MAC-T Monthly Call

Midwest Agriculture and Climate Team

March 8, 2023

For more information:
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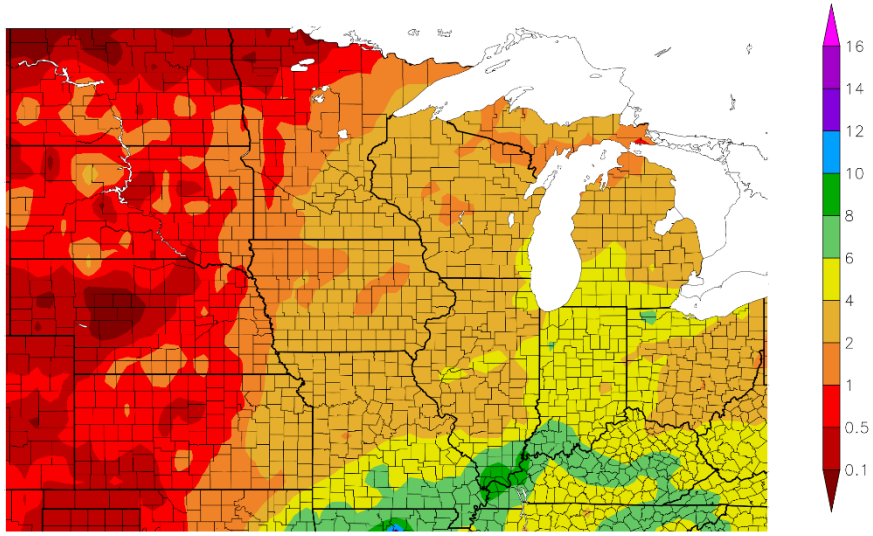
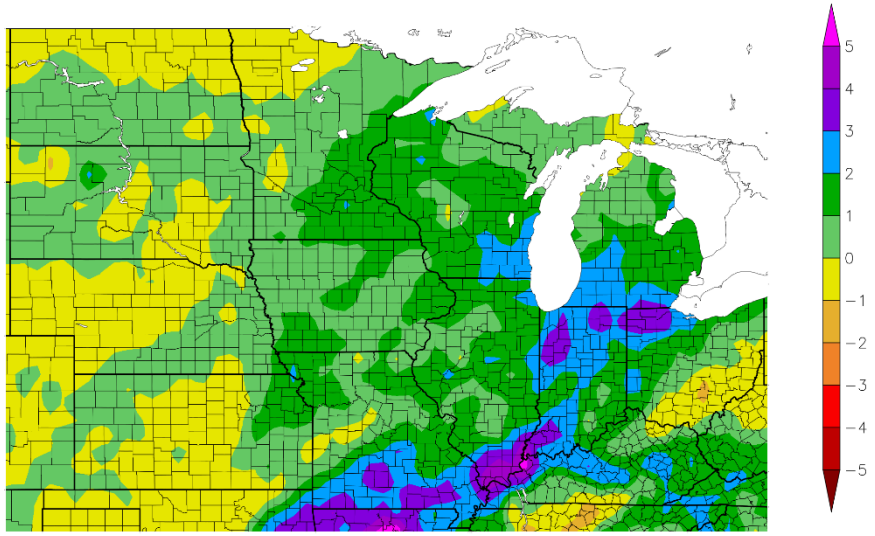
USDA Midwest Climate Hub
U.S. DEPARTMENT OF AGRICULTURE

Precipitation (in)
2/5/2023 – 3/6/2023



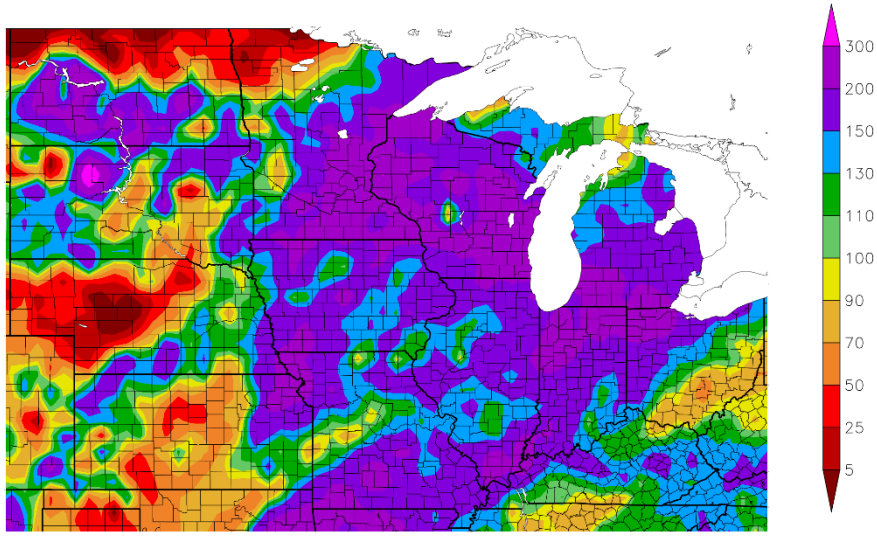
Generated 3/7/2023 at HPRCC using provisional data. NOAA Regional Climate Centers

Departure from Normal Precipitation (in)
2/5/2023 – 3/6/2023



Generated 3/7/2023 at HPRCC using provisional data. NOAA Regional Climate Centers

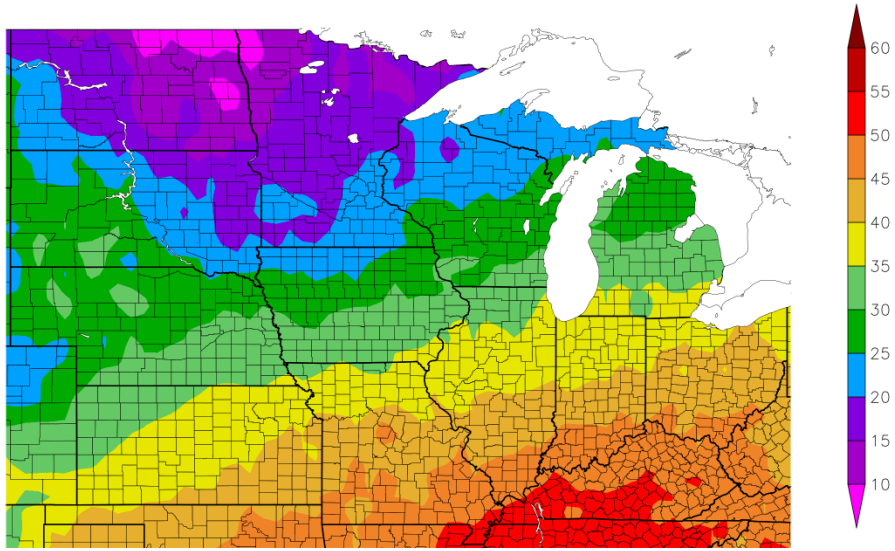
Percent of Normal Precipitation (%)
2/5/2023 – 3/6/2023

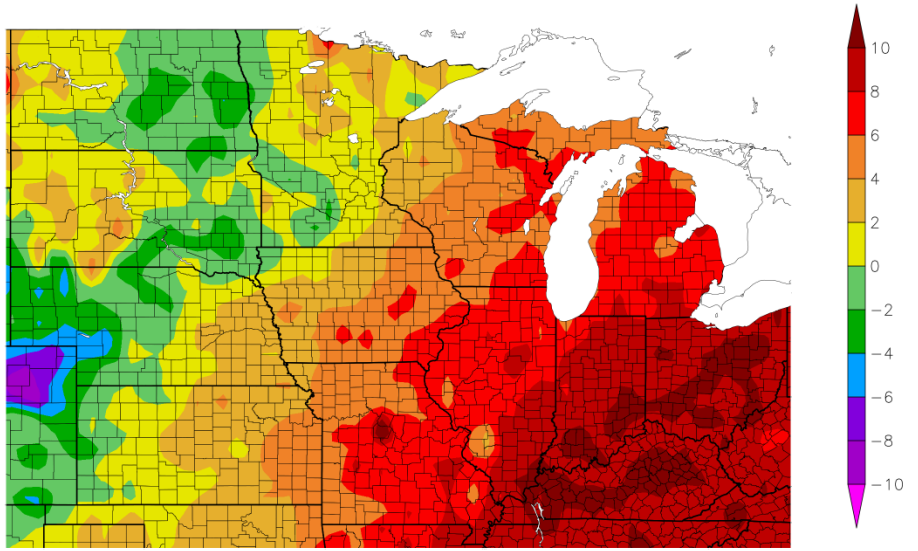


Generated 3/7/2023 at HPRCC using provisional data. NOAA Regional Climate Centers

- Central and eastern areas well above average precipitation (up to 2x + avg.)
- Isolated heavy precipitation
- Still some drier than average pockets west.

