



Weather Forecasting For  
Traders, Investors, and Businesses

# TUESDAY FINAL REPORT US GRAIN WEATHER

## 7/ 24/17 OVERVIEW

One of the serious problems that make grain weather markets even more stressful and chaotic than they should be is the fact that the operational GFS model is the first of the midday models to come during the trading day but it is also the most erratic. As a result, the operational or what I refer to as the regular GFS model can cause the wild swings in the grain markets. This is exactly what we saw happen today at midday.

There are several issues to talk about some which break them down into individual pieces. The midday models generally show significant rains over portions of the Midwest but the trend over the WCB has been to somewhat decrease the rainfall coverage but not the overall rainfall amounts.

In the week 2 forecast there is a lot of confusion because of the wretchedly bad operational GFS model and we get into a lot of that discussion below. Suffice to say we think the wet scenario showing up in the week two GFS model is not correct and is not valid.

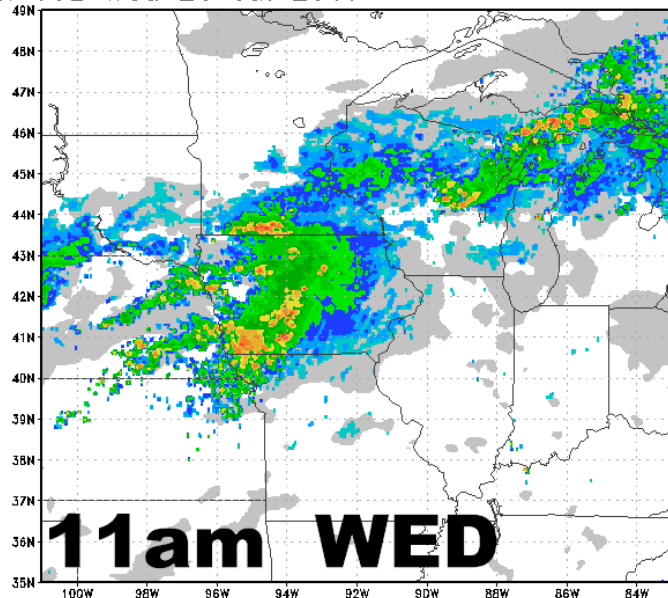
## FAST LOADING RADAR

scattered showers over central Wyoming into western / central South Dakota and far southeast ND and northwest Minnesota are increasing

## NEXT 3 DAYS

There will be a general increase and showers and thunderstorms later on this evening across eastern and southeastern South Dakota and Southern Minnesota. Some of the storms will be severe and produce significant rain ... but they will weaken during the overnight hours and spread into western Wisconsin. But more storms will form the predawn hours over central portions of South Dakota and Nebraska. The storms will move east reaching the Nebraska Iowa border by dawn on Wednesday with additional storms moving into Southern Minnesota by dawn Wednesday.

