

Wisconsin Ag Climate Outlook

Winter Edition

March 2025

Bridgette Mason

Assistant State Climatologist
Wisconsin
bmmason2@wisc.edu

Steve Vavrus

State Climatologist
Wisconsin
sjvavrus@wisc.edu

Kristin Foehringer

Resource Conservationist
NRCS
kristin.foehringer@usda.gov

Anne Pfeiffer

Crops & Soils Program Manager
UW-Madison Division of Extension
anne.pfeiffer@wisc.edu

Rue Genger

Emerging & Specialty Crops Program Manager
UW-Madison Division of Extension
rkgenger@wisc.edu

Dennis Todey

Director
USDA Midwest Climate Hub
dennis.todey@usda.gov

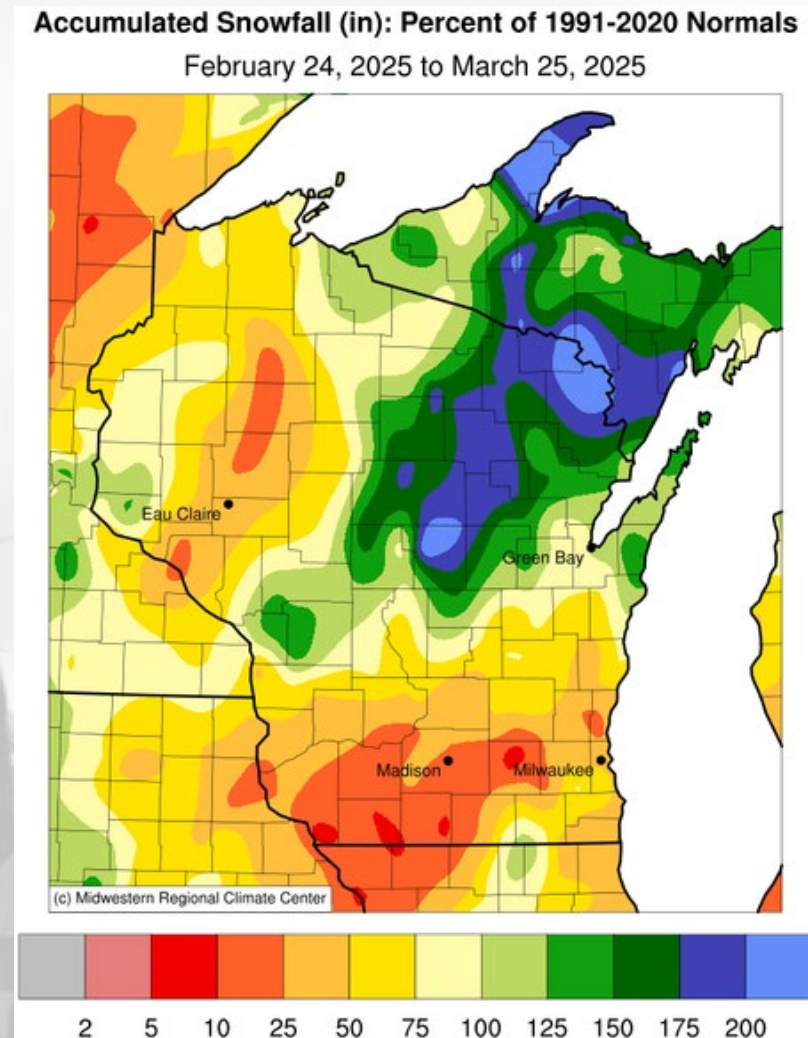
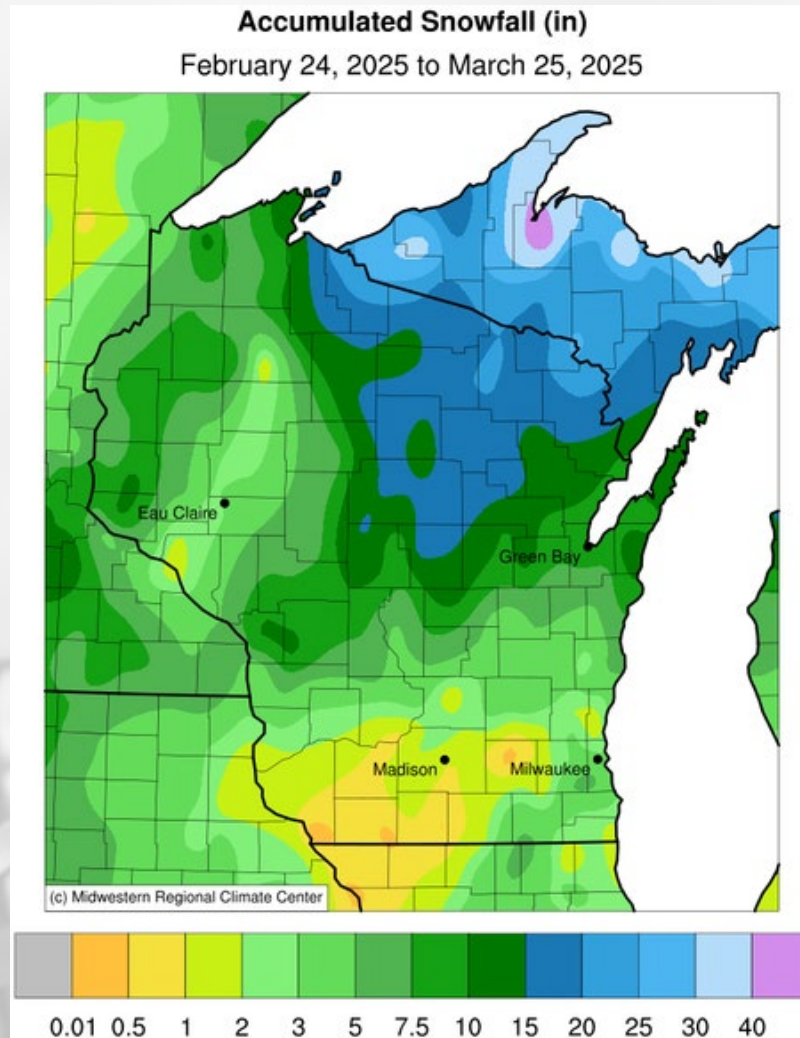
Key Points

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

- 1) The past 30 days have been [warmer](#), with above-normal [precip](#) for most, except for NW WI.
- 2) [Soil moisture](#) is improving for most but deteriorating in NW WI. Deep [soil frost](#) has mostly thawed, with lingering frost over 20” in some areas.
- 3) Precip chances statewide over the [next week](#). Potential for warmer and wetter for [April-June](#) in S & E WI, while uncertainty remains for the rest of the state.

- For this week's agronomic recommendations from UW Extension, click [here](#).

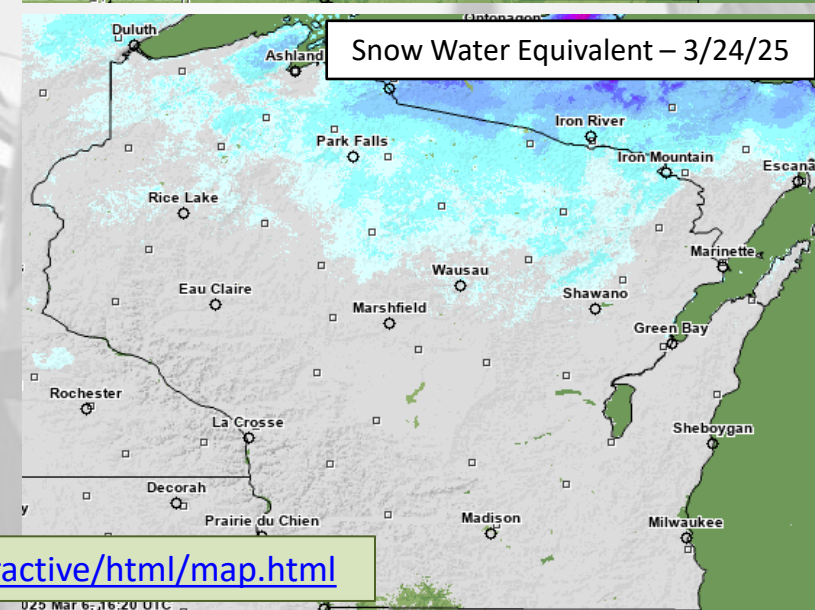
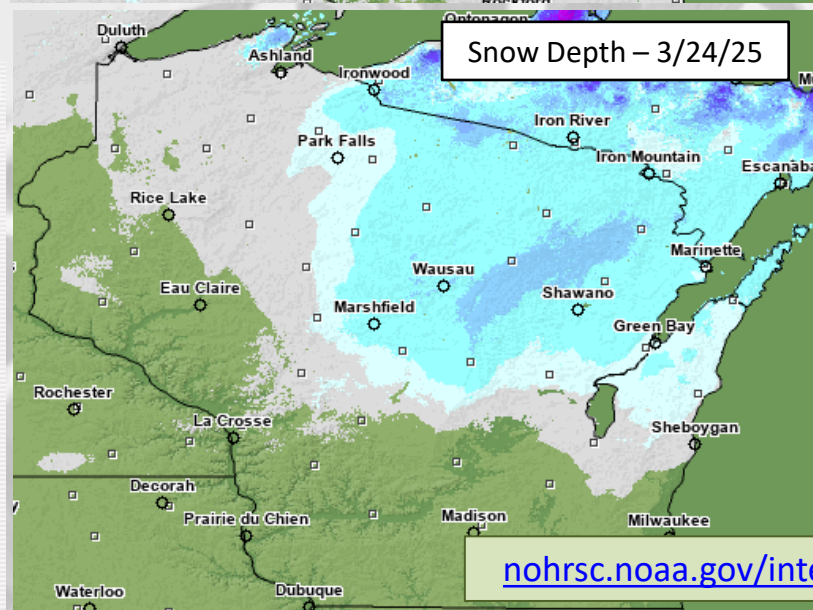
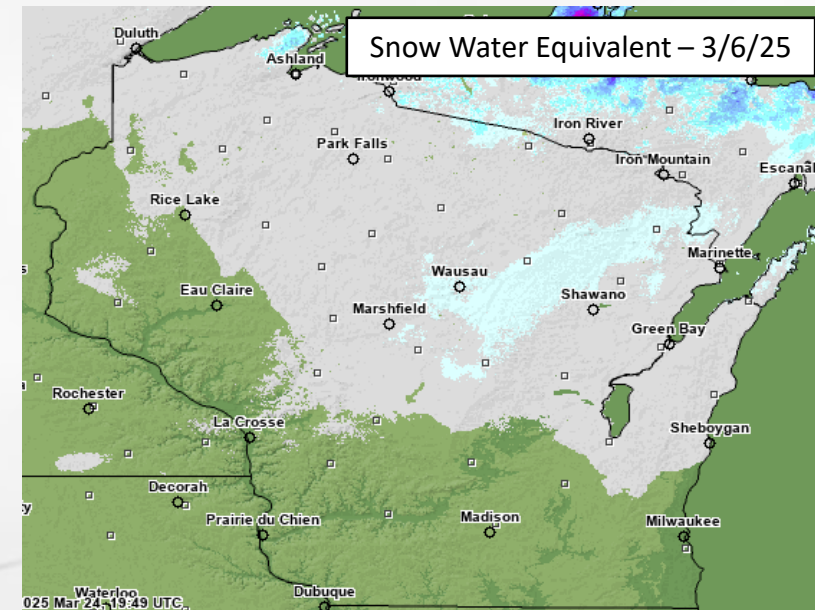
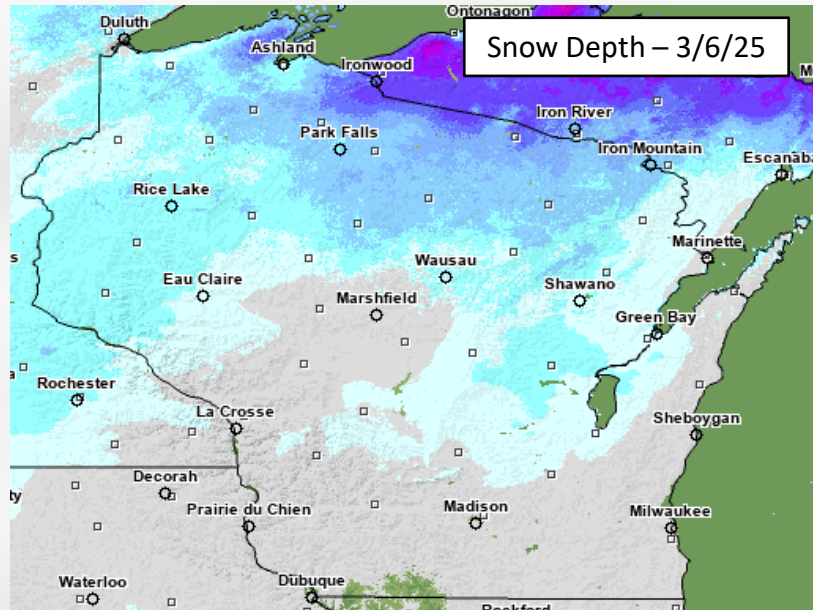
30 Day Snowfall Recap



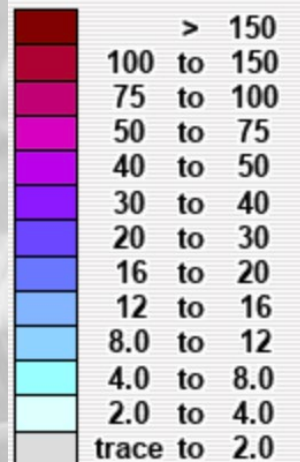
- Range from **15-25"** (**100-200% of normal**) in the NE to **0.5-3"** (**<25% of normal**) in the NW & S.

