

MONDAY FINAL REPORT US GRAIN WEATHER

7/17/17 OVERVIEW

It has been an interesting a wild day in the world of weather models and how they' are impacting the Grains. We started off early in the morning with most the models showing the significant rain coming in this weekend would stay generally north of Iowa and impact mostly Minnesota Wisconsin Michigan ...far northern Illinois and Indiana into Ohio. Then the 12z GFS model came out at midday and threw everything into a tizzy which is what that model usually does. Quite frankly I will be glad when they retire this piece of crap.

The fact that the GFS ensemble held and did not show significant rain into central and northern Iowa at the end of the week and into the weekend I think is very significant. In addition the European model also went that way after the close of trade today. I do think that the northern third of Iowa does run the risk of seeing 1 to 2 inch rains this weekend but the best rains will stay north of the Minnesota Iowa State line. For central and southern Iowa it looks dry and hot into the front finally swings through on Sunday.

The change is going to happen LATE this weekend and once it does the temperatures will be dramatically cooler and the pattern become more unstable with many areas seeing off and rain showers and thunderstorms especially east the Mississippi River during the last week of July. While there are no immediate heat threats for the first half of August I am worried that the heat dome is still out there over the Rockies and it COULD make another run east. In addition a return to the pattern that we saw in late MAY and JUNE is still a rather dry one for the WCB and the Plains and that may be the issue that a lot of soybean traders may be overlooking.

