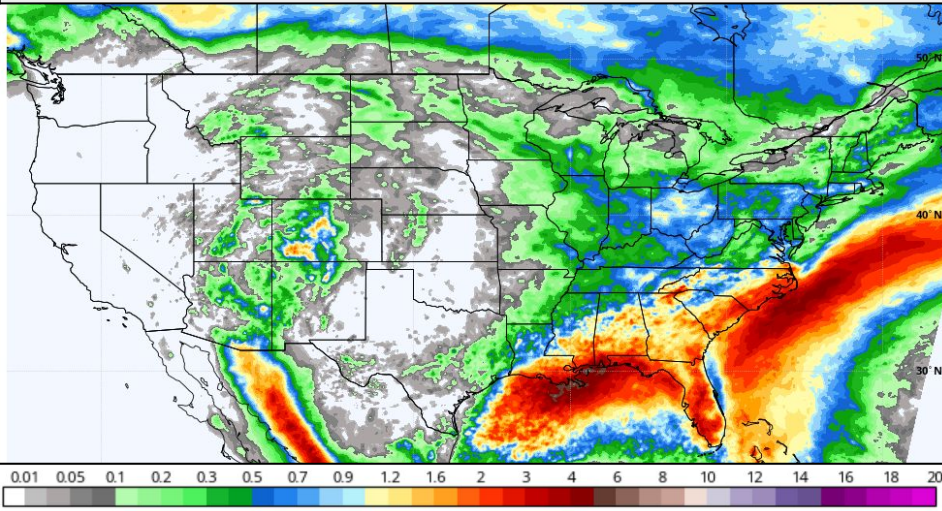


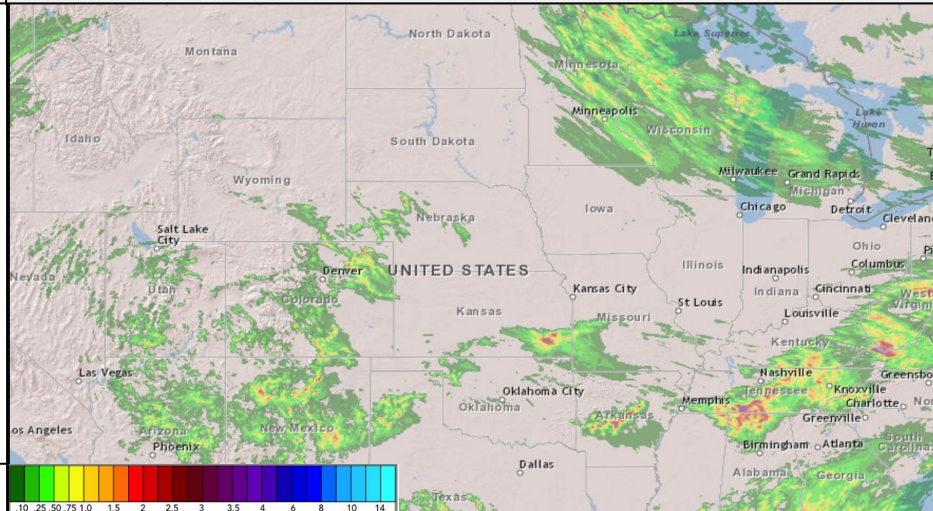
### Warm and drier across the AG Belt. Storm clusters late week and into the weekend...

1. Rainfall over the past 24 hours was mostly confined across MN & WI due to scattered thunderstorm activity with 0.25-0.75" with localized areas receiving up to 1-inch. Isolated showers and storms also occurred across southeast KS with locally 1"+ and TX with 0.25-0.75".
2. High pressure builds across much of the Midwest over the next several days with drier-than-normal conditions across the entire AG Belt. Temperatures will run near average across the Midwest and Ohio Valley.
3. Latest models trends this morning continue to favor storm cluster activity across the Midwest down through the Ohio Valley late week and into early next week. Locally heavy rainfall will be possible along with the risk for gusty winds.
4. As we move into the 8-14 day time frame, temperatures are forecast to become quite warm as the heat builds across the entire AG Belt. Drier-than-normal conditions are still expected across the Plains, while the risk for precipitation remains across the Midwest.

#### 7 Day Moisture Forecast (National Model Blend)

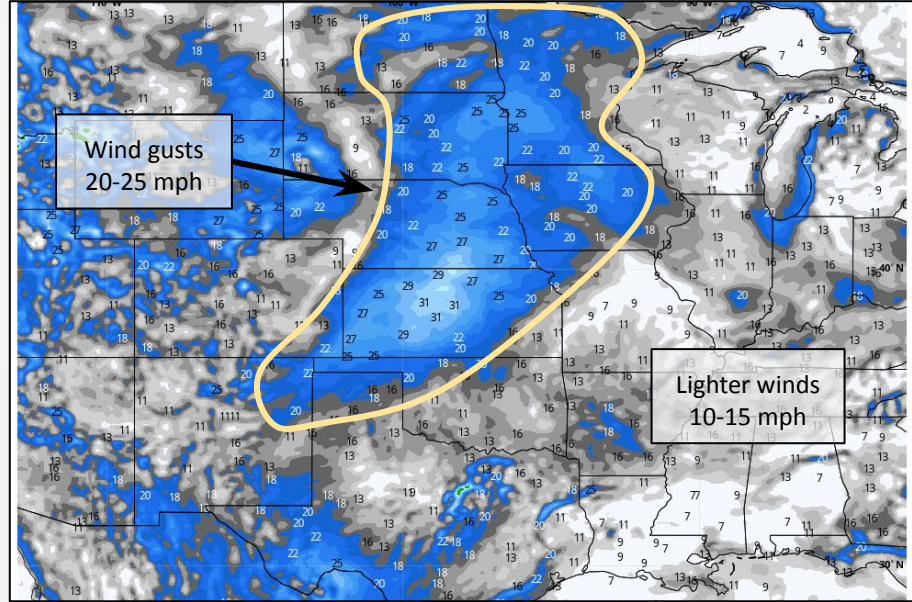
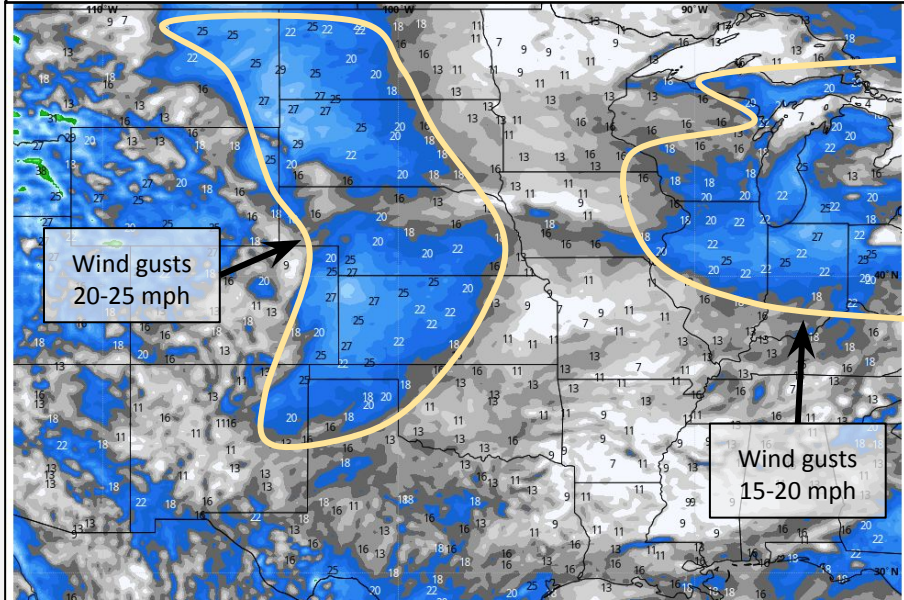


