Wisconsin Ag Weather Outlook

Week of April 7, 2024

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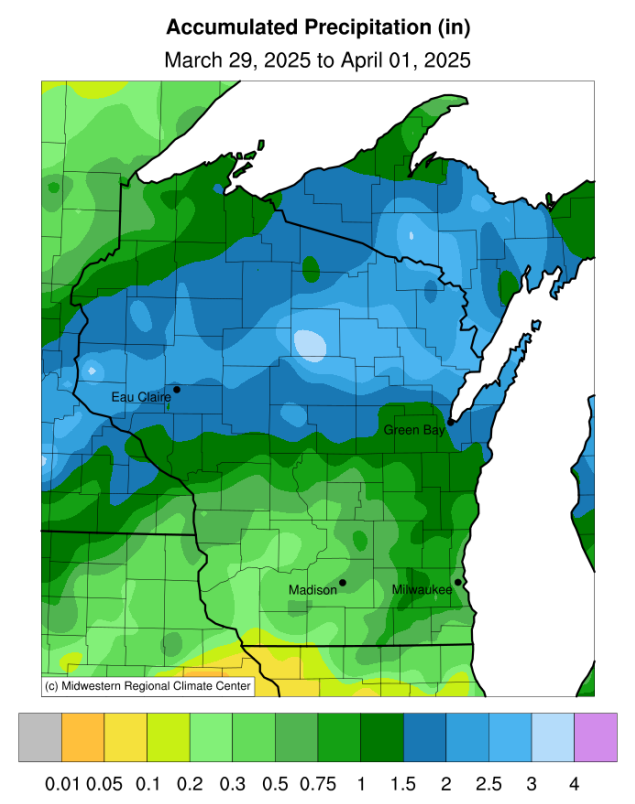
Key Points

Navigate to select slides by clicking on the links below.

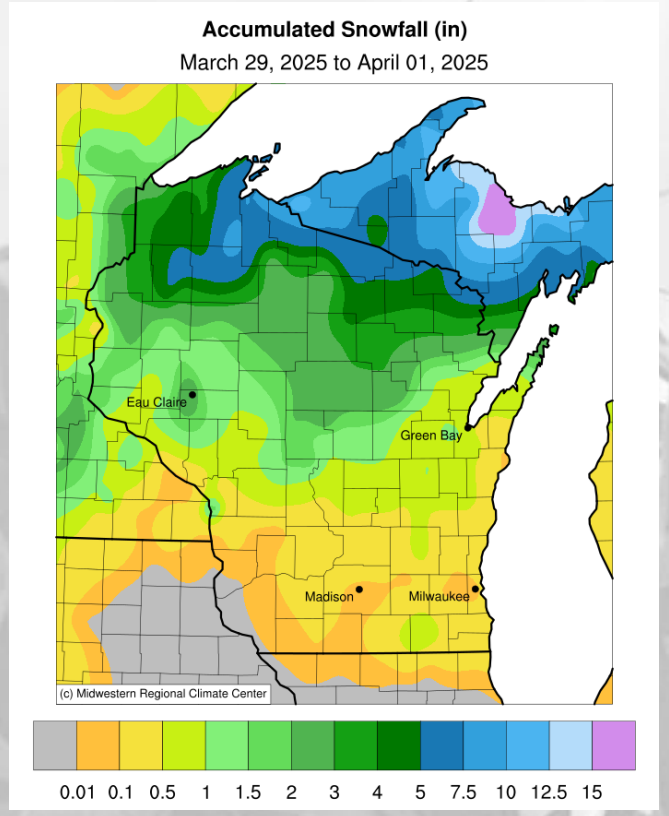
1) Last week was cooler-than-normal statewide, following up what had been a relatively warm March.
2) Drought conditions improved in the north last week following the heavy precip event at the end of March.
3) Wildfire risk is high in the SW corner of the state.
4) Statewide chances for precip over the next week, with mid-April leaning wetter-than-normal.

- *For this week's agronomic recommendations from UW Extension, click here.*

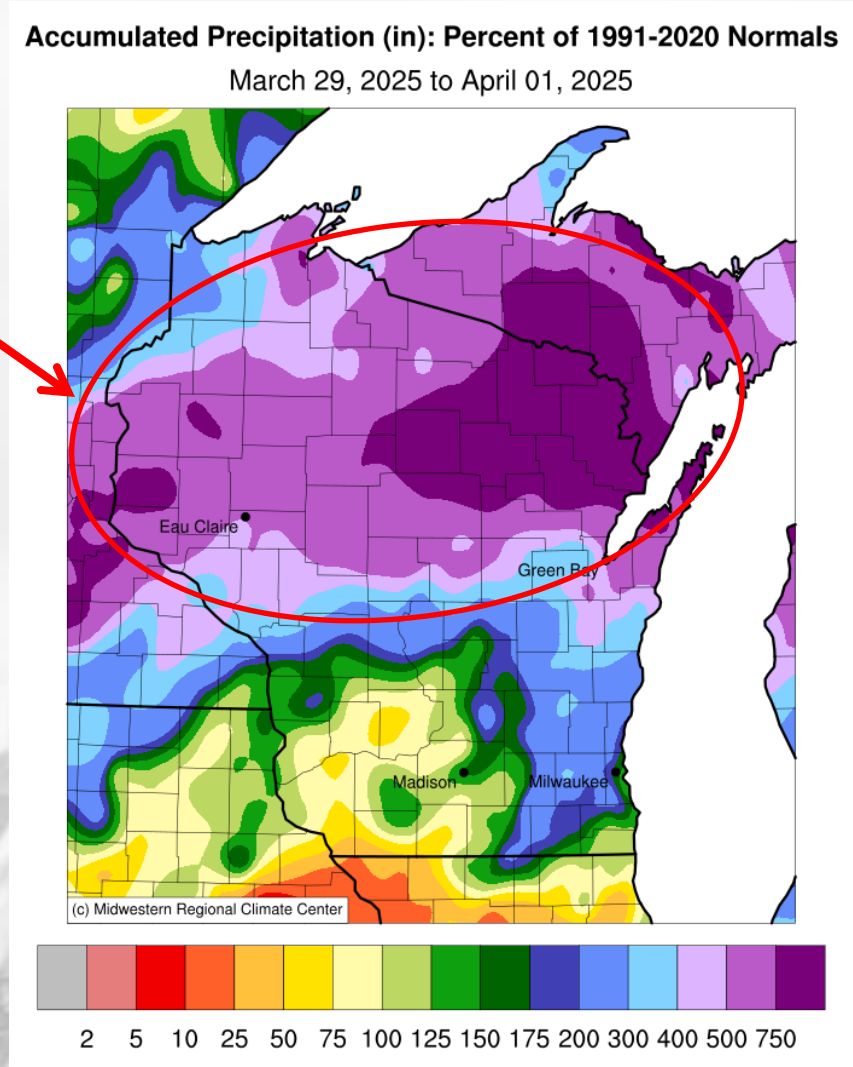
Late March Winter Storm



- A **major winter storm** impacted the northern half of WI during the last days in March. (NWS Summary)
- **Significant ice accumulations** in the north (0.25-0.5+").



4-7x *as much precip was received during this period compared to normal!*



https://mrcc.purdue.edu/CLIMATE

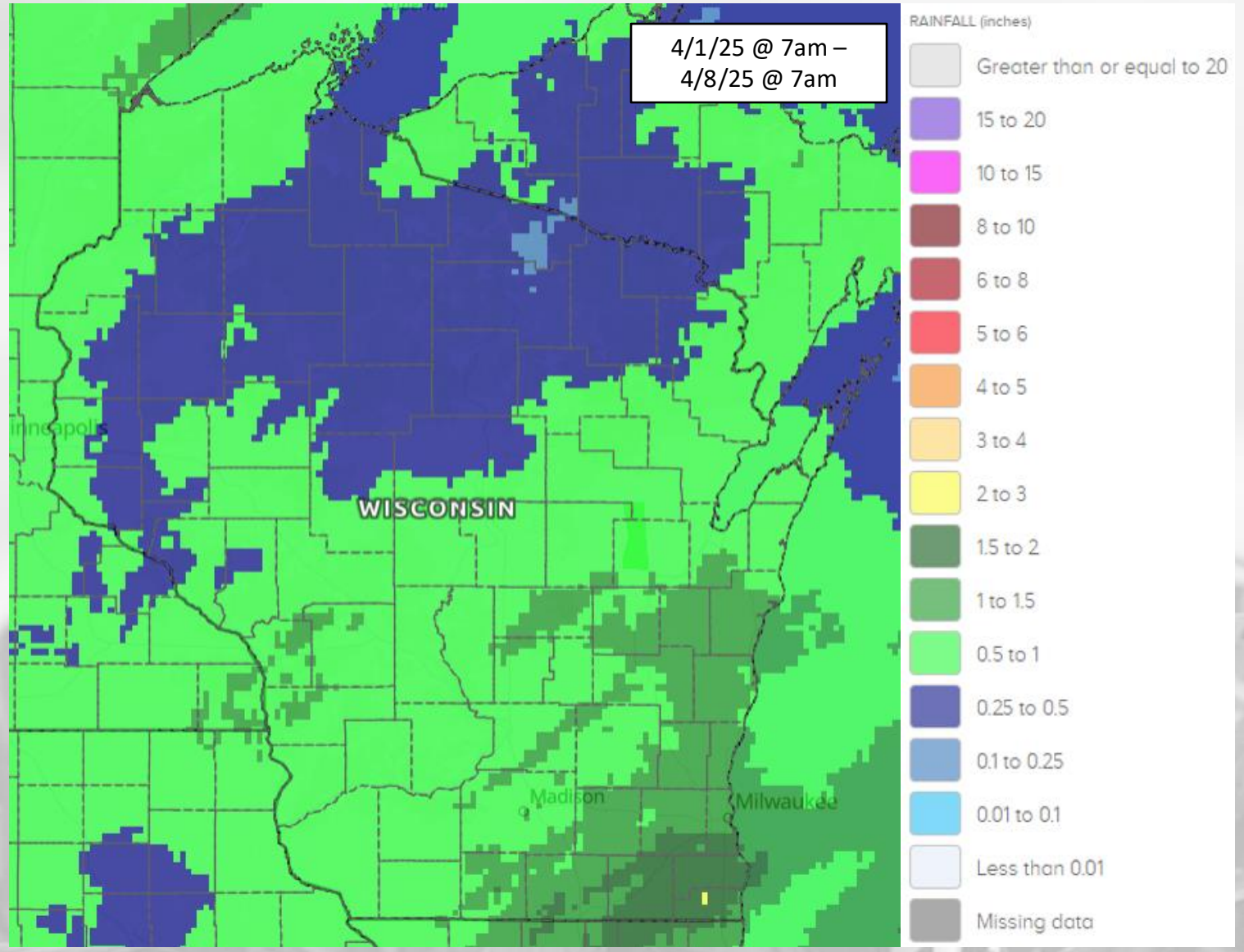
Late March Winter Storm

Precip stats by climate division → March 29 – April 1

Climate Division	2025 Precip	Normal Precip	% of Normal
WI01	0.33	1.64	492
WI02	0.31	2.14	692
WI03	0.33	2.26	695
WI04	0.39	1.80	467
WI05	0.39	1.15	294
WI06	0.98	1.36	356
WI07	0.46	0.41	89
WI08	0.47	0.50	108
WI09	0.41	0.41	156

https://mrcc.purdue.edu/CLIMATE

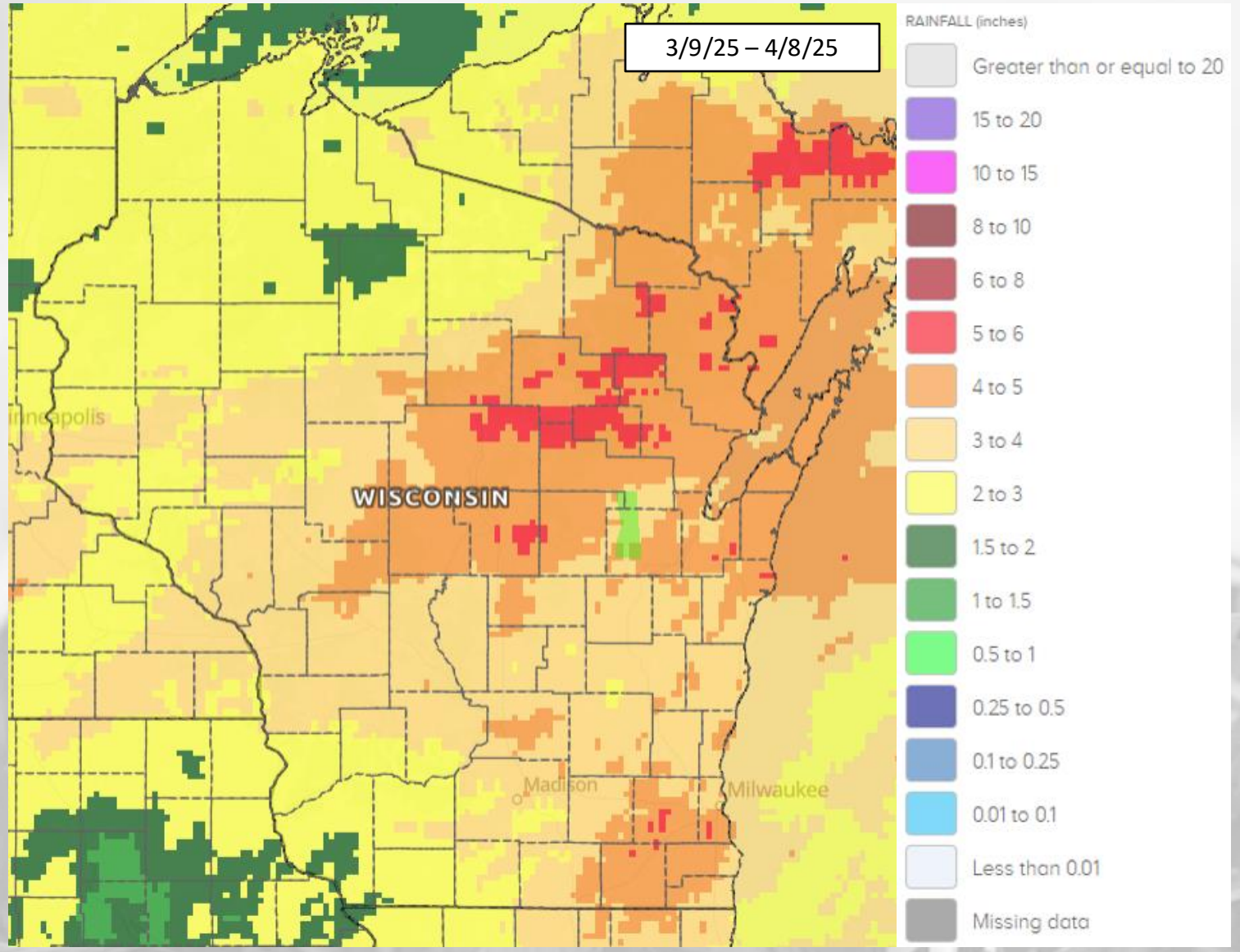
7 Day Precip



- **Half inch or more** of precip fell across most of the state last week.
- Highest totals in the SE corner of the state → **1-2”**
- Lower totals across the northern counties, where precip fell mainly as snow → totals of **0.5” or less**