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



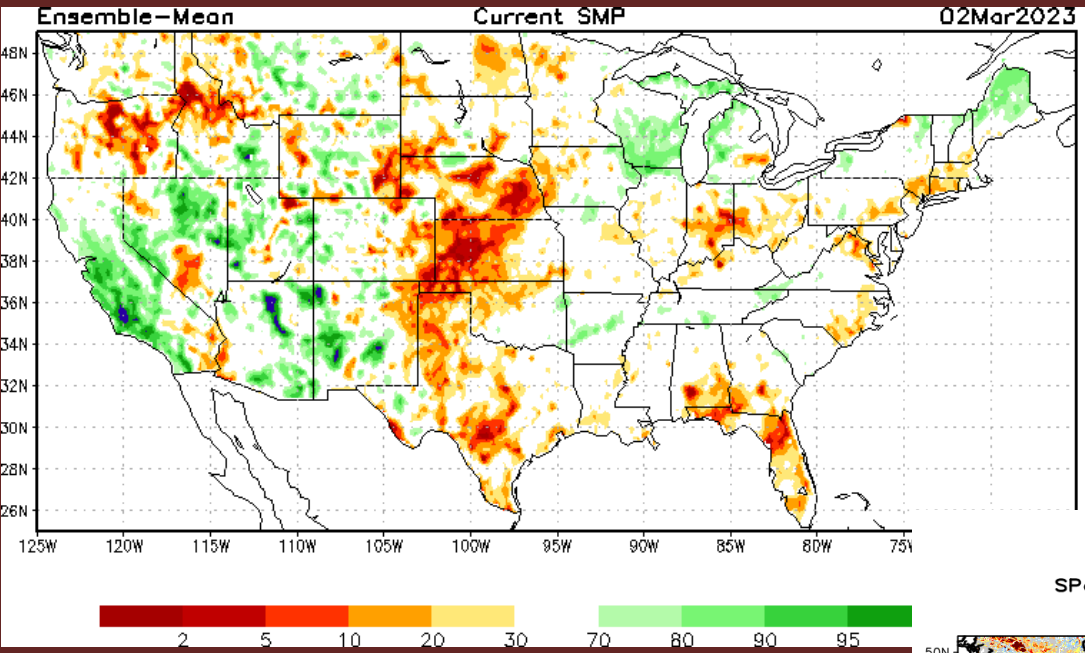


- Similar winter pattern continues with much warmer than average east (+6-10 F)
- Near to slightly below west.

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

Soil Moisture

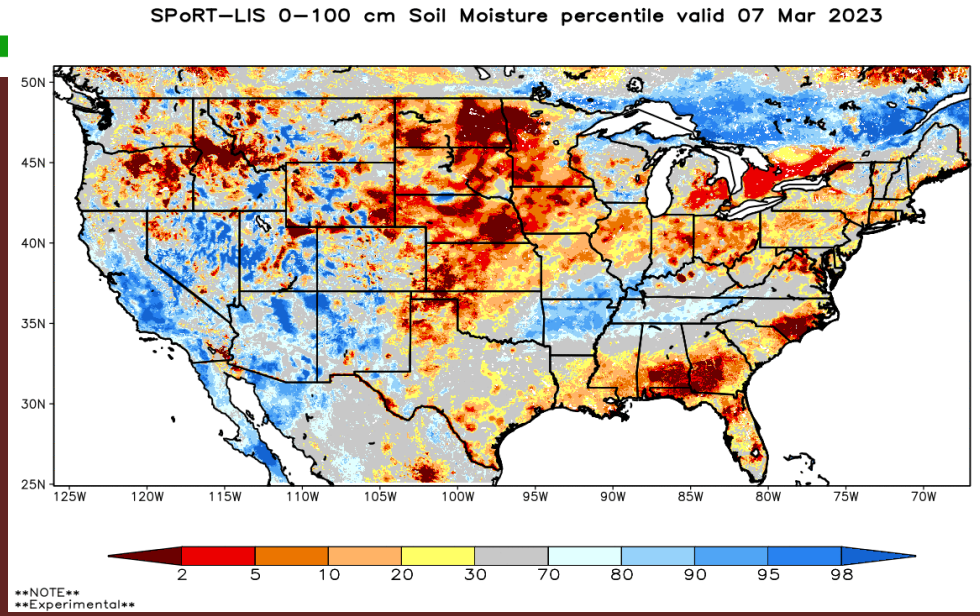
https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml#



- Increased precipitation has mostly eliminated dry soils central-eastern Corn Belt.
- Still dry soils west.
- Some questions north with precip on frozen soils.
- NASA product (below) still overdoing dryness.

