
# THURSDAY FULL US GRAIN WEATHER

## 6/8/17 OVERVIEW

The expectation or consensus forecast since Mid MAY has been that June 2017 was going to be a wet and cool month for most of the plains and the Midwest. I also believed that was going to be the likely scenario and that the pattern would not turn drier and hotter until the last week of JUNE. However that was based upon the assumption that the active and very strong QBO which is driving the entire Pacific jet stream and the excessively wet pattern would continue without weakening until late JUNE.

The data clearly shows that the QBO is now on rapid collapse and because it is the Pacific jet stream is weakening as well. Its like getting a supertanker to turn when doing 30 knots as opposed to 5 knots. Obviously the supertanker is easier to turn will make a much sharper turn only doing 5 knots. In other words the weakening Pacific jet stream is becoming the driving factor in the hotter drier pattern.

The heat that is going to be generated over all the next several days is due to the arrival of a deep trough over the Pacific Northwest and northern Rockies. This trough in the jet stream is going to cause a strong ridge to build a over the Plains and the Midwest which will send the heat into these regions. In addition the drying soils in some areas will also add to the condition as well as the down slope west winds from the Rockies.

The model performance in the 6-10 day continues to not great especially with the GFS model. It has has shown no consistency from run to run and the performance scores show this quite well. Over the last 10 days the opertional GFS Model has consistently shown these big rain and thunderstorms cluster developing over portions of the Plains and

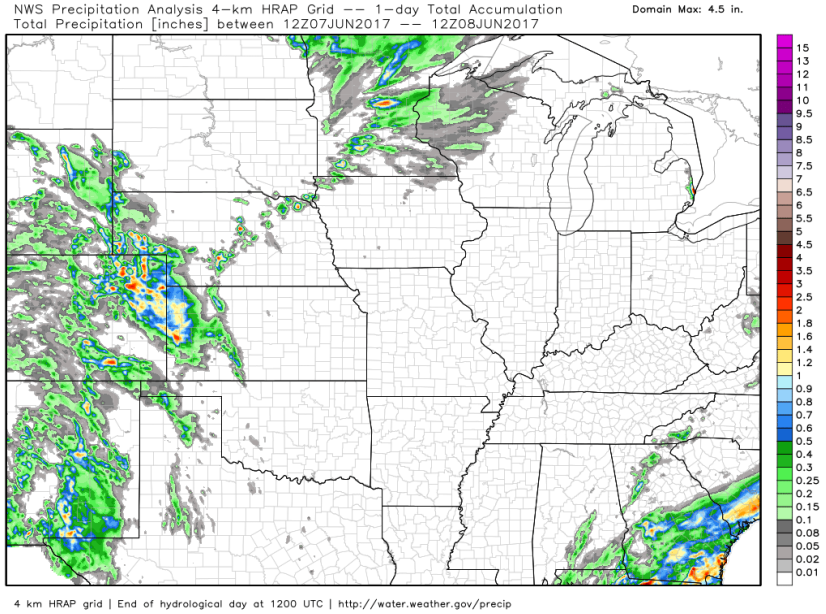
Midwest which do not show up.

It would be a mistake to believe that all of JUNE is going to be hot and dry over the Plains and the Midwest because clearly that is not what the data shows. But as we have set before it is not going to be anywhere near as wet or as cool as what the data was showing early and mid MAY either. In our view June 2017 is becoming a transition month and the pattern COULD transition into something more extreme in July and August of 2017.

One final note the new forecast model data from the El Nino models have come out and they continue to show dramatic weakening of the potential El Nino event. In fact some other data shows the DC Service temperatures cooling in August and September and it possible light Nina developing.

**RAINFALL OVER THE LAST 24 HRS - 0700 CDT 7 JUNE - 0700 CDT 8 JUNE**

0.25-1.50"/6-38mm over 40% of MN and 60% of ne 25% of COL. All other areas completely dry



FAST LOADING RADAR

Thursday morning radar shows not a lot of activity. 95% Midwest is completely dry and 90% of the plains. There is some widely scattered showers over northeast IA into southwestern & central WI into thin band and a second area of light to moderate showers over southwest KS which extends down into the Texas panhandle.