30 Day Snow Depth Recap

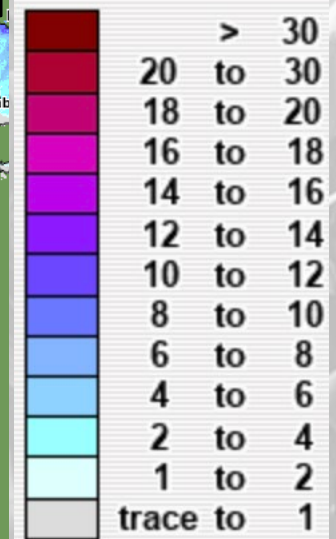
- Generally, **disappearing snowpack** across the state throughout March.
- A few snowstorms to generate end-of-season snowpack.



Inches of depth



Inches of water equivalent



nohrc.noaa.gov/interactive/html/map.html

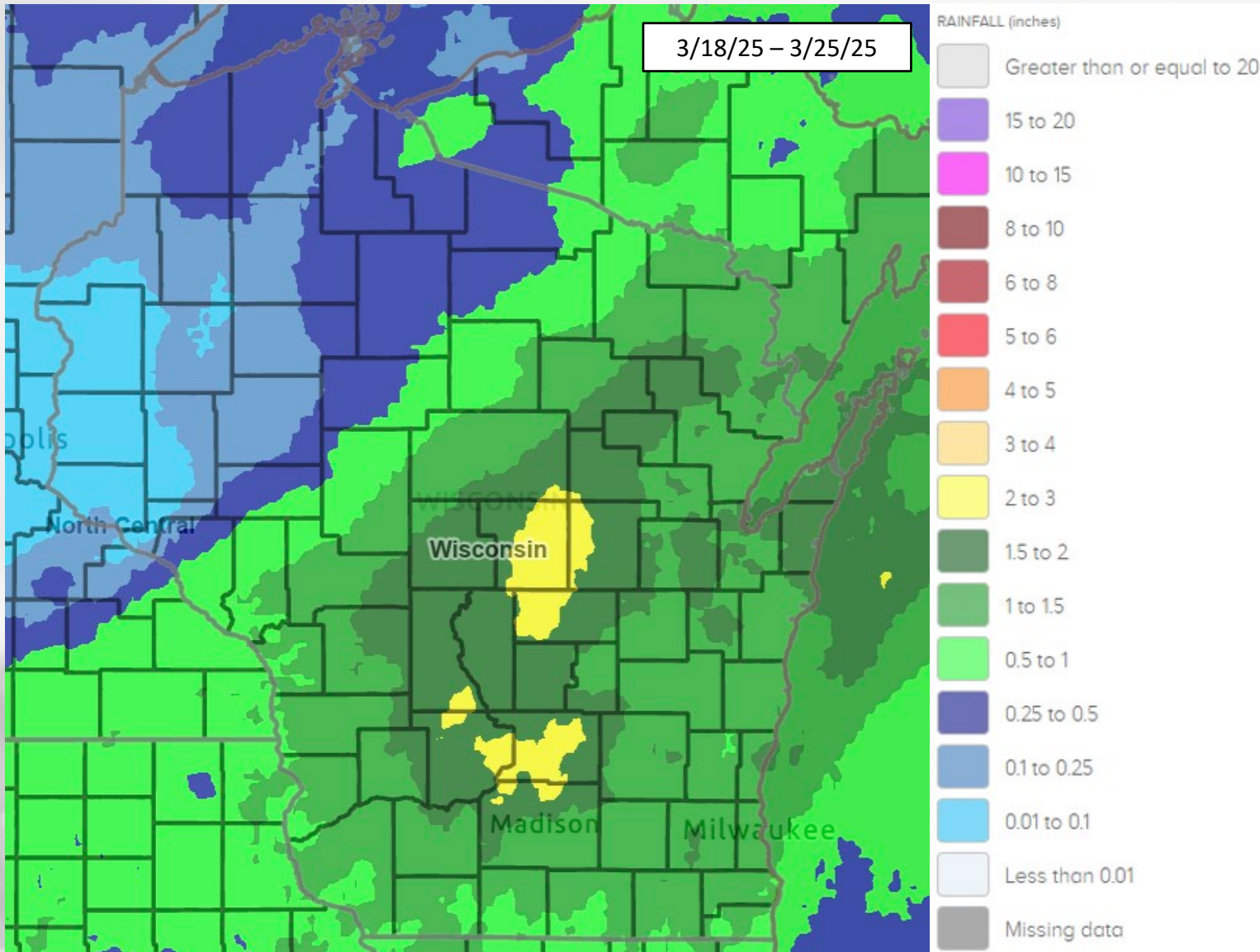
Snowfall Between Dec. 1 – Mar. 24

Station	Snowfall Total (in.)	Normal Snowfall (in.)*	Difference (in.）**
Madison	19.3	44.2	-24.9
Milwaukee	27	42.7	-15.7
La Crosse	20.5	38.3	-17.8
Wausau	47.1	48.3	-1.2
Green Bay	38.4	45.9	-7.5
Eau Claire	26.8	43.2	-16.4
Duluth, MN	37.7	61.1	-23.4
Twin Cities, MN	24.5	38.8	-14.3
Dubuque, IA	17.2	36.6	-19.4

**Climate normals are for 1991-2020, December 1 – March 24.*

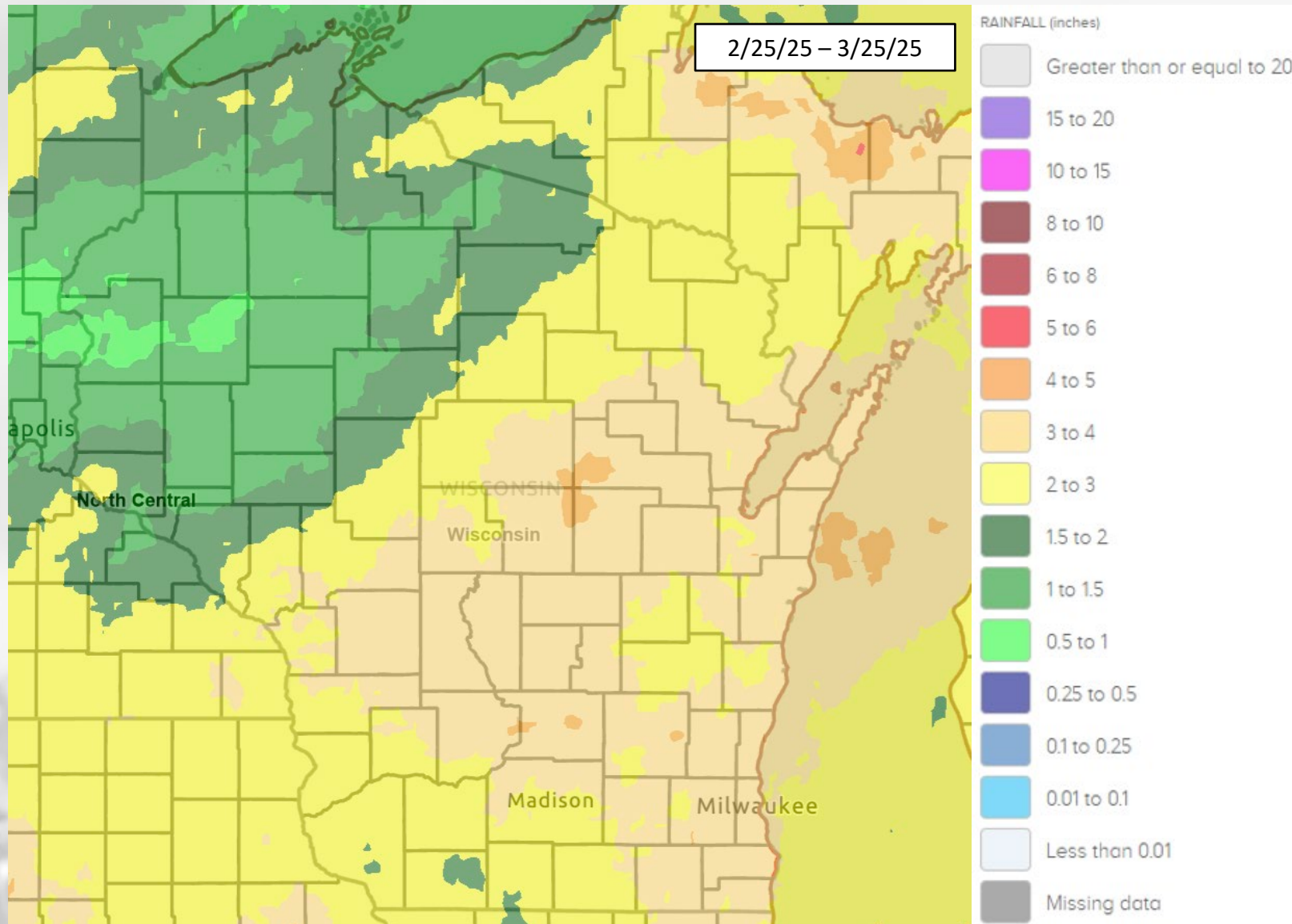
***Negative values mean that this year's snowfall totals are less than normal snowfall.*

7 Day Precip



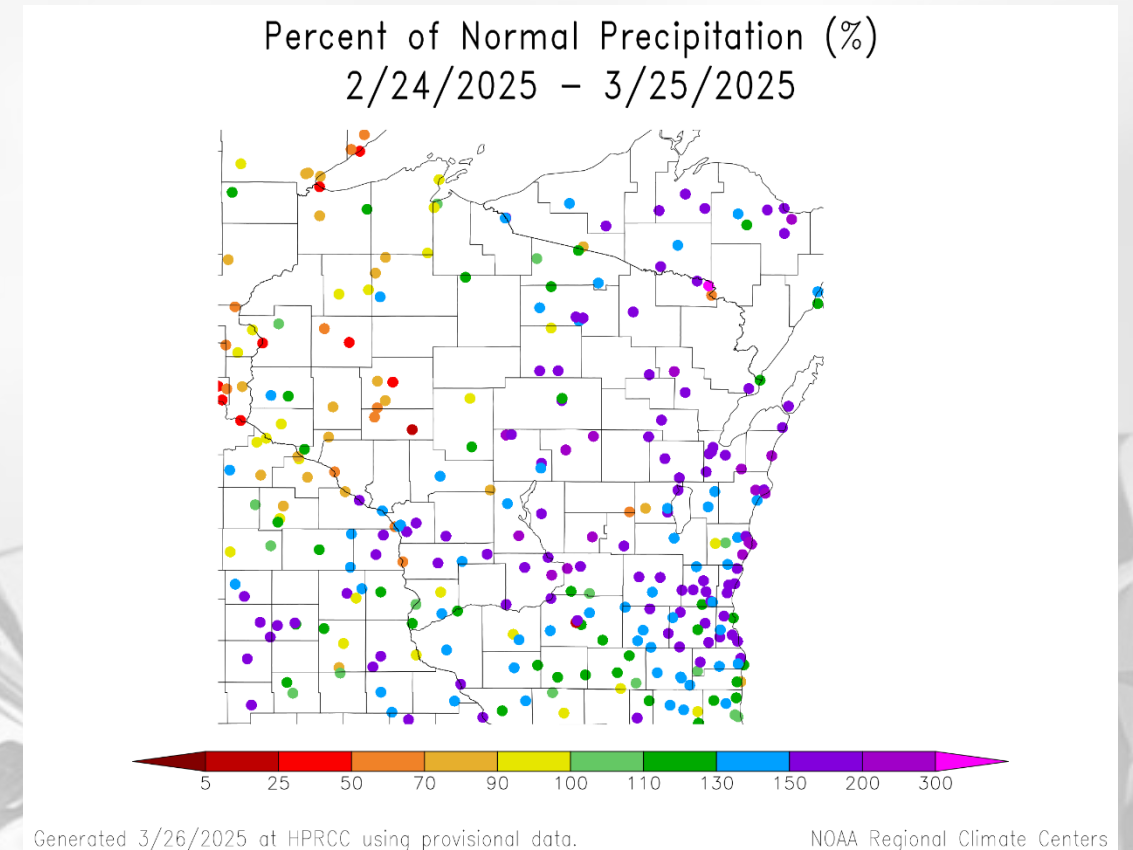
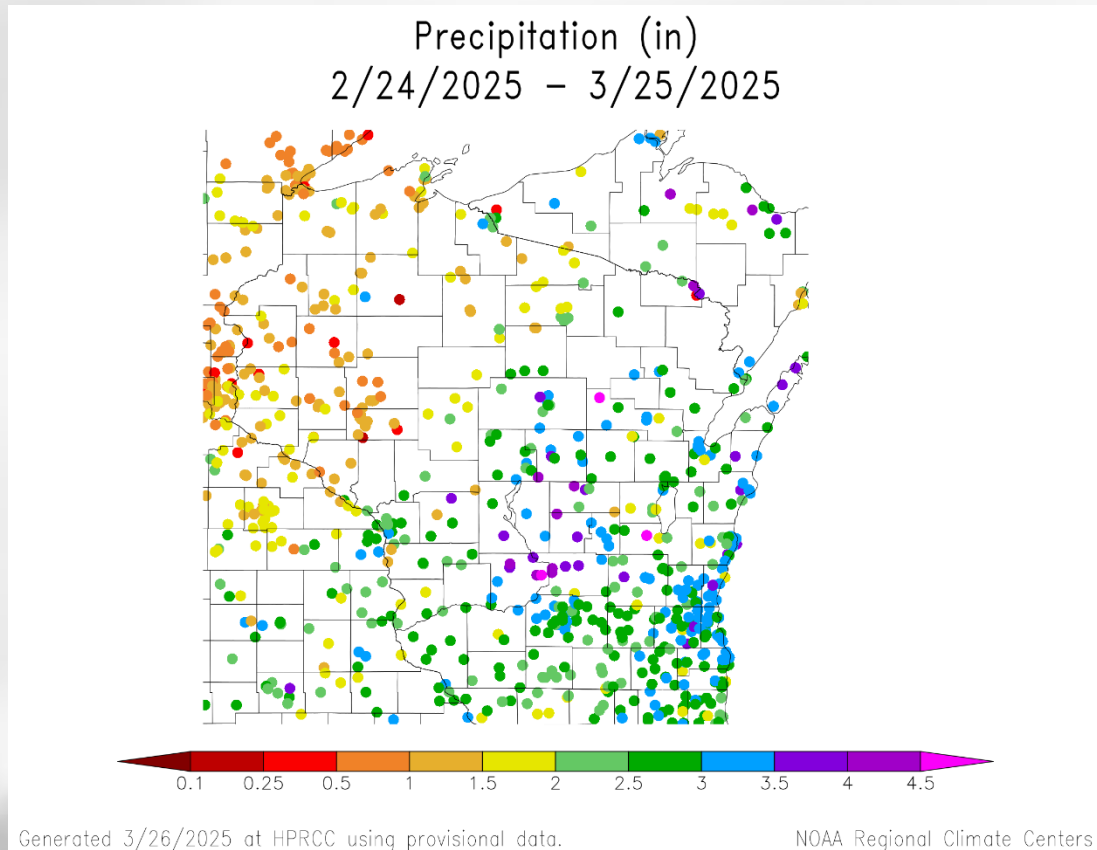
- **Relatively wet week** for much of Wisconsin.
- **Mixture** of rain and snow.
- Higher amounts of **rain** received in central & south-central WI, including:
 - Mar 19-20 → 1"+
 - Mar 24 → 1.5"+

