

MONDAY FULL US GRAIN WEATHER

5/8/17 OVERVIEW

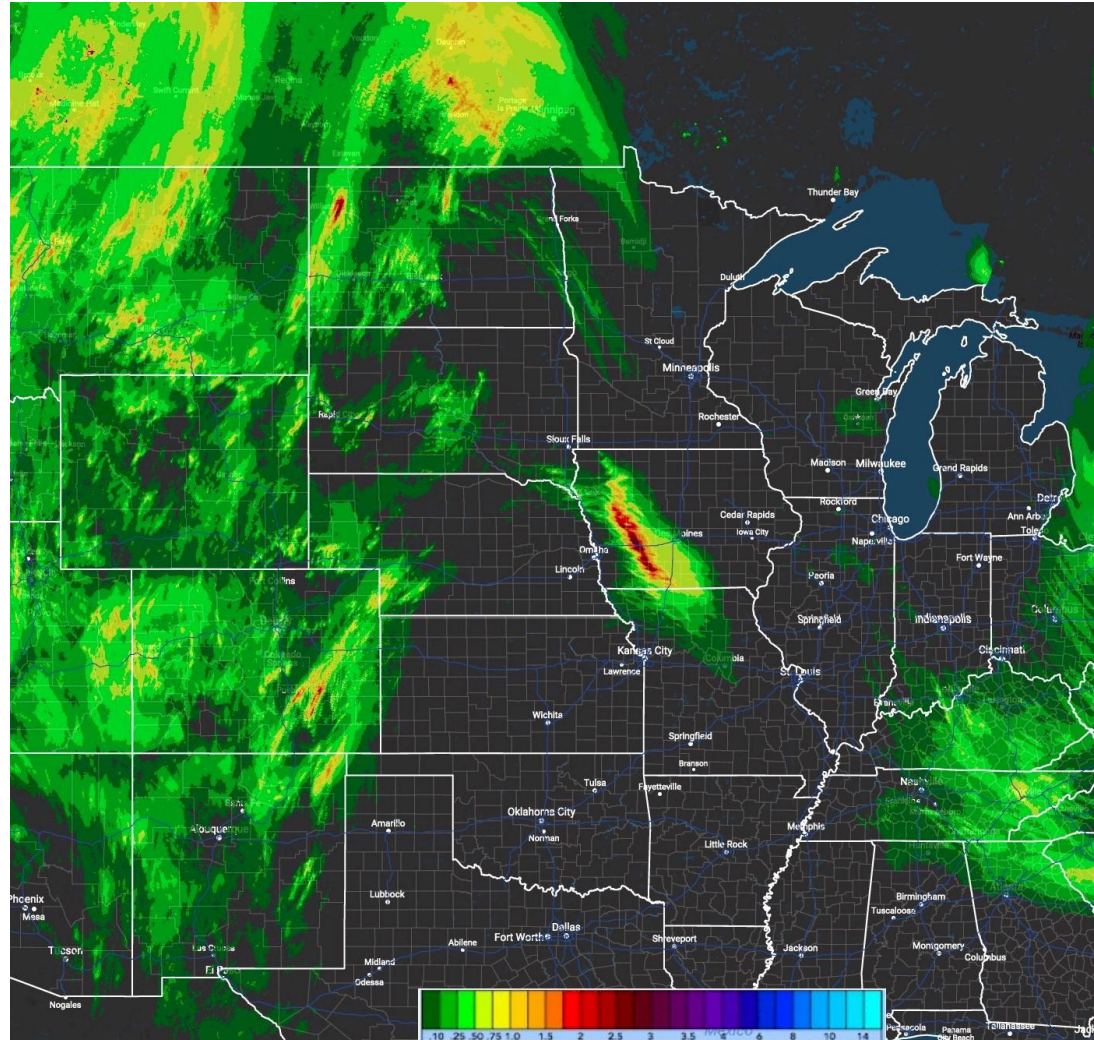
The pattern continues to warm slowly with temperatures are already back to normal across all of the Plains and a moving back to normal conditions of the WCB. The weather models are pretty much unchanged for Sunday and they are consistent from late last week with regard to how the next 5 days will develop. There are gaps and rain shield but generally speaking this looks like a pretty decent rain for most of the central Plains and the lower half of the Midwest. The weather models are not in great agreement in the 6-10 D as the European ...the Canadian ...and the GFS operational models all have some areas of rain over some portion of the Plains and Midwest. But many areas also completely dry. The upper air pattern would support a dry 6 to 10 day and we are inclined to go that way. The 6-10 day ensembles are also fairly dry.

In the 11 to 15 day the pattern turns quite wet again as a major trough over the West Coast at DAY 9-10 moves into the Rockies then into the Plains the Midwest. This time of year the movement of a deep trough into the Rockies and the Plains states and towards the Mississippi River always brings about a prolonged wet interval so we are strongly inclined to favor this sort of development.

Longer term the deep trough over the West coast remains a problem and looks like as we go into the first half of June 2017 the pattern remains fairly wet especially for the Plains and the WCB.