FAST LOADING RADAR

Not much going on anywhere.. in Plains and Midwest

TEMPS JULY 16-17

MAX TEMPS JULY 16

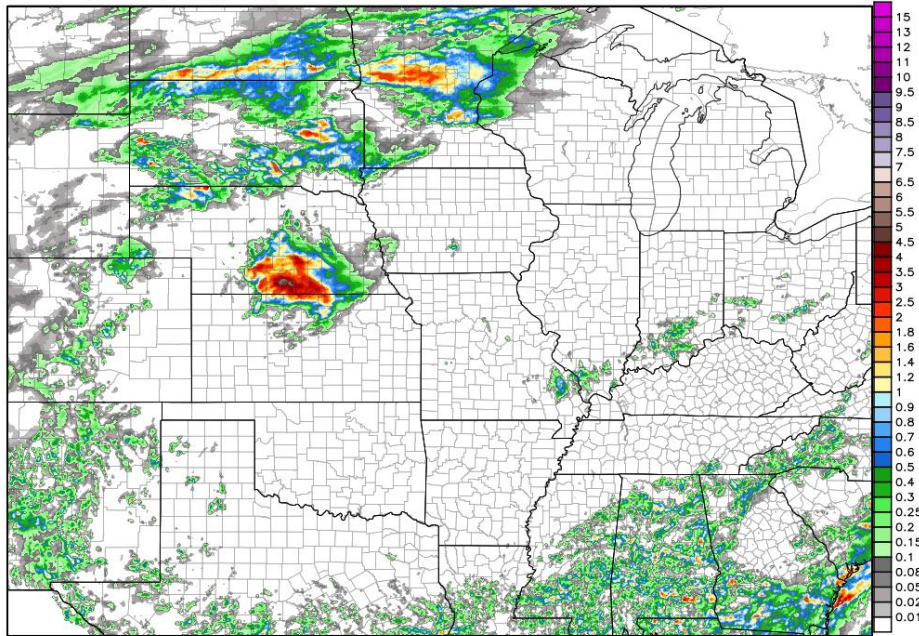
NORMAL MAX TEMPS FOR MID JULY

MIN TEMPS JULY 17

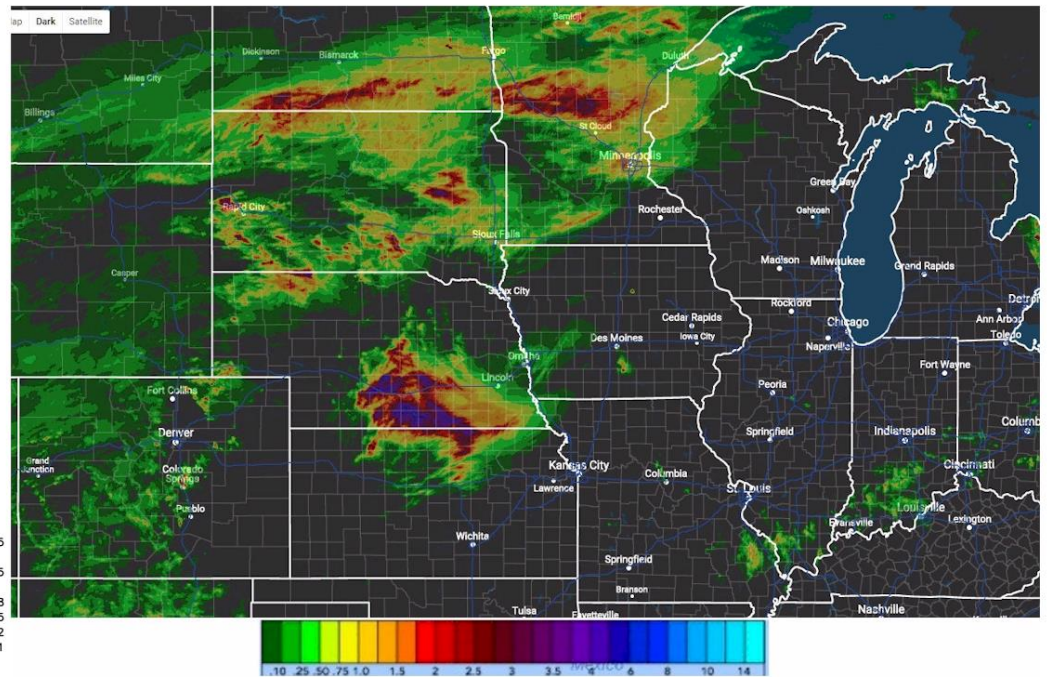
NORMAL MIN TEMPS FOR MID JULY

RAINFALL LAST 24 HRS 0700cdt 17 JULY- 0700cdt 18 JULY

NWS Precipitation Analysis 4-km HRAP Grid -- 1-day Total Accumulation Domain Max: 6.9 in.
Total Precipitation [inches] 1 days 12Z17JUL2017 --> through --> 12Z18JUL2017

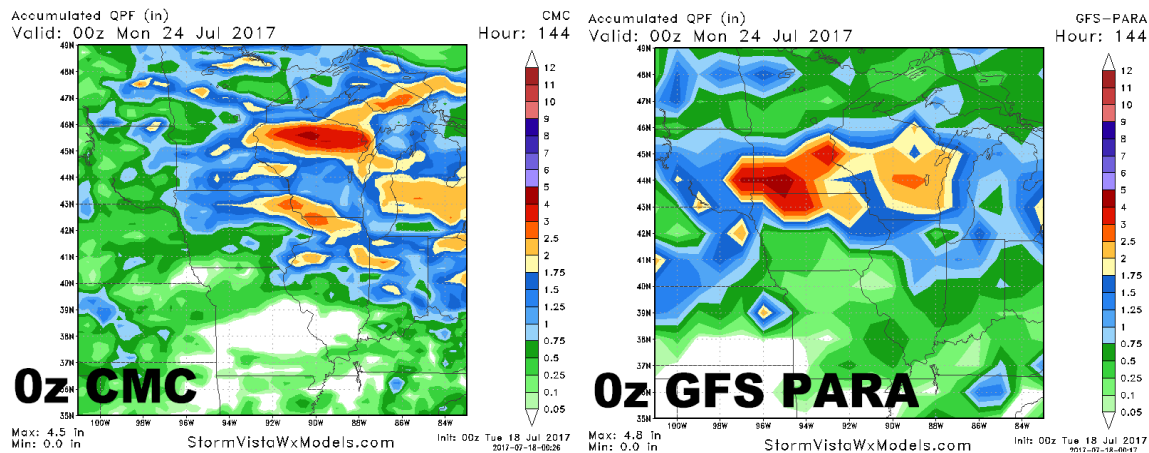
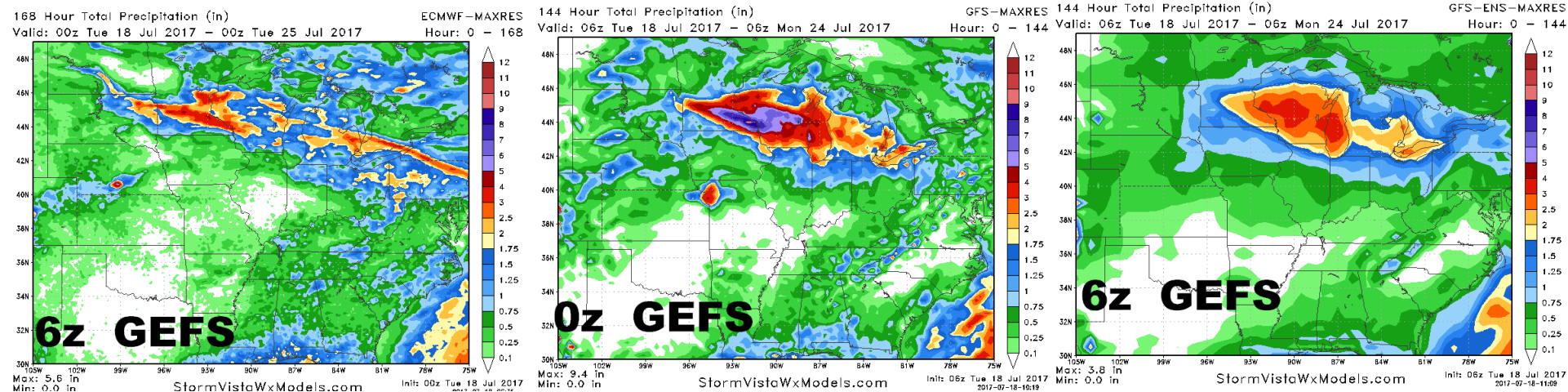


