

Wisconsin Ag Climate Outlook

Week of April 22, 2024

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Key Points

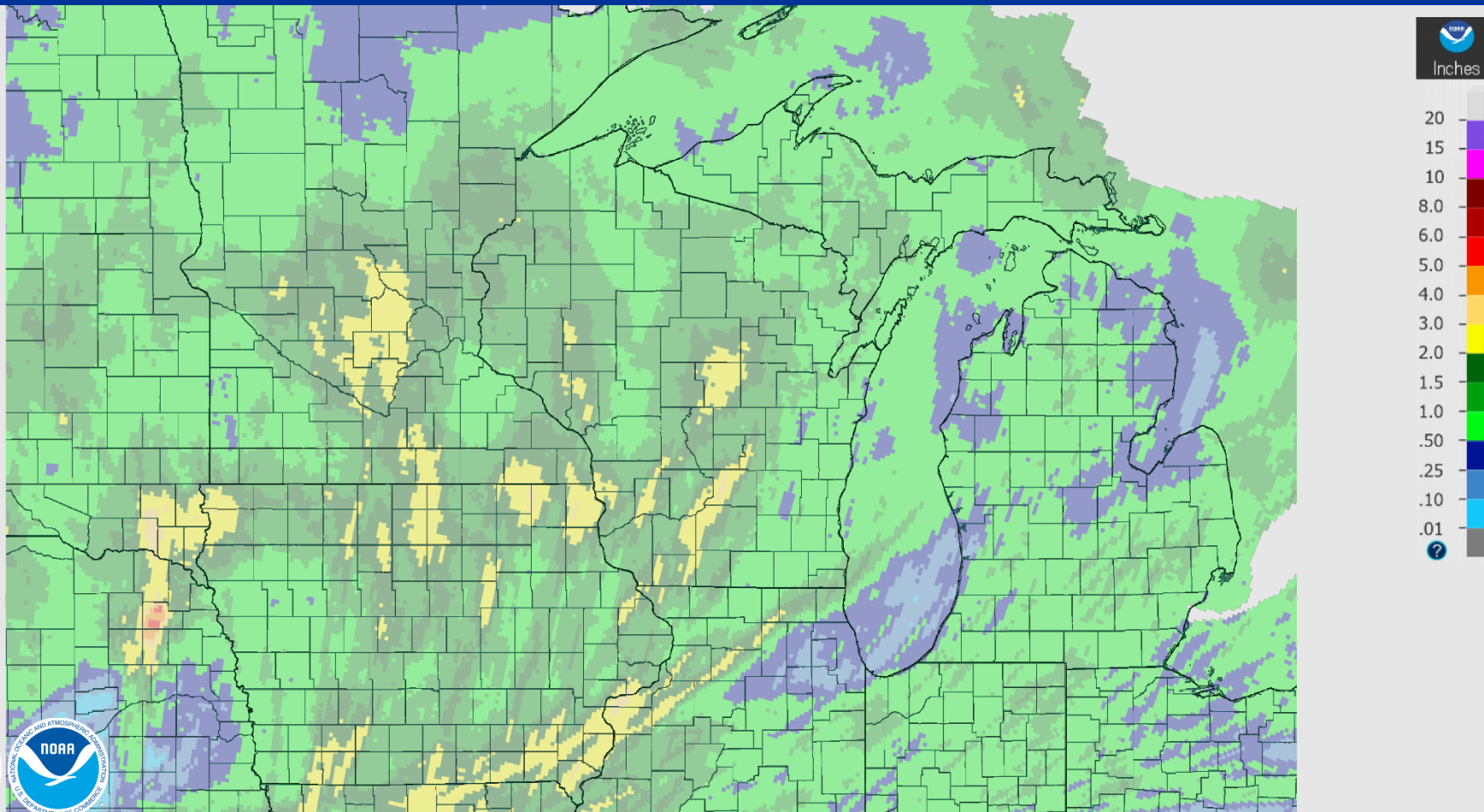
- 1) Soil moisture levels improved slightly from last week due in part to rainfall.
- 2) Temperatures have been near or slightly above average for this time of year, with 4" soil temps in the mid to upper 40s.
- 3) Corn and soybean planting has begun in the state.
- 4) Be on the lookout for some rainy days and the risk of freeze during this next week.

7 Day Precip

April 23, 2024 7-Day Observed Precipitation

Created on: April 23, 2024 - 13:56 UTC

Valid on: April 23, 2024 12:00 UTC



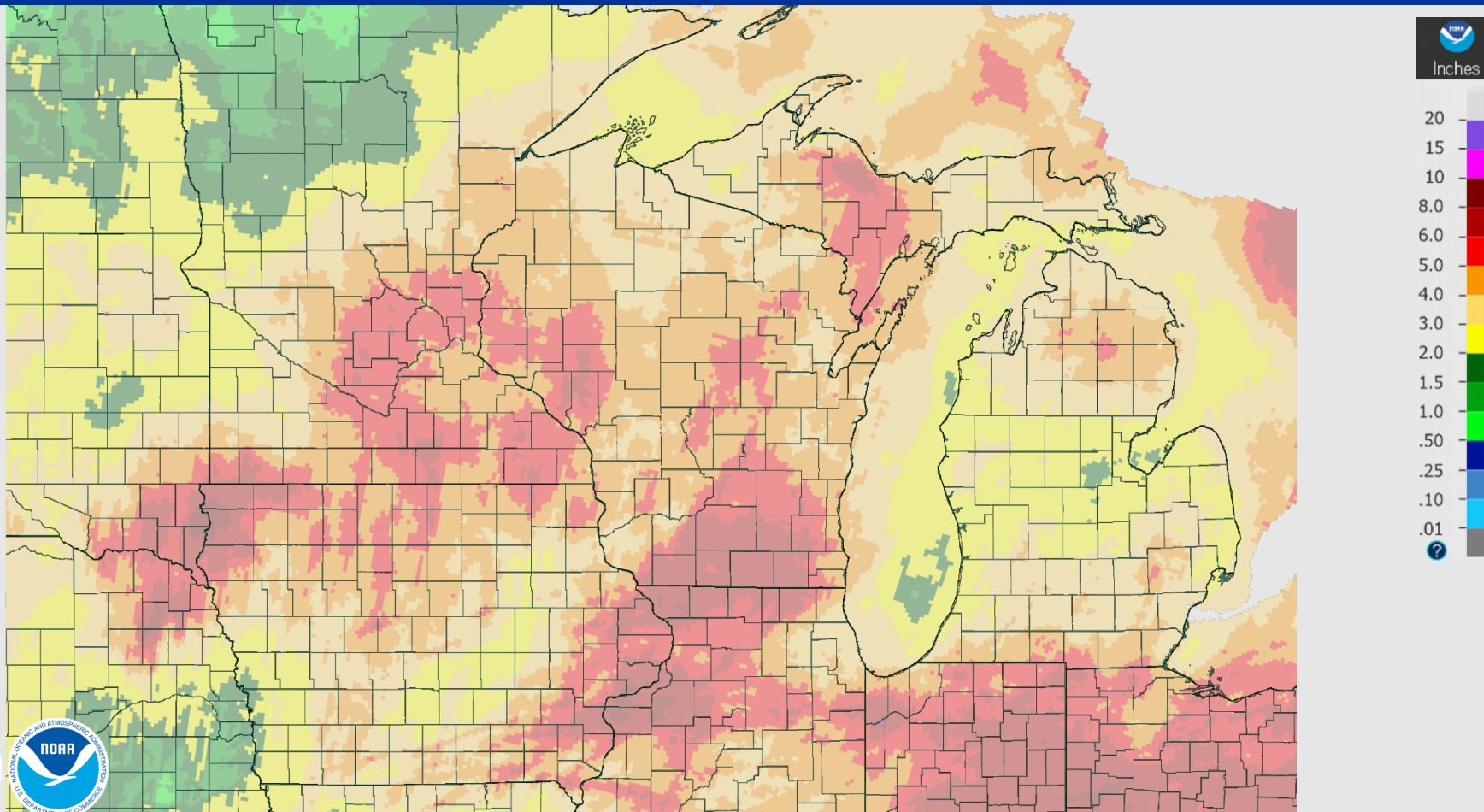
- Majority of the state saw **1" or more** of precip last week.
- Areas in yellow saw **>2"** of precip.
- **Severe winds** accompanied the storms that brought a lot of this rain.

30 Day Precip

April 23, 2024 30-Day Observed Precipitation

Created on: April 23, 2024 - 14:05 UTC

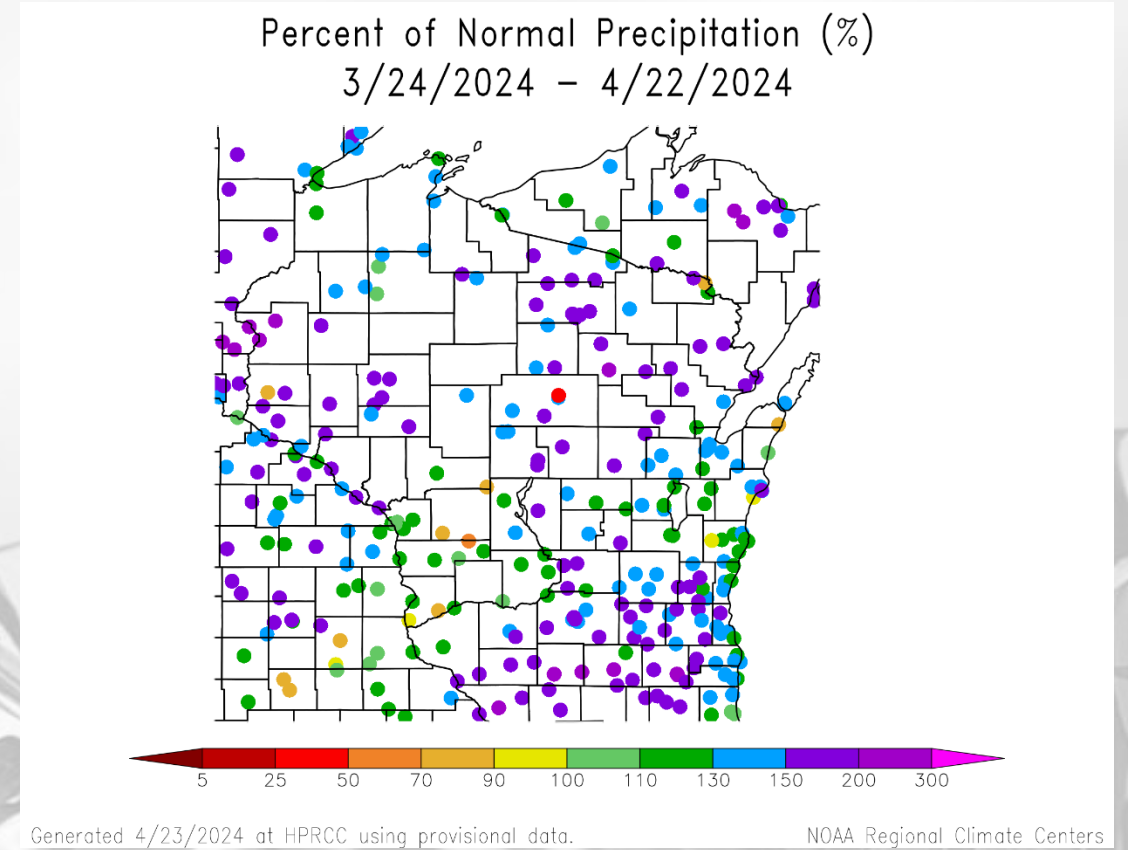
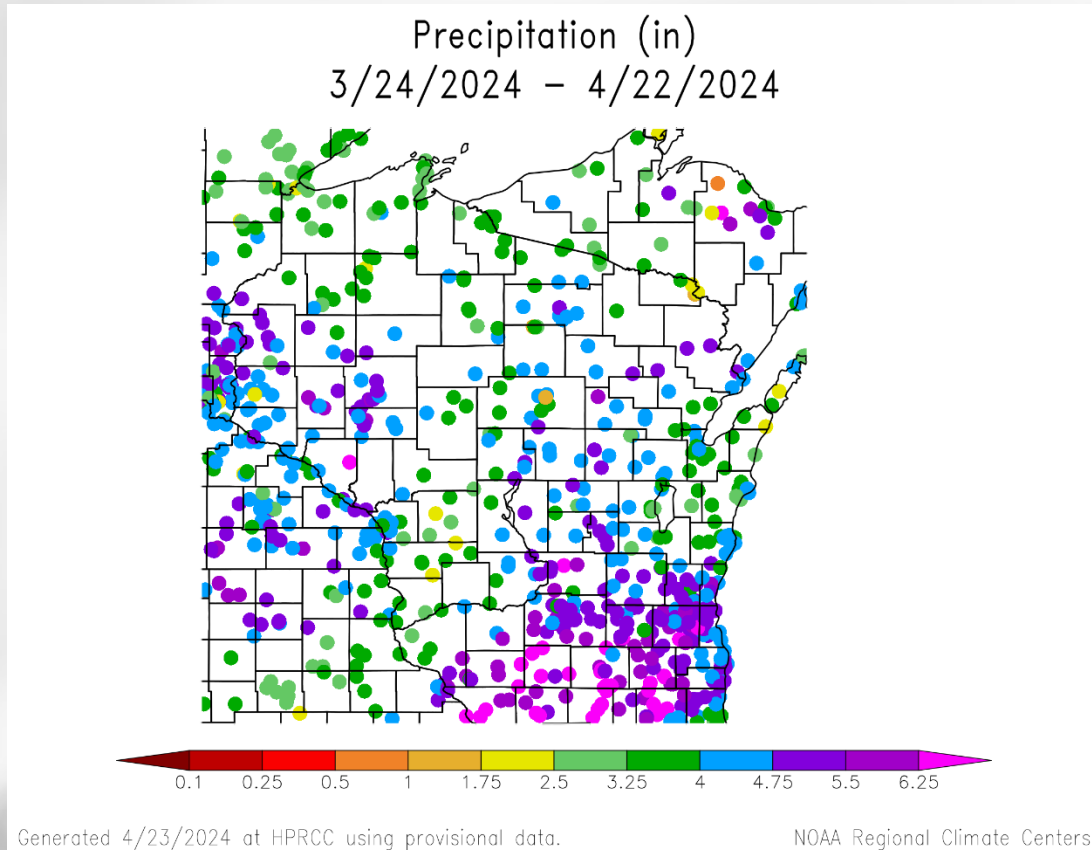
Valid on: April 23, 2024 12:00 UTC



- Most of the state has seen **4-6+”** of precip over the past month.
- Highest amounts in the SC part of the state → **>6”** widespread.