30 Day Precip



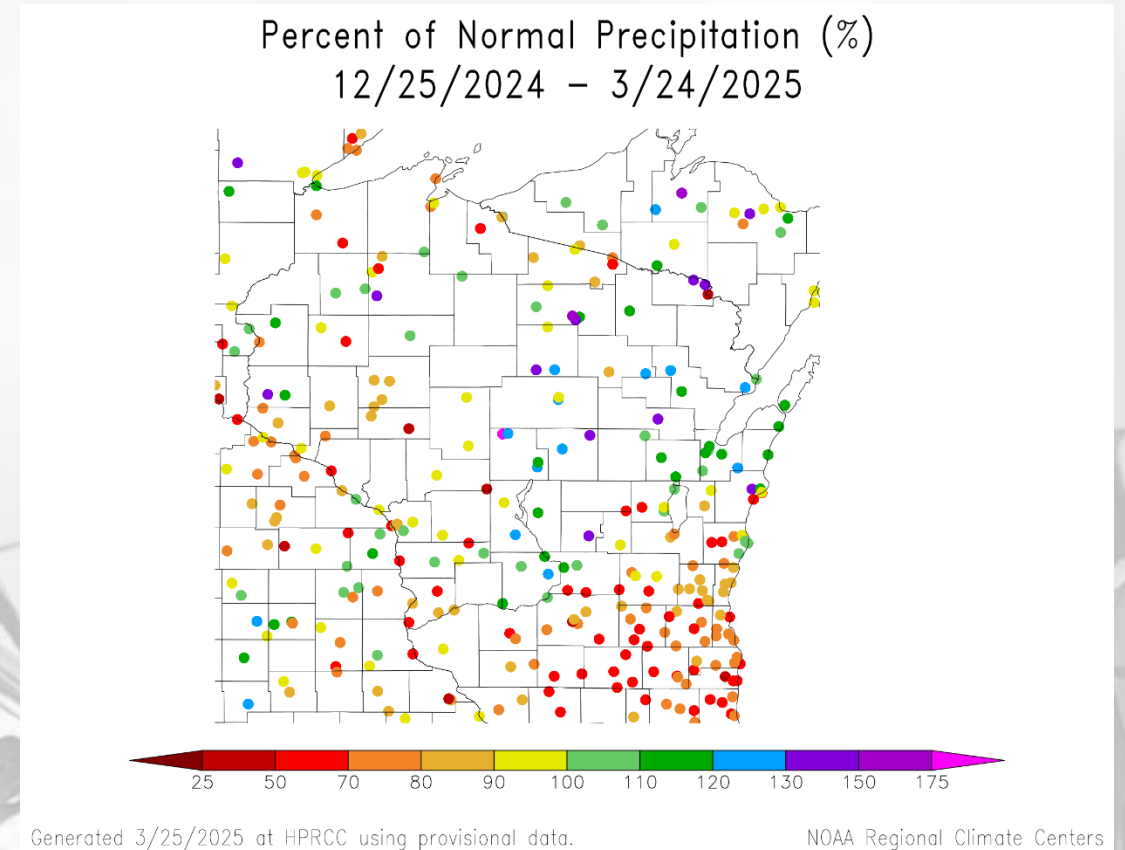
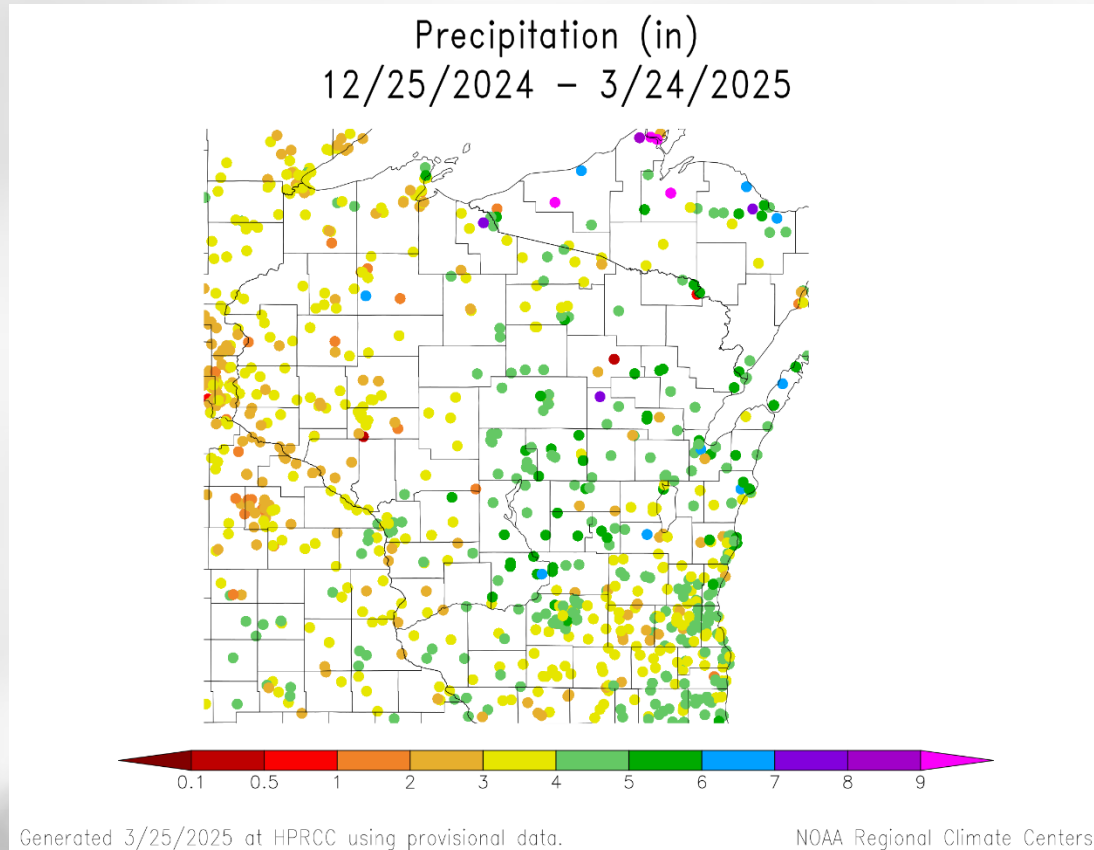
- **Statewide 1-4"** of precip (rain plus melted snowfall).
- **Higher totals** for central & eastern WI (3-4+").
- **Lower totals** in NW WI (< 1.5"), especially Polk and Barron counties (< 1").

30 Day Precip Total/% Avg.



- Highest totals in central WI (3.5"+) and branching east and south (2-3.5") → **130% of normal or greater.**
- Lower totals across NW WI (< 2") → **90% of normal or less.**

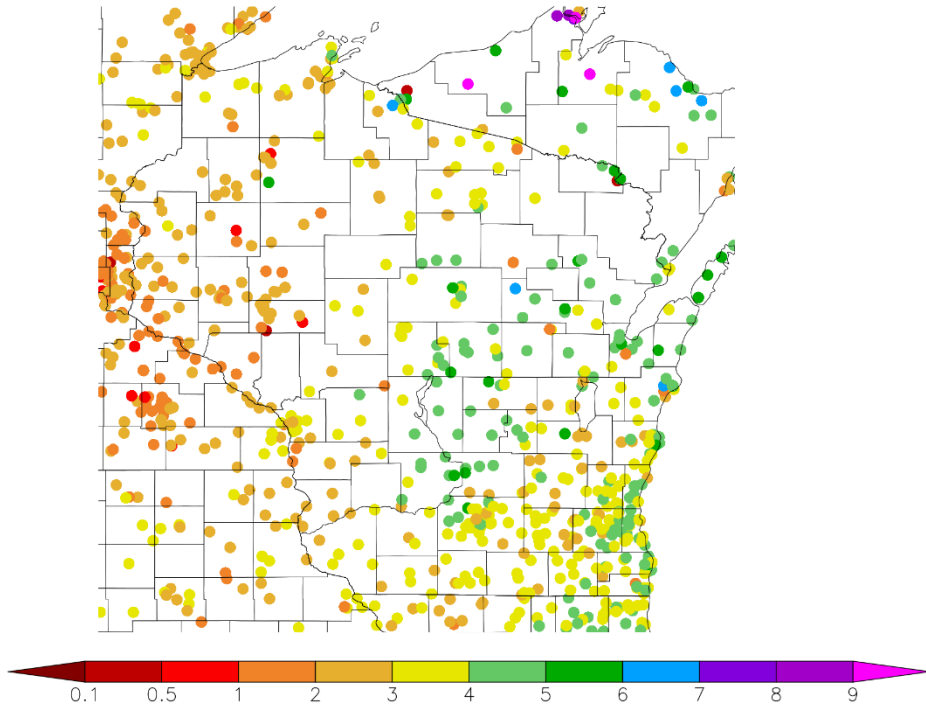
90 Day Precip Total/% Avg.



- Below the climatological average for many in S, east-central, and NW WI → **70% of normal or less.**
- Parts of central and N/NE WI above average → **110% of normal or greater** for most; some **130% of normal or greater.**

2025 Precipitation (So far)

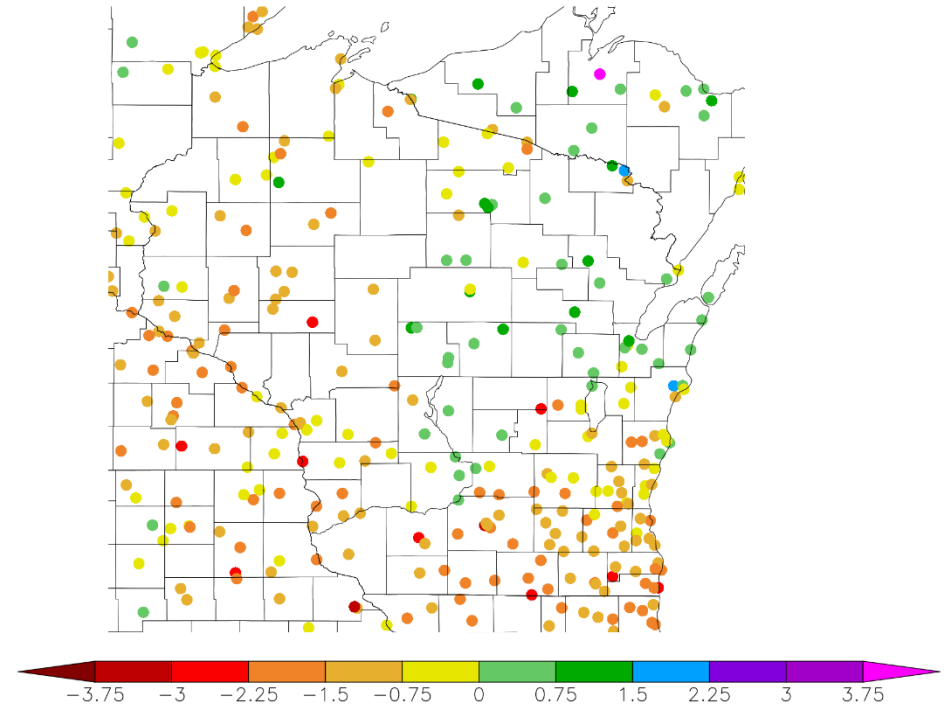
Precipitation (in)
1/1/2025 – 3/25/2025



Generated 3/26/2025 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Precipitation (in)
1/1/2025 – 3/25/2025



Generated 3/26/2025 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

Soil Moisture Models

- **Near-normal conditions** for a majority of WI.
- **70th percentile or above** in small portions of central WI and far northern WI.
- **Significant improvement in dryness** thanks to precip in western, southern, and eastern WI, but **still trending very dry (5th percentile or lower)** in parts of the Door Peninsula and southeast WI. The SE has been **drier-than-normal** since October.
- **Much drier conditions (5th percentile or lower)** have emerged due to a lack of precip in northwest WI.
- NOTE: Atmospheric moisture demand and plant water use are not as high this time of year as compared to summer due to cooler temps and lower evaporation and transpiration rates.

Model Notes:

Red areas = top 5 driest in 100 years.

