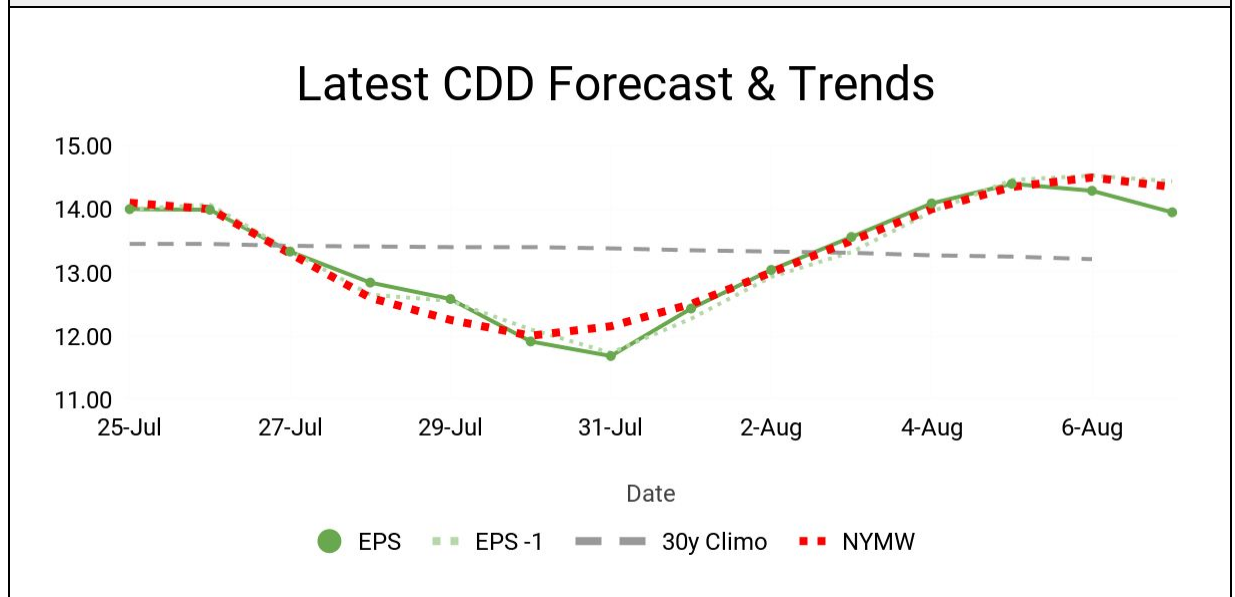


Pattern Briefing

Ridging over the Southern Plains and along the East Coast of the United States will result in a pattern that favors +CDD numbers over the next day or two, despite cooler than normal air dropping into the Plains States. The pendulum will begin to dramatically swing again by the end of this week, however, as the impressive heat in the Southern Plains and Texas begins to wane. A notable shot of cooler than normal air from the higher latitudes of Canada will move into the Plains, Grain Belt, and Northeast resulting in CDD numbers falling below the 30-year average beginning 7/28. The next rise in CDD numbers occurs in early August as the cold air begins to modify across the country, and it may be notable as ridging expands across the Central United States once again.