#### 24 Hour Rainfall Totals



### Today's Spraying Forecast | Winds not as strong

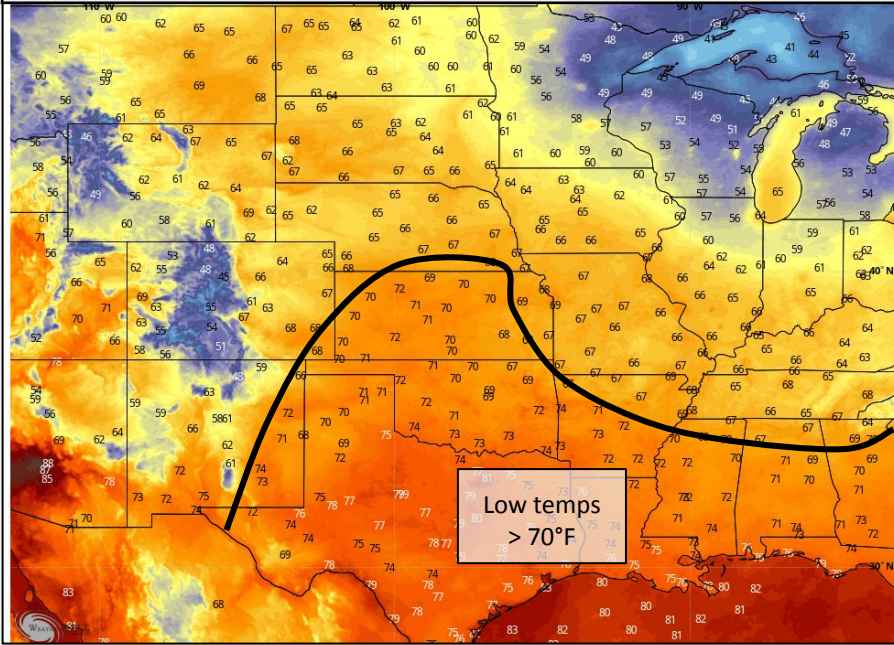
Winds will remain a bit breezy across the Ohio Valley today with gusts 15-20 mph. Lighter winds are expected across the Midwest with midday wind speeds 10-15 mph at times. Breezy conditions continue across the Great Plains with gusts 20-25 mph from the Dakotas through the Texas Panhandle.



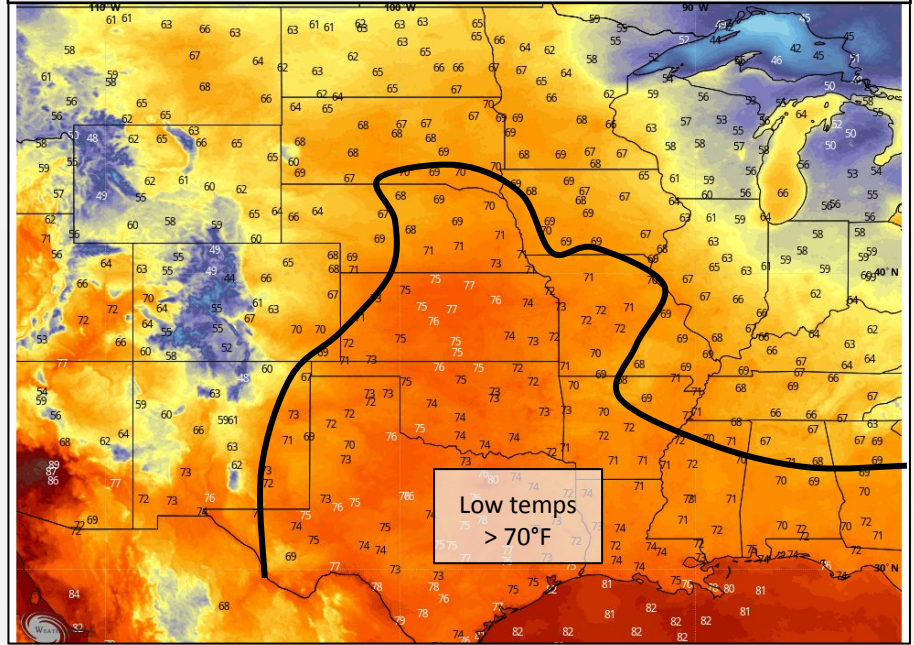
### Tomorrow's Spraying Forecast | Breezy across the Plains

Remaining breezy across the Plains on Thursday with a strong southerly flow with gusts 20-25 mph with wind areas near 30 mph across the C. Plains. Lighter winds and more manageable conditions are expected across the Ohio Valley with 10-15 mph gusts Thursday afternoon.