Composite Reflectivity, Cloud Cover (> 75%)  
Valid: 16z Wed 26 Jul 2017



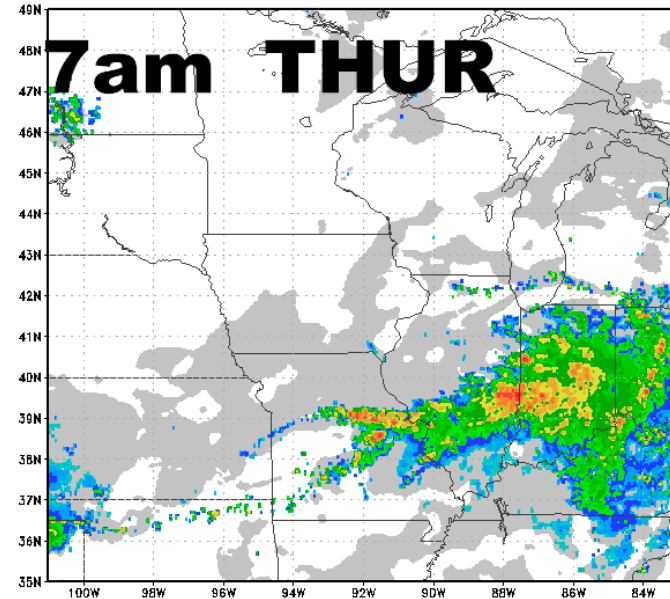
StormVistaWxModels.com

Init: 12z Tue 25 Jul 2017

NAM-HIRES  
Hour: 28



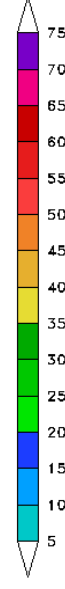
Composite Reflectivity, Cloud Cover (> 75%)  
Valid: 12z Thu 27 Jul 2017