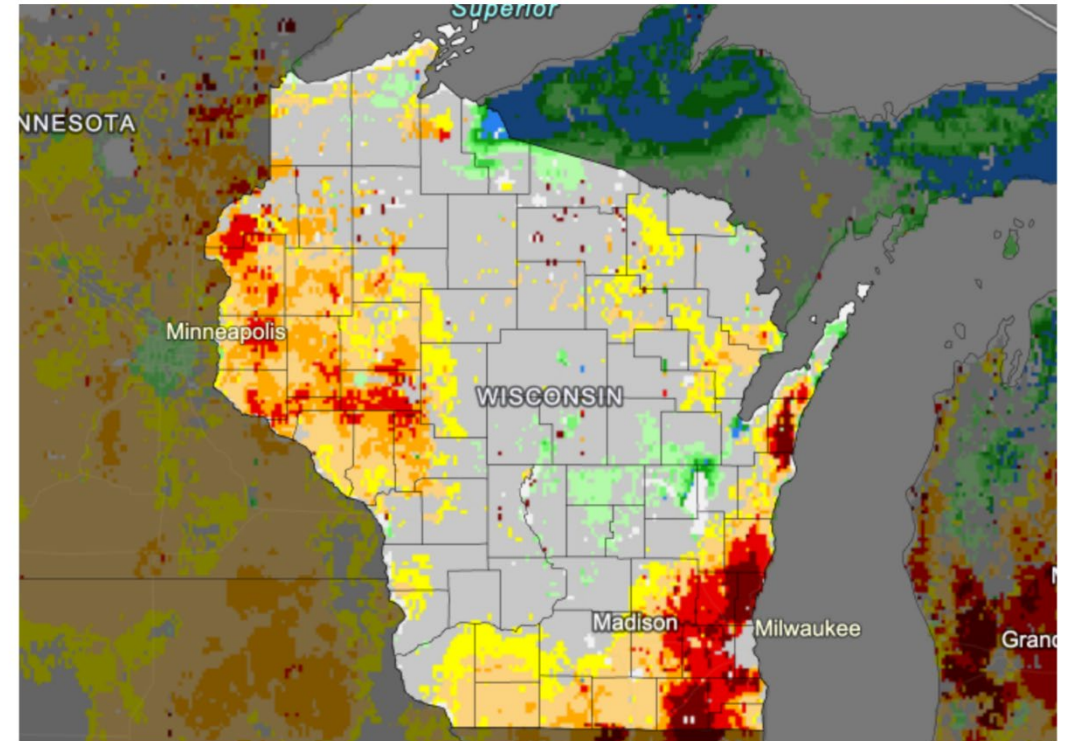
Dark red areas = top 2 driest in 100 years.

Blue areas = top 2 wettest in 100 years.

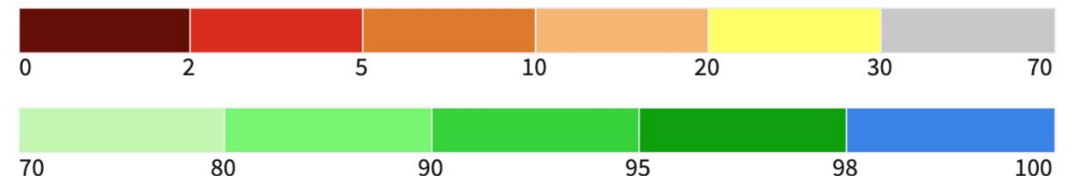
It's worth noting that each soil moisture model has their own characteristics and input variables, so there tends to be variation between models. Thus, it's worthwhile to look at multiple models opposed to just one.

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



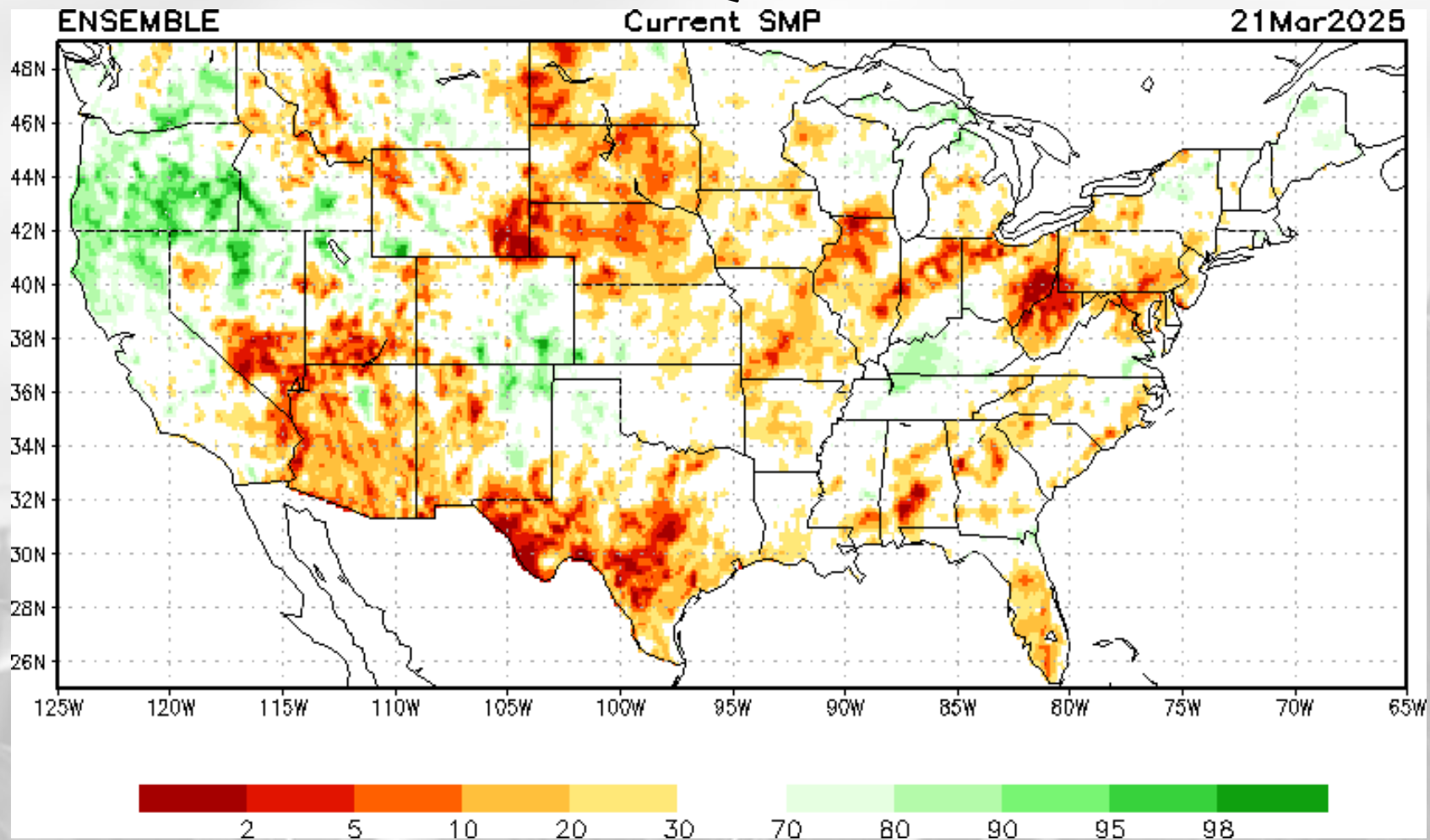
Source(s): NASA

Data Valid: 03/25/25

Drought.gov

Soil Moisture Models

NOTE: this map displays the soil moisture percentile for Mar 21. It was the most recent update as of Mar 26.

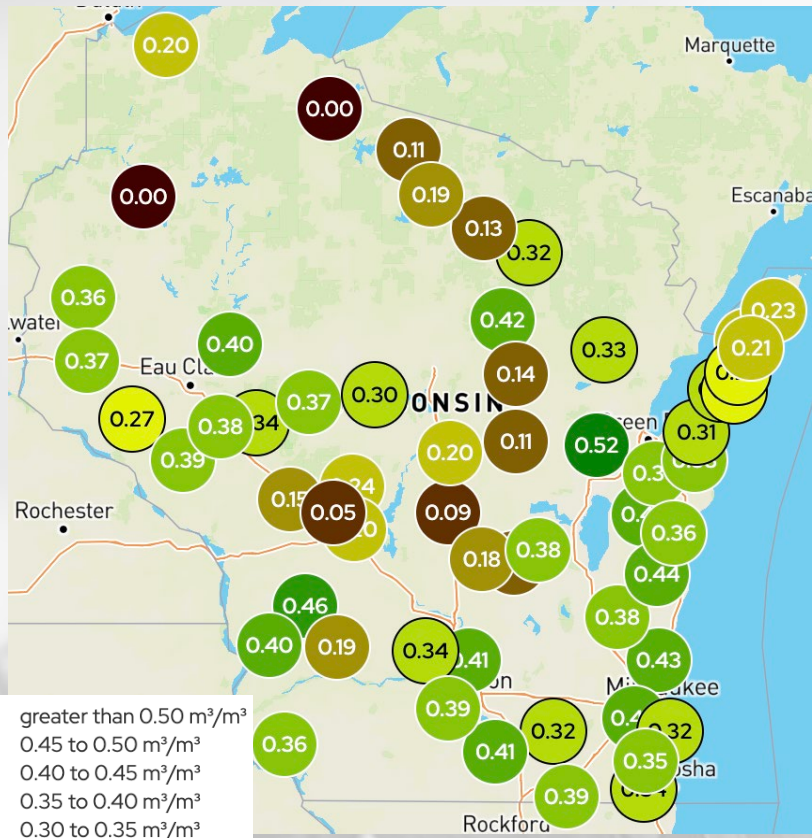


https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml

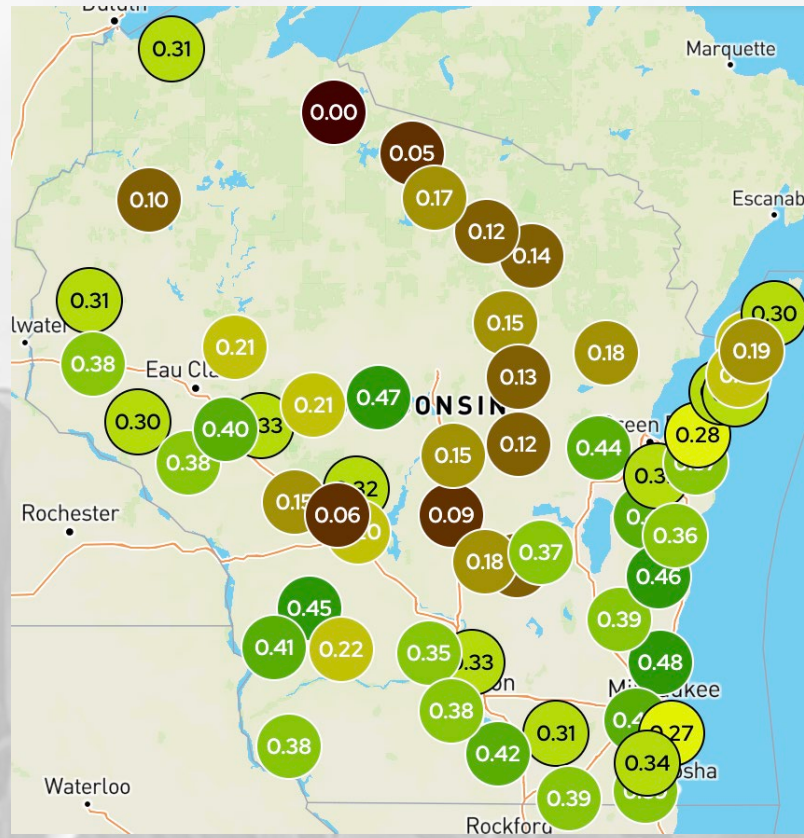
Wisconet Soil Moisture (Various Depths)

Maps Displayed: Wednesday March 26th @ 7:45 am

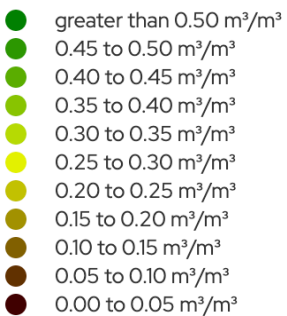
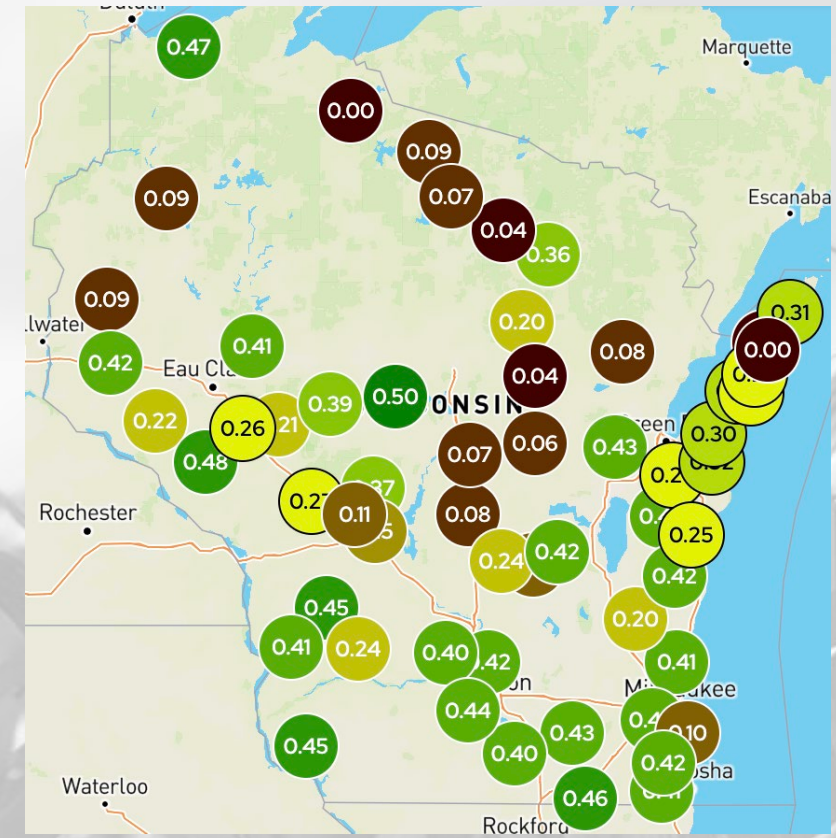
4" Depth