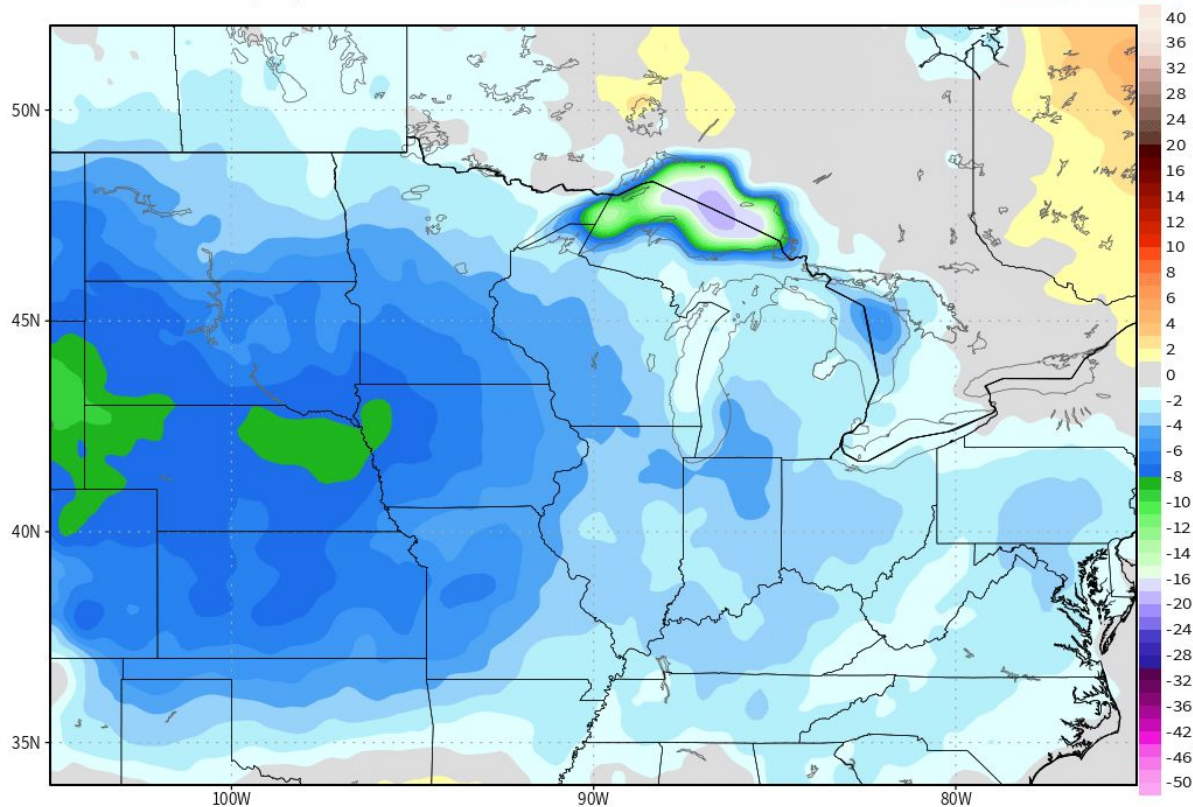
Hazards Overview

Hazard	Severity	Period	Region	Impact
Warmth	Significant	7/25 - 7/26	Southern Plains (TX)	GWCCDD ↑
Cooldown	Significant	7/25 - 8/2	Plains, Ohio Valley, East	GWCCDD ↓
Moderation	Notable	8/4 - 8/10	Central USA	GWCCDD ↑
Heavy Rain	Northeast	7/25 - 7/27	Mid-Atlantic, Northeast	GWCCDD ↓, Flooding

Weighted CDD Projections (Note: Have removed GFS temporarily due to warm bias)

Daily Early AM Note**Significance: Plains, AG Belt Cool Next 7 Dy**ECMWF EPS 2-meter Temperature Anomaly [°F] | 7-day Ensemble Mean --> 12Z24JUL2018 & 12Z31JUL2018 Day 0 - Day 7
Init: 12Z24JUL2018 -- [168] hr --> Valid Tue 12Z31JUL2018

MIN|MAX -19.5° | 5.5°F



This service is based on data and products of the European Centre for Medium-range Weather Forecasts (ECMWF)