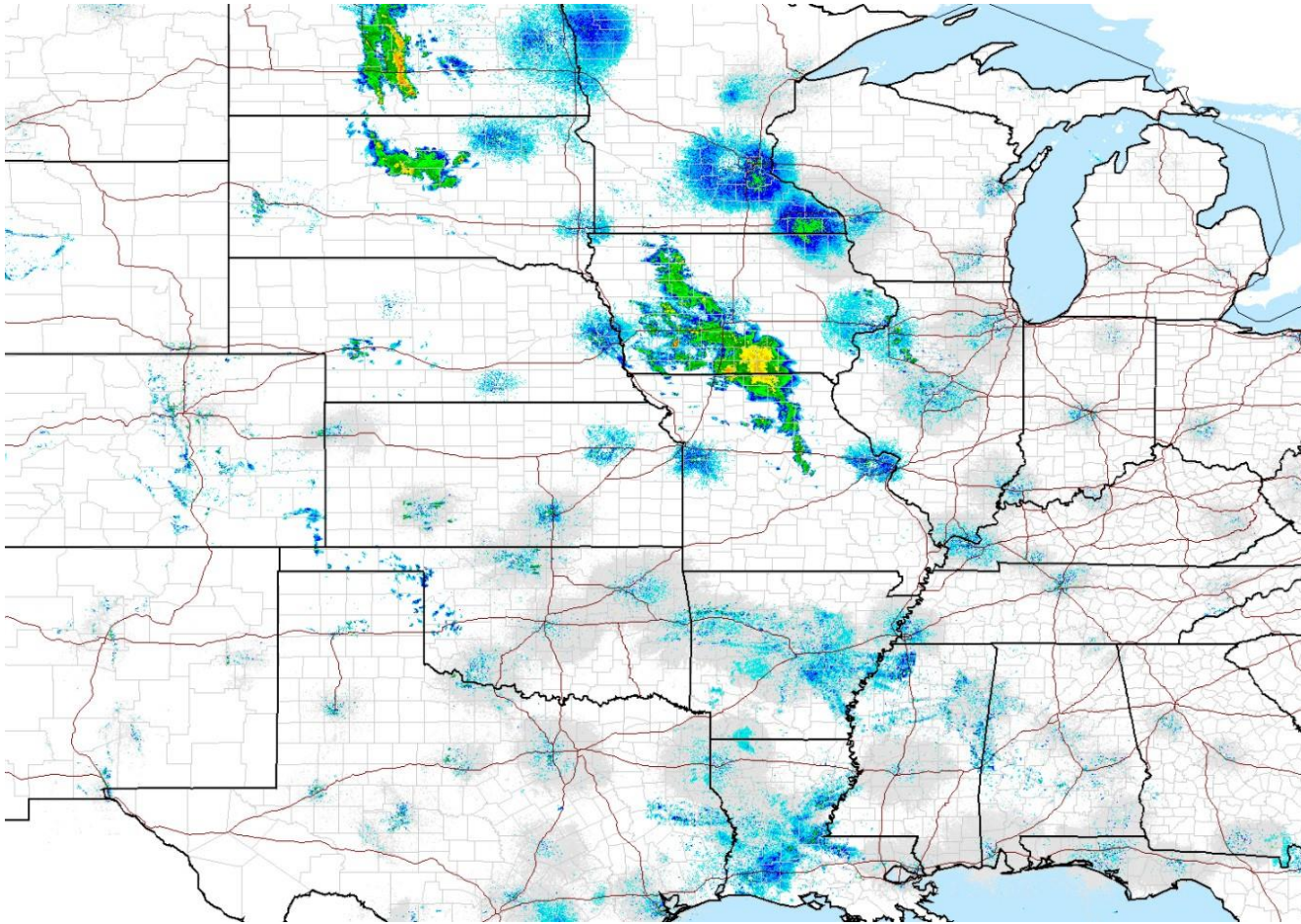
RAINFALL OVER THE LAST 484 HRS - 0700 CDT 6 MAY - 0700 CDT 8 MAY

0.50 to 4.0" /12-100mm over southwest IA ... but most of the Midwest has been dry over past 48 hours s has most of the Plains.
Note that south central Canada has seen Moderate rain of 0.50-1.5" 12-38mm in the last 48 hours.



FAST LOADING RADAR

MODERATE Rain over central Saskatchewan and heavy rain over southern Manitoba WEAKENING rains over central ND and central IA