https://water.noaa.gov/

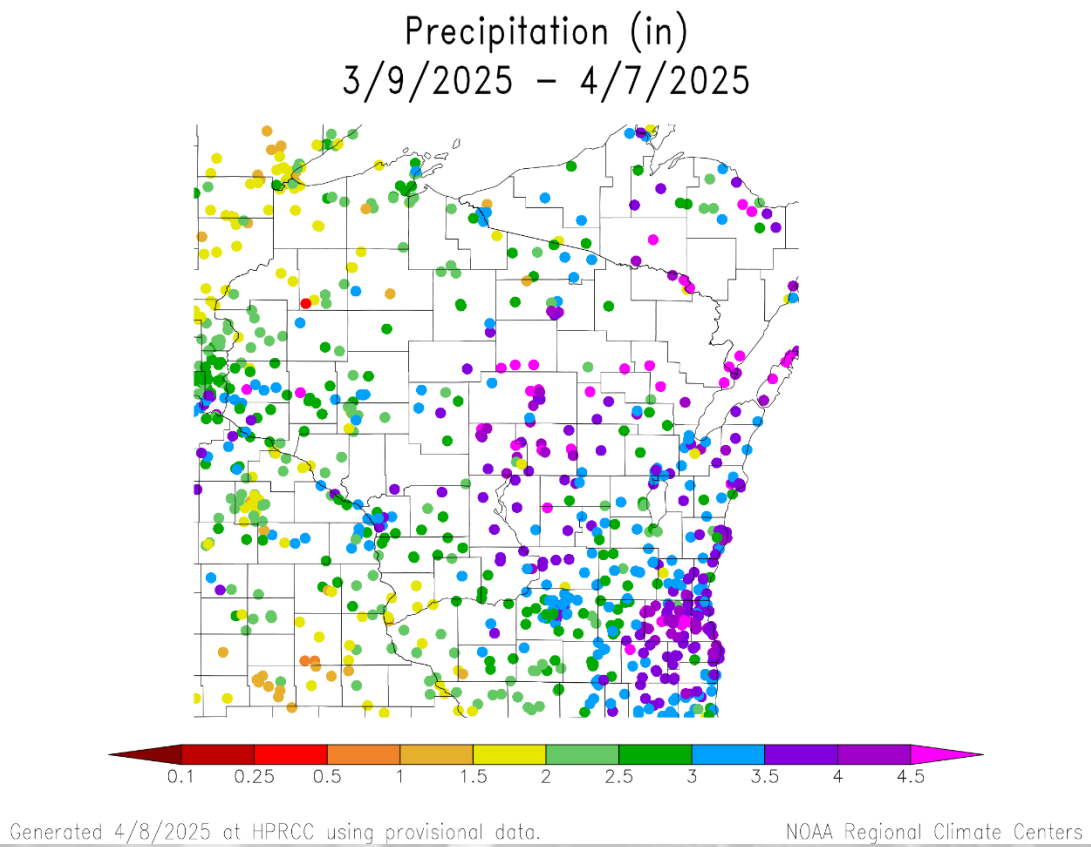
30 Day Precip

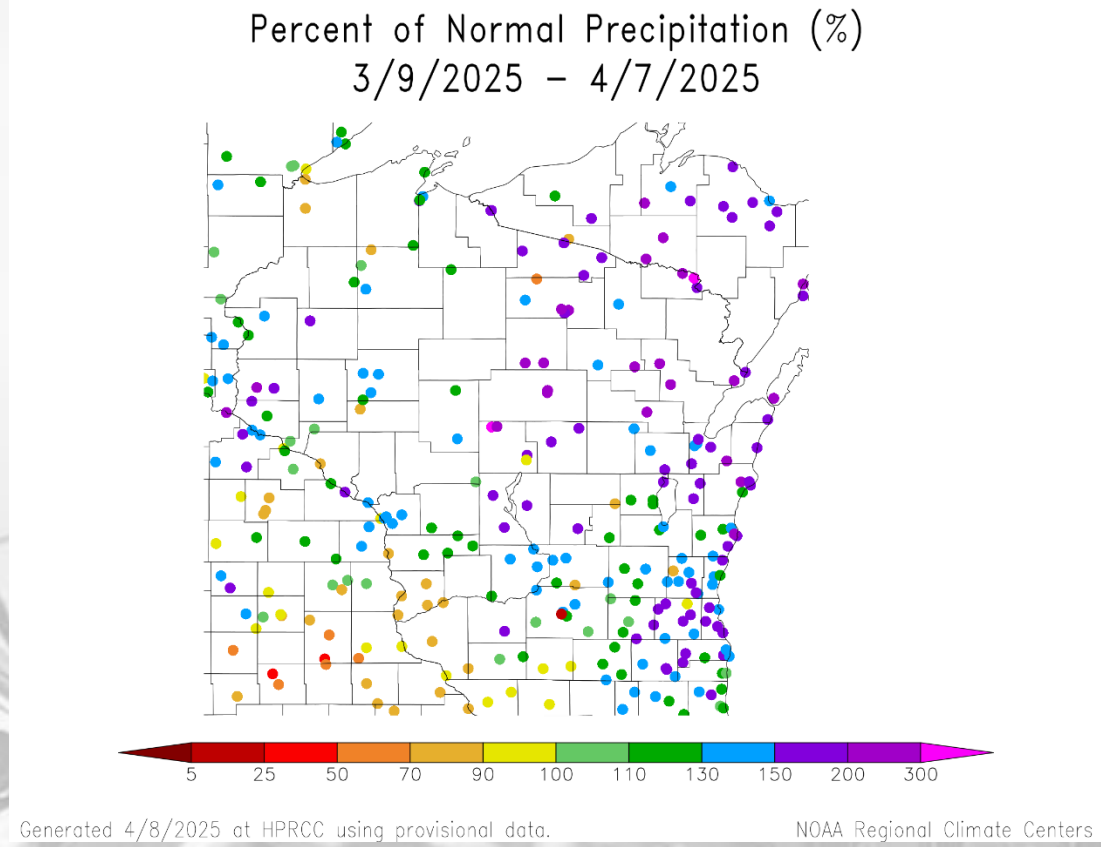


- Heaviest precipitation concentrated in the NE & far SE counties → **4-6”**
- **Multiple inches** of precipitation fell across the north during the late March ice storm.
- **2-4”** across the majority of WI.

https://water.noaa.gov/

30 Day Precip Total/% Avg.

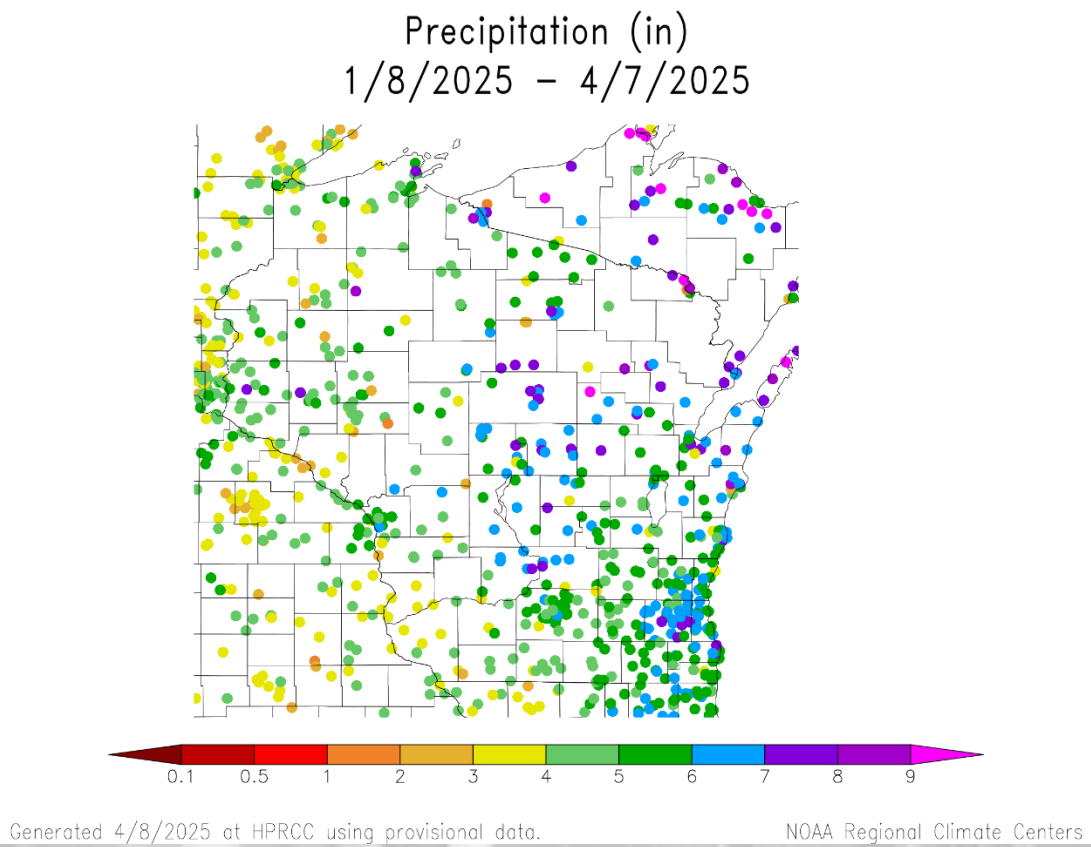


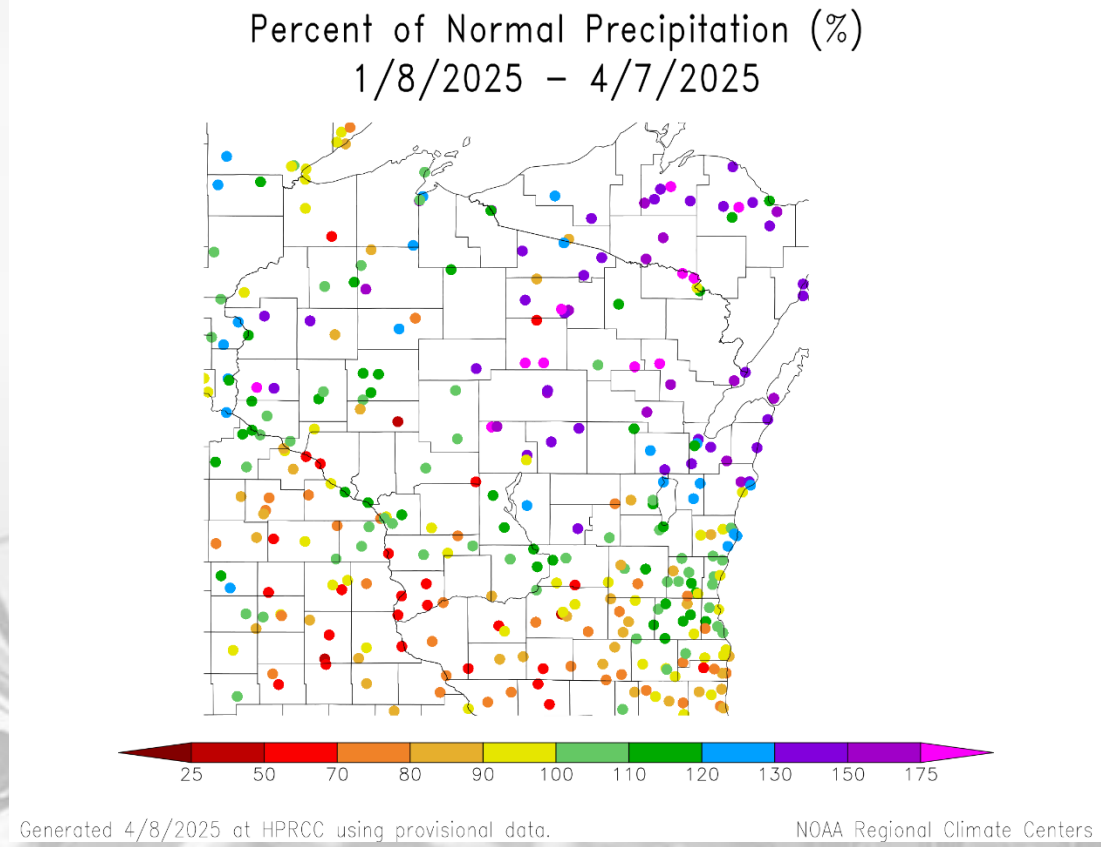


- Precip totals over the past 30 days were **more concentrated on the eastern side** of the state.
  - **3" or more** was common across stations in the Central & East → **130% or more** of 30-year normal.
  - Further west, **1.5-3"** was common → below-to-near normal; **most below normal in the far SW**.

