

Special Weather Event June Webinar

June 6, 2019

For more information:

Dennis.todey@ars.usda.gov

Charlene.Felkley@ars.usda.gov

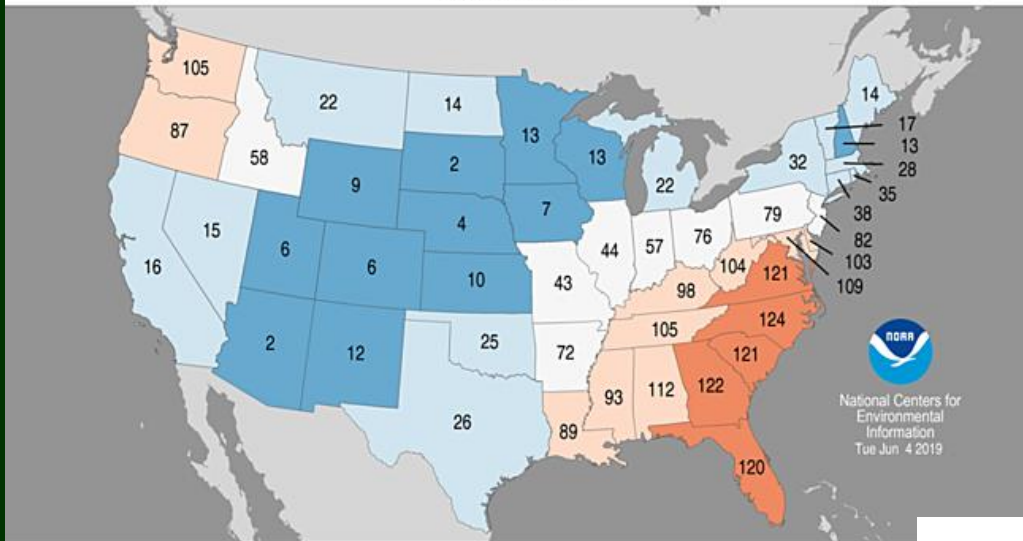
 **USDA** Midwest Climate Hub
U.S. DEPARTMENT OF AGRICULTURE



Statewide Maximum Temperature Ranks

May 2019

Period: 1895–2019

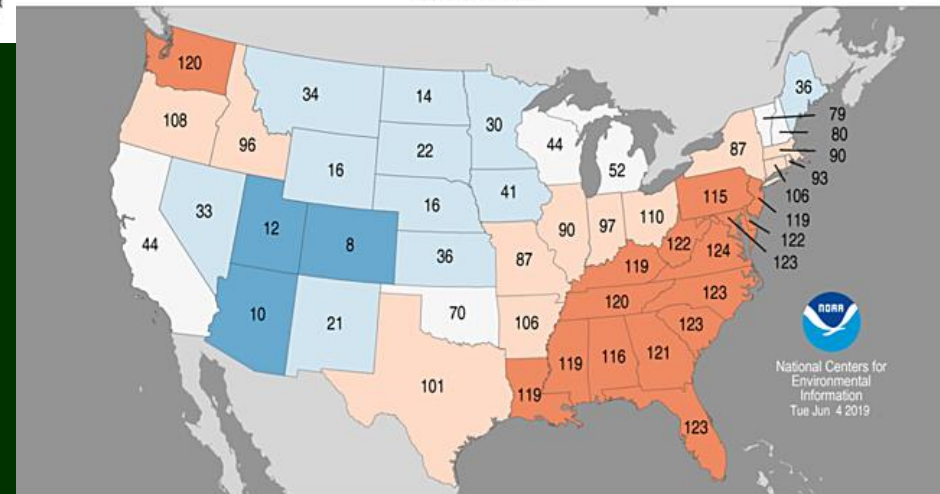


May Temperature

Statewide Minimum Temperature Ranks

May 2019

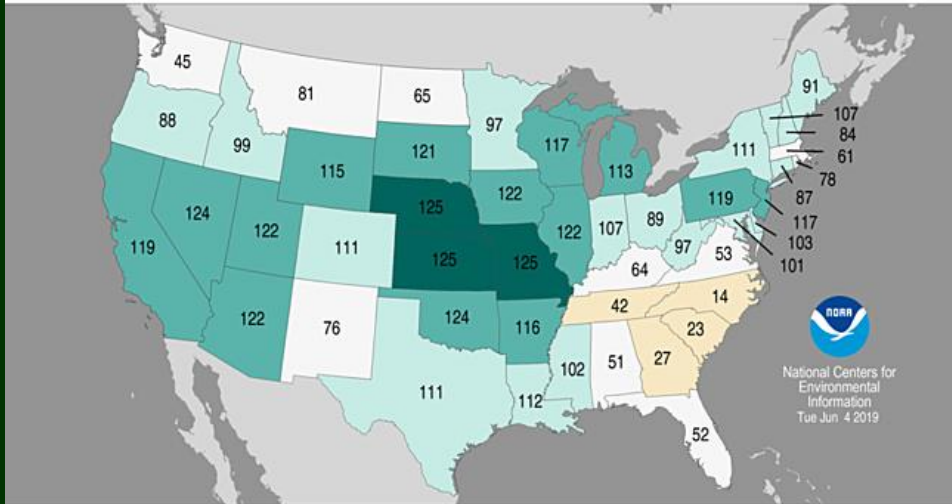
Period: 1895–2019



- May temperatures mostly colder than average. Signal more in the max temps.
- Top 10 coldest average highs central/western US.
- Warmer minimums eastern US