Low Temperatures Thursday Morning

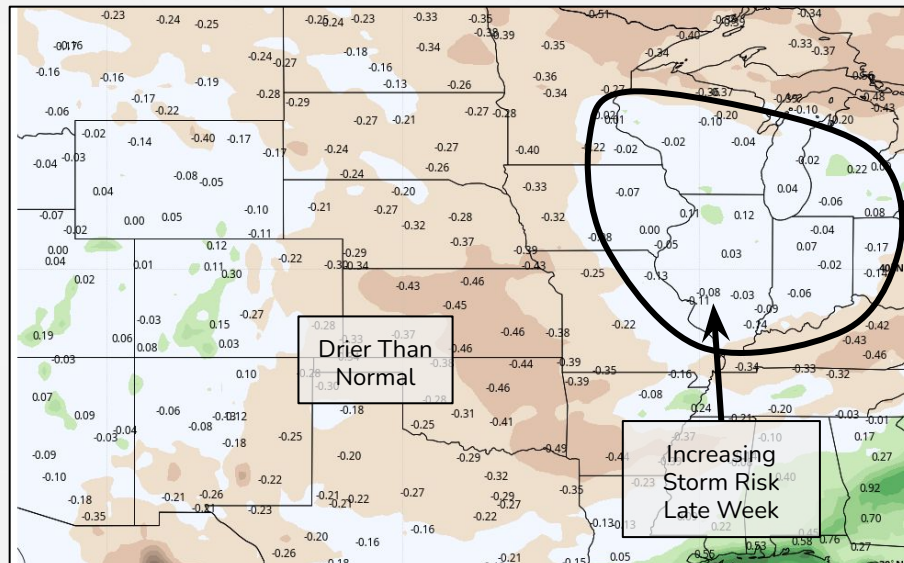
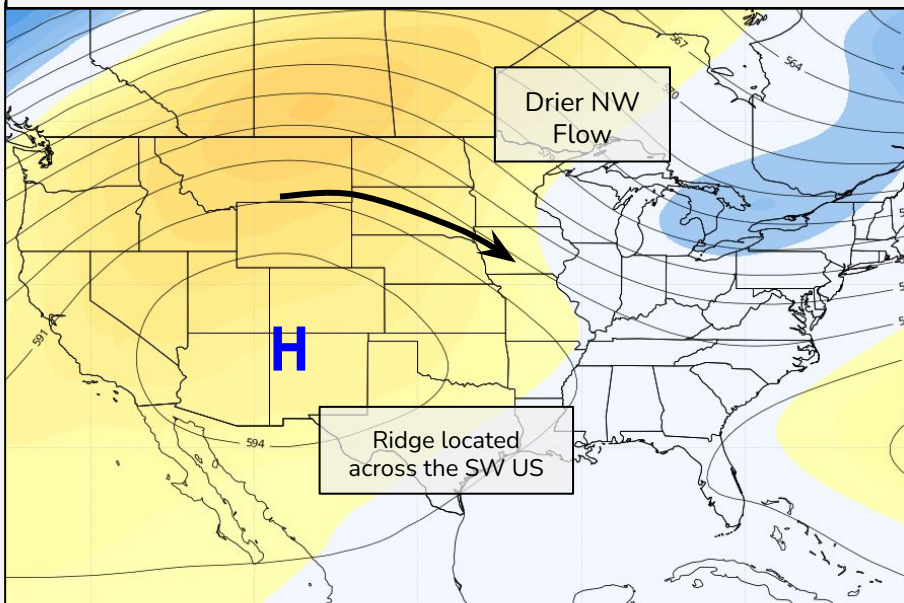


Low Temperatures Friday Morning



### Ridge dominates the pattern...

The upper-level ridge across S. Plains will migrate westward into the SW US over the next 5 days. This will provide a drier northwest flow across and promote higher pressure across the Midwest. This pattern will lead to an extended period of dry weather across the entire AG Belt with warming temperatures.



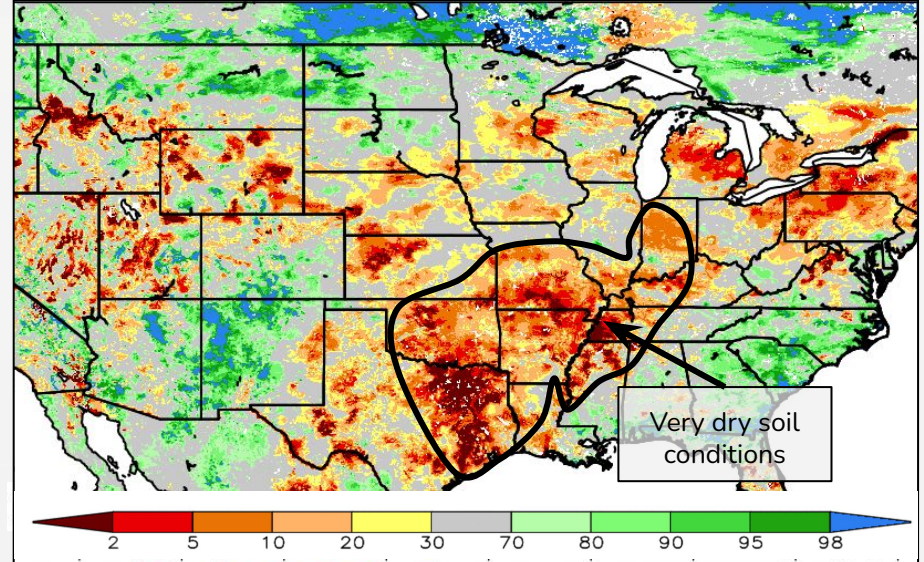
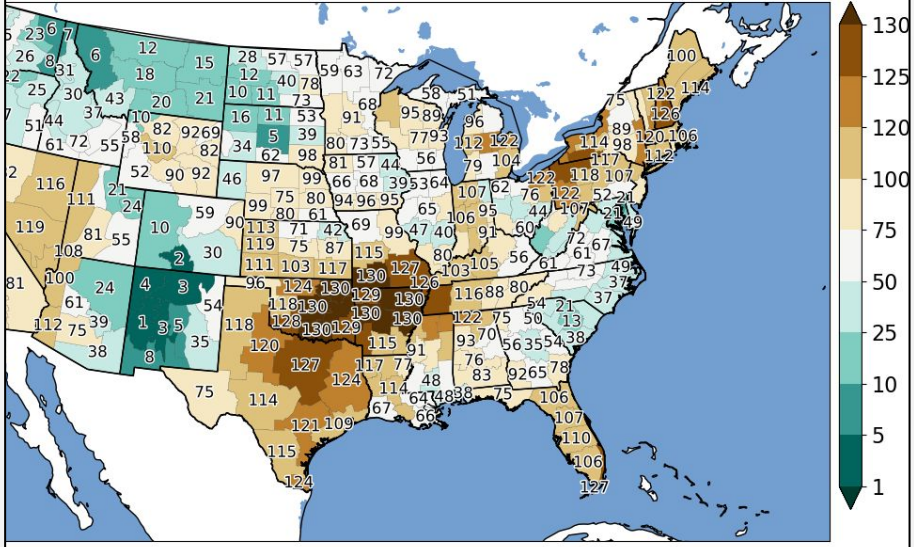
### Drier Than Normal Pattern...

The result of this pattern will lead to drier-than-normal conditions across much of the AG Belt with below average precipitation. However, towards the end of the forecast period, precipitation risk begin to show across the Midwest/Ohio Valley late week and into the weekend. The map above shows 5-day precipitation anomaly ending July 17th with below average precipitation across the entire AG Belt.

### Precipitation over the last month...

The map below shows precipitation ranks over the last month - valid June 11th - July 11th. The Mid South (TX, AR, MO) has experienced the driest period on record during this time frame. Across the AG Belt has been mixed with areas of near to above average precipitation, but largely running near to slightly drier-than normal across much of the AG Belt.