## TEMPS JUNE 7-8

MAX TEMPS JUNE 7 - NORMAL MAX TEMPS FOR LATE MAY

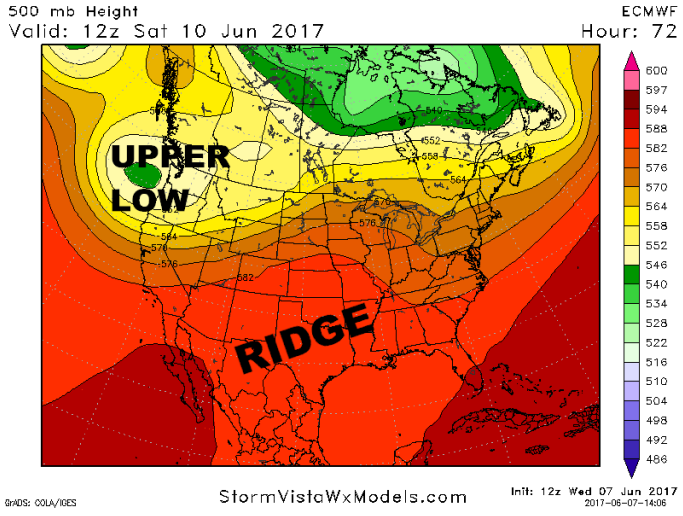
MIN TEMPS JUNE 8 NORMAL MIN TEMPS FOR LATE MAY

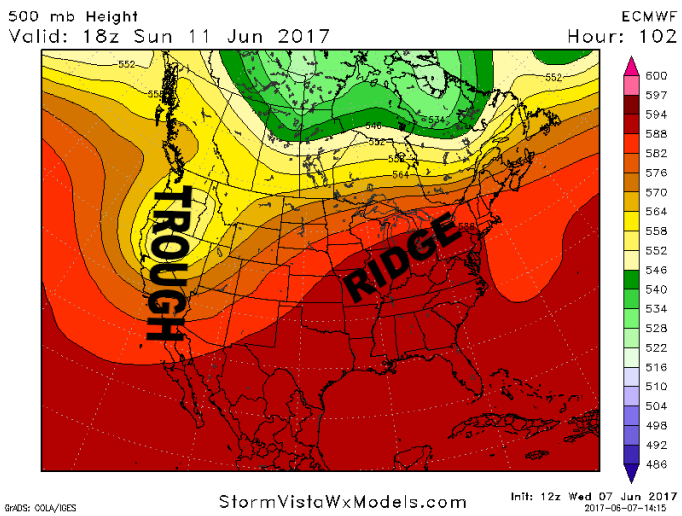
**WEDNESDAY MAX TEMPS --** 70s over ILL eastern WI MI IND OH KY eastern TN.. 80s in all other portions of the Midwest & Plains.. a few 90s over southwest TX.