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

90 Day Precip Total/% Avg.

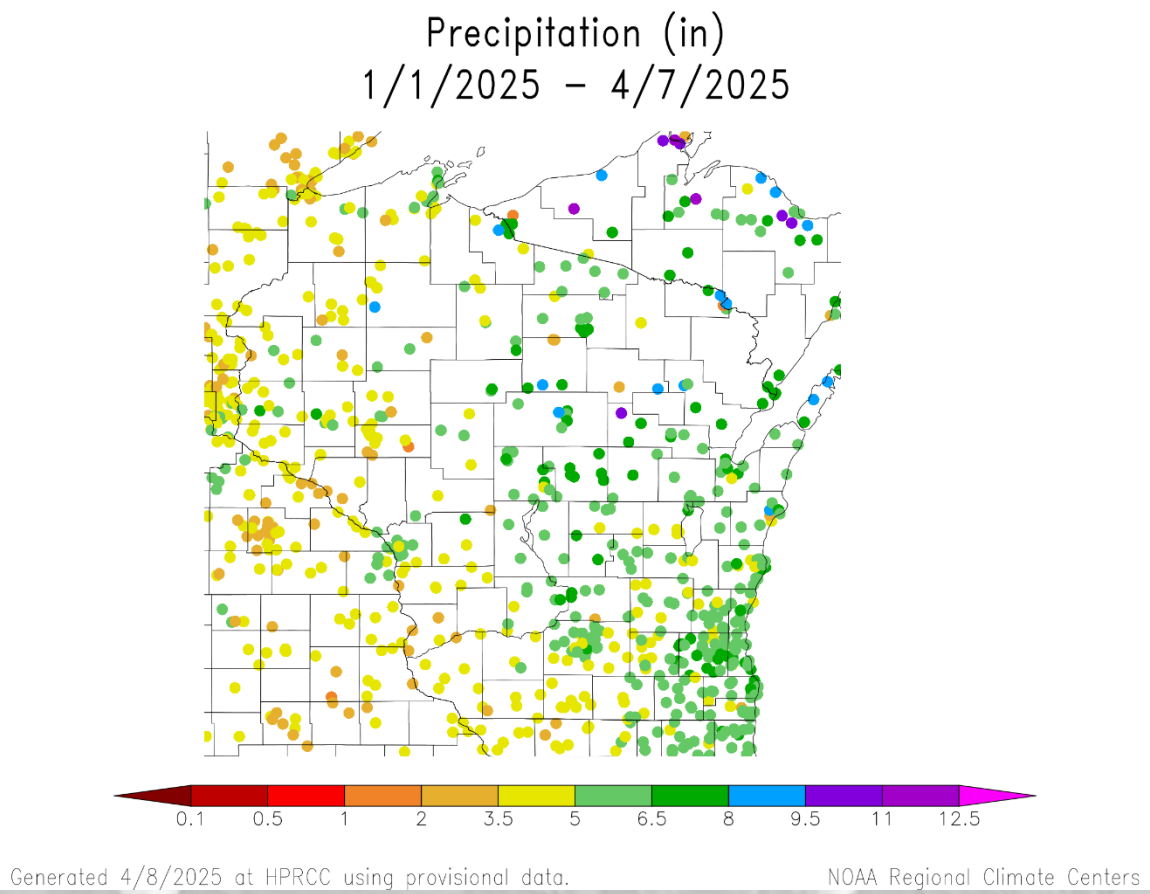


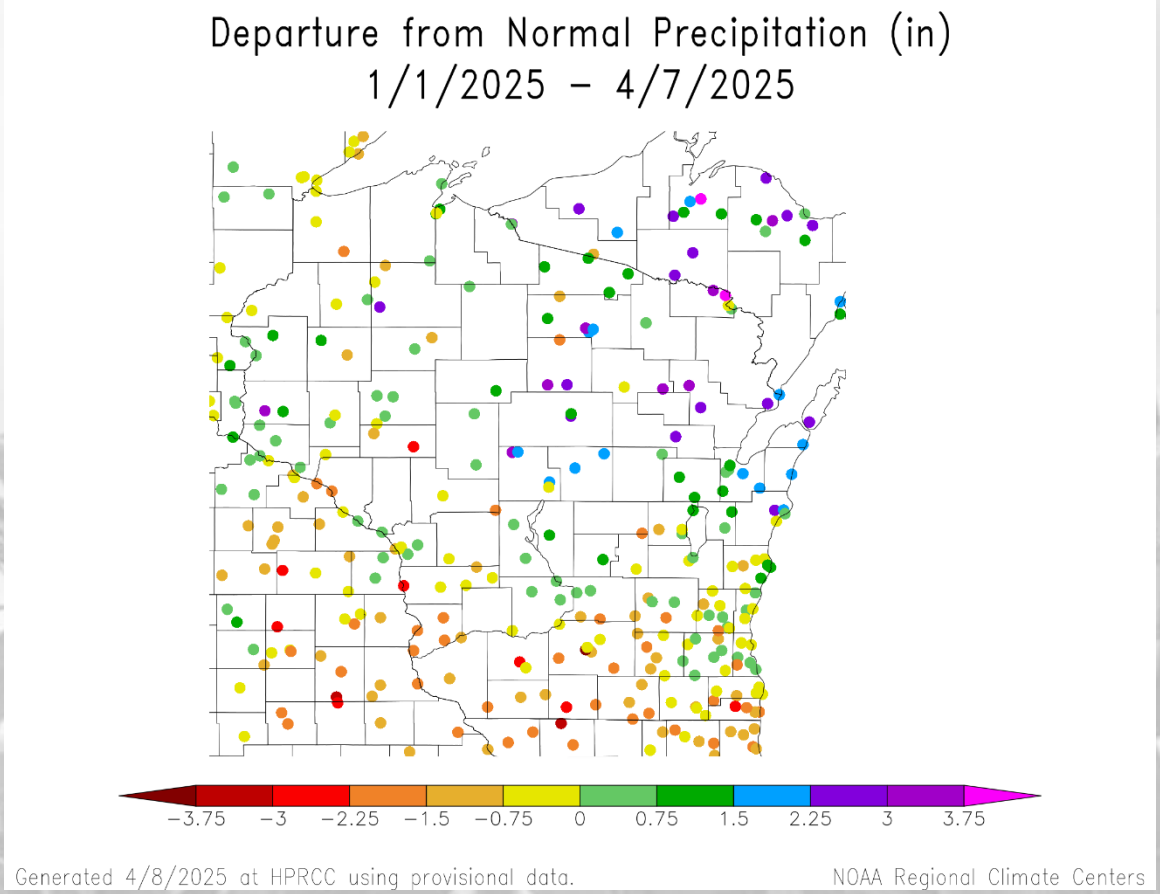


- **4-6”** common across most of WI, with **totals highest on the Eastern side** → 6” or more common
  - **At or above** the 30-year normal
- **Below the 30-year normal** is common in the S & W → **<4”** common in the W/SW.

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

2025 Precipitation (so far)





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

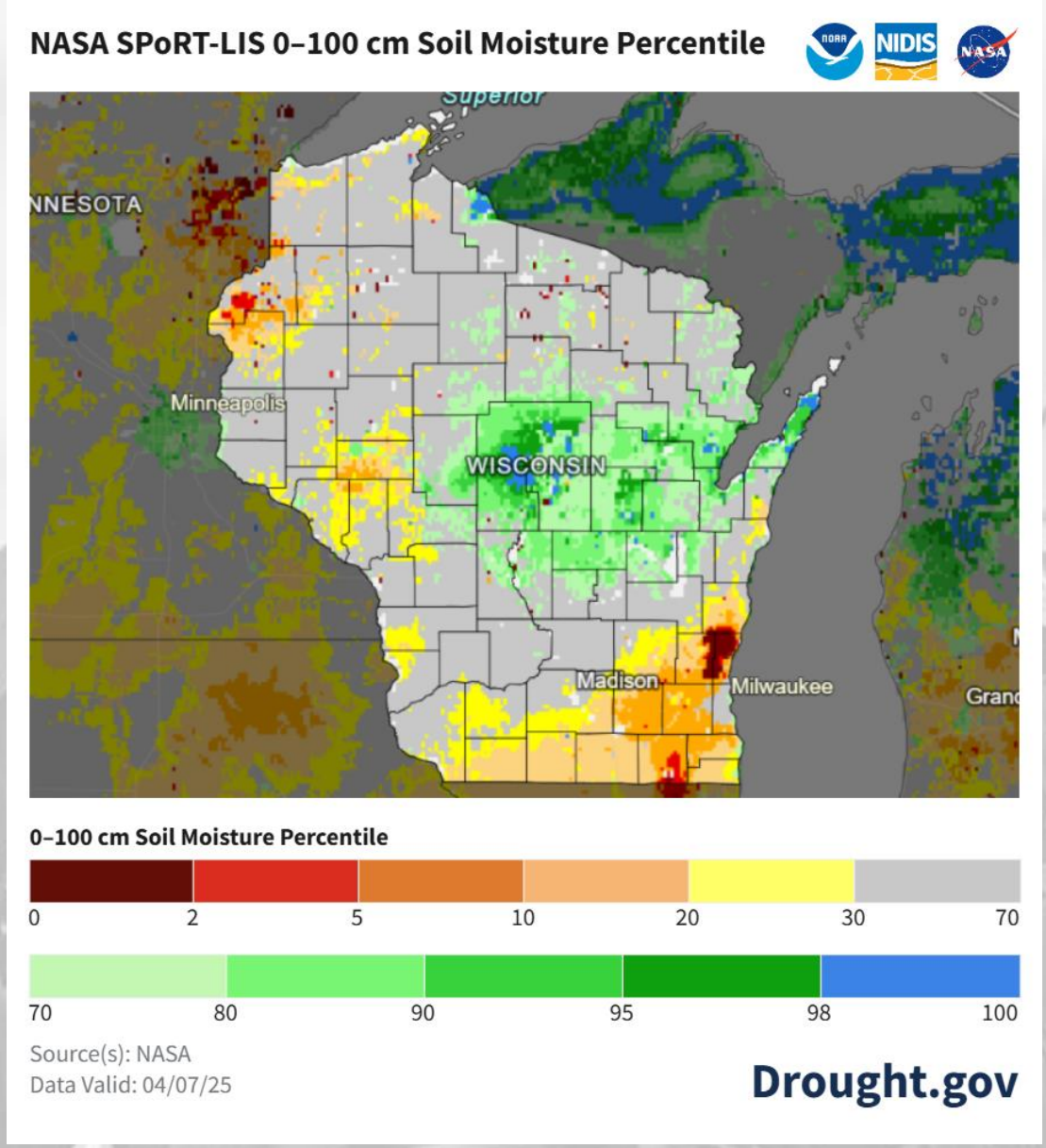
Soil Moisture Models

- **70th percentile or higher** in the central and NE counties with the high precipitation totals from late March; also, this is where the state has been the wettest since Jan. 1.
- **20th percentile or lower** in the south where the last 90 days have been drier-than-normal.
- **Near-normal percentiles** for the majority 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.

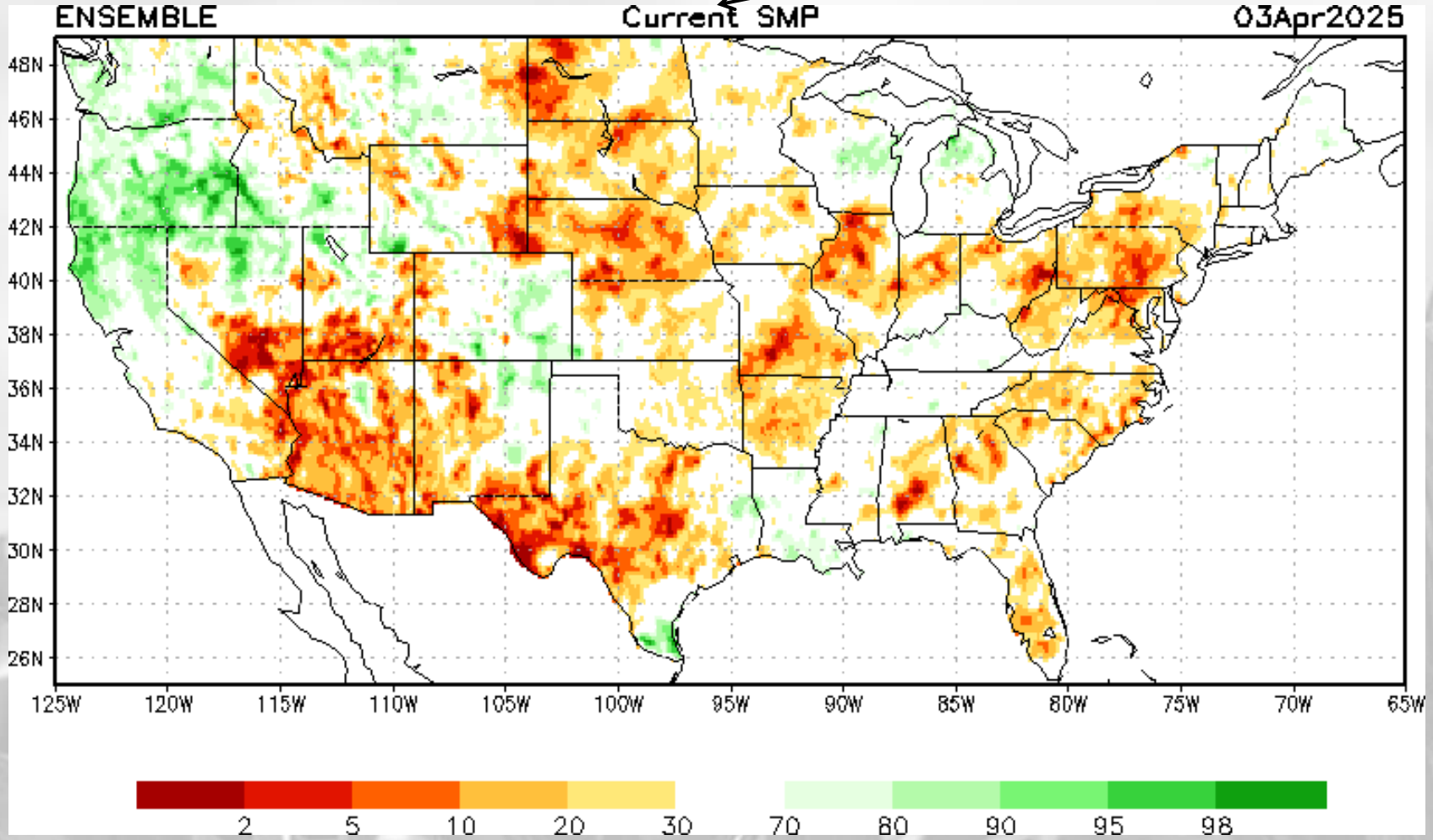
It's worth noting that each soil moisture model has their own characteristics and input variables, so there tends to be variation between models. Thus, it's worthwhile to look at multiple models opposed to just one.

