

Wisconsin Ag Climate Outlook

Week of September 30, 2024

Josh Bendorf

Ag Climatologist, Midwest Climate Hub

joshua.bendorf@usda.gov

Bridgette Mason

Assistant State Climatologist of Wisconsin

bmmason2@wisc.edu

Kristin Foehringer

NRCS State Working Lands Climate Smart Specialist

kristin.foehringer@usda.gov

Steve Vavrus

State Climatologist of Wisconsin

sjvavrus@wisc.edu

Natasha Paris

Crops Educator – Adams, Green Lake, Marquette, Waushara Cos.

natasha.paris@wisc.edu

Dennis Todey

Director, Midwest Climate Hub

dennis.todey@usda.gov

Key Points

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

- 1) Many in the state saw [no precip last week](#), with dry soil moisture [percentiles](#) increasing in state coverage.
 - 2) [GDD's](#) are running 100 units or more ahead of normal pace due in part to a [very mild September](#) in WI.
 - 3) Expect another [dry week](#) to come our way, with things looking likely to remain warm and dry through [mid-October](#).
- *For this week's agronomic recommendations from UW Extension, click [here](#).*
 - *For the latest GDD accumulation maps, click [here](#).*
 - *For NASS crop progress & condition maps, click [here](#).*

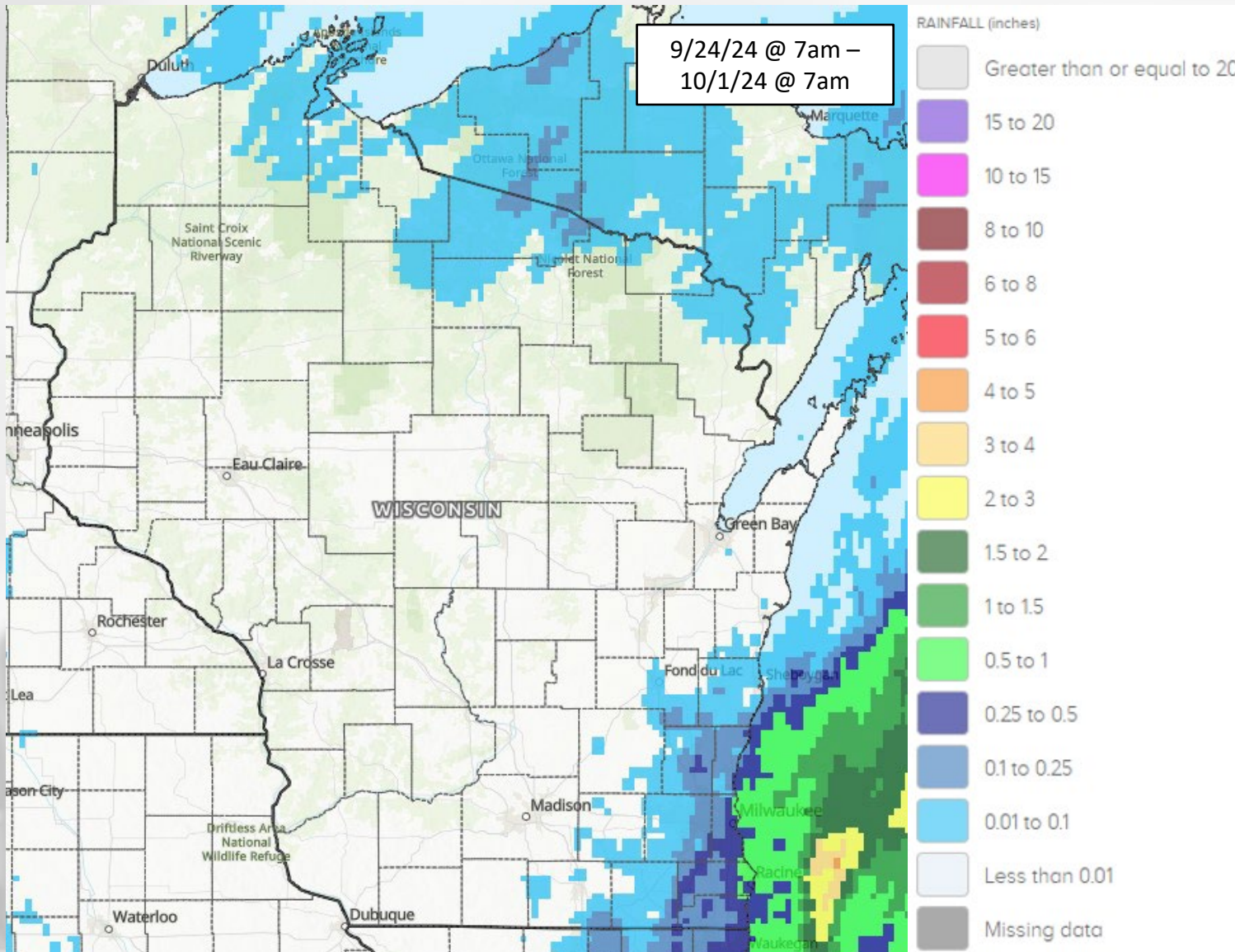
A much drier week (for most)

Wisconsin



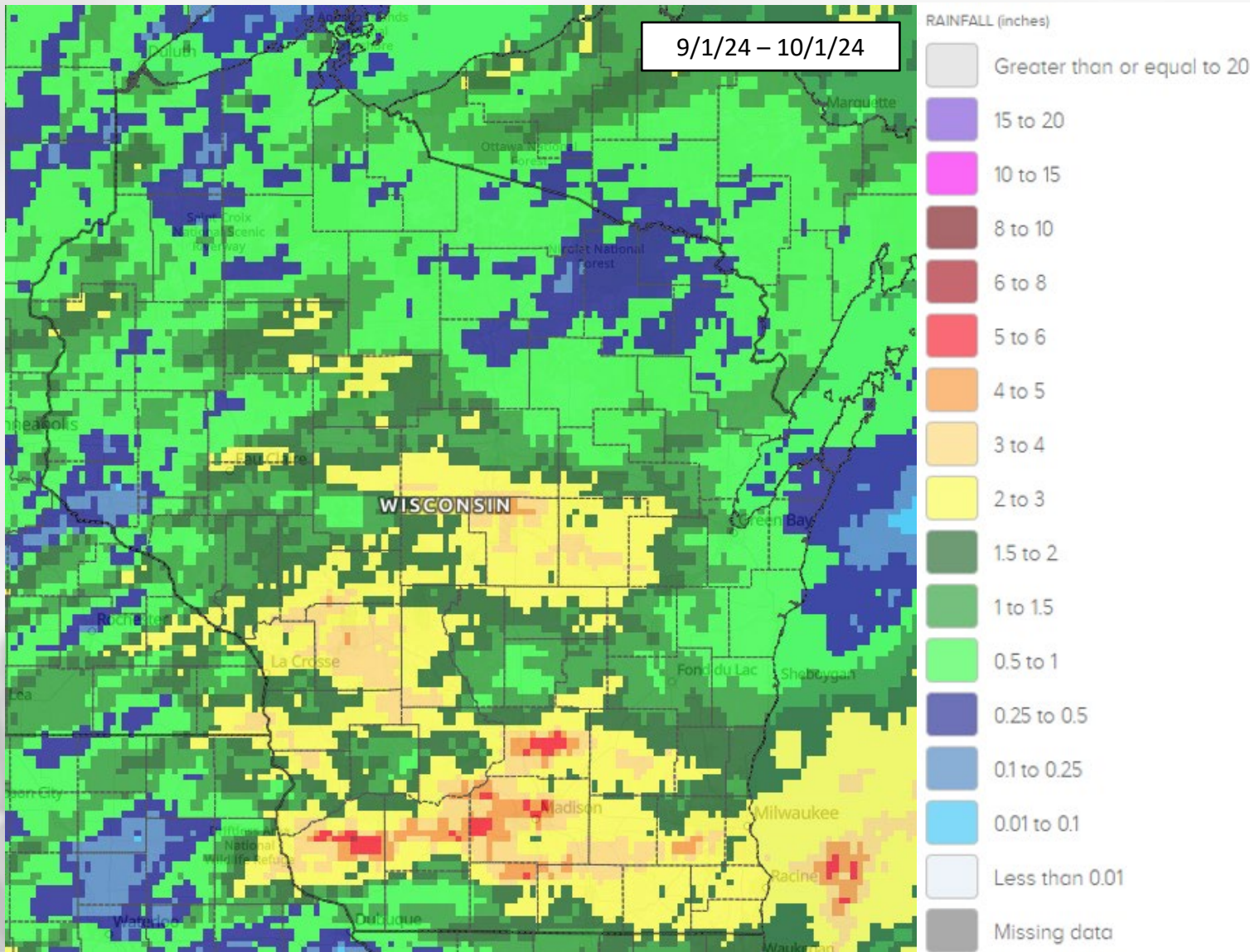
| Climate Division | Avg. Precip (Sep 19-22) | Avg. Precip (Sep 23-30) | Difference |
|------------------|-------------------------|-------------------------|------------|
| WI01 | 0.53 | 0.01 | -0.53 |
| WI02 | 0.58 | 0.00 | -0.58 |
| WI03 | 0.41 | 0.10 | -0.31 |
| WI04 | 1.03 | 0.00 | -1.03 |
| WI05 | 1.55 | 0.07 | -1.47 |
| WI06 | 0.60 | 0.15 | -0.45 |
| WI07 | 1.98 | 0.01 | -1.96 |
| WI08 | 2.27 | 0.46 | -1.81 |
| WI09 | 0.80 | 1.24 | 0.44 |

7 Day Precip



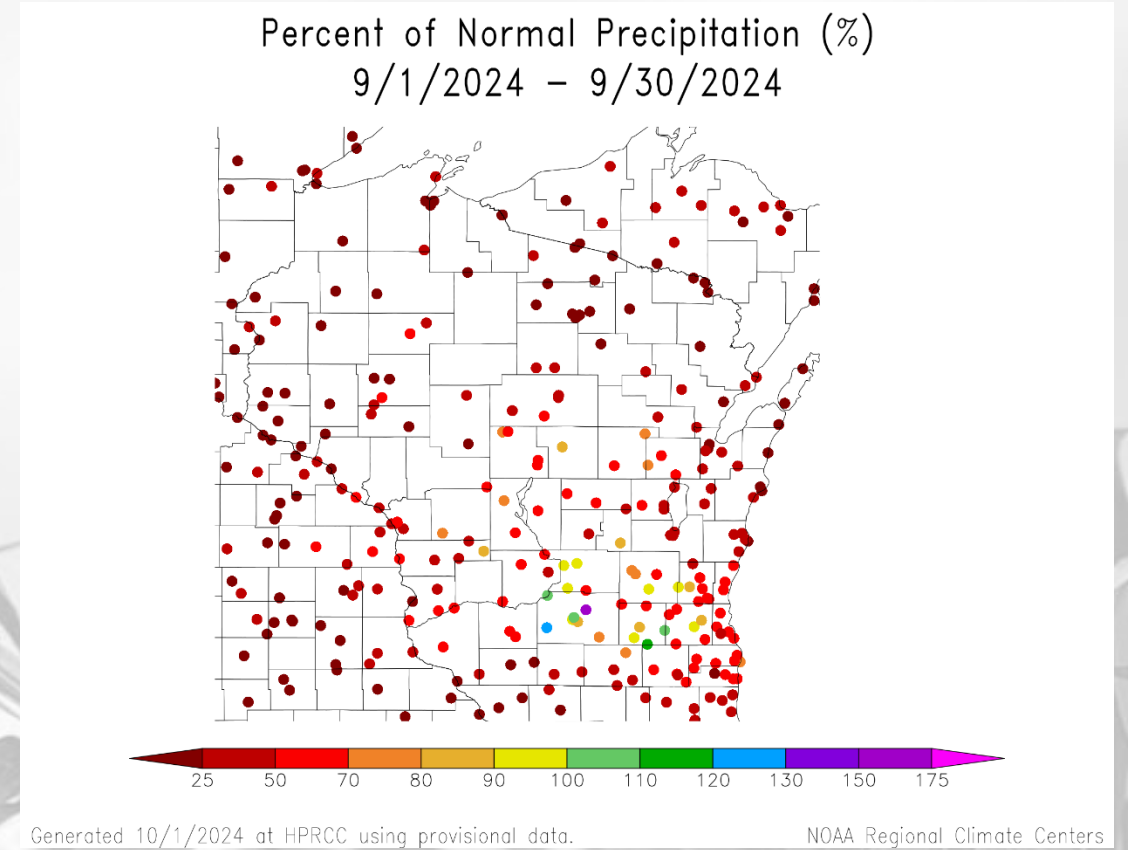
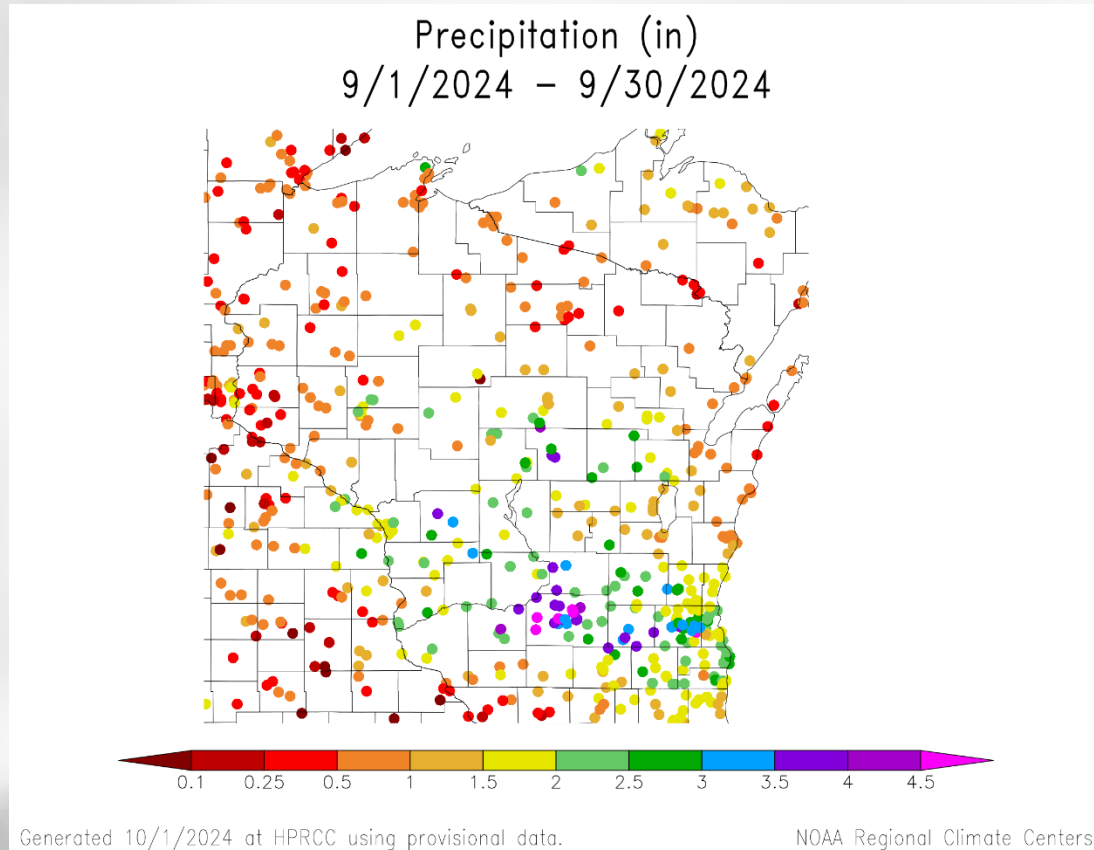
- Most of the state saw **no precip** last week.
- Areas to the S and E of Madison and Lake Winnebago saw a **half inch or less** of precip.
- Vilas County & vicinity experienced some **minor precip totals**.