StormVistaWxModels.com

Init: 12z Tue 25 Jul 2017  
2017-07-25-10:33

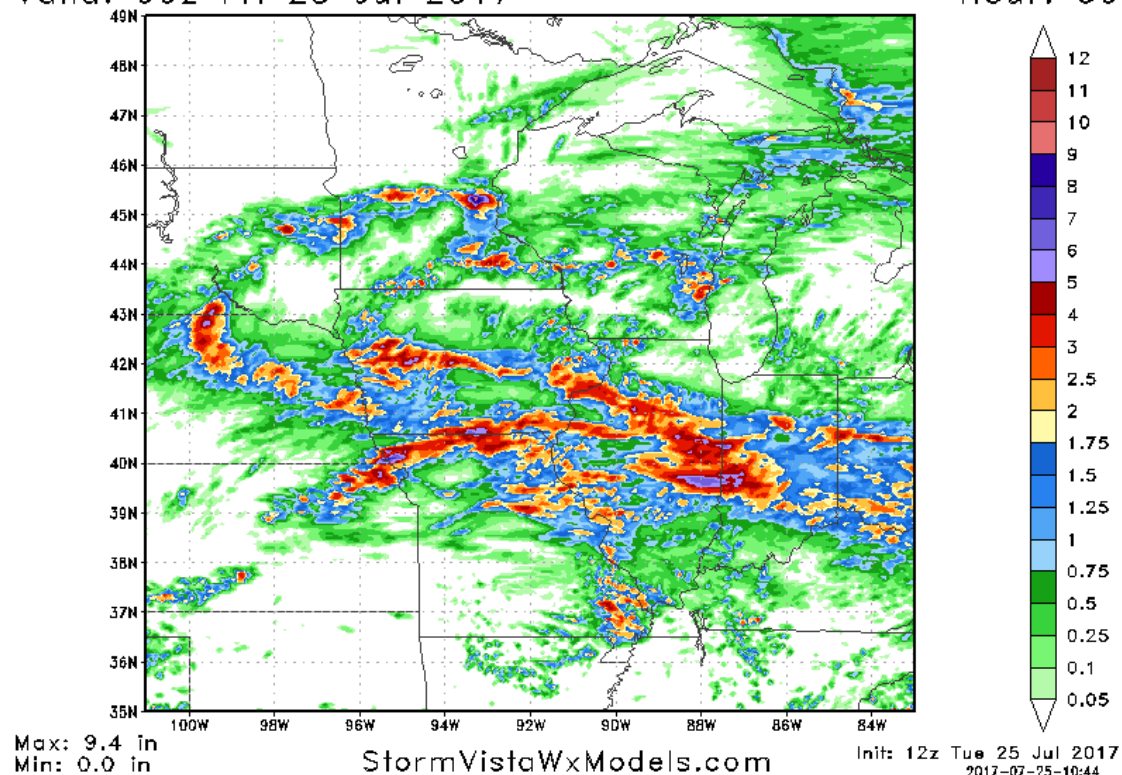
NAM-HIRES  
Hour: 48



Accumulated QPF (in)  
Valid: 00z Fri 28 Jul 2017

## 12z NAM MODEL

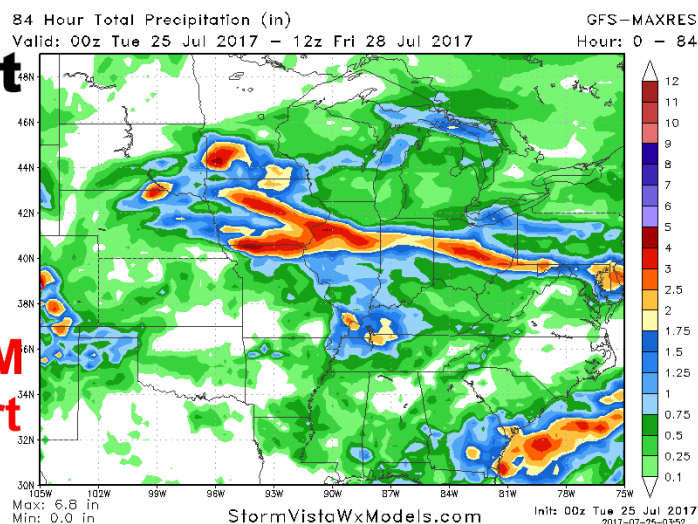
NAM-HIRES  
Hour: 60



Most of the short range models show moderate to significant rain over anywhere from 50 to 75% of Iowa on Wednesday and Wednesday night with the rain/ storms spreading into central and southern Illinois and northern Missouri Wednesday night into Thursday morning. It appears that the best rains will fall over western ...southwestern ...and southern portions of Iowa as well as northern Missouri and central and west Central Illinois Wednesday and Thursday. The amounts will range from 0.75-3.5"/20- -90mm but there will be locally higher amounts especially over northern Missouri ..near the Iowa border and into portions of central Illinois. AGAIN note the "gaps" in the NAM model

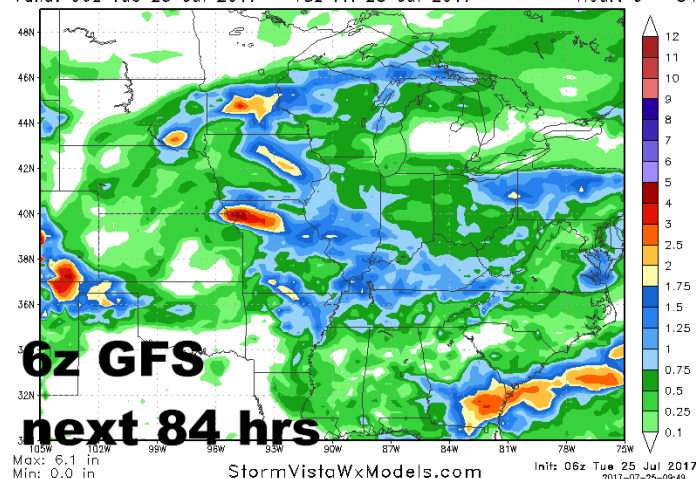
As I stated earlier the midday 12z TUES GFS model is somewhat weaker with the rain over the Iowa over the next three days.... when compared to what the model was showing at 0Z and 6z. The early morning GFS model had coverage of around 80% over Iowa and 70% over central and southern ILL and the southern third of Minnesota. But as you can see in this image that has changed over the past two runs and there are now large gaps the rain shield over much of Iowa. That being said it should be pointed out that the 12z GFS still maintains significant rain over northern and eastern Missouri and much of central and Southern Illinois.

**0z GFS next  
84 hrs**



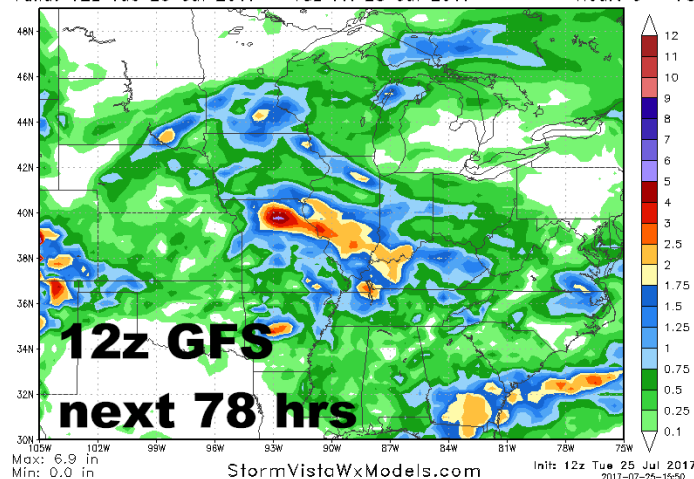
**WCB rains SEEM  
to be falling apart  
0z-6z-12z**