Statewide Precipitation Ranks

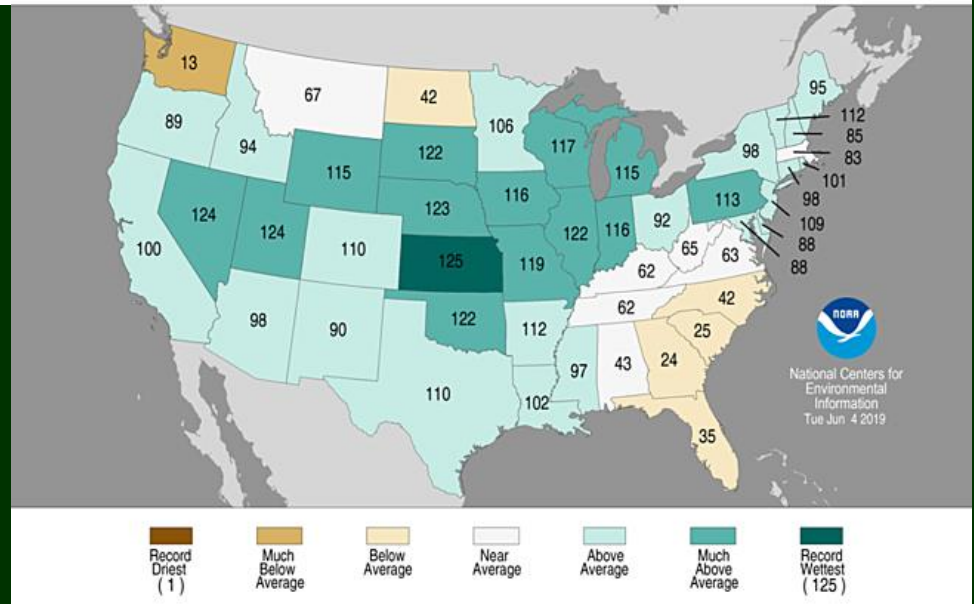
May 2019
Period: 1895-2019



May/Spring Precipitation

Statewide Precipitation Ranks

March-May 2019
Period: 1895-2019

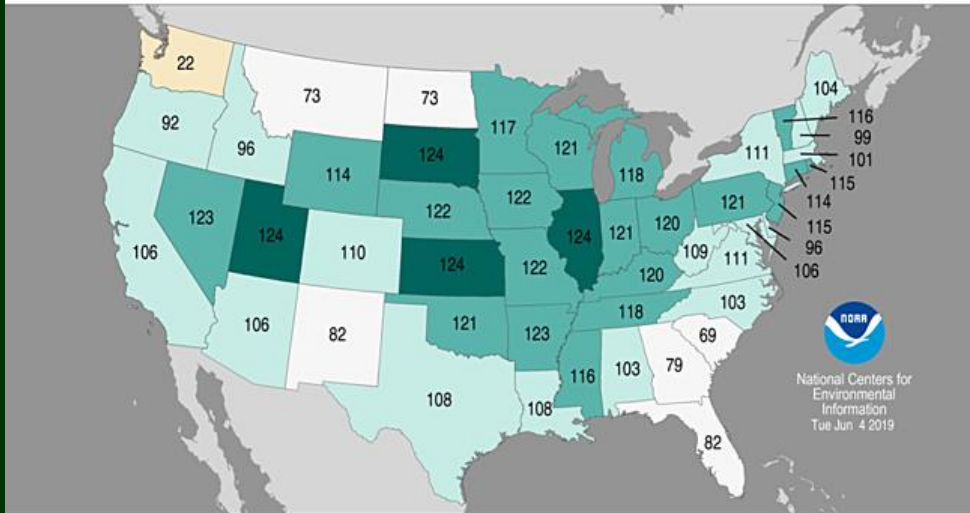


- May and spring precipitation well above average through middle US
- Top 10 and wettest all time for a few states at these time scales

Statewide Precipitation Ranks

December 2018–May 2019

Period: 1895–2019

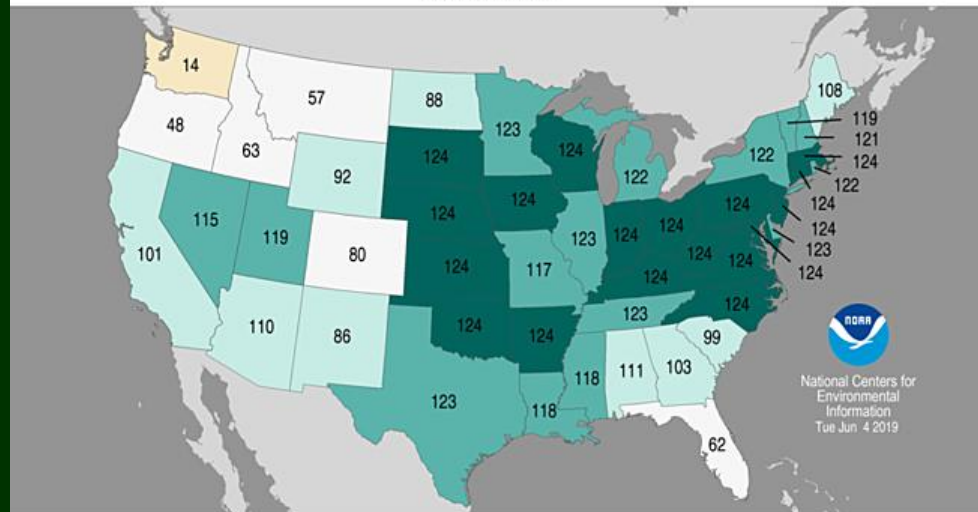


6/12 Month Precipitation

Statewide Precipitation Ranks

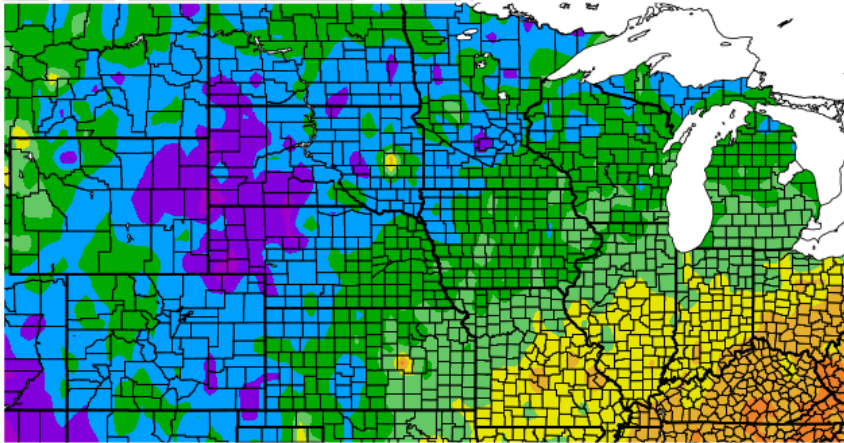
June 2018–May 2019

Period: 1895–2019



- Extended period of wetness back to a year.
- Top 10/record wettest in states back to a year.
- Wetness problems are long term issues.

Departure from Normal Temperature (F)
5/4/2019 – 6/2/2019



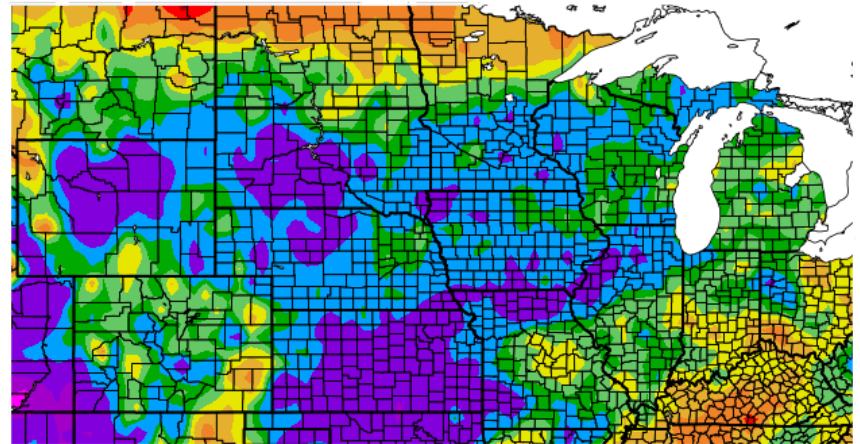
Generated 6/3/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

30 day

Temperature- Precipitation

Percent of Normal Precipitation (%)
5/4/2019 – 6/2/2019



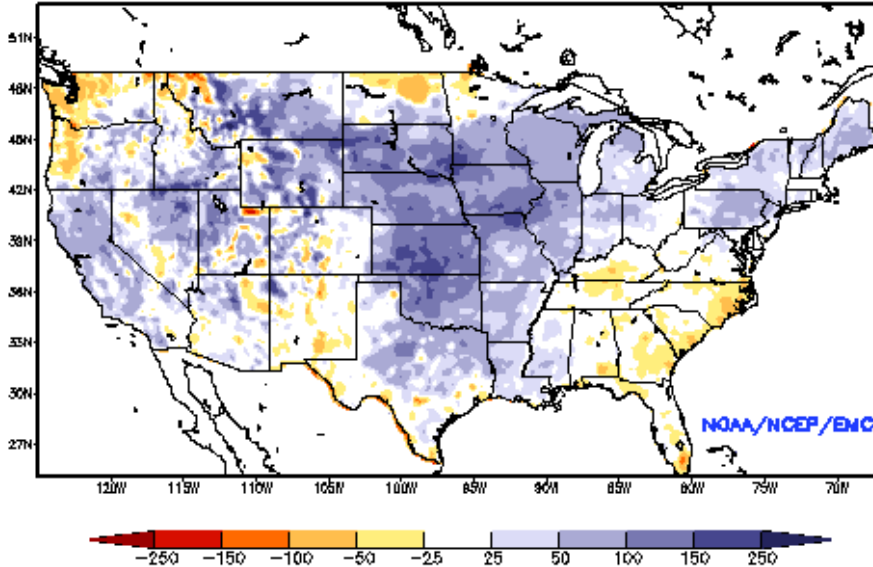
Generated 6/3/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

- May temperatures mostly colder than average. 6-10 F below average in nrn Plains to slightly above average along the Ohio River.
- Generally wet conditions – more than double in places to quite dry along the Canadian border and Kentucky.