30 Day Precip



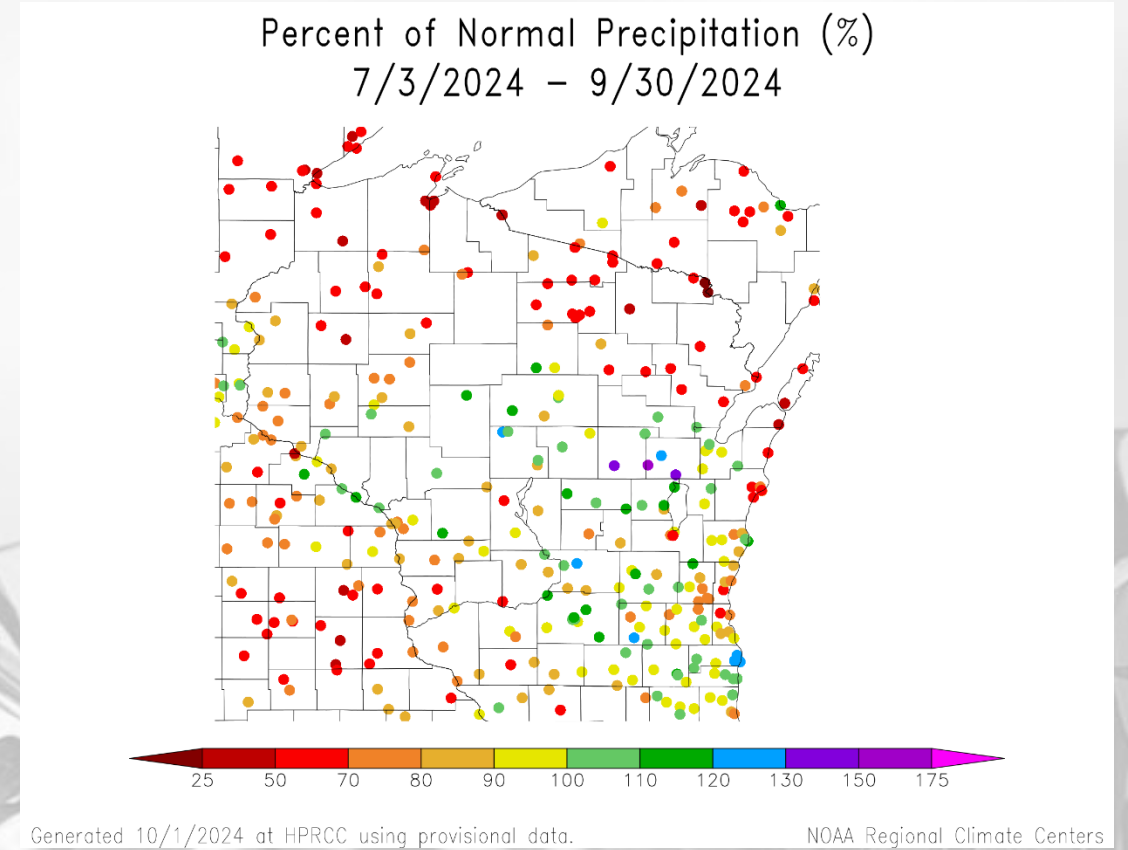
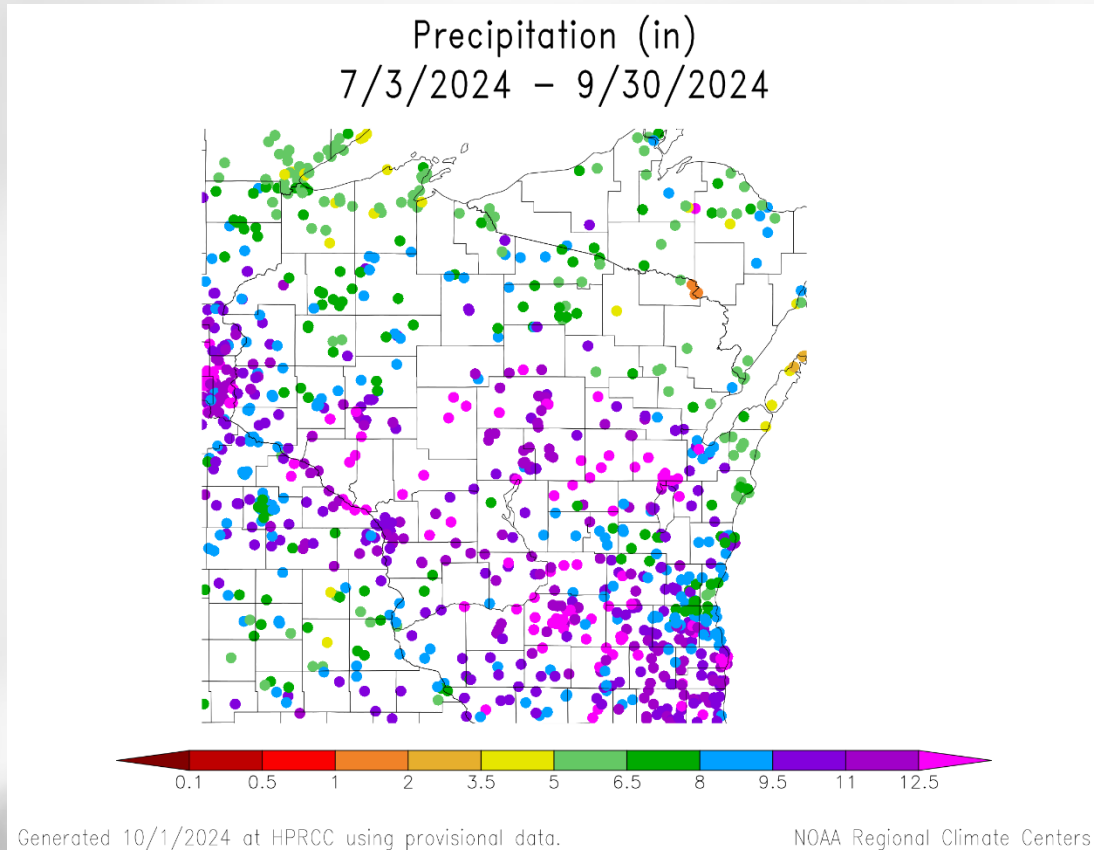
- The majority of the state saw **<2"** of precip since **Sept. 1**. Lowest totals in the north.
- **2-4"** common east of La Crosse, in the Central Sands, and in the south.
- Estimates of 3+'' in the south, which was **received between Sept. 19-22**.

30 Day Precip Total/% Avg.



- Rainfall over the last 30 days was **very concentrated in the SC/SE region** versus elsewhere in WI.
 - Dane County & vicinity → **3" or more** common across stations; **at or above** climatological average.
 - Elsewhere → **<2"** very common, which was **<70%** of the climatological average (in some cases, **<25%**)

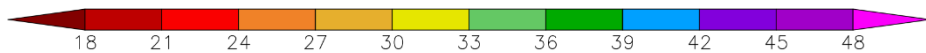
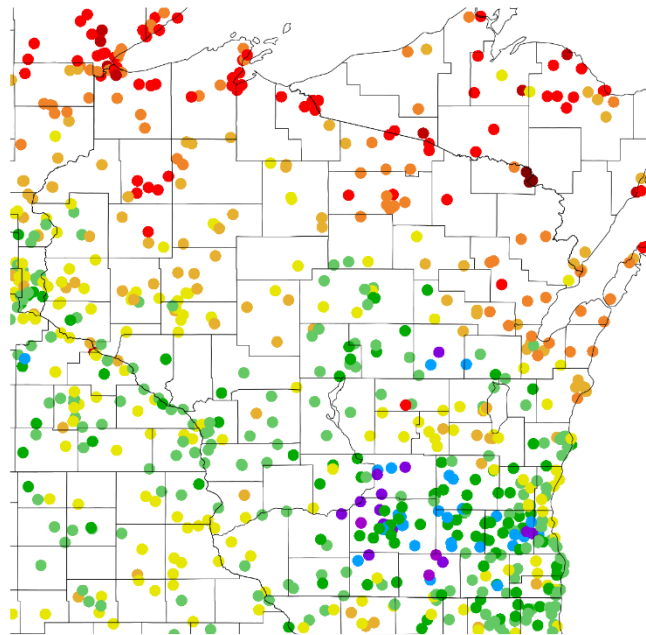
90 Day Precip Total/% Avg.



- **>11"** of precip across most of the state → many stations at or above climatological average.
- Lower totals to the north and east
 - **5-8"** common → **70% or less** of climatological average

2024 Precipitation (so far)

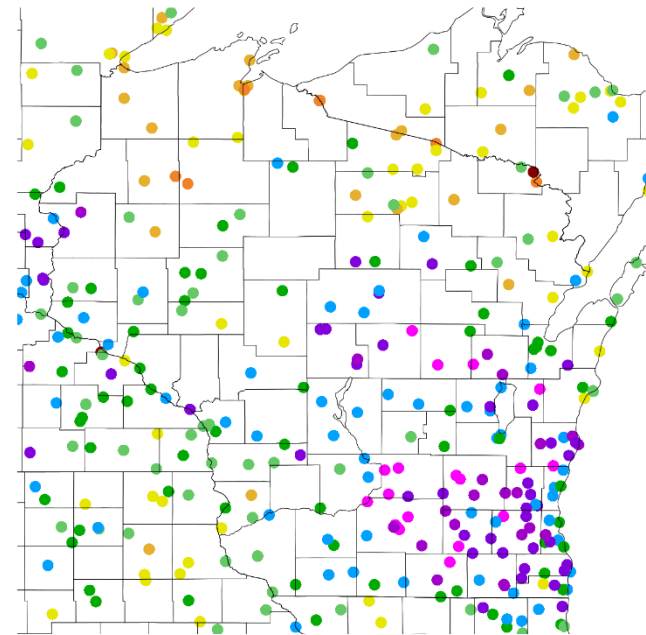
Precipitation (in)
1/1/2024 – 9/30/2024



Generated 10/1/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Precipitation (in)
1/1/2024 – 9/30/2024



Generated 10/1/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

Soil Moisture Models

- **30th percentile or lower** for soil moisture conditions covering a larger domain compared to last week. No wetter percentiles indicated.
- **10th percentile or lower** in Door/Kewaunee Counties, and in the far N.
- **Near-normal percentiles** in the central belt of the state.

Model Notes:

Red areas = top 5 driest in 100 years.

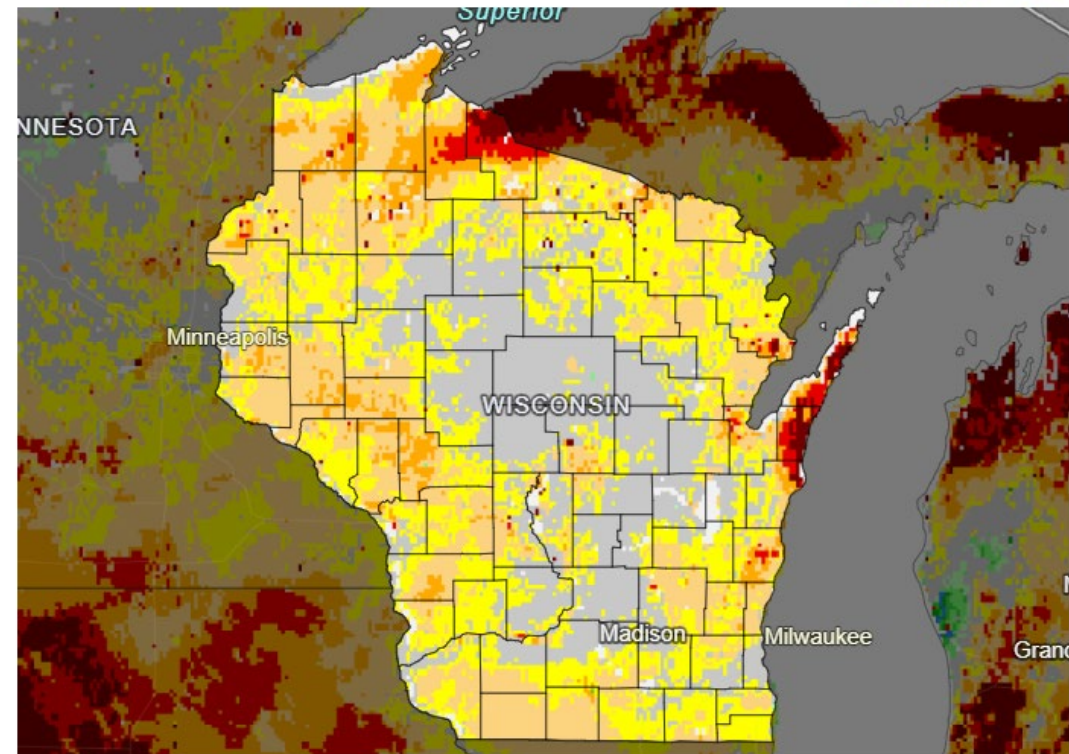
Dark red areas = top 2 driest in 100 years.

Blue areas = top 2 wettest in 100 years.

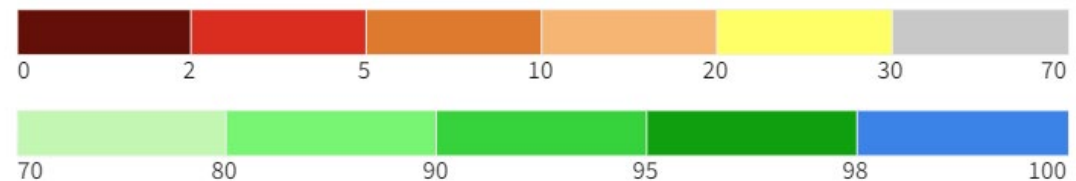
It's worth noting that each soil moisture model has their own characteristics and input variables, so there tends to be variation between models. Thus, it's worthwhile to look at multiple models opposed to just one.