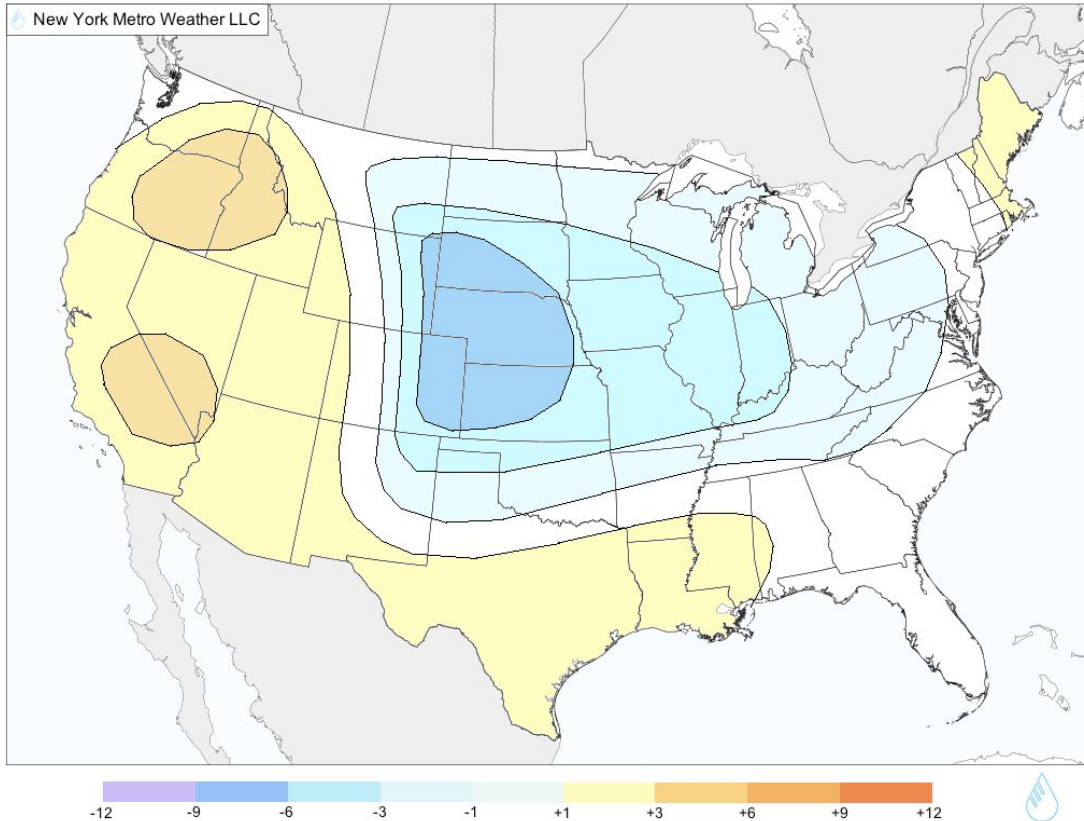
weathermodels.com**Daily AM Note Commentary**

The coolest period of the summer so far is expected over the next 7 days across the Plains, Grain Belt, and Ohio Valley as a whole, as troughing moves into the region and lingers into next week. Notably, this period comes after months of heat and dry weather, and the upcoming period will also be accompanied by the opportunity for precipitation. As you can visualize above, the peak of the cooler than normal weather will be over the Central Plains states (according to the ECMWF, at least) with cold leaking eastward into the Mid-Atlantic during the 7 day average period ending 7/31. It will be a cool end to the month in almost all of the highlighted regions.

Week 1 (7/27/2018 - 8/2/2018)**Trend: Steady**Week 1 Temperature Anomaly (F)
Forecast Departure From Normal