TEMPS MAY 7-8

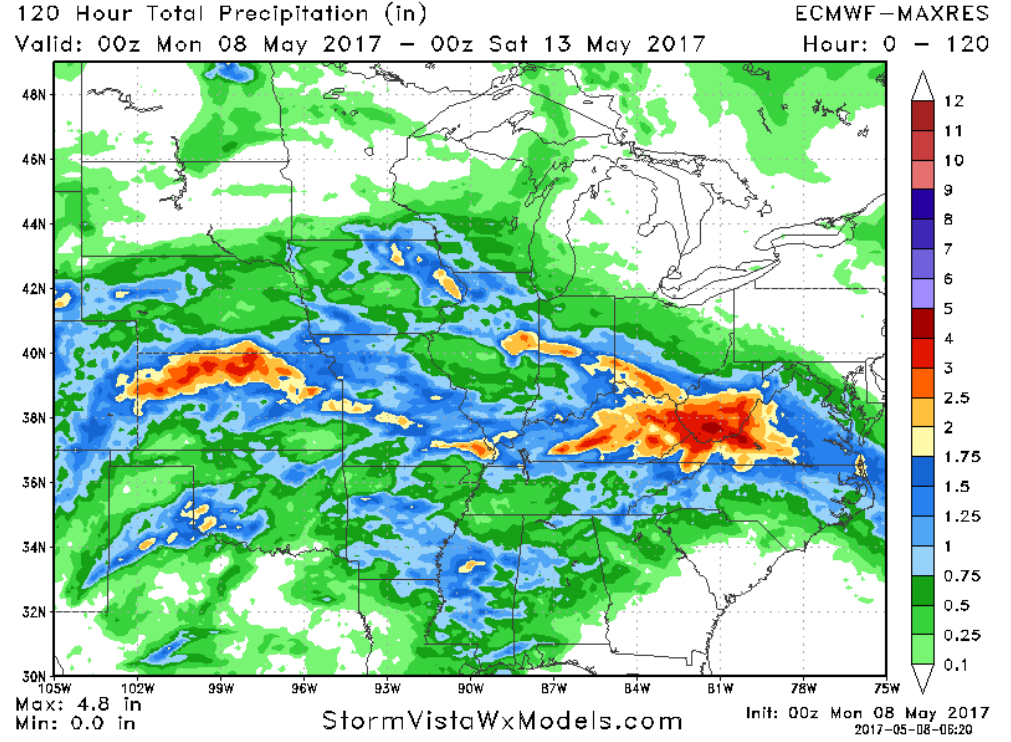
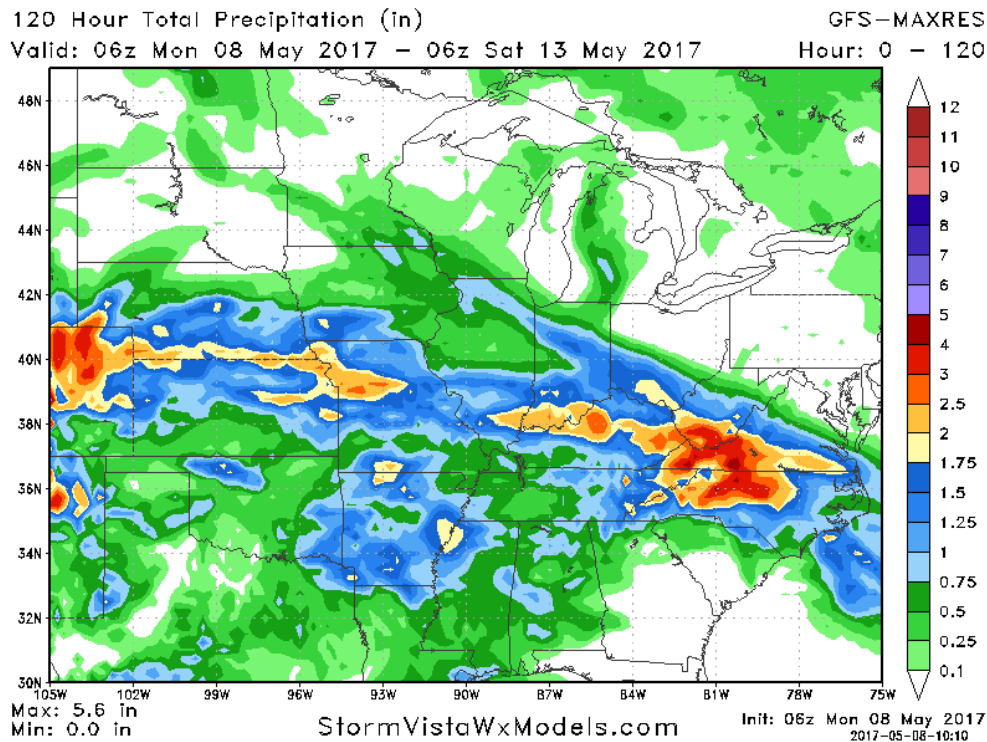
[MAX TEMPS MAY 7](#) - [NORMAL MAX TEMPS FOR EARLY MAY](#)

[MIN TEMPS MAY 8](#) [NORMAL MIN TEMPS FOR EARLY MAY](#)

MONDAY MORNING MIN TEMPS - Still Below Normal over the ECB with max temps in Upper 50s to Mid 60s and over MN... 70s over IA MO KY TN northeast ARK northern MS/AL/ GA ... 80s over all of Plains from ND to TX and into western ARK LA southern MS and AL. **SUNDAY MAX TEMPS** 20s over MI and northern WI ... Low to mid 30s southern WI IND OH ... 40s over KY TN ILL MN eastern IA.

NEXT 5 DAYS

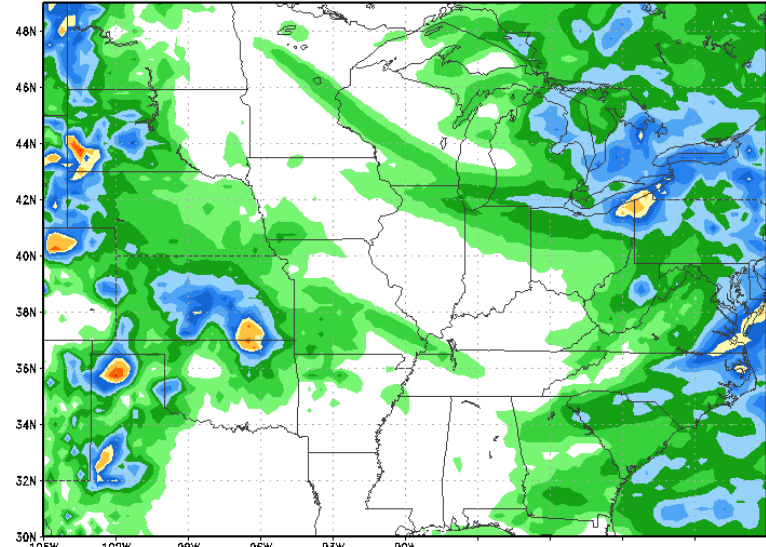
The weather models continue to show moderate to significant rain over large portions of the central Plains and the lower half of the Midwest over the next 5 days. The best rains continue to be along and just south of Interstate 70 affecting much of the southern half of Nebraskamost of Kansas ...most of Missouri ...Arkansas ...the southern half of Illinois ...all of Kentuckythe southern half of Indiana and Ohio and portions of Tennessee. There are gaps the rain shield however especially over portions of Illinois and Iowa. It is impossible at this point to know if these gaps in the rain shield are real or just model variations. The rainfall amounts range anywhere from 0.75 -3.0" 20-75mm and the coverage range anywhere from 60 to 75%. Notice that most of Minnesota ...Wisconsin... the Dakotas miss out on these rains completely.