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

NASA SPoRT-LIS 0-100 cm Soil Moisture Percentile



0-100 cm Soil Moisture Percentile

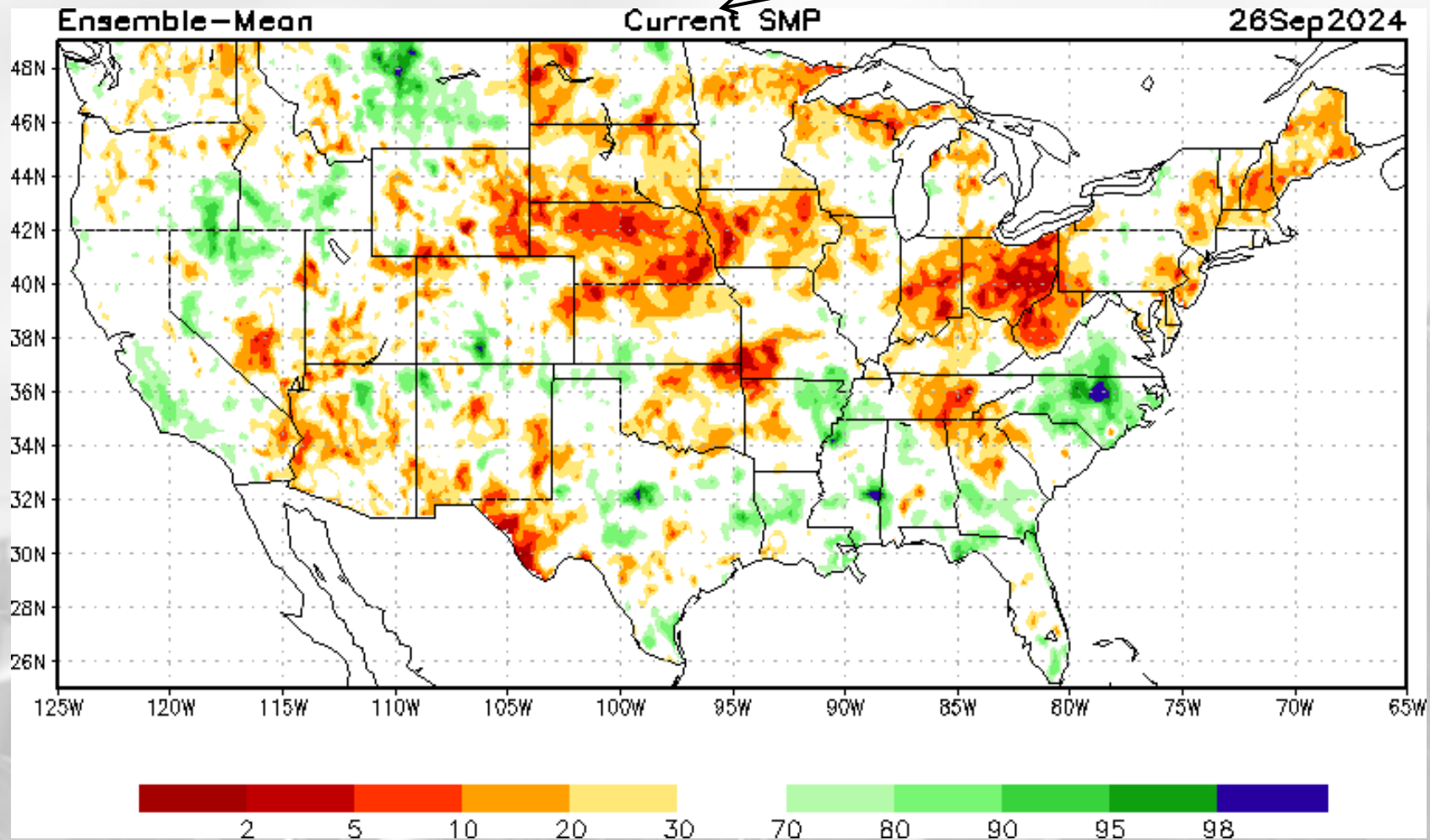


Source(s): NASA
Data Valid: 09/27/24

Drought.gov

Soil Moisture Models

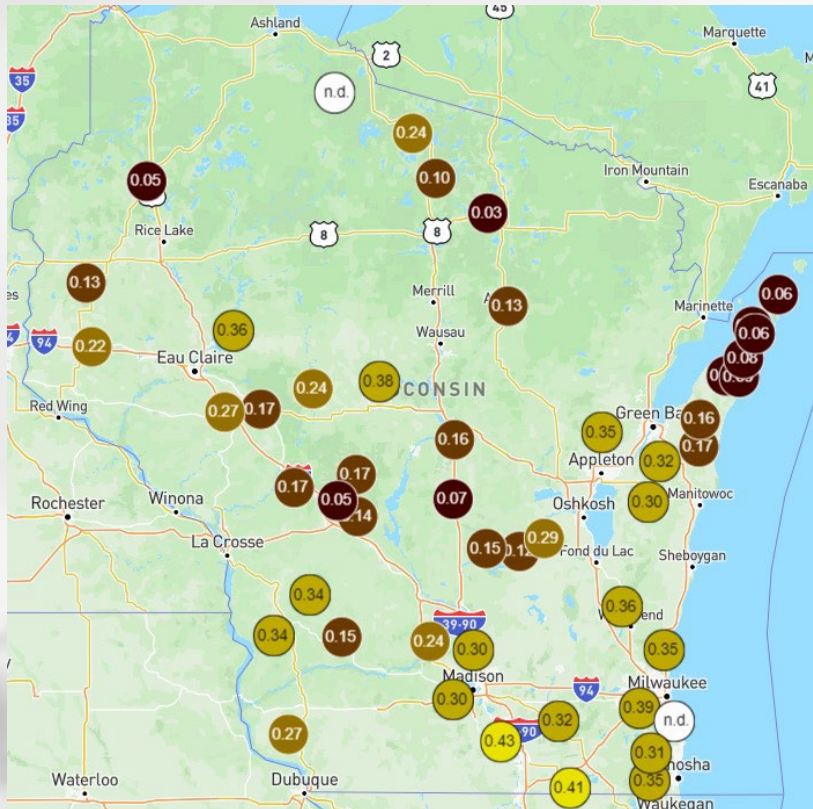
NOTE: this map displays the soil moisture percentile for Sept. 26. It was the most recent update on Oct. 1.



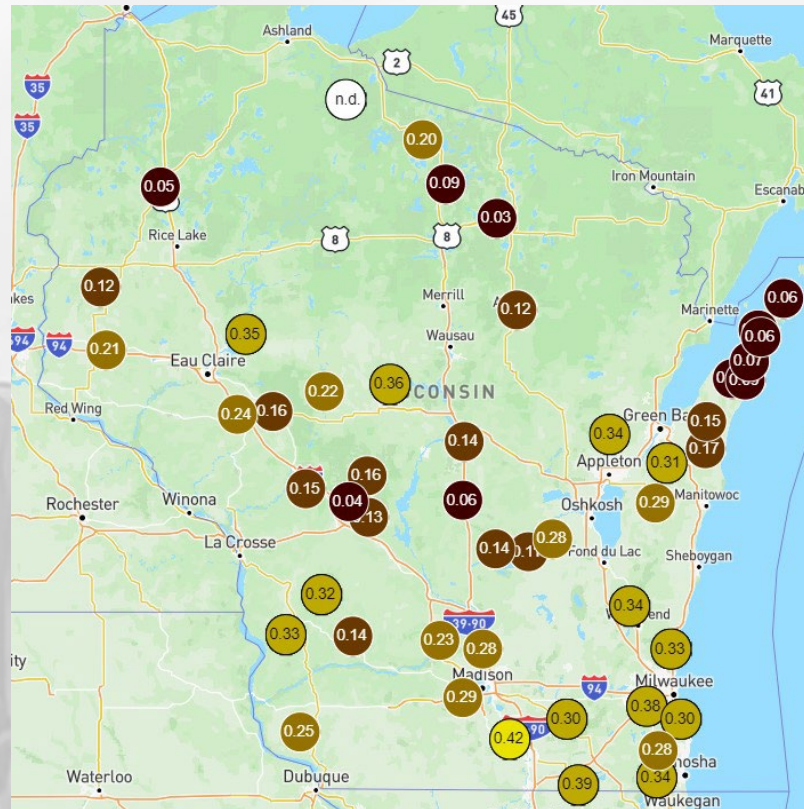
https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml

Wisconet Soil Moisture (4" Depth)

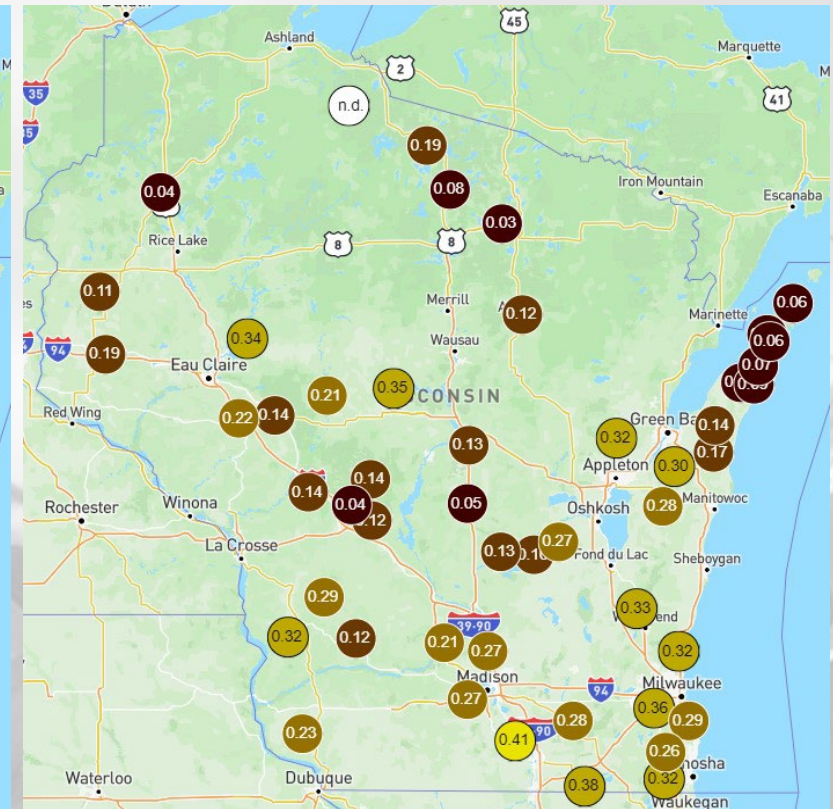
Thursday Sept. 26th @ Midday



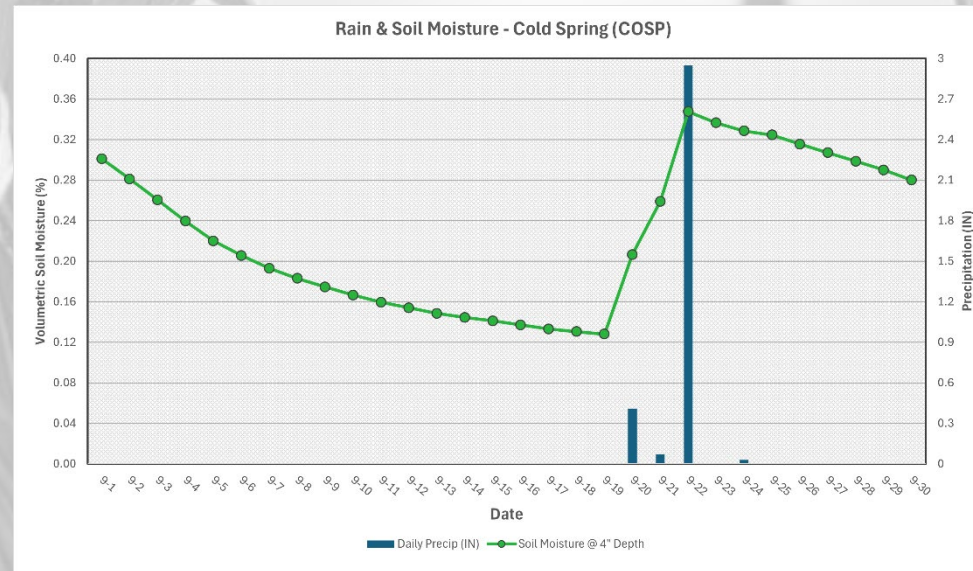
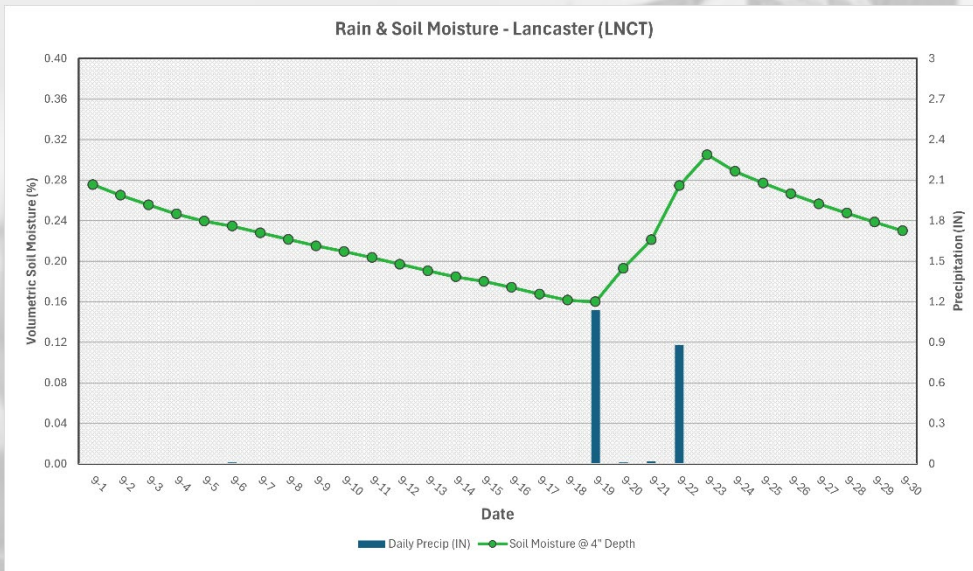
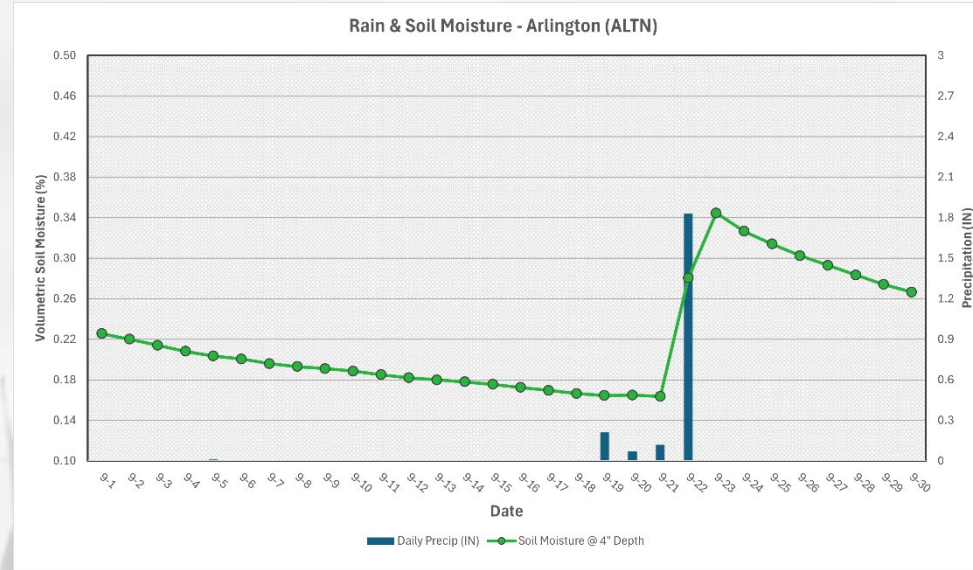
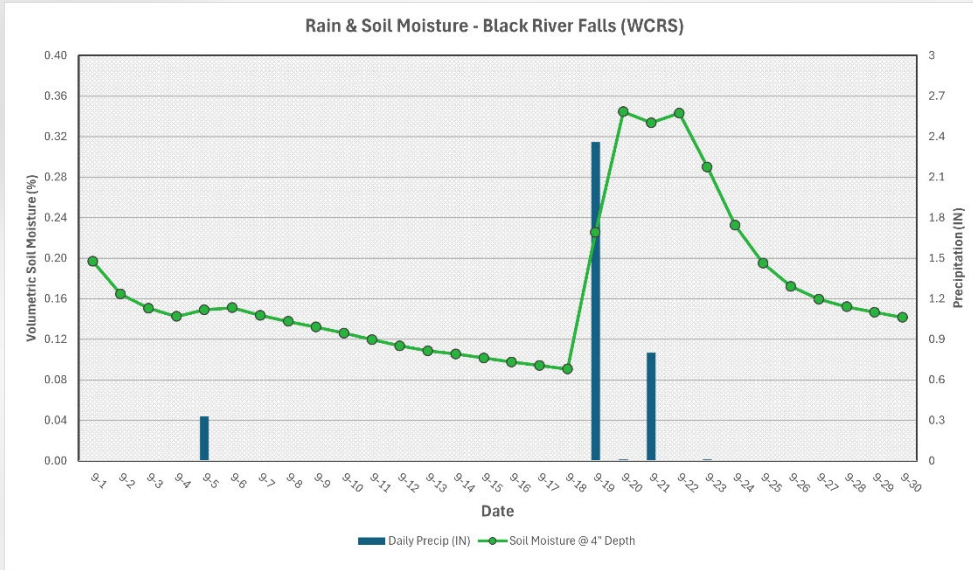
Saturday Sept. 28th @ Midday



Monday Sept. 30th @ Midday



Wisconet Soil Moisture – 4" Depth



Trend in soil moisture (4") & precip since September 1

Soil moisture has dropped off notably since the rains of Sept. 19-22.