4 km HRAP grid | End of hydrological day at 1200 UTC | <http://water.weather.gov/precip>



THIS WEEK

Here are the early of Tuesday morning weather models and as you can see most of the weather models are keeping the rain out of Iowa -- th or at least the significant rain out of Iowa and centered over southeastern Minnesota much of central and Southern Wisconsin and into the far northern 25% of Illinois and and Indiana and most of Michigan and Northern Ohio.



The two models which were somewhat wetter this morning were the early morning Canadian and the GFS experimental or parallel model. The Canadian showed a general 1 to 2 inch rain over most of Iowa which would be helpful but not ideal of this point. The GFS parallel had a huge area of 2 to 4 inch rains over the entire northern half of Iowa and Southern Minnesota and 1 to 2 inch rains into the southern half a Wisconsin and the northern half of Illinois and Indiana

Even the models which eventually showed moderate to heavy rains in northern Iowa did so late in the forecast interval and as a result the temperatures stay quite hot across the wood of ECB. This table shows the forecasted temperatures from the Tuesday morning models for a Moines Iowa. Notice that on day 6 January '23 the heat definitely breaks but until then it's really hot and quite dry +

DES MOINES

Model	Day 1 2017-07-18		Day 2 2017-07-19		Day 3 2017-07-20		Day 4 2017-07-21		Day 5 2017-07-22		Day 6 2017-07-23		Day 7 2017-07-24		Day 8 2017-07-25		Day 9 2017-07-26		Day 10 2017-07-27	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
ECMWF- EPS	75	93	76	97	82	101	80	103	77	95	70	86	66	86	68	91	72	95	76	95
GFS-ENS	73	99	74	102	82	105	83	106	80	105	71	92	65	87	63	89	66	91	68	92
GFS-ENS- BC	74	96	74	99	79	103	81	104	78	103	70	91	64	88	64	90	67	94	69	94
CMC-ENS	76	92	74	93	78	96	78	97	76	93	70	86	65	85	62	87	67	88	70	90
GFS	74	97	74	100	81	103	82	103	75	102	68	95	65	83	63	86	61	90	61	92
ECMWF	75	94	78	100	84	103	84	104	79	98	74	95	69	86	70	84	72	96	78	101
Ensemble Mean	75	95	74	97	81	101	81	102	78	98	70	88	65	86	65	89	68	91	71	92
Operational Mean	75	96	76	100	82	103	83	104	77	100	71	95	67	85	67	85	67	93	69	96
Climo	67	86	67	86	67	86	67	86	67	86	67	86	67	86	67	86	67	86	67	86

Anomaly Colors (F)

