

MAC-T Monthly Call

Midwest Agriculture and Climate Team

March 2, 2020

For more information:

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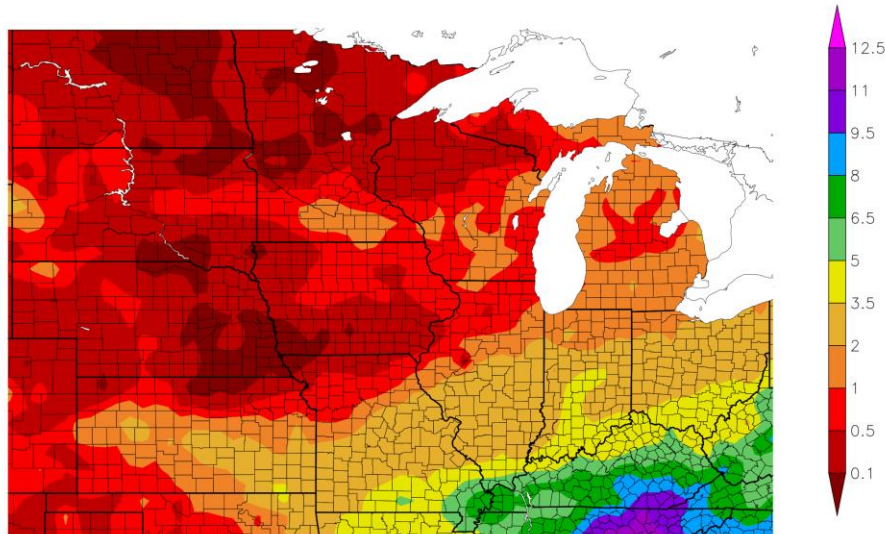
Charlene.Felkley@ars.usda.gov



Midwest Climate Hub
U.S. DEPARTMENT OF AGRICULTURE



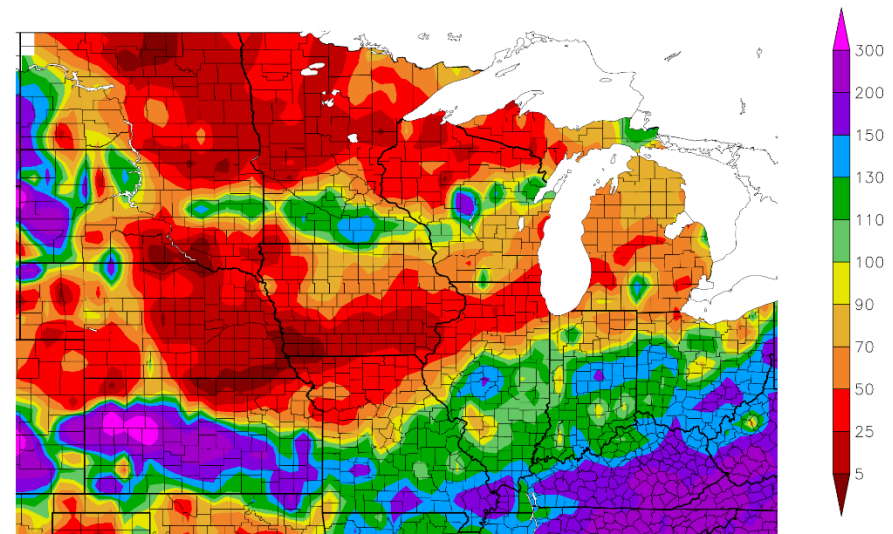
Precipitation (in)
1/31/2020 – 2/29/2020



Generated 3/1/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

Percent of Normal Precipitation (%)
1/31/2020 – 2/29/2020

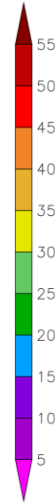
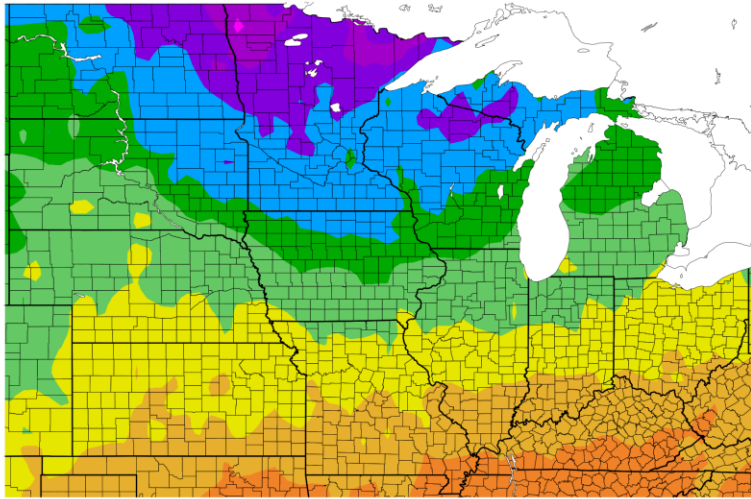


Generated 3/1/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Quieter month for precipitation. Limited precip over chunks of the central and northern part of the region.
- Some wetter than average far south.
- Some locations nearly no precip in Feb.
- But deficits are not too large during this period.