Valid: 7/27/2018 - 8/2/2018

Issued: 7/25/2018 Homenuk

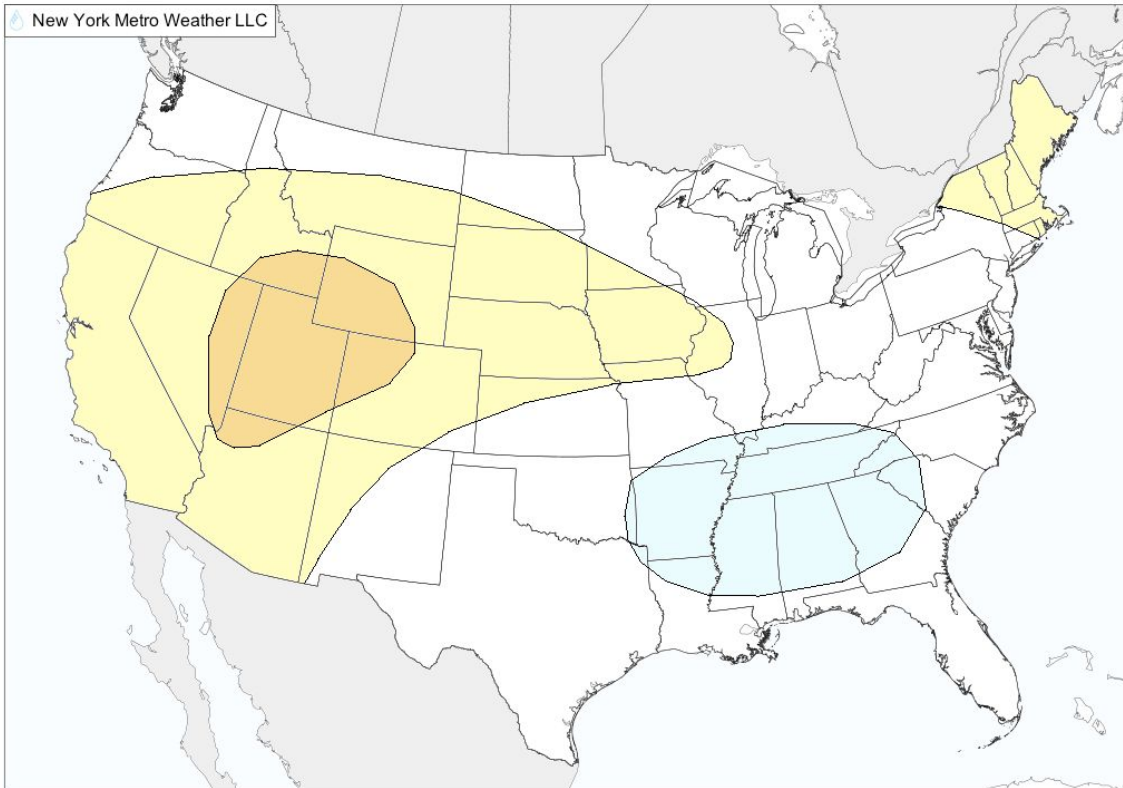
**Week 1 Discussion**

Anomalous troughing is expected to shift through the Plains and Grain Belt during this time frame, effectively suppressing the ridge anomaly over Texas and pushing colder than normal air into the aforementioned regions. While the coolest anomalies will remain angled near the Plains, temperatures below normal will reach all the way into the Mid-Atlantic (and may arguably need to be extended to the coast).

With ridging being suppressed over Texas and heat reducing in those areas, CDD numbers will plummet after 7/28, with values expected to fall well below the 30 year average as a result of the widespread cooler than normal air across the middle of the country.

Week 2 (8/3/2018 - 8/8/2018)**Trend: Steady****Week 2 Temperature Departure (F)**
Forecast Departure From Normal**Valid:** 8/3/2018 - 8/9/2018**Issued:** 7/25/2018 Homenuk

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**Week 2 Discussion**

The pattern begins to undergo some changes during this time frame, marked mostly by reduced forcing from the MJO Pulse - which, in Phase 6, had aided in confidence of colder than normal air over the Central United States during Week 1. Instead, other forcing mechanisms throughout the hemisphere will become more dominant, and the pattern will evolve across the United States. The current expectation is that ridging will shift north/eastward and expand over the Plains, while remnant troughing anomalies and cooler air will linger across the TN/MS Valley and Southeast.