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



Soil Moisture Models

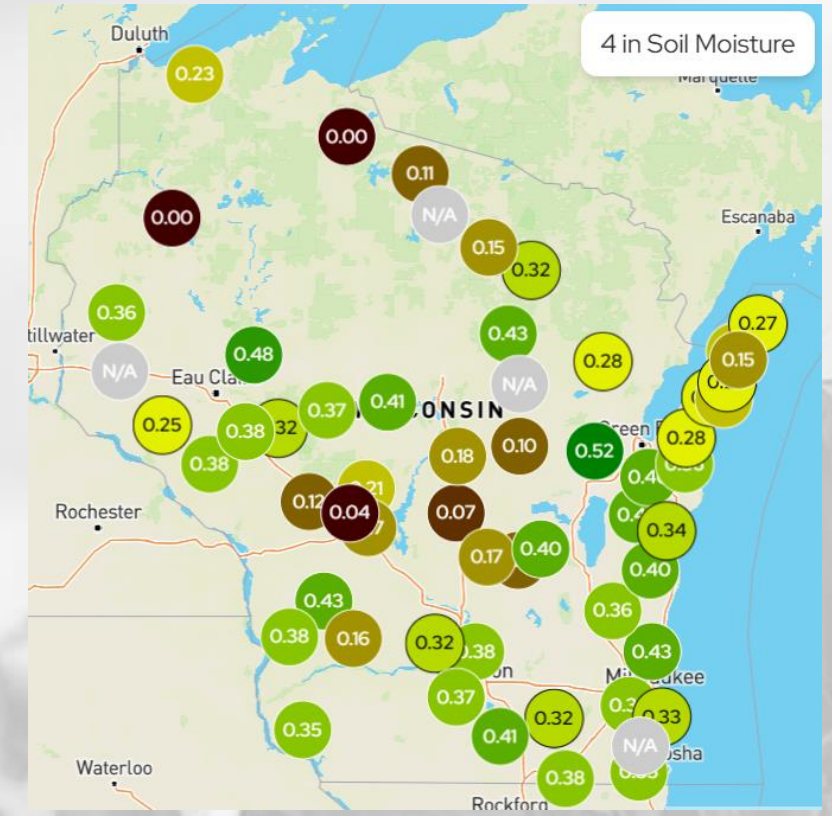
NOTE: this map displays the soil moisture percentile for Apr. 3. It was the most recent update on Apr. 8.

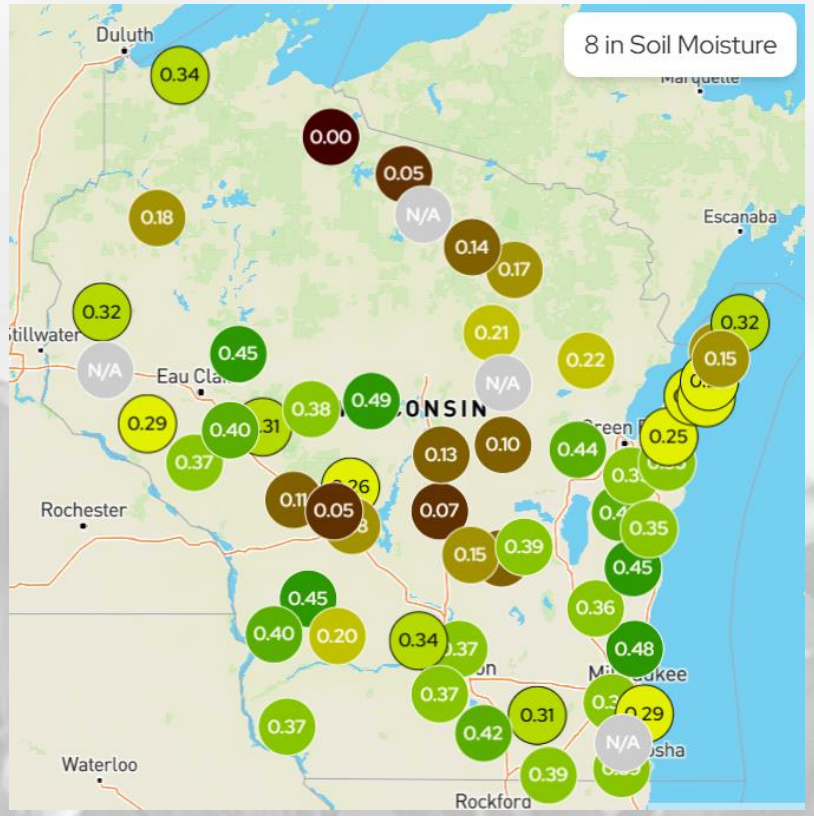


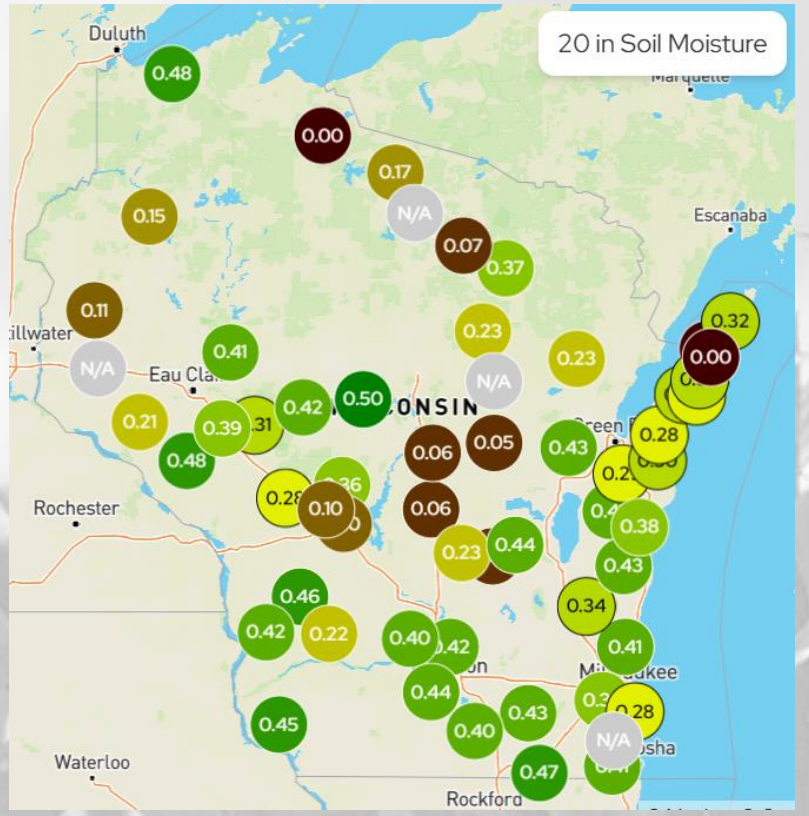
https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml