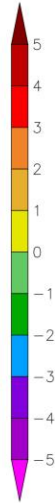
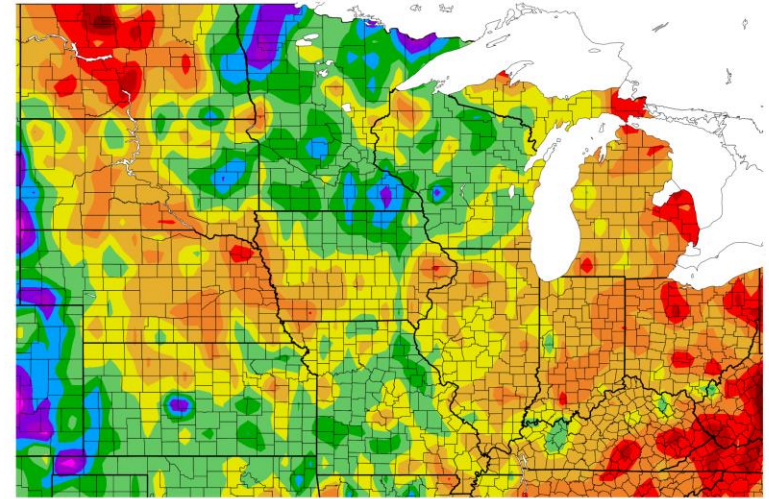
Temperature (F)
1/31/2020 – 2/29/2020



Generated 3/1/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Temperature (F)
1/31/2020 – 2/29/2020



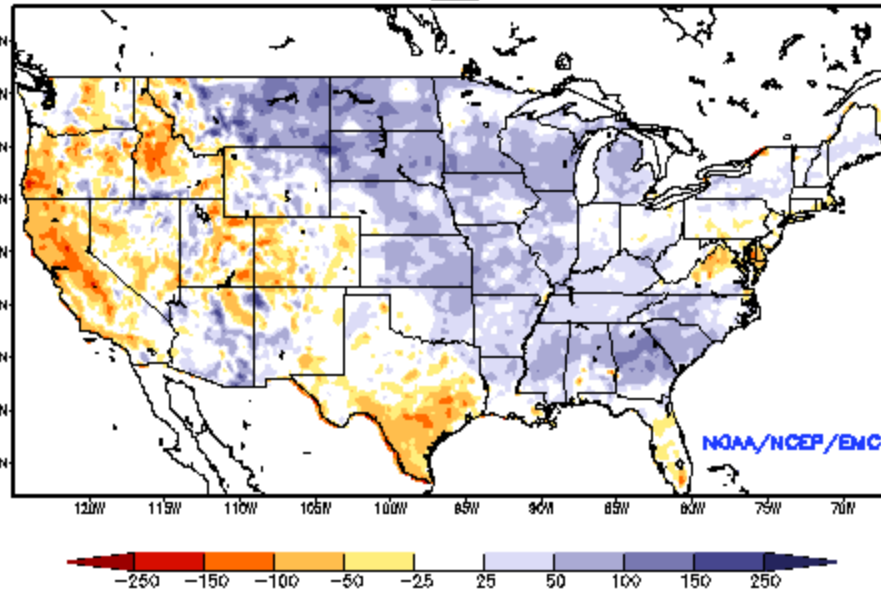
Generated 3/1/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Split parts with colder than average centered on MN and far south. Warmer elsewhere,
- Coldest mainly over snow-covered areas.
- Warmth east could cause issues for perennials

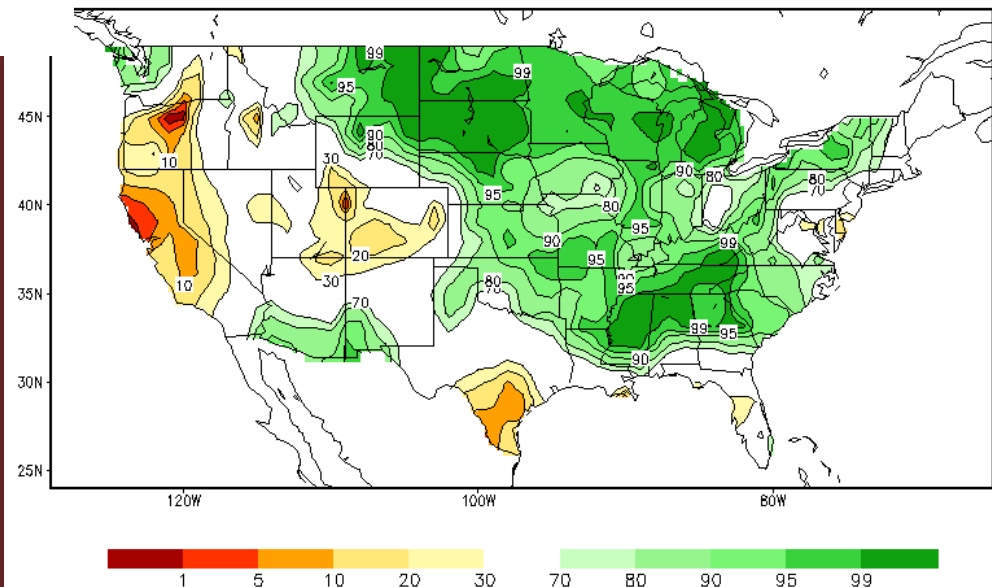
Soil Moisture

Ensemble-Mean - Current Total Column Soil Moisture Anomaly (mm)
NCEP NLDAS Products Valid: FEB 27, 2020



- Modeled soil moisture – still mostly wetter than average.
- Missouri Basin states wetter particularly and north.
- Wet but not quite as bad elsewhere.
- Will still be an issue with spring field work.