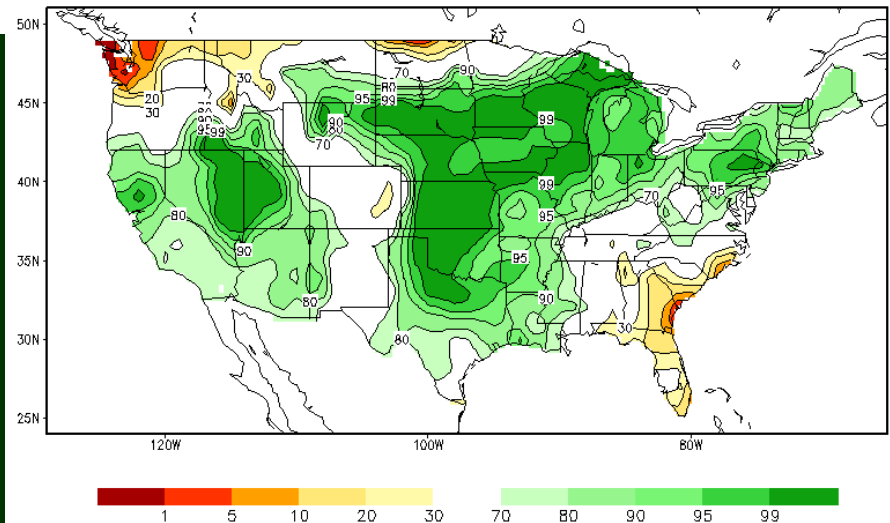
Soil Moisture

Ensemble-Mean - Current Total Column Soil Moisture Anomaly (mm)
NCEP NLDAS Products Valid: MAY 30, 2019



- Very wet soils over most of the region. 99th percentile for much of it.
- Few dry areas.
- Cool and wet conditions and low ET contribute to the overall conditions.

Calculated Soil Moisture Ranking Percentile
JUN 03, 2019



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

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

Drought in the Midwest

U.S. Drought Monitor North Central

June 4, 2019




(Released Thursday, Jun. 6, 2019)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	96.46	3.54	1.09	0.00	0.00	0.00
Last Week 05-28-2019	96.99	3.01	0.00	0.00	0.00	0.00
3 Months Ago 03-05-2019	99.03	0.97	0.00	0.00	0.00	0.00
Start of Calendar Year 01-01-2019	95.93	4.07	1.43	0.00	0.00	0.00
Start of Water Year 09-25-2018	73.15	26.85	12.92	4.07	0.97	0.05
One Year Ago 06-05-2018	61.59	38.41	17.56	6.53	1.70	0.15

Intensity:

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

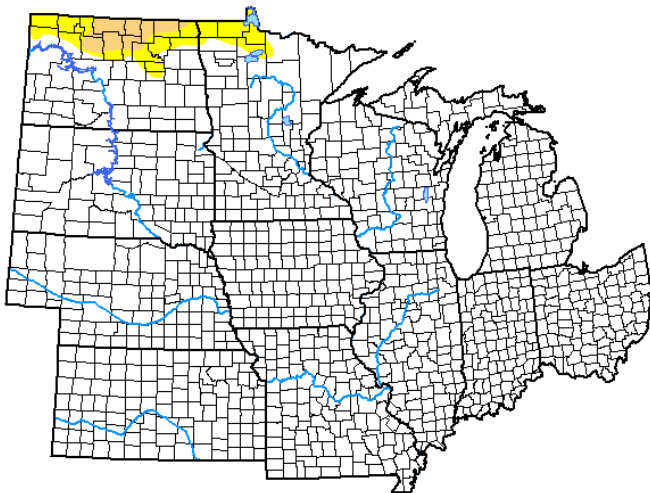
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

David Simeral
Western Regional Climate Center



droughtmonitor.unl.edu

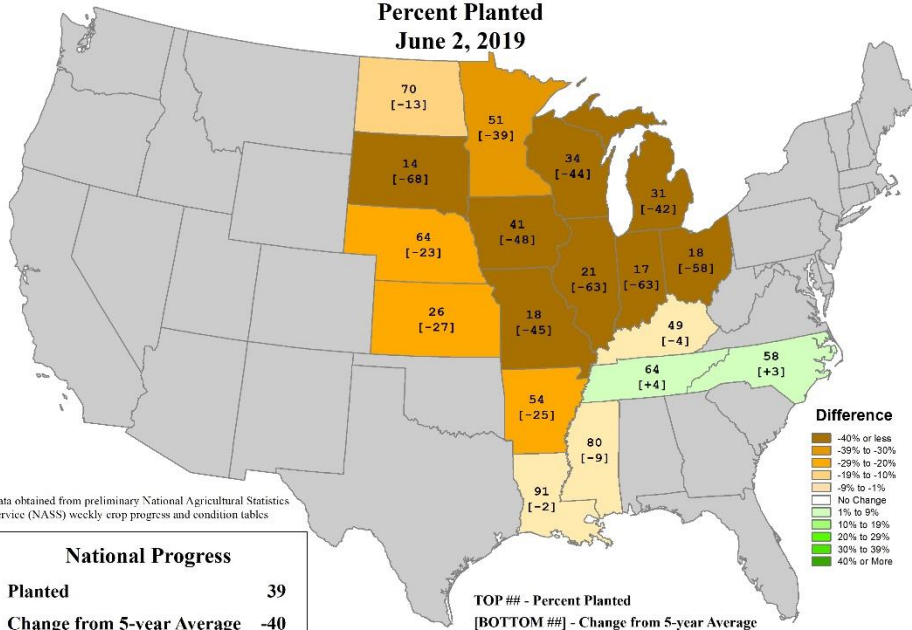


Drought-free period has ended due to serious dryness in ND-MN. D1 introduced this week after an extended period w/o drought. Wetness elsewhere is not close to drought conditions.

Planting Progress

U.S. Soybeans Progress

Percent Planted
June 2, 2019



Data obtained from preliminary National Agricultural Statistics Service (NASS) weekly crop progress and condition tables

National Progress

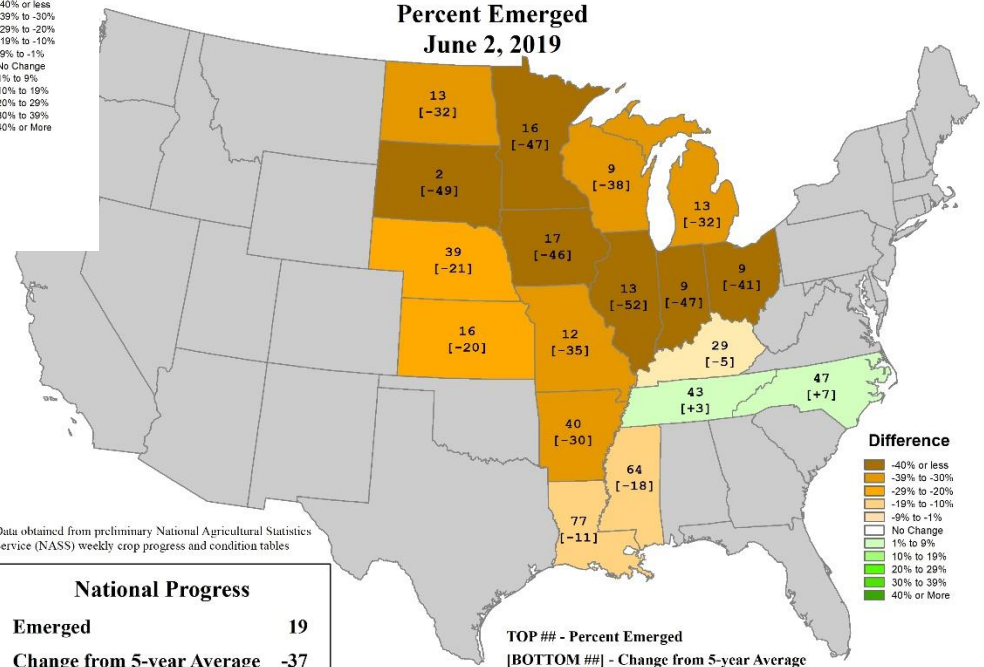
Planted **39**
Change from 5-year Average **-40**

TOP## - Percent Planted
[BOTTOM##] - Change from 5-year Average

- Record slow bean planting and emergence.
- Worst since 1995 for planting (39% vs. 40%)/2013 for emergence (19% vs. 31%).