NASS Topsoil & Subsoil Moisture

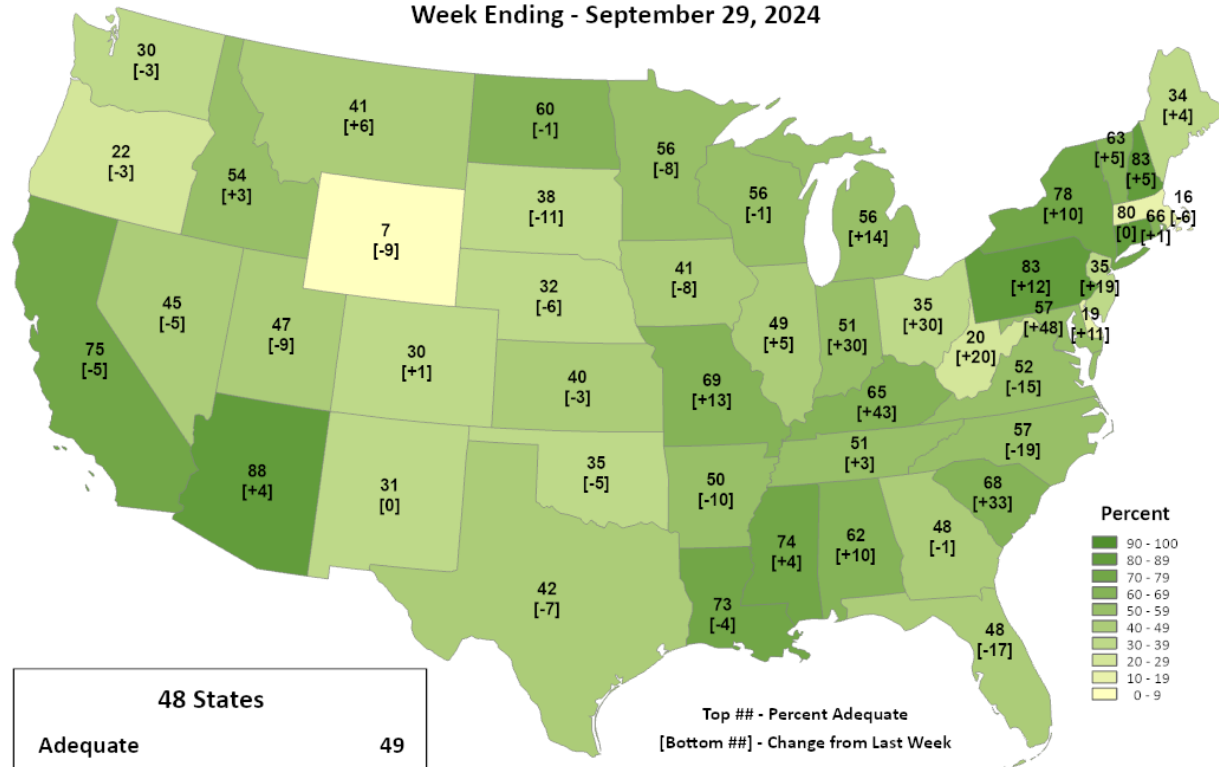


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World Agricultural Outlook Board (WAOB)

Topsoil Moisture

Percent Adequate

Week Ending - September 29, 2024



| | |
|-----------------------|----|
| 48 States | |
| Adequate | 49 |
| Change from Last Week | +2 |

Top ## - Percent Adequate
[Bottom ##] - Change from Last Week

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

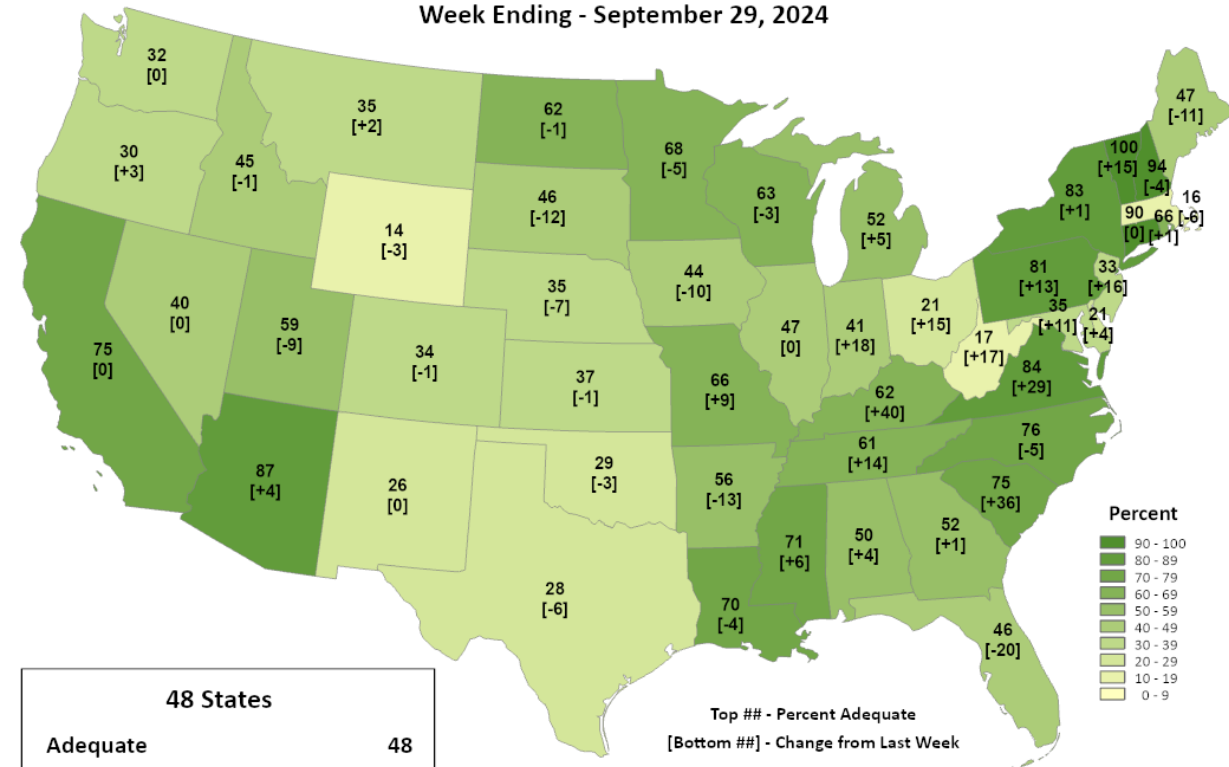


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Subsoil Moisture

Percent Adequate

Week Ending - September 29, 2024



| | |
|-----------------------|----|
| 48 States | |
| Adequate | 48 |
| Change from Last Week | +1 |

Top ## - Percent Adequate
[Bottom ##] - Change from Last Week

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

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

US Drought Monitor

U.S. Drought Monitor Midwest

September 24, 2024
(Released Thursday, Sep. 26, 2024)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|-------|-------|-------|-------|-------|------|
| Current | 20.61 | 79.39 | 31.51 | 9.38 | 3.27 | 1.04 |
| Last Week <small>09-17-2024</small> | 22.92 | 77.08 | 33.29 | 9.93 | 2.56 | 0.79 |
| 3 Months Ago <small>06-25-2024</small> | 72.88 | 27.12 | 3.86 | 0.00 | 0.00 | 0.00 |
| Start of Calendar Year <small>01-02-2024</small> | 22.92 | 77.08 | 50.25 | 20.76 | 4.20 | 0.00 |
| Start of Water Year <small>09-26-2023</small> | 16.82 | 83.18 | 54.98 | 23.81 | 6.21 | 0.13 |
| One Year Ago <small>09-26-2023</small> | 16.82 | 83.18 | 54.98 | 23.81 | 6.21 | 0.13 |

Intensity:

| | |
|---|--|
|  None |  D2 Severe Drought |
|  D0 Abnormally Dry |  D3 Extreme Drought |
|  D1 Moderate Drought |  D4 Exceptional Drought |

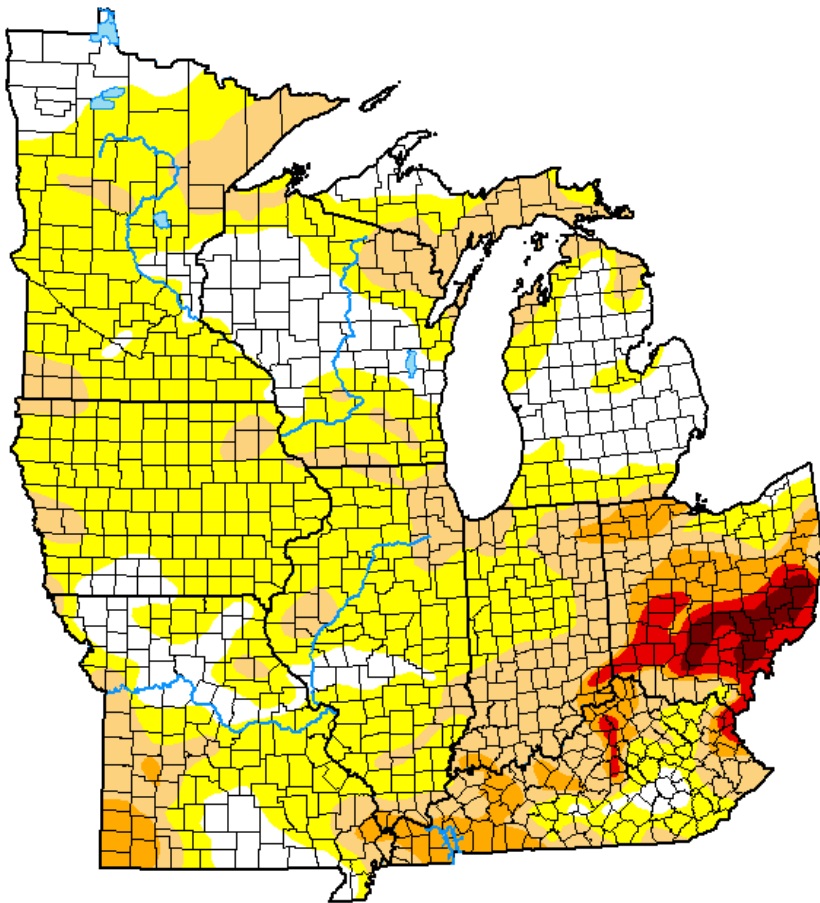
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Brad Rippey
U.S. Department of Agriculture



droughtmonitor.unl.edu



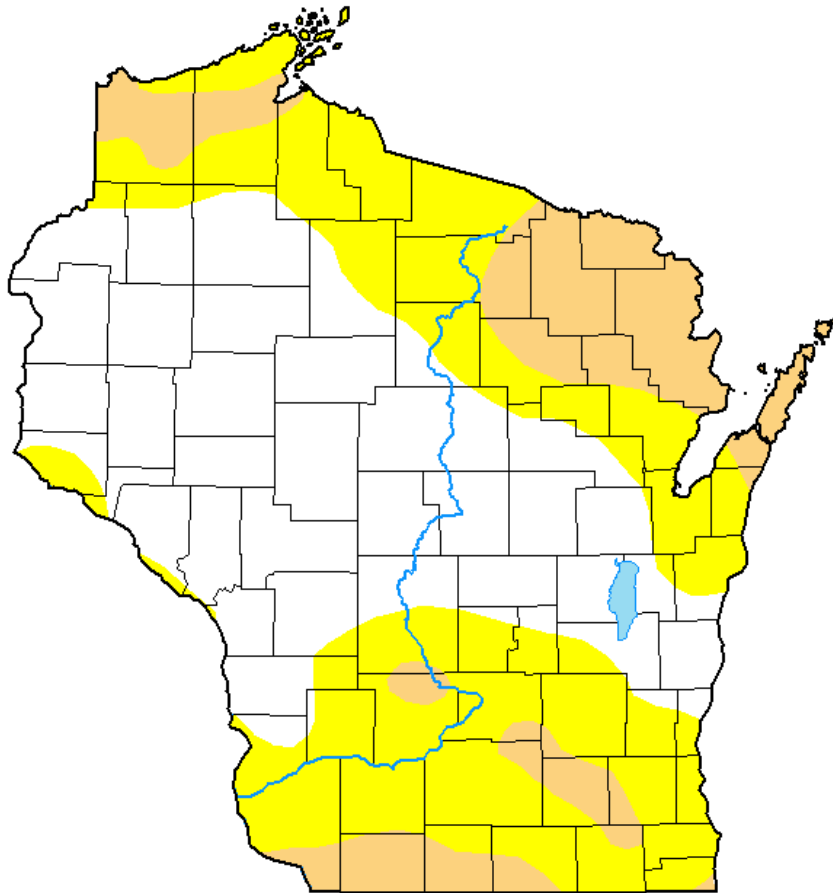
- Compared to last week:
 - Decrease in D1-D2 coverage area, with small increases in D3-D4.
- **31.5%** of the Midwest is categorized in D1 (moderate) drought, **now including WI.**
- **3.3%** is in D3-D4 drought, all in OH & KY. **1%** in D4.
- **79.4%** of the Midwest is in D0 (abnormally dry) conditions, up from last week.

Note: D0 is not considered drought.