Calculated Soil Moisture Ranking Percentile
MAR 01, 2020

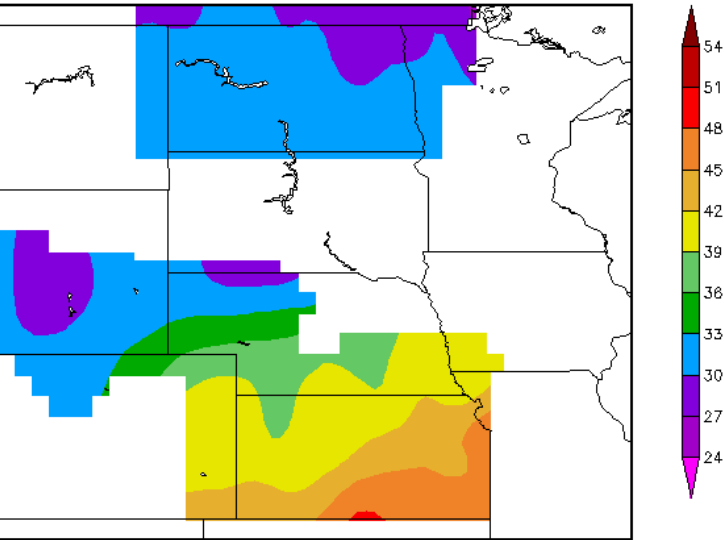


<http://www.emc.ncep.noaa.gov/mmb/nldas/drought/>

http://www.cpc.ncep.noaa.gov/products/Soilmst_Monitoring/US/Soilmst/Soilmst.shtml#

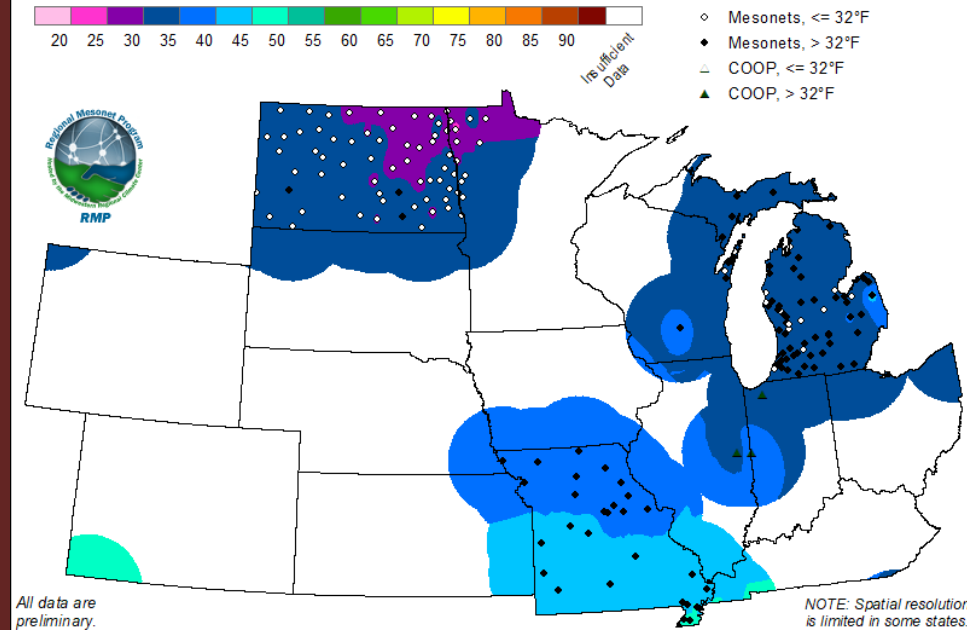
Soil Temperature

Soil Temperature (F at 4 inches)
3/1/2020 – 3/1/2020



High Plains Regional Climate Center
Generated 3/2/2020 using AWDN data.

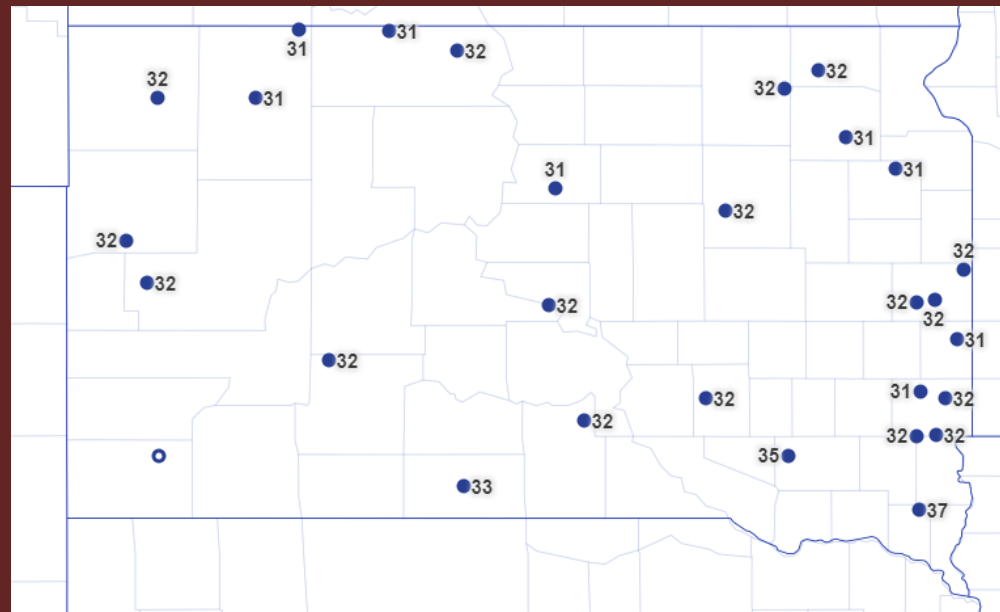
4" Soil Temperature (°F) (Bare) 24-Hour Period Through 2/29/2020



All data are preliminary.