U.S. Soybeans Progress

Percent Emerged
June 2, 2019



Data obtained from preliminary National Agricultural Statistics Service (NASS) weekly crop progress and condition tables

National Progress

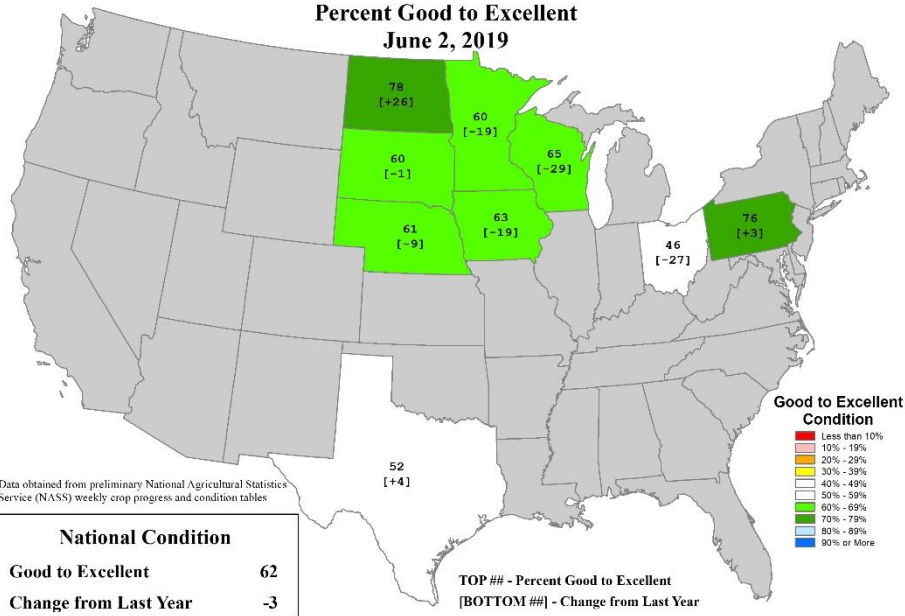
Emerged **19**
Change from 5-year Average **-37**

TOP## - Percent Emerged
[BOTTOM##] - Change from 5-year Average

Crop Condition

U.S. Oat Conditions

Percent Good to Excellent
June 2, 2019



Data obtained from preliminary National Agricultural Statistics Service (NASS) weekly crop progress and condition tables

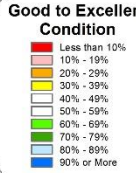
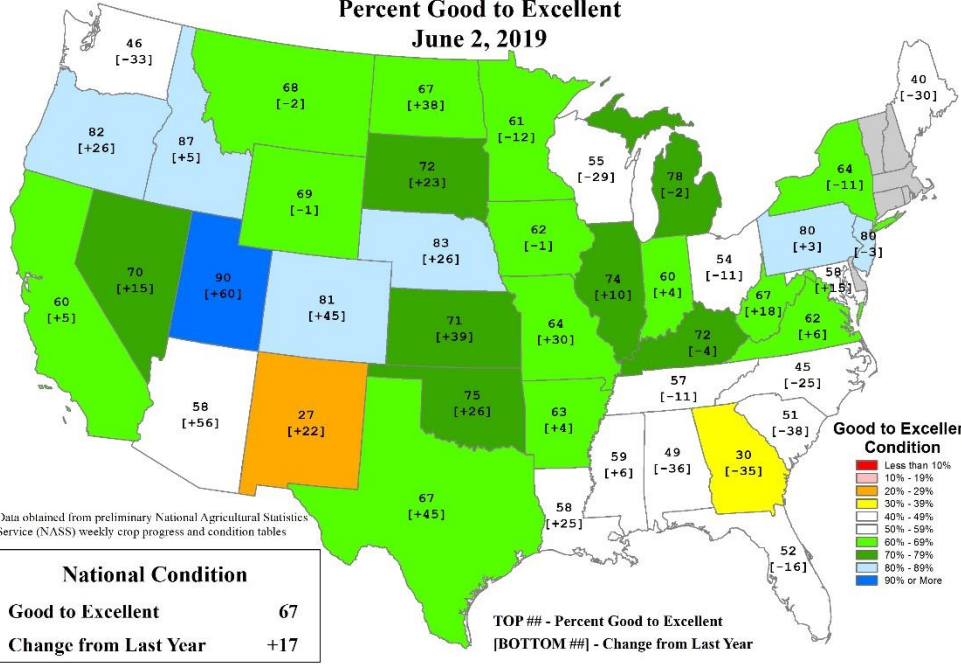
National Condition	
Good to Excellent	62
Change from Last Year	-3

TOP ## - Percent Good to Excellent
[BOTTOM ##] - Change from Last Year

- Crop conditions, though delayed are generally good.
- Rangeland and pasture good except for southeast.

U.S. Pasture and Range Conditions

Percent Good to Excellent
June 2, 2019



Data obtained from preliminary National Agricultural Statistics Service (NASS) weekly crop progress and condition tables

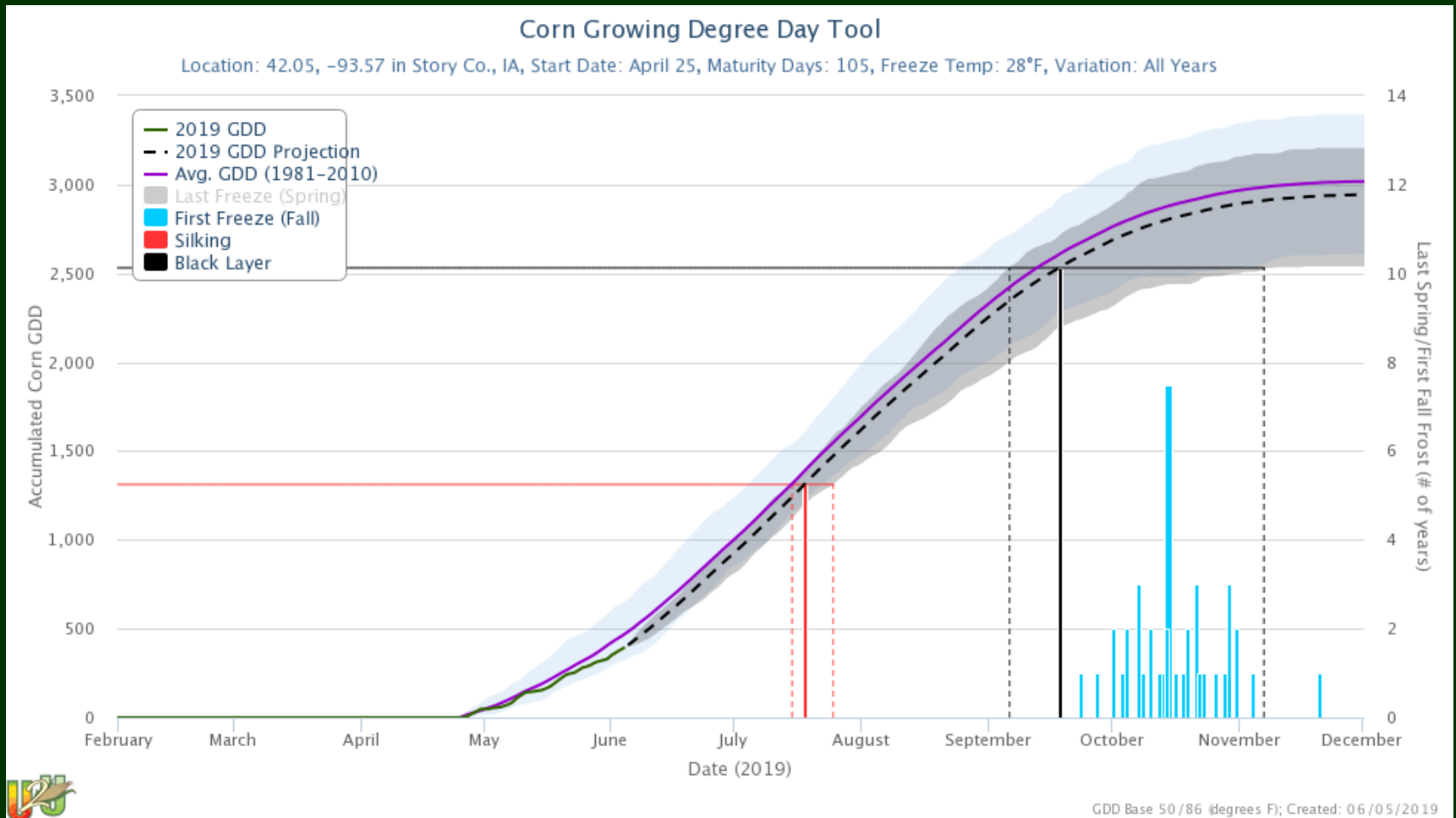
National Condition	
Good to Excellent	67
Change from Last Year	+17