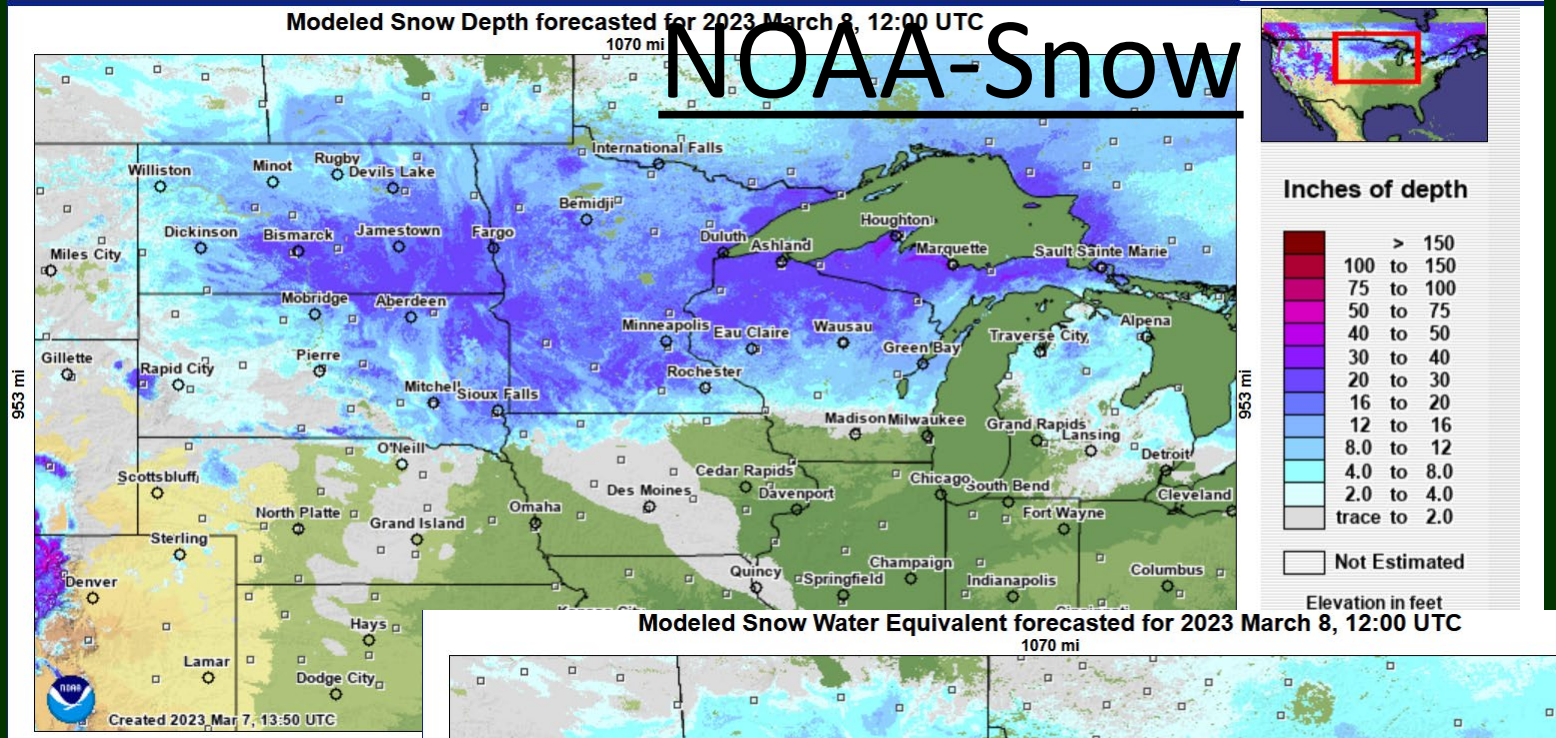
Both percentile maps

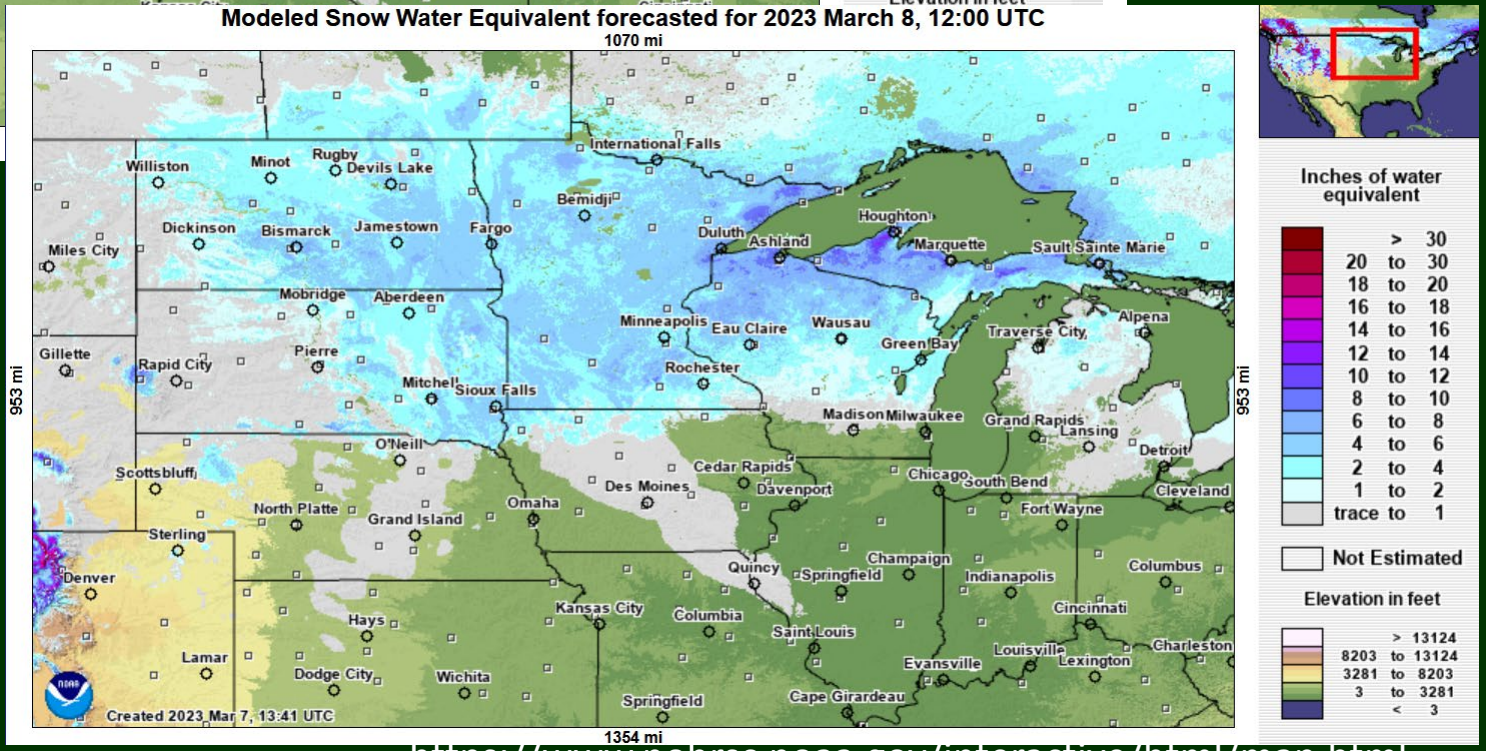
- Upper – whole profile
- Lower – top 100 cm (~40”)