Wisconet Soil Moisture

Maps showing soil moisture conditions on
April 8th @ Midday



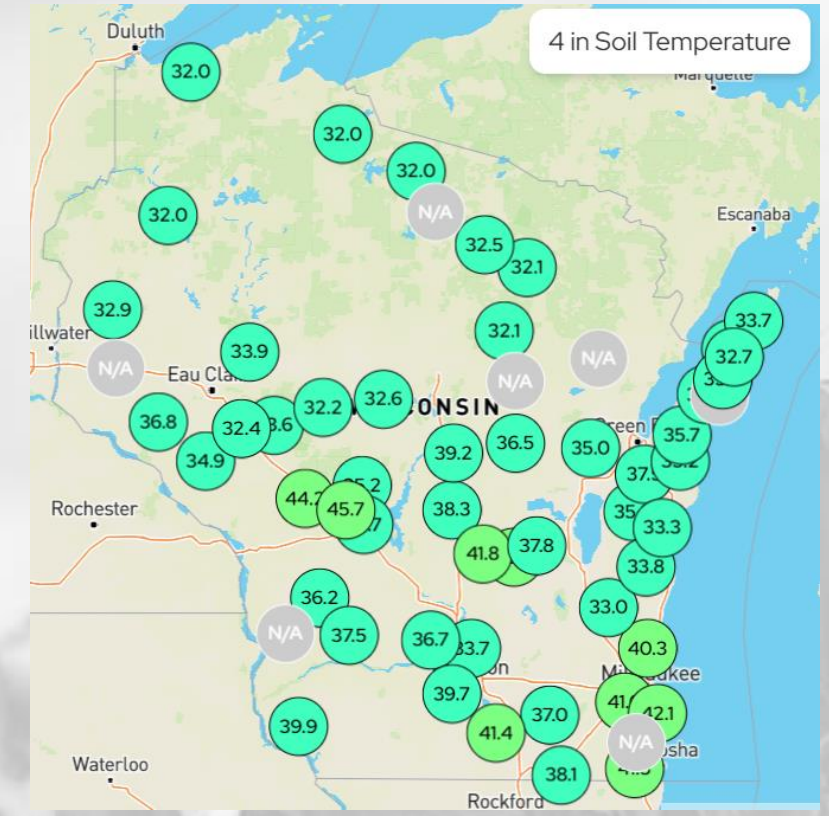


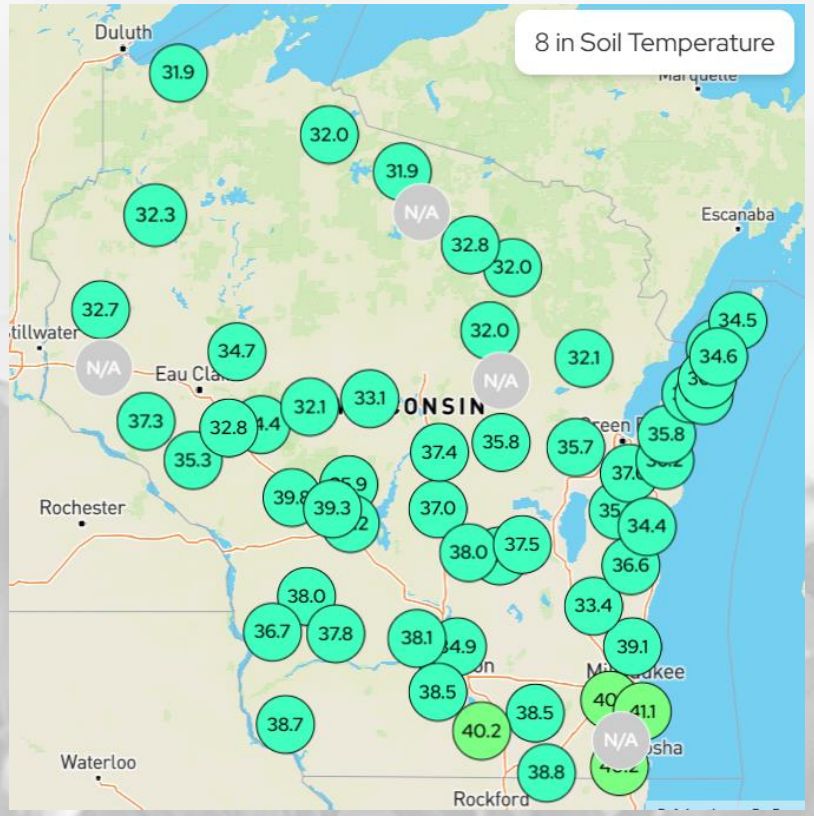


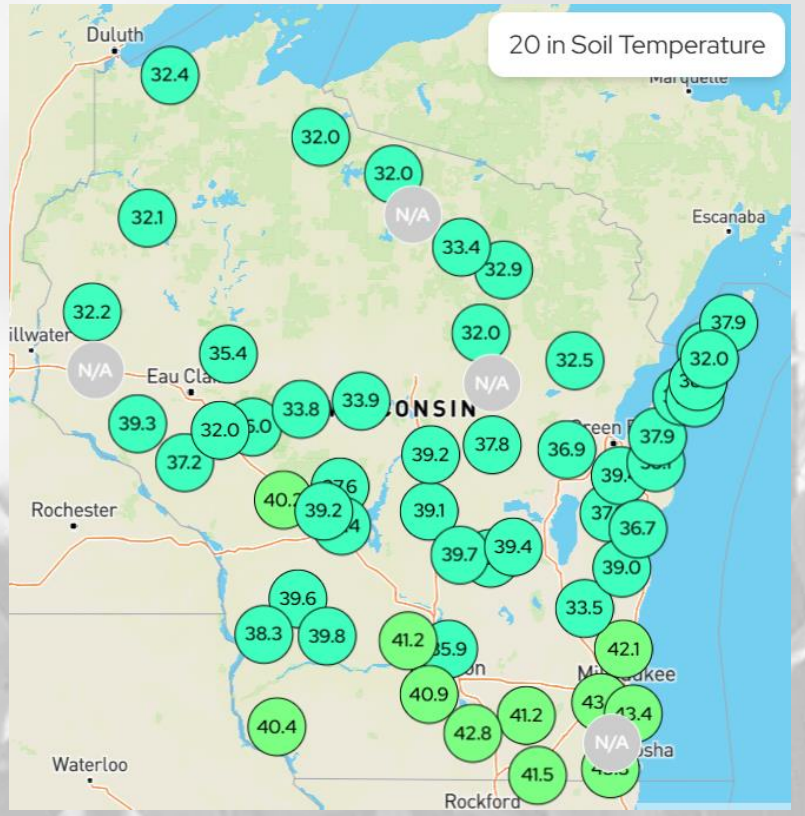
https://wisconet.wisc.edu/

Wisconet Soil Temperature

Maps showing soil temperature conditions
on April 8th @ Midday

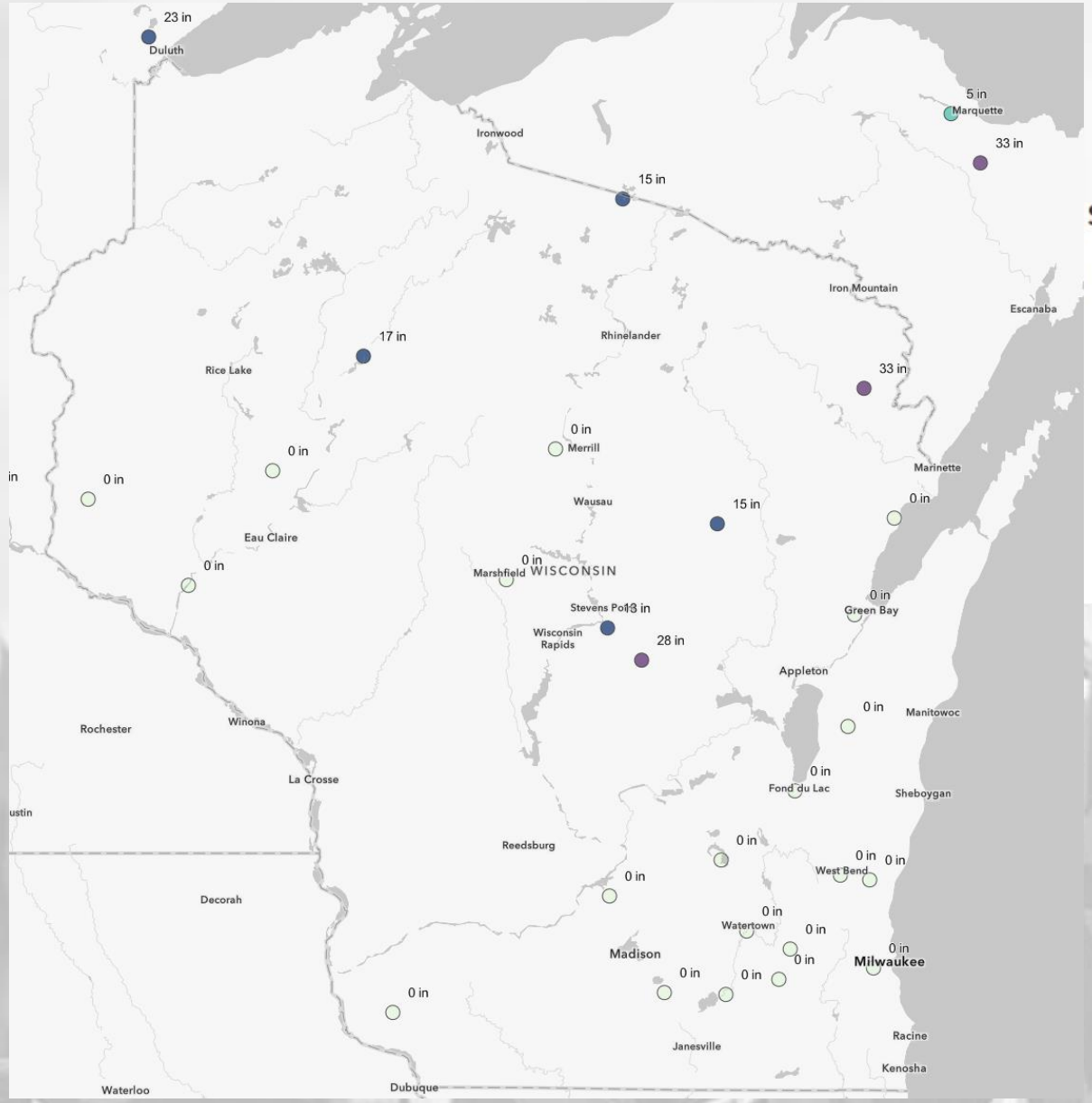


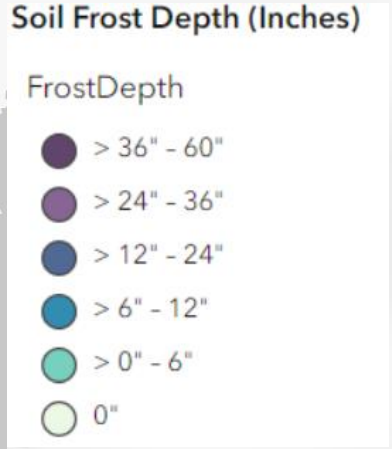




https://wisconet.wisc.edu/

Frost Depth





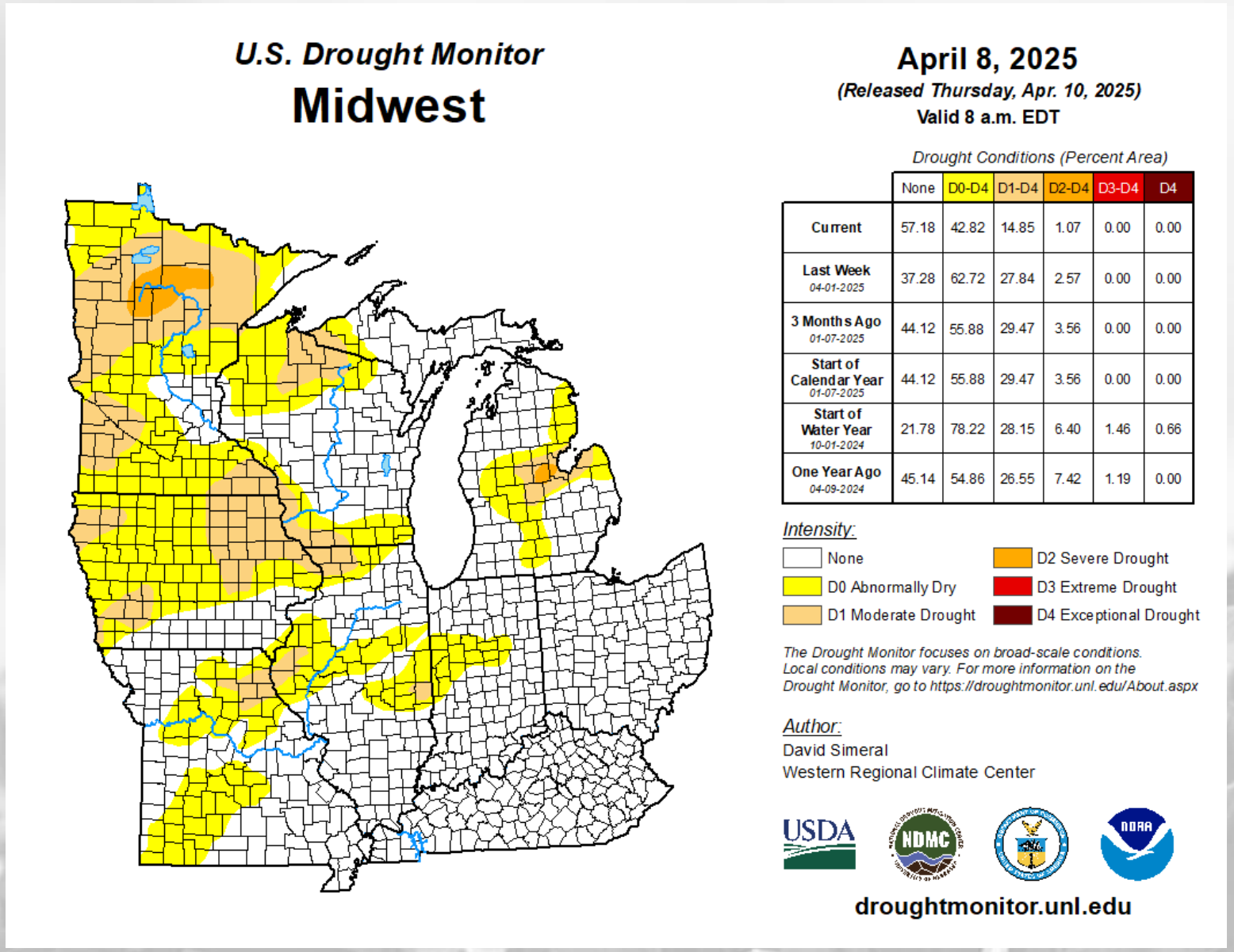
- Deep soil frost has **continued to thaw** since last week.
- Frost depth of **greater than 1 foot** is common across the north, but near surface soils are thawed.
- Southern & eastern parts of the state are **virtually frost free**.

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 4/10/25

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

US Drought Monitor

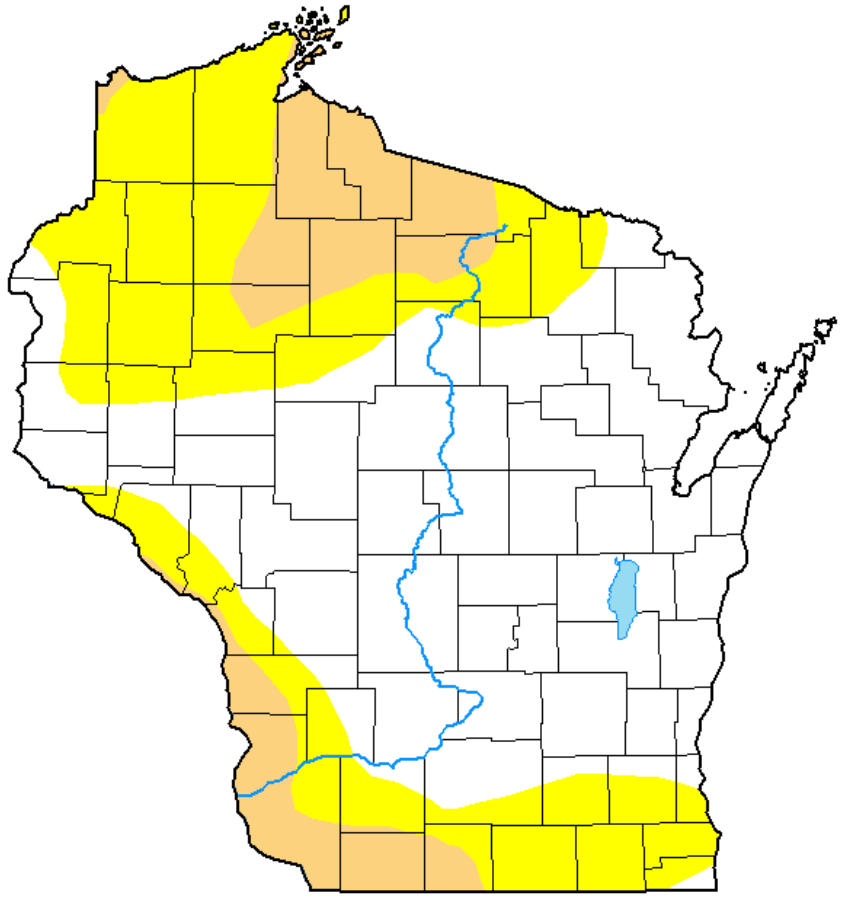


- Compared to last week:
  - **Decrease** in all drought categories
- **1-2 class improvement** across northern & SE WI resulting from precip over the past 2 weeks.
- **1.1%** of the region remains in D2 drought, **down 1.5%** from last week.
- **>85%** of the region is drought free (14.8% in D1 or D2).

Note: D0 is not considered drought.

http://droughtmonitor.unl.edu/

US Drought Monitor



April 8, 2025
(Released Thursday, Apr. 10, 2025)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	55.24	44.76	13.81	0.00	0.00	0.00
Last Week 04-01-2025	42.79	57.21	29.27	0.00	0.00	0.00
3 Months Ago 01-07-2025	36.12	63.88	39.54	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 04-09-2024	24.97	75.03	28.36	5.81	0.00	0.00

Intensity:

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

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

Author:
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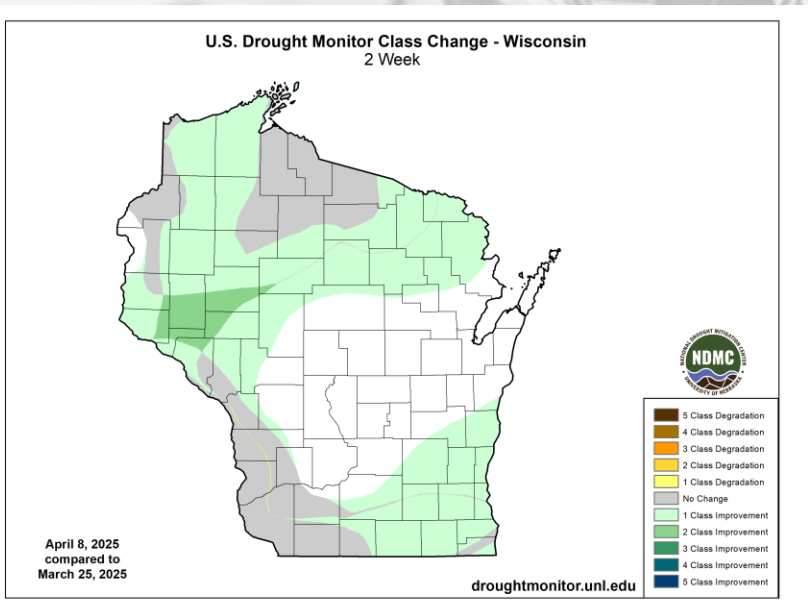
droughtmonitor.unl.edu

http://droughtmonitor.unl.edu/

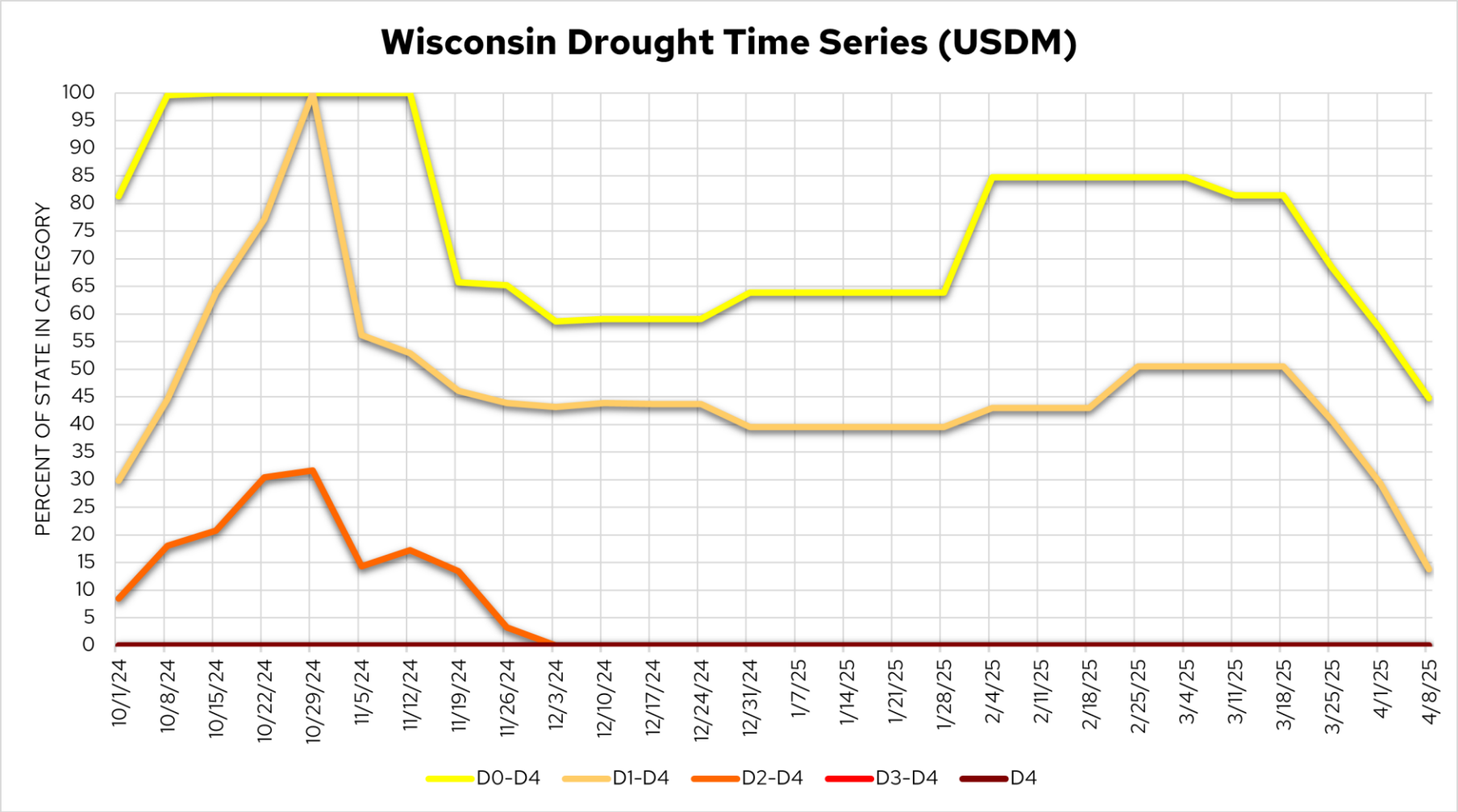
Amount of state in:

- D1-D4 – 13.8% ↓
- 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.