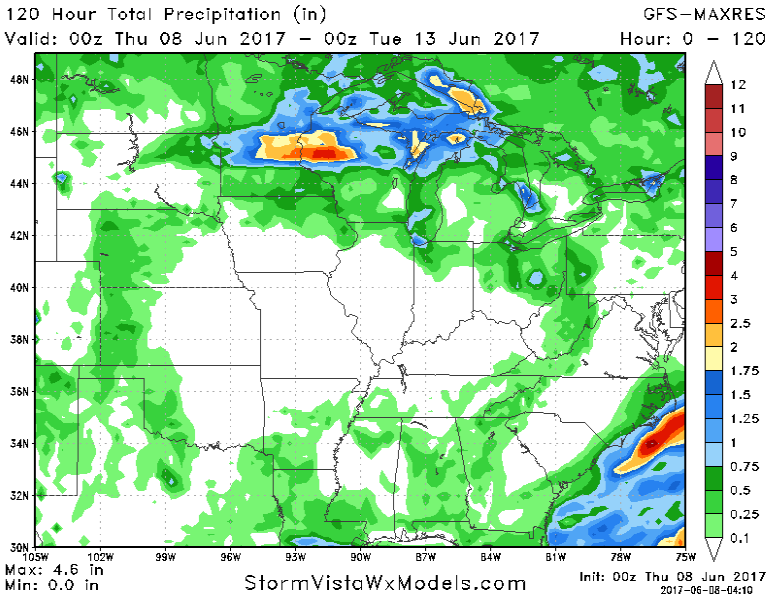
## NEXT 5 DAYS

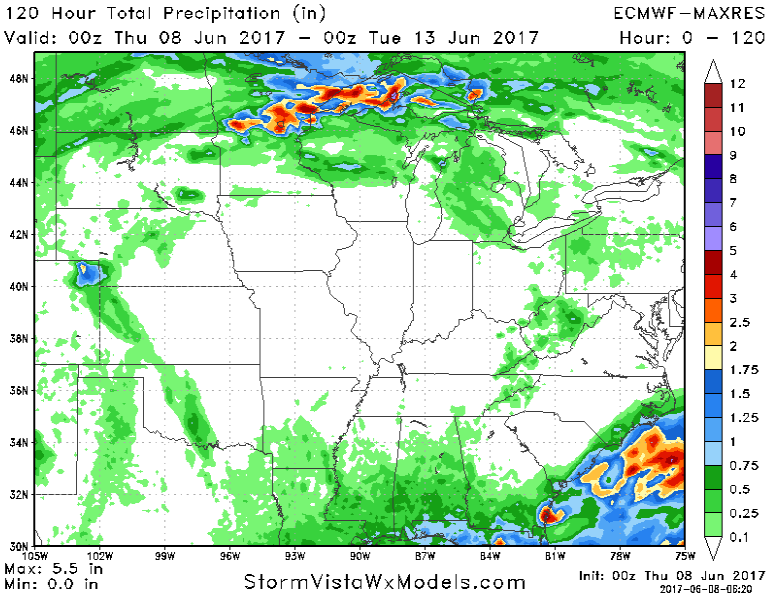
This image shows the how the jet stream pattern will develop over the next 5 days and why it gets so hot. This Friday evening a much large upper LOW in the jet stream over the Gulf of Alaska will move into Pacific Northwest and the northern Rockies for the weekend. If we remember our basic physics from high school - for every action is an equal and opposite reaction -- then the development of this deep upper LOW and large trough in the jet stream over the western third of the country, is going to cause a reaction to the jet stream over the central and eastern 2/3 of the country. It is the rapid increase in this ridge thats causes temps to soar as well as the downslope of the winds from the Rockies. There is strong model agreement as to what the data shows over the next 5 days. Temperatures greater than 95°/35c with some 100f/ 38c plus degree readings develop on Friday over the Dakotas and TX which expand into all of the Plains and a good portion of the WCB on Saturday …Sunday… Monday… into Tuesday. About 85% of the Midwest is completely rain free all the next 5 days. Both models show significant rains of 1-3"/25-75mm over east central MN into northwest WI Sunday into Monday. The European

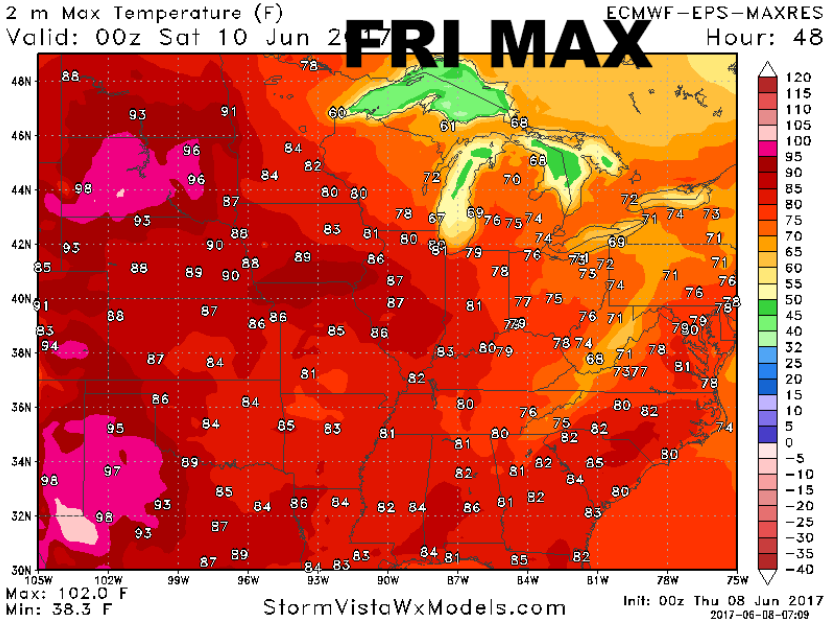
model has these rains a  little further to the north  than the GFS but the differences  here  in how the model handle  these rains are not significant.