6-10 DAY

The weather models are generally drier in the 6-10D but it is not all dry in all areas. The GFS model shows areas of showers and thunderstorms over portions of the central and western Plains but it keeps most of the Midwest fairly dry. The European model however is different. Even though it has much of the Midwest dry it has significant rains over Minnesota Wisconsin and the northern Great Lakes of 1-3" 25-75mm with 75% coverage and it has additional lighter rains over portions of Southeast Nebraska and Kansas Missouri Arkansas and Tennessee with 50% coverage of 0.5-2.5" /12-60mm . And the Canadian model has a third solution which does not match the GFS or the European!! The Canadian model shows significant rains over the southern half of Iowa ... northern and central Missouri ...much of Nebraska into northeastern Kansas of 1-3" 25-75mm.

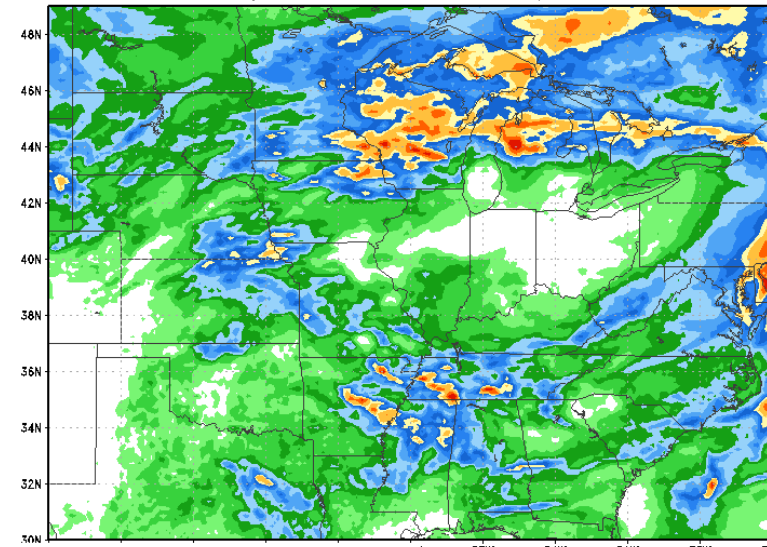
120 Hour Total Precipitation (in)
Valid: 06z Sat 13 May 2017 - 06z Thu 18 May 2017



Max: 3.1 in
Min: 0.0 in

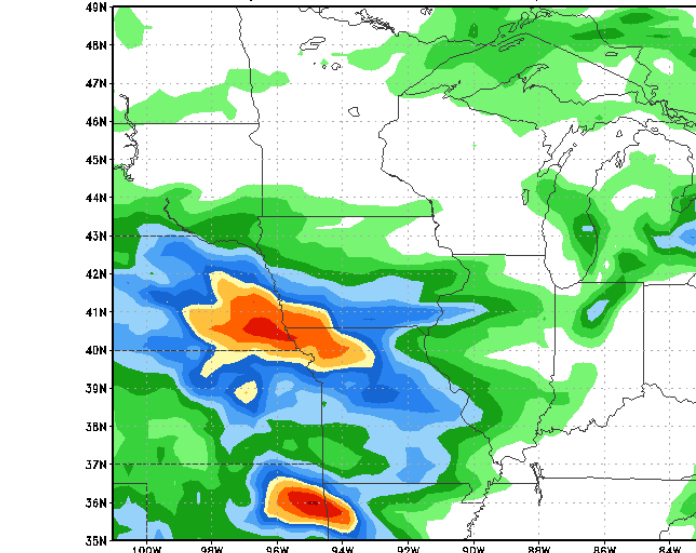
GFS-MAXRES
Hour: 120 - 240

120 Hour Total Precipitation (in)
Valid: 00z Sat 13 May 2017 - 00z Thu 18 May 2017



ECMWF-MAXRES
Hour: 120 - 240

StormVista 5 Day Total Precipitation (in)
Valid: 00z Sat 13 May 2017 - 00z Thu 18 May 2017