NOTE: Spatial resolution is limited in some states.

- Soils still mainly frozen north (ND, part of SD and MN)
- Frost depths (not pictured) are fairly shallow.



<https://mrcc.illinois.edu/RMP/currentMaps.html>
<https://hprcc.unl.edu/maps.php?map=AWDNMaps>
<http://climate.sdstate.edu>

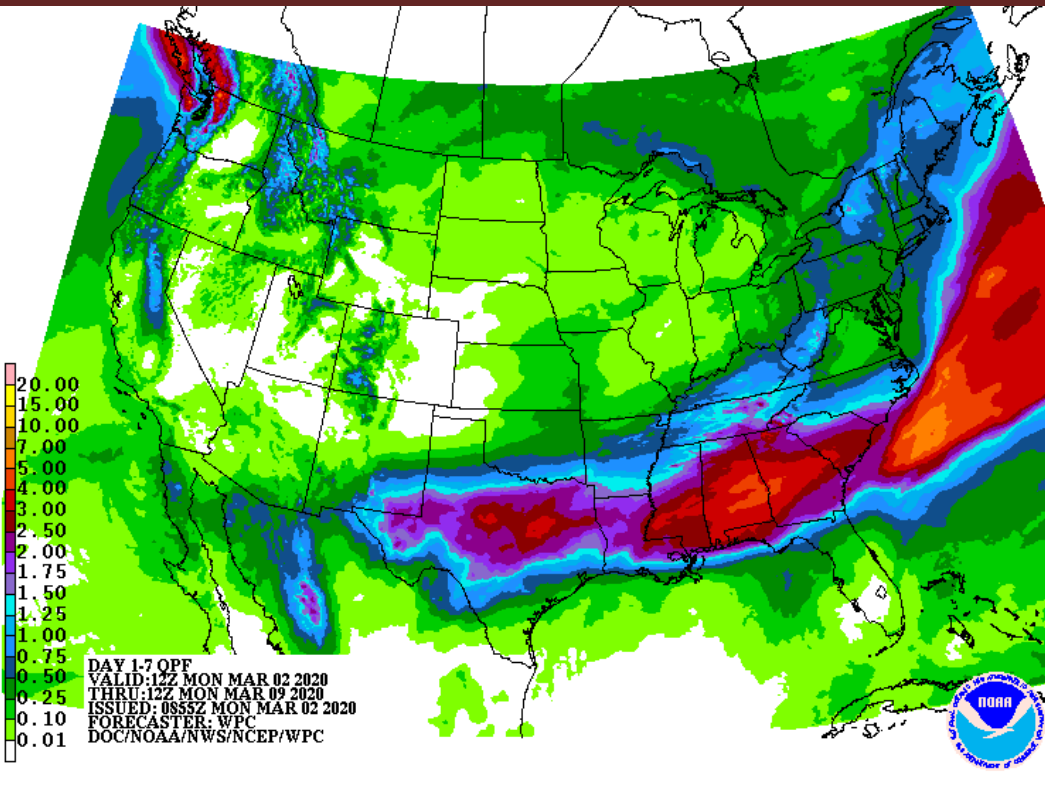
Assorted AG Issues

- Wet soils will again limit field work (pending additional pcp).
- Compaction and soil/nutrient losses could be problems again
- Concerned about current and March warmth in regard to potential freeze.

- Still crops to be harvested
- Grain storage issues and human losses

- Monitoring spring outlooks for planting.