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

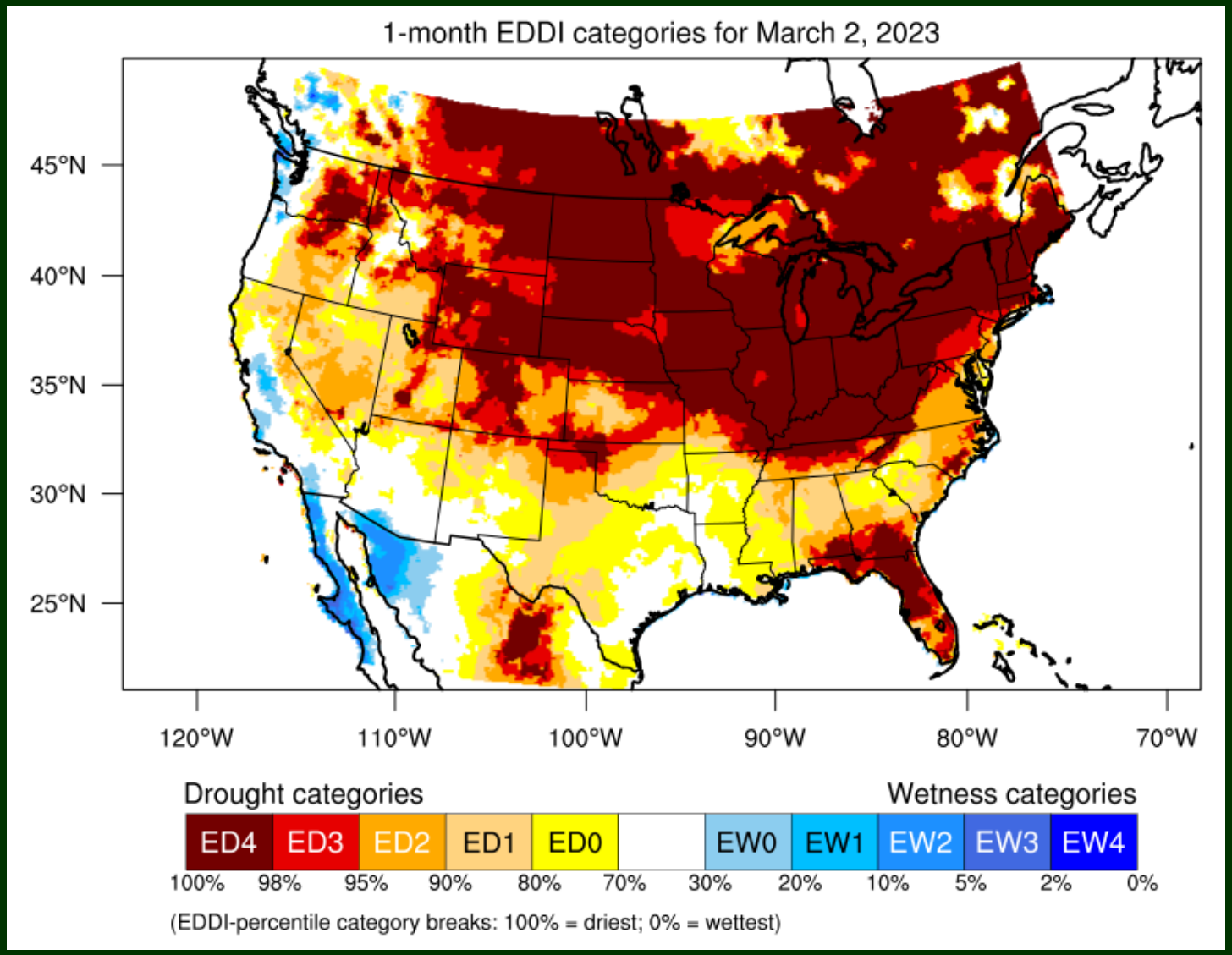
NOAA-Snow





https://www.nohrsc.noaa.gov/interactive/html/map.html

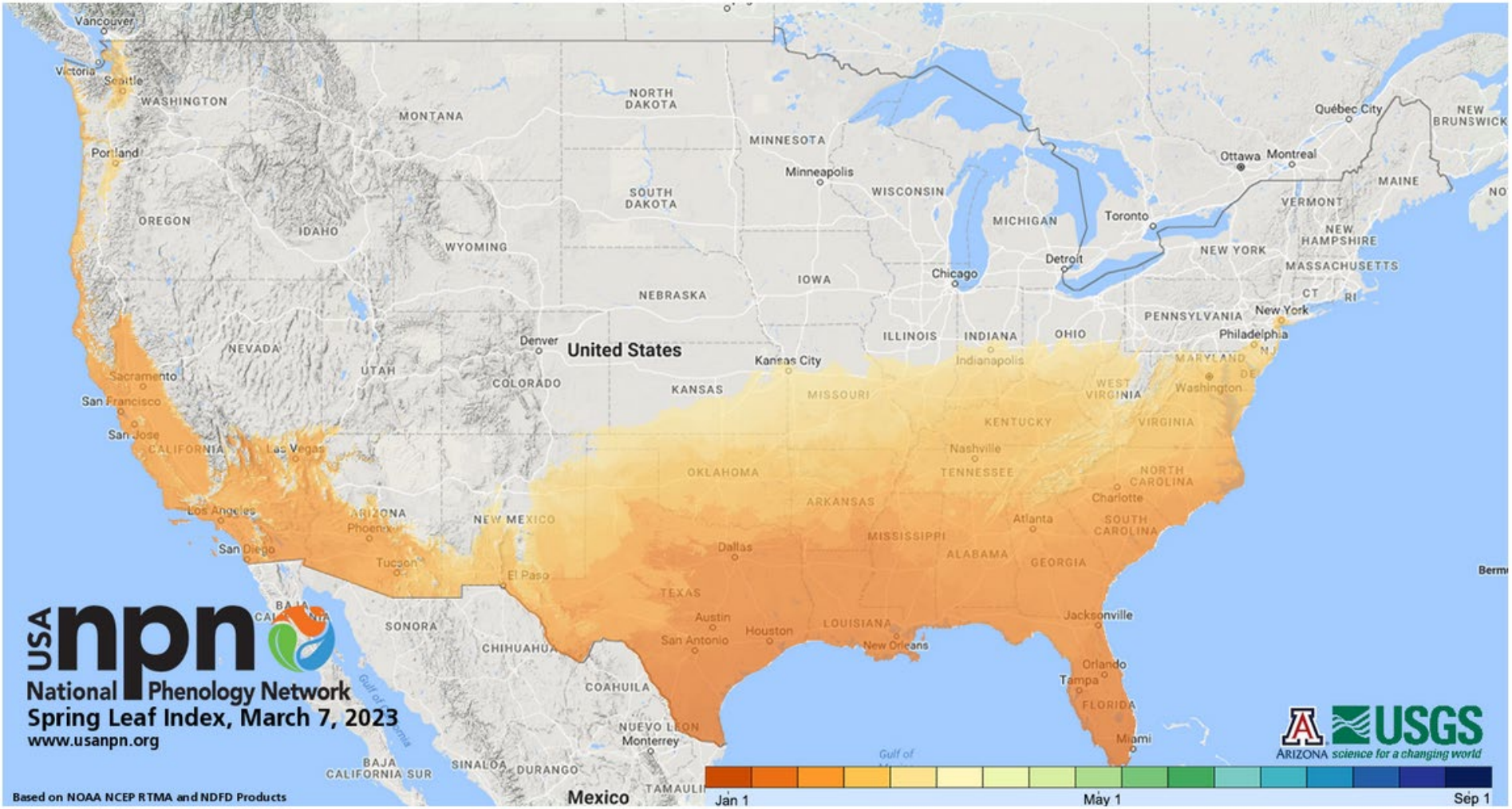
ET Estimates-EDDI



- Higher than average ET rates continue.

https://psl.noaa.gov/eddi/#current_conditions

Status of Spring



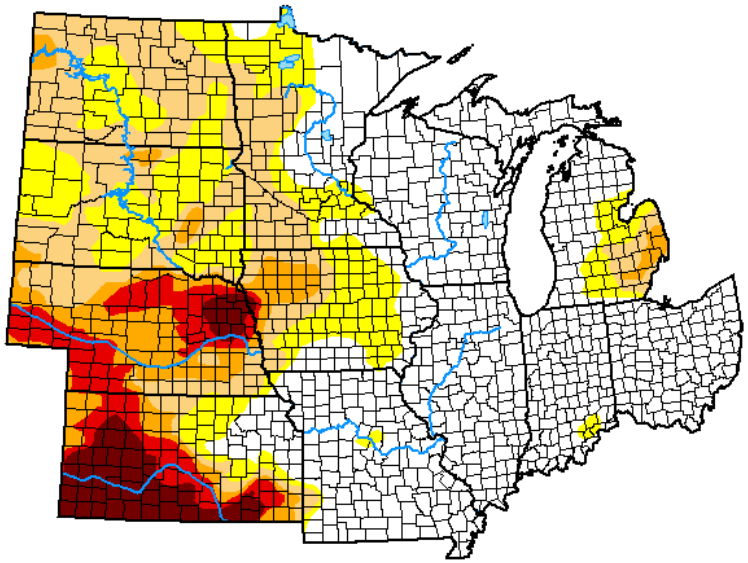
- Early “spring” by several weeks.
- Many plants at risk for freeze.

https://psl.noaa.gov/eddi/#current_conditions

Drought in the Midwest

U.S. Drought Monitor

North Central States



February 28, 2023

(Released Thursday, Mar. 2, 2023)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	46.79	53.21	35.32	17.17	9.79	4.41
Last Week *02-21-2023*	42.24	57.76	40.06	18.47	9.87	4.77
3 Months Ago *11-29-2022*	17.12	82.88	60.83	27.87	14.75	5.53
Start of Calendar Year *01-03-2023*	23.51	76.49	51.22	24.39	11.79	5.25
Start of Water Year *09-27-2022*	32.06	67.94	43.99	21.51	9.92	4.04
One Year Ago *03-01-2022*	36.82	63.18	40.36	14.29	1.13	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:

Richard Heim

NCEI/NOAA

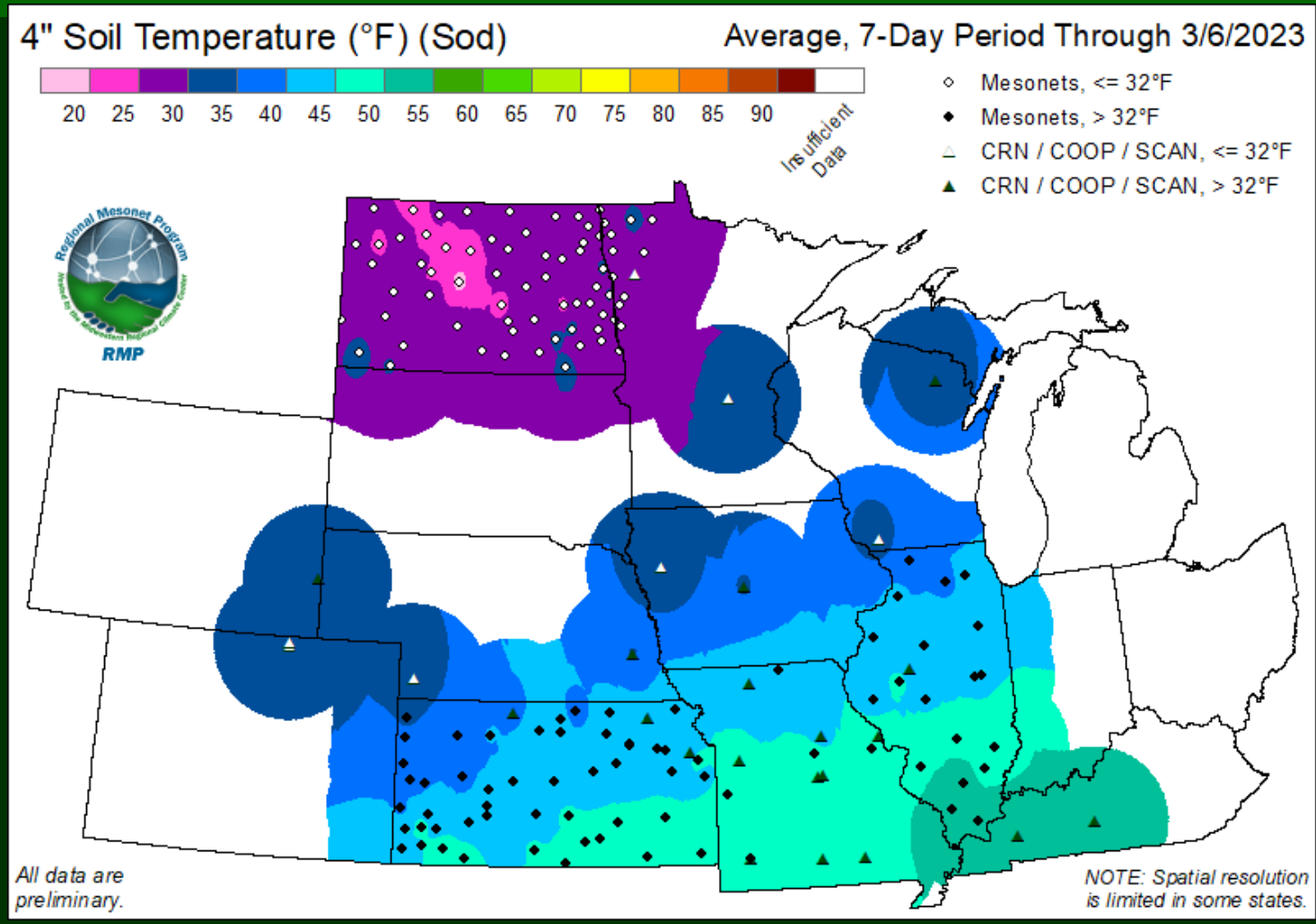
droughtmonitor.unl.edu

- Over 53% coverage with D0 or more. 36% in drought (D1+).
- Worst over Plains with persistent areas of D3-D4

http://droughtmonitor.unl.edu/

Soil Temperatures

Frozen soils (4”) still in northern areas.