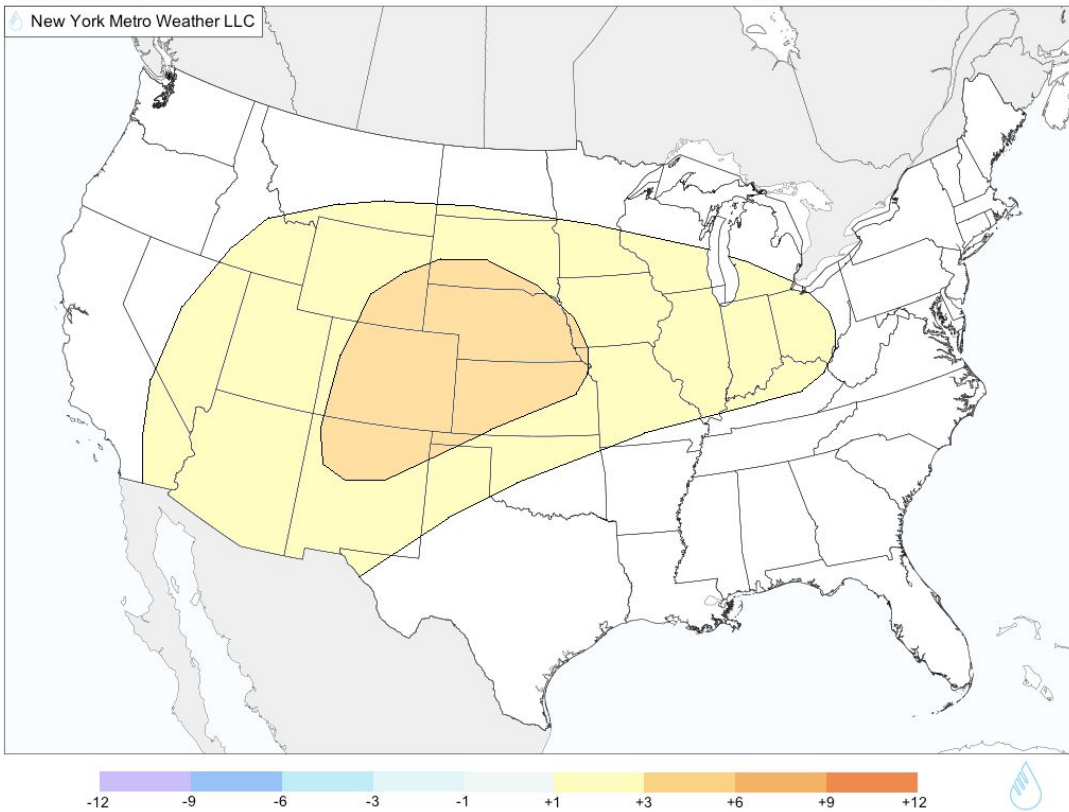
This should create a near/above normal CDD profile for the majority of the period.

Week 3 (8/9/2018 - 8/15/2018)**Trend: Steady**Week 3 Temperature Departure (F)
Forecast Departure From Normal

Valid: 8/9/2018 - 8/15/2018

Issued: 7/25/2018 Homenuk

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**Week 3 Discussion**

Uncertainty continues during this time frame as the forecast becomes increasingly cloudy (no pun intended) with the lack of tropical forcing signal on all ensembles. With the higher latitudes still in flux, the expectation is that ridging will be given room to expand across the Central United States once again, with warming temperatures and a reduced cool risk. The remaining cool risk may very well be across the Northeast US, where cooler air and troughing may keep temperatures near/below normal.

The general CDD profile is expected to remain near/above normal during this time frame, but obviously some of that will hinge on the development of below normal temperatures in the Northeastern US and how far heat can expand into Texas.

