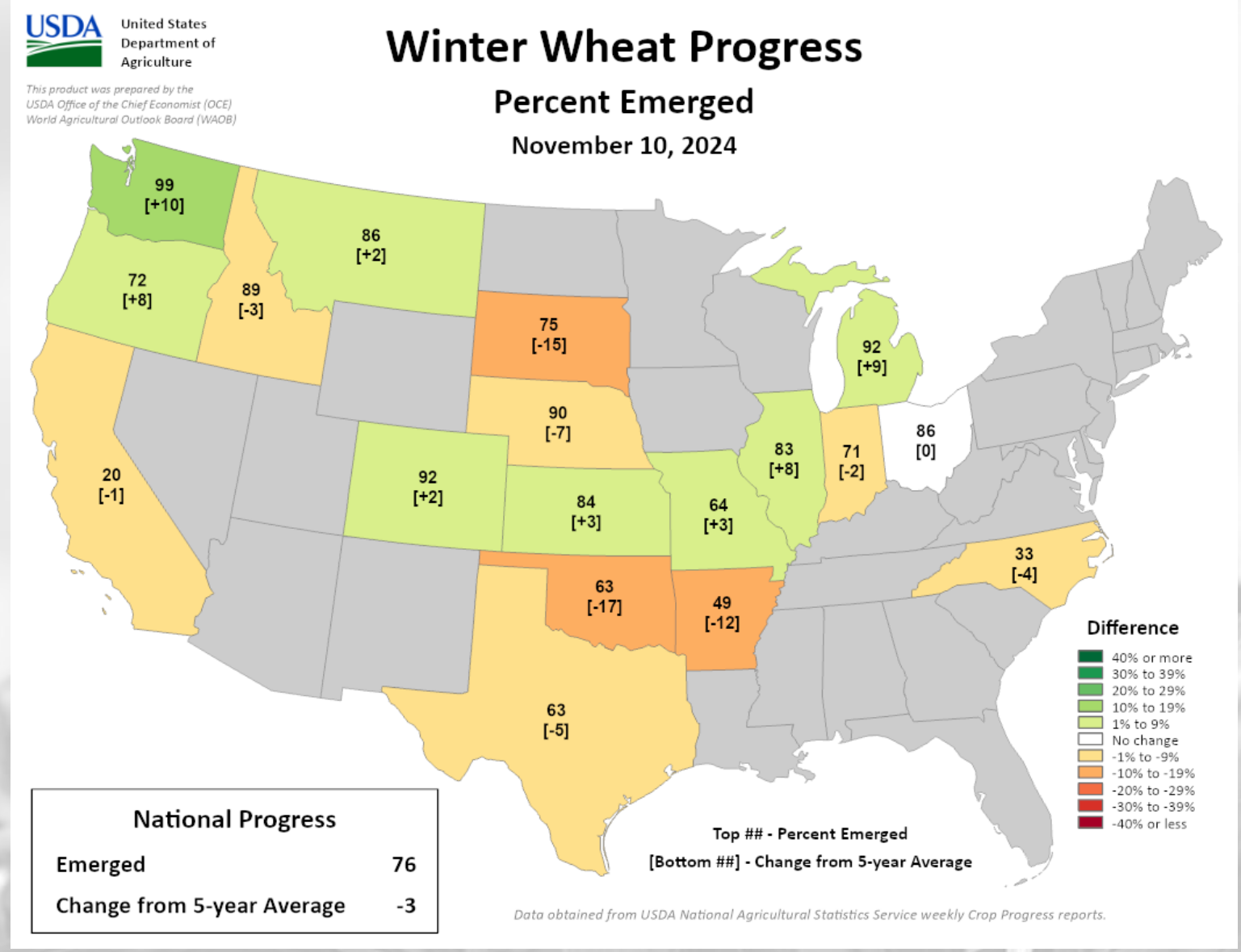
NASS Crop Progress – Soybean



Soybean harvest is **nearly complete at 99%.**

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

NASS Crop Progress – Wheat

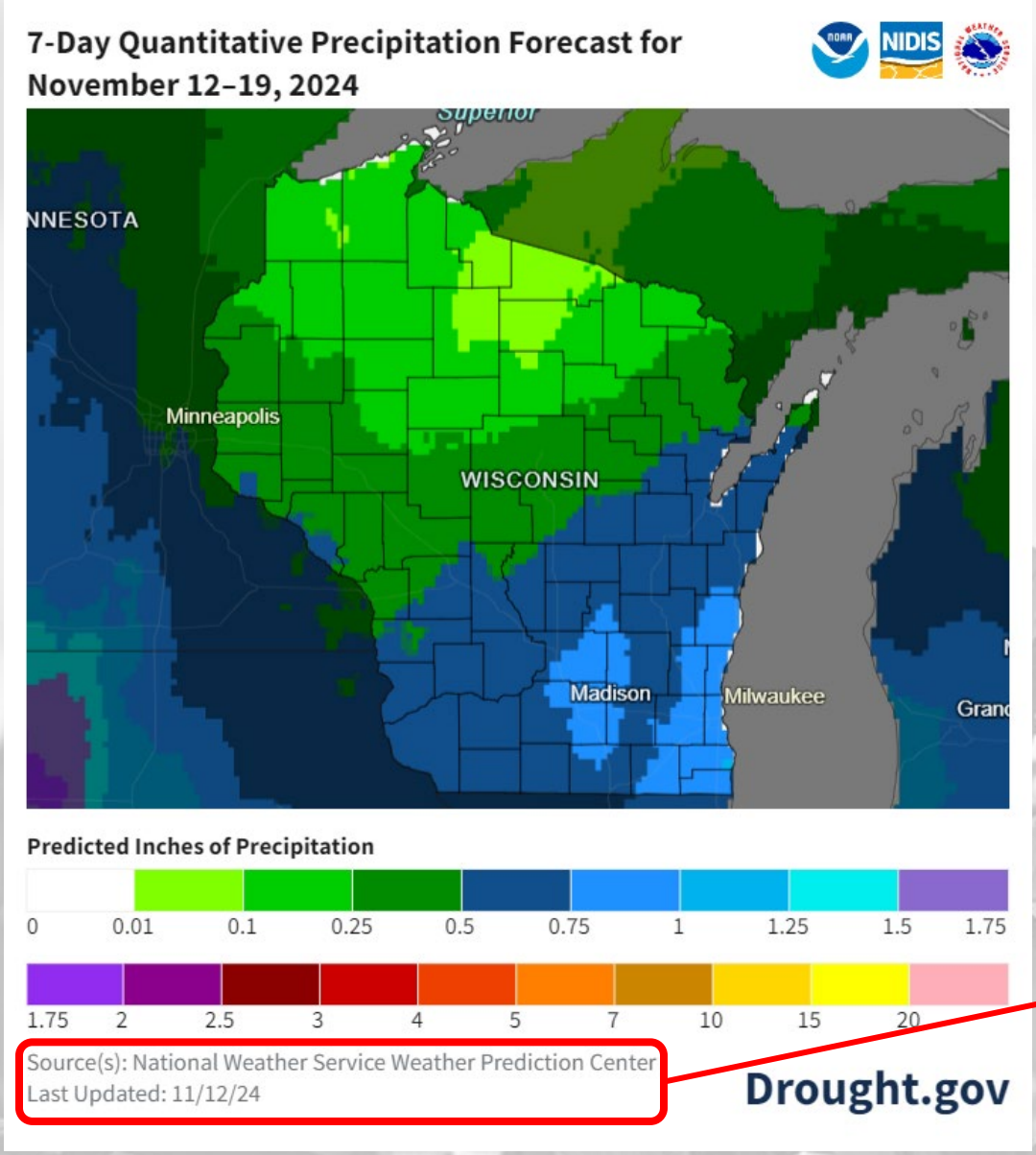


From the November 12 Wisconsin Crop Progress & Condition Report:

- The winter wheat crop is **89%** emerged, 1 day ahead of last year and **9 days ahead of average**.
- Winter wheat condition was rated **74% good to excellent**, up **2 percentage points** from last week.