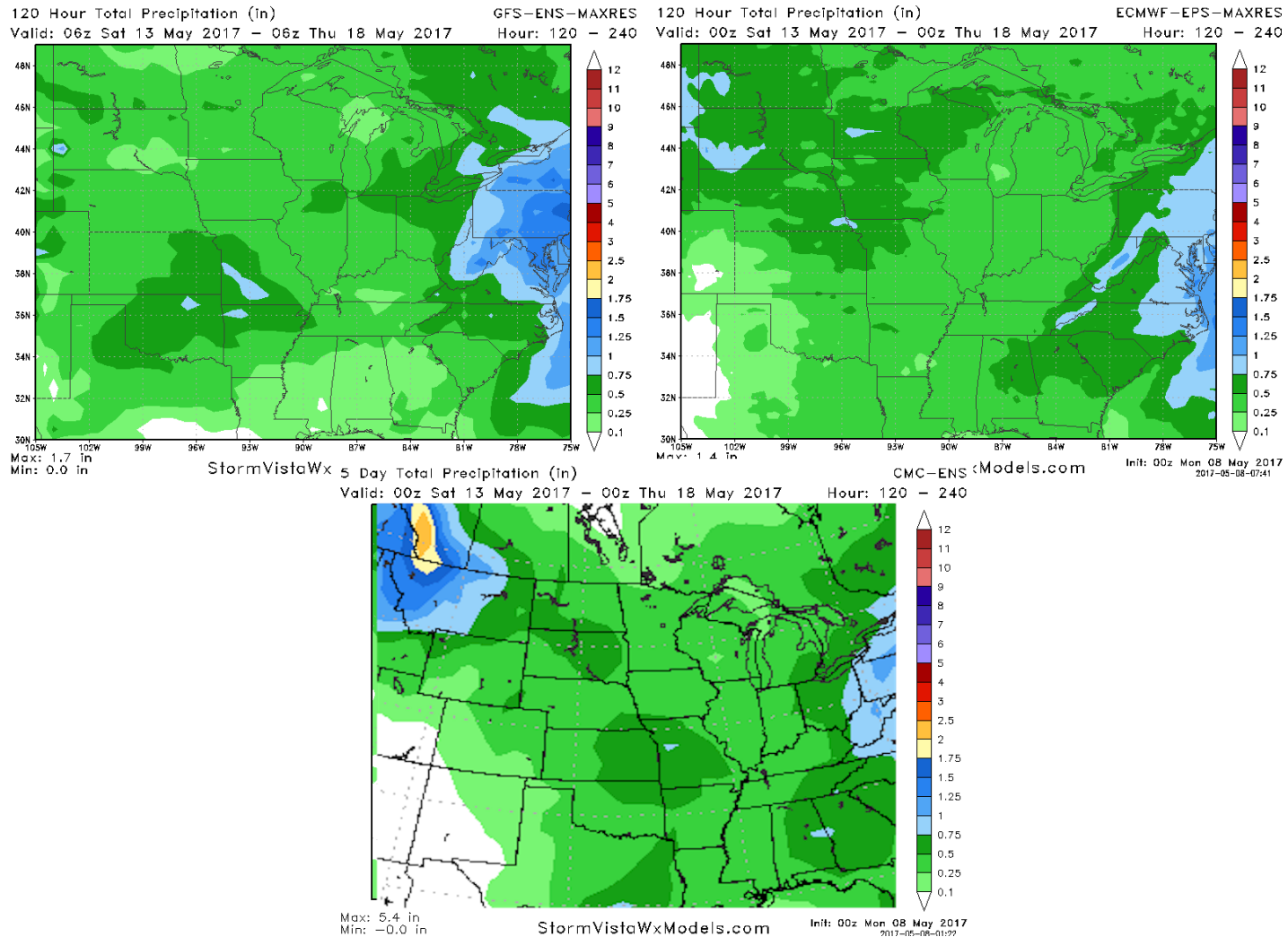
Max: 4.1 in
Min: -0.0 in

StormVistaWxModels.com

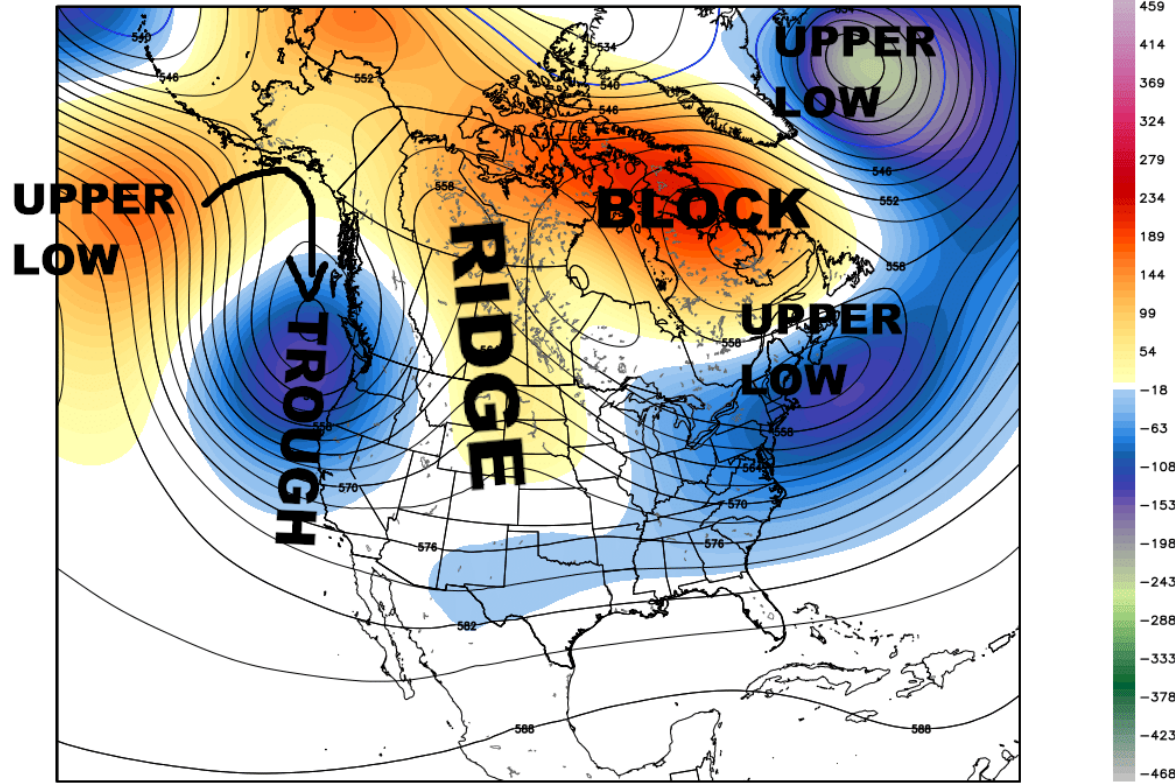
CMC WxModels.com
Hour: 120 - 240

Init: 00z Mon 08 May 2017
2017-05-08-06:55

In this case the model ensembles really does not help was much because the GFS model continues to show a decent moderate rain over portions of Missouri ...eastern Kansas ...Oklahoma and northern Arkansas while the European model has the best rains over the WCB into the Dakotas and southern Minnesota. Interestingly probably the most consistent with the models is the Canadian ensemble which seems to match its operational run with a concentration of rain over eastern Kansas and Missouri as well as far southwest Iowa.



ECMWF EPS Ensemble Mean 500 hPa Geopotential Height [dm] & Anomaly [m] fx: [180] hr --> Mon 12Z15MAY2017
INIT: 00Z08MAY2017 5-day Mean between 12Z10MAY2017 & 12Z15MAY2017 Day 2.5 -MDay 7.5 -237.1 | 220.2 m