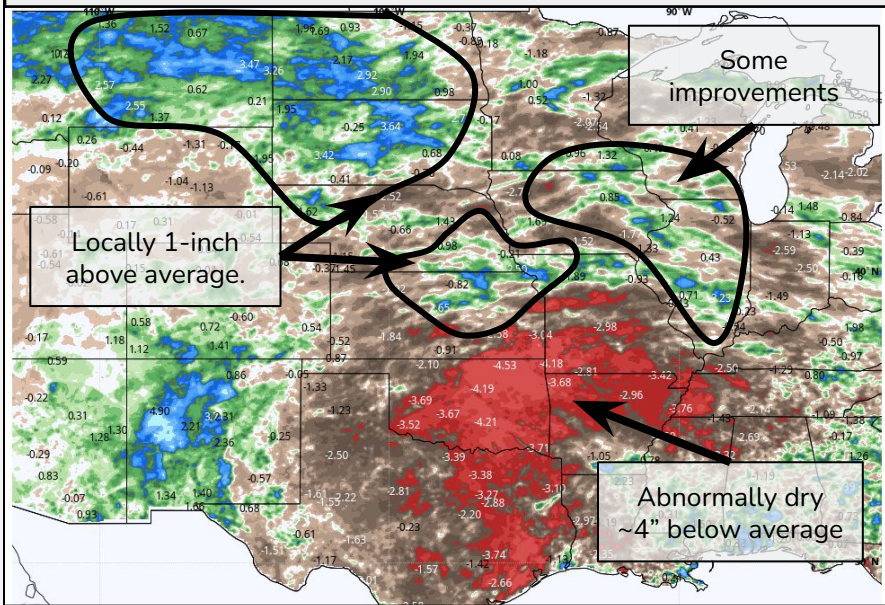
Estimates, 1 is wettest out of 130 total years (1893-2022)



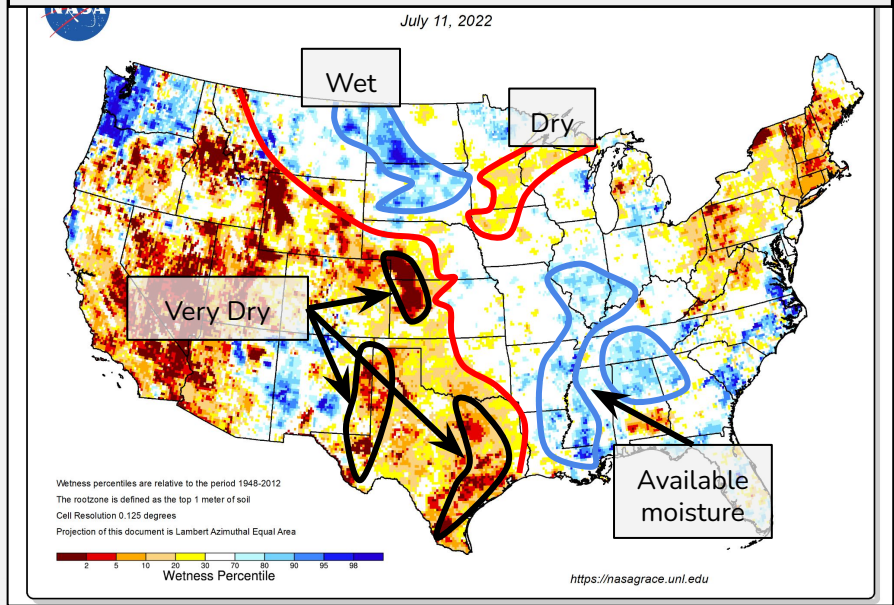
### Latest 16-inch Soil Moisture...

The latest 16-inch soil moisture analysis reflects the area of near record dryness in the previous map with soil moisture in the 2-10 percentile from eastern Texas through the western Ohio Valley. Recent rainfall has maintained a mixed moisture profile across the Midwest and added a "cushion" in some areas from the Dakotas through Iowa and parts of Illinois and Ohio.

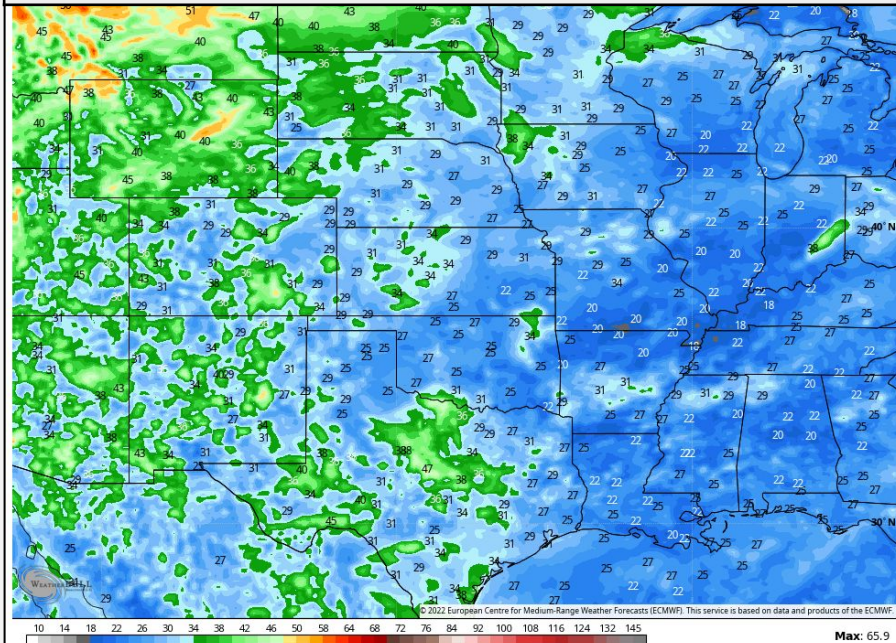
Rainfall Anomaly (Last 30 Days)



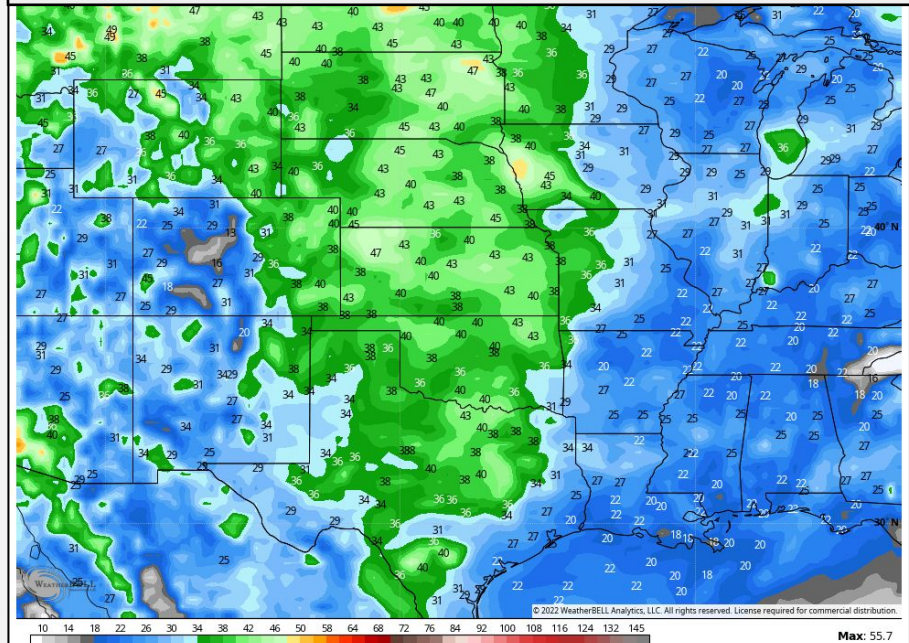
Root Zone Soil Moisture Percentile (NASA Grace)