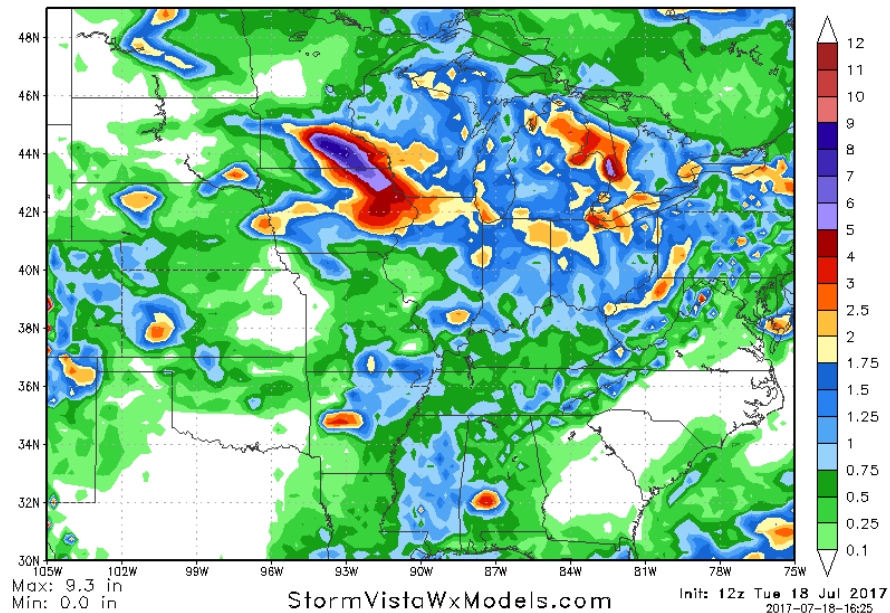


MIDDAY MOXDELS

The midday models came out with a new change and of course the change is from the unreliable and constantly flip flopping GFS models. As you can see the midday operational or regular GFS as well as the parallel GFS model when dramatically wetter over all of Iowa but especially over Eastern Iowa. As a general rule when you have a weather model which are showing XYZ for several runs in a row but then it suddenly shows ABCthat should trigger an alarm bell of some type.