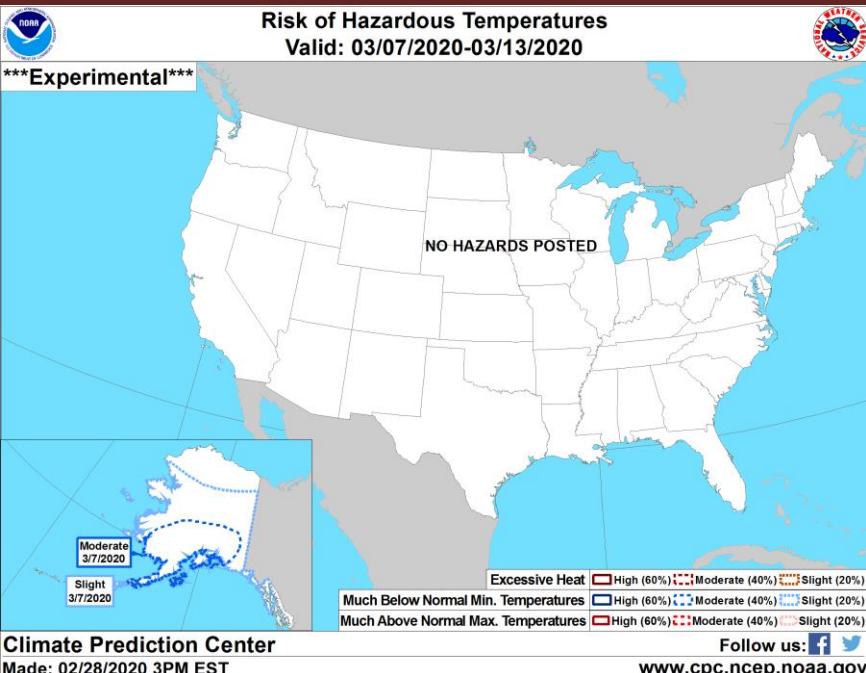
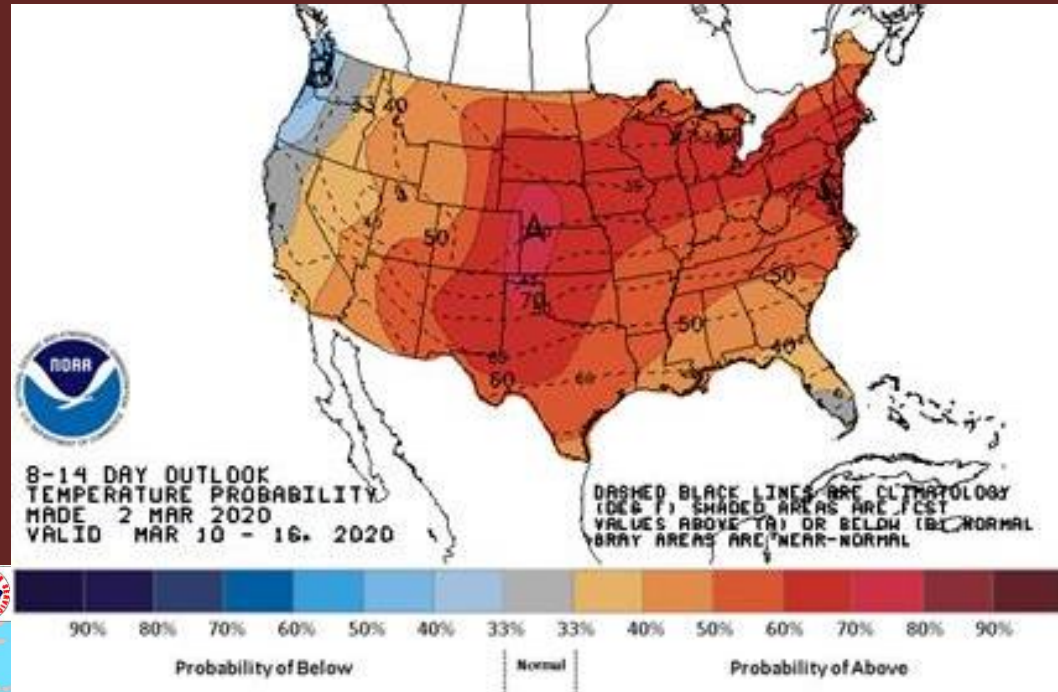
1-7 Day Precip



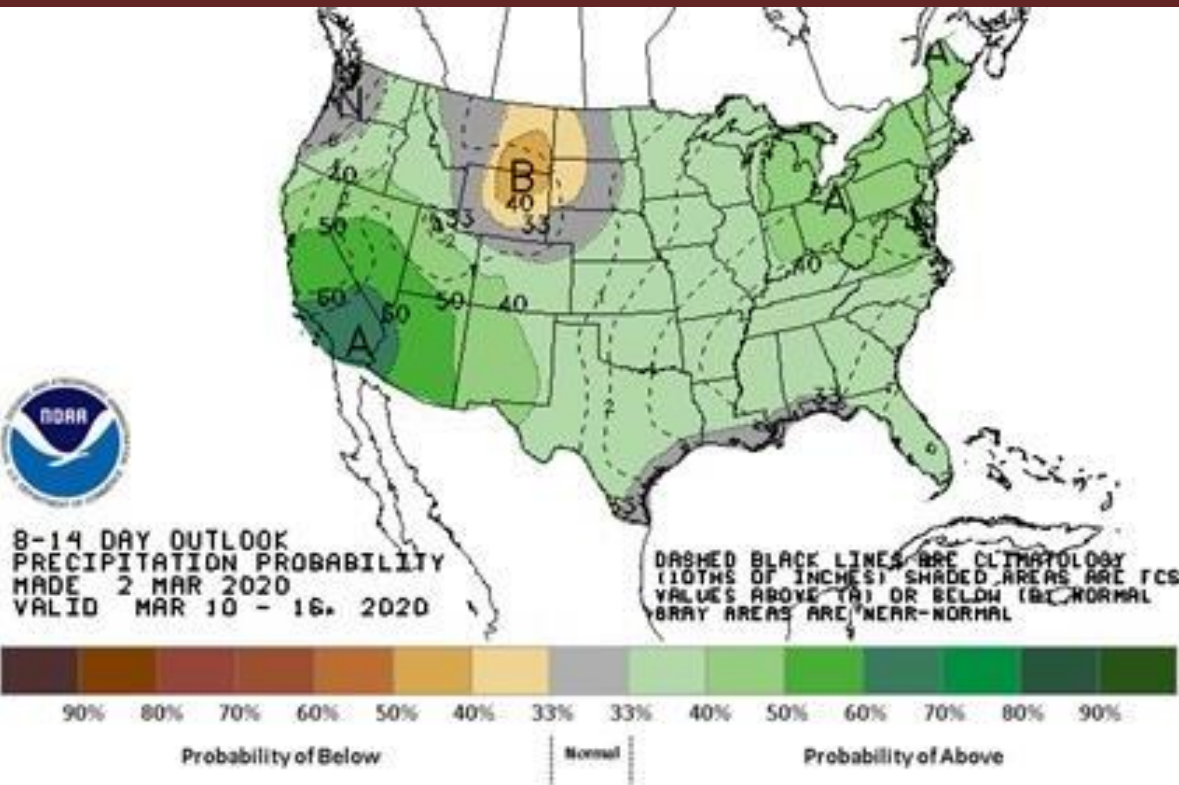
- Mostly light precip over nearly the whole region.
- A little more farther south.