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

US Drought Monitor

U.S. Drought Monitor Wisconsin



September 24, 2024

(Released Thursday, Sep. 26, 2024)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|---|--------|-------|-------|-------|-------|------|
| Current | 46.45 | 53.55 | 16.00 | 0.00 | 0.00 | 0.00 |
| Last Week 09-17-2024 | 47.63 | 52.37 | 16.23 | 0.00 | 0.00 | 0.00 |
| 3 Months Ago 06-25-2024 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Start of Calendar Year 01-02-2024 | 33.04 | 66.96 | 37.34 | 16.80 | 0.26 | 0.00 |
| Start of Water Year 09-26-2023 | 2.04 | 97.96 | 80.86 | 37.74 | 6.77 | 0.00 |
| One Year Ago 09-26-2023 | 2.04 | 97.96 | 80.86 | 37.74 | 6.77 | 0.00 |

Intensity:



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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Brad Rippey
U.S. Department of Agriculture



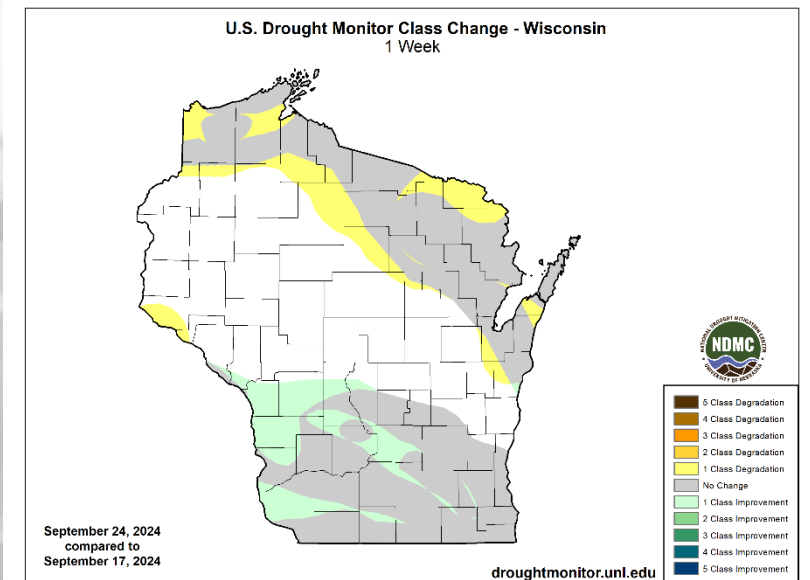
droughtmonitor.unl.edu

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

Amount of state in:

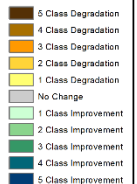
- **D1-D4** – 16.0% ↓
- **D2-D4** – 0.0% --
- **D3-D4** – 0.0% --
- **D4** – 0.0% --

Note: ↑ ↓ indicate change from last week. Red up arrows indicate increase in drought area; vice-versa for green arrows.

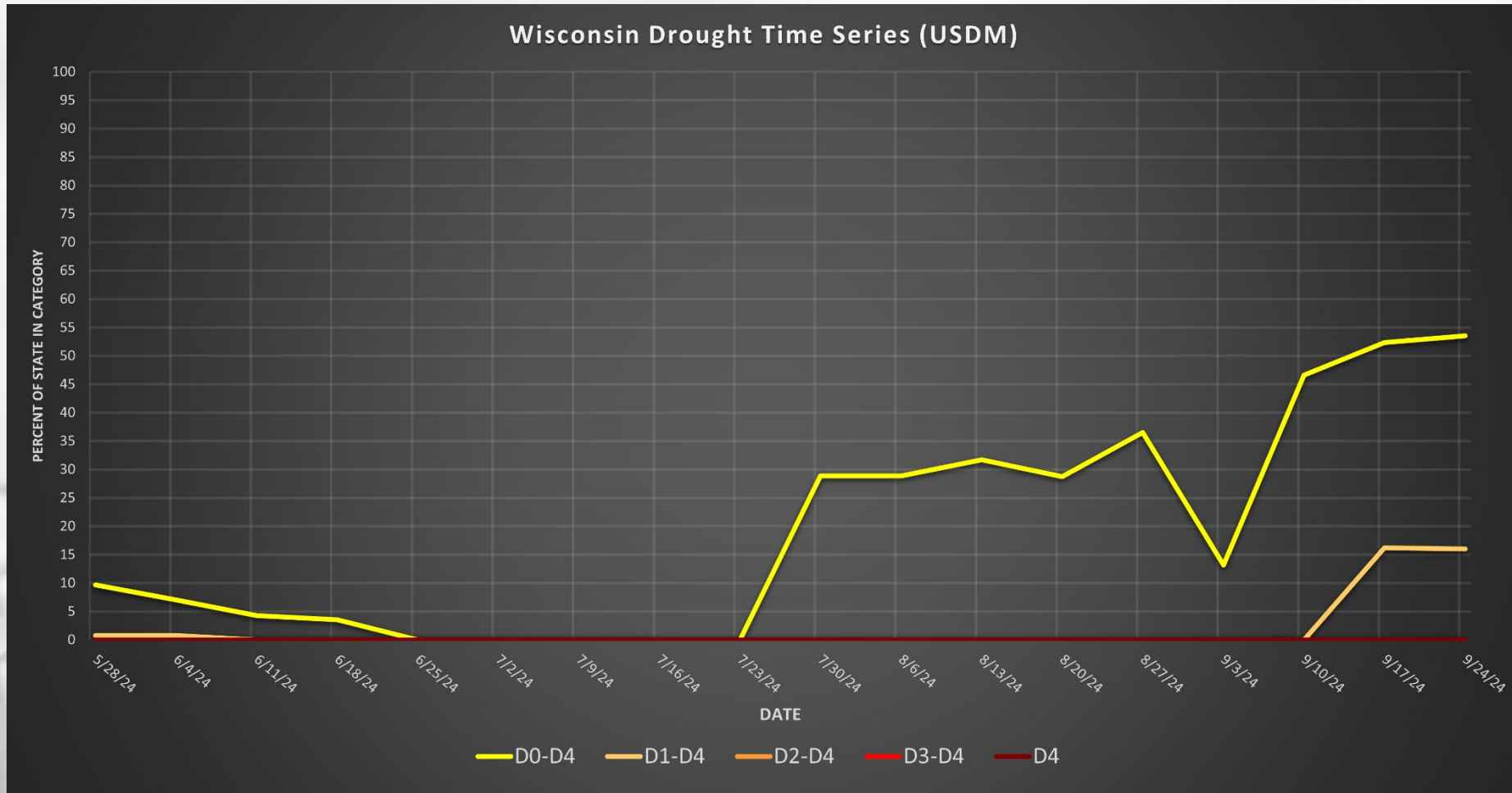


September 24, 2024
compared to
September 17, 2024

droughtmonitor.unl.edu



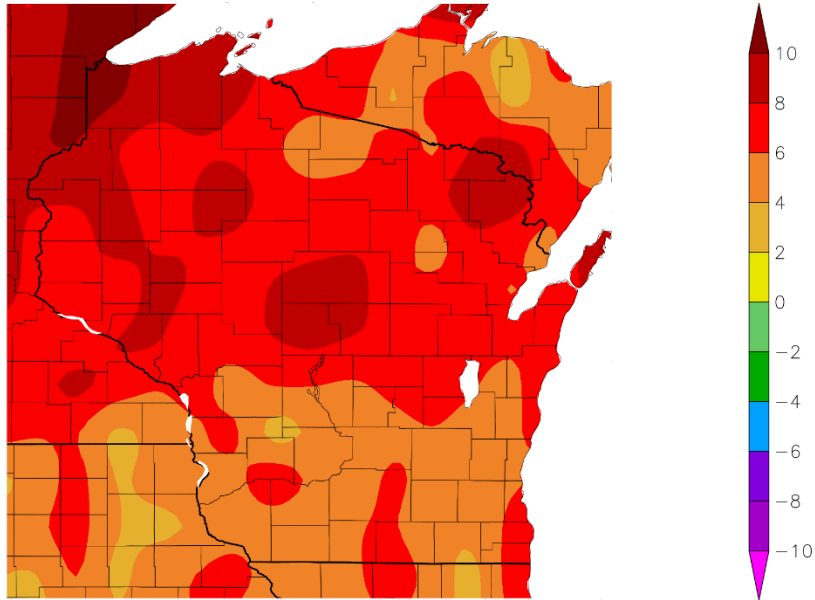
USDM Time Series



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

7 Day Temperatures

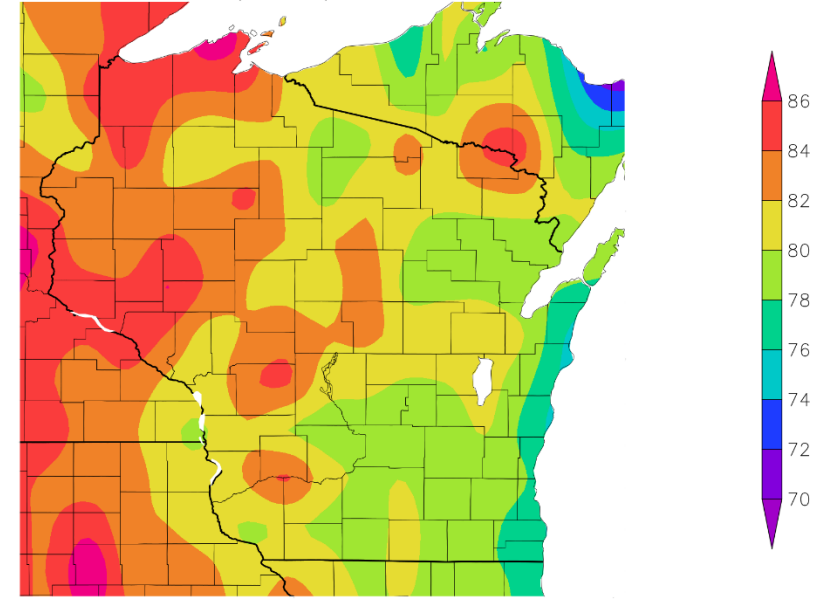
Departure from Normal Temperature (F)
9/24/2024 – 9/30/2024



Generated 10/1/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Highest 1-Day Maximum Temperature (F)
9/24/2024 – 9/30/2024



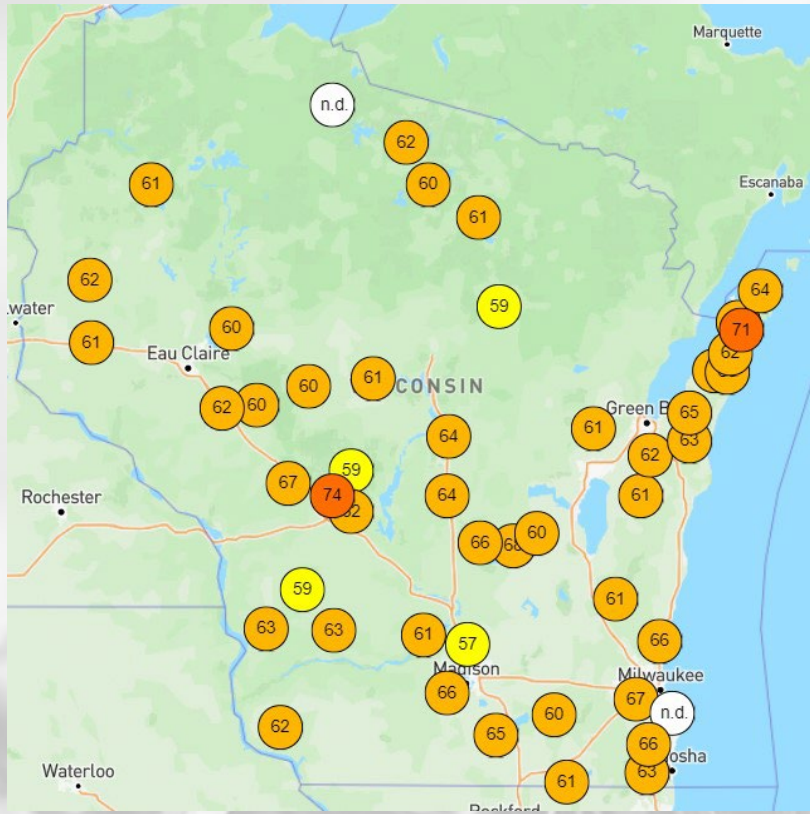
Generated 10/1/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

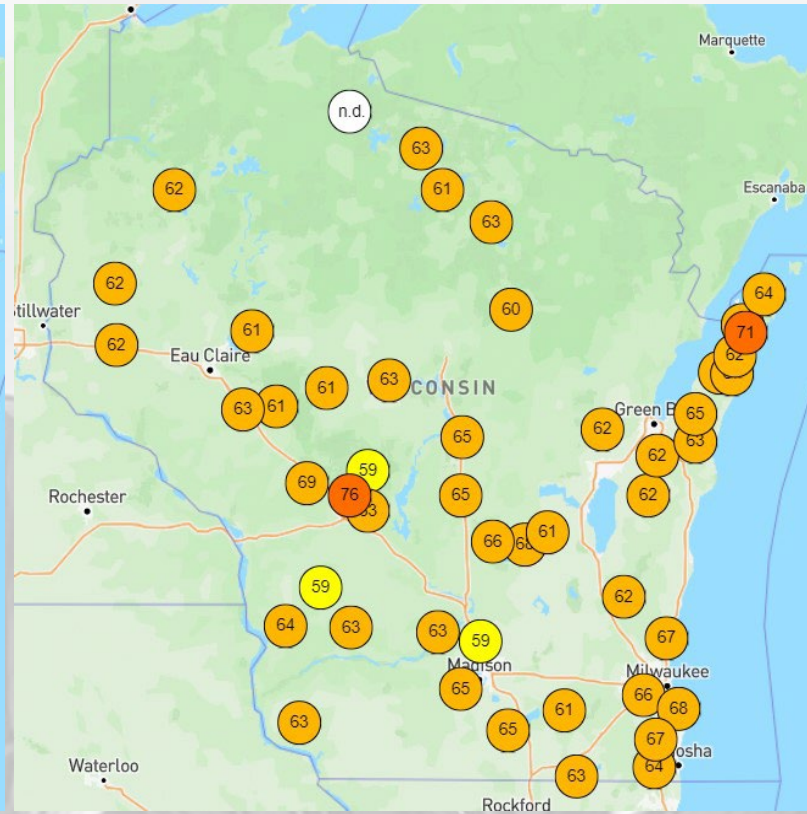
- It was a **warm week** across the state last week; with most $\geq 4^{\circ}\text{F}$ above climatological normal.
 - **6-10°F above** climatological average in the N, with **4-6°F above normal** common in the S.
- Weekly maximums in the **mid-80s** in the W/NW, with **upper 70s** to the E.