8" Depth



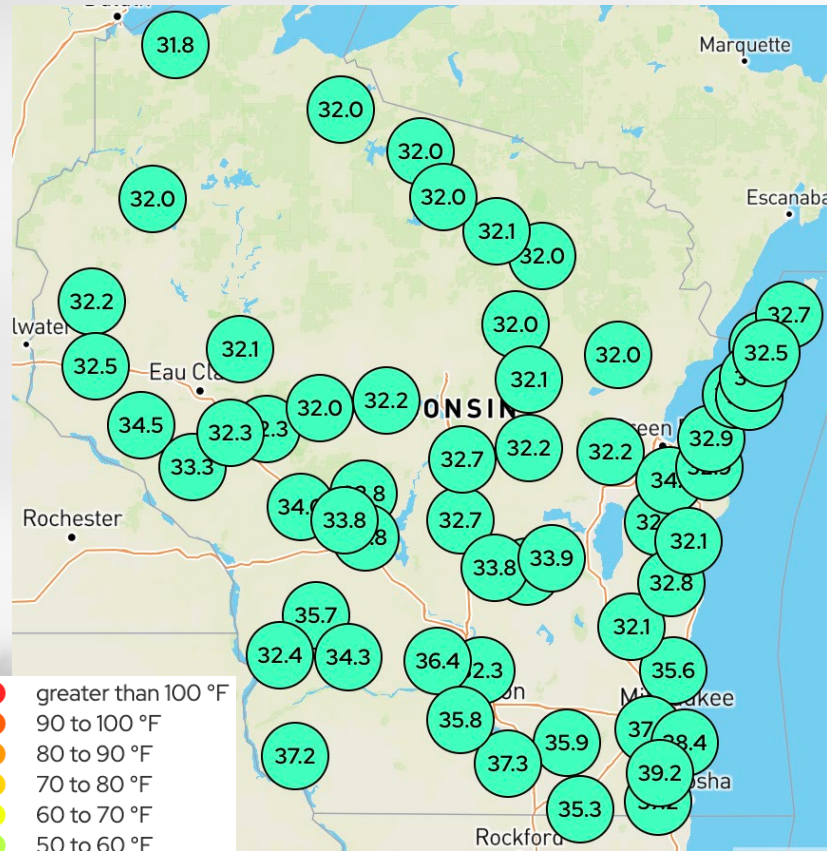
20" Depth



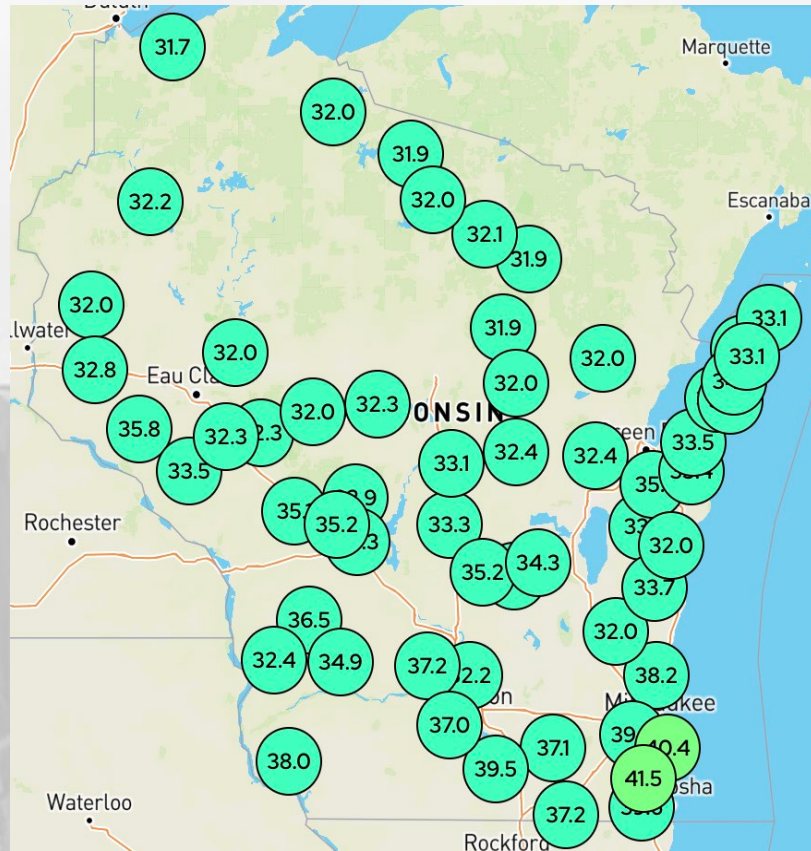
Wisconet Soil Temp (Various Depths)

Maps Displayed: Wednesday March 26th @ 7:45 am

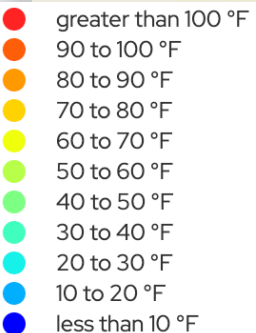
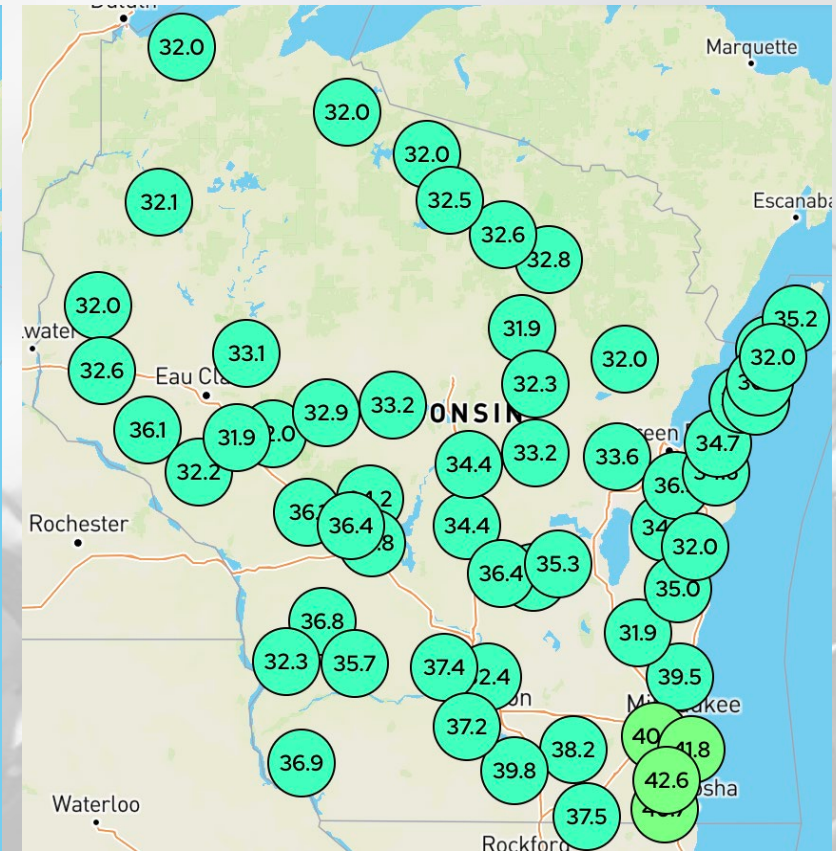
4" Depth



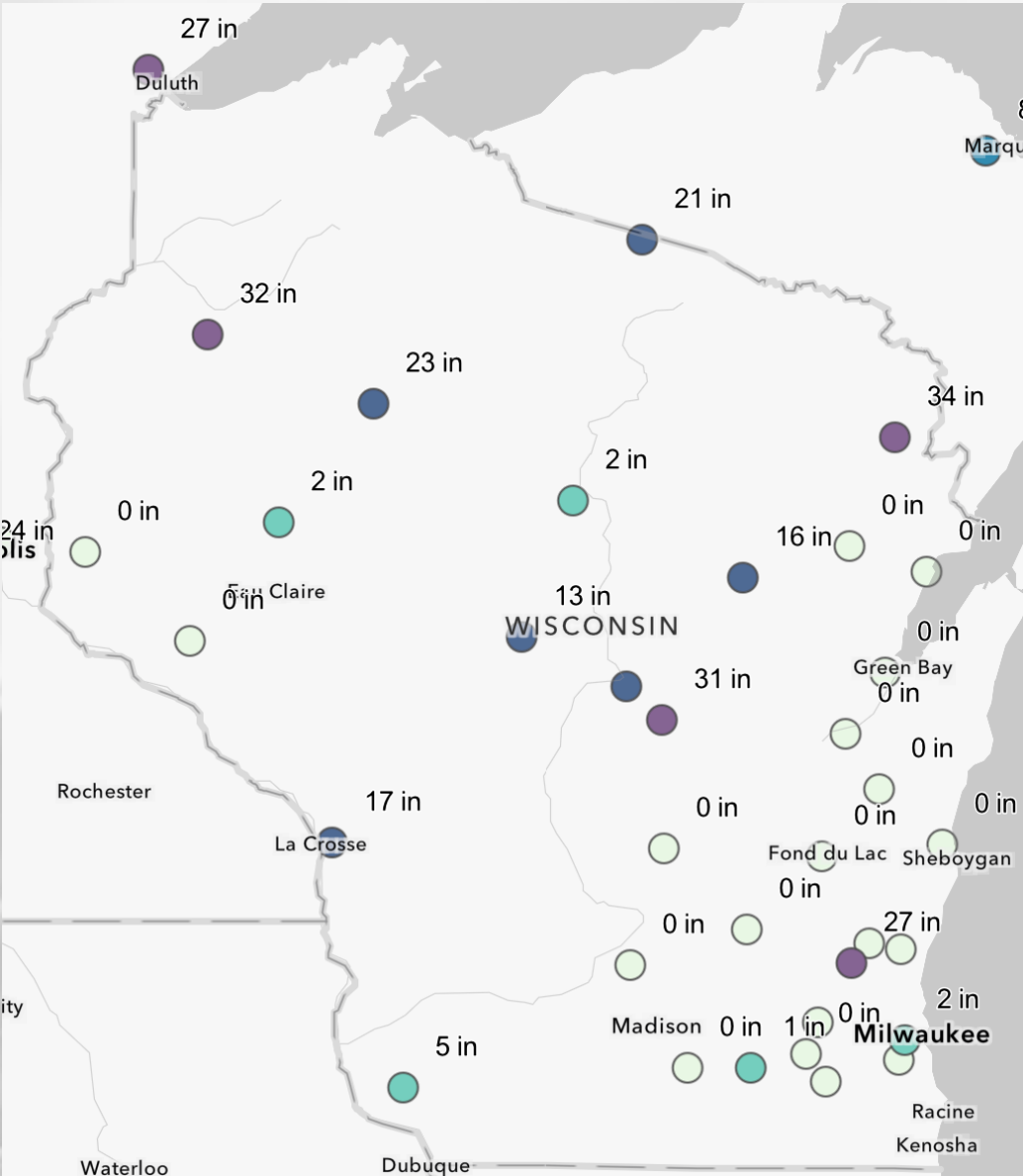
8" Depth



20" Depth



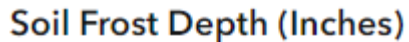
Frost Depth



- Deep soil frost has **thawed greatly** over the last month, with lingering deep frost in places.

Location | 2/26 → 3/26

- Lancaster | 24" → 5"
- Durand | 32" → 0"
- Merrill | 31" → 2"
- Oconto | 20" → 0"
- Mukwonago | 29" → 0"



FrostDepth



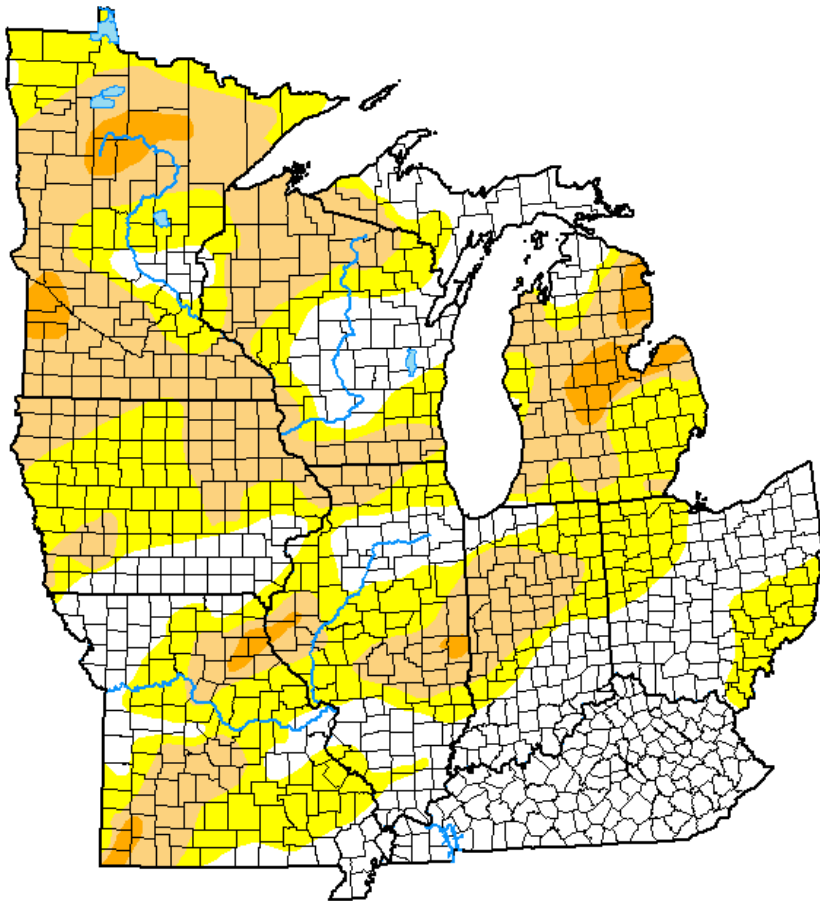
About This Map (from NOAA): “This map displays recent frost depth measurements in terms of inches below the soil surface. Frost depth reports are commonly from frost tube instruments, visual reports from construction or cemetery sites, or other types of electronic probes.”