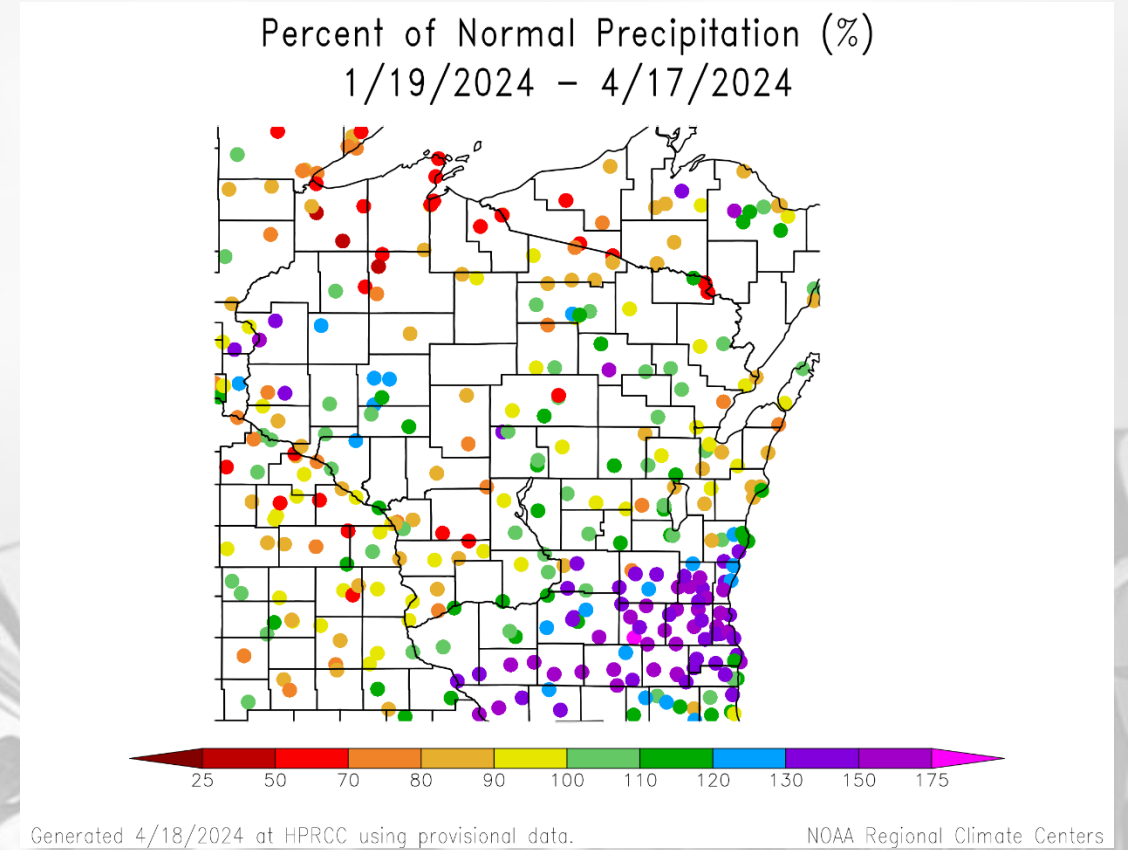
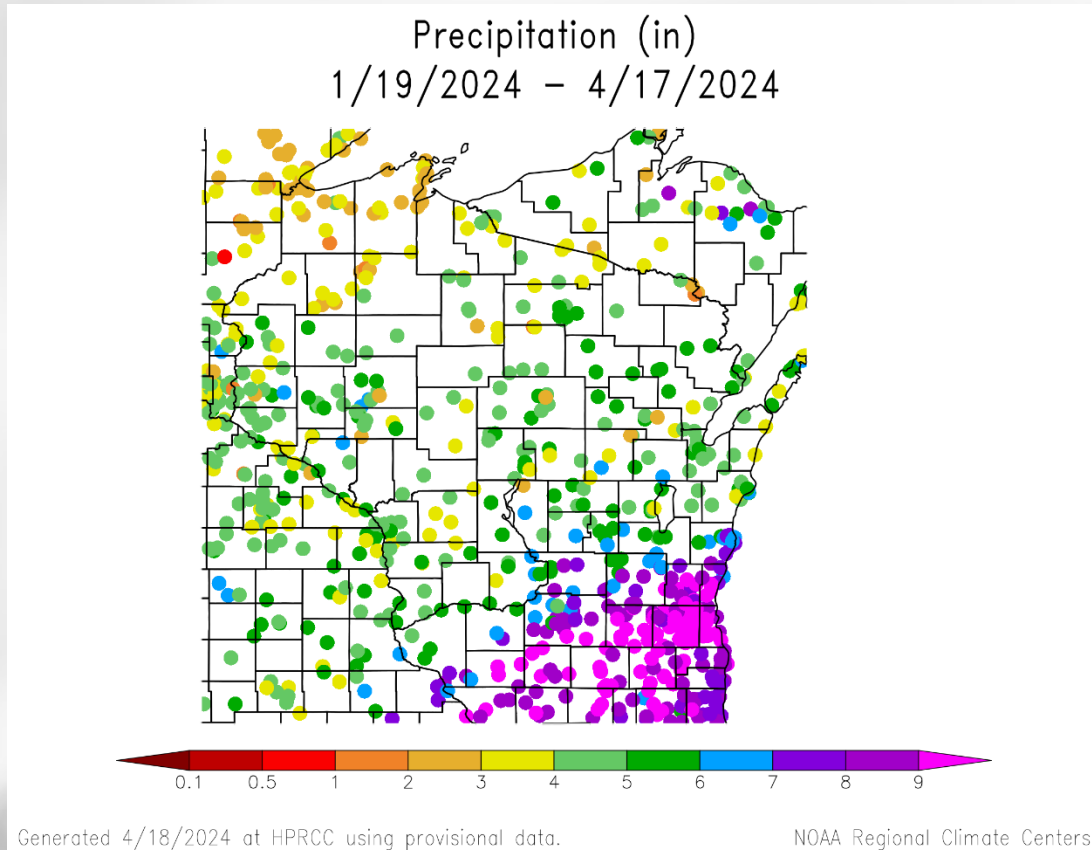


30 Day Precip Total/% Avg.



- Highest precip totals in the SC/SE (5-6+"); 150-200+% of average.
- Majority of stations are above the long-term 30-day average.
- Below average totals at stations in the Driftless Region & along the Lake Michigan shoreline.

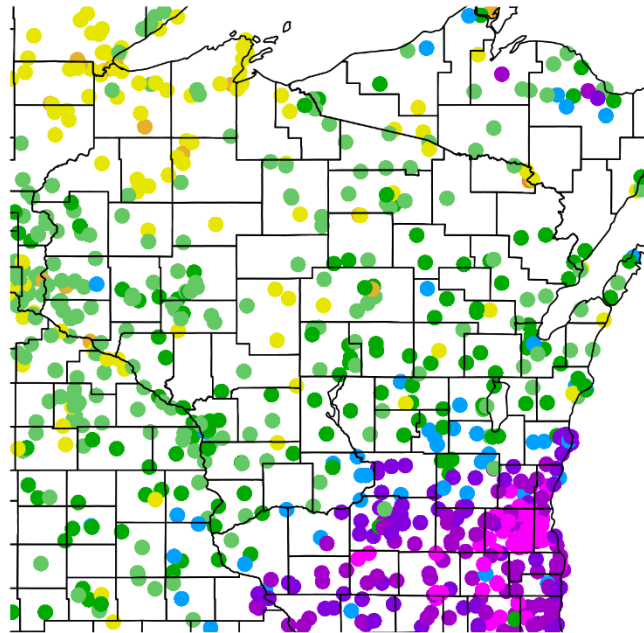
90 Day Precip Total/% Avg.



- Highest precip totals in the SE (>9") and lowest in the NW (<3").
- 150+% of long-term average precip common from Dubuque to Sheboygan (& points south).
- 50-90% of average is common across the NC/NW.

Precipitation since Jan. 1

Precipitation (in)
1/1/2024 - 4/22/2024

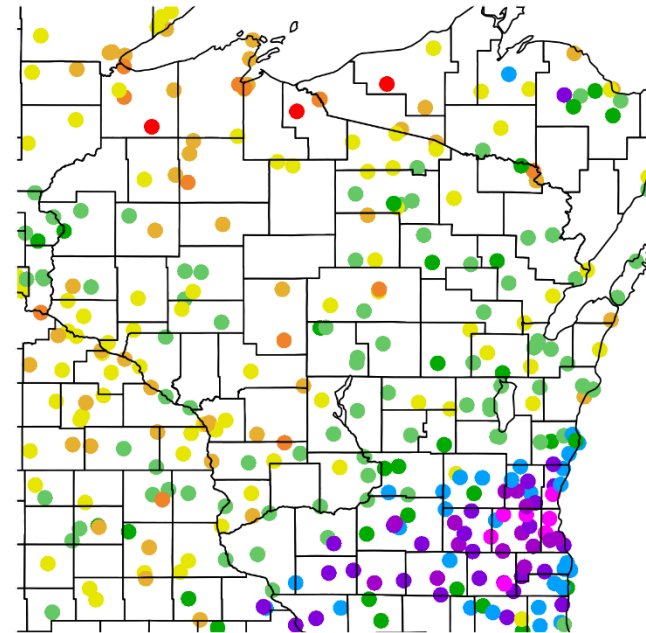


0.1 0.5 1 2 3.5 5 6.5 8 9.5 11 12.5

Generated 4/23/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Precipitation (in)
1/1/2024 - 4/22/2024



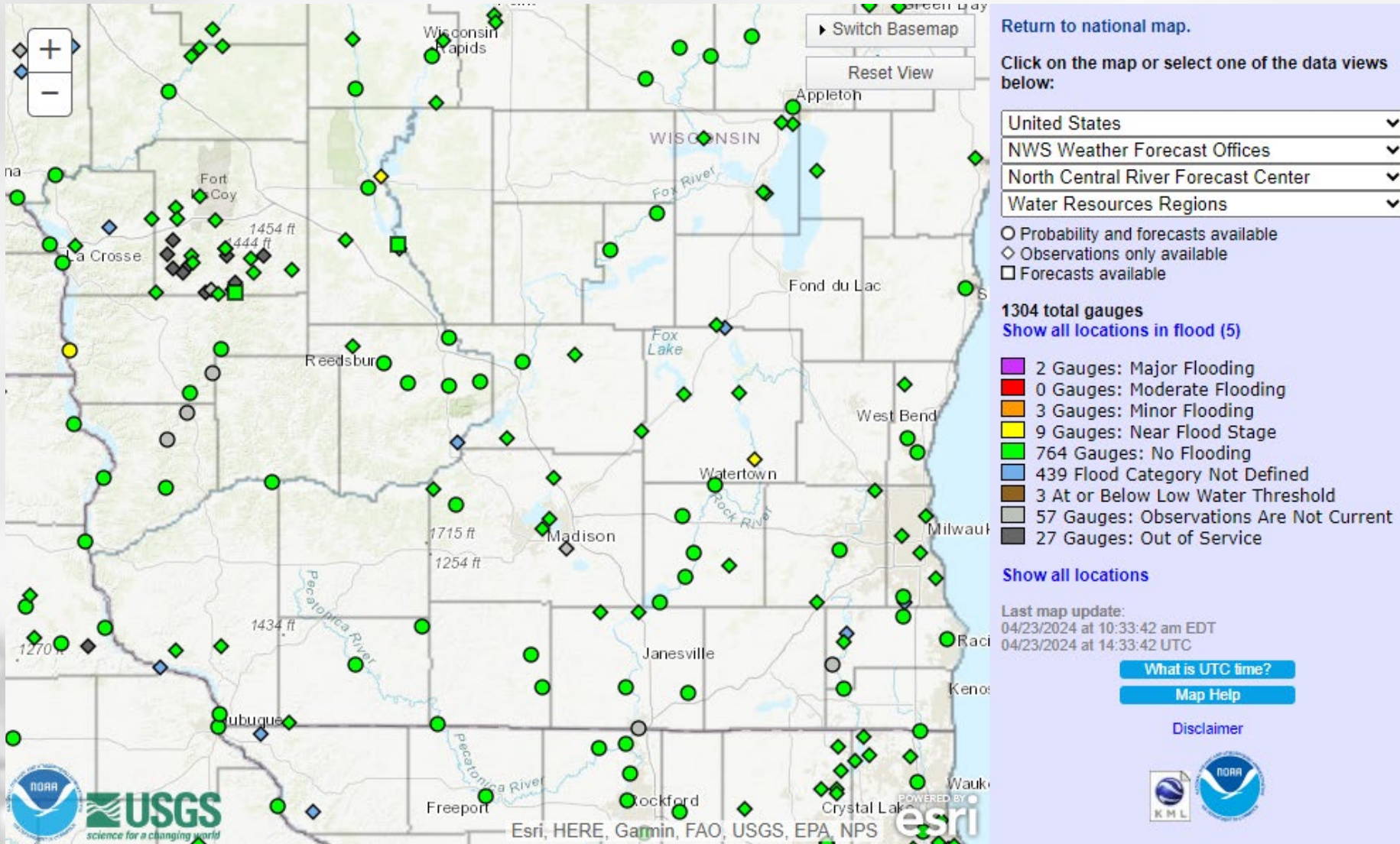
-5 -4 -3 -2 -1 0 1 2 3 4 5

Generated 4/23/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

River Levels



- Only a few gauges remain near flood stage (yellow). The majority are running at normal levels.