Wisconet Soil Temp (4" Depth)

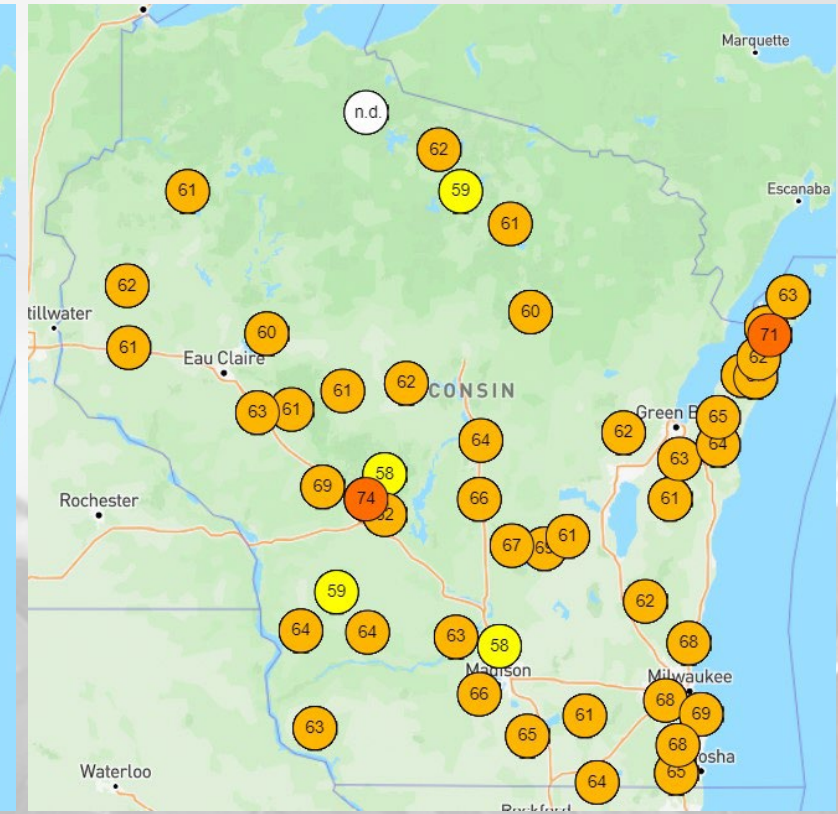
Thursday Sept. 26th @ Midday



Saturday Sept. 28th @ Midday

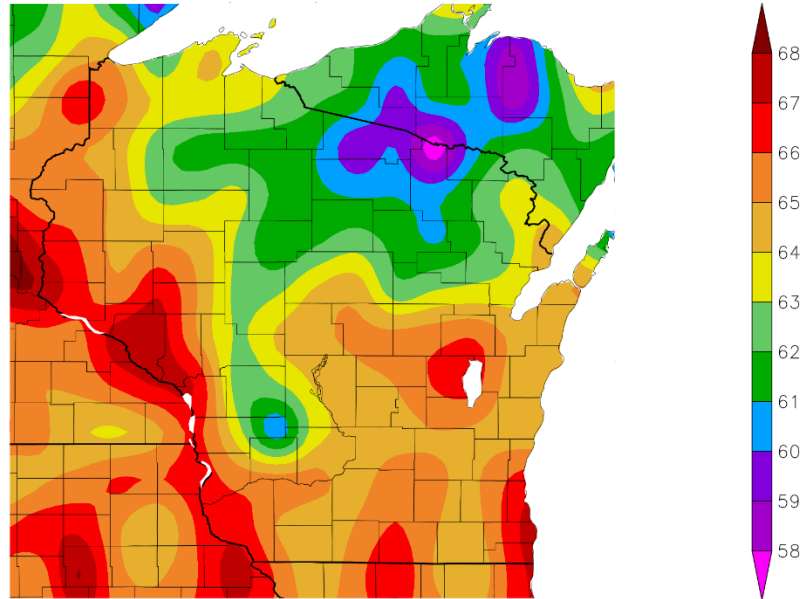


Monday Sept. 30th @ Midday



30 Day Temperatures

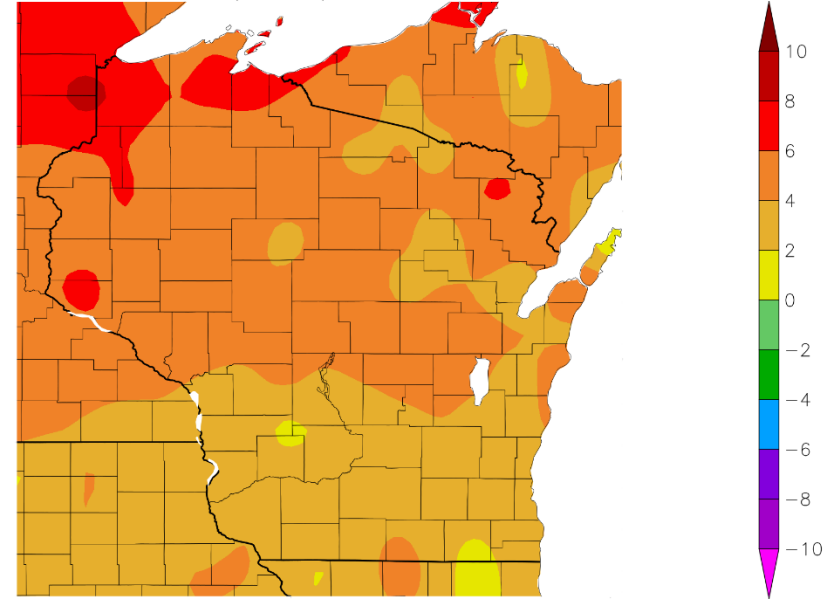
Temperature (F)
9/1/2024 - 9/30/2024



Generated 10/1/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Temperature (F)
9/1/2024 - 9/30/2024



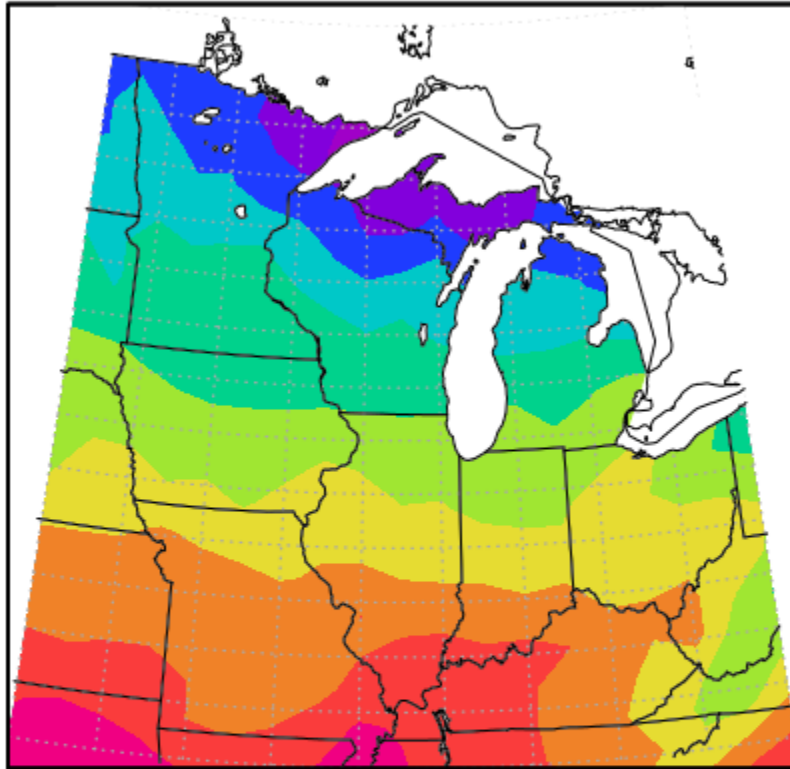
Generated 10/1/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Temperatures for the past month ranged from **65-68°F** in the S & W to **59-62°F** in the far NC.
 - **2-6°F above normal** for most of the state compared to climatological (1991-2020) average.
 - Temps more above the climatological average in the north compared to the south.

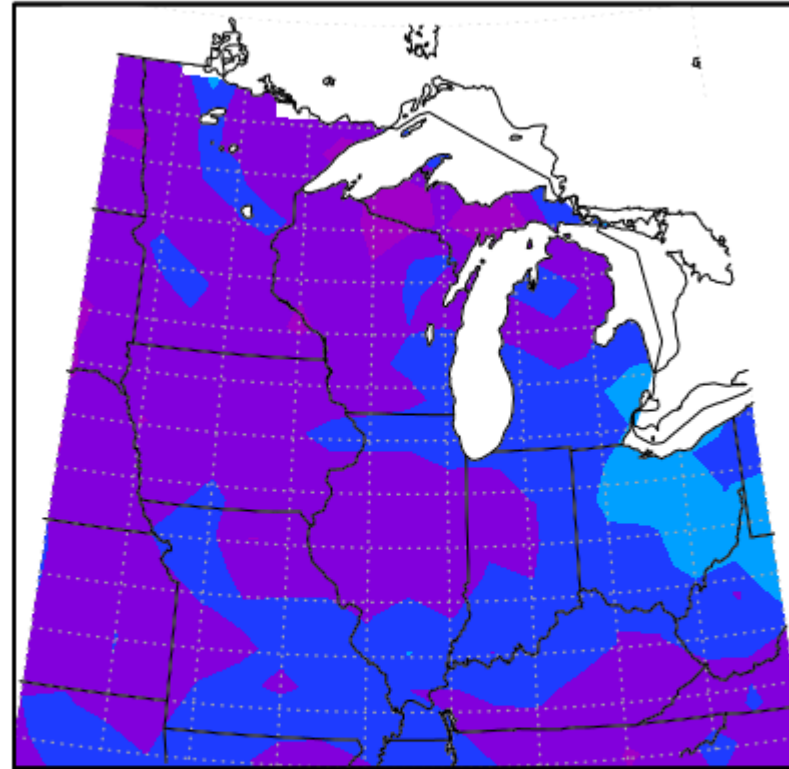
Growing Degree Days (Base = 50°F; Since April 1)

Total MGDD from 4/1/2024 to 9/30/2024



Midwestern Regional Climate Center
Purdue University

MGDD Departure, 4/1/2024 to 9/30/2024



Midwestern Regional Climate Center
Purdue University
Normals Period, 1991–2020

- **2700-3000** GDD in the S to **2100-2400** GDD in the N.
- With the warm September we've had, GDD accumulation is running **≥100 GDD ahead of normal pace.**

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

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

https://mrcc.purdue.edu/climate_watch

NASS Crop Progress – Corn

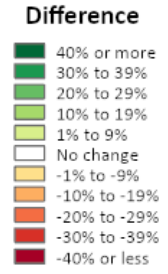
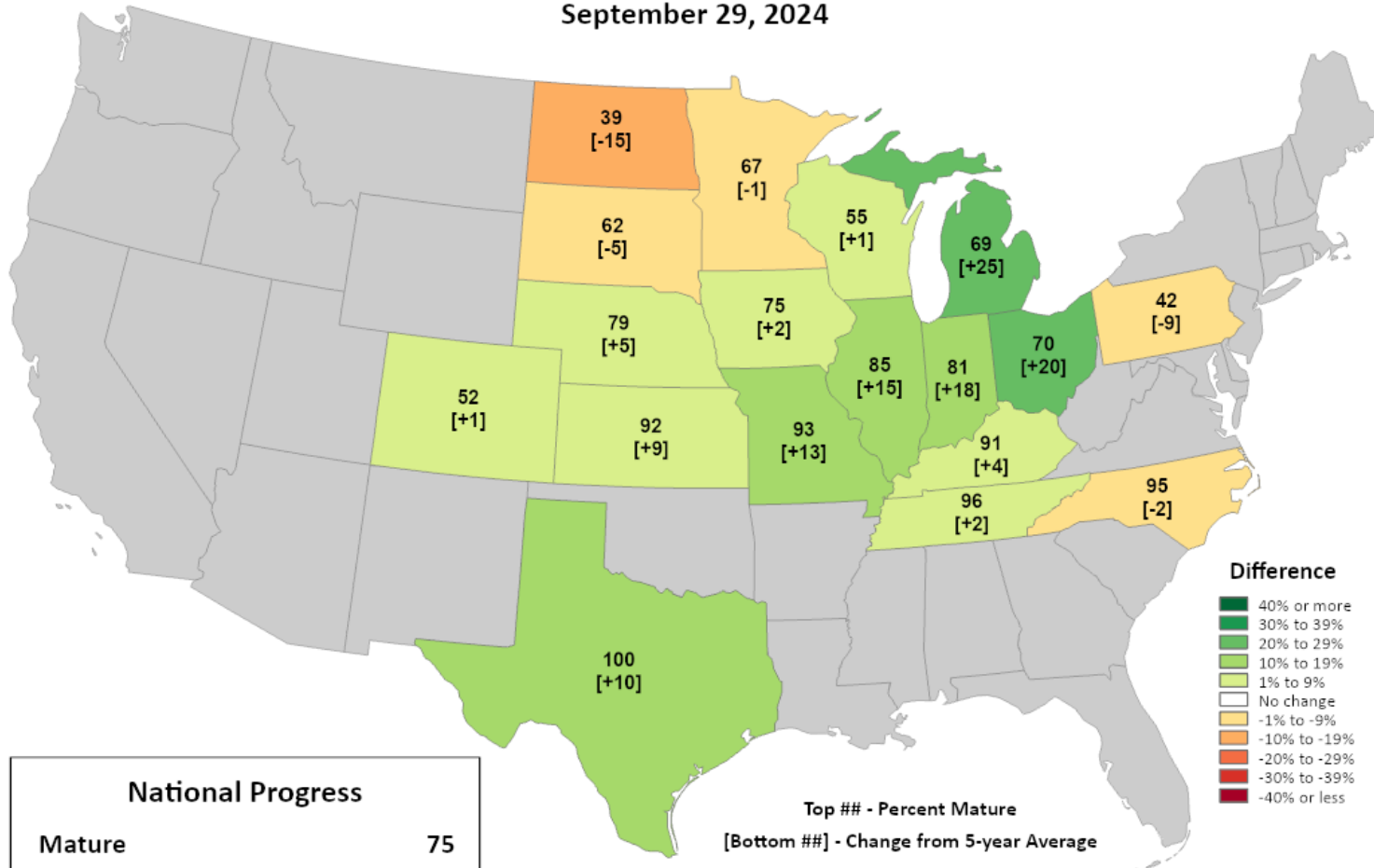


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World Agricultural Outlook Board (WAOB)

Corn Progress

Percent Mature

September 29, 2024



| National Progress | |
|----------------------------|----|
| Mature | 75 |
| Change from 5-year Average | +5 |

Top ## - Percent Mature
[Bottom ##] - Change from 5-year Average

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

- The corn in WI fields is **over 50% mature**. Denting is almost complete. Progress is **ahead of normal pace** in WI, similar to states to the S/E.
 - In WI, maturity is **55% complete**. 1% ahead of the 5-year average pace & up **16%** from last week.
 - Denting → **91% complete**
 - Harvested → **5% complete**