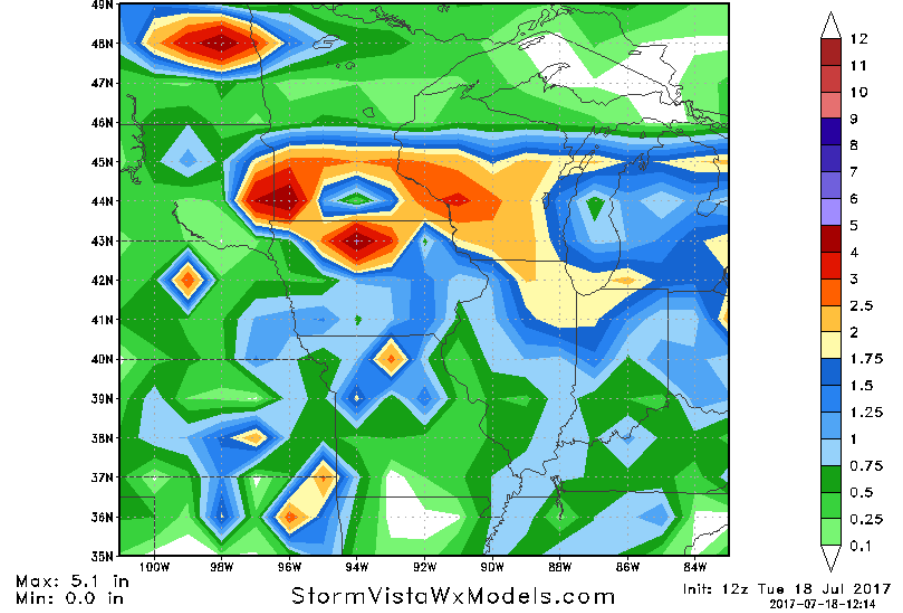
12z TUE GFS to D6

120 Hour Total Precipitation (in)
Valid: 03z Thu 20 Jul 2017 - 03z Tue 25 Jul 2017



12z TUE GFS PARA to D6

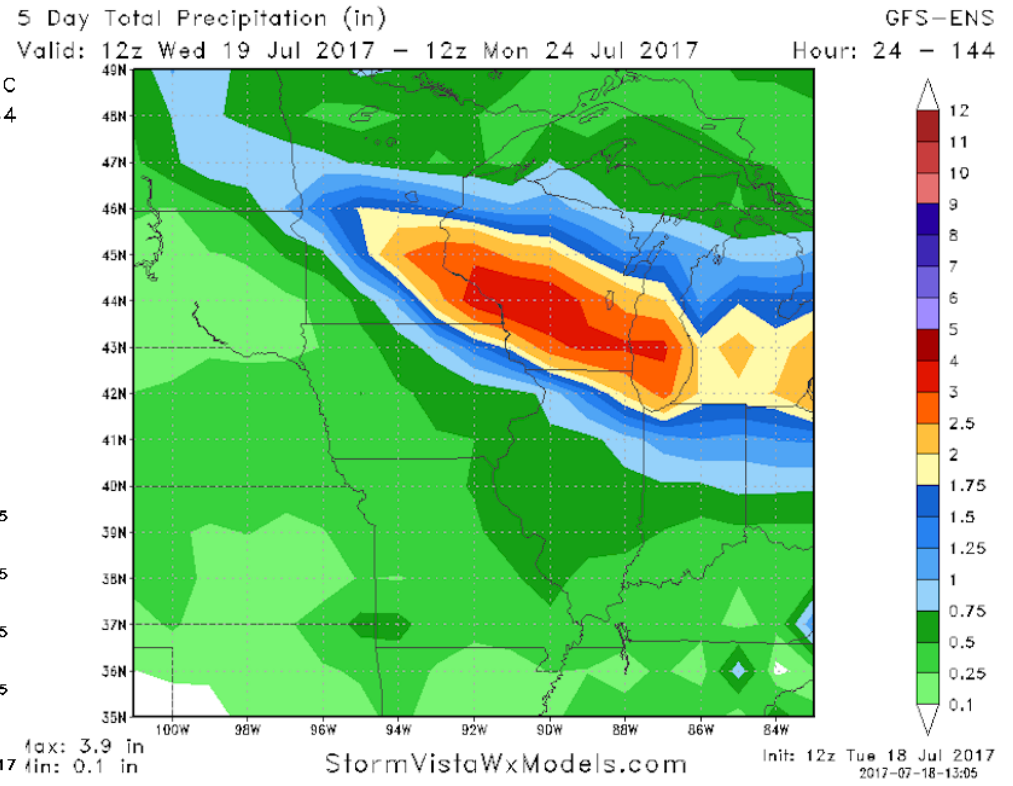
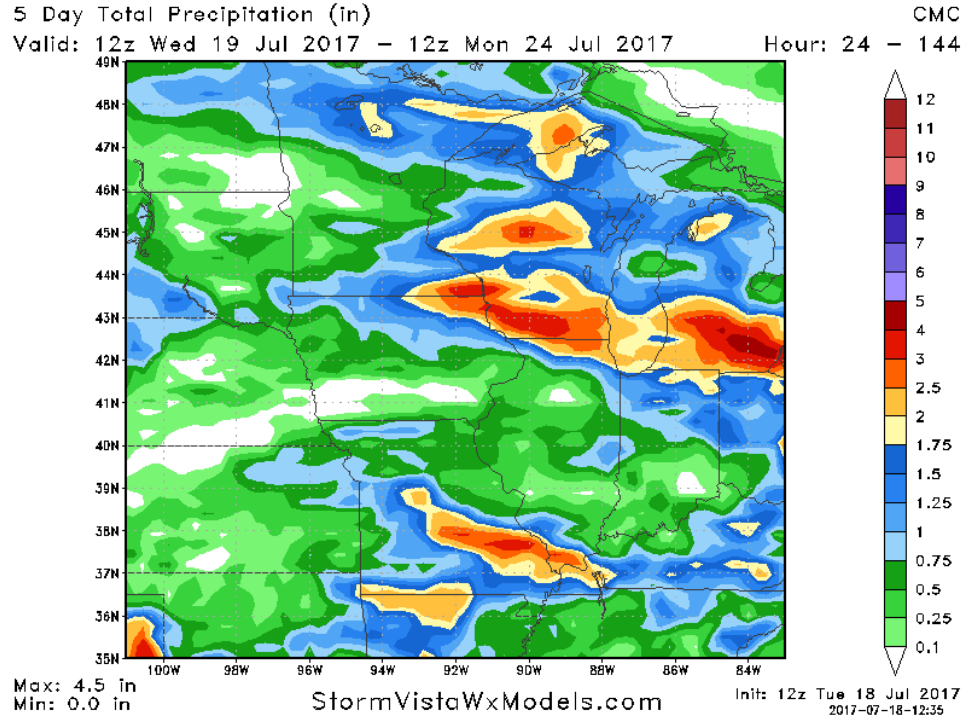
5 Day Total Precipitation (in)
Valid: 12z Wed 19 Jul 2017 - 12z Mon 24 Jul 2017



Of course sometimes that change in the model is real and when that happens it usually shows up on the model ensembles and other weather models. **In this case the GFS ensembles did not support the operational run and neither does the midday Canadian model.**