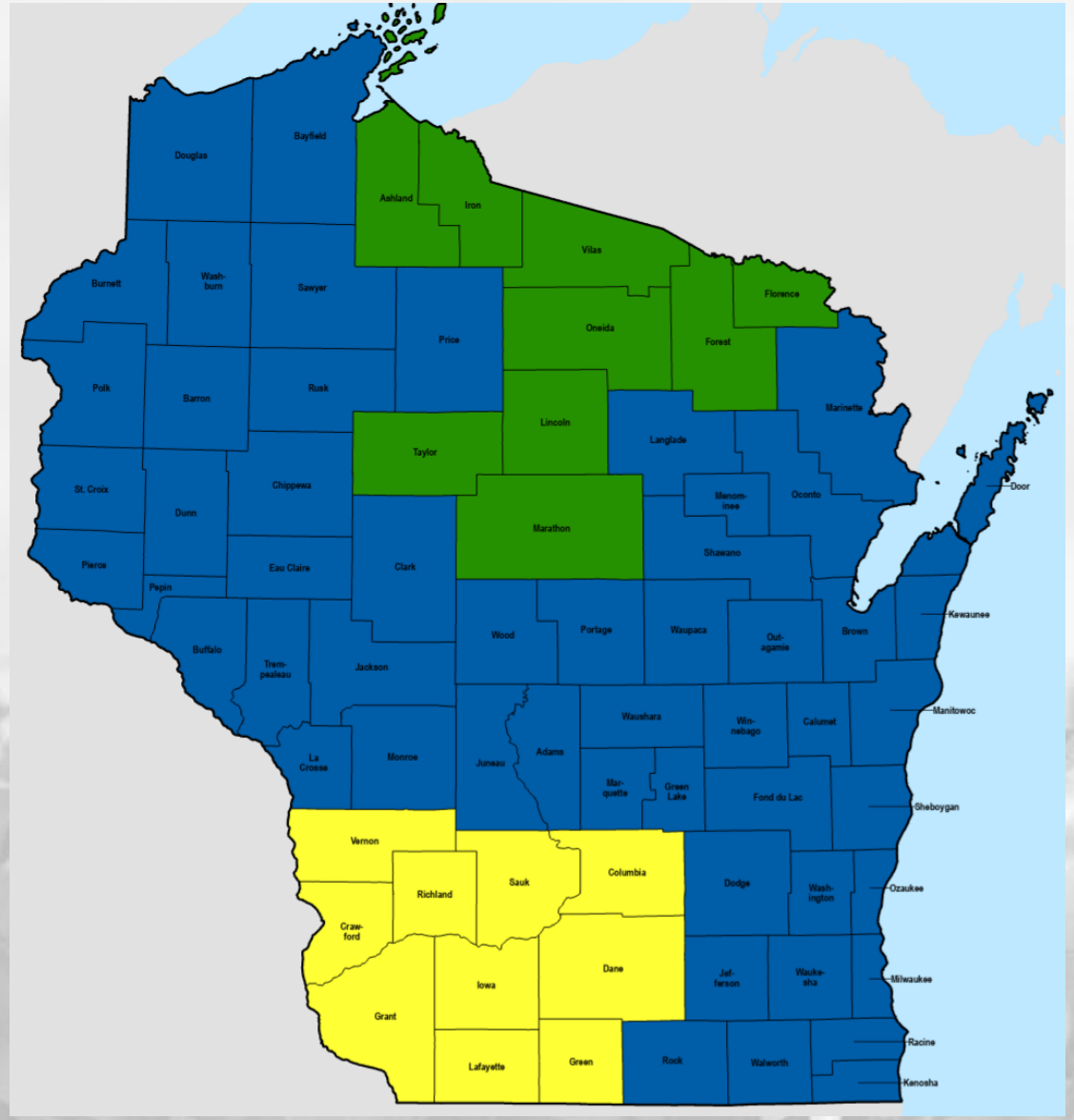


USDM Time Series



http://droughtmonitor.unl.edu/

Wildfire Risk



Fire Danger
- Low
- Moderate
- High
- Very High
- Extreme

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

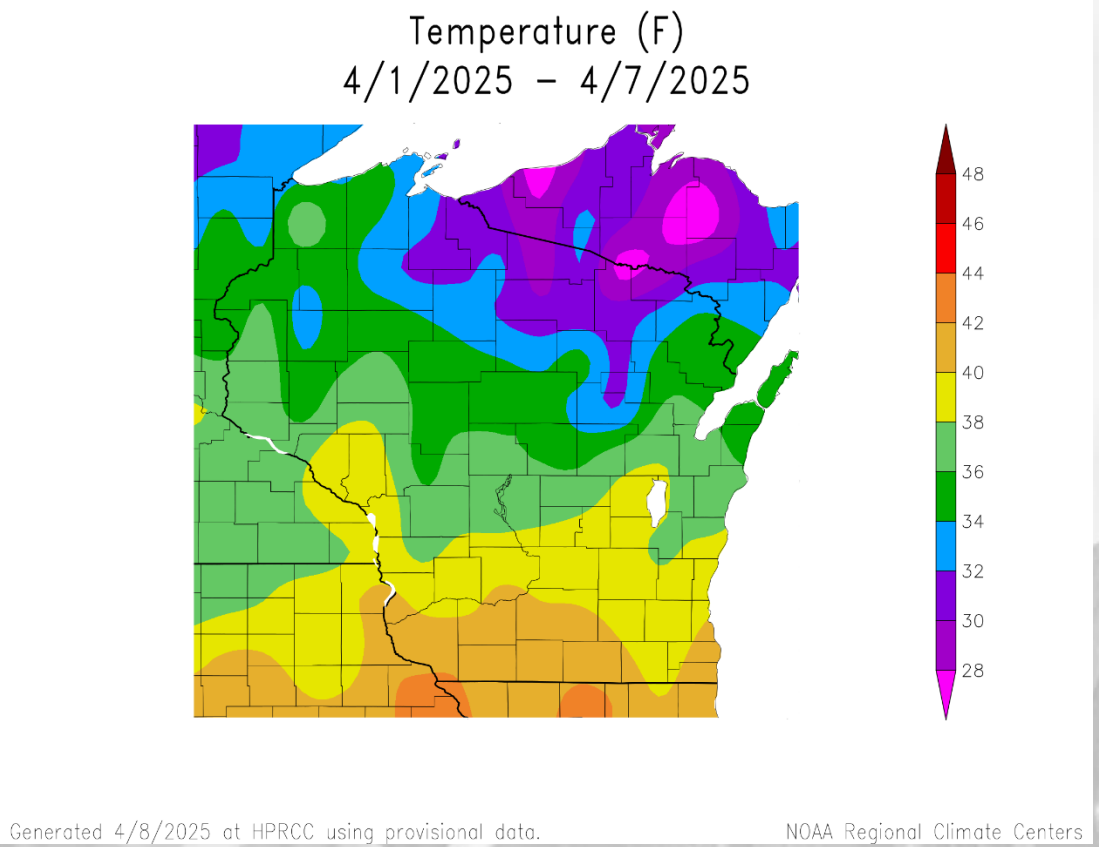
A fire danger of **MODERATE** means wildfires can ignite and will spread but are relatively easy to contain.

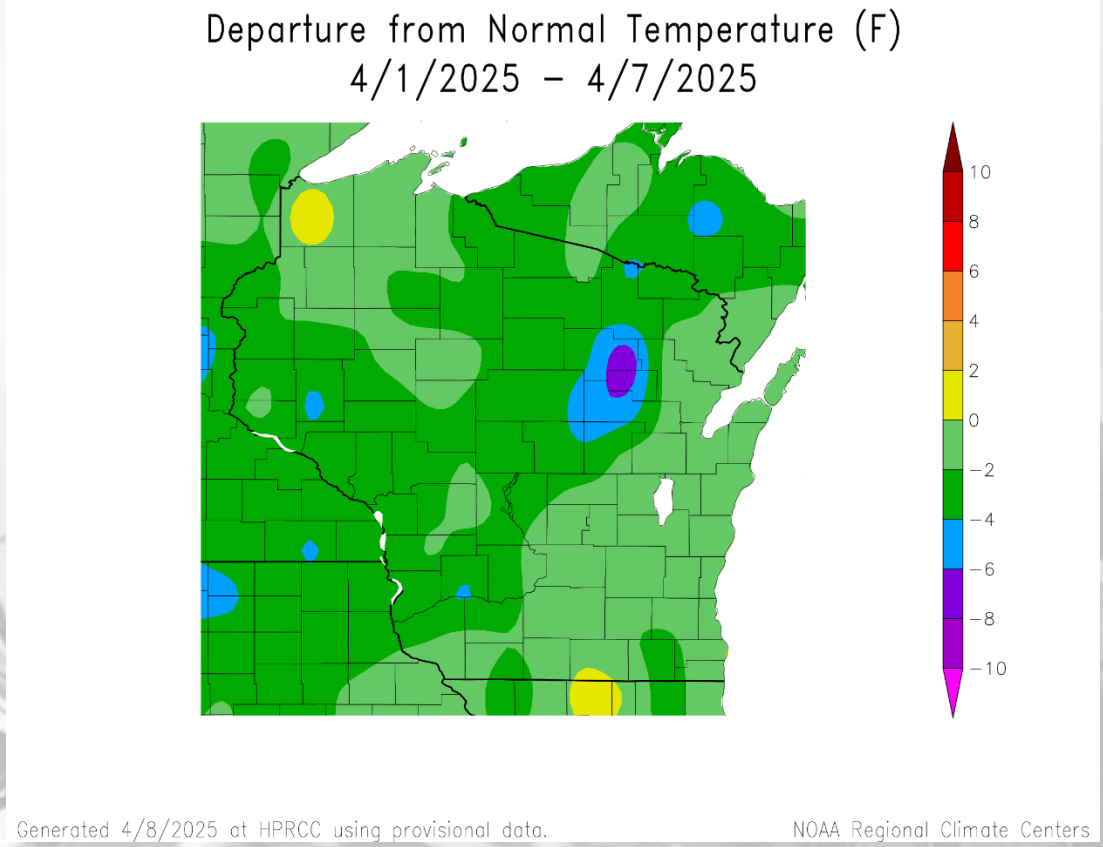
A fire danger of **HIGH** means wildfires ignite easily, spread rapidly, and can be challenging to control.