### Max Wind Gust Next 7 Days (European)

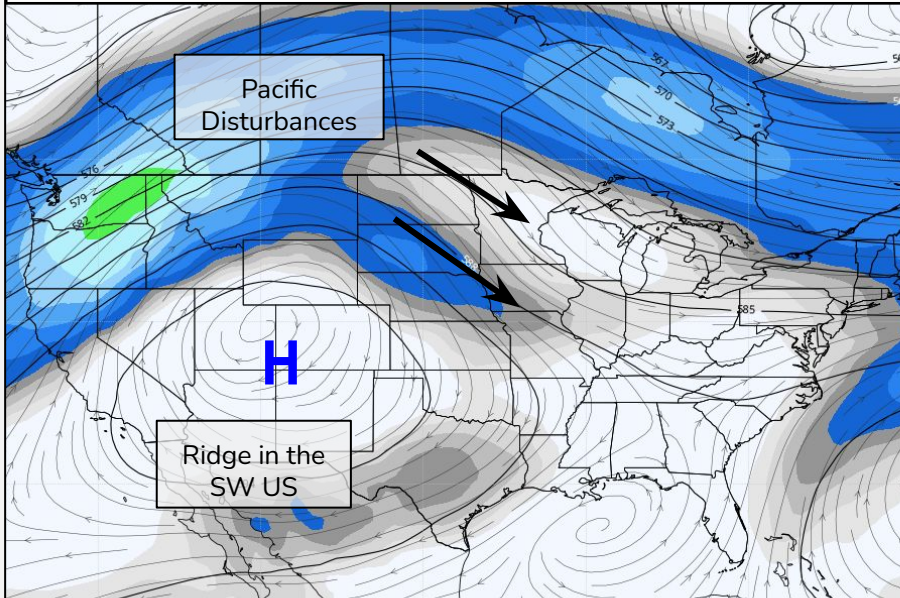


### Max Wind Gust Next 7 Days (GFS)

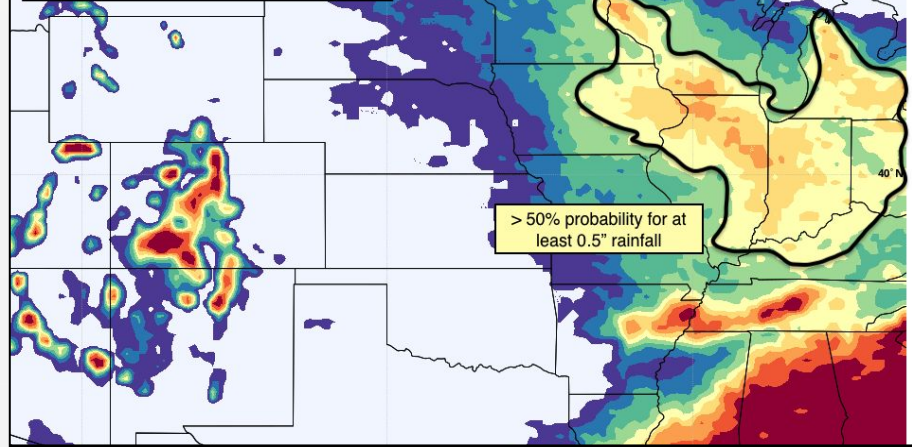


### Precipitation Risks...

The ridge is forecast to remain positioned across the SW US over the next 7 days. A trough off the west coast will allow disturbances to move ashore off the Pacific and be guided across the Upper Midwest. This will create opportunities for precipitation across the Midwest through the Ohio Valley into early next week.



### Probability for 0.5" Rain or More Ending July 18th



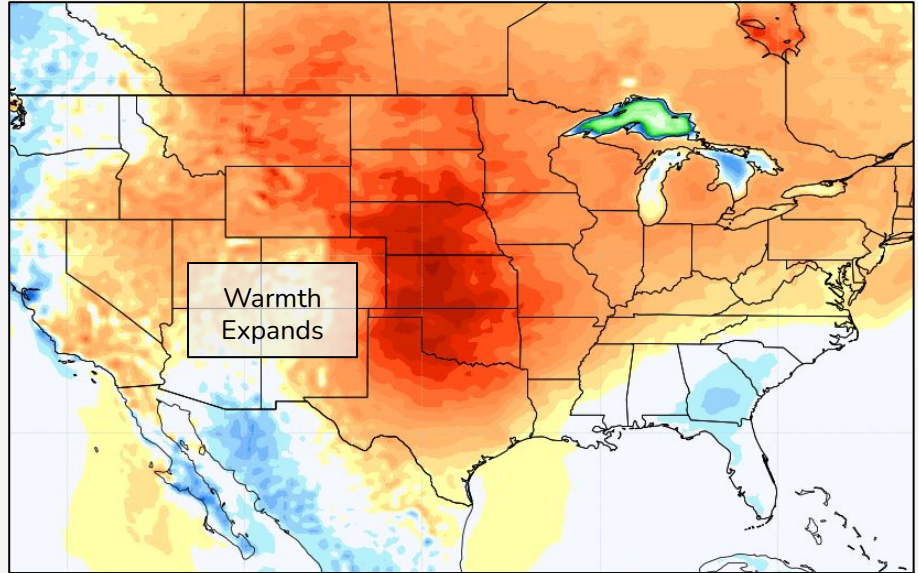
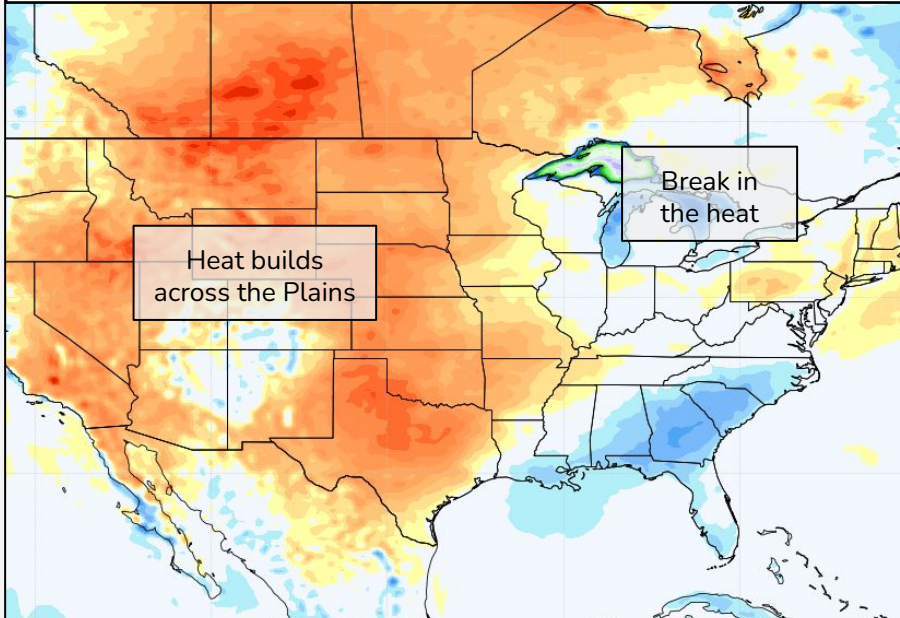
### Storm Clusters...