12z GFS ENSEMBLE says no operational/regular GFS is BOGUS

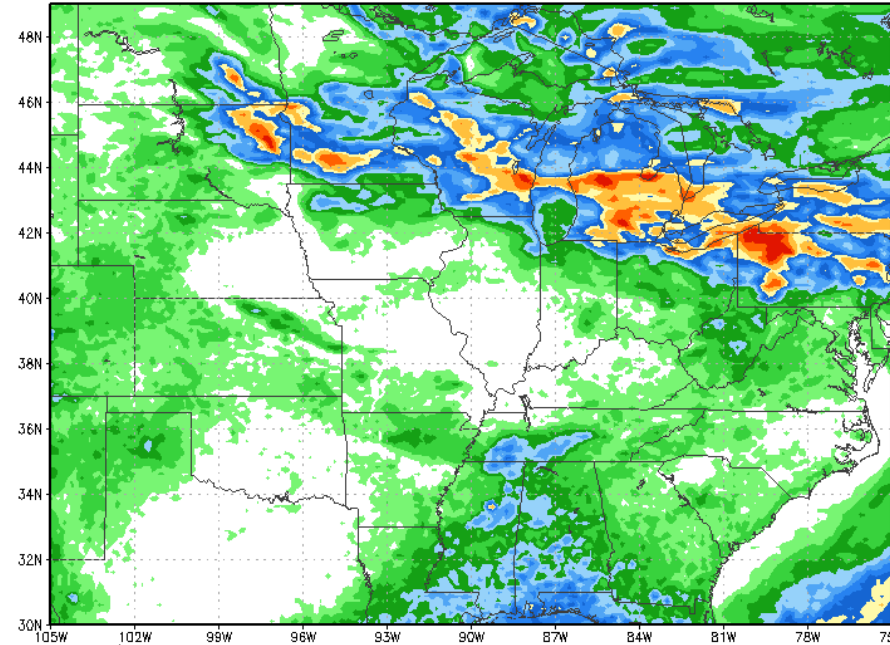
12z TUE CMC to D6



Finally the operational European model came out after the close of trading and as you can see over the next 6 days and has no significant rain of any kind even Northern Iowa or Northern Illinois or Indiana. The rainfall shield is weaker even over eastern portions of South Dakota... southern Minnesota Wisconsin and Michigan. I am not willing to buy the fact that the rain is going to be THAT much weaker on the European but clearly the GFS solution of pushing the significant rain into central and Eastern Iowa by the weekend is not correct -- or at least it has no weather model support. Later on in the 6-10DAY much of the Midwest does turn wetter over all areas as the DOME pattern breaks down and the "Northwest flow" and the mean trough over the Midwest resumes and takes over.