Map updated on 3/26/25

https://www.weather.gov/ncrfc/lmi_frost_depthmap/

US Drought Monitor

U.S. Drought Monitor Midwest



March 25, 2025

(Released Thursday, Mar. 27, 2025)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	34.92	65.08	33.13	3.46	0.00	0.00
Last Week 03-18-2025	33.73	66.27	37.17	4.39	0.00	0.00
3 Months Ago 12-24-2024	37.16	62.84	39.93	5.57	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 03-26-2024	34.90	65.10	26.56	7.29	1.36	0.00

Intensity:

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

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

Author:

Brad Rippey
U.S. Department of Agriculture



droughtmonitor.unl.edu

Compared to last month:

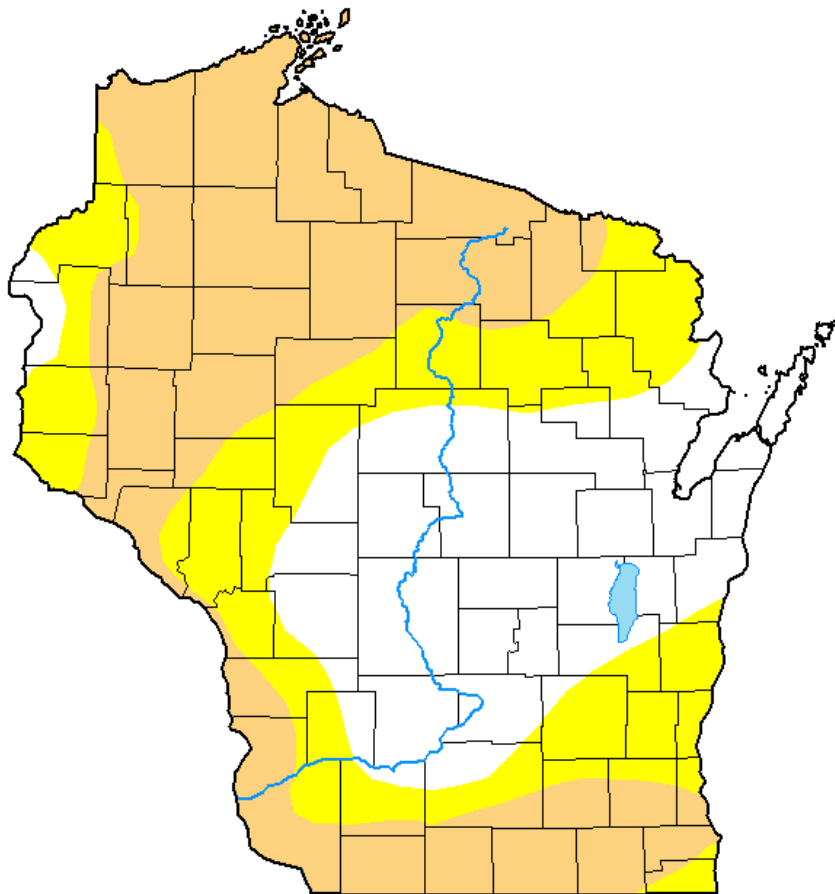
- Slight **decrease** in drought severity and coverage for some states, namely IA, IL, WI, and MI, where above-normal precipitation has been recorded in the last 4 weeks.
- Slight **increase** in drought severity and coverage for some states, namely MO, IL, IN, and OH, where below-normal precipitation has been recorded in the last 4 weeks.
- **D1 has been removed** from eastern and southern WI, **but expanded** in west-central WI.
- **Not much change** for the southeastern Midwest.

Note: D0 is not considered drought.

[http://droughtmonitor.unl.edu/](https://droughtmonitor.unl.edu/)

US Drought Monitor

U.S. Drought Monitor Wisconsin



March 25, 2025

(Released Thursday, Mar. 27, 2025)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	31.55	68.45	40.73	0.00	0.00	0.00
Last Week 03-18-2025	18.55	81.45	50.50	0.00	0.00	0.00
3 Months Ago 12-24-2024	40.89	59.11	43.70	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 03-26-2024	13.96	86.04	31.55	5.99	0.00	0.00

Intensity:

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

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

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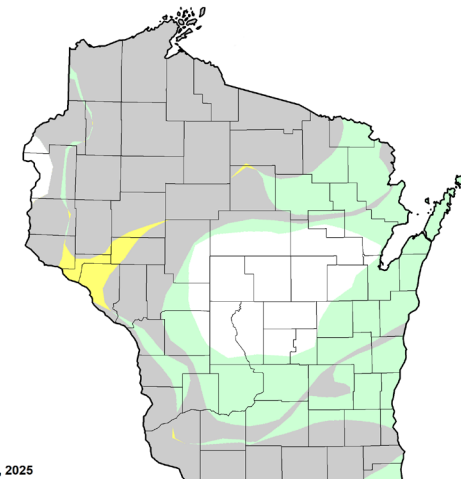
droughtmonitor.unl.edu

Amount of state in:

- D1-D4 – 40.7% ↓
- D2-D4 – 0.0% --
- D3-D4 – 0.0% --
- D4 – 0.0% --

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

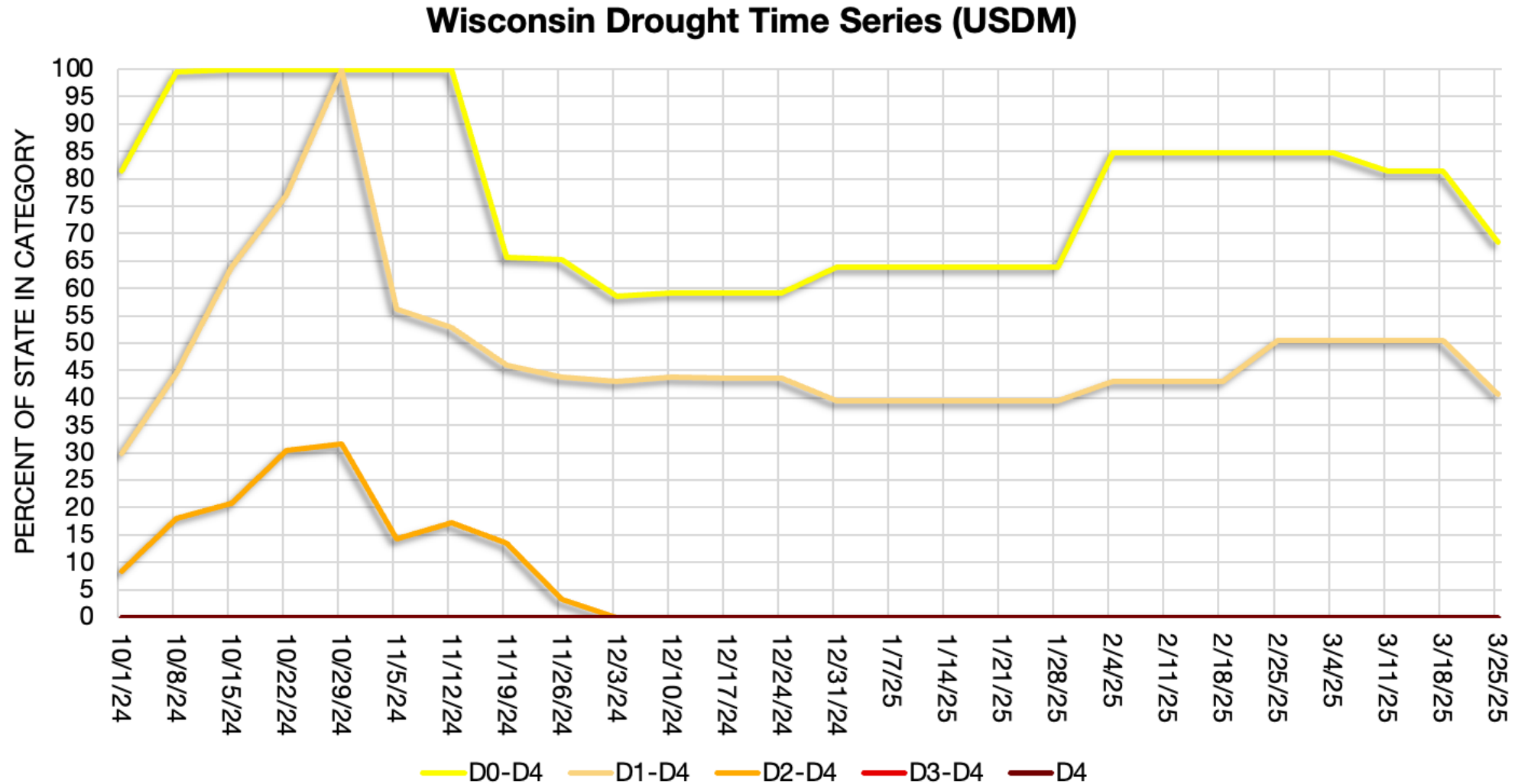
U.S. Drought Monitor Class Change - Wisconsin
4 Week



March 25, 2025
compared to
February 25, 2025

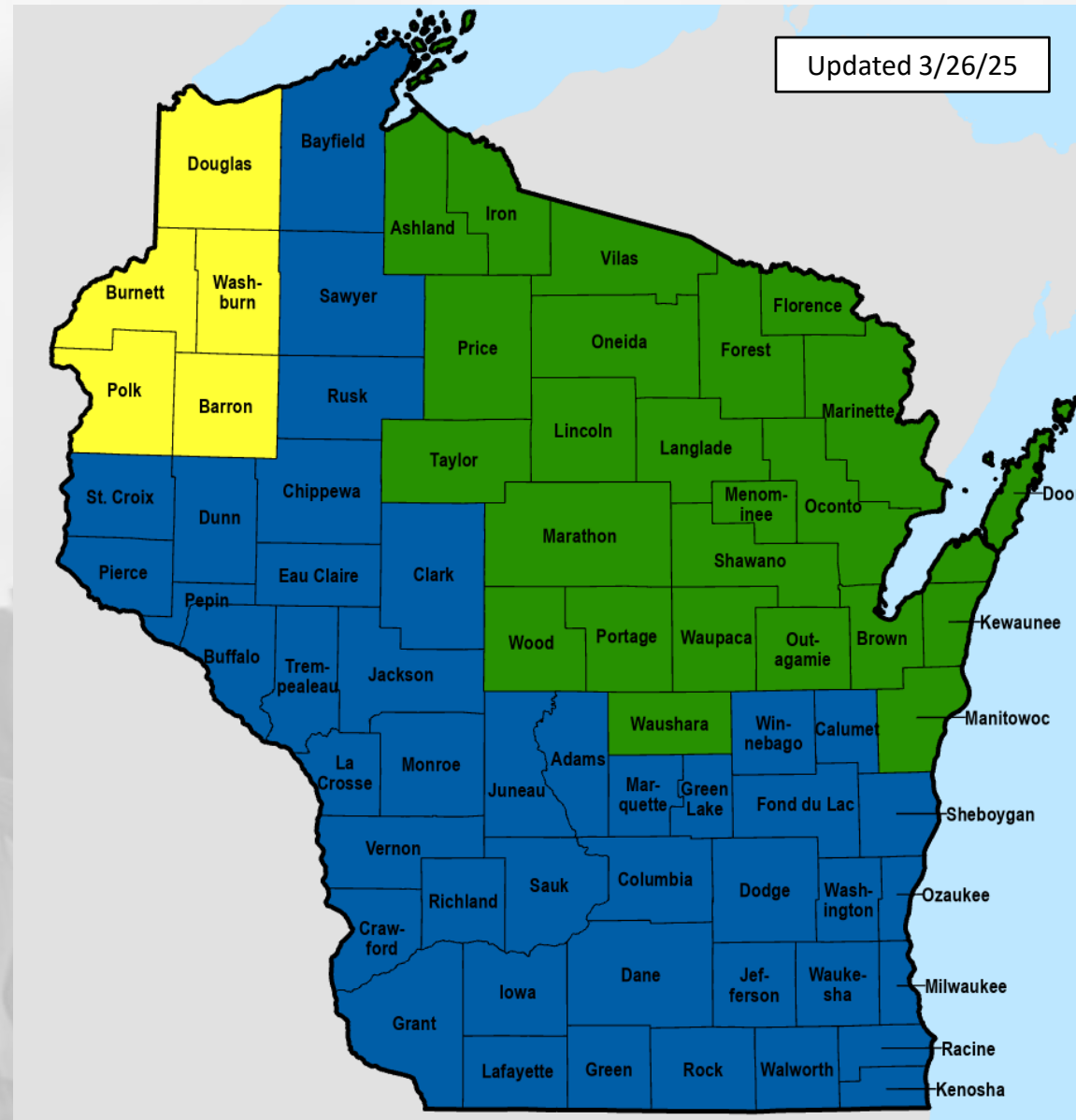
droughtmonitor.unl.edu

USDM Time Series



Wildfire Risk

Fire Danger



A fire danger of **LOW** means wildfires do not easily ignite and will spread slowly.