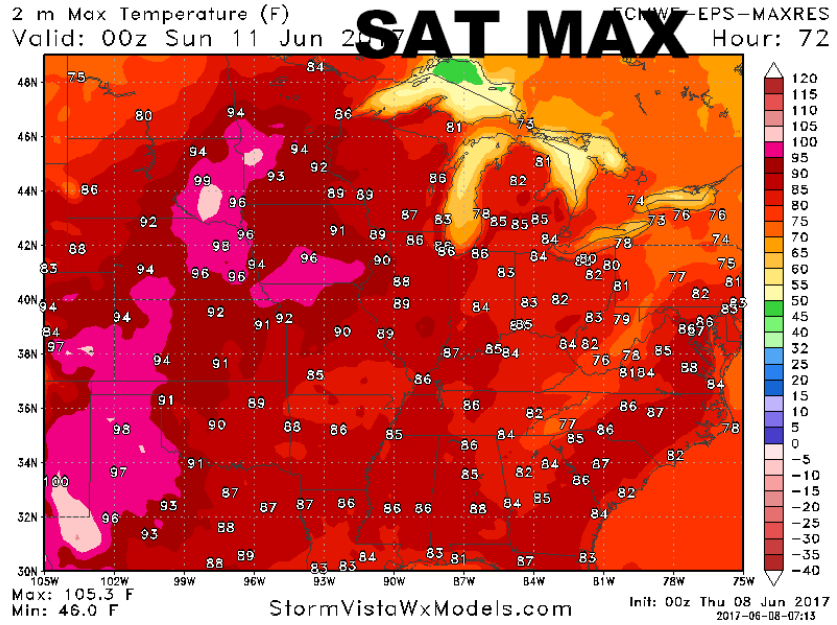


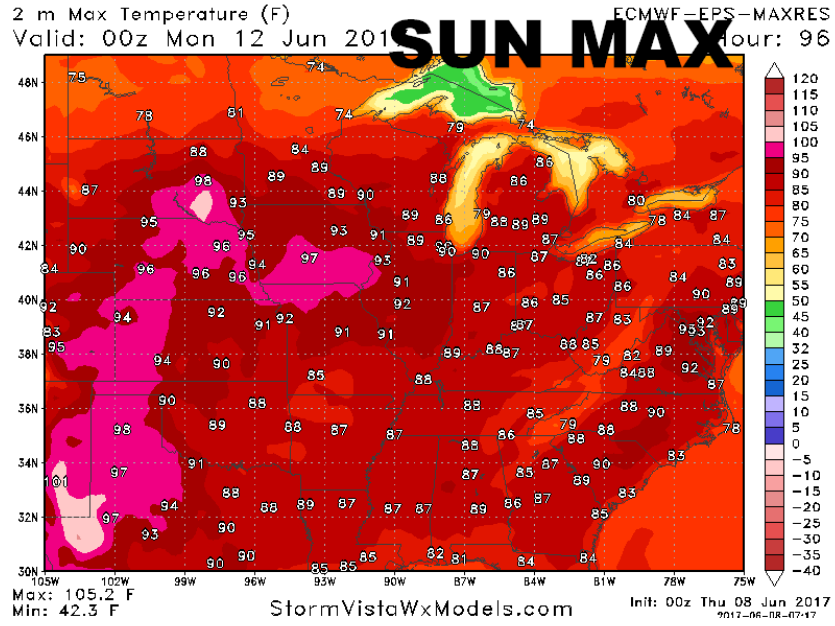



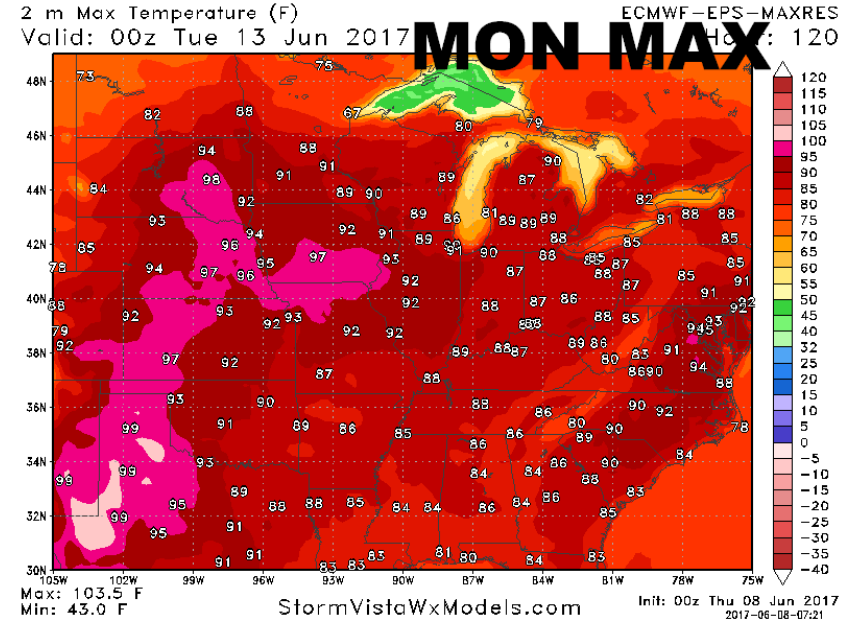




FRI MAX
2 m Max Temperature (F)
ECMWF-EPS-MAXRES
Valid: 00z Sat 10 Jun 2017
Hour: 48
Max: 102.0 F
Min: 38.3 F
StormVistaWxModels.com
Init: 00z Thu 08 Jun 2017
2017-06-08-07:09