TOP ## - Percent Good to Excellent
[BOTTOM ##] - Change from Last Year

Assorted AG Issues

- Wet soils continue to slow planting – many acres likely planted in soils that should not have equipment on them.
- Cool temperatures have delayed emergence and development as well as ET
- USDA-NASS report crop conditions decent for those far enough along.
- Serious decision-making on planting. Many acres not going to be planted. (Multiple influences on decisions)
- Some frost/freeze still far north
- Weed/disease issues reported.

GDD Accumulation Tool



<https://hprcc.unl.edu/gdd.php>

<https://mrcc.illinois.edu/U2U/gdd/>

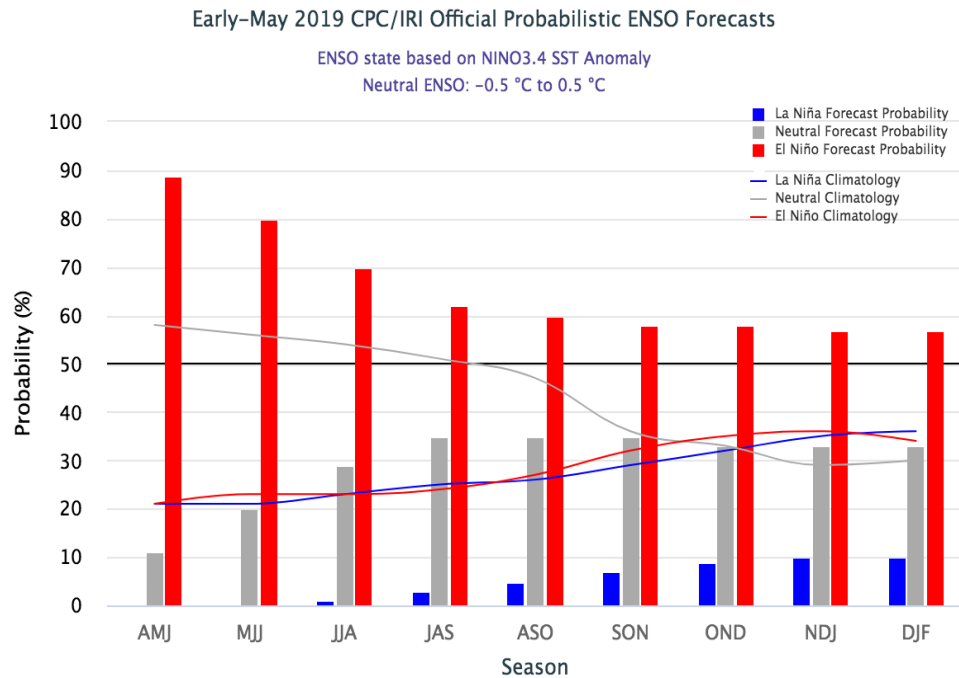
Hydro points

- Major flooding on Mississippi River from the Quad Cities downstream to the Ohio confluence
 - Also on the Illinois downstream of Peoria
- Crest just upstream of St. Louis today
- Lock and Dams closed from LD12 (Bellevue, Ia) downstream
- Significant contributions from Illinois, Missouri, and Arkansas Rivers
- Not so much from the Ohio River
- Rivers will fall steadily pending future rainfall, but the hydro system remains hypersensitive to future rains, and a lack of ag crops and/or slow development hampers transpiration contribution to the hydro situation

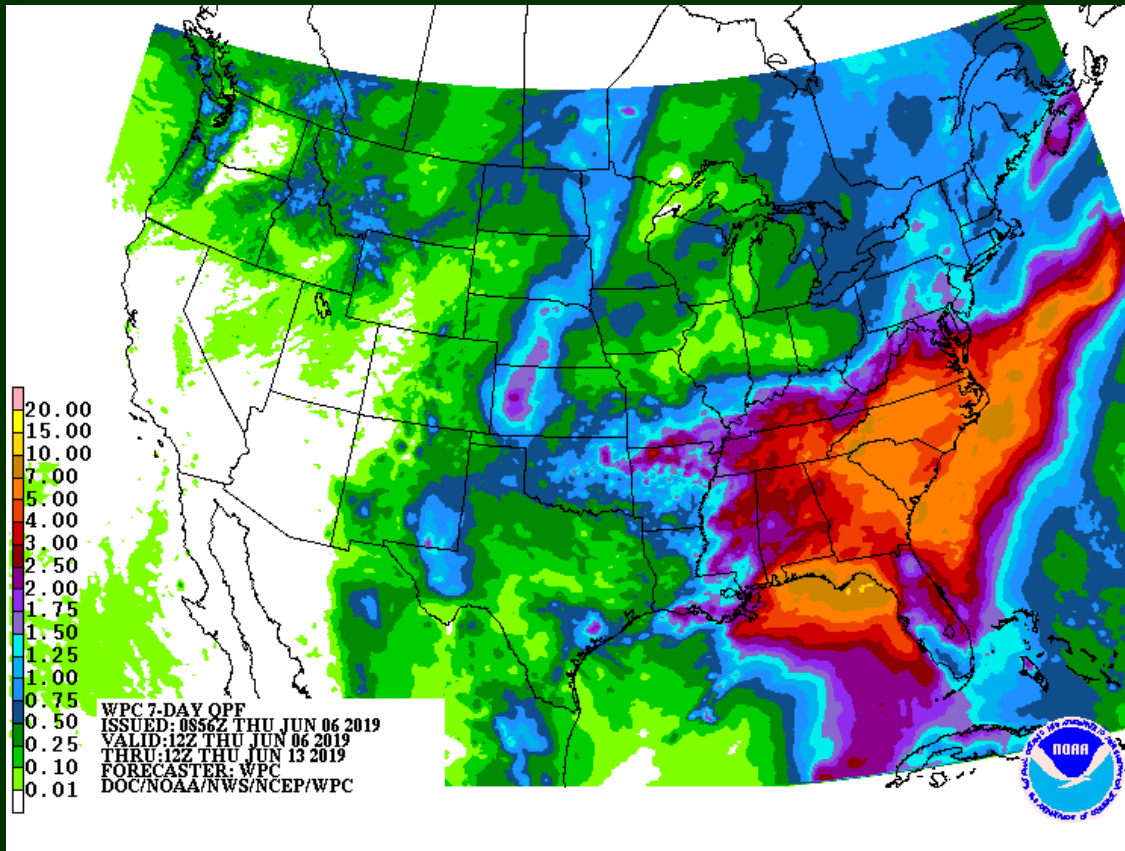
CPC/IRI Probabilistic ENSO Outlook

Updated: 9 May 2019

El Niño conditions are favored to continue through winter 2019-20 with diminishing chances.