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

7 Day Precip Forecast

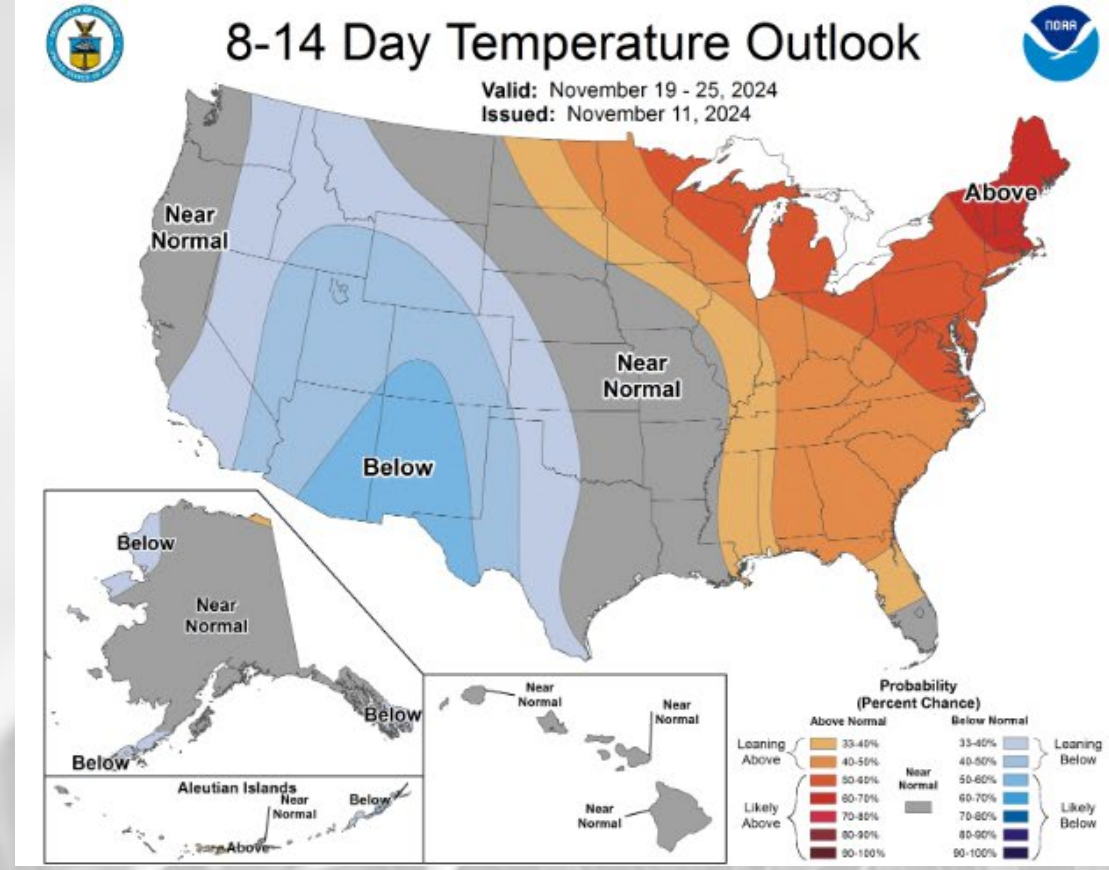


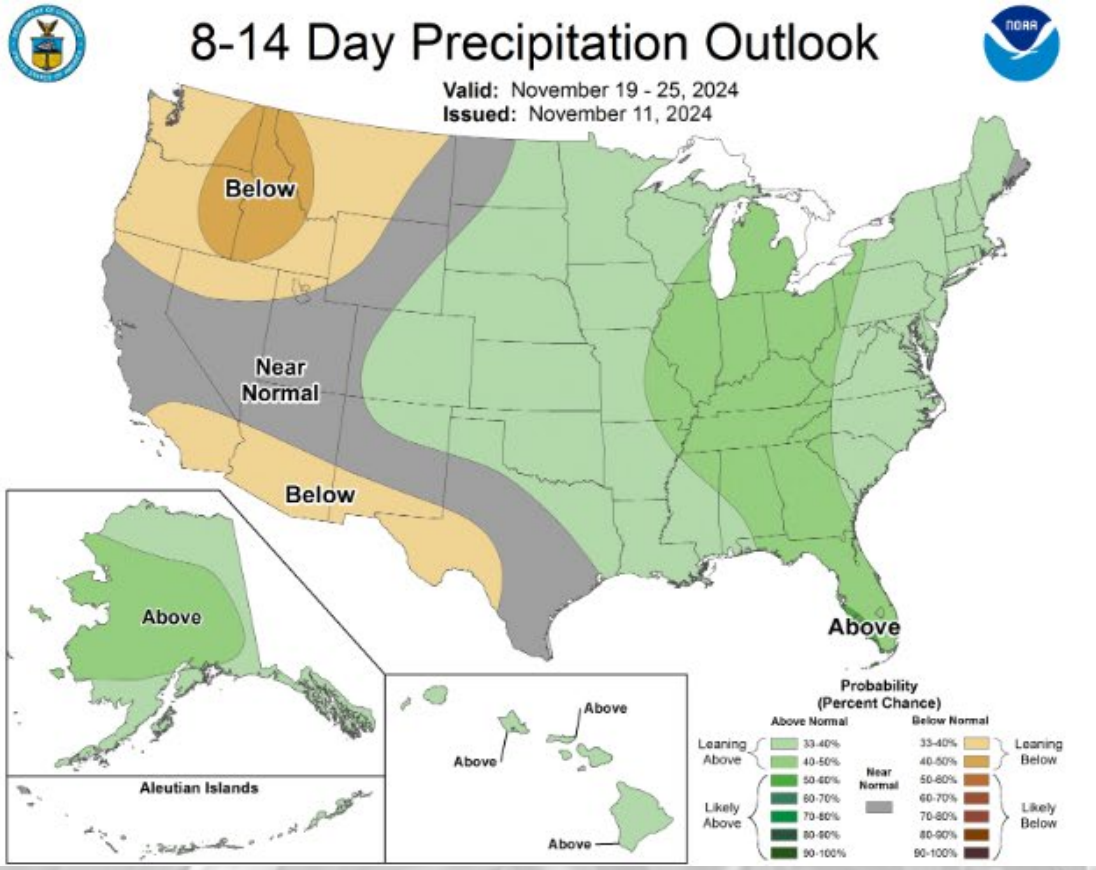
- **Statewide chances** for precip during the next 7 days, with near or above normal totals in the south.
  - Location: Best chances in the **southern half of the state.**
  - Timing: **Wednesday afternoon thru Thursday morning**, and again on **Monday night into Tuesday** next week.

Forecast for 11/12/24 thru 11/19/24
(Begins at 6pm CST)