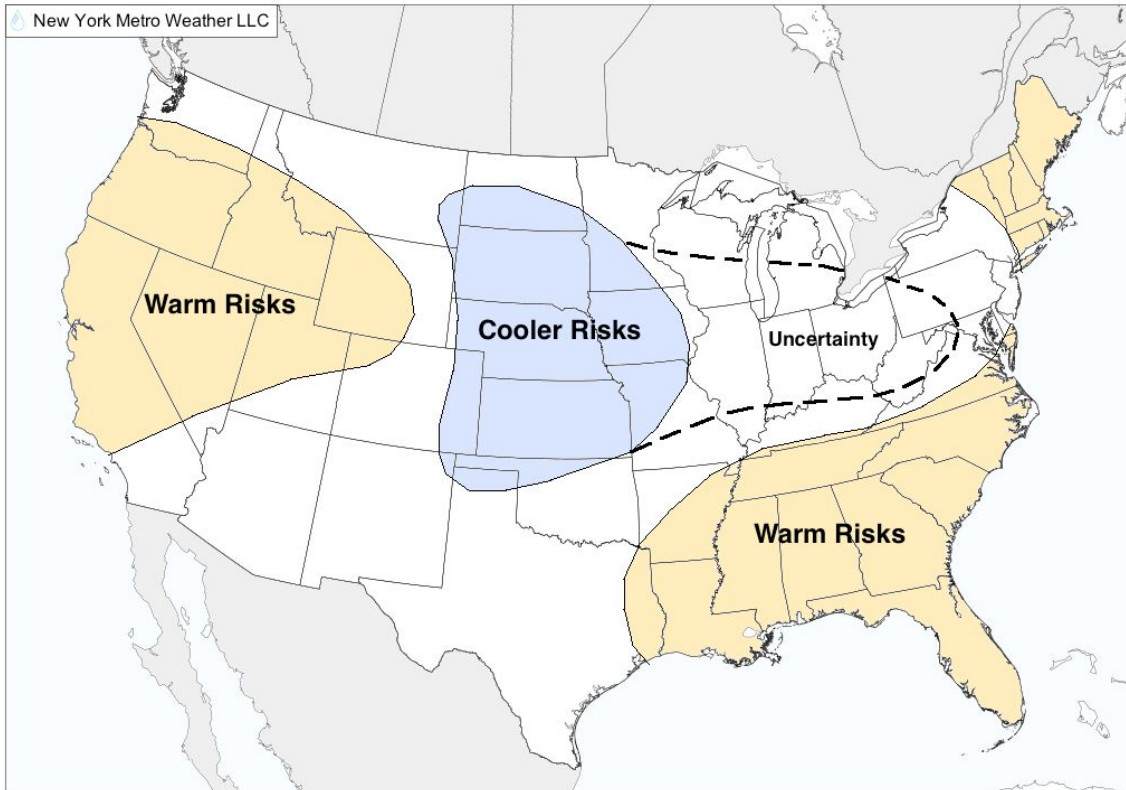
Extended Range (Through 8/31/2018)

Extended Temperature Departures (F)
Forecast Departure From Normal

Valid: 8/1/2018 - 8/31/2018

Issued: 7/11/2018 Homenuk

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**Extended Discussion**

As you probably are aware, we have made little change to our Summer 2018 forecast. In going along with that theme, after careful consideration and review, our forecast for August will begin with a similar theme to what we highlighted a few months ago, although some minor tweaks are included. Cooler risks will take over across the Plains and parts of the AG Belt, while warmer risks will become relegated to the Southeast and New England (as well as the West Coast). One area of uncertainty is the Ohio Valley and Mid-Atlantic, depending on the North Pacific evolution, cooler air could frequently expand into these regions as well. This would keep CDD numbers lower than normal.

National City Data (Temperature Departure in °F)

City	7/25	7/26	7/27	7/28	7/29	7/30	7/31	8/1	8/2	8/3	11-15	15-30
NYC	-3	-1	-3	-5	-5	-2	-2	-1	-1	+1	-2	-1
MSP	-2	-8	-6	-5	-5	-2	-2	-1	-1	+1	-2	-1
CHI	-2	-3	-6	-5	-5	-2	-2	-1	-1	+1	-2	-1
DEN	+1	+1	+1	+1	+1	+1	+1	+1	+1	+1	+1	+1
DAL	+4	+4	+4	+2	+2	+1	+1	+1	+2	+2	+2	+2
HOU	+1	+1	+1	+1	+1	+1	+1	+1	+1	+1	+1	+1

Last Updated: 6:00am CST 7/25/2018 | **Forecaster:** Homenuk