NASS Crop Progress – Soybean

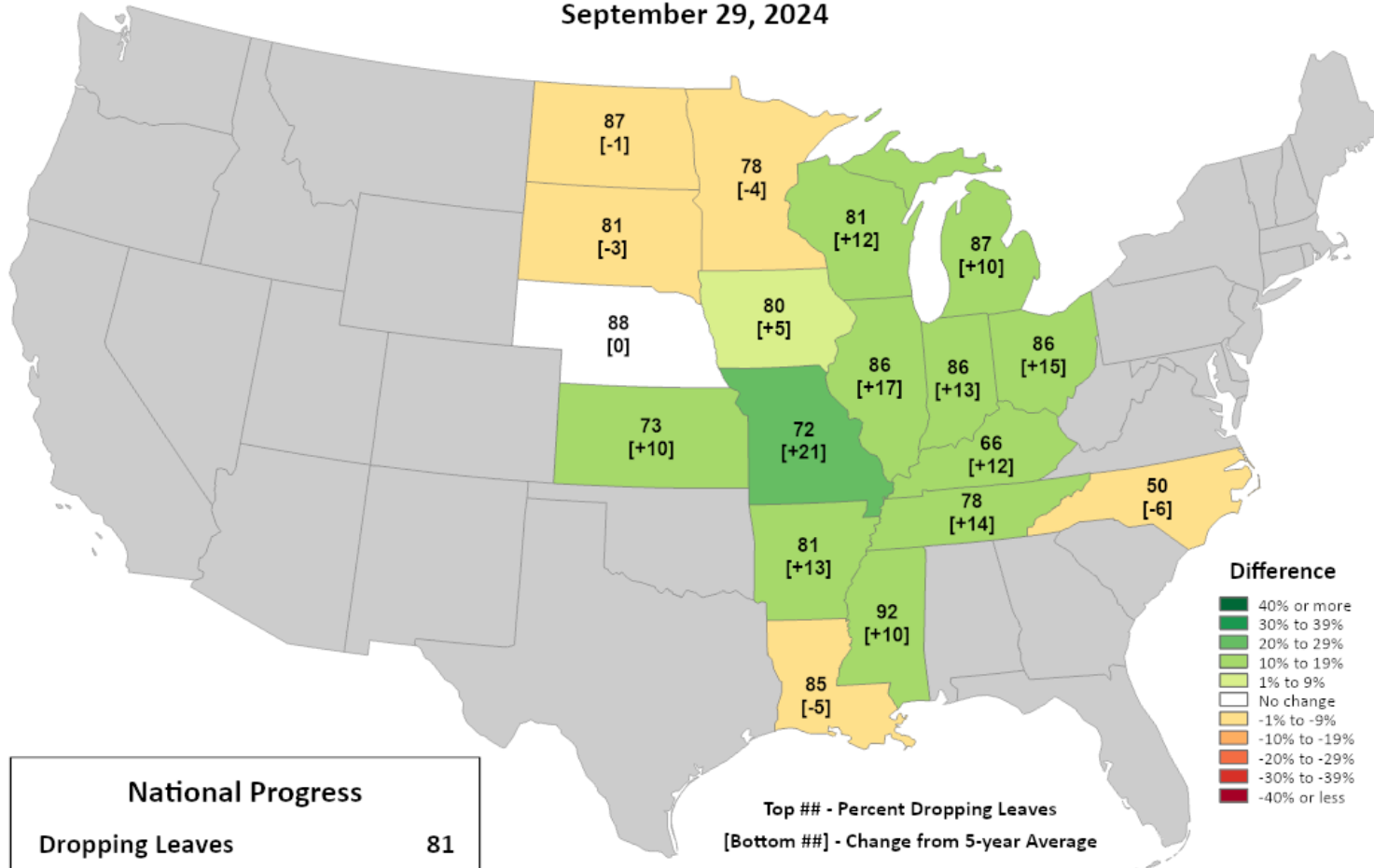


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USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)

Soybeans Progress

Percent Dropping Leaves

September 29, 2024



| National Progress | |
|----------------------------|----|
| Dropping Leaves | 81 |
| Change from 5-year Average | +8 |

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

- Soybean **pod setting is complete** & leaf drop is over 50% complete. Things are running **well ahead of normal pace** in WI and points to the S/E.
 - In WI, leaf dropping is **81% complete**. 12% ahead of the 5-year average pace & up **16%** from last week.
 - Harvested → **30% complete**

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

NASS Crop Condition

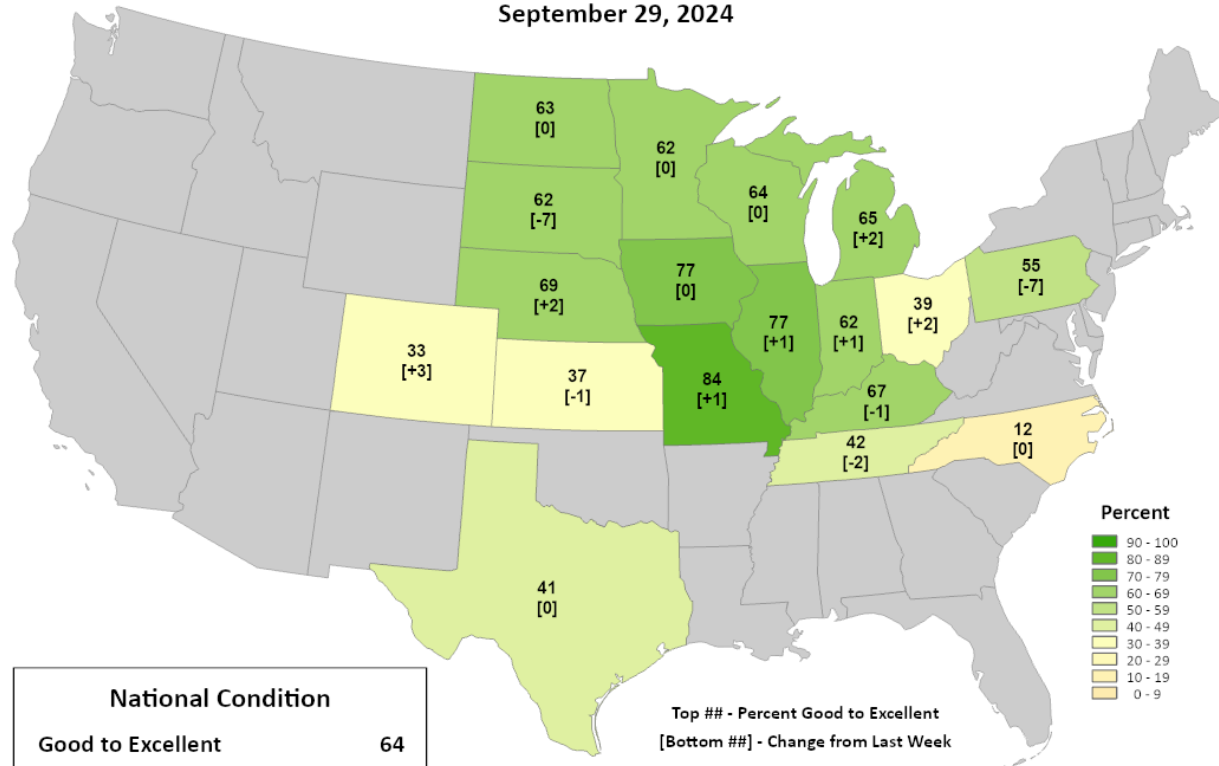


This product was prepared by the
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Corn Conditions

Percent Good to Excellent

September 29, 2024



| National Condition | |
|-----------------------|----|
| Good to Excellent | 64 |
| Change from Last Week | -1 |

Top ## - Percent Good to Excellent
[Bottom ##] - Change from Last Week

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

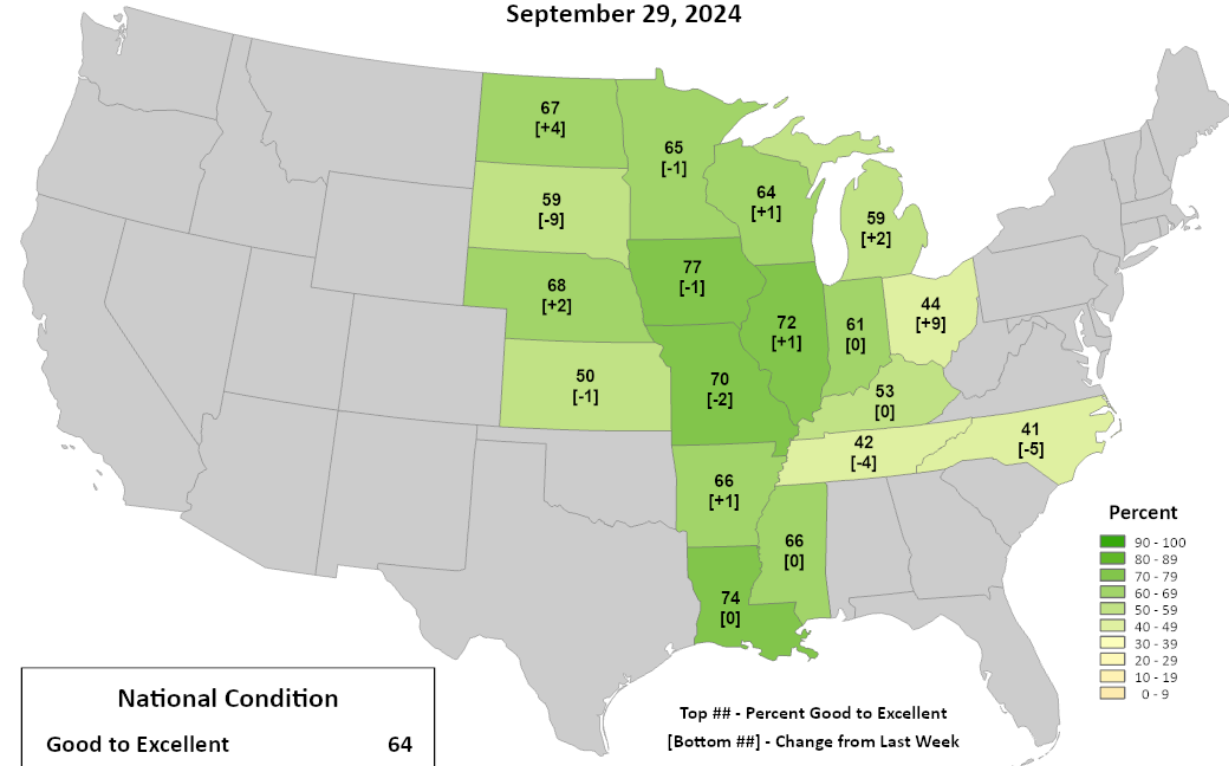


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Soybean Conditions

Percent Good to Excellent

September 29, 2024



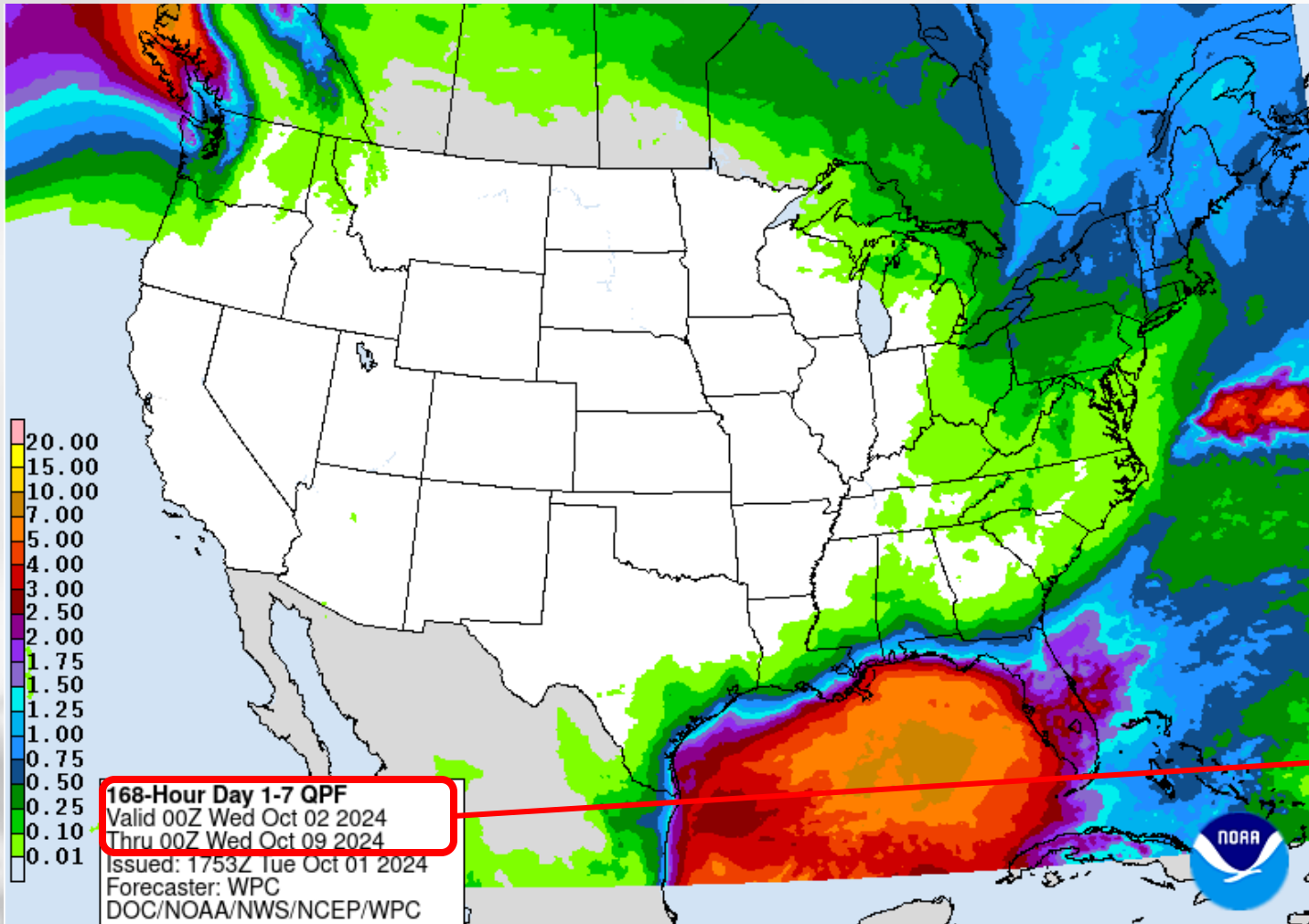
| National Condition | |
|-----------------------|----|
| Good to Excellent | 64 |
| Change from Last Week | 0 |

Top ## - Percent Good to Excellent
[Bottom ##] - Change from Last Week

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

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

7 Day Precip Forecast

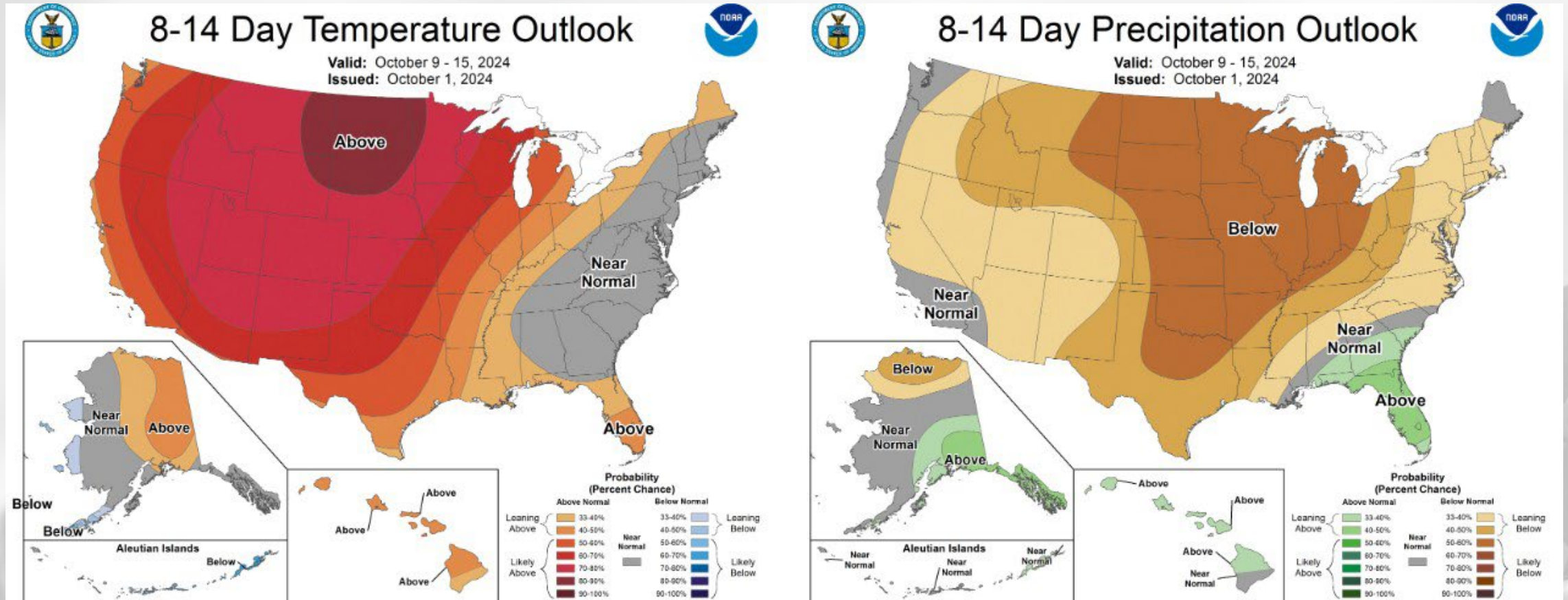


- Another week of **minimal rain chances**.
 - Most of the state is forecasted to receive **no rain**.
 - Highest rain chances in the **NE**, but it is minor.
 - Best chances for rain on **late Saturday into Sunday**.