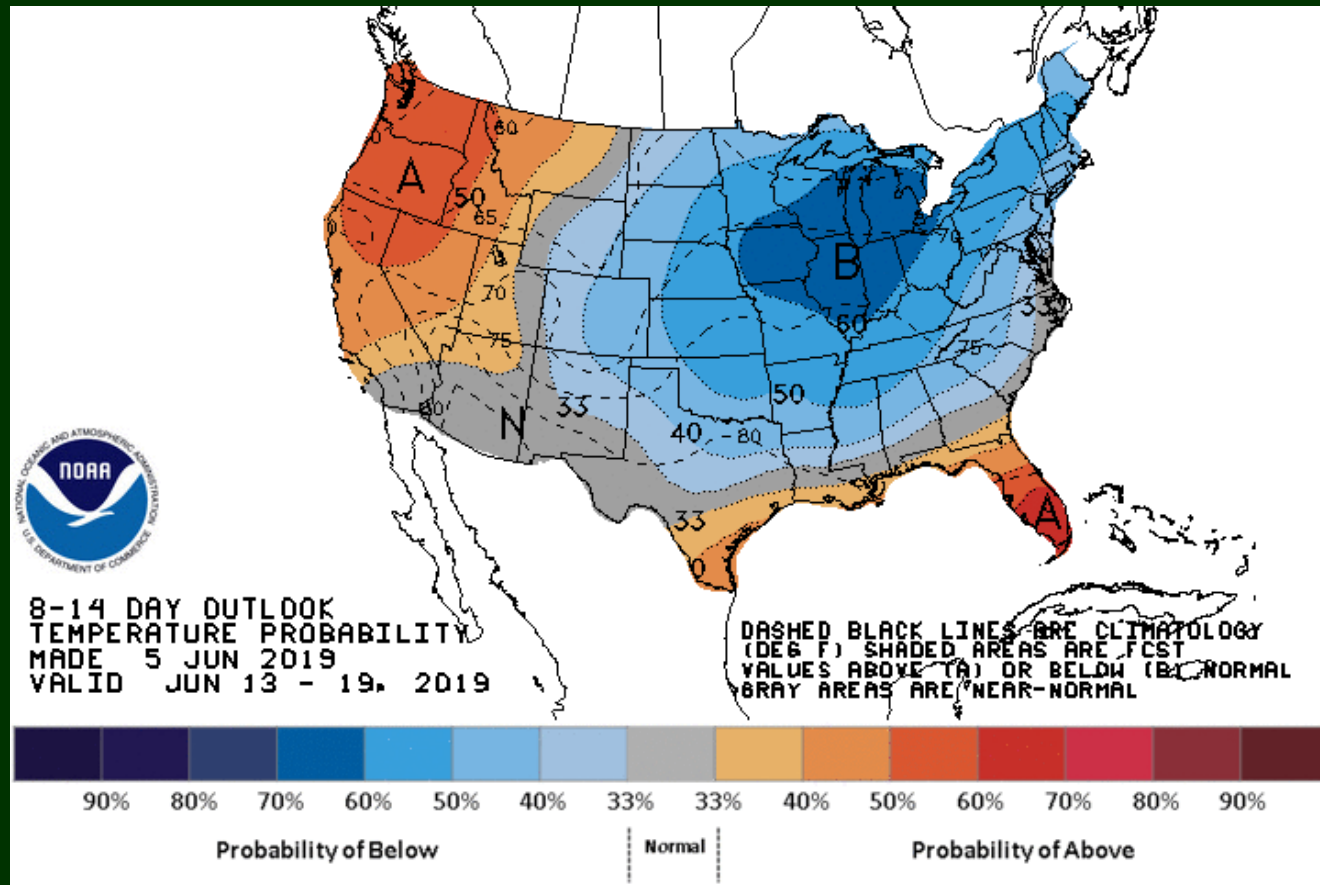
1-7 Day Precip



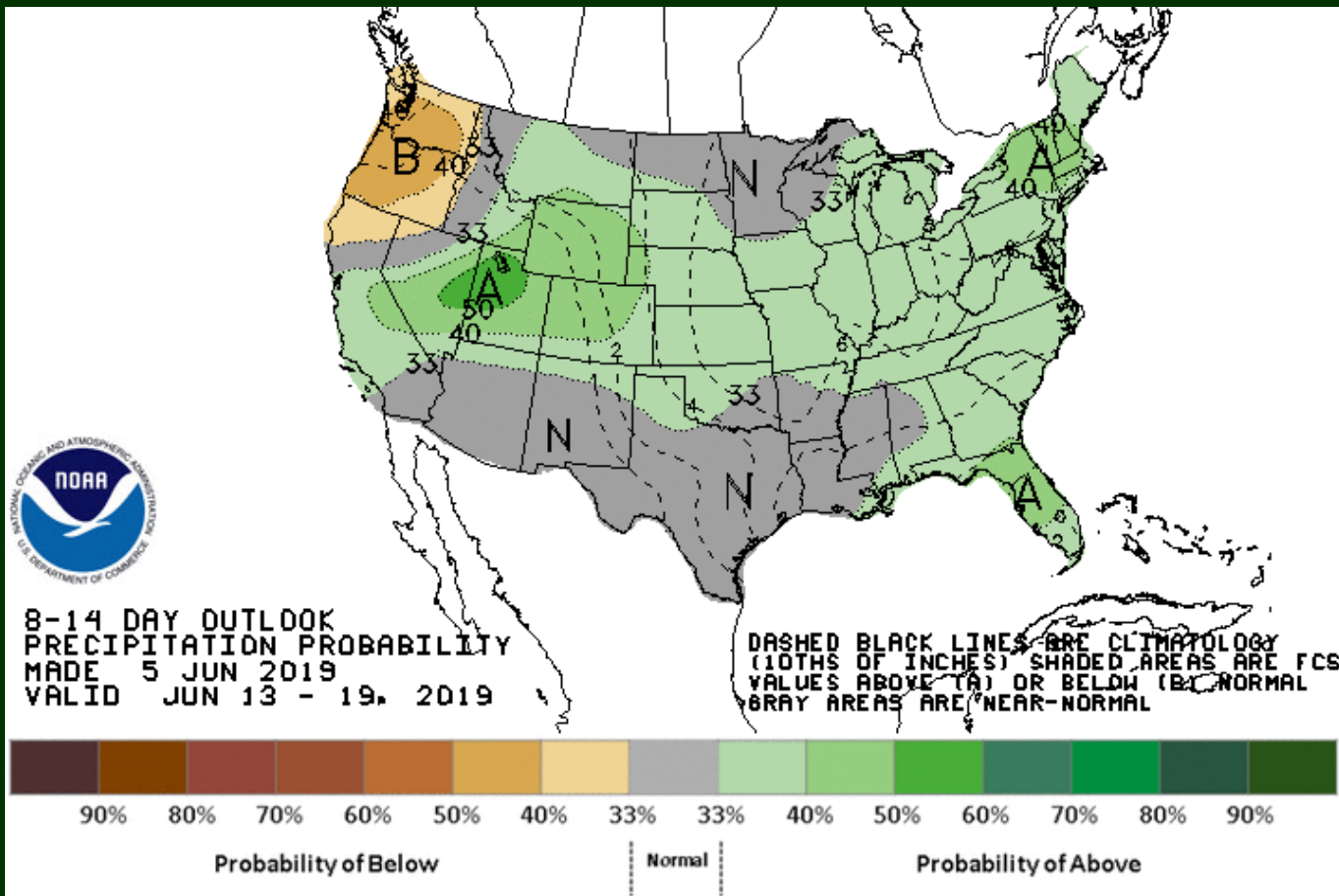
- Heavier precipitation more to the southeast US – some srn Corn Belt.
- Lesser amounts in the Midwest/Plains.
- May open for late planting.

Temperature Outlook

- Not great news on temperature toward mid-June.
- Cooler than average more likely throughout the area.