84 Hour Total Precipitation (in)  
Valid: 06z Tue 25 Jul 2017 - 18z Fri 28 Jul 2017  
GFS-MAXRES  
Hour: 0 - 84



**6z GFS  
next 84 hrs**

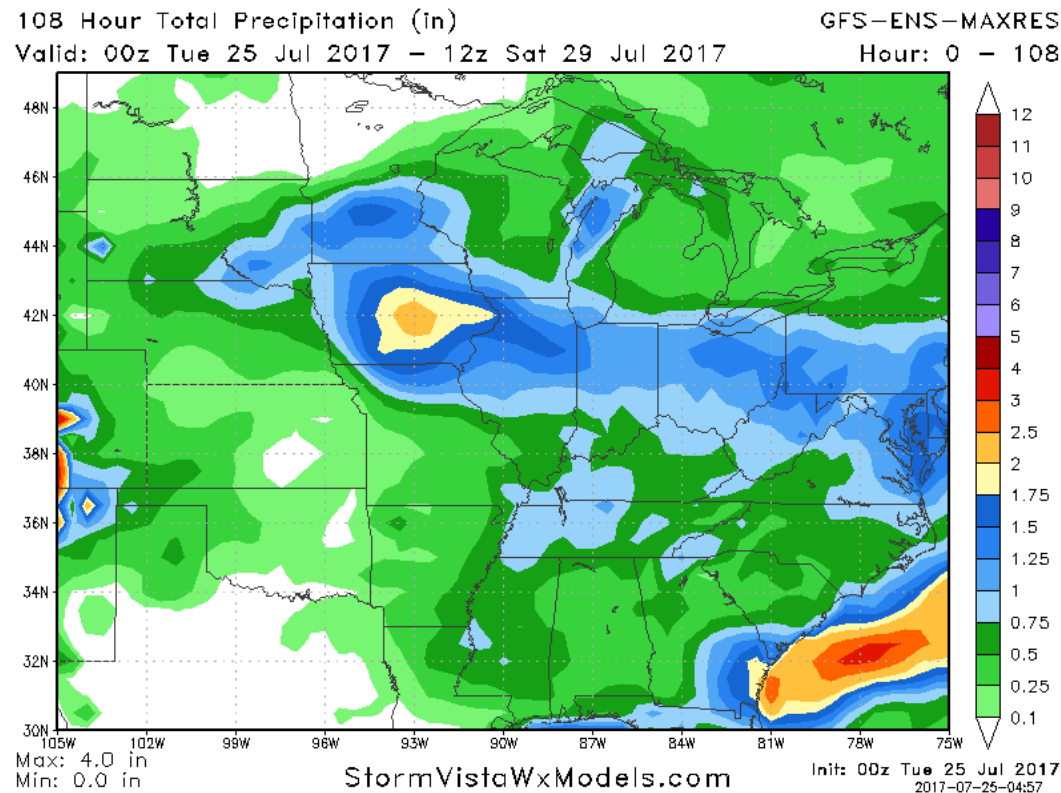
8 Hour Total Precipitation (in)  
Valid: 12z Tue 25 Jul 2017 - 18z Fri 28 Jul 2017  
GFS-MAXRES  
Hour: 0 - 78



**12z GFS  
next 78 hrs**

The 12z GFS ensemble however is still quite wet and stormy over the next 84 hours and shows a large area of 1 to 3 inch rains over the heart of the WCB and into Central Illinois. Even though we 'ae not a fan of the GFS models usually when the event is within 84 hours like this the GFS ensemble is a pretty good model and we think this solution has a better chance of being correct than the very dry Canadian model

## 12z TUES GFS ENSEMBLE total rainfall next 84 hours



**DAYS 4-5-6-7**

Most the data shows a dry tranquil pattern with below normal temperatures east of Mississippi River late July and early August over the Midwest and most of the Plains. That is up until the operational Tuesday afternoon GFS model came out..