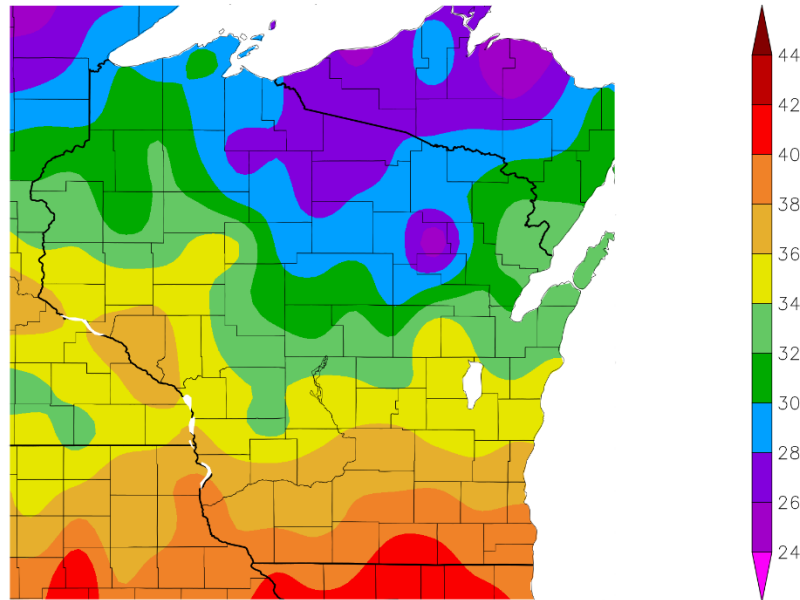
A fire danger of **MODERATE** means wildfires can ignite and will spread but are relatively easy to contain.

A fire danger of **HIGH** means wildfires ignite easily, spread rapidly, and can be challenging to control.

<https://apps.dnr.wi.gov/wisburn/#/>

7 Day Temperatures

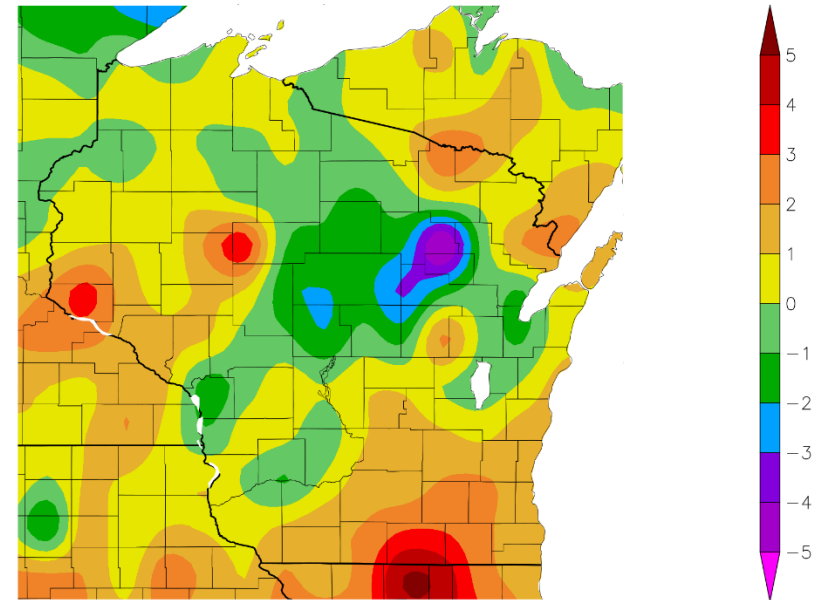
Temperature (F)
3/19/2025 – 3/25/2025



Generated 3/26/2025 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Temperature (F)
3/19/2025 – 3/25/2025



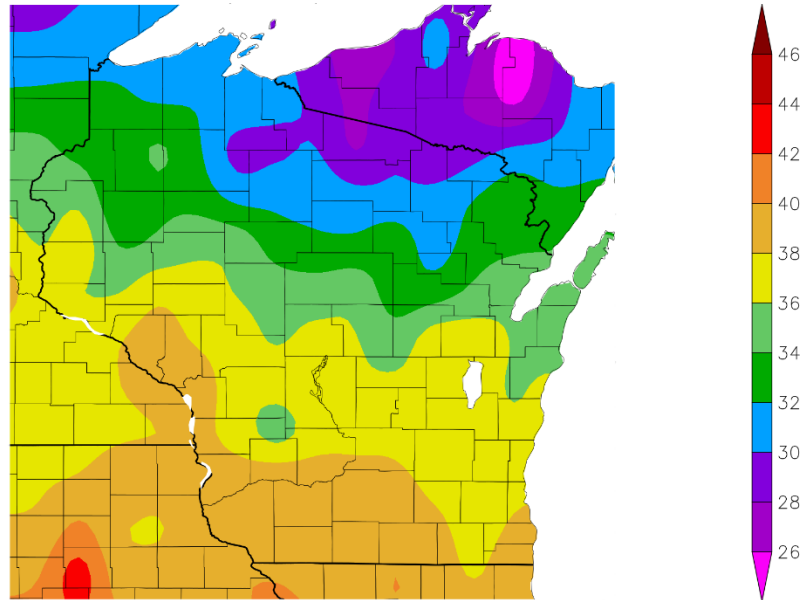
Generated 3/26/2025 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Temperatures for the past week averaged **26-42°F** across the state.
- **Slightly (1-2°F) below normal** for parts of central and northern WI; **3-4°F below normal** around Langlade County, likely due to snowpack keeping temps lower.
- **Above normal** widespread, likely due to minimal snowpack. **Slightly (1-2°F) above normal** for many; **3-4°F above normal** around Pierce, Taylor, and Rock Counties.

30 Day Temperatures

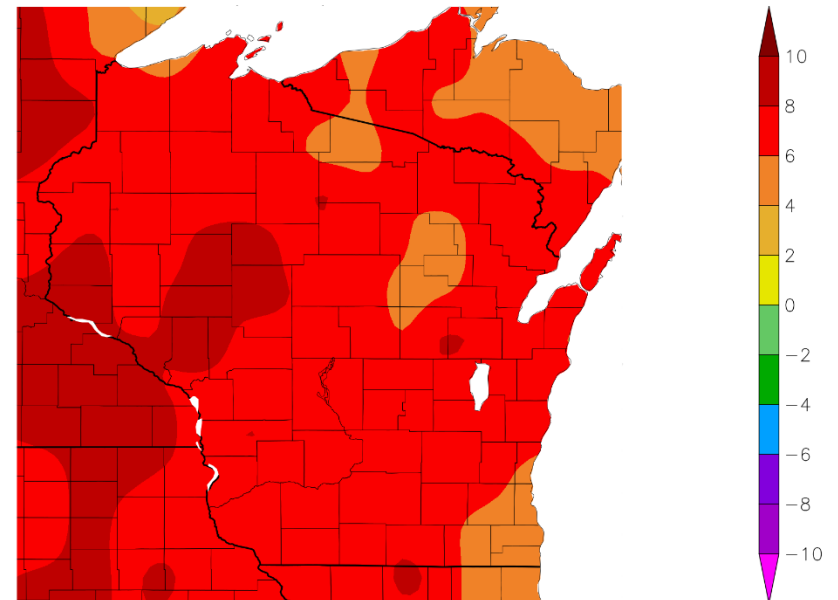
Temperature (F)
2/24/2025 – 3/25/2025



Generated 3/26/2025 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Temperature (F)
2/24/2025 – 3/25/2025



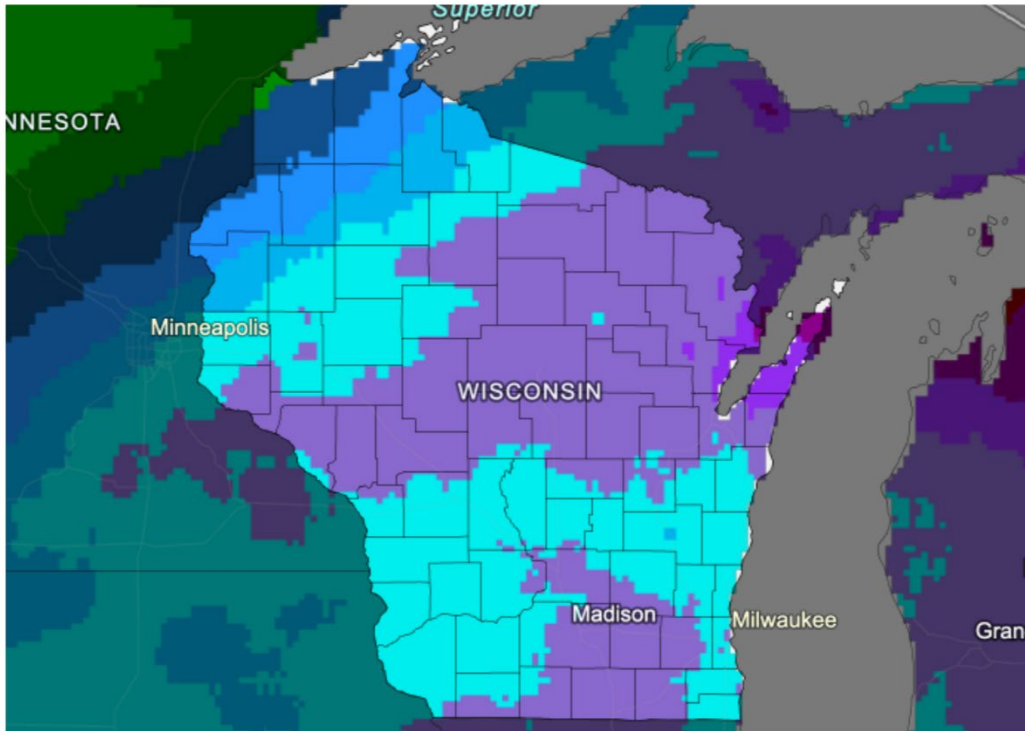
Generated 3/26/2025 at HPRCC using provisional data.

NOAA Regional Climate Centers

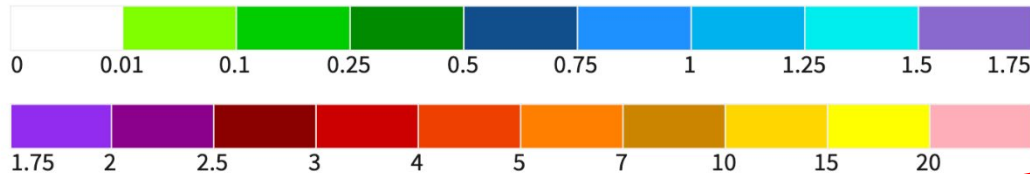
- Temperatures for the past month ranged from **28-36°F** in the N to **36-40°F** in the S.
- **6-8°F above normal** for most in the state, with pockets of **4-6°F above normal** in the E and **8-10°F above normal** in the W; warmer temps aided by the lack of snow cover.

7 Day Precip Forecast

7-Day Quantitative Precipitation Forecast for
March 26-April 2, 2025



Predicted Inches of Precipitation



Source(s): National Weather Service Weather Prediction Center

Last Updated: 03/26/25

Drought.gov

- **Statewide chances** for precip during the next 7 days.
 - Location: Statewide, but higher chances for south-central and west-central to northeast WI.
 - Timing: Rain & wintry mix **Friday, Saturday, and Sunday**. Snow possible **Wednesday (Apr 2)**.

NOTE: This map shows liquid-equivalent precipitation (i.e., rain plus melted snowfall).

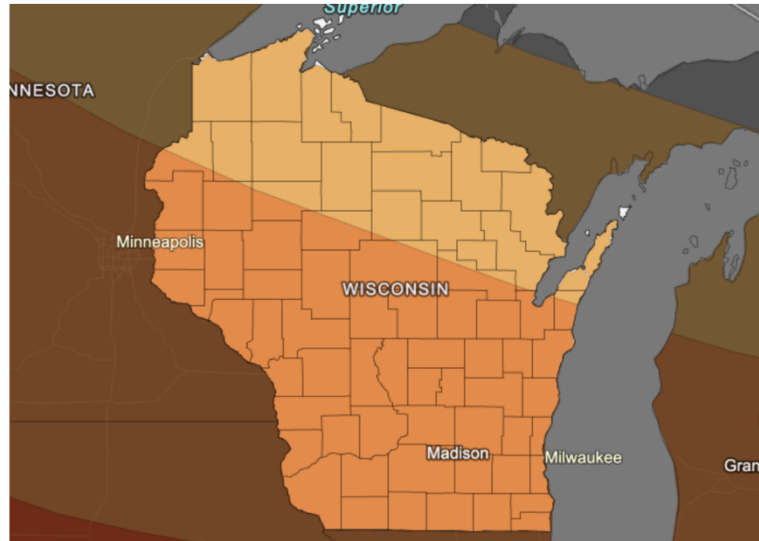
Check your area's [NWS forecast](#) for local predictions.