Forecast for 10/1/24 thru 10/8/24
(Begins at 7pm CDT)

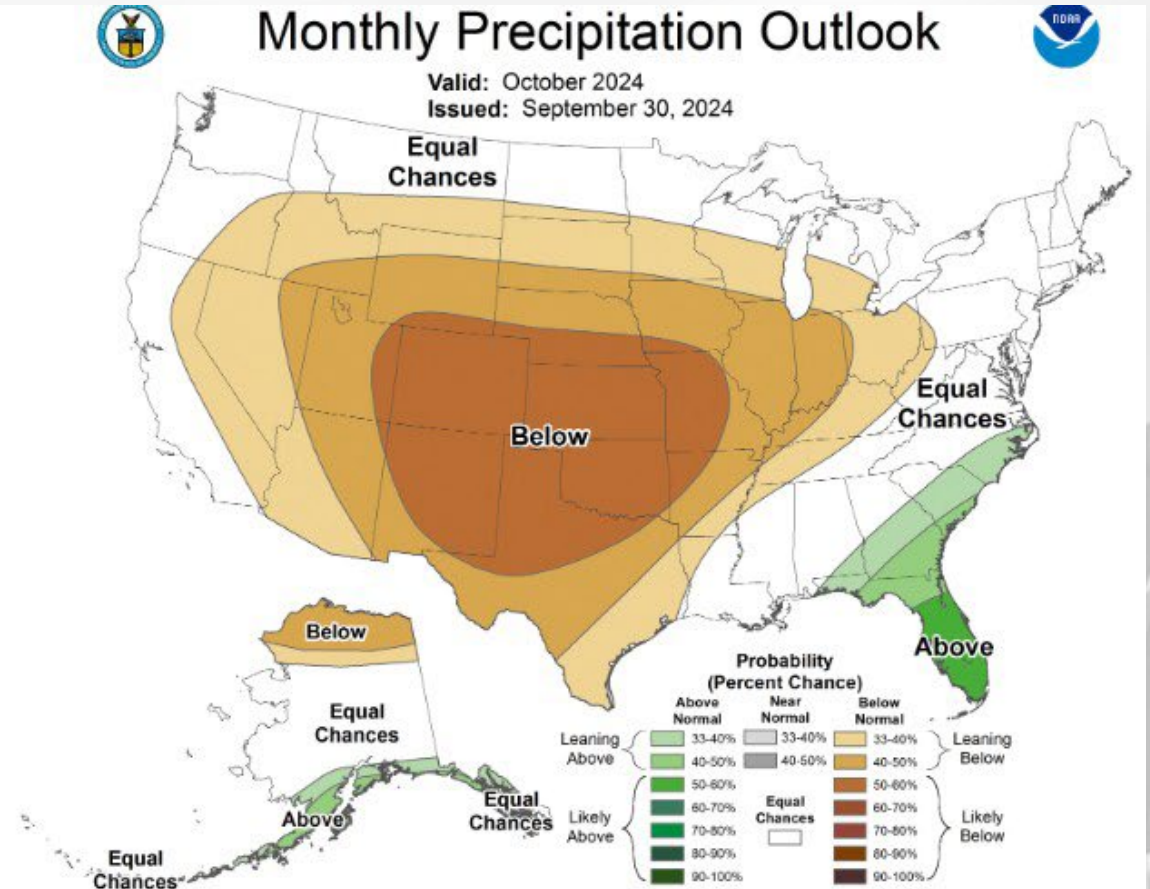
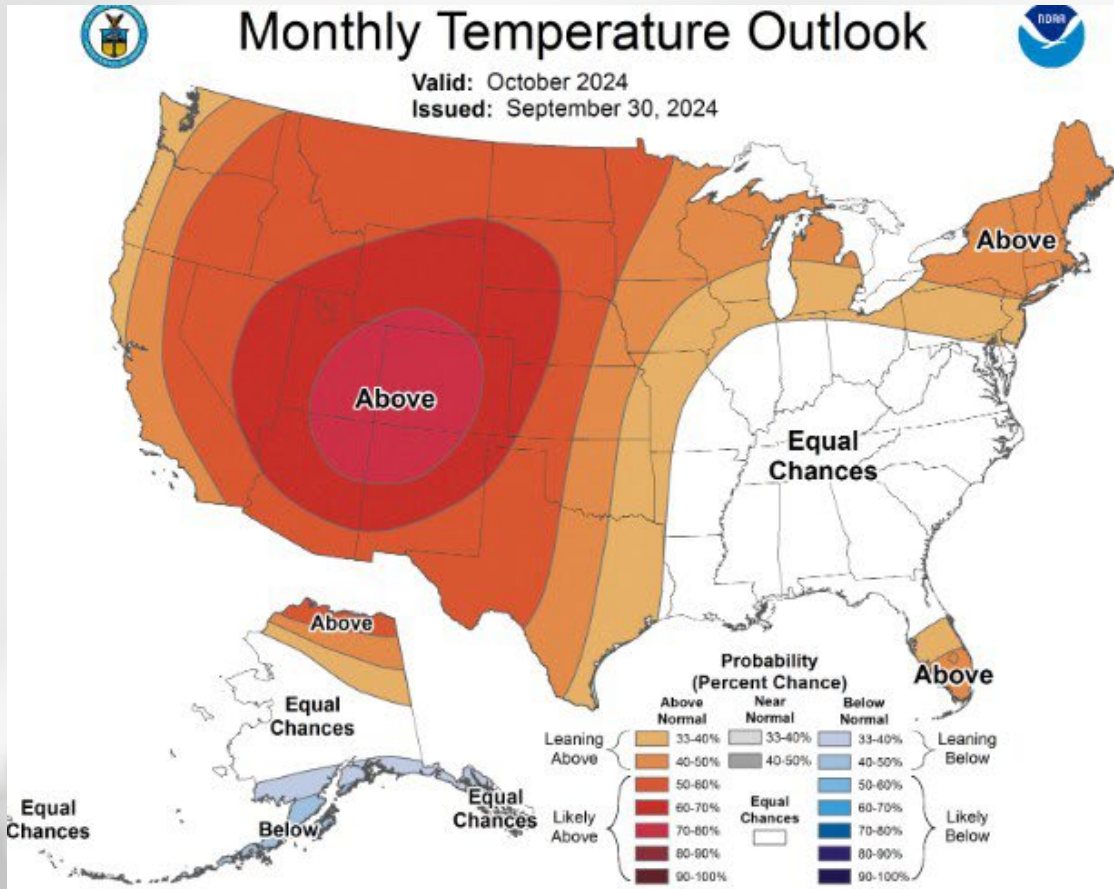
<https://www.wpc.ncep.noaa.gov/qpf/p168i.gif>
<https://www.drought.gov/states/wisconsin>

8-14 Day Temp & Precip Outlook



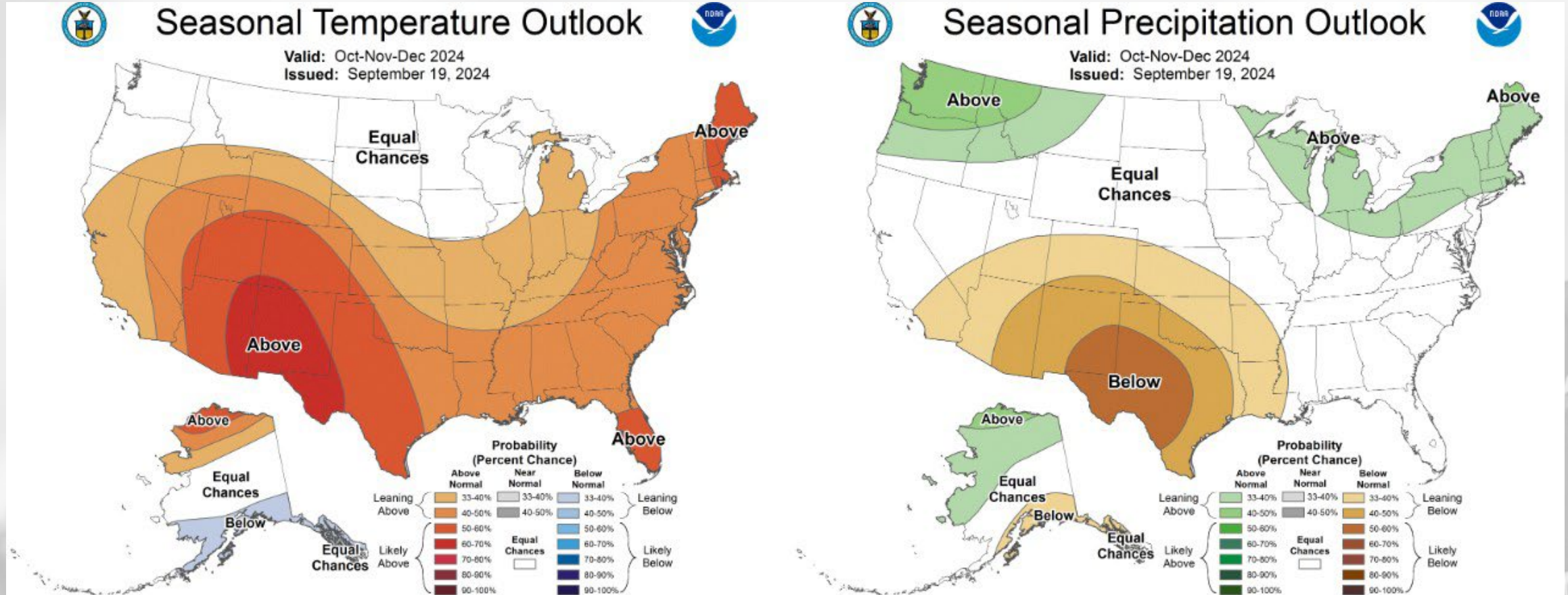
Second week of October: Temperatures likely to be above normal, with precipitation likely to be below normal.

30 Day Temp & Precip Outlook



Month of October: Temperatures leaning towards above normal, with precipitation leaning towards below normal.

90 Day Temp & Precip Outlook



Fall into Early Winter: Temperatures showing equal chances. Precipitation uncertainty with equal chances in the west, leaning above normal in the E/N.

Take-Home Points

Current Conditions:

- Last week was once again a **warmer-than-normal week** across the entire state, wrapping up a **relatively warm September**.
- Following last week's heavy rainfall in the south, we had a week of **little to no rain statewide**. Most in the state received **no new rainfall** between Sep. 23-30.

Impact:

- Dry soil moisture percentiles **increased in coverage area** across the state compared to last week.
 - D1 drought coverage was **slightly reduced in the south** USDM map where the heavy rains came last week. Some increase in D0-D1 coverage **in the north**.
- **Corn** maturity is reported as **55% complete**, with harvest now at **5% complete**.
- **Soybean** progress is running **well ahead of normal pace**, with harvest jumping up 21% to **30% complete**.
- GDDs are approaching **3000 (2400) units** in the southern (northern) counties.

Outlook:

- **No new precip** is forecasted next week for the majority of WI, with **minor totals possible in the NE**.
- Early-to-Mid October has a higher probability to be **warmer and drier than normal**, with a lean towards these conditions **remaining in place** for the rest of October.
- The remainder of fall is more **uncertain** for temperatures, with some lean towards **above normal** precip totals.
 - **La Niña** is favored to be in place by September-November (according to the CPC)

Agronomic Considerations

Crop Development

- Be aware of what is going on in corn silage fields, especially related to some tar spot & other disease issues. Even later planted fields seem to be drying down quickly.
- As silage and other early crops come off, consider diverse cover crop mixes to help mitigate any compaction that may have occurred this spring and protect soil heading into fall. Tools available here for [cover crop selection](#) and their [use in a forage rotation](#).

Manure Applications

- Low runoff risk in the next week. Check the DATCP runoff risk advisory forecast [here](#).
- As silage comes off, consider the relationship between manure and cover crops, learn more [here](#).

Pest Management

- Southern rust of corn was found in Wisconsin in August, see more info [here](#).
- Late blight was found on tomato in Wisconsin in August, see more info [here](#).

Forage Management

- Look out for herbicide carryover, volunteers in late summer seeding of alfalfa into wheat. [Read more](#).
- **Corn Silage Harvest** - look for local opportunities for stalk chopping to gauge moisture content, scout fields to understand which may be ready first. For varying planting dates, plan for a segregated, longer season harvest to optimize forage quality. More info [here](#).
- Fall alfalfa cutting can affect persistence, [read more](#) and use our [new tool](#) to make informed decisions.

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>

Contact Info

Photo Credit: USDA



Josh Bendorf

Ag Climatologist, Midwest Climate Hub

joshua.bendorf@usda.gov

Bridgette Mason

Assistant State Climatologist of Wisconsin

bmmason2@wisc.edu

Dennis Todey

Director, Midwest Climate Hub

dennis.todey@usda.gov

Steve Vavrus

State Climatologist of Wisconsin

sjvavrus@wisc.edu

Natasha Paris

Crops Educator – Adams, Green Lake,
Marquette, Waushara Cos.

natasha.paris@wisc.edu

Kristin Foehringer

NRCS State Working Lands Climate Smart
Specialist

kristin.foehringer@usda.gov