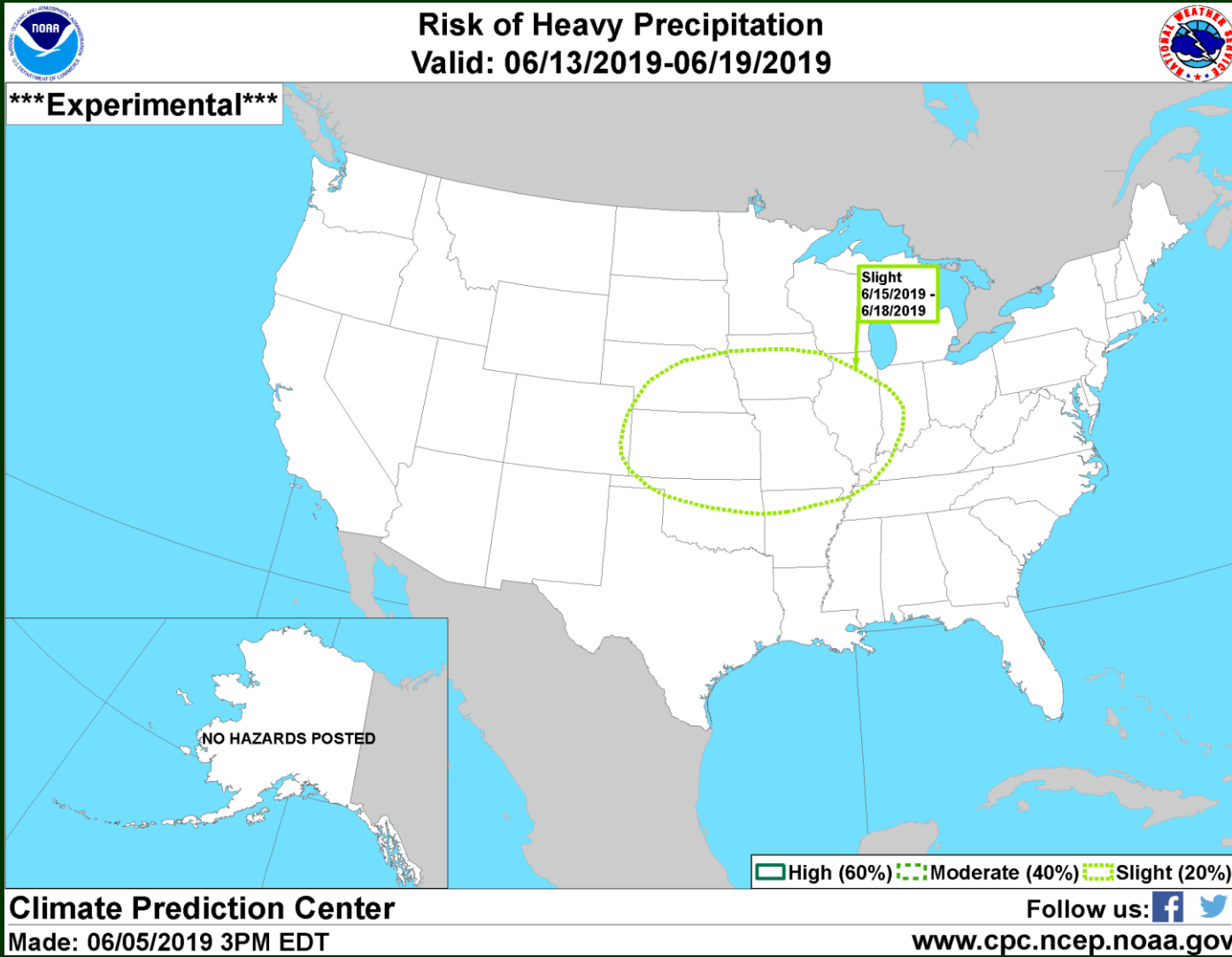


Precipitation Outlook



- Above average chances for precip continue.
- Normal chances farther north.

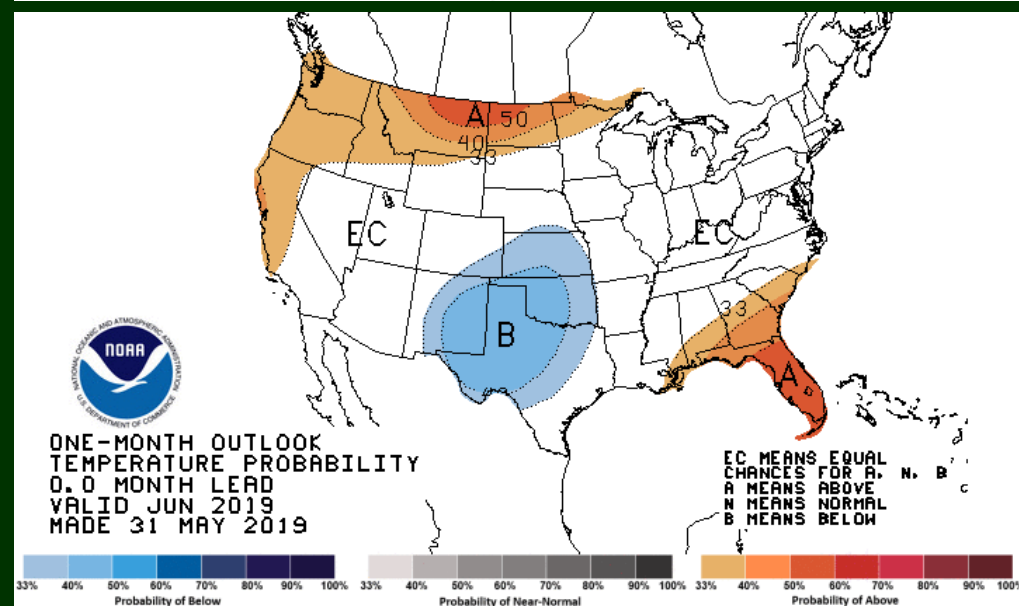
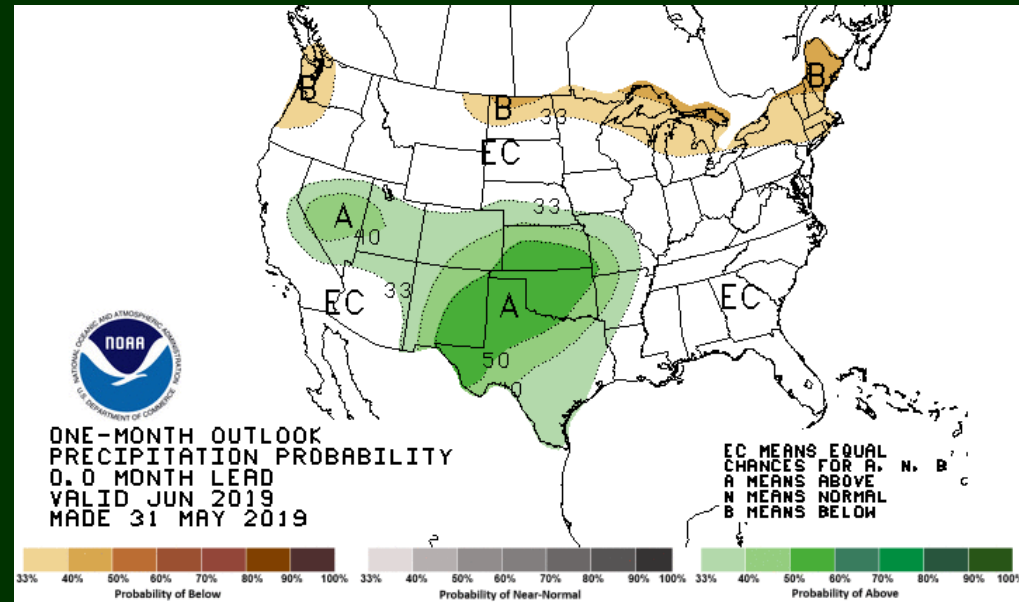
Precipitation Outlook



- Ongoing slight risk of heavy precipitation over wet areas.