Forecast models continue to double-down on the risk for storm cluster across the Midwest through the Ohio Valley this weekend. The map above shows the probability for at least 0.5" or more of rainfall ending July 18th. Outlined in the map is > 50% probability for receiving at least a half-inch of rainfall through early next week. Many areas would certainly benefit from this moisture!



#### A break in the heat...

The map below shows temperature anomalies ending July 18th with a pullback in the heat across the Midwest through the Ohio Valley with temperatures running near average. The warmth remains in place across the Plains with temperatures running well above average, as the ridge shift into the SW US.

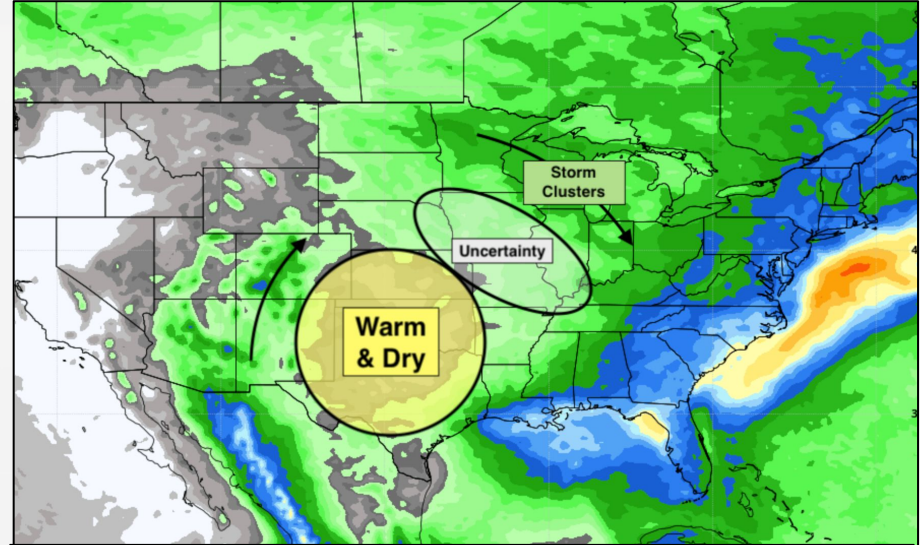
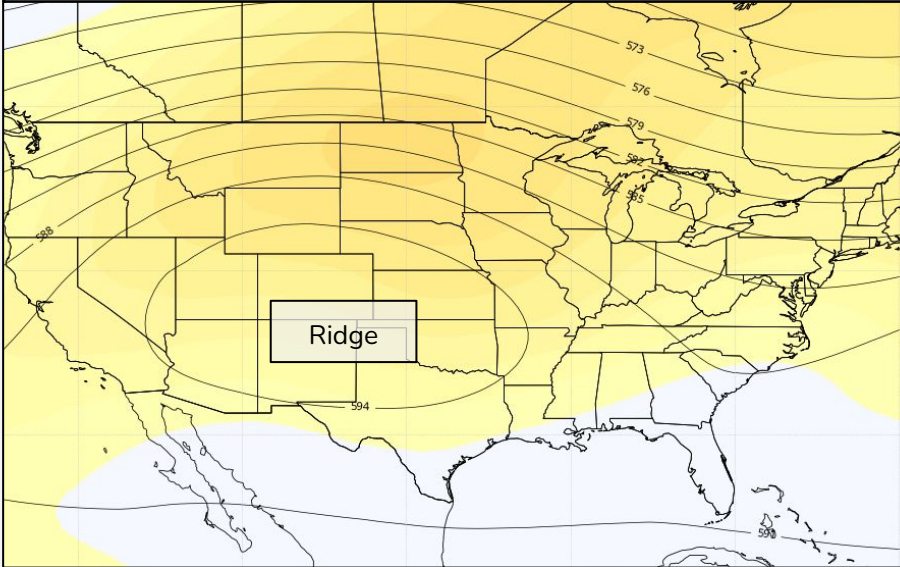


#### Heat builds late July...

The forecast into week 2 highlights an amplified signal for heat building across the Great Plains. The warmth will quickly expand across the entire AG Belt during this period with well above normal temperatures leading to a period of heat across the Plains through the eastern Corn Belt. The map above is temperature anomalies valid July 18-25th.

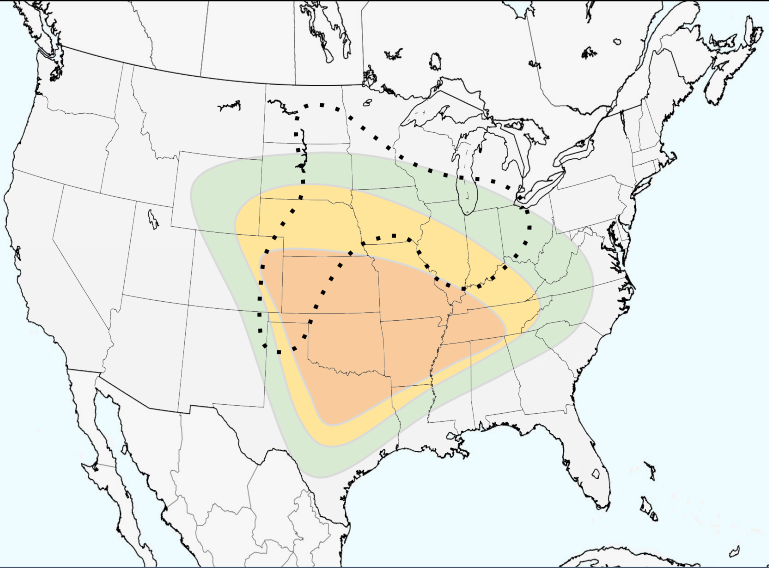
### Extended Forecast...

The extended forecast through late July maintains a strong ridge in the Southern Plains. This will allow for a continuation of warmth across the entire AG Belt, but also maintain the northwest flow across the Midwest and Ohio Valley. This pattern may provide periodic precipitation risks as disturbances ridge the periphery of the of the ridge.



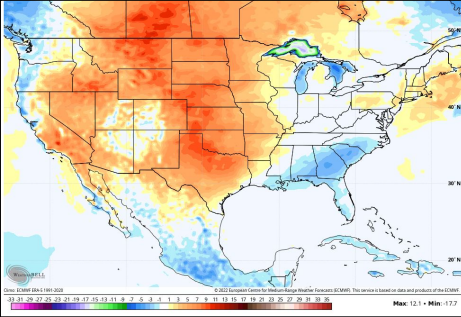
### Late July Precipitation Risks...