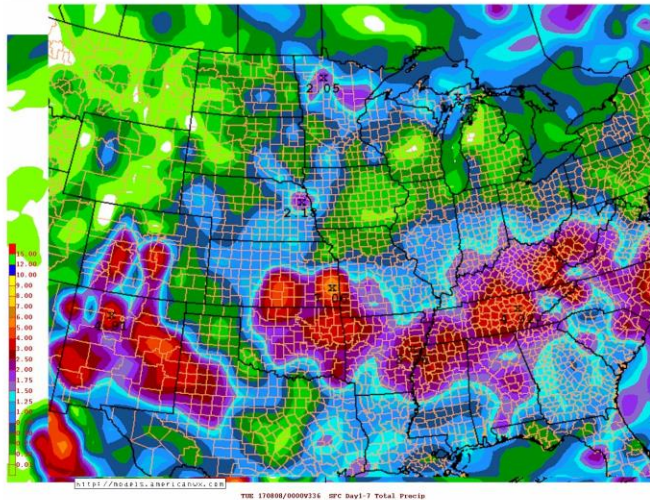
## WEEK 2 / 6-10 DAY

As we texted and reported on earlier ...the 12z operational or regular GFS model which this morning showed a very dry pattern for all the Midwest in week 2 ... came out with a dramatically different solution showing a widespread 4 to 8"/ 100-200mm h rain over much of Iowa into southern Minnesota ..southern Wisconsin and eastern Nebraska. Here we can see why the GFS model has turns dramatically wetter. These two maps show the upper air or 500 mb pattern valid a day nine. **The image on the LEFT shows the GFS model from this morning which takes a strong piece of energy in the jet stream and moves it from Wyoming southward into the Louisiana delta. The image on the right side represents the 12Z GFS model and it has the same piece of energy stalling over the heart of the Midwest which is what produces the huge amounts of rain.**

Of course the GFS model had a recent upgrade but and it was hoped that the upgrade would resolve problems like this with the model but it's pretty clear that the upgrade is not doing that at all.