Map updated on 4/10/25

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

7 Day Temperatures

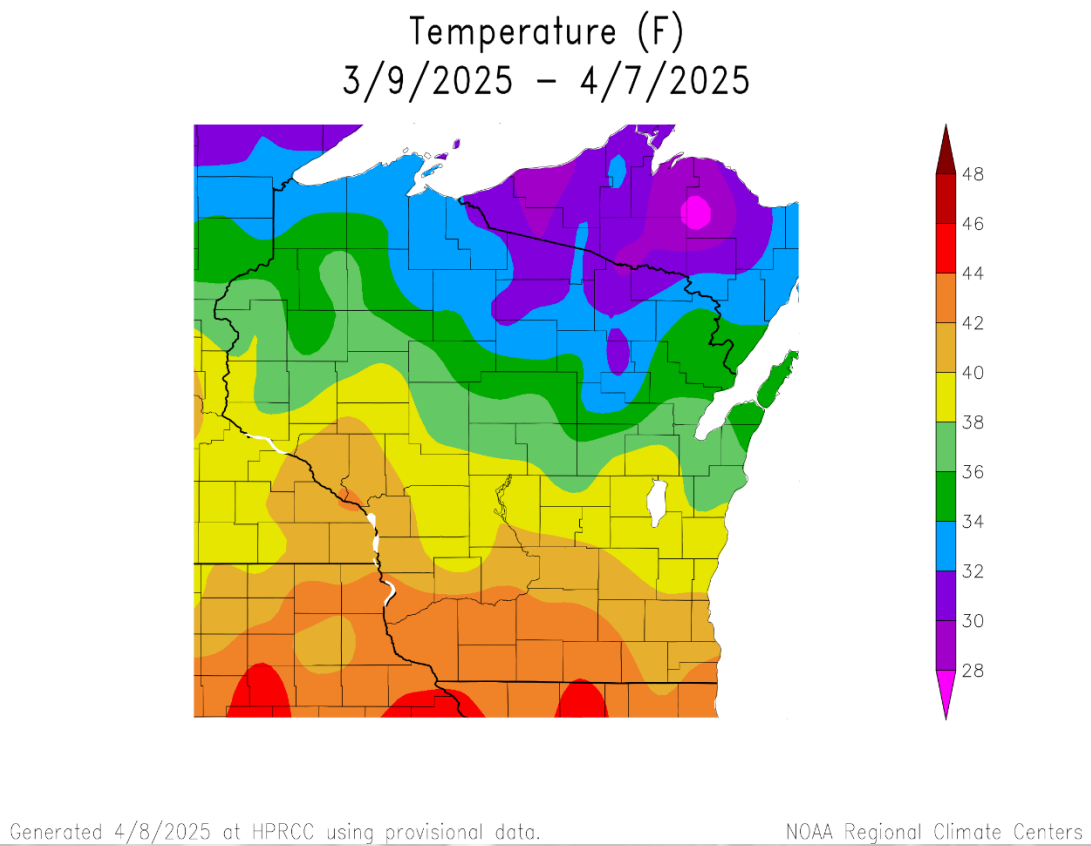


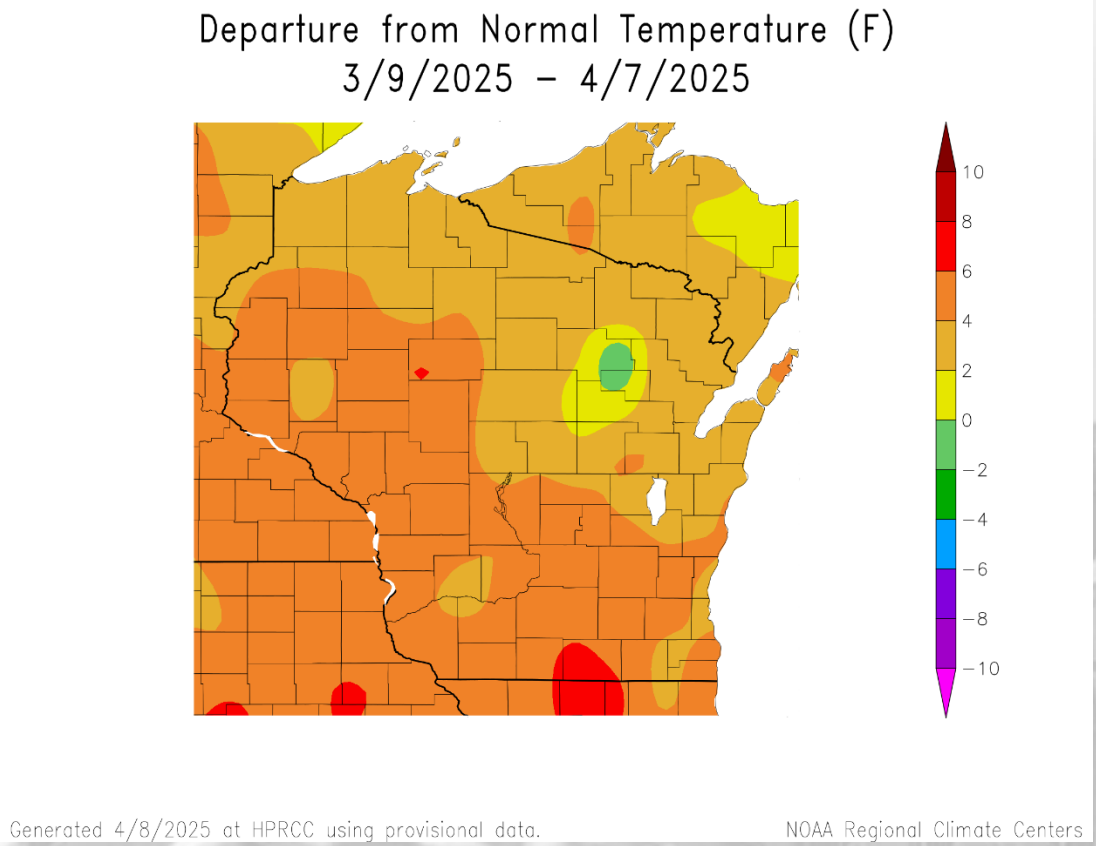


- It was a **cooler week** across the state last week; with most **below climatological normal**.
  - Weekly averages of **38-42°F** in the S and **30-34°F** in the NC.
  - **2-4°F below** climatological average in the W & NC.

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

30 Day Temperatures



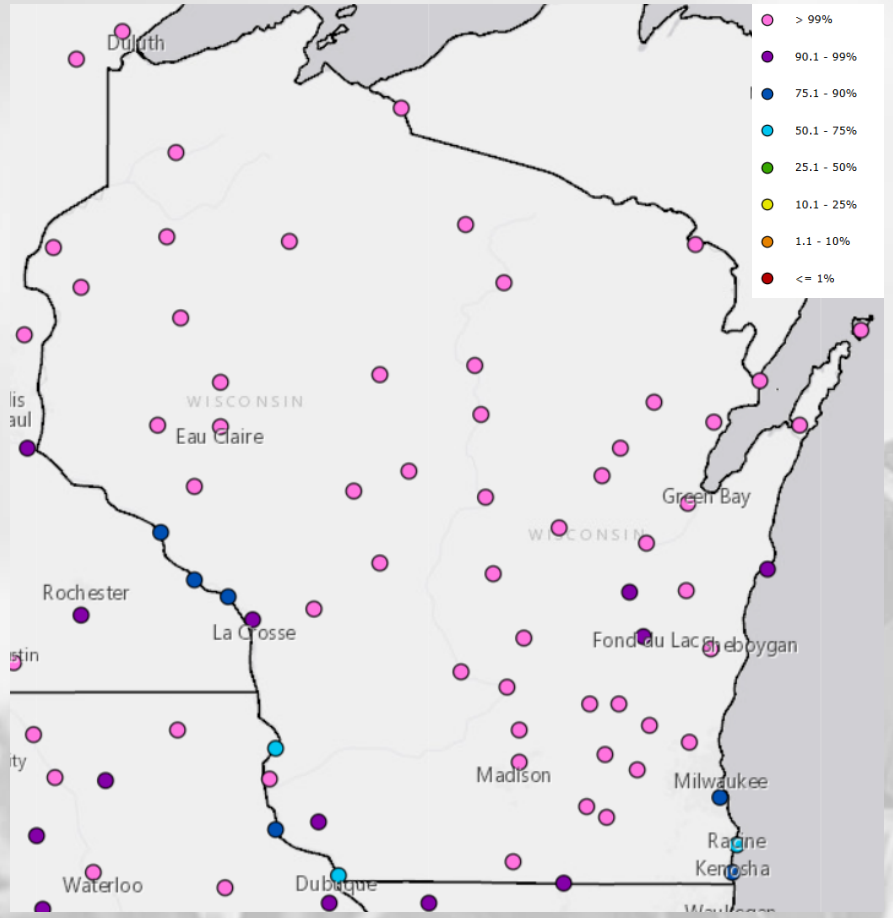


- Temperatures for the past month ranged from **40-44°F** in the S & W to **30-34°F** in the far NC.
  - **2-6°F above normal** for most of the state compared to climatological (1991-2020) average.
  - Temps more above the climatological average in the S &W compared to the south.

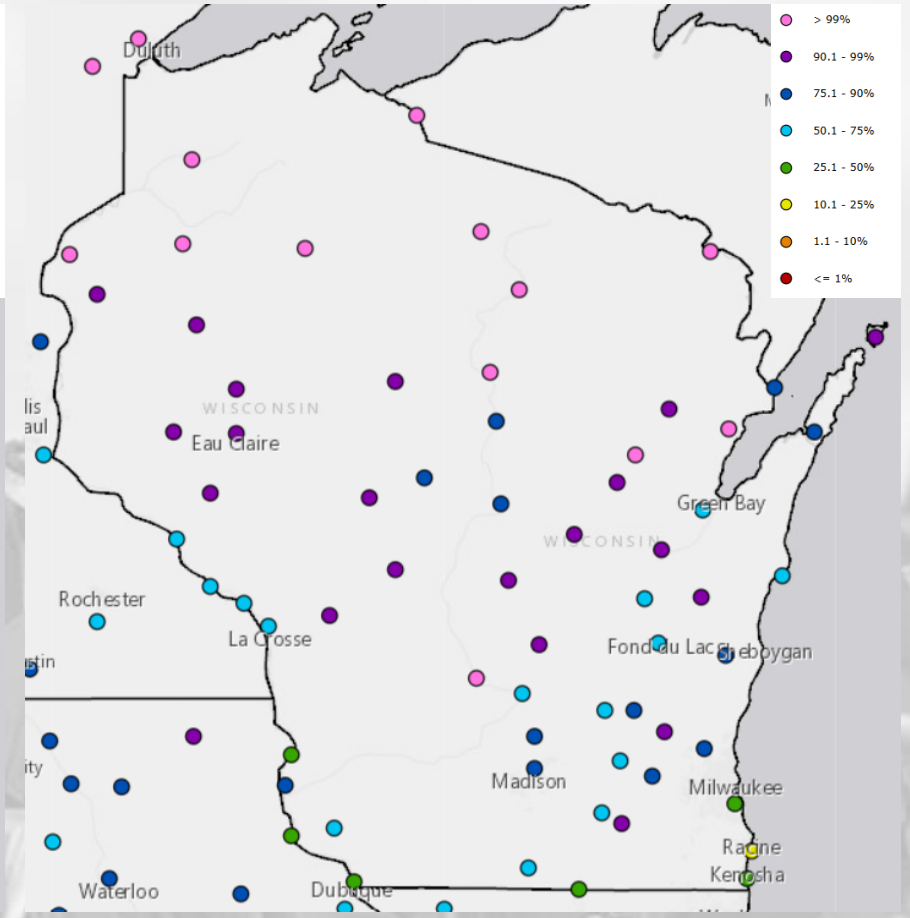
https://hprcc.unl.edu/maps.php?map=ACISClimateMaps

Freeze Risk

Daily Low ≤ 32°F



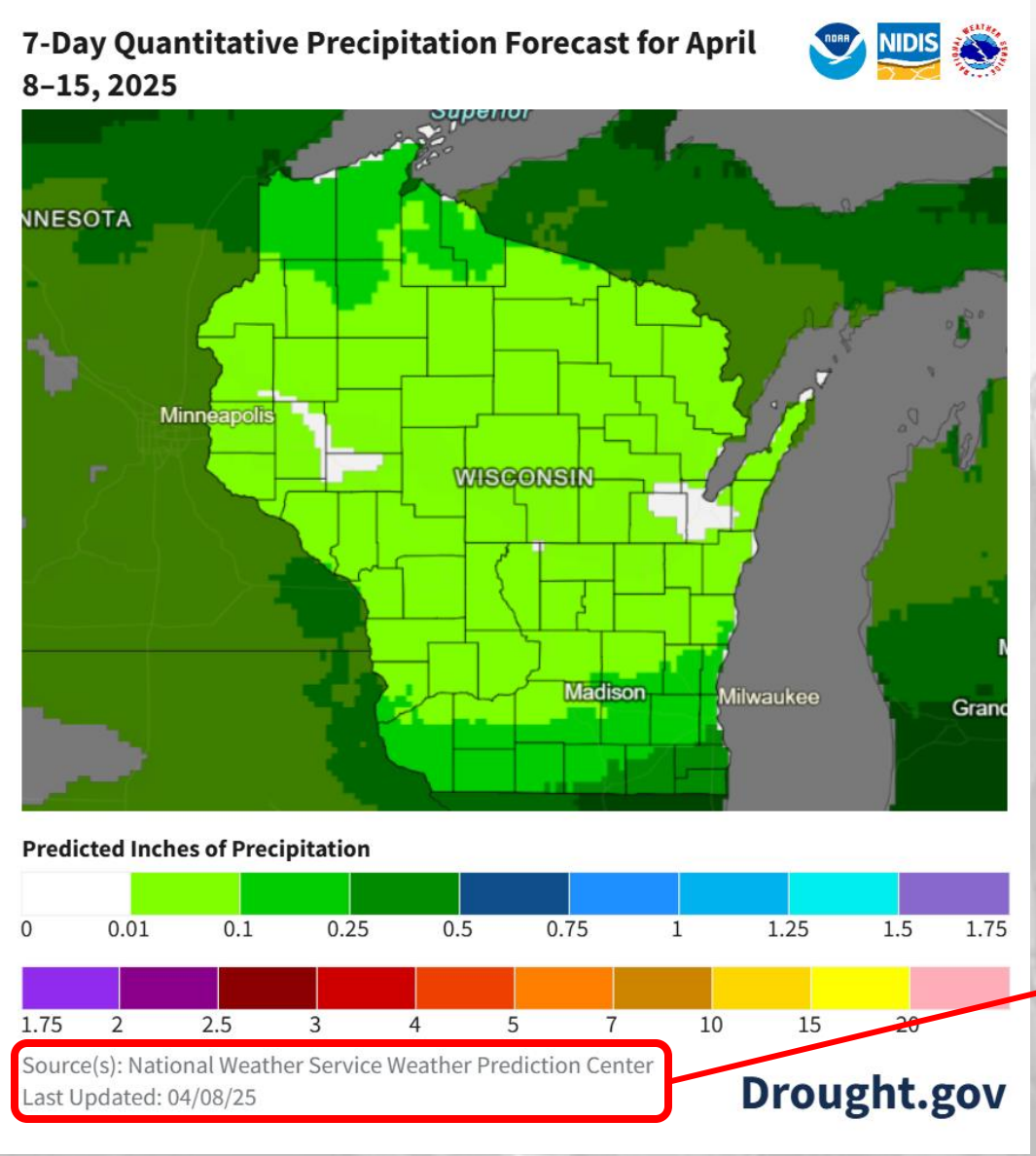
Daily Low ≤ 28°F



- Maps show the probability of a **freeze occurring after April 10th**.
- For most of the state, it is **very likely** that a freeze will occur after April 10th.
- Likelihood is **lesser** along the Mississippi River and in the far south.