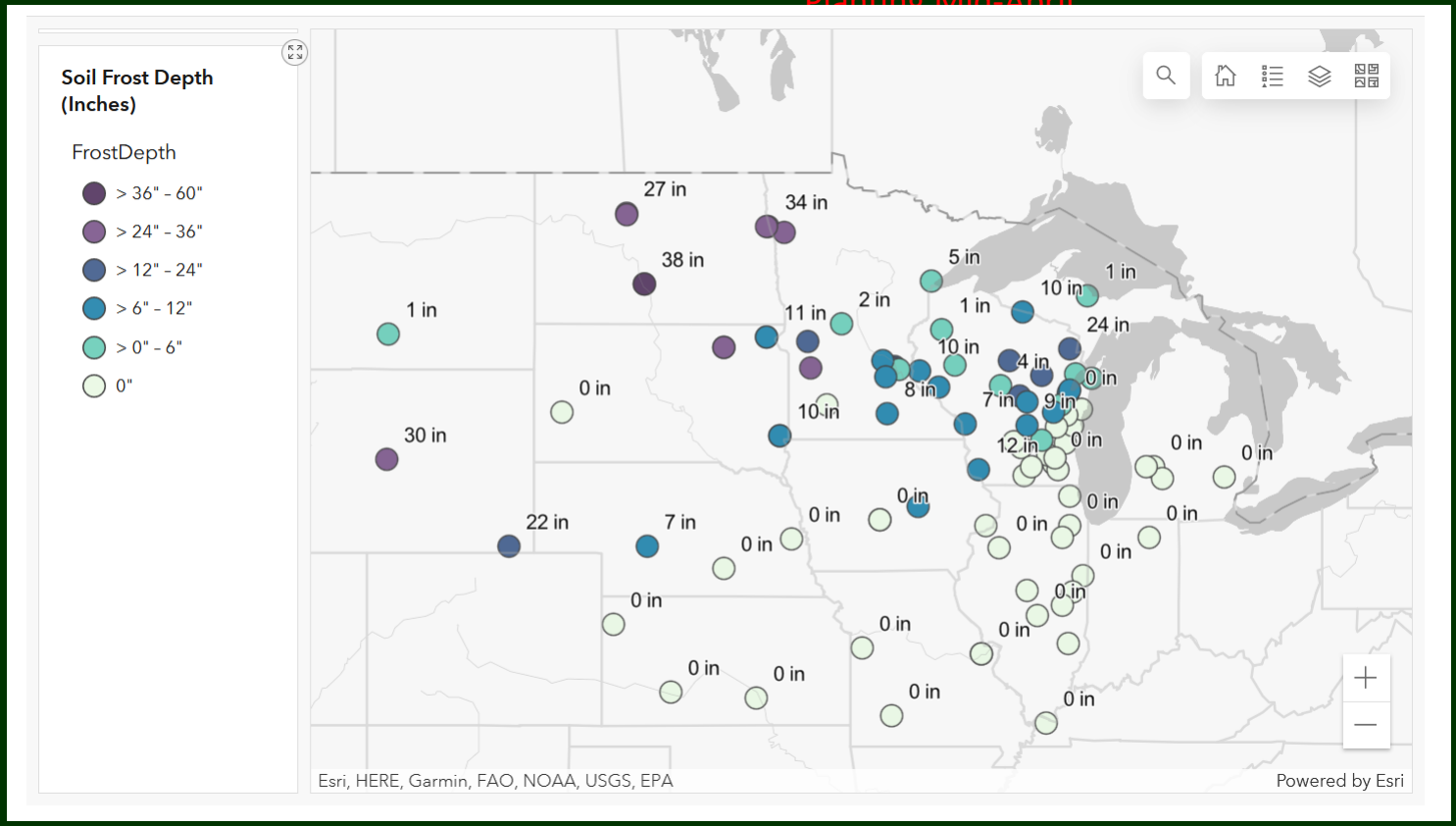
https://mrcc.purdue.edu/RMP/currentMaps.html

Frost Depth

Frozen soils (to some depth) still in northern areas.

Fairly deep in Plains.

Planting Mid-April



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

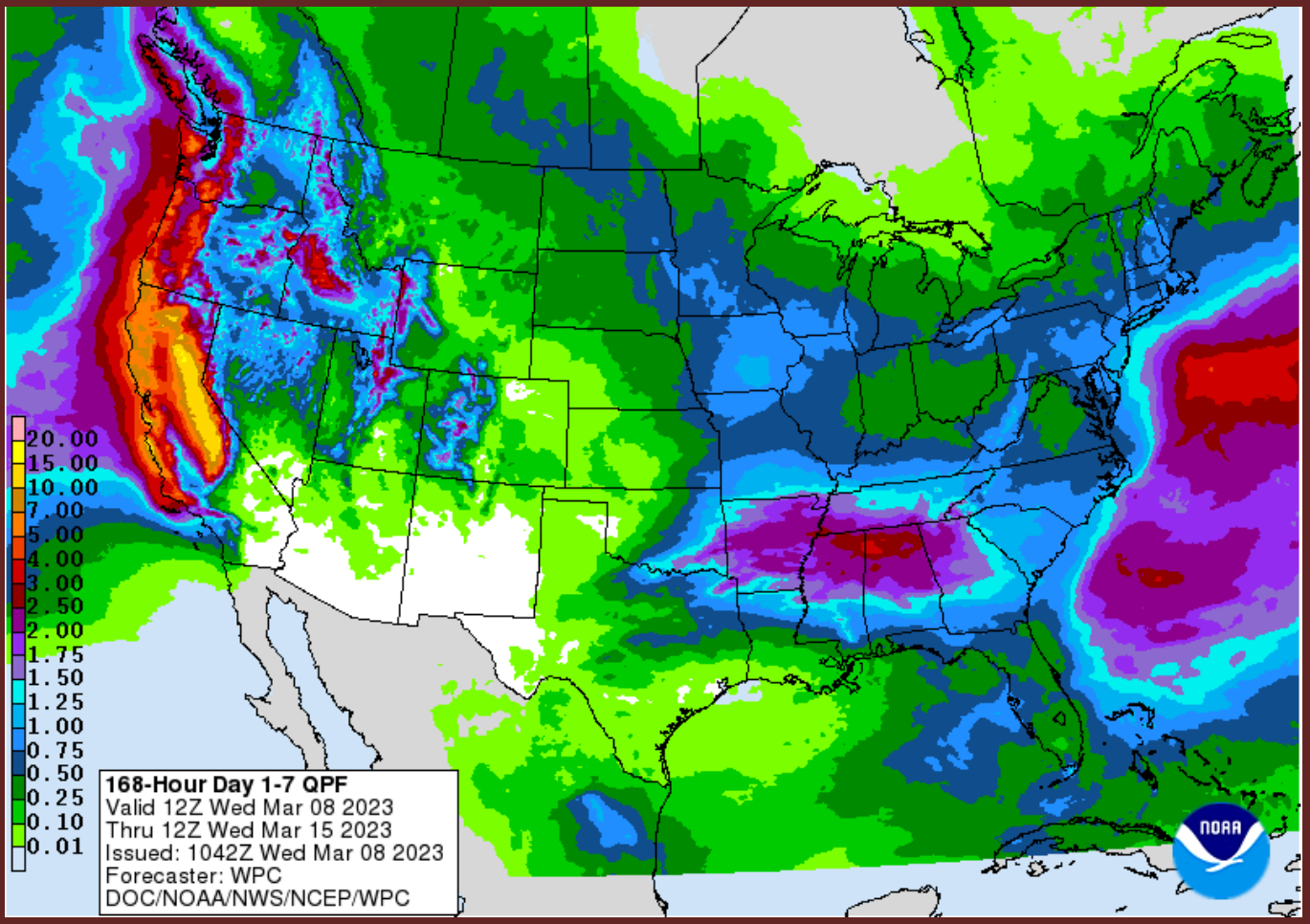
Assorted AG Issues

- Dry soils persist west.
- Soils becoming wet (possibly too wet) in east
- Frozen northern areas – questions on soil moisture recovery

- Cold in December damaged buds on fruit trees parts of region

- Upcomging cold
  - Warmth/chill accumulation pushing perennials – risk of freeze
  - Stress on livestock