SAT MAX
2 m Max Temperature (F)
ECMWF-EPS-MAXRES
Valid: 00z Sun 11 Jun 2017
Hour: 72
Max: 105.3 F
Min: 46.0 F
StormVistaWxModels.com
Init: 00z Thu 08 Jun 2017
2017-06-08-07:13

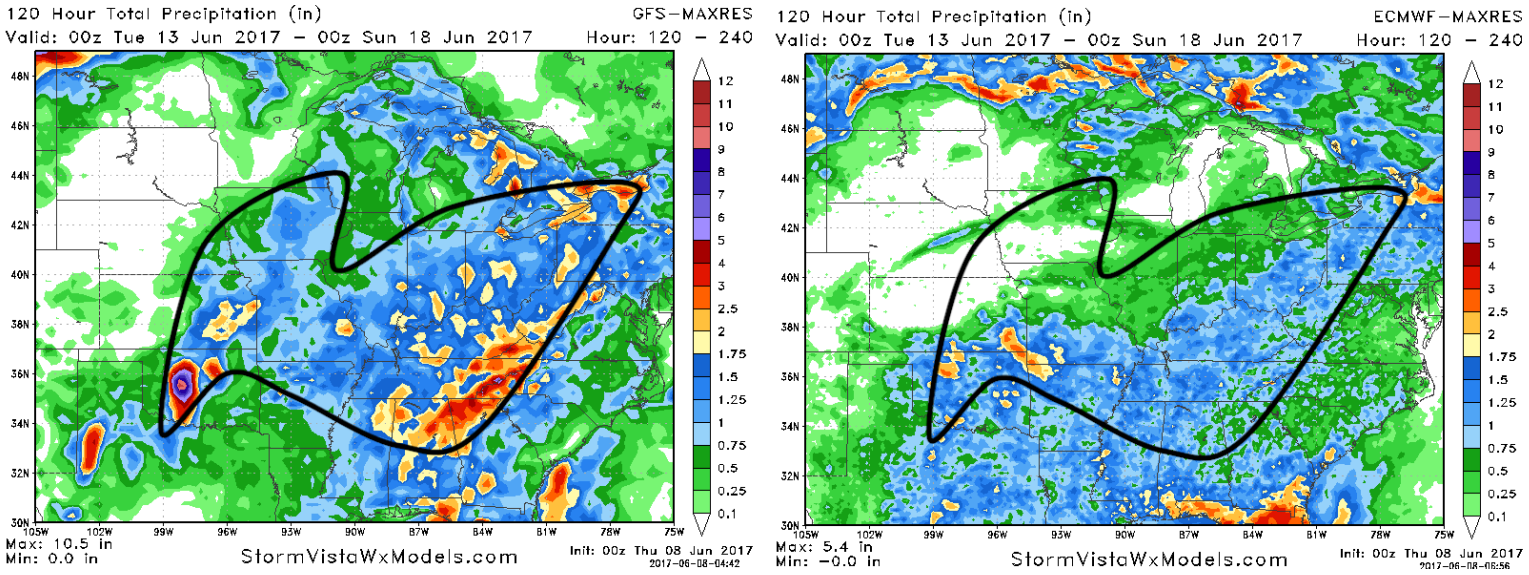

SUN MAX
2 m Max Temperature (F)
ECMWF-EPS-MAXRES
Valid: 00z Mon 12 Jun 2017
Hour: 96
Max: 105.2 F
Min: 42.3 F
StormVistaWxModels.com
Init: 00z Thu 08 Jun 2017
2017-06-08-07:17


MON MAX
2 m Max Temperature (F)
ECMWF-EPS-MAXRES
Valid: 00z Tue 13 Jun 2017
Hour: 120
Max: 103.5 F
Min: 43.0 F
StormVistaWxModels.com
Init: 00z Thu 08 Jun 2017
2017-06-08-07:21