<https://water.weather.gov/ahps/>

Soil Moisture Models

- **Moisture improvement** in the central & southern regions with the precip received last week.
- **Driest soil moisture conditions** in east central area, according to this model.

Model Notes:

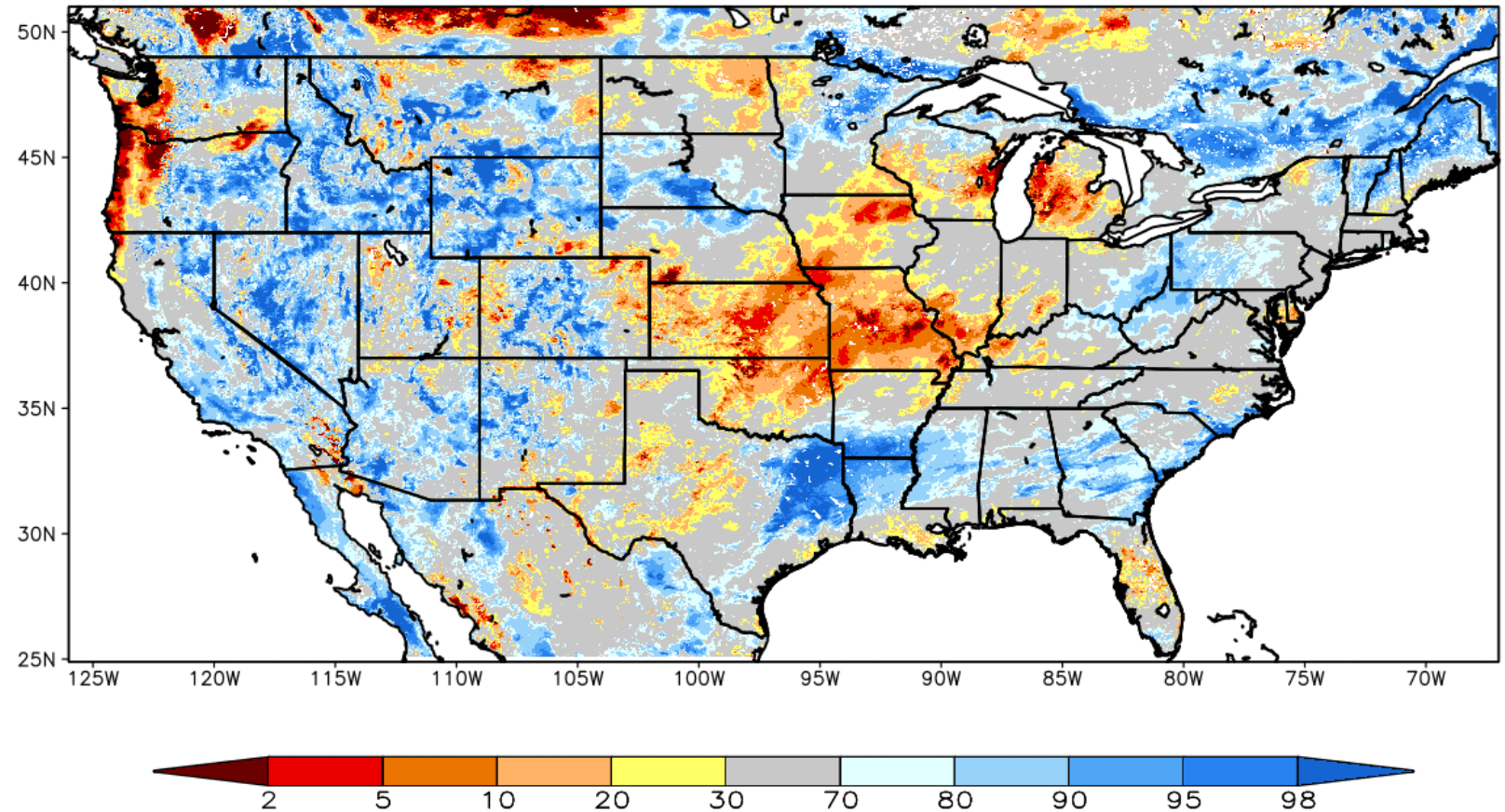
Red areas = top 5 driest in 100 years.

Dark red areas = top 2 driest 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.

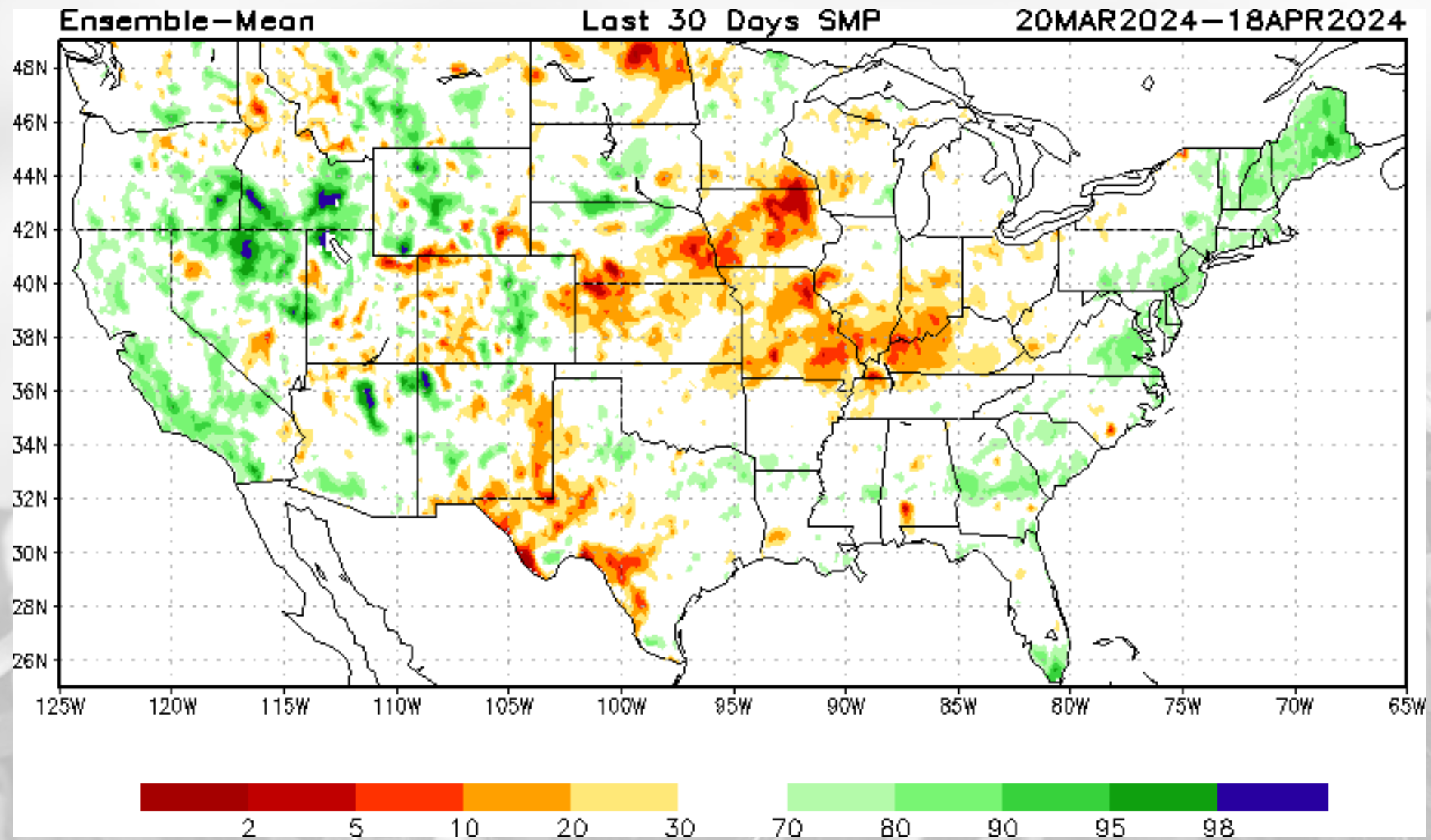
https://weather.msfc.nasa.gov/sport/case_studies/lis_CONUS.html