1-7 Day Precip



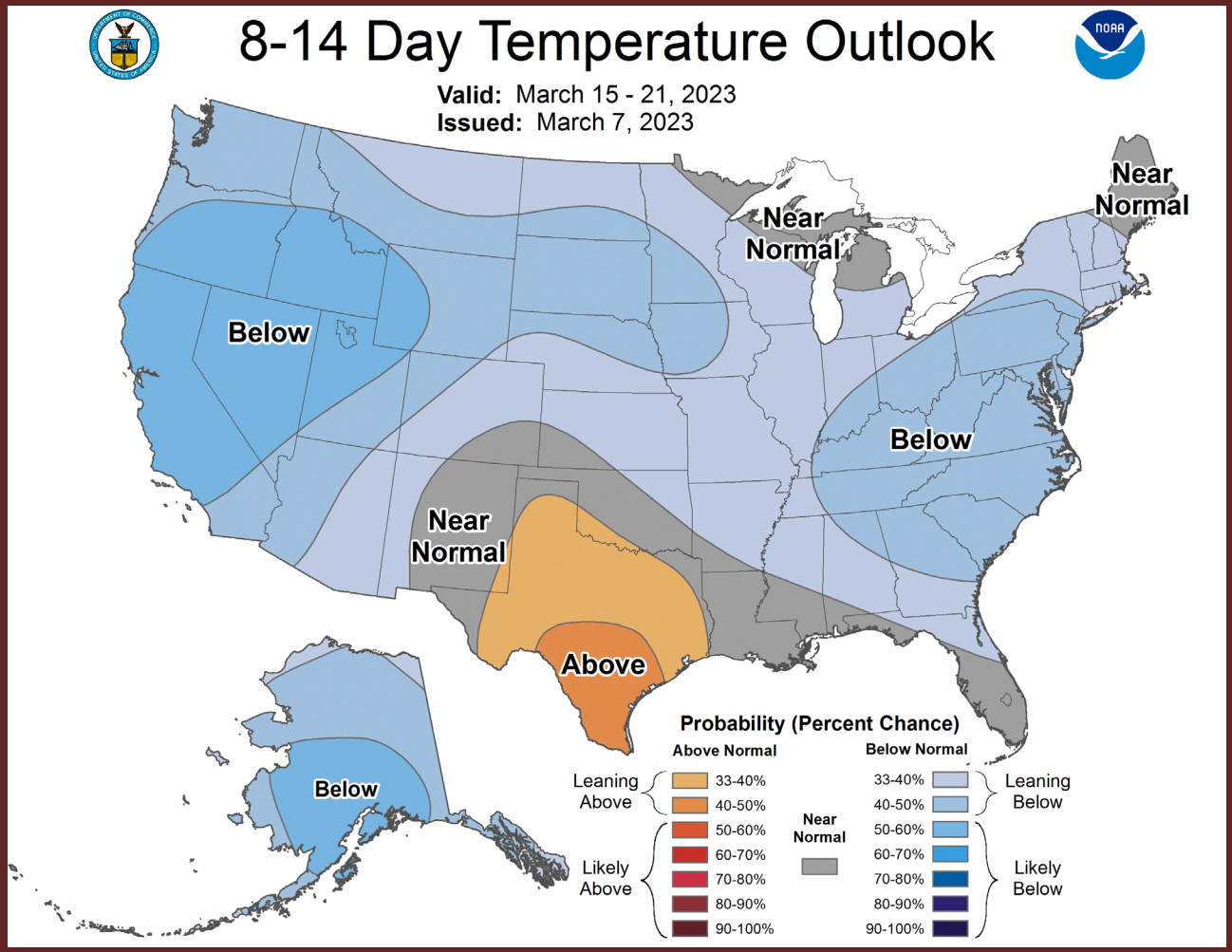
Next 7 days

- Heaviest south but more active possible from pending storm Mississippi Valley

http://www.wpc.ncep.noaa.gov/qpf/day1-7.shtml

Temperature Outlook

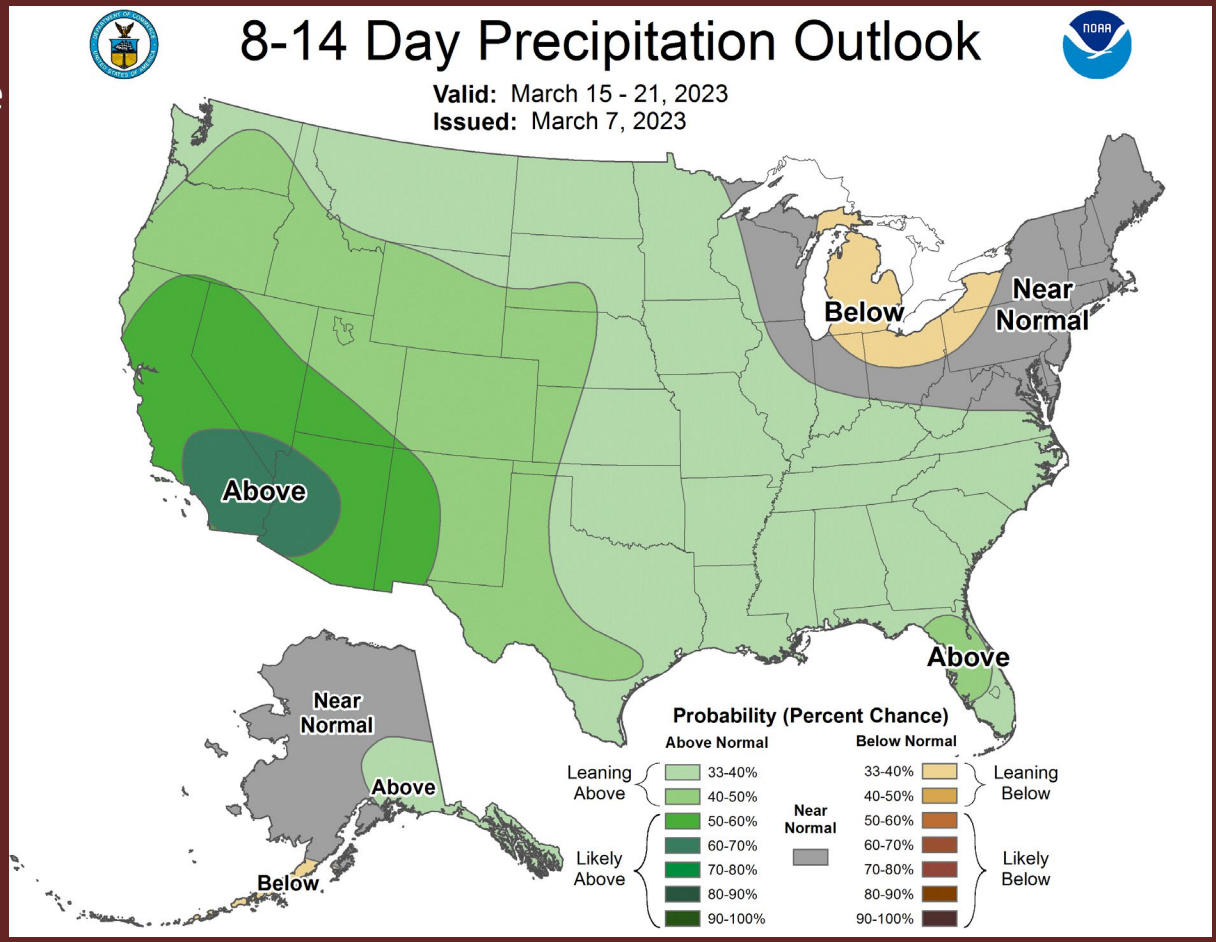
- Persistent cold into latter part of March.



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

Precipitation Outlook

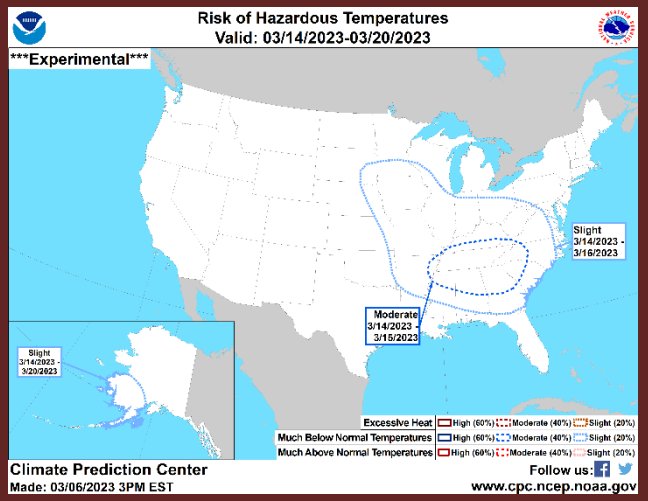
- Most of western US likely more active precipitation.
- Central US only slightly higher chances
- Slightly drier chance eastern Great Lakes.