120 Hour Total Precipitation (in)

Valid: 12z Wed 19 Jul 2017 - 12z Mon 24 Jul 2017



Max: 4.0 in
Min: -0.0 in

StormVistaWxModels.com

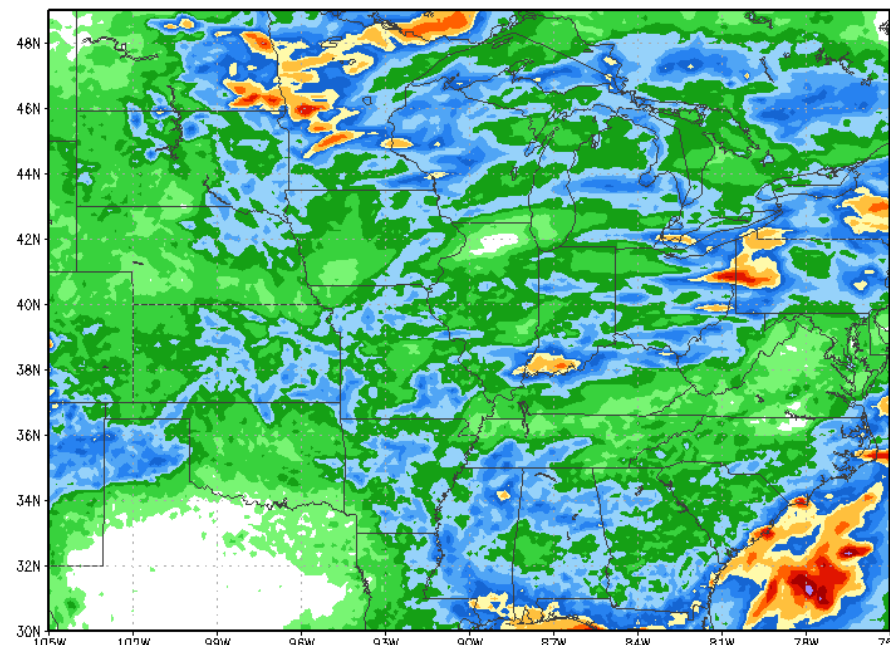
ECMWF-MAXRES

Hour: 24 - 144

Init: 12z Tue 18 Jul 2017
2017-07-18-18:27

120 Hour Total Precipitation (in)

Valid: 12z Sun 23 Jul 2017 - 12z Fri 28 Jul 2017



Max: 5.8 in
Min: -0.0 in

StormVistaWxModels.com

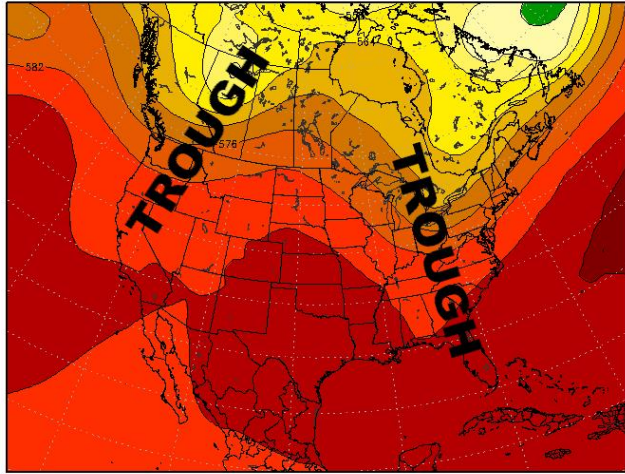
ECMWF-MAXRES

Hour: 120 - 240

Init: 12z Tue 18 Jul 2017
2017-07-18-18:55

This next image shows two important items. On the left side we see the change in the pattern at 500 MB dramatically from Sunday to Monday, July 23 to July 24. The heat dome has been destroyed and we have a deep trough over the Midwest and another one over the Pacific Northwest. The map on the right hand side shows the surface temperatures July 24-25 and as you can see temps are Below and or Much Below Normal over all of the Midwest New England into the central Plains

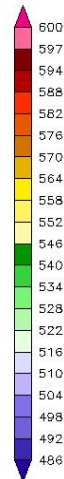
500 mb Height
Valid: 12z Mon 24 Jul 2017



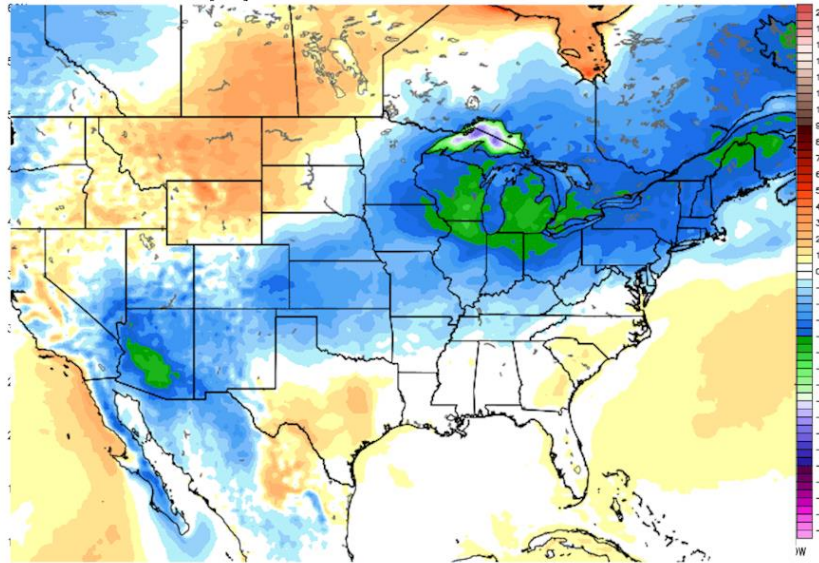
StormVistaWxModels.com

Init: 12z Tue 18 Jul 2017

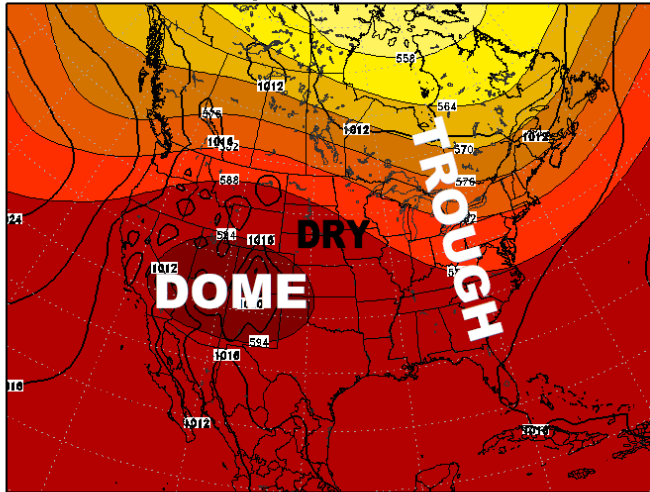
ECMWF
Hour: 144



ECMWF EPS Ensemble Mean 6-hourly Max 2-meter TEMP ANOMALY [°C]
Init: 00Z18JUL2017 -- [180] hr --> Valid Tue 12Z25JUL2017