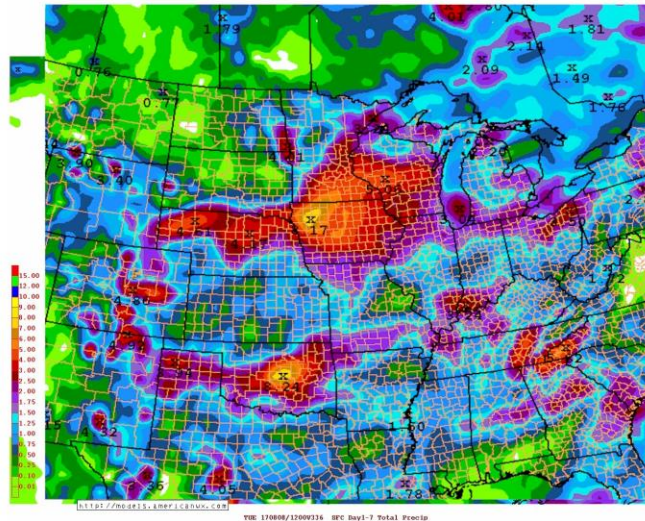
### 0z TUES AM GFS WEEK 2 RAINFALL

mostly DRY in east NEB... IA.... WI ...north MO and only moderate rains in ECB



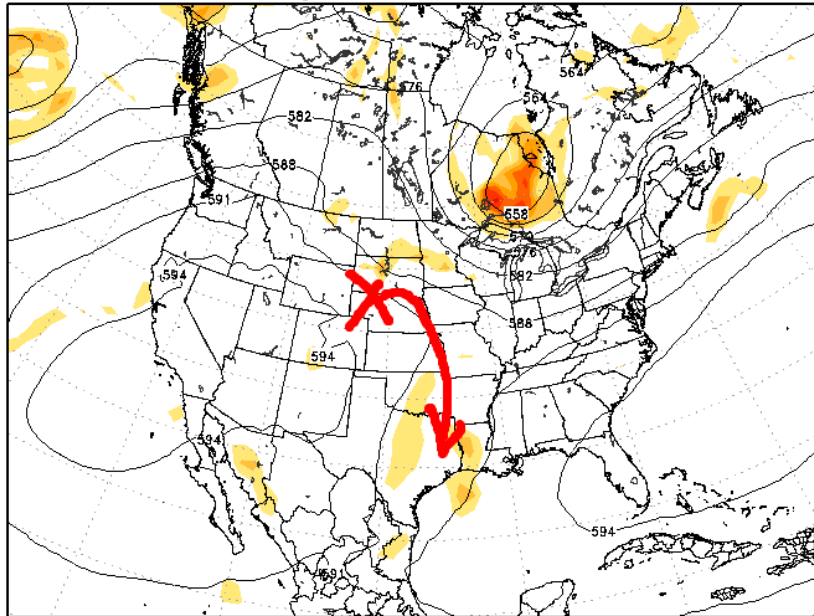
### 12z TUES AM GFS WEEK 2 RAINFALL

WOW! what a massive change. Even though we still see grain Mets who still tout the GFS those who know what they are doing see this sort of massive change as sign the model is well 'GOOFY'



This stunning turnaround simply makes no sense. The GFS model developing a new piece of energy in the jet stream that moves slowly from Colorado to Missouri then up into the Great lakes in week 2. This is a slow moving piece of upper energy that causes the model to develop all that rain over the WCB.