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

8-14 Day Temp & Precip Outlook

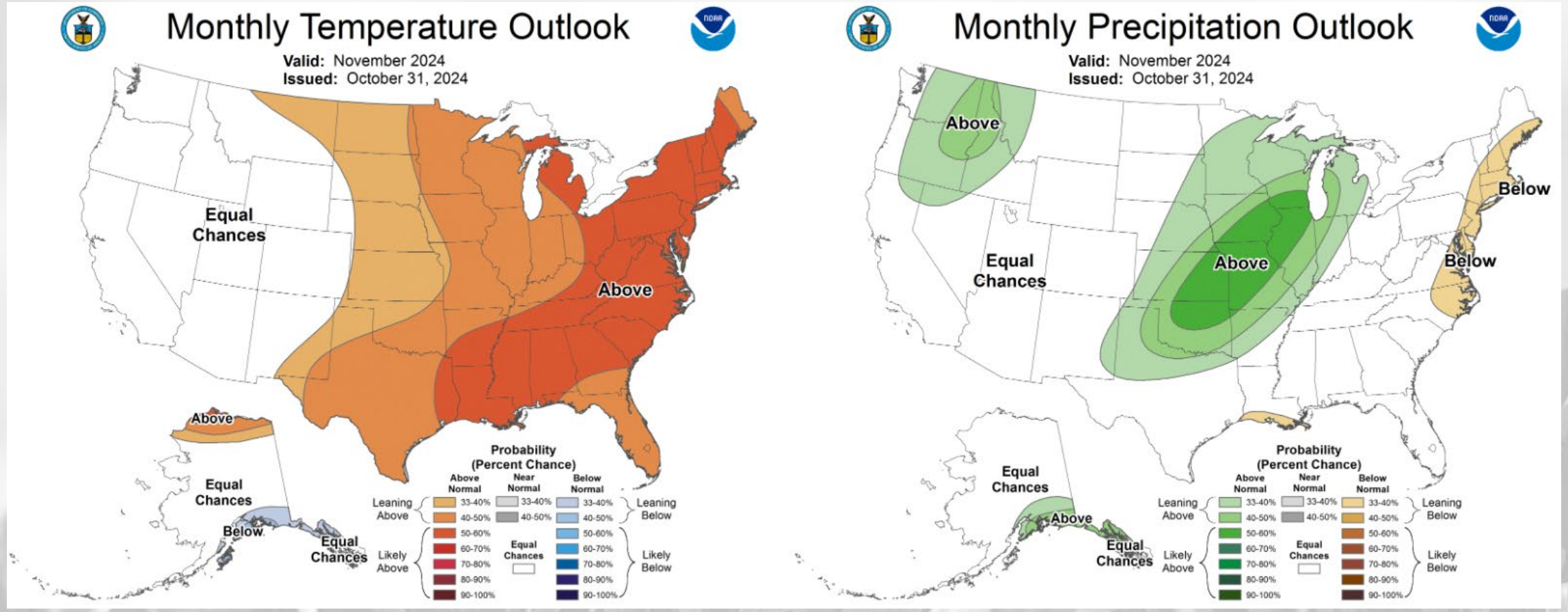




Late November: Temperatures leaning/likely to remain above normal, with precipitation leaning towards above normal.