500 mb Height & MSLP
Valid: 06z Tue 01 Aug 2017

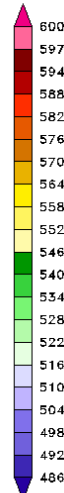


Max: 595.2 dm
Min: 544.6 dm

StormVistaWxModels.com

Init: 00z Tue 18 Jul 2017
2017-07-18-03:57

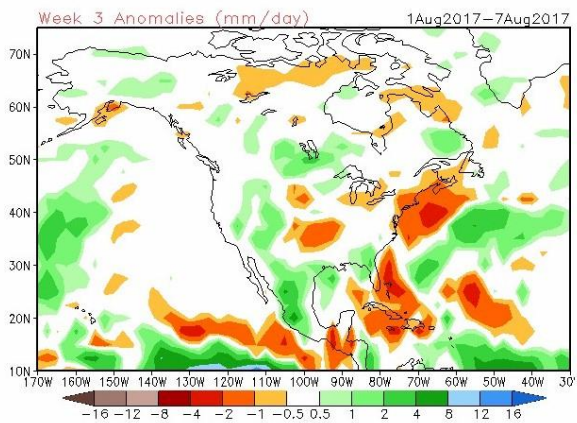
ECMWF-EPS
Hour: 342



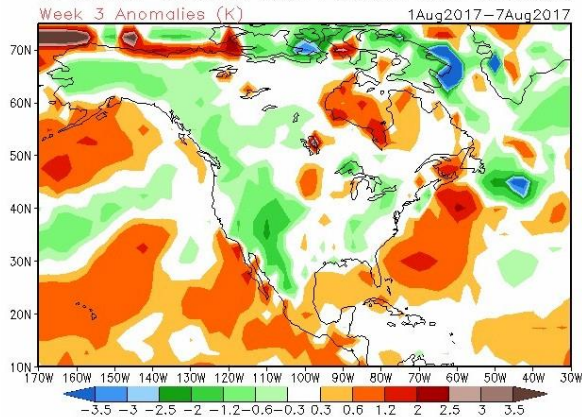
By August 1 the heat dome is back over the southwestern states the mean trough is over the Midwest. This is the pattern we saw MAY and JUNE that produced a rather dry pattern for the Plains and the WCB -although temperatures were either near normal or somewhat below normal. This appears in the seasonal pattern which means that all this august could remain quite dry relative to normal over portions of the Plains and the WCB. In addition as long as we have that heat dome lingering out over the Rockies and the southwestern states it will have to be watched to see if it decides to come east again in the middle of August.

Finally here is the new week three CFS Model which covers the first seven days of August and as you can see rainfall looks either somewhat below normal or near normal but wetter over South Central Canada and the Rockies. Temperatures are generally near normal over most of the Midwest and the plains with a few areas below normal. In week 4 the CFS shows a lot of areas seeing below normal rainfall over the Midwest especially over the Delta and temperatures are below normal over all of the Plains and the Midwest

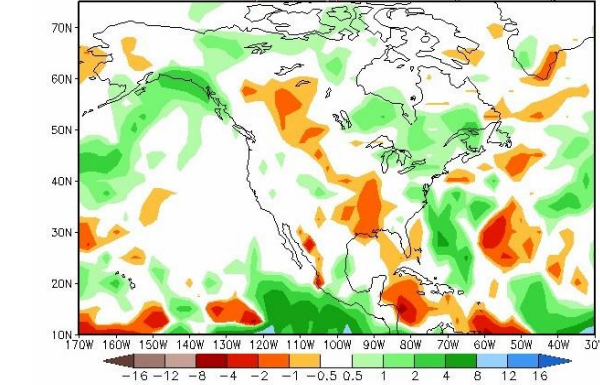
CFSv2 Weeks 3 & 4 Precipitation
16 Member Ensemble Mean Forecast from 17Jul2017



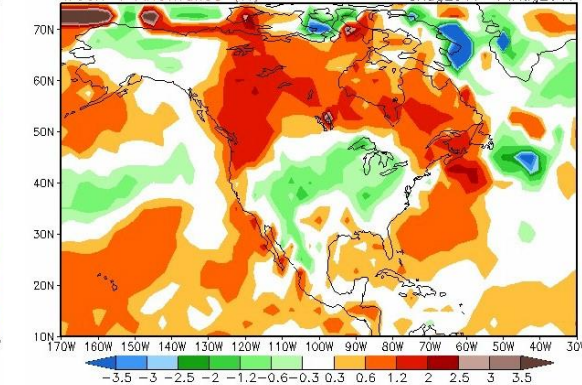
CFSv2 Extended Range Temperature
16 Member Ensemble Mean Forecast from 17Jul2017



Week 4 Anomalies (mm/day) 8Aug2017-14Aug2017



Week 4 Anomalies (K) 8Aug2017-14Aug2017



DT wxrisk.com OFFICE 804 715 8330 CELL 804 307 8070