500 mb Height & Vorticity  
Valid: 00z Fri 04 Aug 2017  
**00z GFS 500mb map**

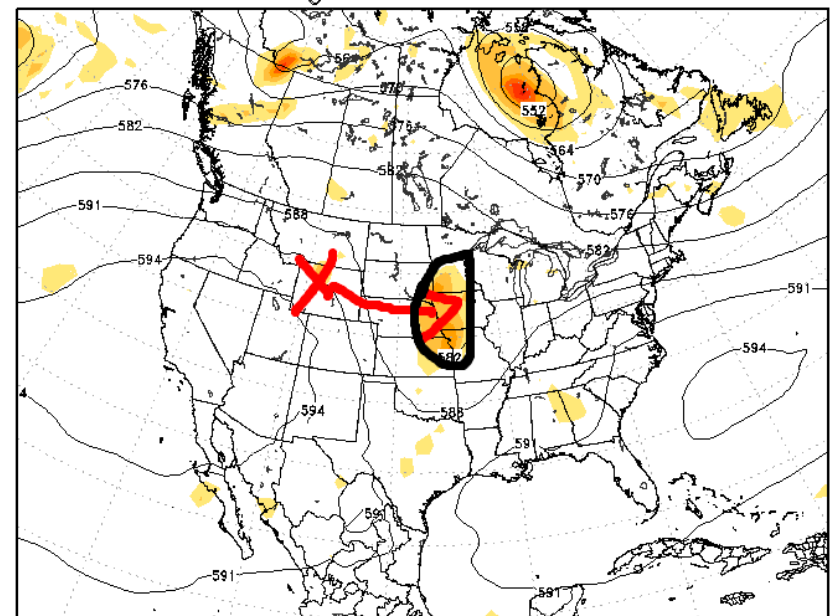


GRADS: COLA/IGES

StormVistaWxModels.com

Init: 00z Tue 25 Jul 2017  
2017-07-25-00:41

500 mb Height & Vorticity  
Valid: 09z Fri 04 Aug 2017  
**12z GFS 500mb map**



GRADS: COLA/IGES

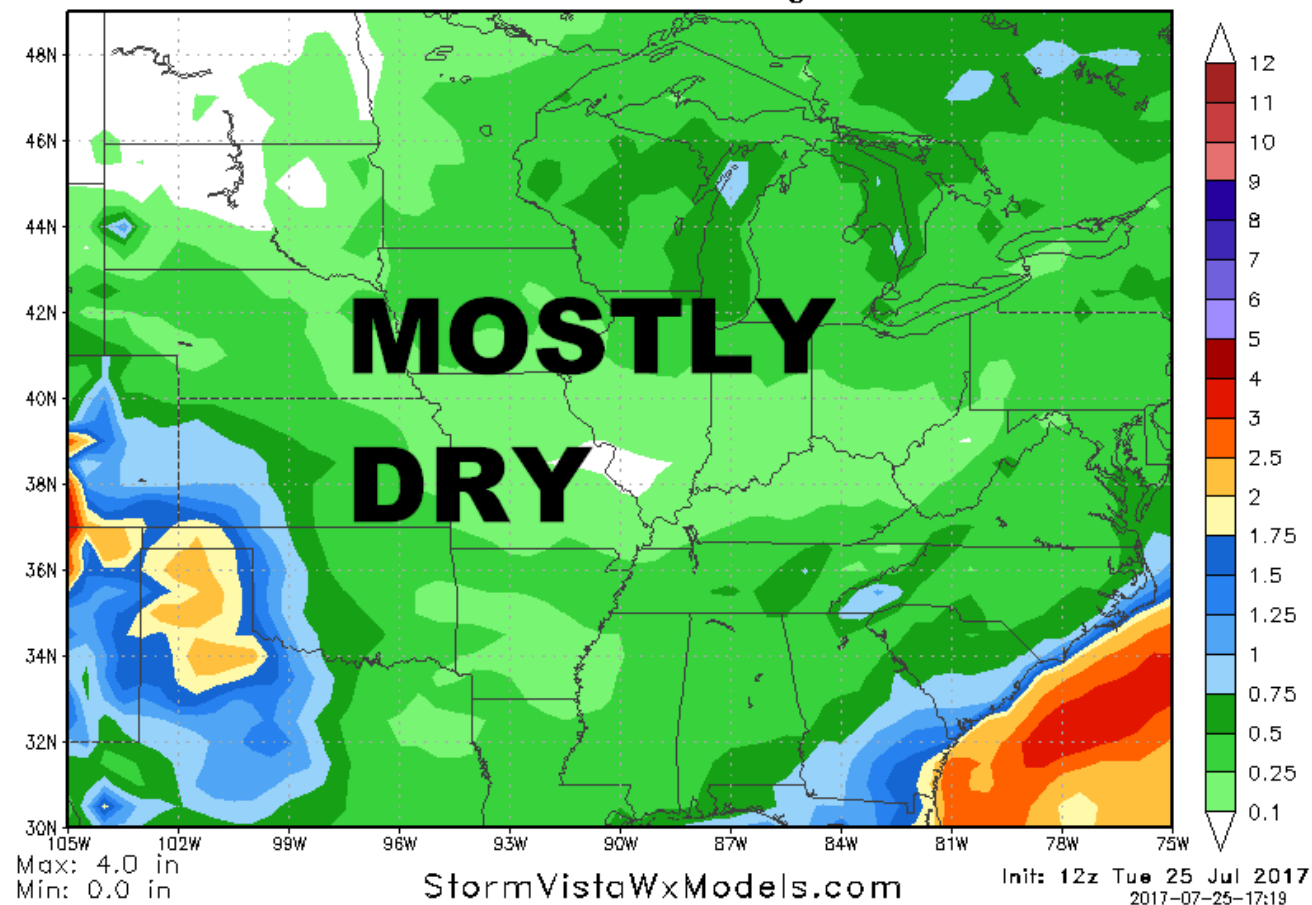
StormVistaWxModels.com

Init: 12z Tue 25 Jul 2017  
2017-07-25-12:41

Fortunately there are rules or guidelines that experienced meteorologists can use when you see a stunning turnaround in a weather model from its previous runs. One of the rules is to take a look at the model's ensemble and see if that trend is showing up. Another rule is to look at the other weather models - at this state in most weather models are so good that if one model shows a BIG change other weather models usually catch on very shortly.