# 6-10 DAY

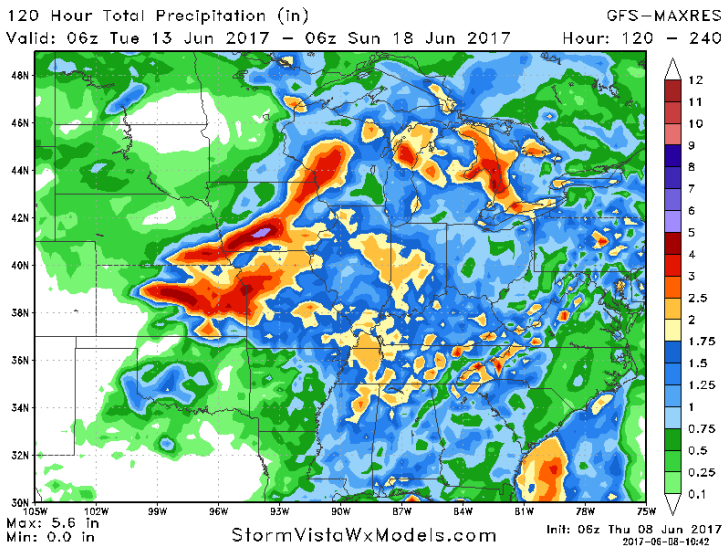
There are big difference in the weather models here. The European is substantially drier than the GFS. The GFS model has widespread 0.5-1.75" /12-45mm over 70% of KY OH IND ILL and 60% coverage with same amounts over MO IA & eastern KS. The European is VASTLY different showing large areas of dry conditions over most the Midwest with moderate rains over KY TN south MO ARK OK and the Gulf coast states. The European also has significant rains over north MN northern ND and over south central Canada.

## BIG DIFFERENCES HERE



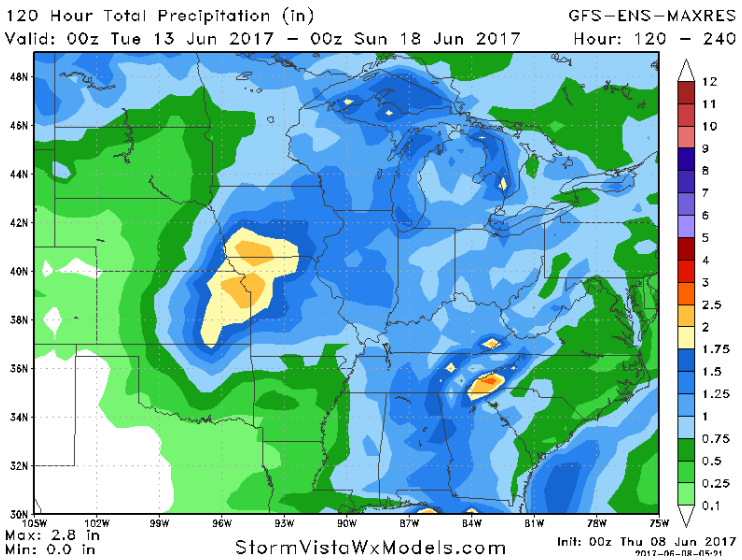

Even more shocking is the 6z operational GFS model which came out showing a much wetter pattern over the heart of the WCB and significant widespread rains over most of the ECB. We reject thos solution categorically. It has long been known that the intermediate model runs on the GFS such as the 6z and/ or 18z GFS model runs are often the most unreliable and showed the biggest tendency to flip flop and come up with dramatically different solutions from run to run