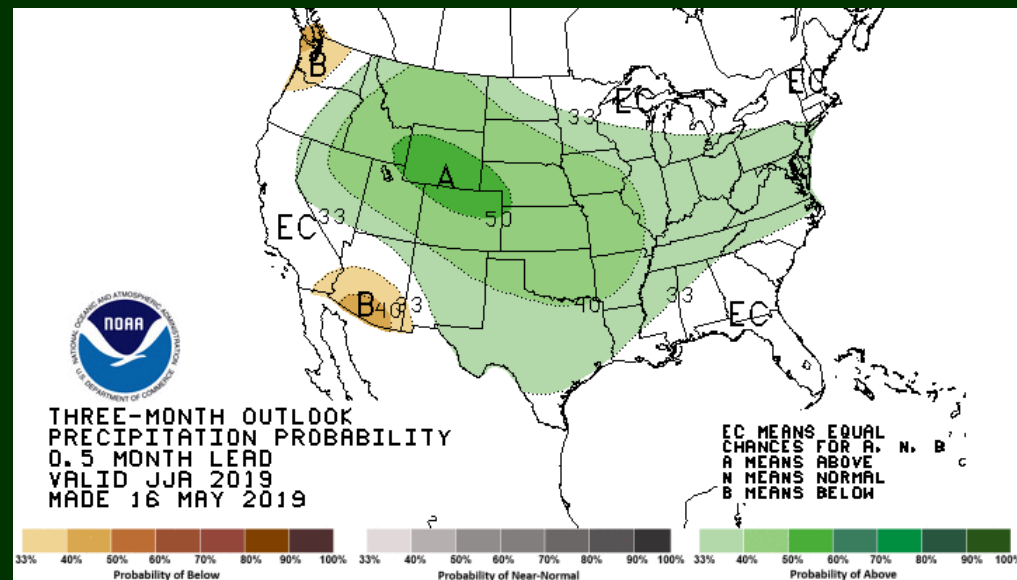
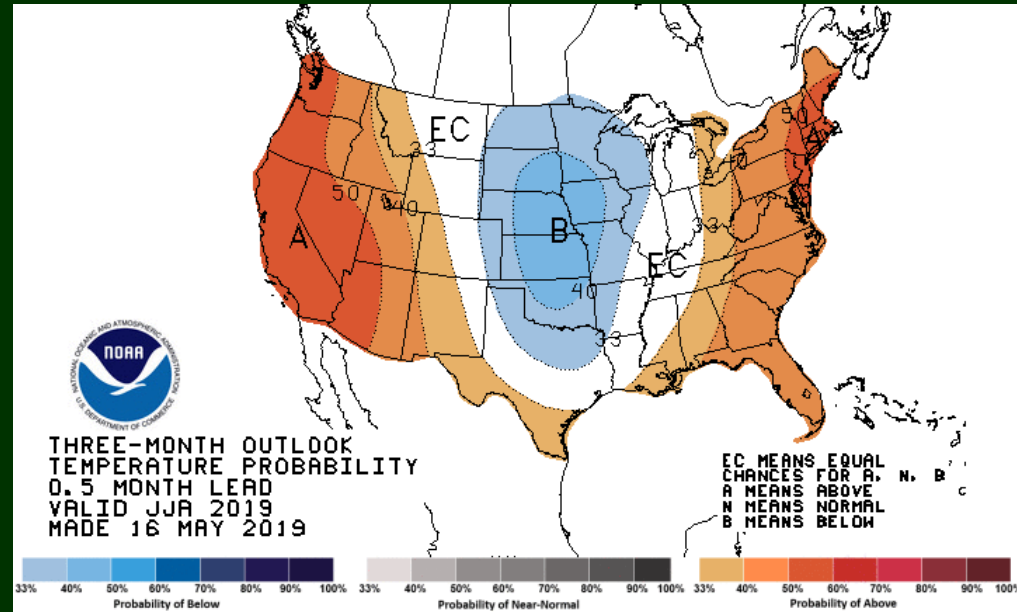
1-Month Outlook

- Interesting June outlook
- Precip – likely wetter central-southern Plains – likely drier along Canadian border
- Temps – likely cooler over the wet area and more likely warmer nrn Plains
- Indicates some variability from mid to late month in the outlooks. Cooler and wetter in Week 2 may not continue into late month



3-Month Outlook

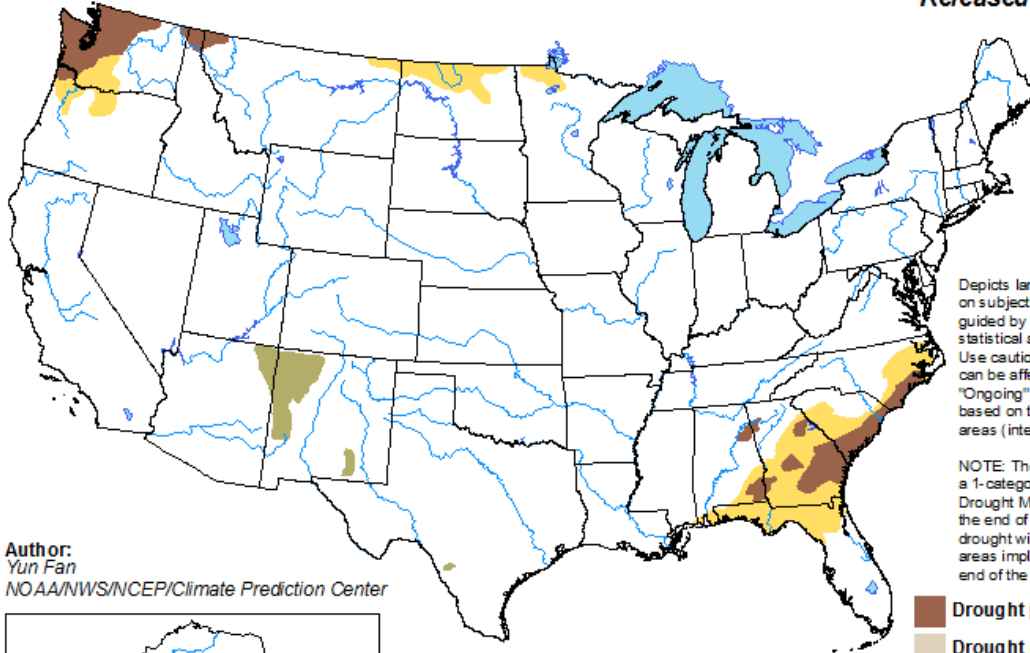
- Precip – likely wetter throughout most of the area
- Temps – likely cooler over the wet area central US
- New outlooks released in 2 weeks. Outlooks continue to seem on track.



Drought Outlook

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

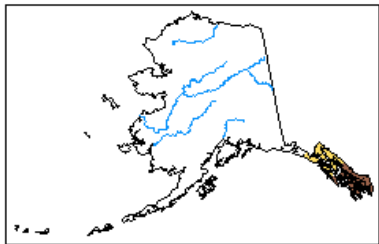
Valid for June 2019
Released May 31, 2019







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).

Author:
Yun Fan
NOAA/NWS/NCEP/Climate Prediction Center



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



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

Current D0 area in ND-MN headed toward drought category during the month.

Summary

- Cold and wet conditions generally over the area leading to delayed planting and emergence.
- Cool to near avg. temps not a great thing for ongoing crop development. Need some above avg. before mid-season. Or warmth well into fall.
- Wet-avg. precip also difficult.
- Major decisions ongoing with final planting due to various influences.

Summary-2

- Going to need conditions to be near-perfect for balance of growing season.
- Will need regular rainfall ongoing because of likely poorly developed root systems.
- Disease issues likely to flare up with ongoing wetness
- Delayed crop development likely through season – could lead to immature/wet grains.
- Grain drying seems likely.

Next Regular Webinar

- **Thursday June 20, 2019 1:00 PM Central Time**
- **Kelsey Jensco – Montana Climate Office**