Temperature Outlook

- Early March looks warm over nearly the whole area.
- Will melt snow and lead to runoff (flood issues likely).
- Will dry and start warming soils.



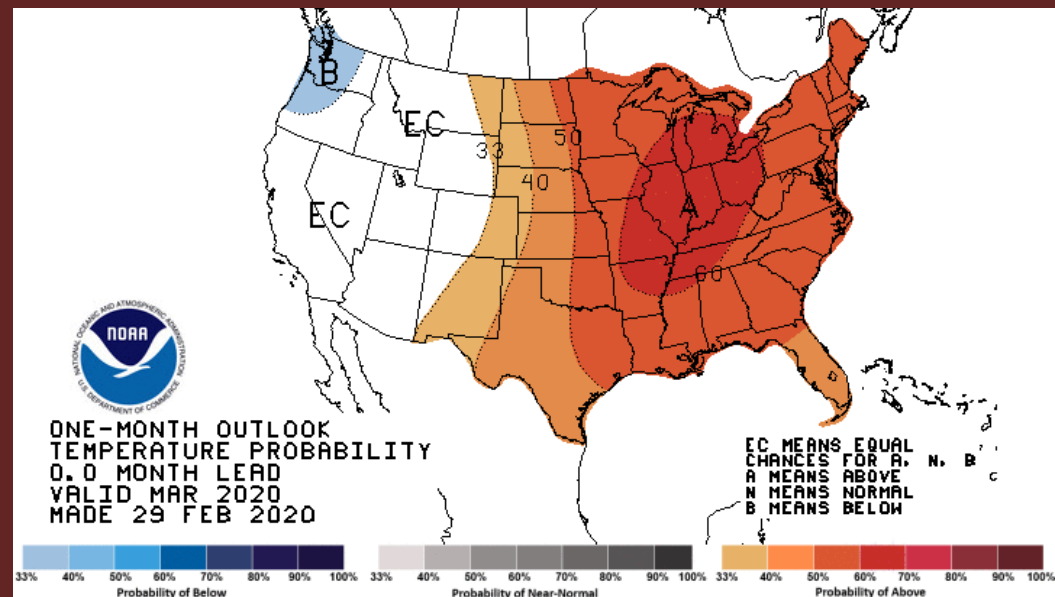
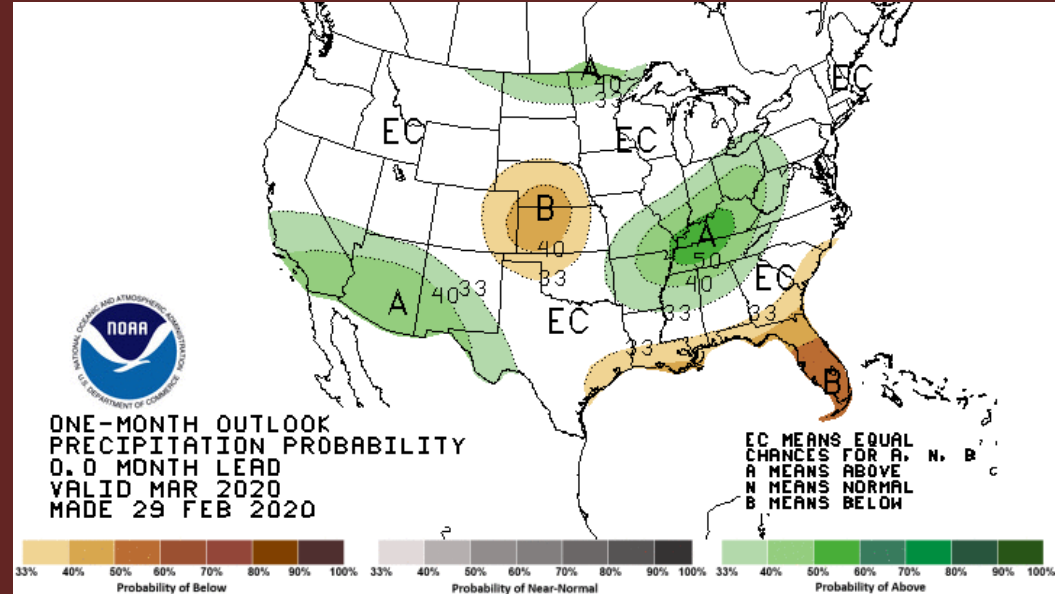
Precipitation Outlook