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

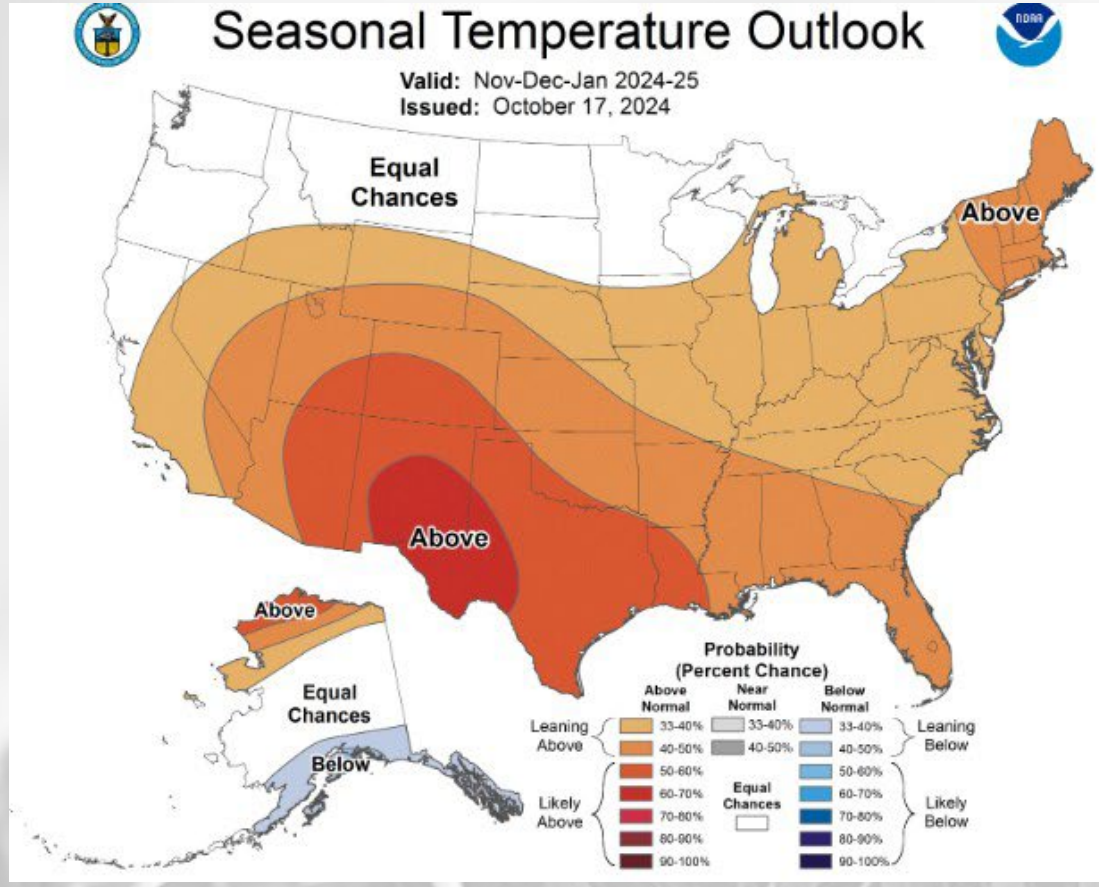
30 Day Temp & Precip Outlook

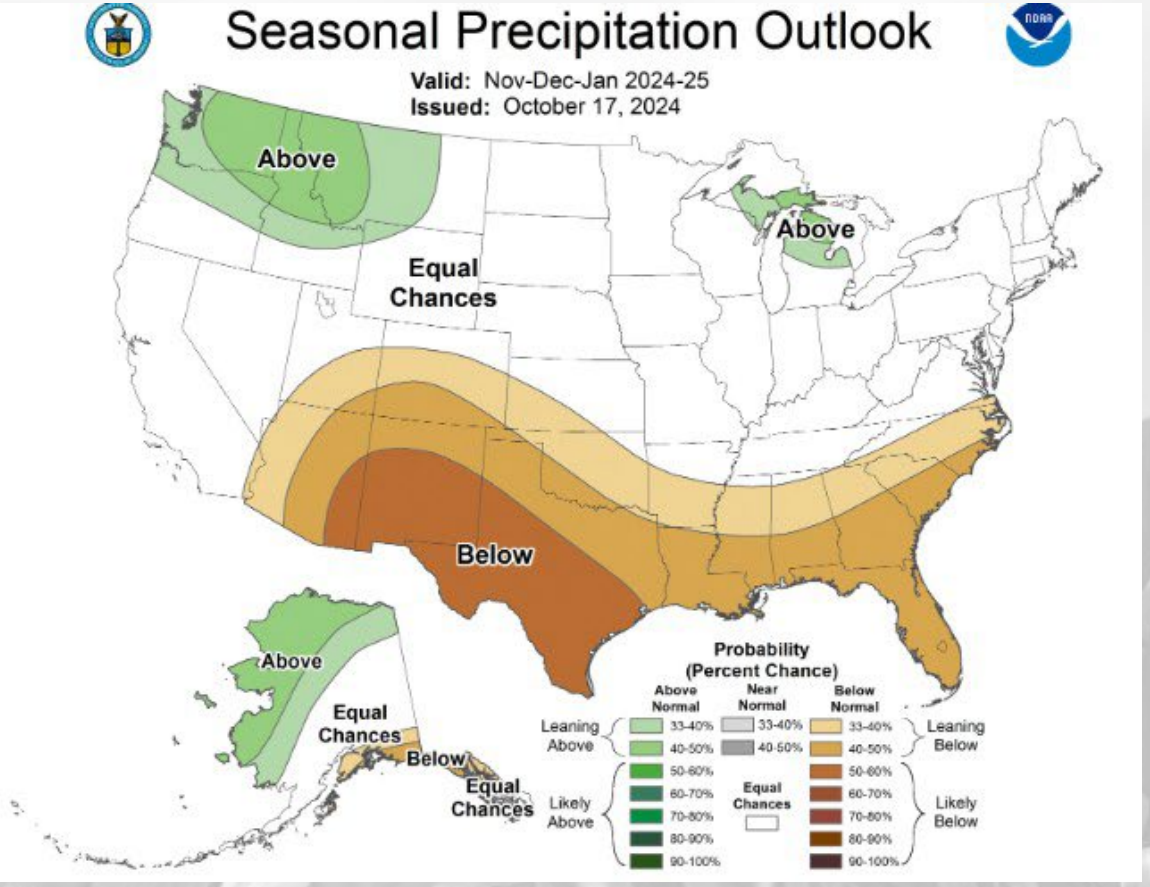


Month of November: Temperatures leaning towards above normal, with precipitation leaning towards above normal, especially in southern WI.

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

90 Day Temp & Precip Outlook





Late Fall into Winter: Temperatures showing equal chances in the north and leaning above normal in the south. Precipitation uncertainty with equal chances.

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

Take-Home Points

Current Conditions:

- An additional **half inch to an inch** of rainfall fell across most of the state last week, bringing **fall precip totals up to near-normal levels** across a SW-to-NE swath of counties.
- Conditions remain **warmer-than-normal** for this time of year, with weekly high temps reaching into the **mid-to-upper 60s** for many in S/E WI.

Impact:

- A large portion of WI is in **near-normal soil moisture percentiles** thanks to rainfall over the past 2 weeks.
  - USDM drought coverage area was **greatly reduced** following the rains.
- Corn harvest continues to run **well ahead of normal pace**, with soybean harvest **all but complete**.
- Winter wheat is **nearing complete emergence,** with **89%** of the crop emerged in WI fields.

Outlook:

- **Statewide chances** for additional precip next week, **especially in the southern half of WI**.
- The warmth looks to continue into the latter part of November with a higher probability to be **warmer-than-normal** temps, with a lean toward **above-normal precip**.
- Late fall into early 2025 is more **uncertain** for temperatures and precip.
  - **La Niña** is favored to be in place by September-November (according to the CPC); **less of a chance** for having a colder-than-normal winter.

Agronomic Considerations