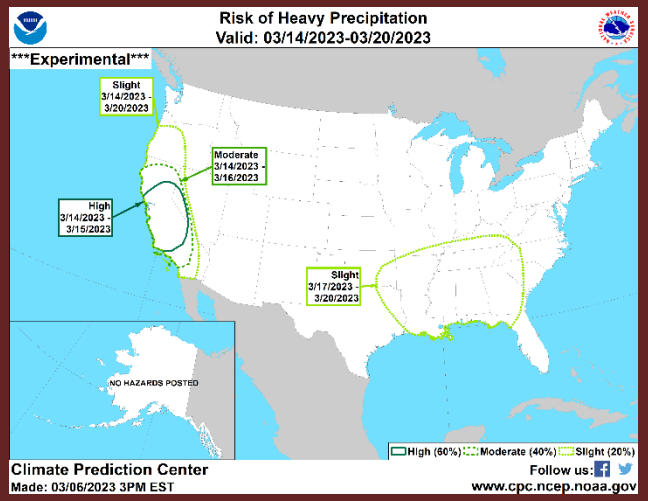


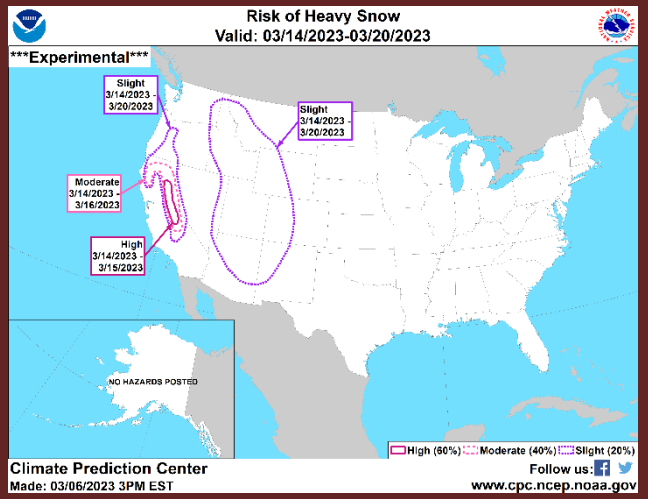
http://www.cpc.ncep.noaa.gov/

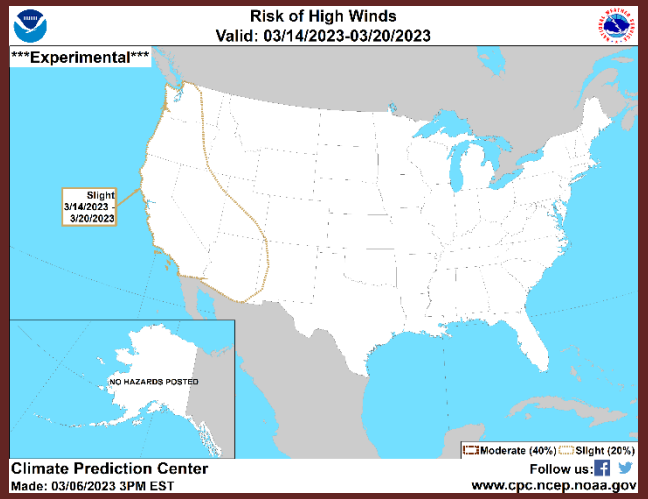
Other Risks

- Largest risk is cold with well below freezing temperatures likely into mid-March.



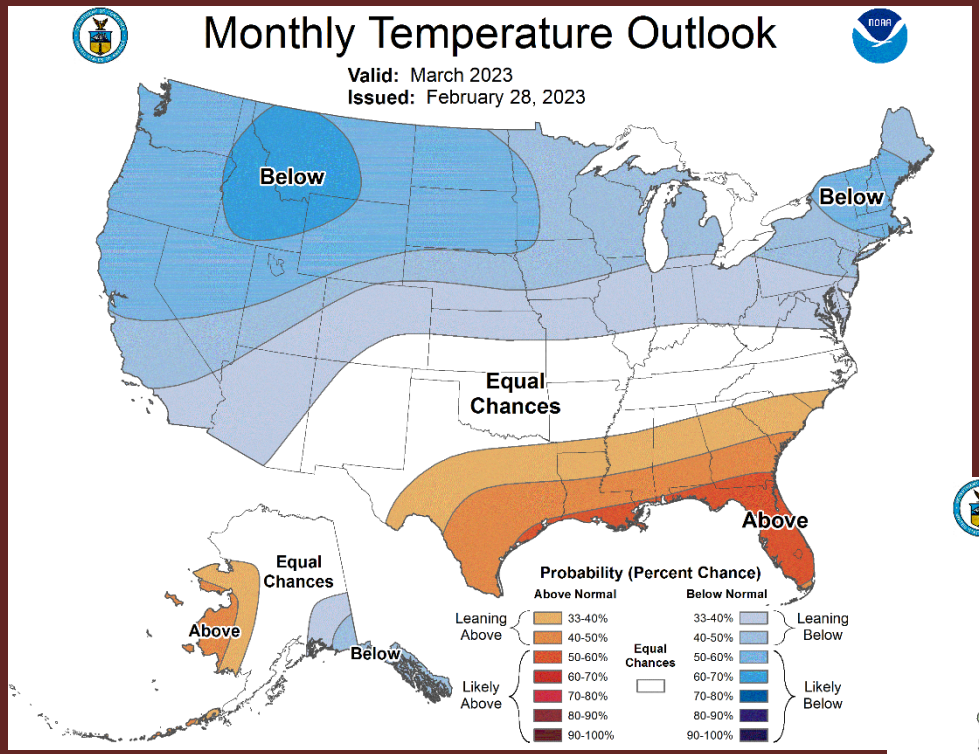






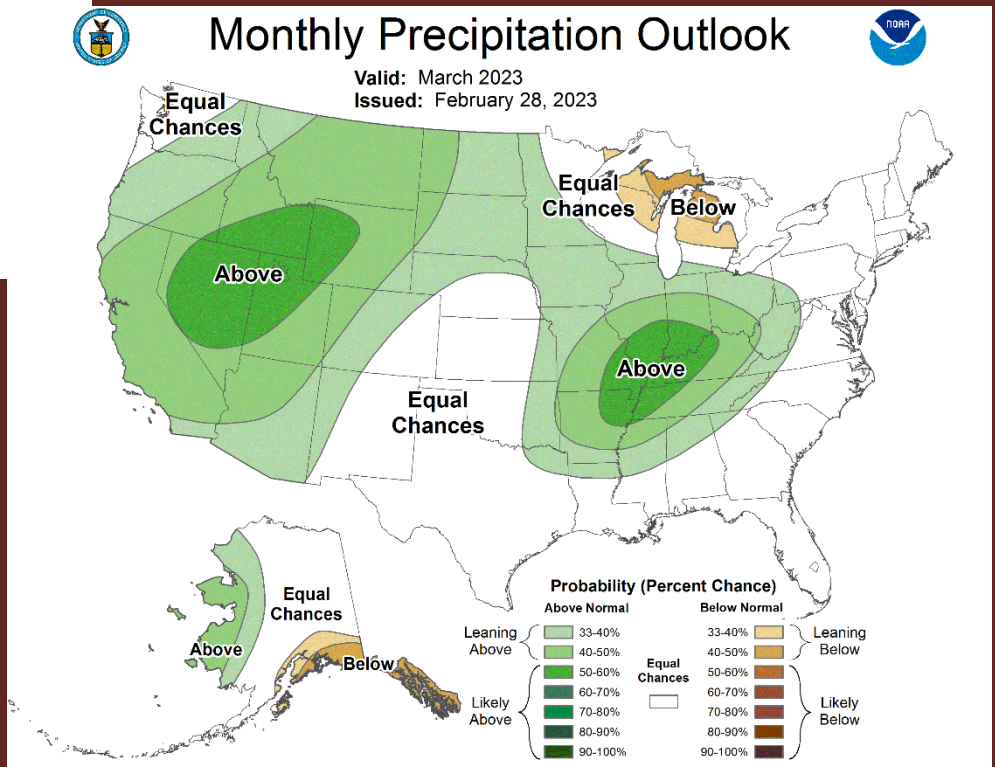
http://www.cpc.ncep.noaa.gov/

1-Month Outlook



March Monthly Outlook

- Colder conditions likely to verify given shorter term outlooks
- Wetter more likely Ohio Valley and Plains.