SPoRT-LIS 0-100 cm Soil Moisture percentile valid 23 Apr 2024



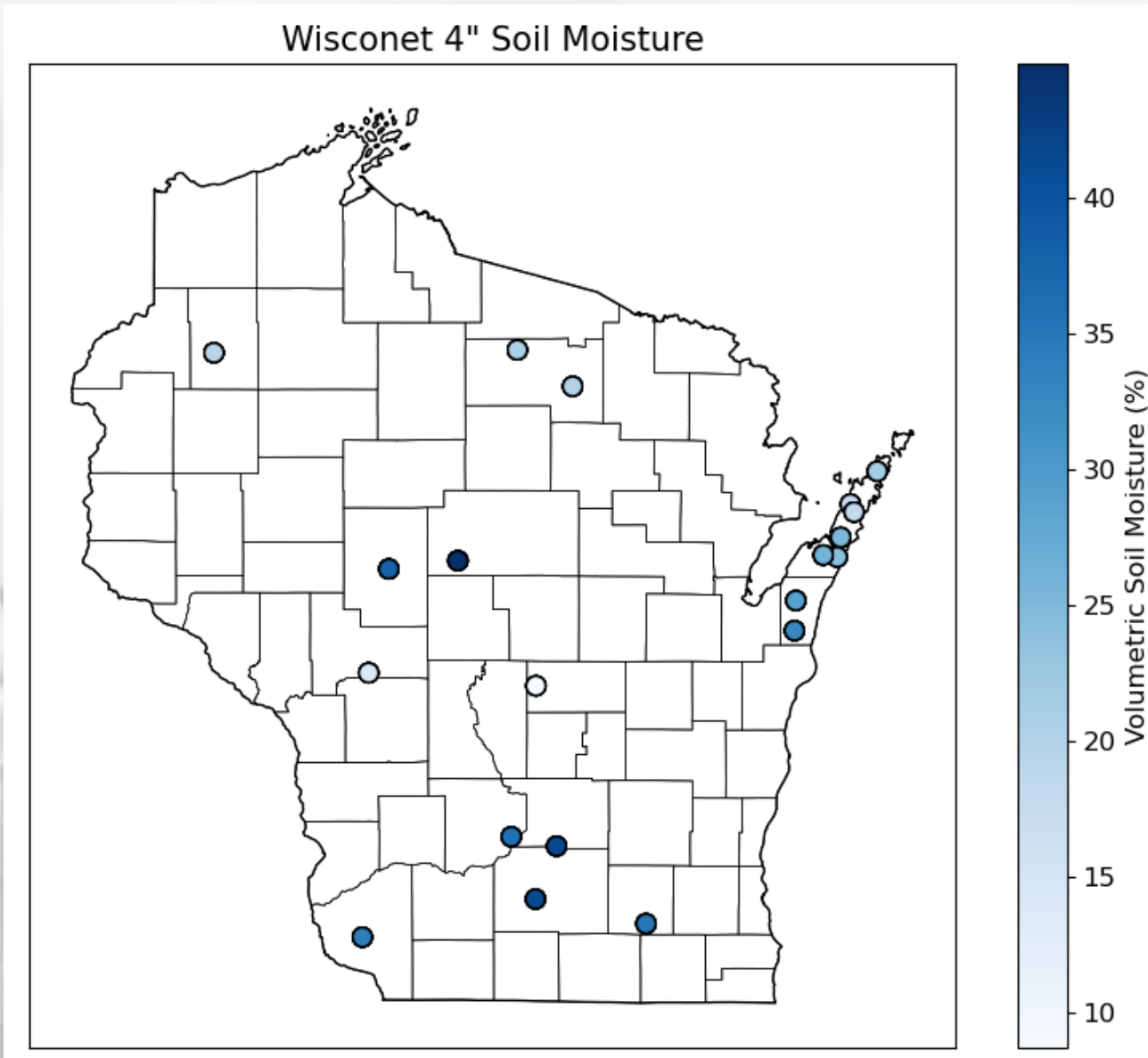
****NOTE****
****Experimental****

Soil Moisture Models

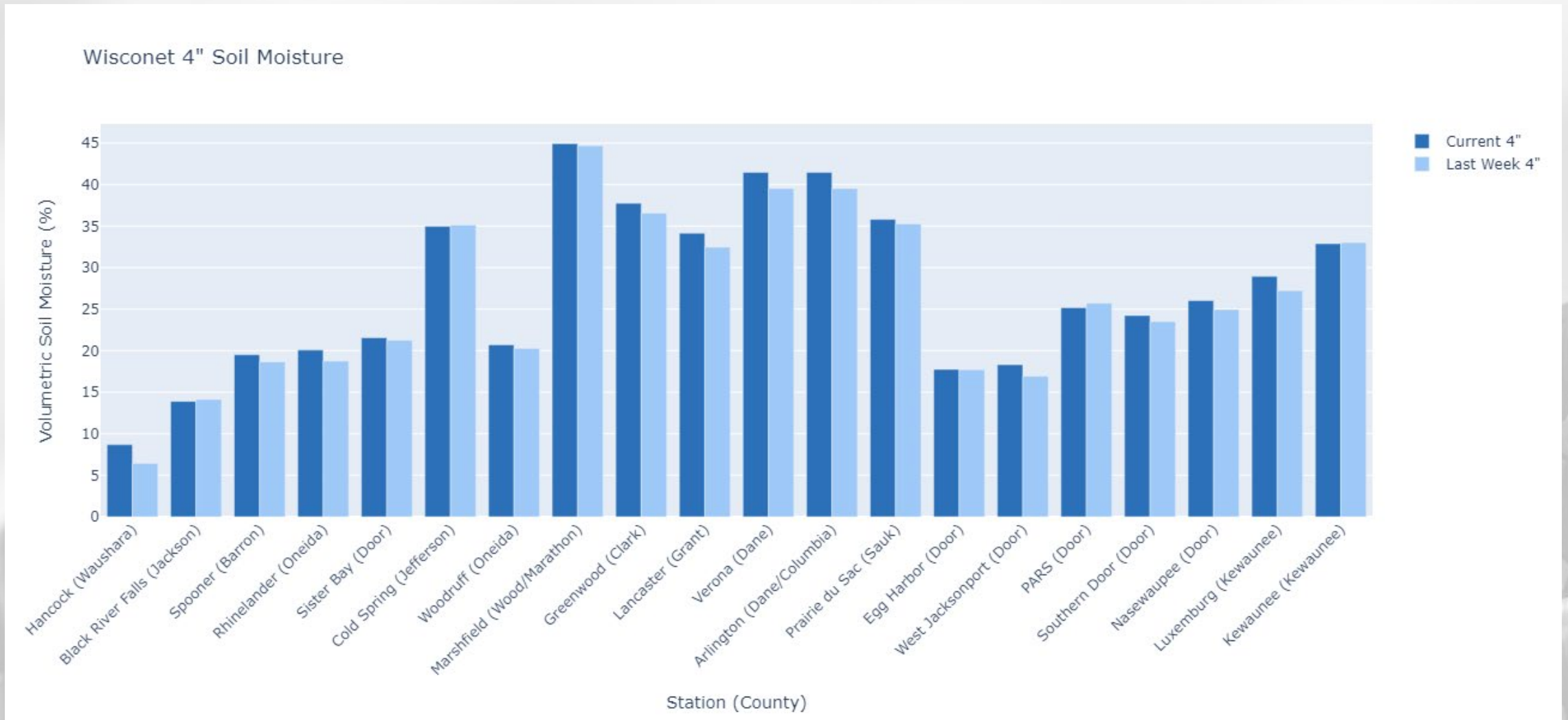


https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml#

Soil Moisture - Wisconet



Soil Moisture - Wisconet



Current: 7-day average ending on 4/22

Last Week: 7-day average ending on 4/15

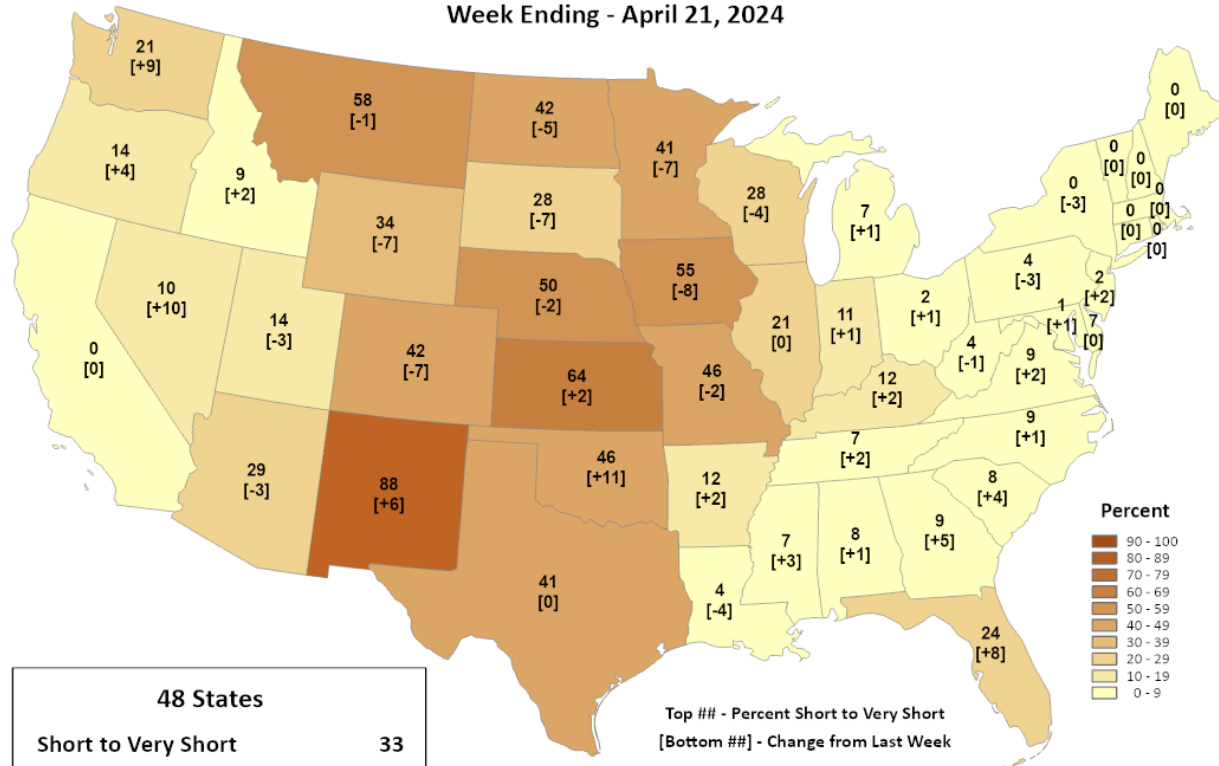
<https://wisconet.wisc.edu/>

NASS Subsoil Moisture



This product was prepared by the
USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)

Subsoil Moisture Percent Short to Very Short Week Ending - April 21, 2024



48 States	
Short to Very Short	33
Change from Last Week	-1

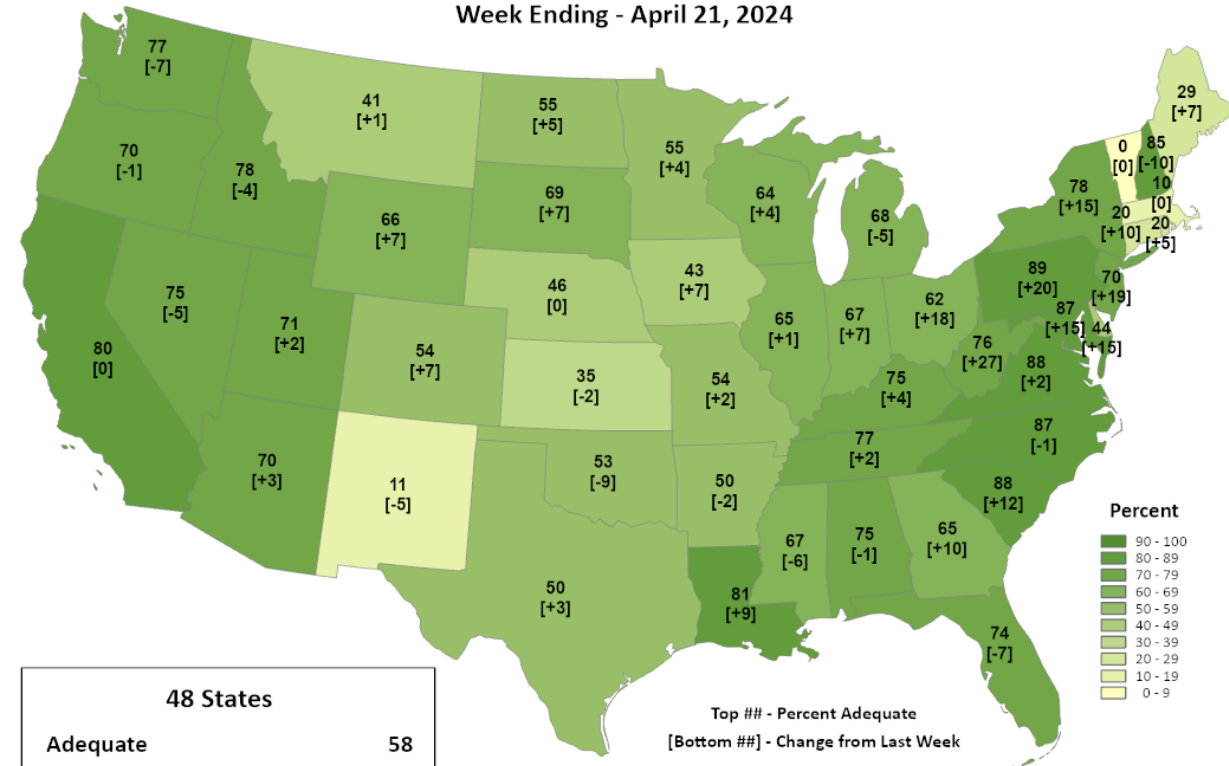
Top ## - Percent Short to Very Short
[Bottom ##] - Change from Last Week

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



This product was prepared by the
USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)

Subsoil Moisture Percent Adequate Week Ending - April 21, 2024



48 States	
Adequate	58
Change from Last Week	+3

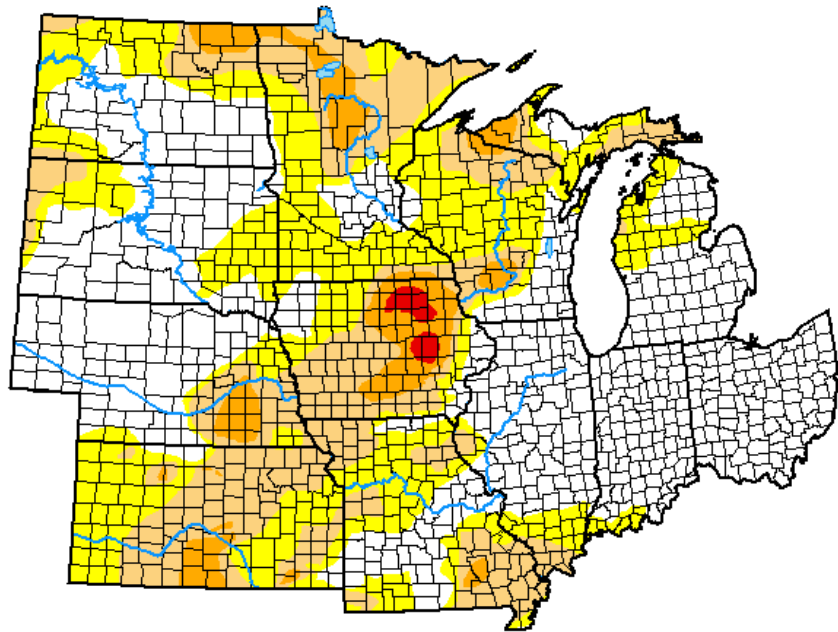
Top ## - Percent Adequate
[Bottom ##] - Change from Last Week

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 North Central States

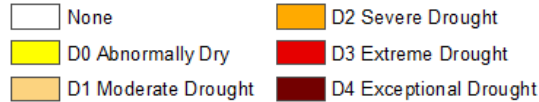


April 16, 2024
(Released Thursday, Apr. 18, 2024)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	46.38	53.62	26.40	6.14	0.55	0.00
Last Week <i>04-09-2024</i>	46.38	53.62	24.14	6.12	0.78	0.00
3 Months Ago <i>01-16-2024</i>	40.48	59.52	31.08	12.51	2.84	0.00
Start of Calendar Year <i>01-02-2024</i>	37.52	62.48	38.54	16.91	3.77	0.02
Start of Water Year <i>09-26-2023</i>	25.87	74.13	49.98	25.16	7.67	0.73
One Year Ago <i>04-18-2023</i>	55.84	44.16	26.41	16.64	9.14	5.39

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>

Author:

Lindsay Johnson
National Drought Mitigation Center



droughtmonitor.unl.edu

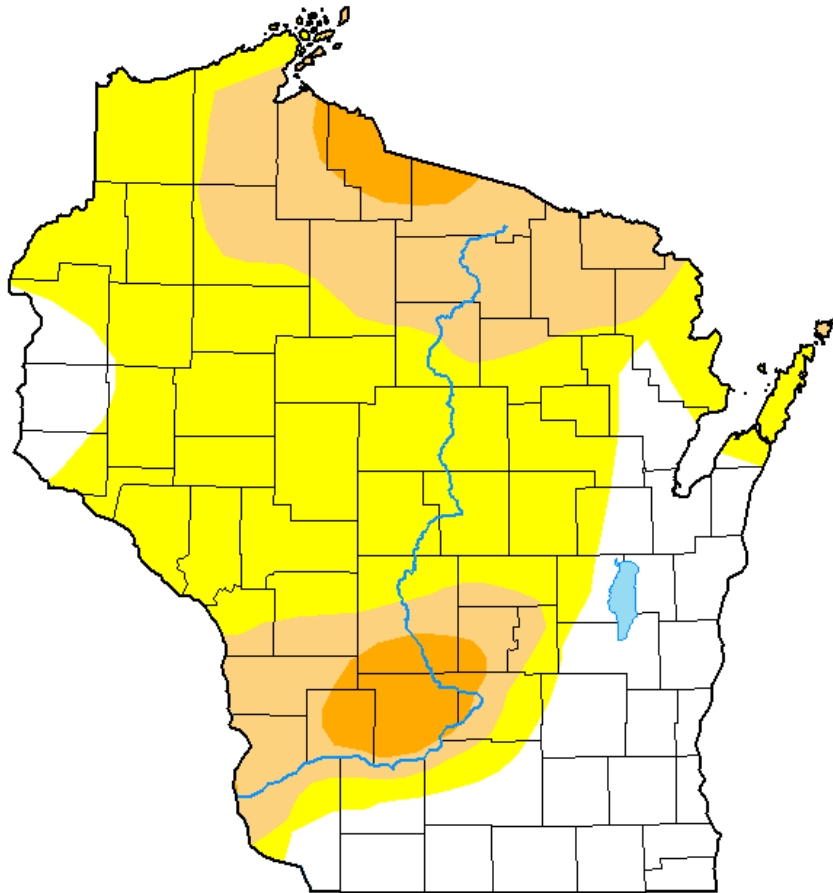
- Compared to last week:
 - Minor changes in drought category area (-/+).
- Ohio is drought-free
- Indiana, Michigan (lower), & Illinois are mostly drought-free.
- D3 level drought persists in eastern IA.
 - 199th consecutive week of IA having at least D1 conditions somewhere in the state

Note: D0 is not considered drought.

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

US Drought Monitor

U.S. Drought Monitor Wisconsin



April 16, 2024

(Released Thursday, Apr. 18, 2024)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	24.94	75.06	28.34	5.30	0.00	0.00
Last Week 04-09-2024	24.97	75.03	28.36	5.81	0.00	0.00
3 Months Ago 01-16-2024	33.68	66.32	35.51	14.93	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 04-18-2023	100.00	0.00	0.00	0.00	0.00	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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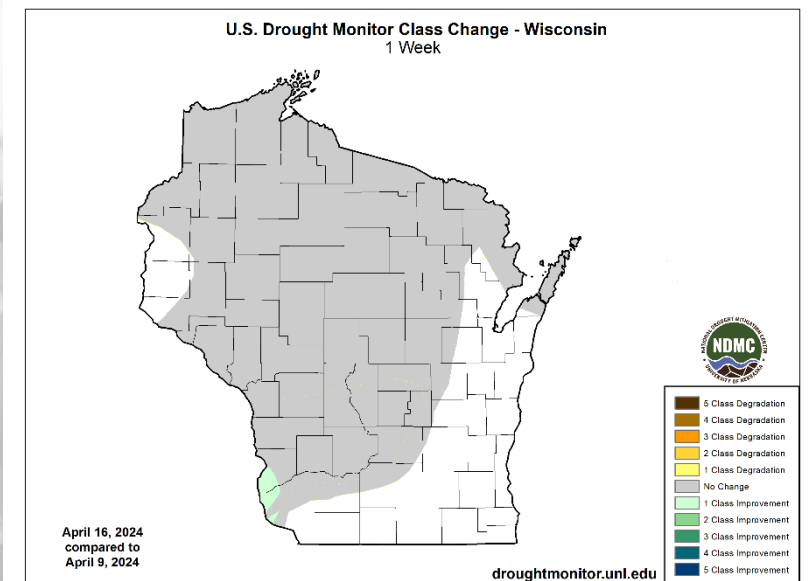
droughtmonitor.unl.edu

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

Amount of state in:

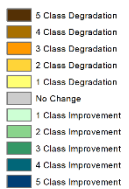
- **D1-D4** – 28.3% --
- **D2-D4** – 5.3% ↓
- **D3-D4** – 0.0% --
- **D4** – 0.0% --

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

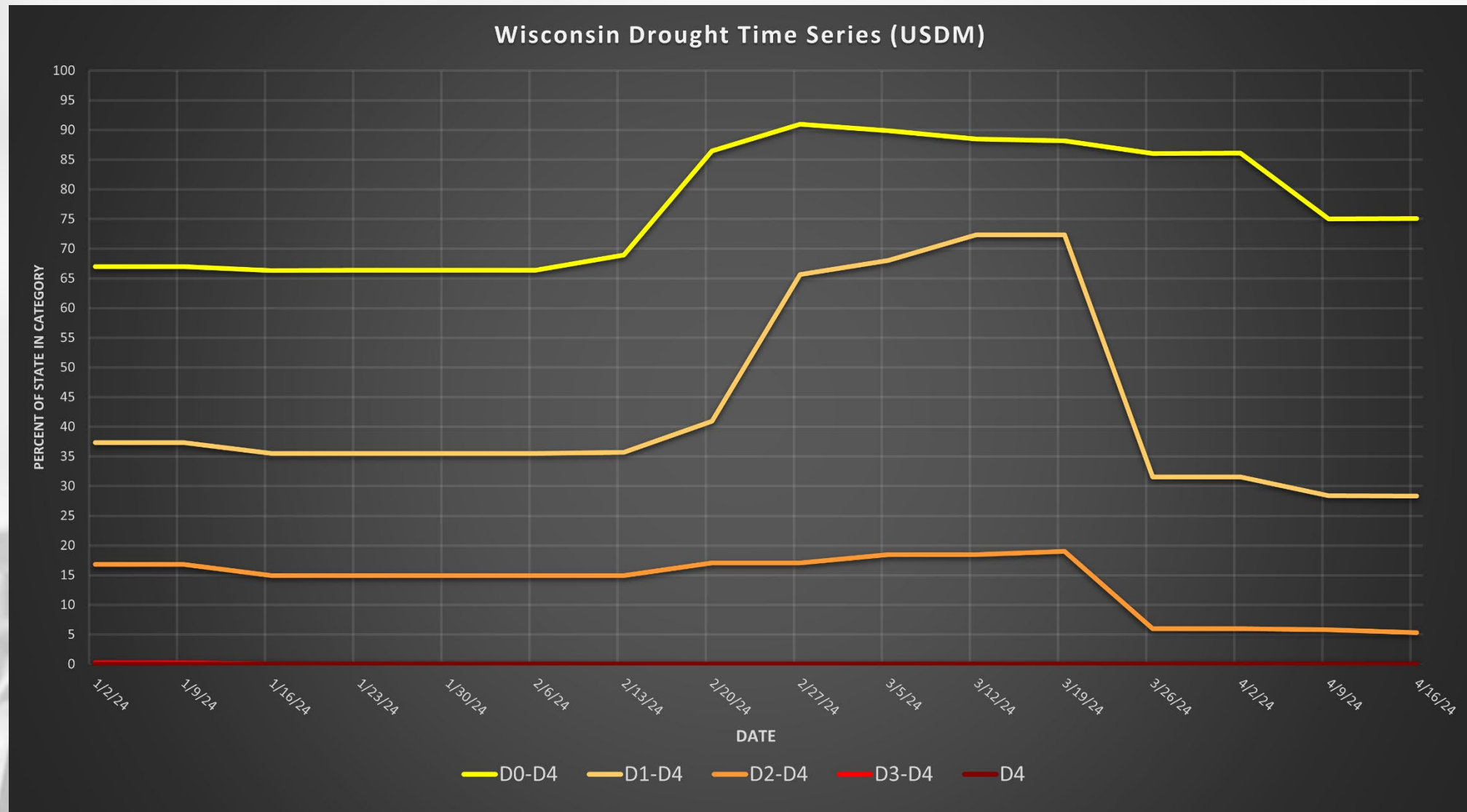


April 16, 2024
compared to
April 9, 2024

droughtmonitor.unl.edu



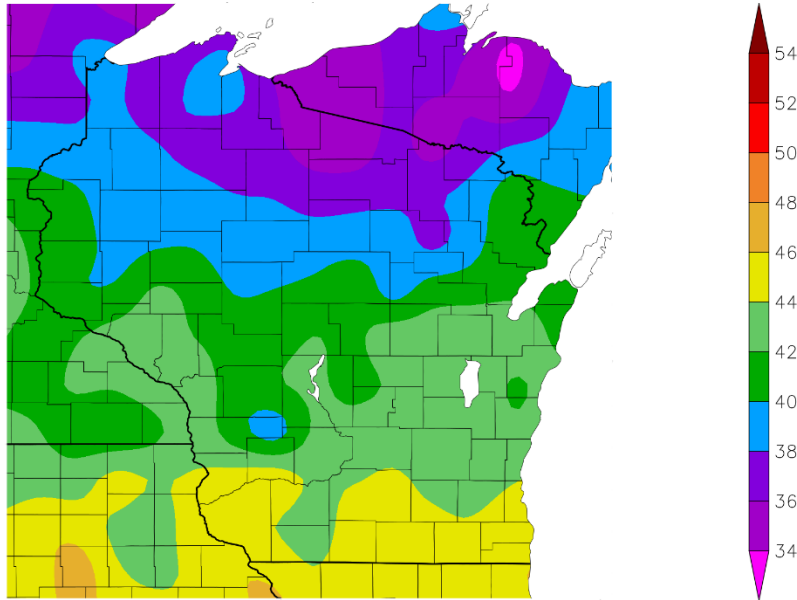
USDM Time Series



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

30 Day Temperatures

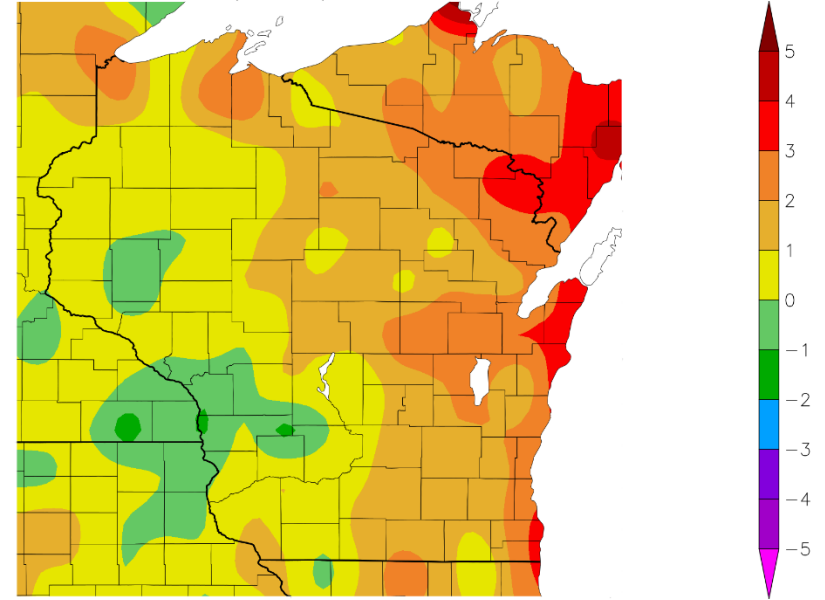
Temperature (F)
3/24/2024 - 4/22/2024



Generated 4/23/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Temperature (F)
3/24/2024 - 4/22/2024



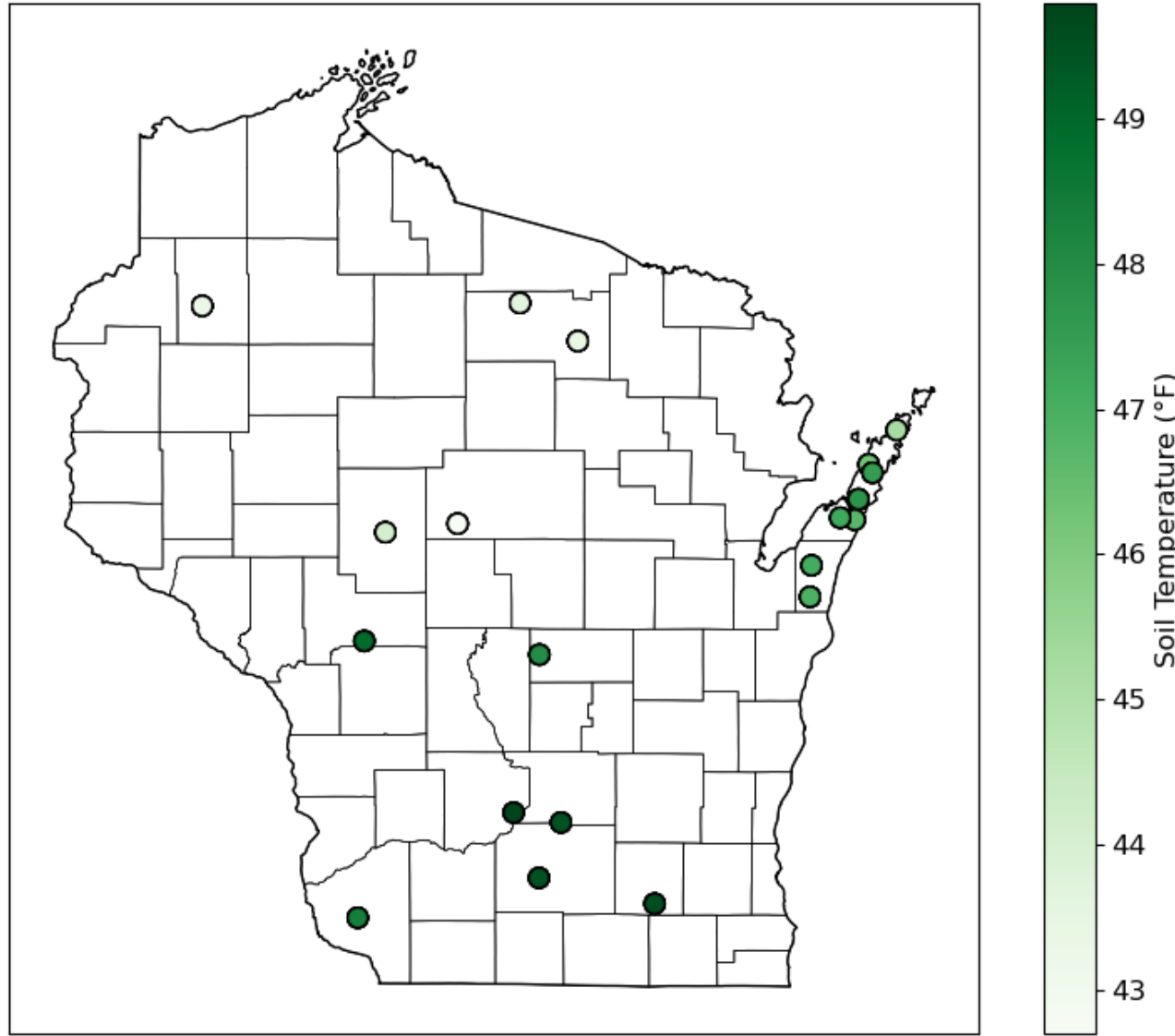
Generated 4/23/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