Crop & Soil Management

- Soil is wet in many places, avoid working in wet fields when possible to reduce compaction issues.
- Be aware that nitrogen is still mobile as soil temperatures are still above 50F in some places.
- Look for areas where erosion may have occurred during the recent rains. Read more here.
- When making nutrient management decisions for next season, check out the new edition of Fast Facts from the Nutrient & Pest Management Team

Manure Applications

- Runoff risk is **low to moderate** throughout the state in the next week. Be mindful of the possibility of runoff and plan manure applications accordingly. Check the DATCP runoff risk advisory forecast here.
- Consider the relationship between manure and cover crops, learn more here.

User Survey

Are you a regular user of the Wisconsin Ag Climate Outlook (WACO)? Or maybe you are viewing these slides for the first time this week? Either way, we want to hear **your** feedback on this new resource! Please take a few minutes and fill out this survey:

LINK TO SURVEY

Your feedback will help us better serve your ag-climate data needs through WACO.

If you have any trouble accessing or filling out the survey, please email Josh Bendorf at Joshua.Bendorf@usda.gov.

Thank you!!
-The WACO Team

Citizen Science Opportunity

CoCoRaHS – Community Collaborative Rain, Hail, & Snow Network

The Mission

(From cocorahs.org)

- Provide accurate high-quality precipitation data for end-users;
- Increasing the density of precipitation data available throughout the country;
- Encouraging citizens to have fun participating in meteorological science and heightening their awareness about weather;
- Providing weather education opportunities.

Sign Up Here:
https://cocorahs.org/Content.aspx?page=application

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Thank you, veterans!

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