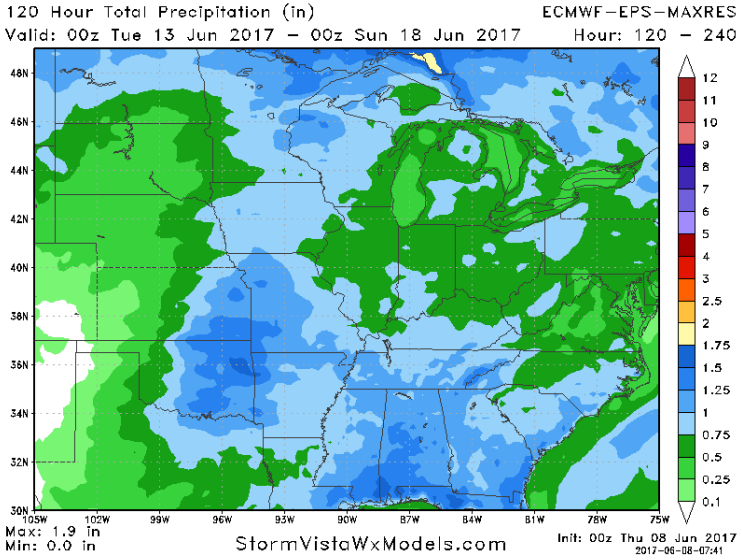
# 6z GFS much wetter




## 6-10 DAY ENSEMBLE

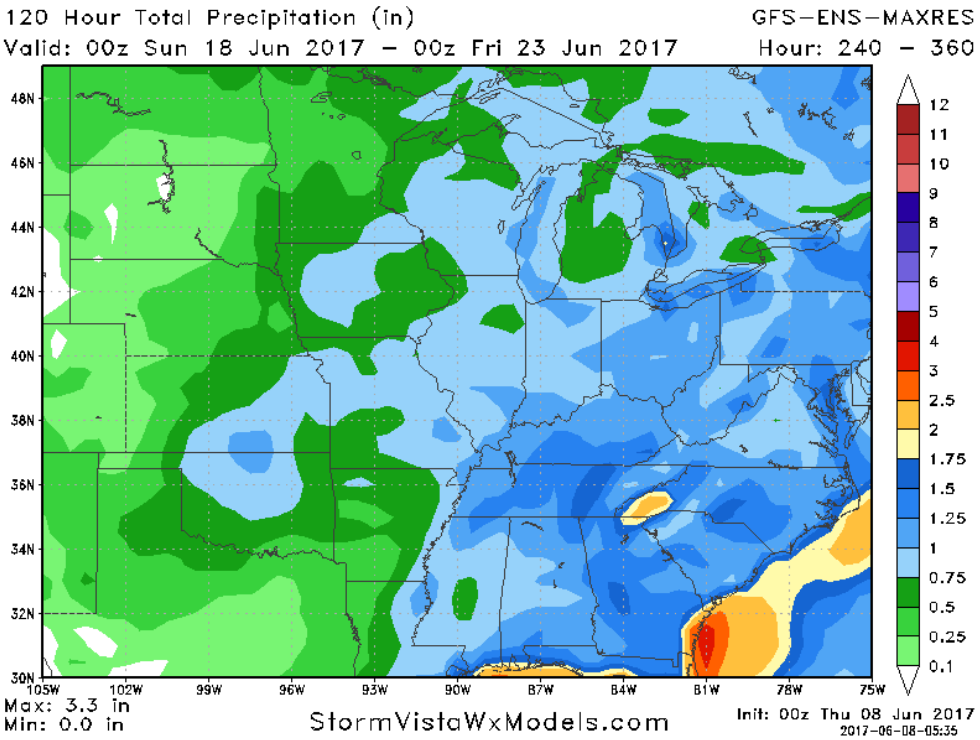
There are significant differences in the 6-10 day Ensembles as well with the GFS showing significant rains up to 2.5-3.0" 60-75mm over MO southern IA and eastern KS which the European does not have. In other words both models showed general agreement as to where the as rain is going to fall in the sixth attend - over the WCB and portions of the Deep South but they do not agree about the ECB rainfall amounts OR coverage and they do not agree as to how much rain is going to fall over the WCB