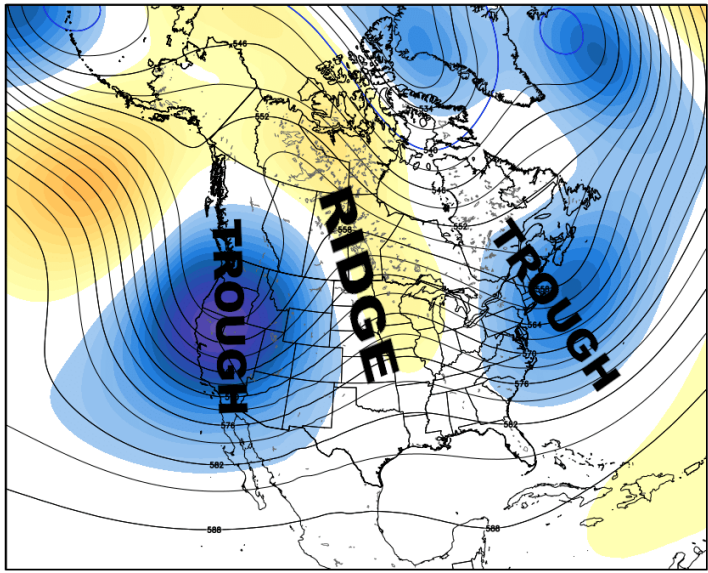


This image shows 500 Mb pattern on May 15. We can see a strong trough with the upper Low centered over the West Coast and another one over New England. In between there is a strong RIDGE centered over the plains and Rockies. This sort of feature would tend to suppress any sort of significant rain. Because of this overall pattern we favor the weather models which have less rain over the Midwest and the Plains in the 6-10day.

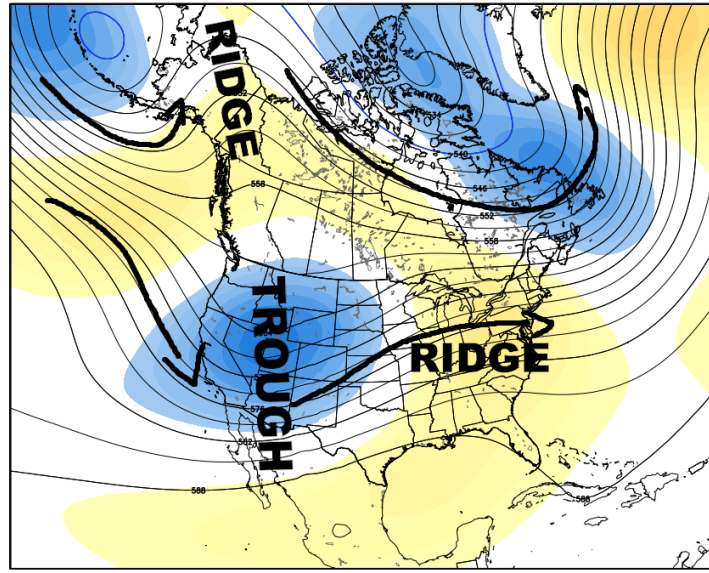
11-15 DAY

The models continue show significant rains in the 11 to 15 day because of significant changes in the patterns which develop starting late on DAY 9 / 10 on the West Coast. These images show the changes in the upper level patterns. That deep trough over the West Coast May 15 moves inland slowly and as it does so it interact with a ridge over the Deep South. This sets up a pretty wet looking pattern and the models are reflecting this.