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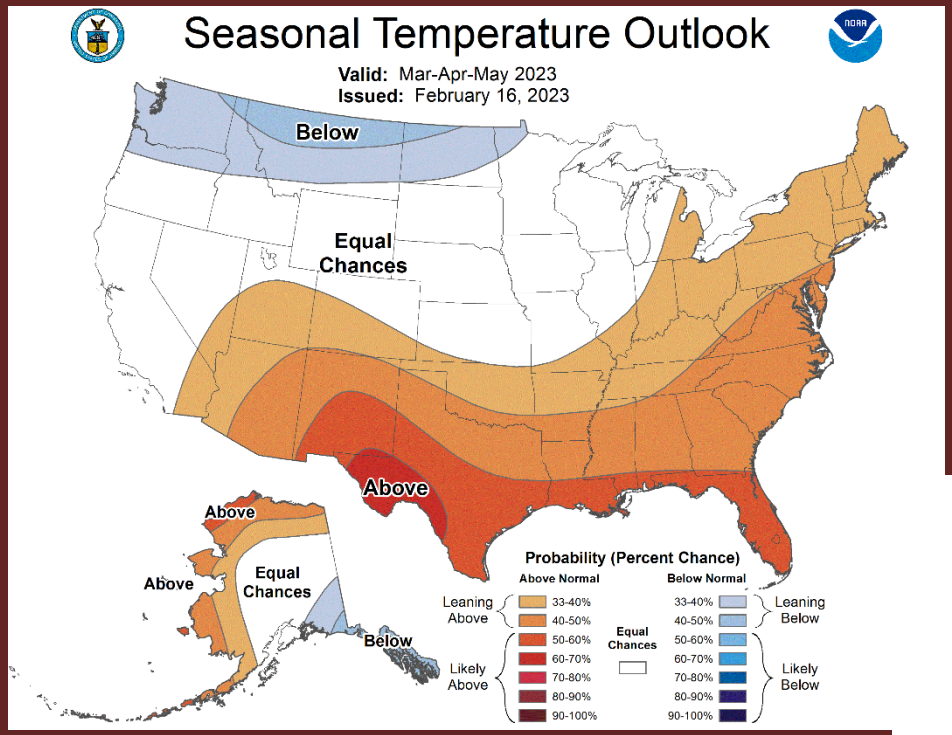
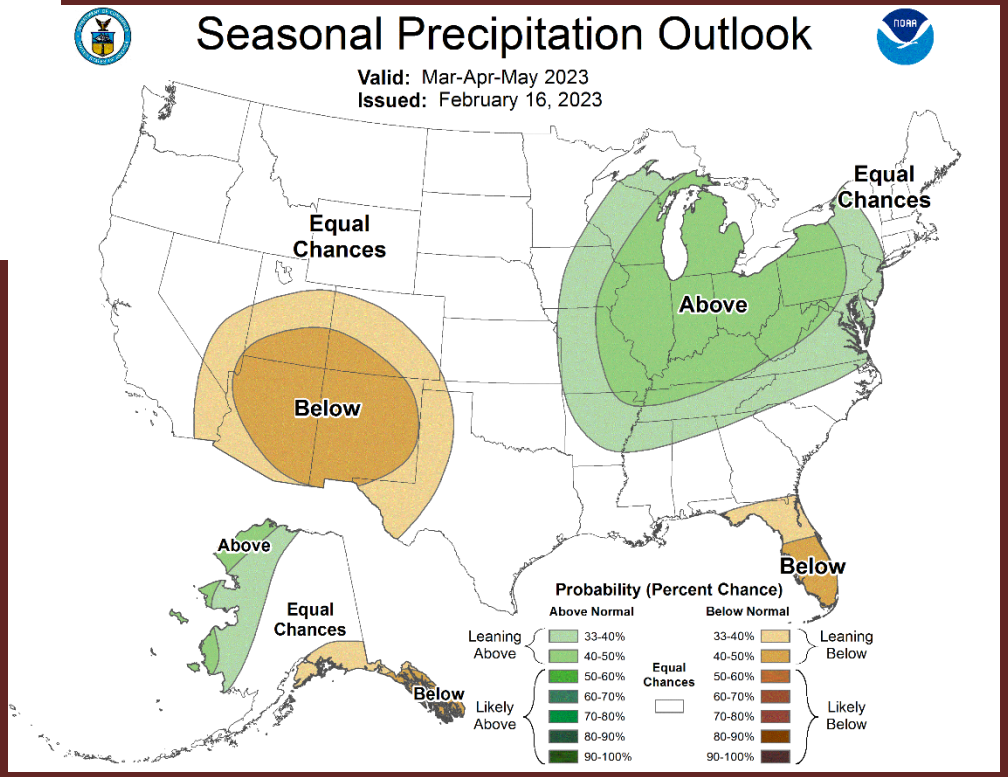
March-May Outlook



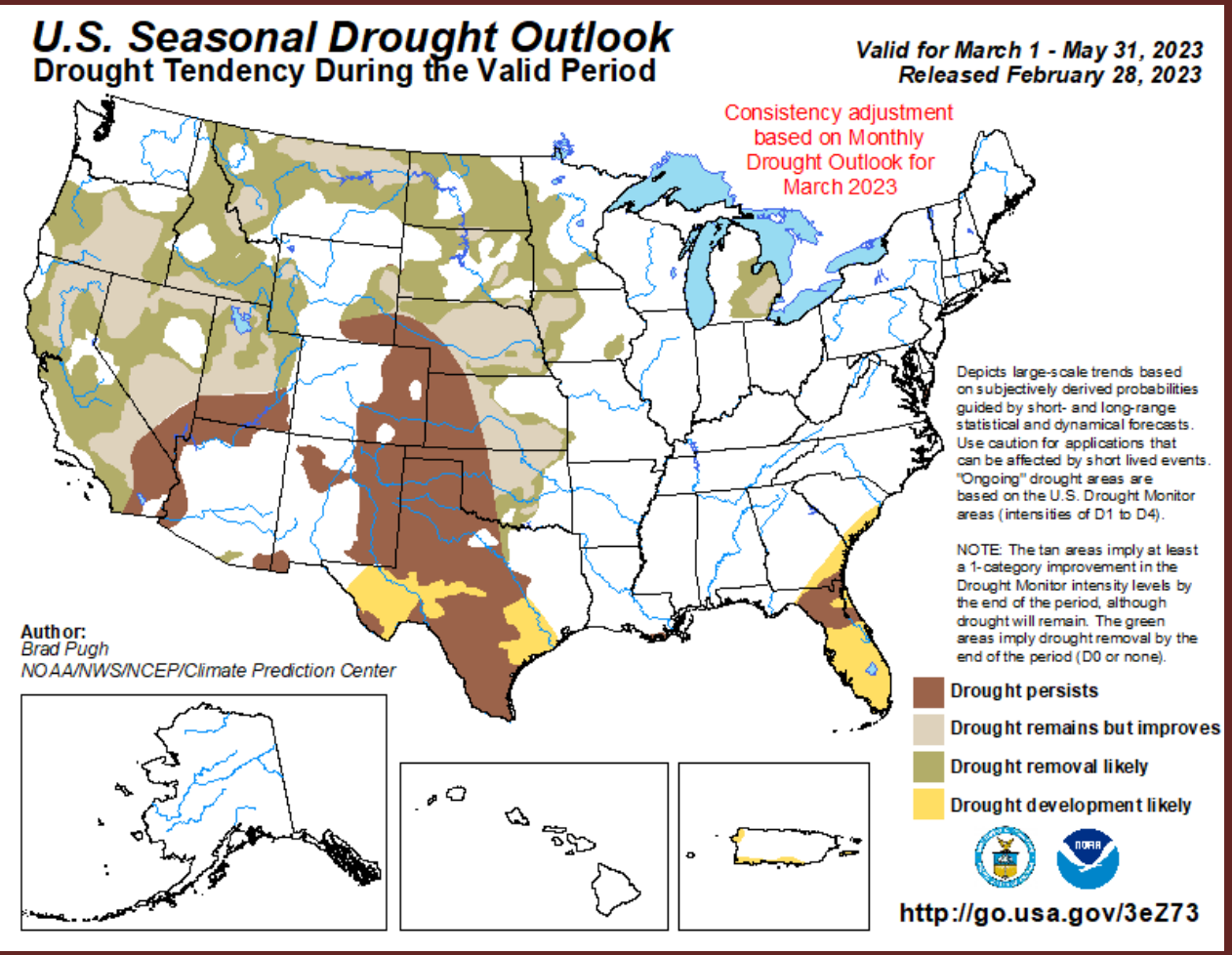
- La Niña fading – outlooks follow more along trend
- Very little on temperatures
- Slightly better wetter conditions east.



- Drought in Plains likely to remain – but some improvement.

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

Drought in the Midwest/Plains



- Spring 2023 outlook
- Expected improvement – as would expect in spring (precip > ET).

Summary

- Still some frozen soils. Soils getting wetter east – spring delay risk increasing.
- Some specialty crop damage already (cold) – more at risk with increasing green-up. Cold into mid-March likely to do some additional damage
- Snow cover could produce some flooding. Less concerned about wet soils there currently.
- Still some persistent drought issues/dry soils western Corn Belt.

Next MAC-T Monthly Call

Next Call

April 5, 2023, 9-10am CT