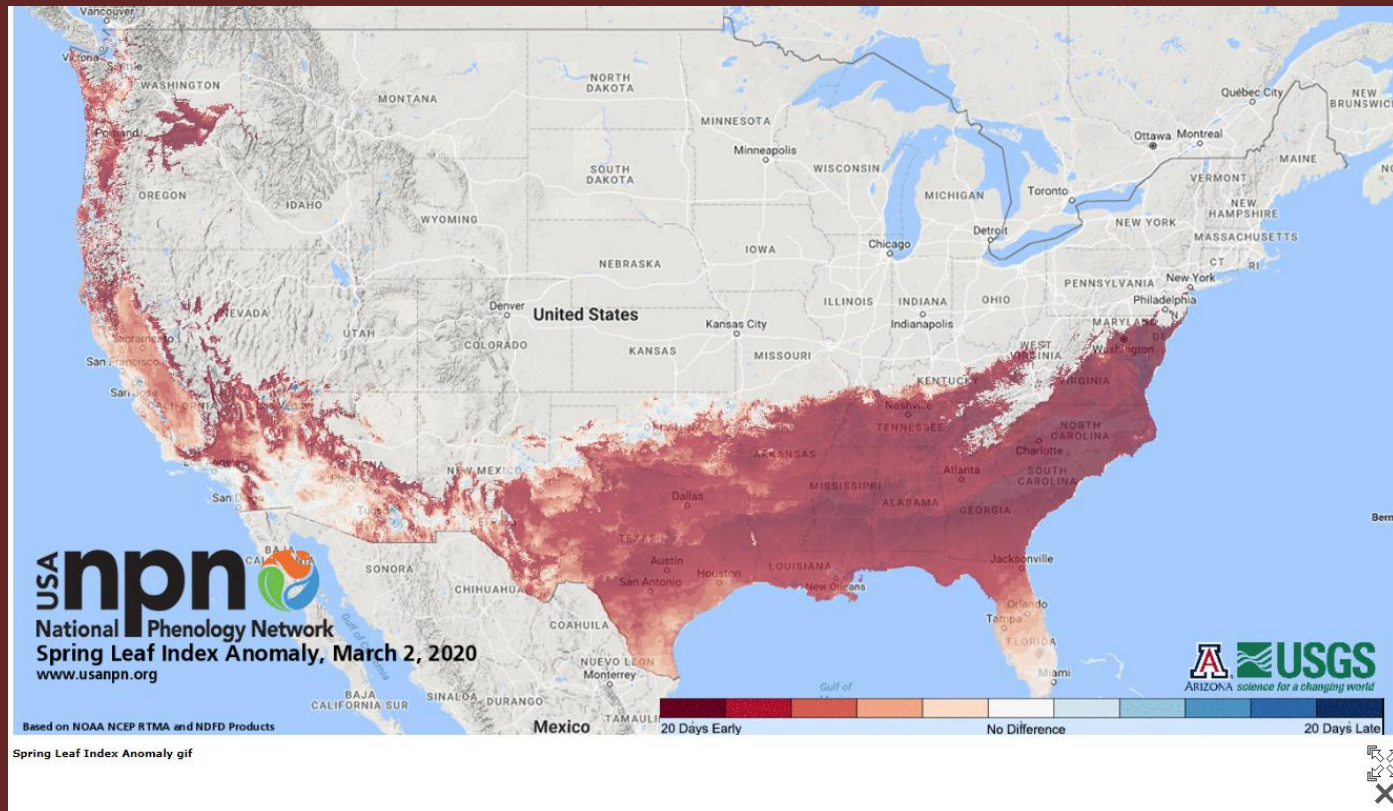
- Precip outlooks seems to be the least confident right now.
- Still leaning wet for most of the area.
- With wet soils this is still not a good situation.

1-Month Outlook

- Warmth likely to continue through March (positives and negatives).
- Likely quicker melt-off of snow.
- Will warm and help dry soils
- Pcp more likely wetter Ohio Valley and spot of dryness central Plains.
- Confidence in pcp outlooks lower.
- Less risk on planting from these outlooks (still enough concerns looking ahead).



USA National Phenology Network



For the Spring Leaf Index video, select the link below.

<https://www.usanpn.org/files/npn/maps/six-leaf-index-daily-anomaly-2020.gif>

Drought in the Midwest

U.S. Drought Monitor

USDA Midwest Climate Hub

February 25, 2020

(Released Thursday, Feb. 27, 2020)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	100.00	0.00	0.00	0.00	0.00	0.00
Last Week 02-19-2020	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago 11-26-2019	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year 12-31-2019	99.71	0.29	0.00	0.00	0.00	0.00
Start of Water Year 10-01-2019	80.58	19.42	4.98	0.39	0.00	0.00
One Year Ago 02-26-2019	100.00	0.00	0.00	0.00	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>

Author:

David Miskus
NOAA/NWS/NCEP/CPC

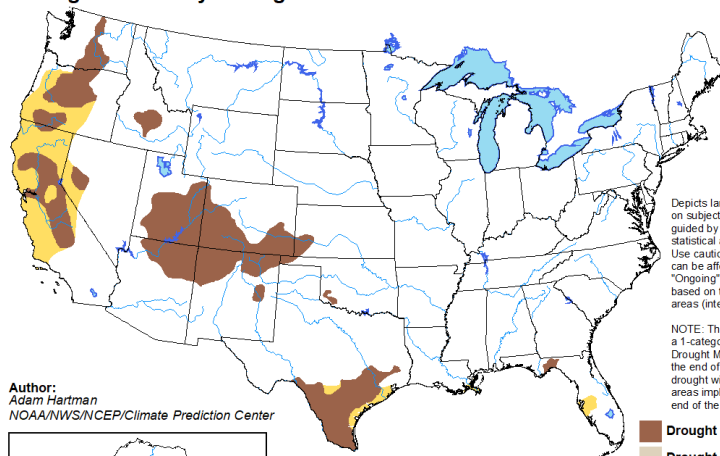


droughtmonitor.unl.edu

The past 30-days have seen mostly below-normal precipitation (except surpluses across far southern and eastern sections), with below-normal temperatures the past 14-days. With excess precipitation encompassing much of the Midwest the past 60- to 90-days, no D0 development was needed. Not surprisingly, USGS stream flows were near to much above-normal (more so at longer time periods) where the rivers were not frozen. In the upper Midwest, a decent snow cover blanketed the area. The drier weather was welcome in the Midwest, but they could also use some milder air – as long as it thaws the ground while gradually melts the snow.