With the ridge remaining located across the SW US/Central Plains, a NW flow is still a dominant feature in the late July forecast. Because of this, we'll continue to highlight the risk for precipitation/storms across the Upper Midwest through the Ohio Valley. Warm/dry risk will likely be a dominant signal for the central/southern Plains with a zone of uncertainty across the Dakotas through IA, MO and IL as storms track around the periphery of the ridge.

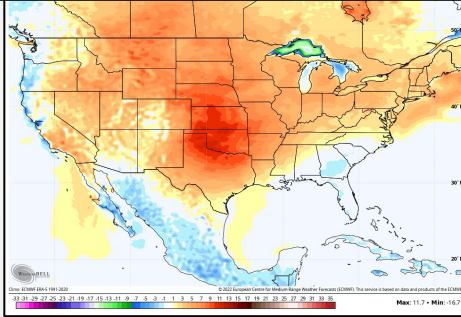
July 2022 Agriculture Concern Levels	July 2022 Agriculture Concern Discussion
 <p data-bbox="401 889 589 917">More Concern →</p>	<p data-bbox="966 316 1835 442">As we move into mid-July, the atmospheric pattern will favor warmth to quickly build in the Southern Plains and Deep South regions, expanding northward across much of the AG Belt with well above average temperatures.</p> <p data-bbox="966 475 1854 666">Meanwhile, precipitation risks fade across much of the Plains, Great Lakes and Ohio Valley with drier-than-normal conditions and below average precipitation through mid-month. With the ridge remaining across the Southern Plains maintaining northwest flow across the AG Belt, there are indications for precipitation risks returning across portions of the AG Belt mid-late July.</p> <p data-bbox="966 704 1854 922">Because of the potential for an extended overlap of warmth and dryness across Iowa and points eastward into IL, IN &amp; OH, have increased concern levels to account for added stress to these areas mid-late July. The greatest and highest confidence area of concern is in the S. Plains and Deep South where warm, drier than normal weather is likely. Otherwise, storm cluster risks are gradually forecast to return as we move into the latter part of July.</p>