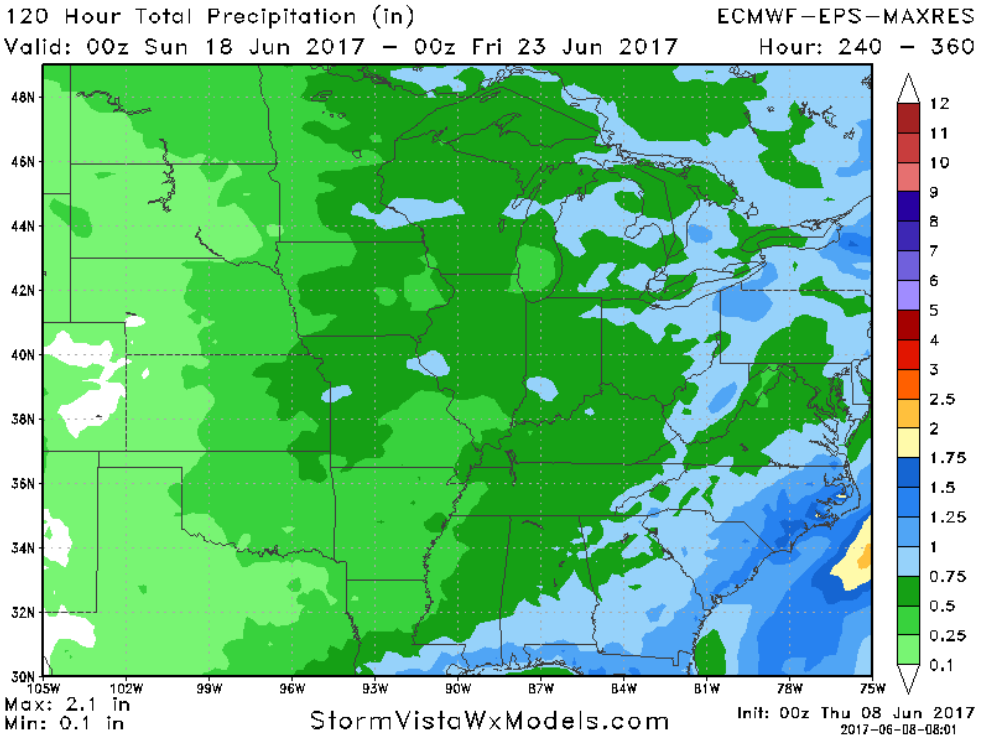



# 11-15 DAY

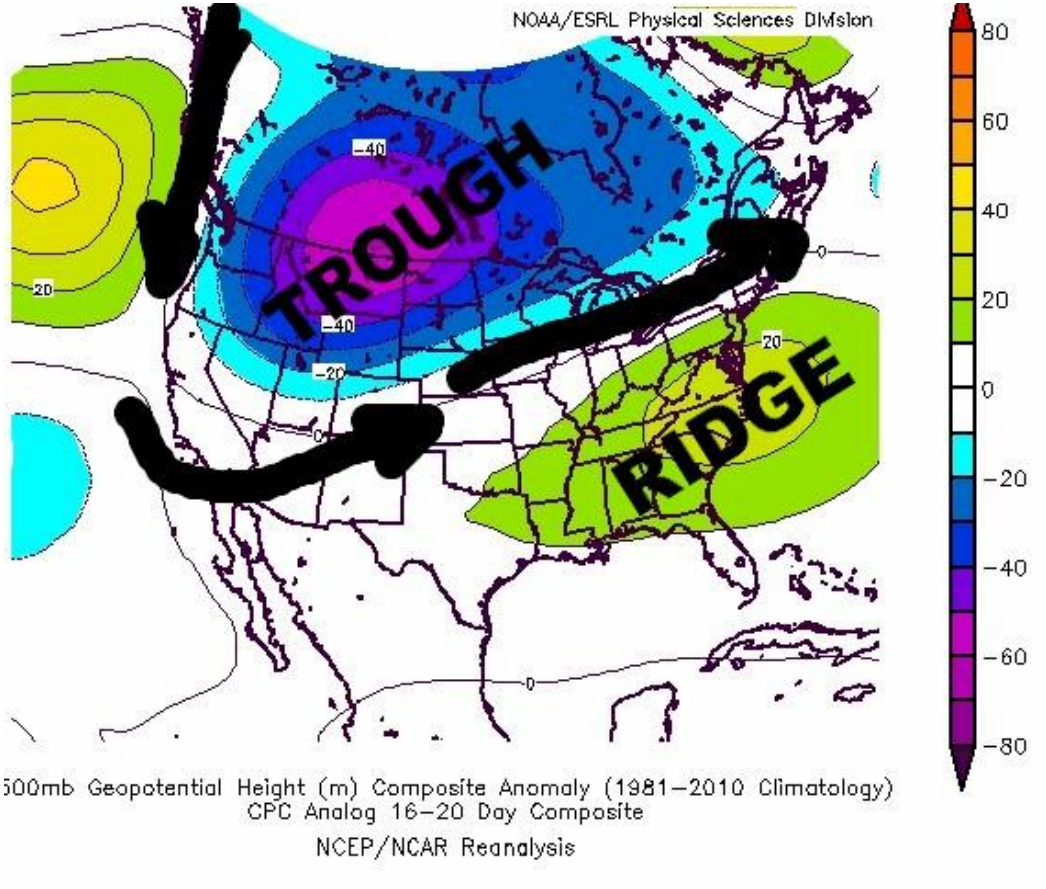
looks rather ordinary. All models show widespread 0.5-1.5"/12-38mm rains over most the Midwest which is rather ordinary rainfall for 5 day interval. The Dakotas and NEB remain quite dry




# 16-20 DAY

Here we use the ROLL OVER ANALOG pattern which takes the top 10 jet stream analog matches anticipated in the 11 to 15 day and rolls the pattern over .. according to the laws of physics and meteorology. Potential exists for another round of heat over a significant portion of the Midwest and Deep South and below normal temperatures over the northern Rockies and south central Canada and possibly into the Dakotas and Northern Minnesota. Th this storm track would be along or close to where we have superimposed the black arrows on this map. This situation could bring significant rain into the Dakotas and Minnesota but this is just a little more than informed speculation at this time

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