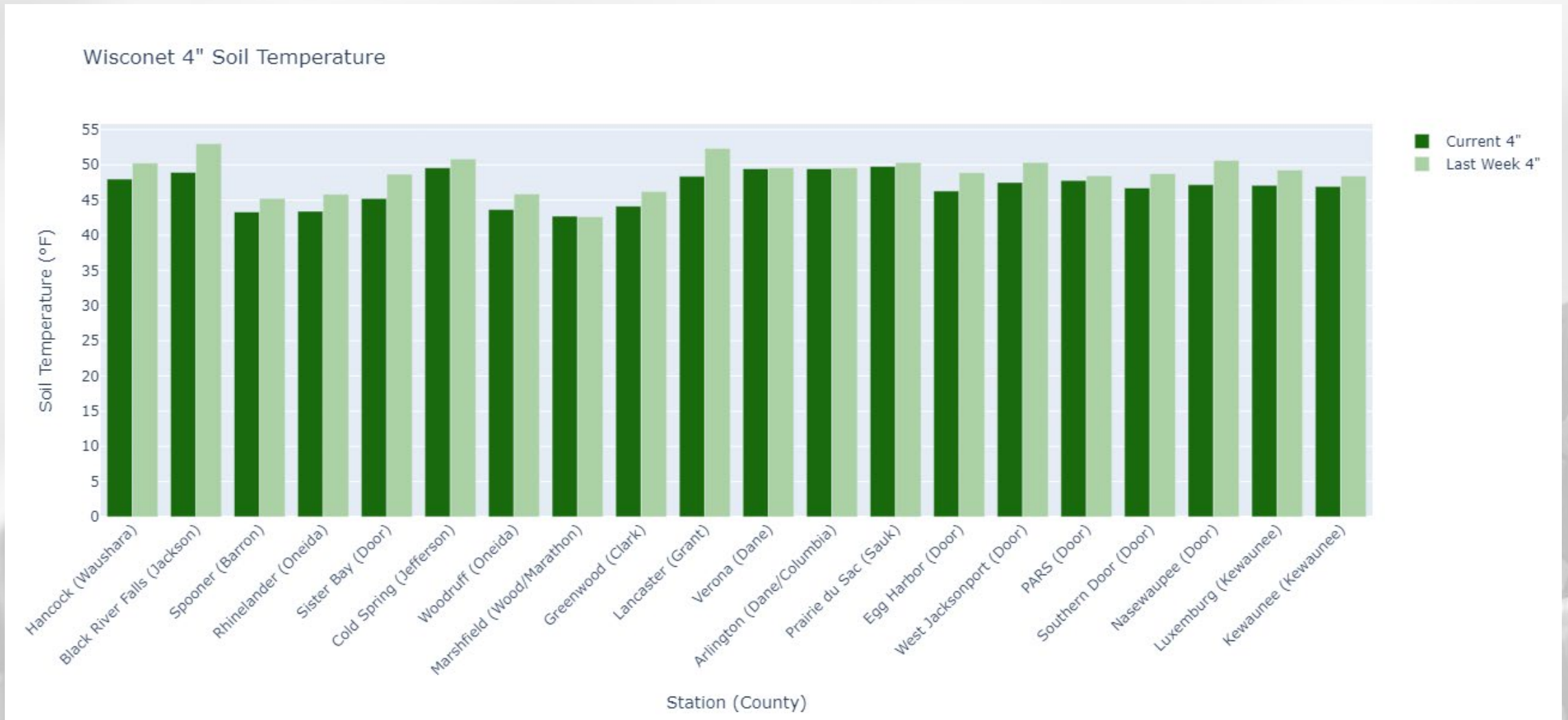
- Temperatures over the last 30 days ranged from **42-46°F** in the S to **34-38°F** in the far N.
 - Warmer closer to Lake Michigan → **2-4°F** above normal.
 - Cooler over in the Driftless Region → near normal or **<1-2°F** below normal

Soil Temperature - Wisconet

Wisconet 4" Soil Temperature



Soil Temperature - Wisconet



Current: 7-day average ending on 4/22

Last Week: 7-day average ending on 4/15

<https://wisconet.wisc.edu/>

NASS Crop Progress – Corn

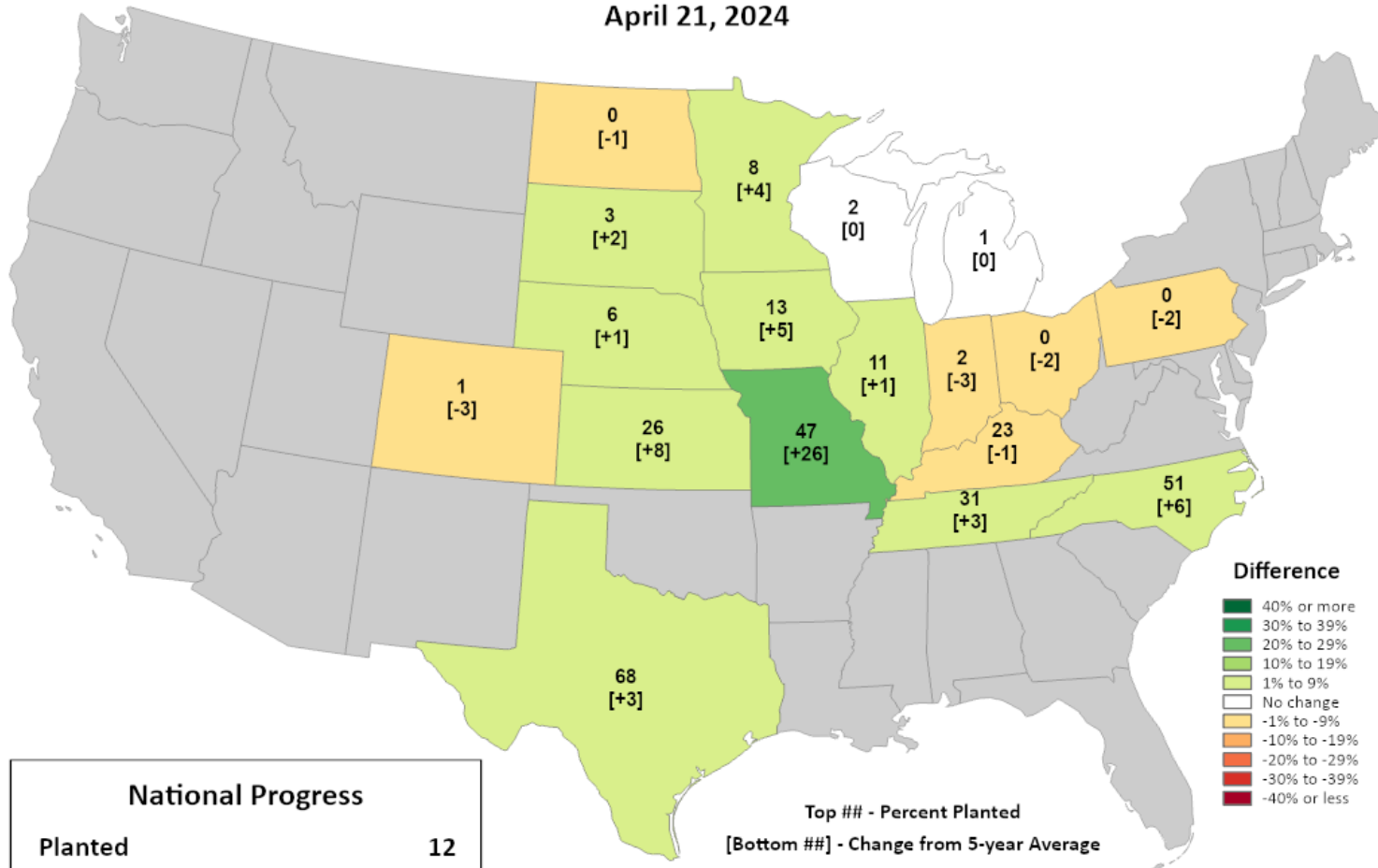


This product was prepared by the
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World Agricultural Outlook Board (WAOB)

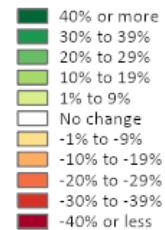
Corn Progress

Percent Planted

April 21, 2024



Difference



National Progress

Planted	12
Change from 5-year Average	+2

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

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

- Planting is running **at or ahead** of the 5-year average in WI and state to the S and W.
- Wisconsin → **2% complete**; on pace with the 5-year average.

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

NASS Crop Progress – Soybean

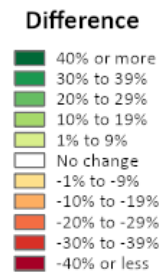
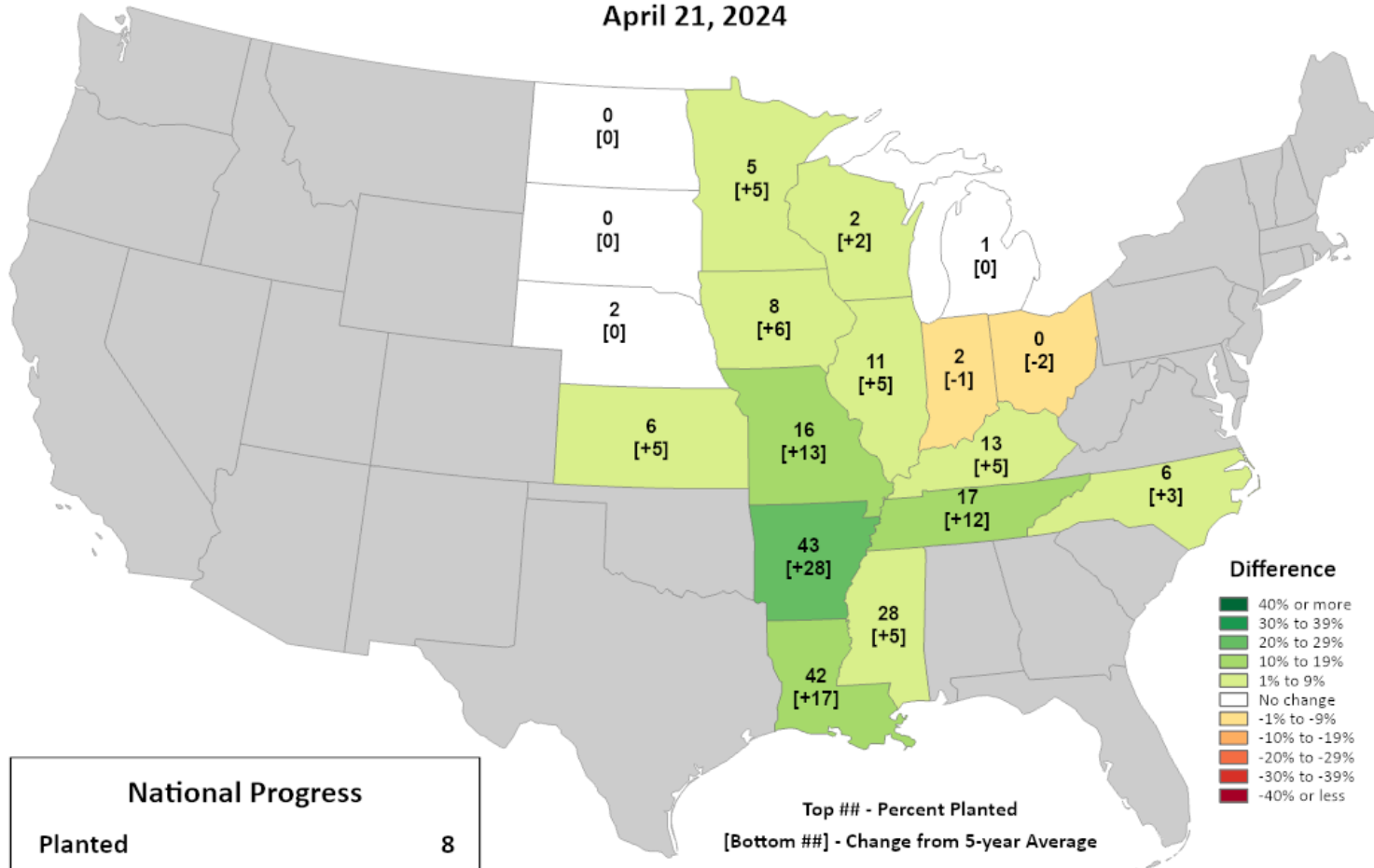


This product was prepared by the
USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)

Soybeans Progress

Percent Planted

April 21, 2024



National Progress	
Planted	8
Change from 5-year Average	+4

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

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

- Planting is running **at or ahead** of the 5-year average in WI and state to the S and W.
- Wisconsin → **2% complete**; ahead of the 5-year average.