U.S. Monthly Drought Outlook Drought Tendency During the Valid Period

Valid for March 2020
Released February 29, 2020



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. *Ongoing* drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

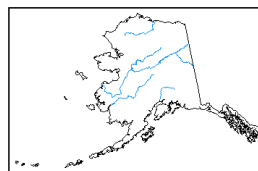
NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely



<http://go.usa.gov/3eZGd>

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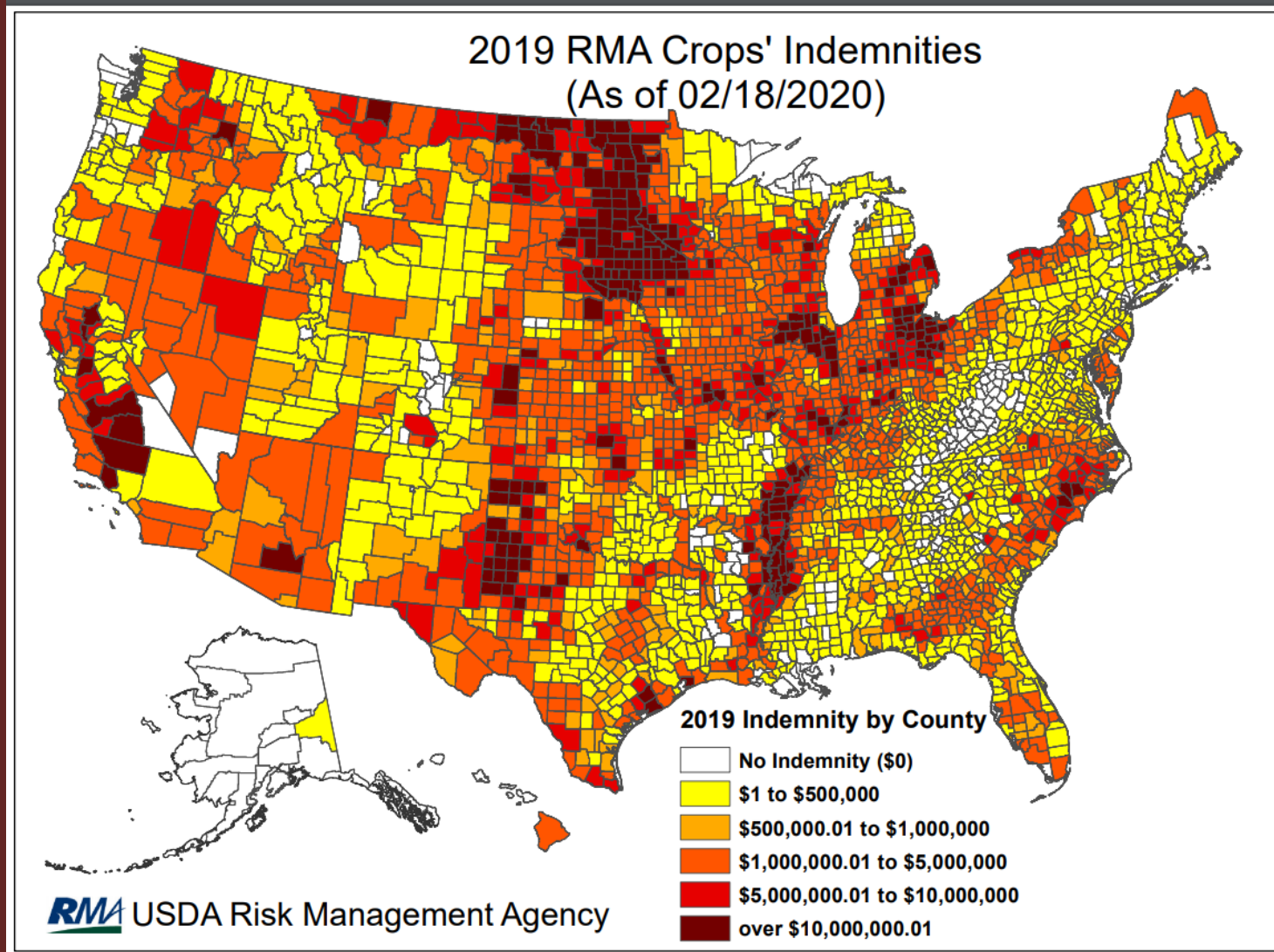
<http://droughtmonitor.unl.edu/>

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

Summary

- March outlook gives a little optimistic look ahead for planting season
- Pcp still a questionable outlook.
- Better chance of planting moving closer to average. Delays still likely.
- Concerns about perennials with strong warmth coming.

2019 Crop Indemnities



Next MAC-T Monthly Call

Next Call
April 1st, 2020