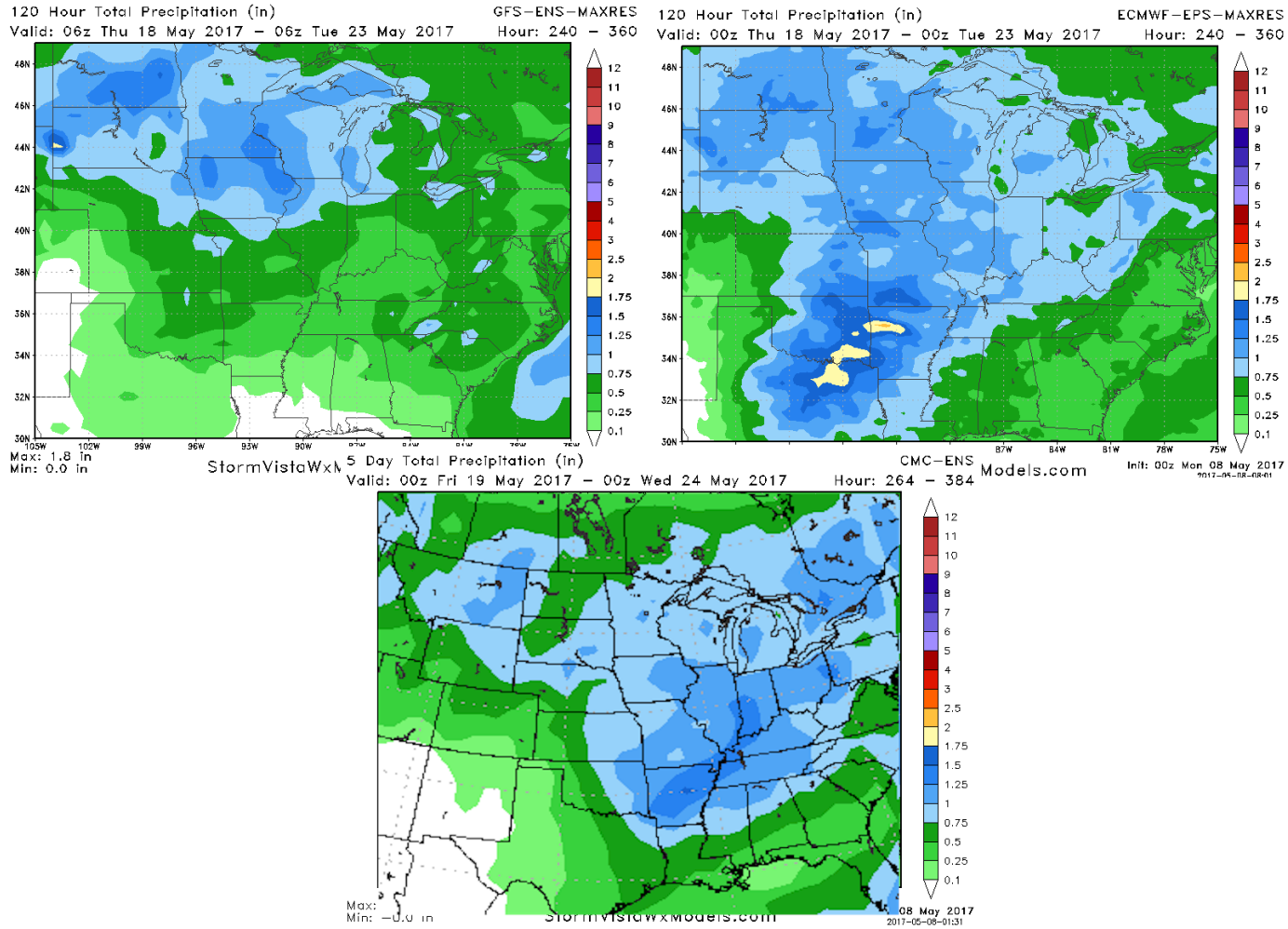
ECMWF EPS Ensemble Mean 500 hPa Geopotential Height [dm] & Anomaly [m] fx: [264] hr --> Fri 00Z19MAY2017
INIT: 00Z08MAY2017 5-day Mean between 00Z14MAY2017 & 00Z19MAY2017 Day 6 - Day | Tbx: -144.6 | 132.5 m



ECMWF EPS Ensemble Mean 500 hPa Geopotential Height [dm] & Anomaly [m] fx: [348] hr --> Mon 12Z22MAY2017
INIT: 00Z08MAY2017 5-day Mean between 12Z17MAY2017 & 12Z22MAY2017 Day 9.5 - Day | Tbx: -144.5-78.0 | 89.3 m



The GFS ensemble wants to shift the rain more to the WCB and the Dakotas and upper Plains and western Great Lakes. The European ensemble shows a much more widespread significant rain event affecting portions of the lower Plains ... the Delta as well as all of the Midwest and upper Plains. This solution is also supported by the Canadian ensembles which are also quite wet.