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

7 Day Precip Forecast

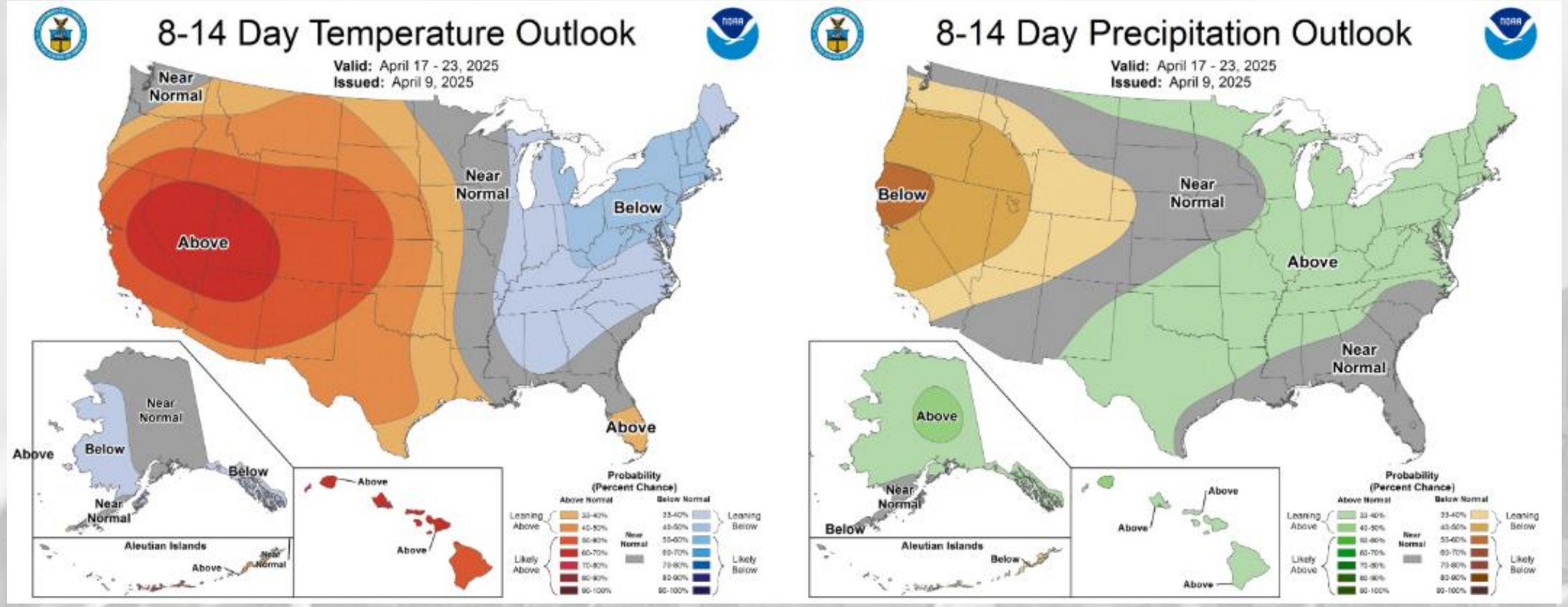


- **Statewide precip chances** over the next week.
  - Best chances on **Wed-Thu** and **early next week**.
  - Precip may fall as rain or snow, depending on temperatures.
  - Liquid equivalent totals of a **quarter inch or less**.

Forecast for 4/8/25 thru 4/15/25
(Begins at 7pm CDT)

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

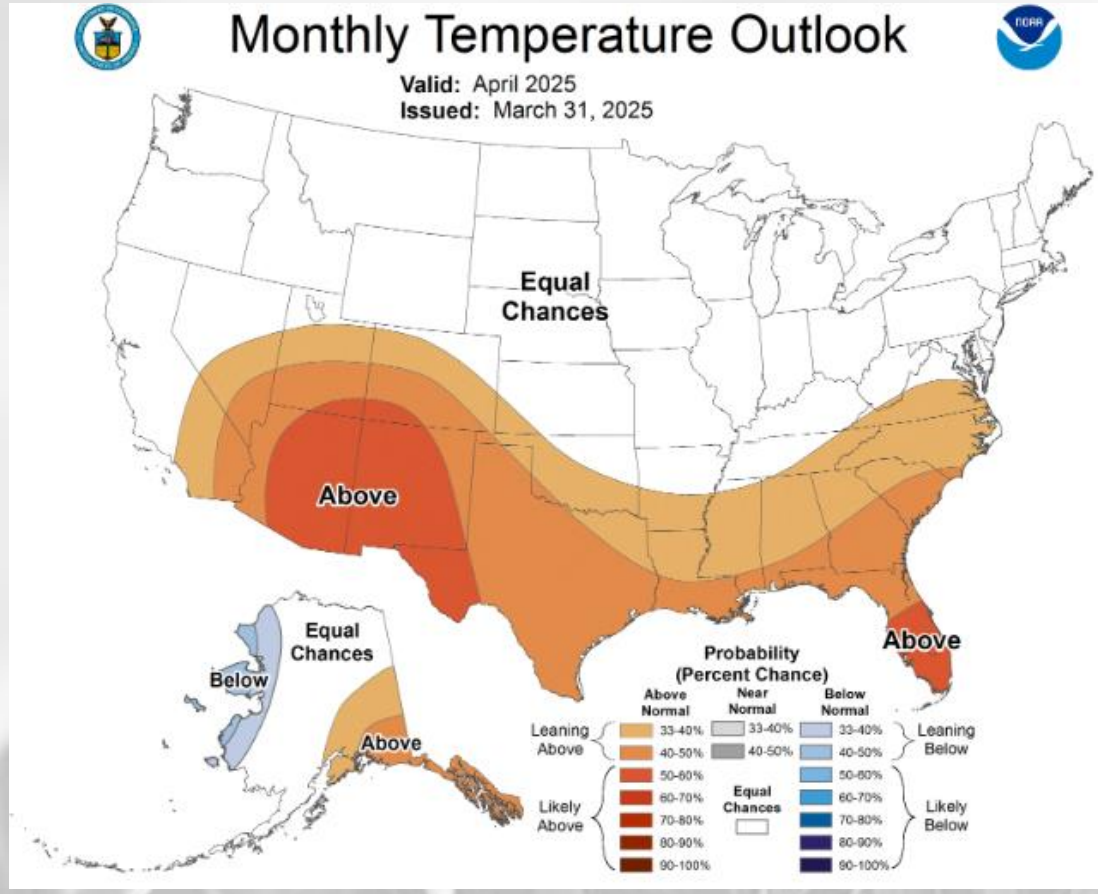
8-14 Day Temp & Precip Outlook

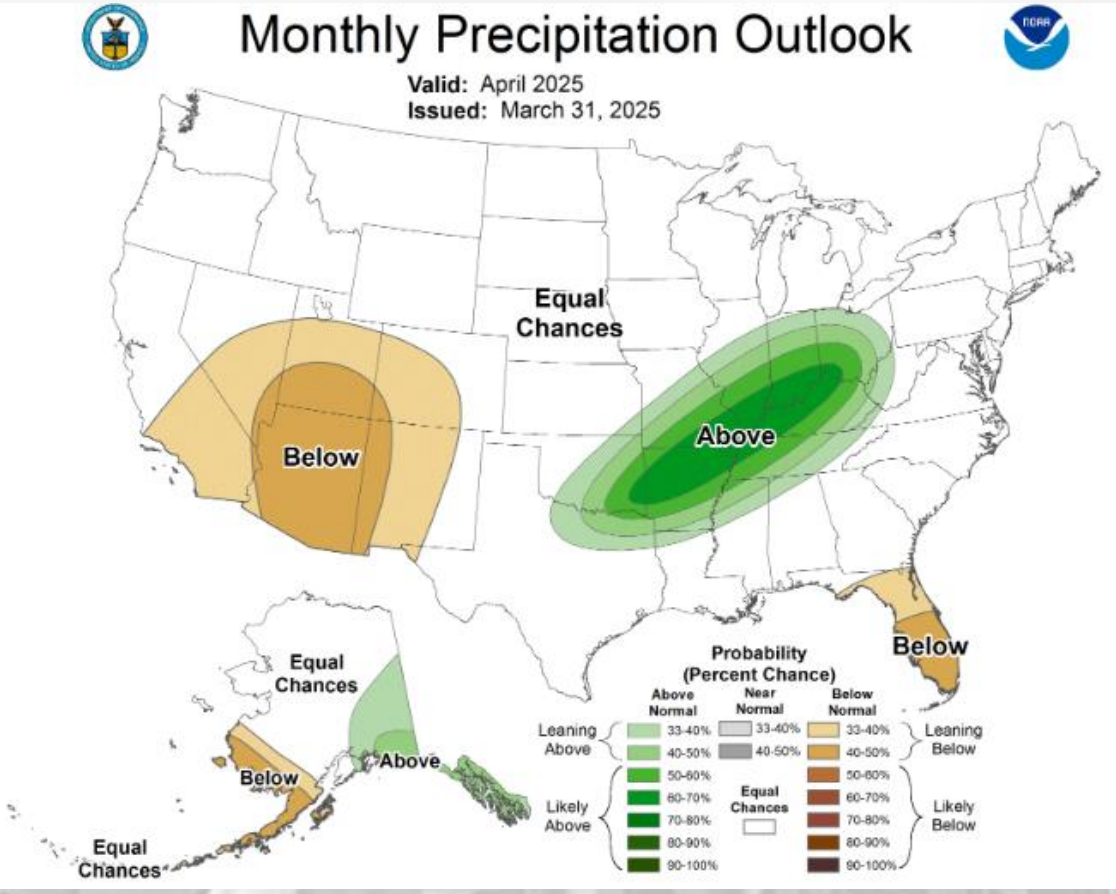


Mid-to-Late April: Temperatures leaning towards near-to-below normal, with precipitation leaning towards above normal.

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

30 Day Temp & Precip Outlook

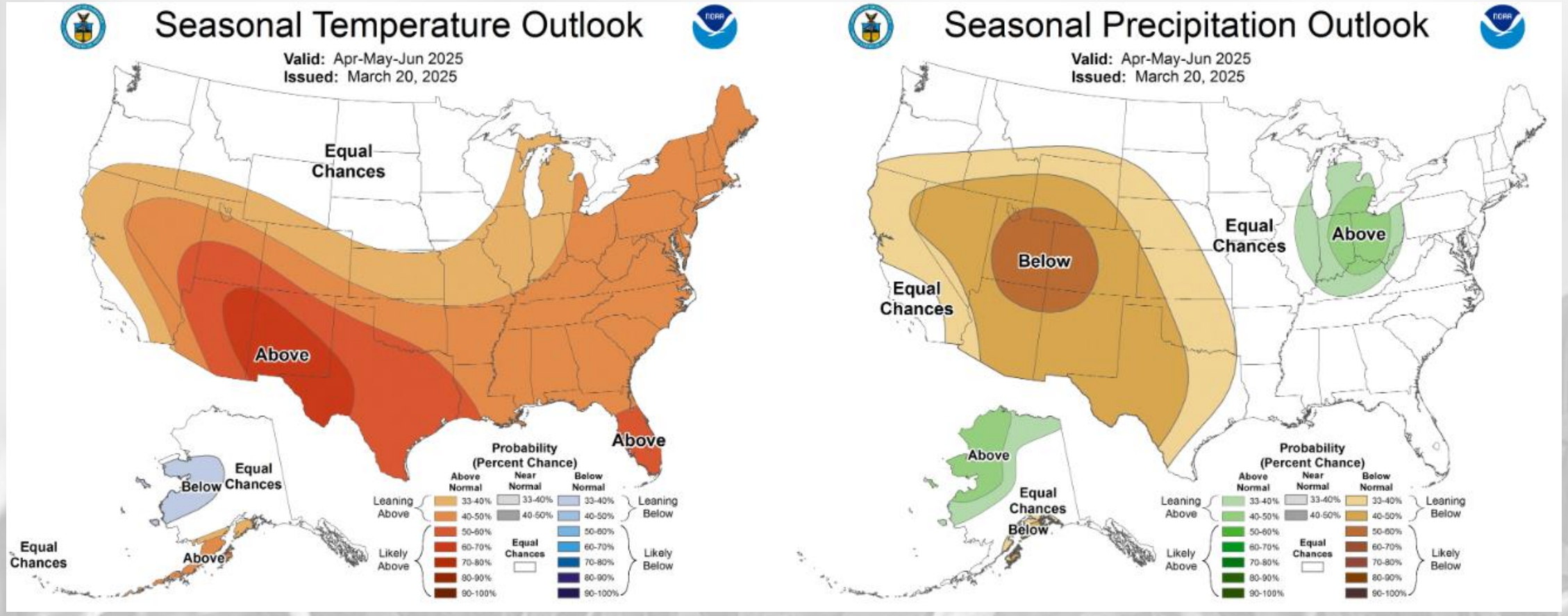




Month of April: Temperature and precipitation uncertainty with equal chances for above, near, or below normal.

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

90 Day Temp & Precip Outlook



Spring into 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:

- Most of last week's precip was concentrated down in the SE corner of the state, with totals of 1-2".
- Cooler-than-normal conditions were common across the state last week, a switch from what had been warmer-than-normal conditions for much of March.

Impact:

- Soil moisture conditions remain driest in the northwest and south where D1 drought persists.
  - However, drought improvements of 1 class were prevalent across the north in part to the later winter storm.
- Wildfire risk is moderate to high across most of the state, except the far north where recent precip has been higher.
- Wisconet soil temperature readings at 20" depth are at or above freezing statewide. Frost continues to thaw.

Outlook:

- Statewide precip chances over the next week. Highest chances in the south with a rain/snow mix to impact the region on Wednesday (4/9).
- As we head into mid-April, temperature probabilities are leaning towards near normal with a lean towards above normal precip.
- April as a whole looks more uncertain for temperatures and precip with equal chances for above, near, or below normal.

Agronomic Considerations

Field Work

- Soil temperatures to 4" still cool, ensure temps are reaching 50 degrees at a minimum before planting. (See WiscoNet) Also note upcoming insurance dates.
- 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.
- 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.

Agronomic Considerations

Specialty Crops

- Small scale producers may consider tarping fields with adequate (but not excessive) soil moisture to avoid spring rains for later planting.
  - Tarping in the Northeast: A Guide for Small Farms- SARE
- Winter cutworms are active at 40°F - check high tunnel crops (e.g., overwintered hardy greens and direct-seeded spring greens) for cutworm damage.
  - Winter cutworms in high tunnel crops- Cornell
- Asparagus cultivation can occur in early spring (very shallowly- less than 2 inches) before spears emerge to control bad weed problems or incorporate fertilizer.

Fruit

•Pre-emergent herbicide applications should be applied prior to green tip, during a dry period where temperatures will remain above 40F for several days post-application.

- Importance of Spring Herbicide Application in Fruit Trees - Michigan State

•Dormant copper and urea applications used to reduce fire blight and apple scab inoculum should be applied prior to green tip.

- Early Season Disease Prevention - UW-Madison

•Prune out damaged, dead or diseased tissue and remove any fruit mummies from the tree canopy prior to green tip. Growers can chop, bury or burn (where permitted) prunings.

- Sanitation for Disease Prevention - UW-Madison

User Survey

Are you a regular user of the Wisconsin Ag Weather Outlook (WAWO)? 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 WAWO.

If you have any trouble accessing or filling out the survey, please email Josh Bendorf at jbendorf@wisc.edu.

Thank you!!
-The WAWO 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.

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