NASS Crop Progress – Winter Wheat

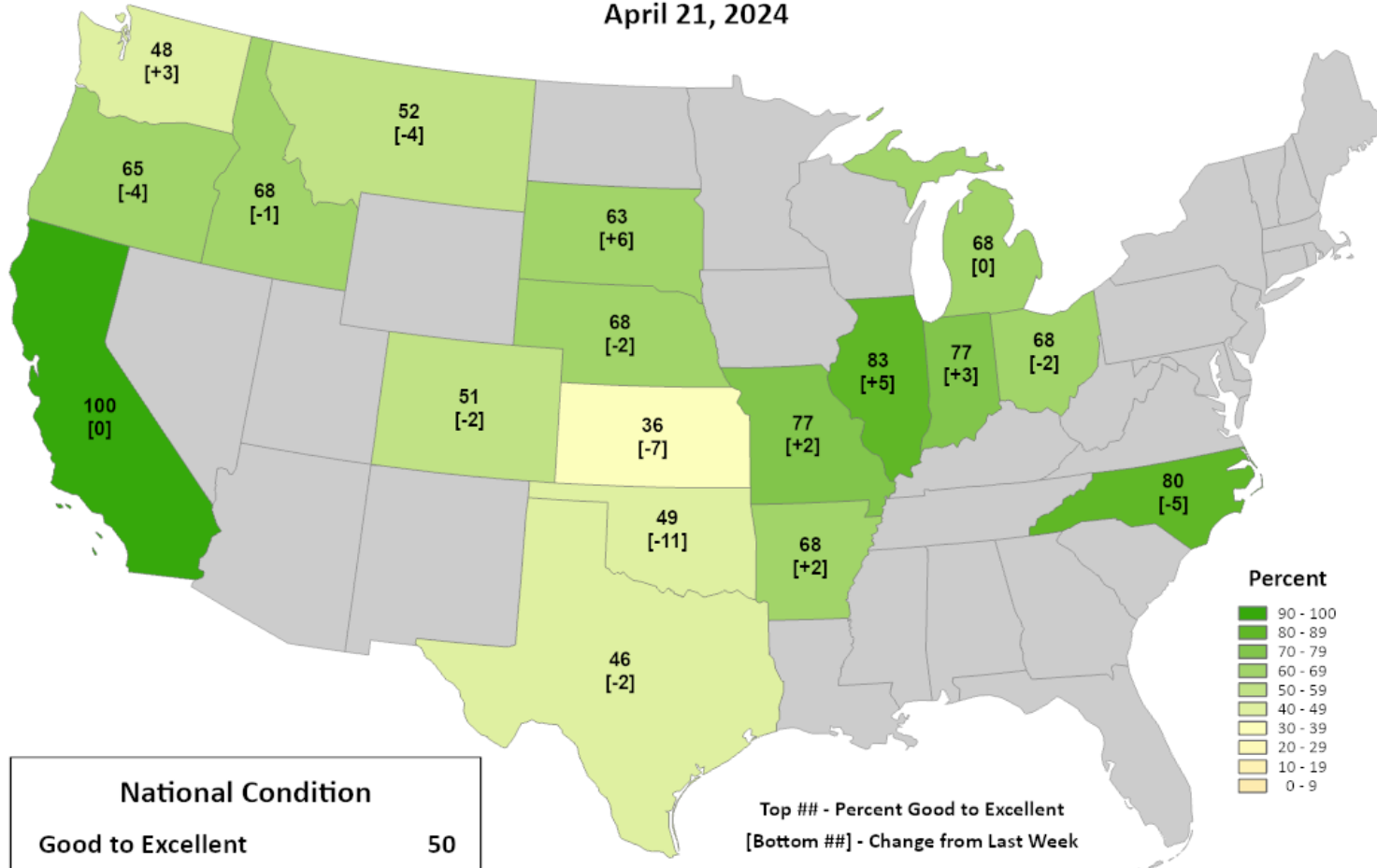


This product was prepared by the
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World Agricultural Outlook Board (WAOB)

Winter Wheat Conditions

Percent Good to Excellent

April 21, 2024



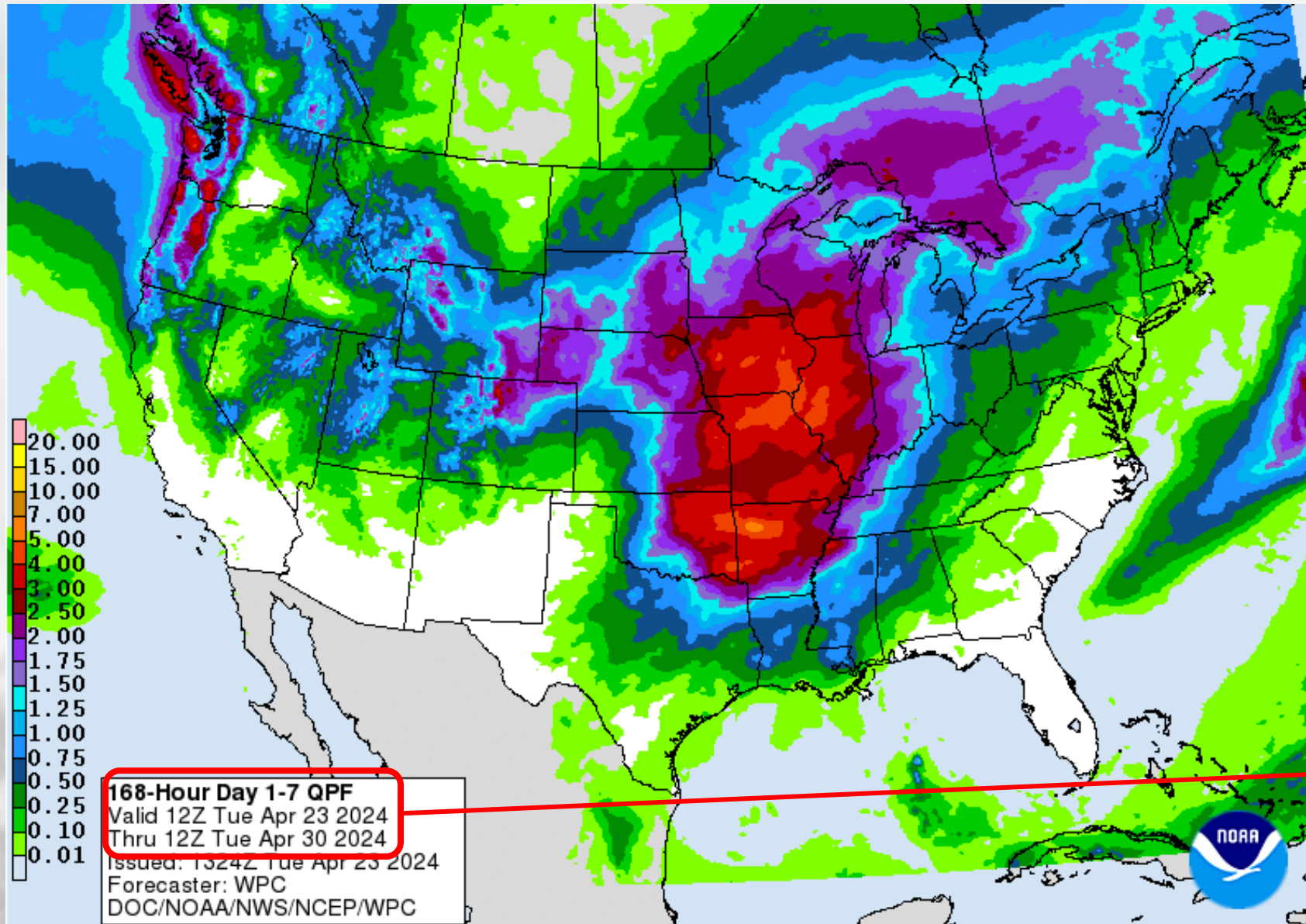
National Condition	
Good to Excellent	50
Change from Last Week	-5

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

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

- In states around Wisconsin, winter wheat condition is **>70-80%** good to excellent.
- Improvement from last week.

7 Day Precip Forecast



- A very active week is forecasted for the state → **2.0" or more for most.**

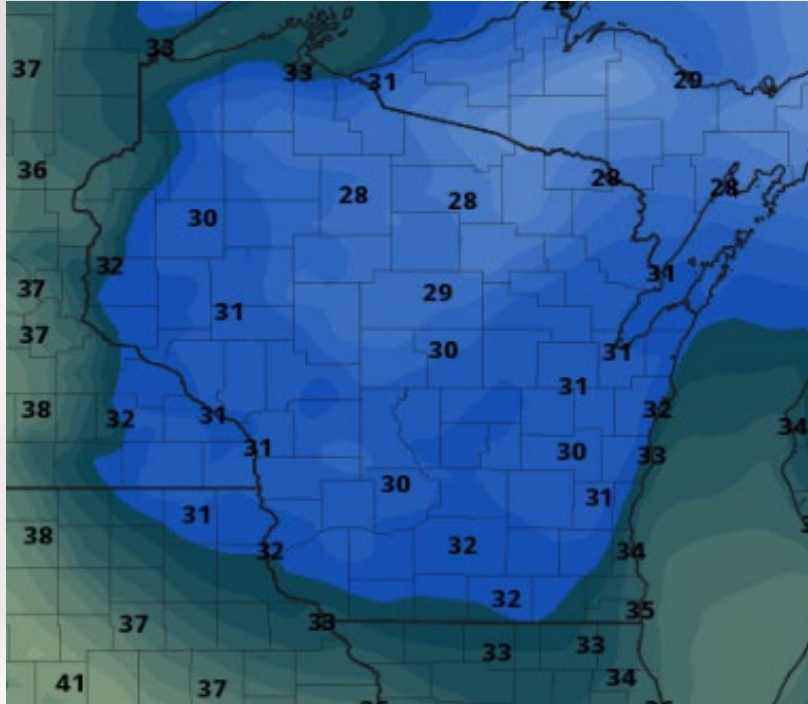
- Multiple rounds of precip forecasted to impact the state Friday through Monday.

Forecast for 4/23/24 thru 4/30/24
(12Z = 7am CDT)

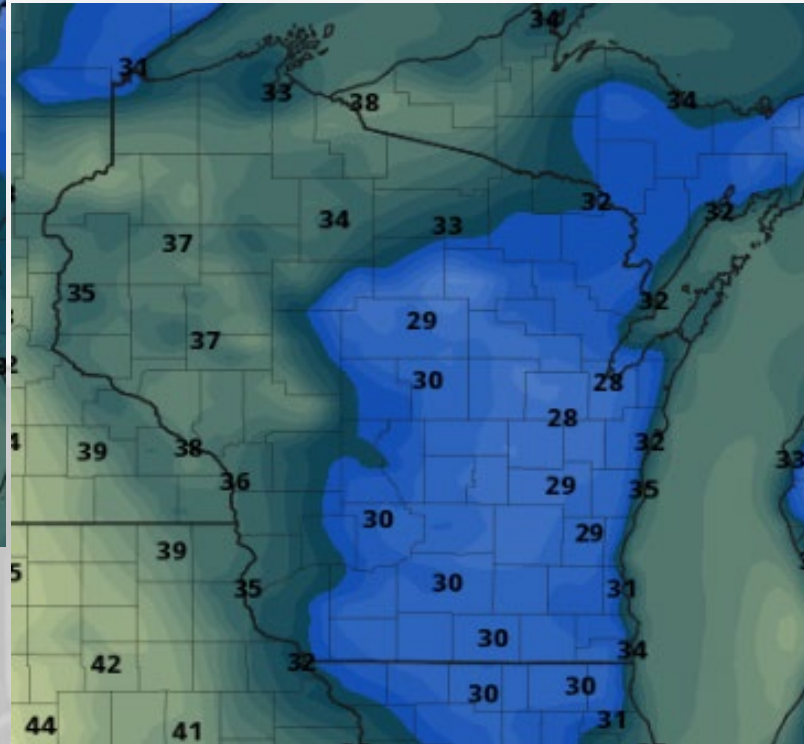
<https://www.wpc.ncep.noaa.gov/qpf/p168i.gif>