In this case if we look of the GFS ensemble we see there is no hint at all of a massive rain storm over any portion of the Midwest much less the WCB in the week 2 to forecast (6-10day). So this tells me that the massive rain event that the operational GFS is depicting in week 2 over the WCB is essentially BS.

120 Hour Total Precipitation (in) GFS-ENS-MAXRES  
Valid: 12z Sun 30 Jul 2017 - 12z Fri 04 Aug 2017 Hour: 120 - 240

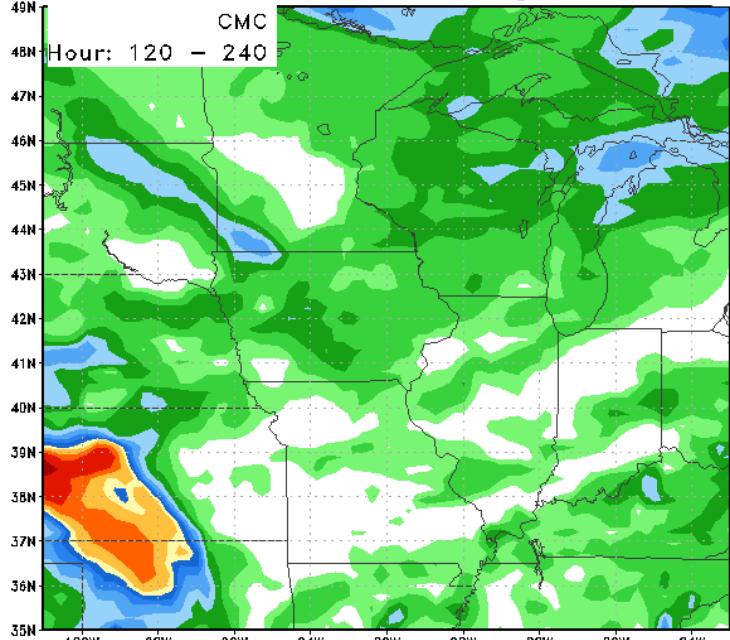


In addition the midday Canadian model in its 6-10 day shows a almost completely dry Midwest.



Total Precipitation (in)

12z Sun 30 Jul 2017 - 12z Fri 04 Aug 2017

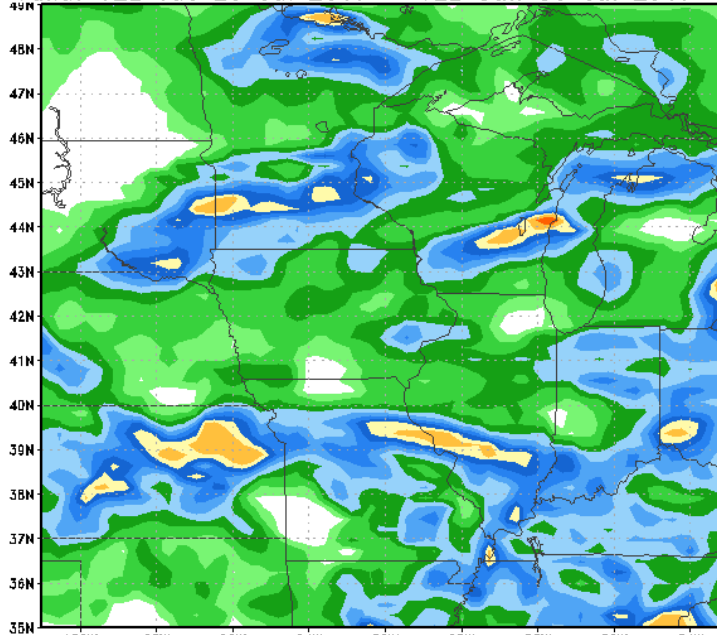


Max: 2.9 in  
Min: 0.0 in

StormVistaWxModels.com

5 Day Total Precipitation (in)

Valid: 12z Tue 25 Jul 2017 - 12z Sun 30 Jul 2017 Hour: 0 - 120



Max: 2.9 in  
Min: 0.0 in

StormVistaWxModels.com

Init: 12z Tue 25 Jul 2017  
2017-07-25-12:18

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