### Model Data (European Ensemble)

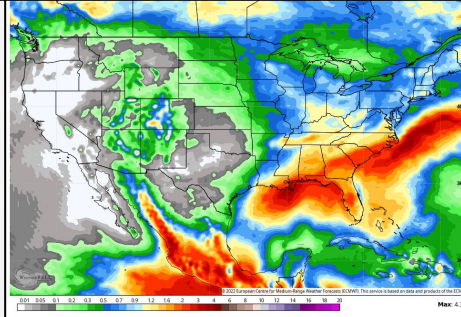
#### Week 1 Temp



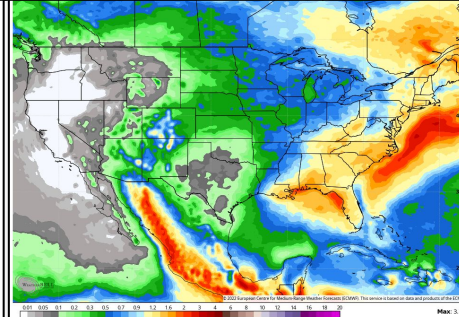
#### Week 2 Temp



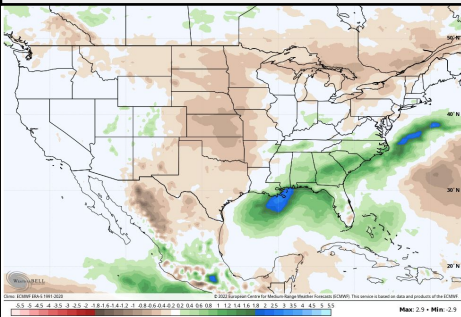
#### Week 1 Precip Amounts



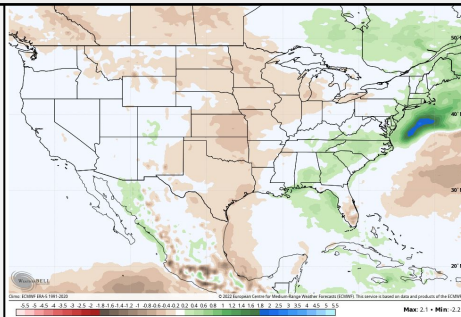
#### Week 2 Precip Amounts



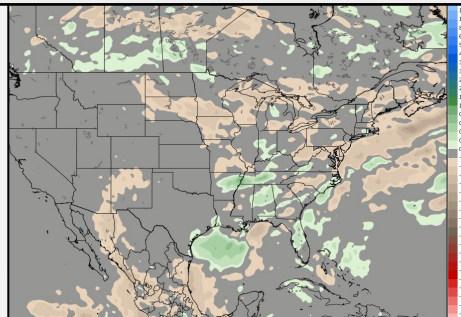
#### Week 1 Precip



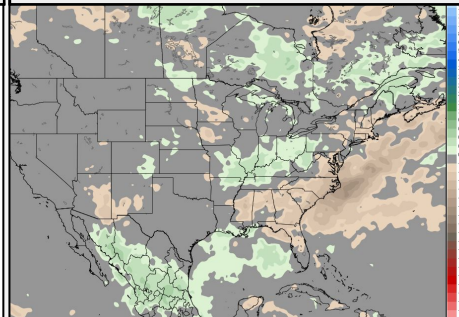
#### Week 2 Precip



#### Week 1 Pcp Change

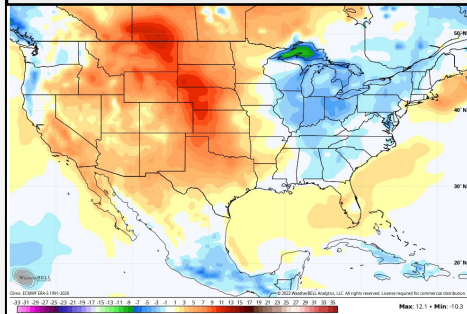


#### Week 2 Pcp Change

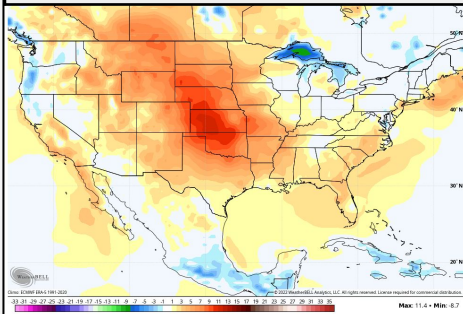


### Model Data (GFS Ensemble)

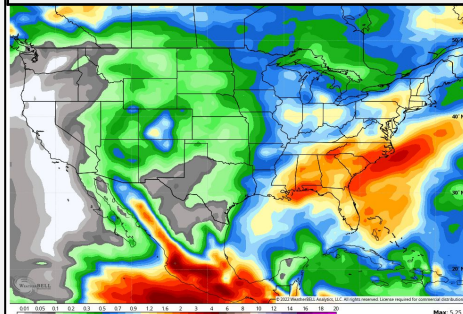
#### Week 1 Temp



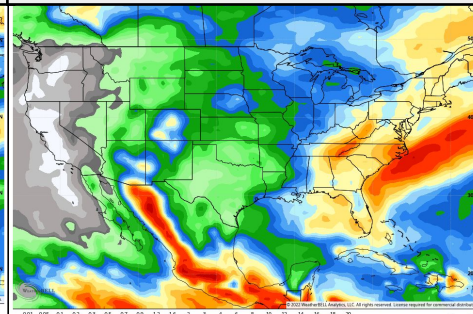
#### Week 2 Temp



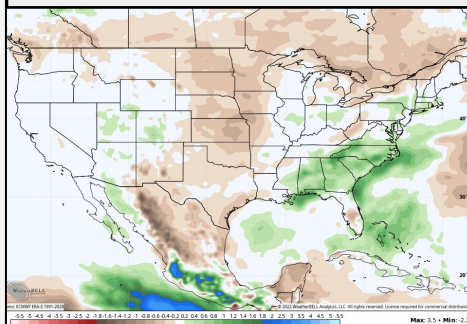
#### Week 1 Precip Amounts



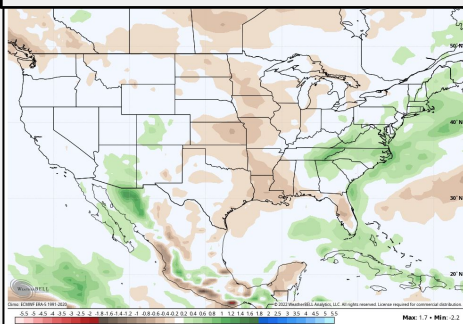
#### Week 2 Precip Amounts



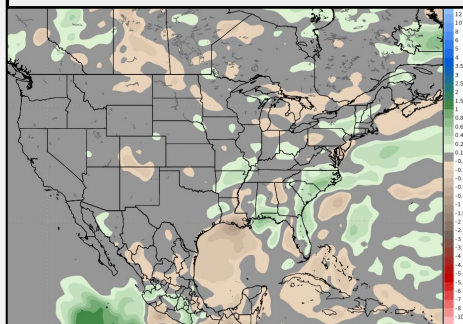
#### Week 1 Precip



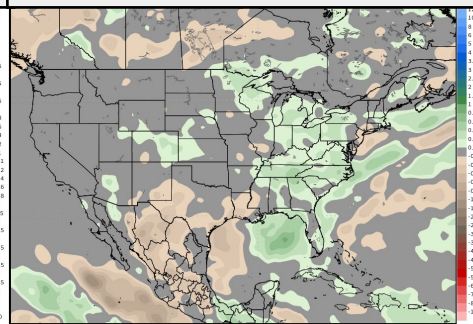
#### Week 2 Precip



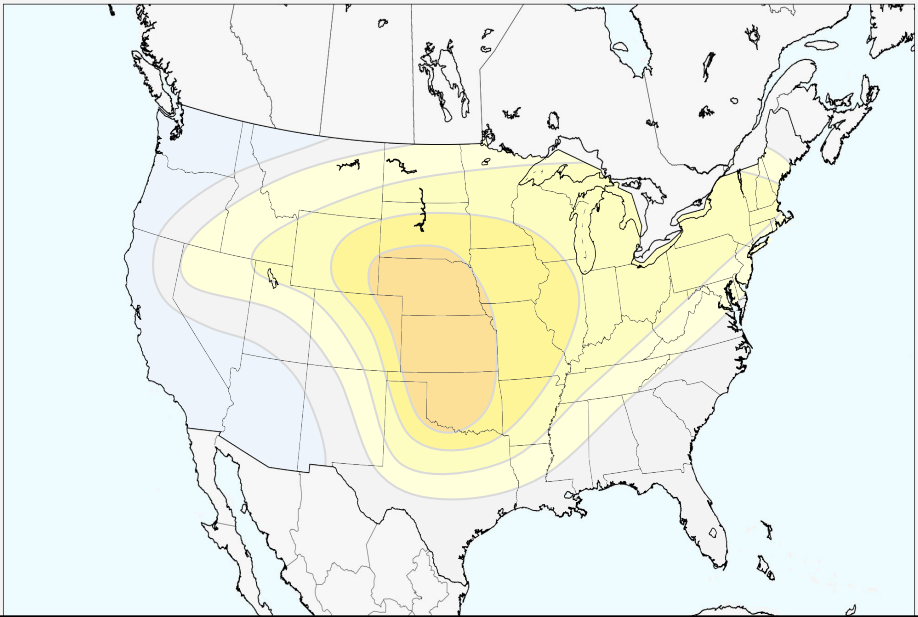
#### Week 1 Pcp Change



#### Week 2 Pcp Change

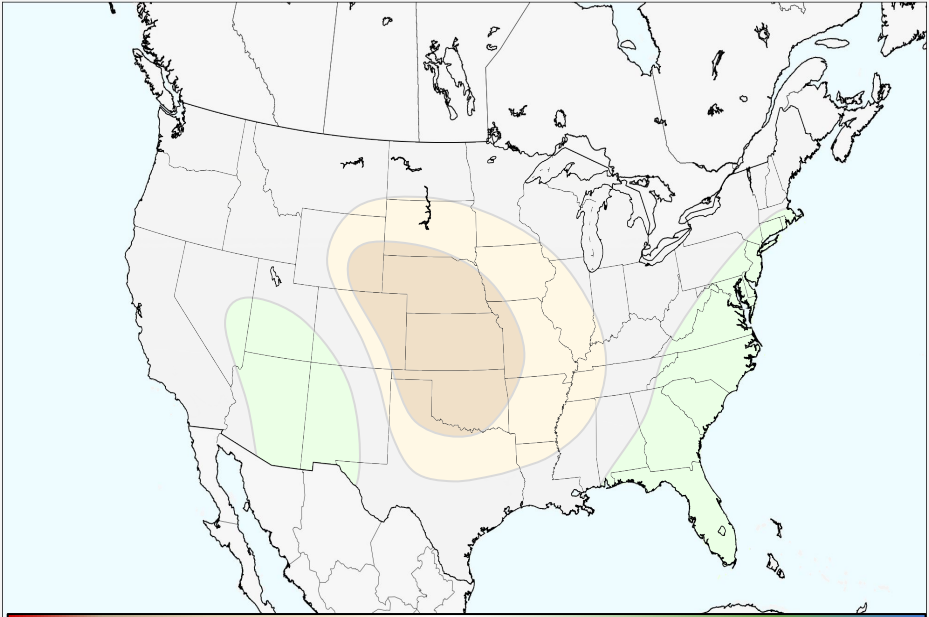


16-30 Day Forecast | 7/24-8/7 Temperature Anomaly



Below Norm Above Norm

16-30 Day Forecast | 7/24-8/7 Precipitation Anomaly



Below Norm Above Norm