Forecast for 3/26/25 thru 4/2/25
(Begins at 6am CST)

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

8-14 Day Temp & Precip Outlook

8-14 Day Temperature Outlook for April 2-8, 2025



Probability of Below-Normal Temperatures



Probability of Above-Normal Temperatures



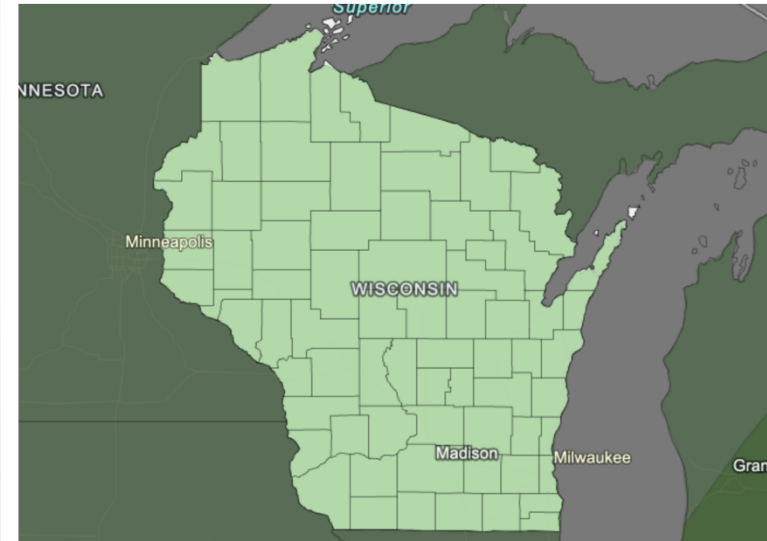
■ Near-Normal Conditions

Source(s): Climate Prediction Center

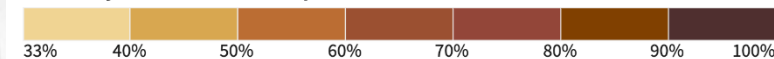
Last Updated: 03/25/25

Drought.gov

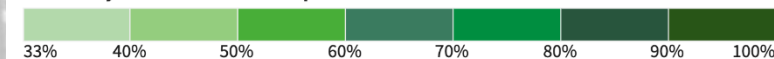
8-14 Day Precipitation Outlook for April 2-8, 2025



Probability of Below-Normal Precipitation



Probability of Above-Normal Precipitation



■ Near-Normal Conditions

Source(s): Climate Prediction Center

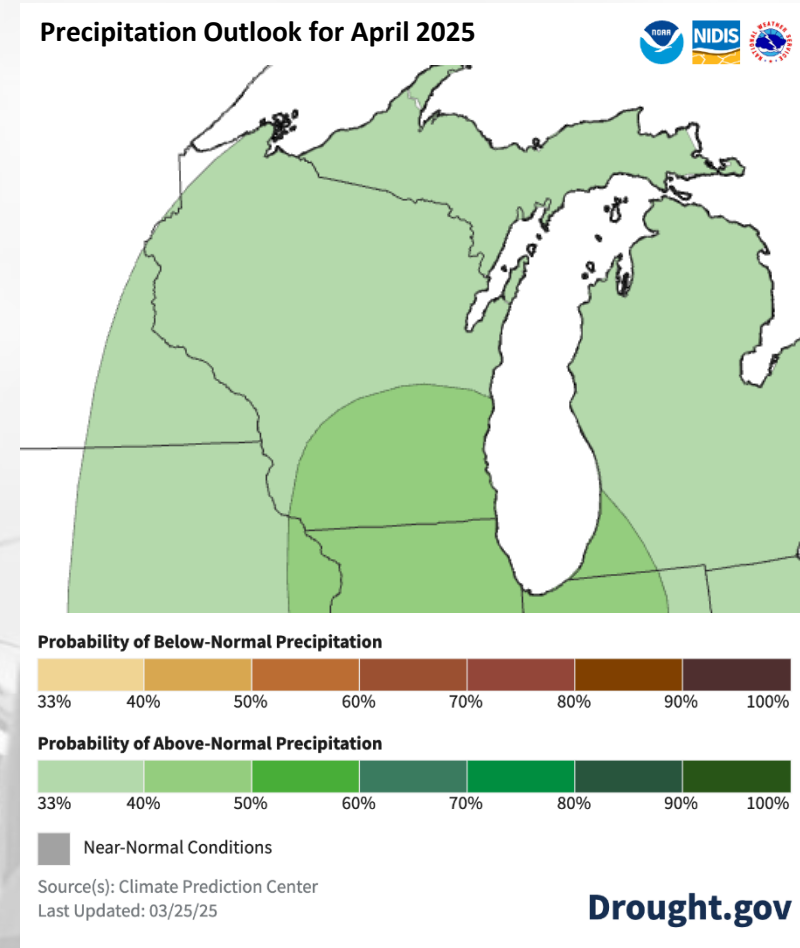
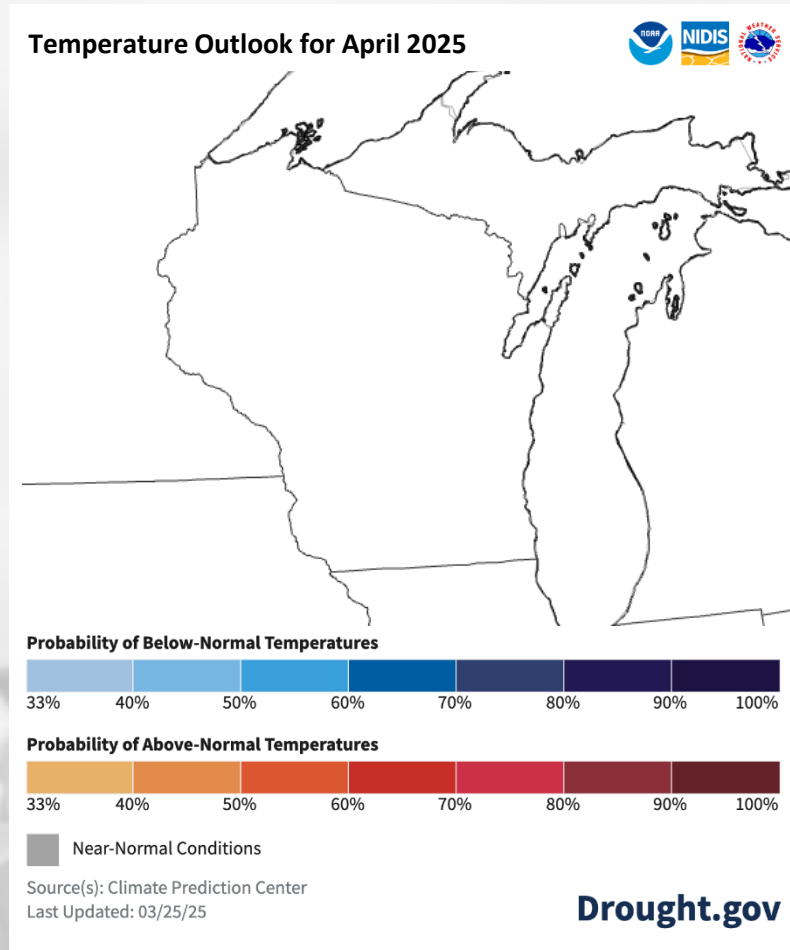
Last Updated: 03/25/25

Drought.gov

Start of April: Chances are slightly leaning toward **above-normal** temperatures and precipitation.

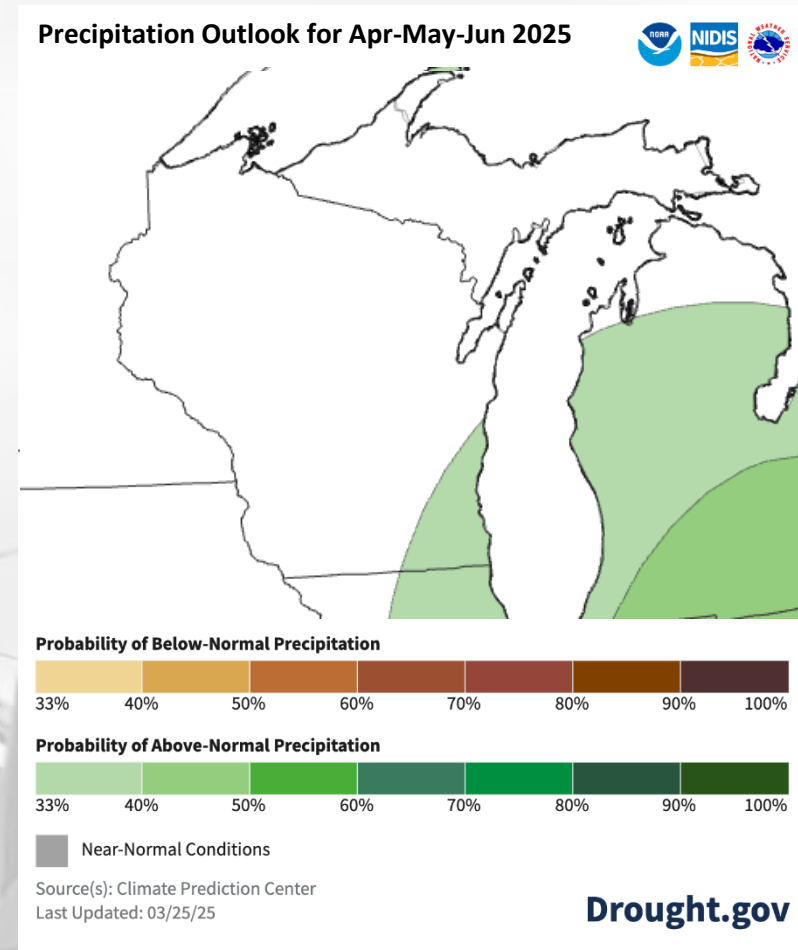
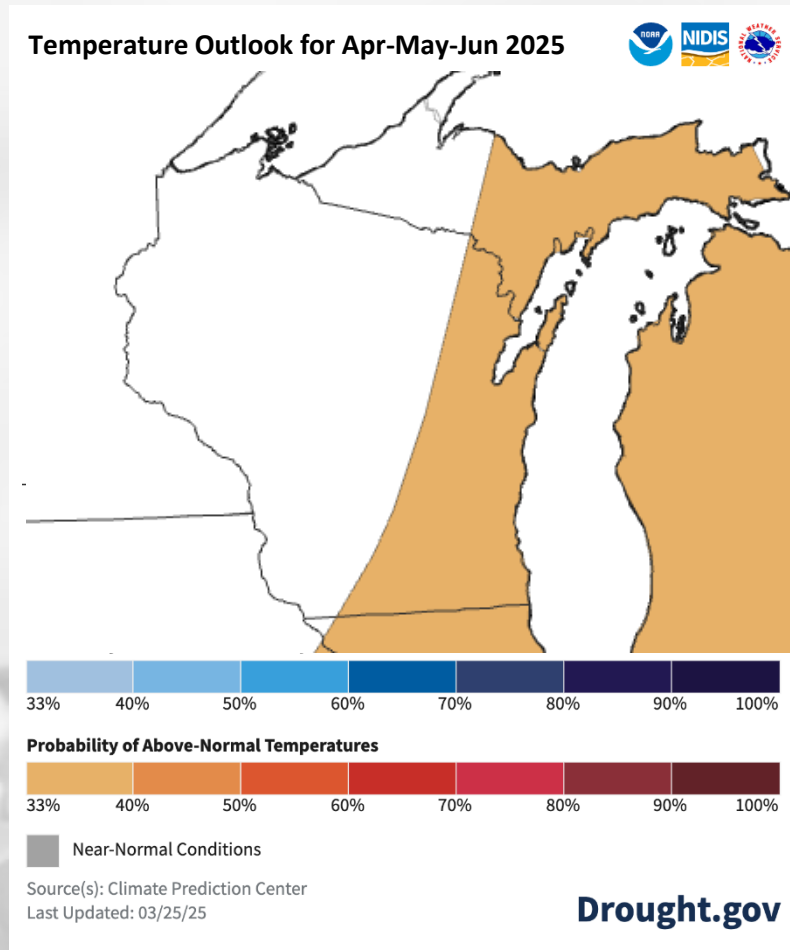
<http://www.cpc.ncep.noaa.gov/>

30 Day Temp & Precip Outlook



Month of April: Equal chances for above-, near-, or below-normal temperatures. Slightly leaning toward above-normal precipitation with lingering influence from La Niña.

90 Day Temp & Precip Outlook



Spring to Early Summer: Chances slightly lean toward **above-normal** temperatures and precipitation for S & E WI, with **uncertainty (equal chances)** for both temperature and precipitation for the rest of WI with lingering influence from La Niña.

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

Take-Home Points

Current Conditions:

- March has been a **warmer-than-normal** month, aided by increasingly sunny days and limited snowpack.
- March has been **wetter-than-normal** for most, except NW WI, in terms of precipitation (rain+melted snow).
- As of the end of March, snow cover is **limited to the northeast quarter of the state**.

Impact:

- Soil moisture estimates are **improving for most** due to recent precip, except for **deteriorating conditions** in NW WI.
- Over the last month, USDAM drought severity coverage **decreased** along E and S WI, but **increased** slightly in west-central WI.
- Deep soil frost has **thawed greatly for most** but **lingering (20"+)** for some. Wisconet soil temp measurements at 20" depth are mostly **above freezing**.

Outlook:

- Statewide chances for 7-day precip; more so for **south-central & west-central to northeast WI**. Potential for impactful **wintry mix** Fri-Sun and **snow** possible Wed (Apr 2).
- For the beginning of April, chances are slightly leaning toward **above-normal** temperatures and precipitation.
- April as a whole and the rest of spring show a slight lean toward **above-normal** temperatures and precipitation for S & E WI, with **uncertainty (equal chances)** for both temperature and precipitation for the rest of WI.

Agronomic Considerations

Field Work

- Soil temperatures to 4" still cool, ensure temps are reaching 50 degrees at a minimum before planting. (See WiscoNet)
- Avoid trafficking fields in moist conditions to prevent compaction and rutting.
- Avoid fertilizer applications in wet and cool conditions. Nitrogen loss is greater in wet conditions.
- In drier regions of the state, consider earlier-termination of cover crops to retain soil moisture if conditions remain dry.

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.

Pest Management

- Start scouting fields by foot to note any early emerging weeds.

Forage Management

- Check alfalfa fields for signs of winterkill.

Small Grains

- Assess winter grain stands. Likely too early to fertilize winter wheat yet.
- If warmer weather continues, there is potential for early planting of spring grains, but be aware of continuing possibility of freeze.

Livestock

- Keep livestock out of critical and sensitive areas with soft, muddy ground.
- Regulate body temperature and wetness of calves. Make sure dry bedding (e.g., hay, grass) is available to keep calves dry.

Specialty Crops

- Small scale producers may consider tarping fields with adequate soil moisture to avoid spring rains for later planting
- Check overwintered high tunnel crops such as hardy greens for winter cutworm damage which are active at 40F
- Prune fruit trees and grapevines while still dormant

Contact Info



Photo credit: Bridgette Mason
Bristol Wisconet Station (3/15/25)

Steve Vavrus

State Climatologist
Wisconsin
sjvavrus@wisc.edu

Bridgette Mason

Assistant State Climatologist
Wisconsin
bmmason2@wisc.edu

Dennis Todey

Director
Midwest Climate Hub
dennis.todey@usda.gov

Anne Pfeiffer

Crops & Soils Program Manager
UW-Madison Division of Extension
anne.pfeiffer@wisc.edu

Kristin Foehringer

Resource Conservationist
NRCS
kristin.foehringer@usda.gov

Rue Genger

Emerging & Specialty Crops Program Manager
UW-Madison Division of Extension
rkgenger@wisc.edu