Freeze/Frost Risk

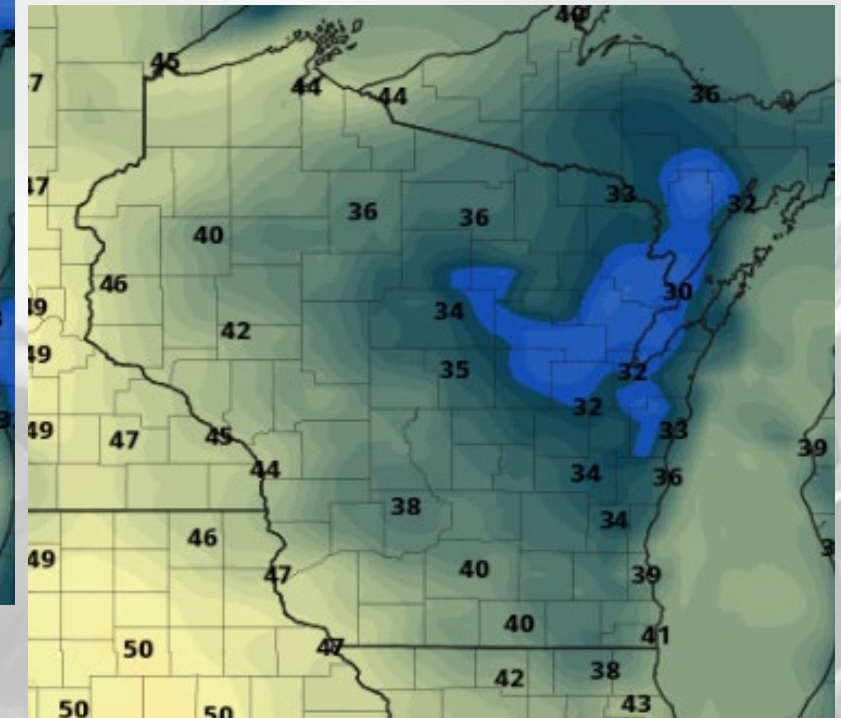
Morning of April 24



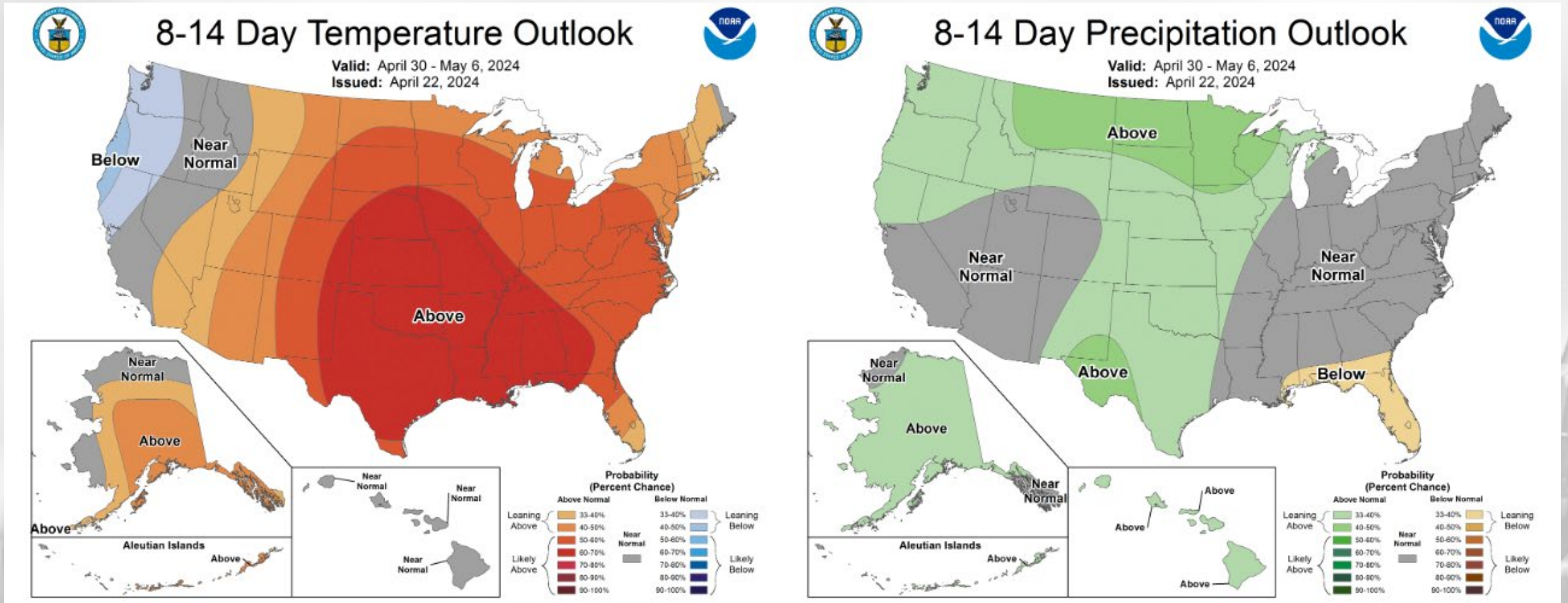
Morning of April 25



Morning of April 26

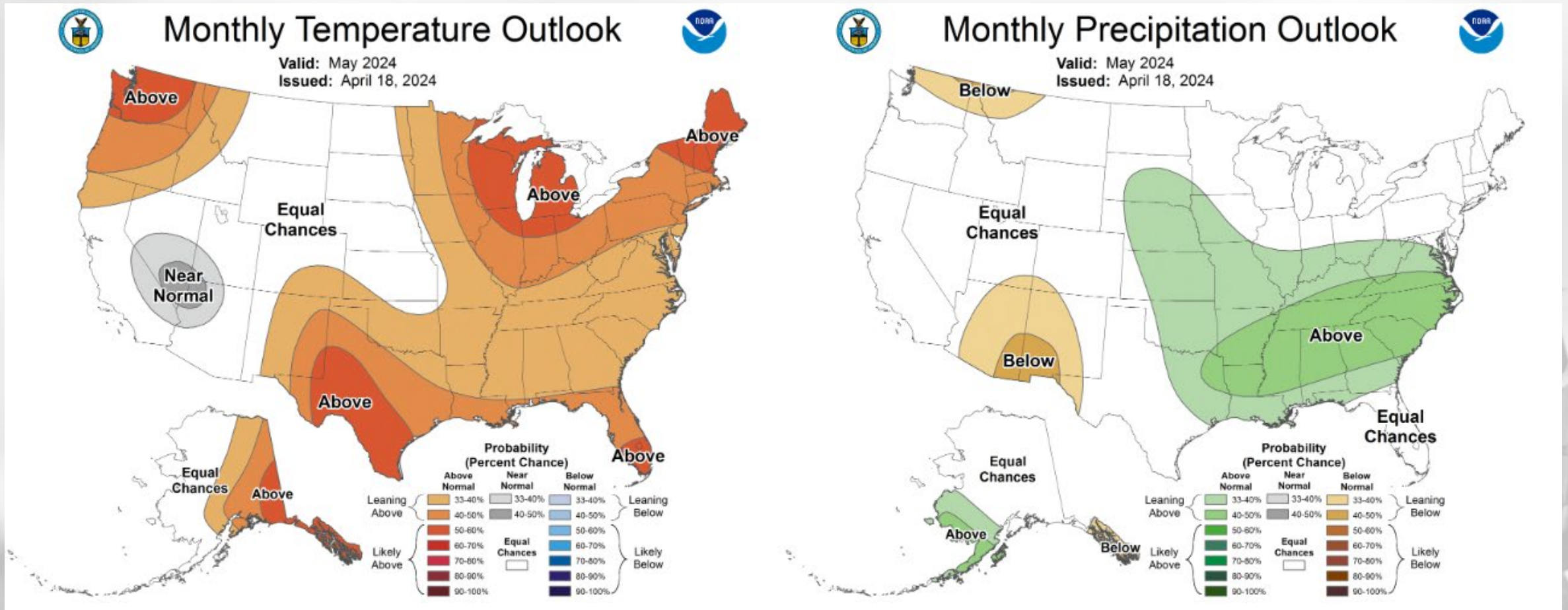


8-14 Day Temp & Precip Outlook



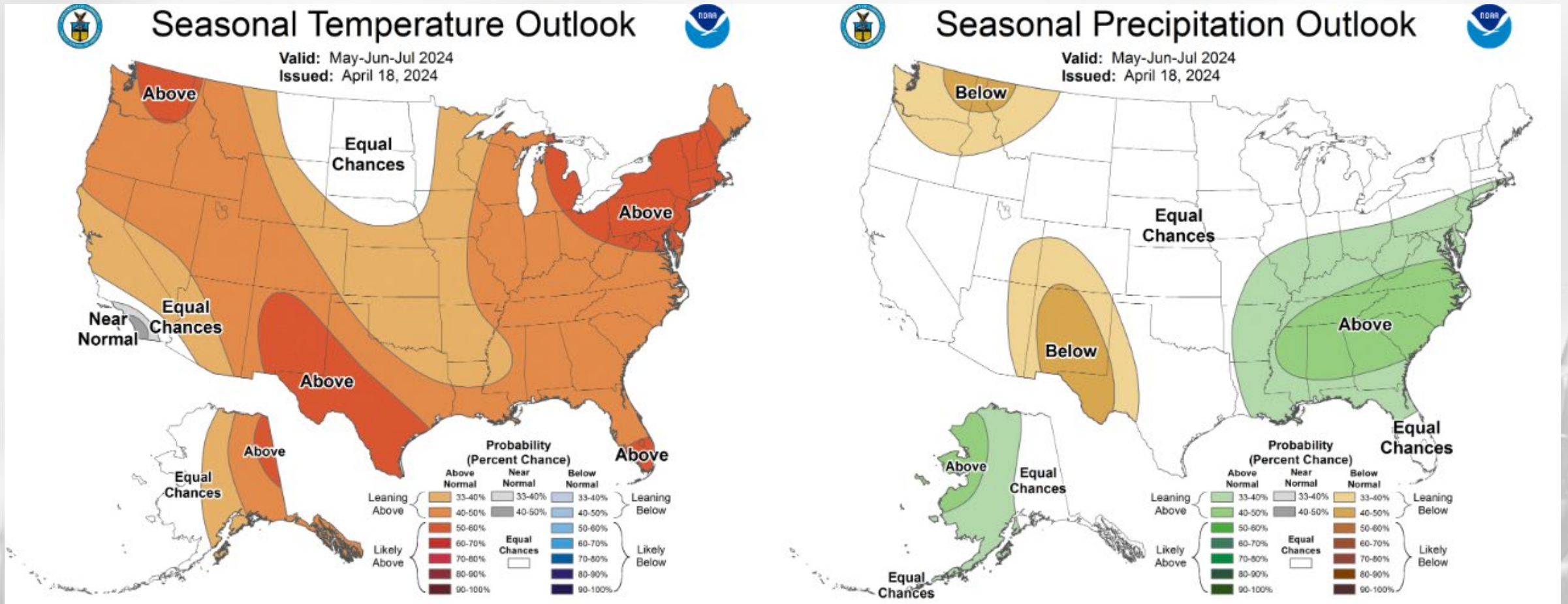
Beginning of May: Temperatures likely to be above normal. Precipitation is leaning above normal.

30 Day Temp & Precip Outlook



Month of May: Temperatures likely to be above normal. Precipitation is showing equal chances.

90 Day Temp & Precip Outlook



Late Spring into Summer: Temperatures leaning towards above normal. Precipitation indications are for equal chances of above/at/below average.

Take-Home Points

Current conditions:

- At least 1” of rainfall for many in the state last week, capping a 30-day period where many have seen above-normal precip totals.
- April temps have been at or a few degrees above normal for most.

Impact:

- Soil moisture conditions improved slightly for most Wisconet stations.
- Soil temperatures are in the mid to upper 40s statewide.
- US Drought Monitor conditions in the state remain mostly unchanged from last week; removal of D2 drought from the Prairie du Chien area.
- Corn and soybean planting is underway in the state, running near the 5-year average pace.

Outlook:

- A rainy week is forecasted to wrap up April – some could see multiple inches of precip.
- May will likely be warmer-than-average, with some uncertainty for precip (“equal chances”).
- The warmer-than-normal conditions have a higher probability to persist into early summer.
 - *A transition to La Nina is expected by June.*

Agronomic Considerations

Planting Considerations

- If planting early, consider planting depth adjustments to ensure planting into moisture. Also, check insurance policies.
- Tillage may be tempting to dry out topsoil, but subsoil is often still dry so consider using methods which conserve soil moisture.

Nutrient & Herbicide Applications

- Consider using a preplant nitrate test to assess if there is nitrogen left over from last year due to drought conditions.
- Observe soil moisture conditions before doing fieldwork to avoid soil compaction.
- Read herbicide labels from products used last year to assess if carryover is a possibility due to warmth and lack of moisture.

Manure Applications

- [DATCP](#) is forecasting widespread moderate to severe runoff risk by later in the week, so consider delaying application until after precipitation.
- Early season manure applications into warm soil conditions may lead to increased mineralization/nitrification and potential for N loss if receive “typical” heavy spring rainfall events, particularly if not applied to a growing cover crop or if the cash crop will not be planted soon after application.

Small Grains

- Wheat N typically goes on at green up, which will be earlier than normal with warm conditions.
- Potential for earlier planting of spring grains, if warmer weather continues. However, there is still a risk with potential for freeze.

Breaking Dormancy

- Potential risk of freeze damage this week for perennial fruit crops that have budded out.
- When seeding alfalfa, be aware that it can germinate at 32-34°F but will die if temperatures drop below 24°F, so it is best to wait to plant alfalfa until those low temperatures are unlikely.

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



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