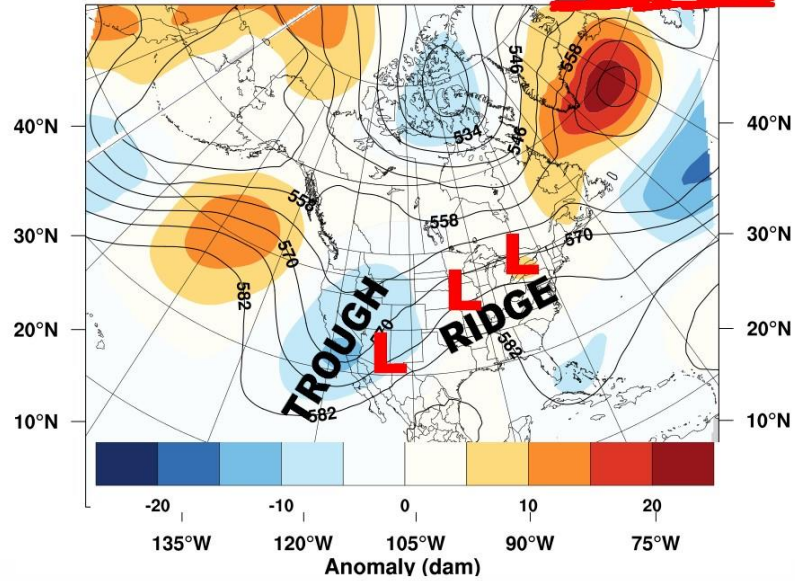


WEEK 4-5

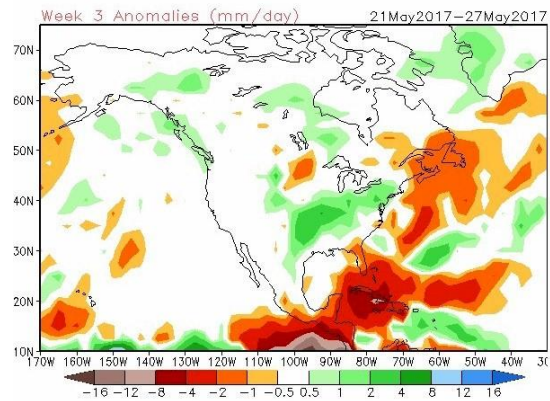
LONGER TERM ... the weekly CFS models continue to show a pretty wet pattern for late MAY into early JUNE. This image shows the upper air pattern for WEEK 4 which takes us to May 26. The overall pattern does not change much because of the deep trough over the West Coast and the flat ridge over the Deep South. This continues to bring waves of Low pressure coming out of the West Coast into the Plains and the Midwest and as result we continues see a pretty wet looking pattern for WEEK 4.

Mean/Anom Geopotential Height [500 mb] (dam)

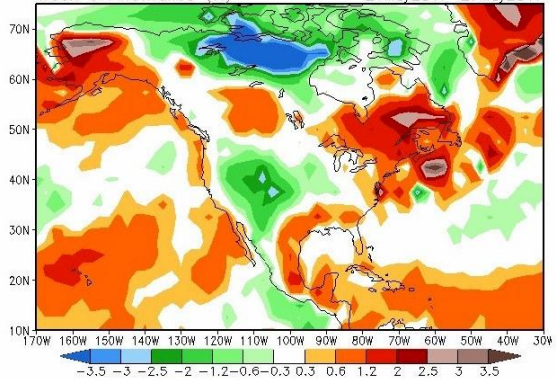
CFSv2 Initialization: 2017-05-06, Forecast Period: 2017-05-20 -> 2017-05-26



CFSv2 Weeks 3 & 4 Precipitation
16 Member Ensemble Mean Forecast from 06May2017



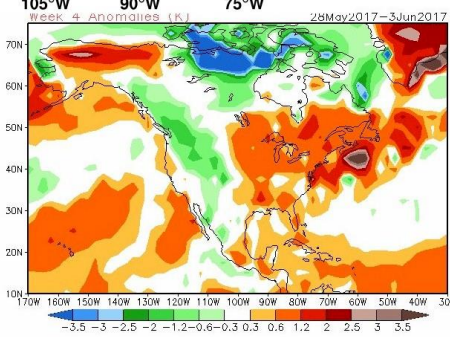
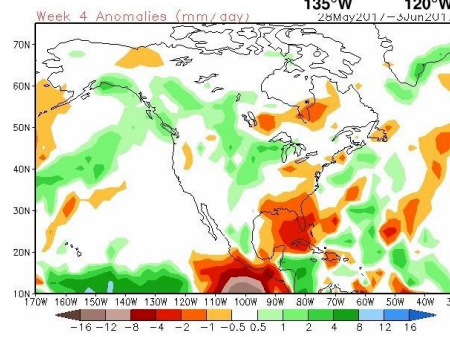
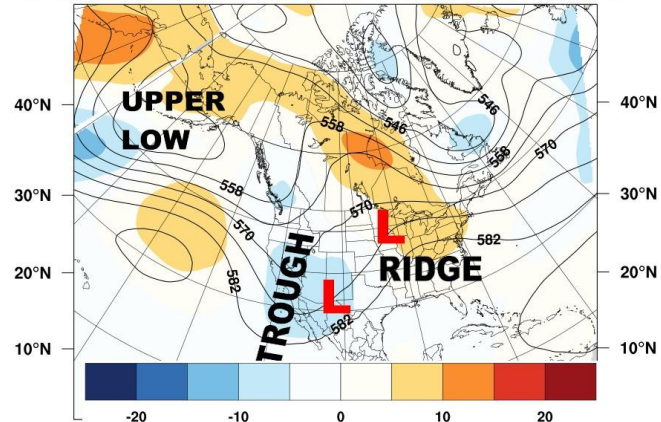
CFSv2 Extended Range Temperature
16 Member Ensemble Mean Forecast from 06May2017
Week 3 Anomalies (K) 21May2017-27May2017



In WEEK 5 not much has changed. The ridge over the Deep South the strength and so the rains may shift more into the Plains the WCB as opposed to the entire Midwest but the overall pattern remains rather wet.

Mean/Anom Geopotential Height [500 mb] (dam)

CFSv2 Initialization: 2017-05-06, Forecast Period: 2017-05-27 -> 2017-06-02



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