

USA GRAIN WEATHER 3/27/15

The active and somewhat wet pattern will continue for another 7 to 10 days then it looks like it will shut off for while. There is strong model agreement about the significant rains coming over the next 5 e days for large portions of the dry areas of Kansas and eastern Colorado as well as more significant rain coming in for Missouri Oklahoma Arkansas and southwestern Illinois. The rains begin to shift southward in the 6 to 10 day because of the change in the jet stream pattern over Western Canada with most the rains falling south of Interstate 70. The morning GFS models here very inconsistent -- as these models have their significant rains falling over for Texas and Oklahoma panhandles into southeastern Kansas -- leaving western Kansas dry. This solution is not even supported by the GFS own ensembles ...so we are ignoring the GFS in the 6-10 day and going with the European model.

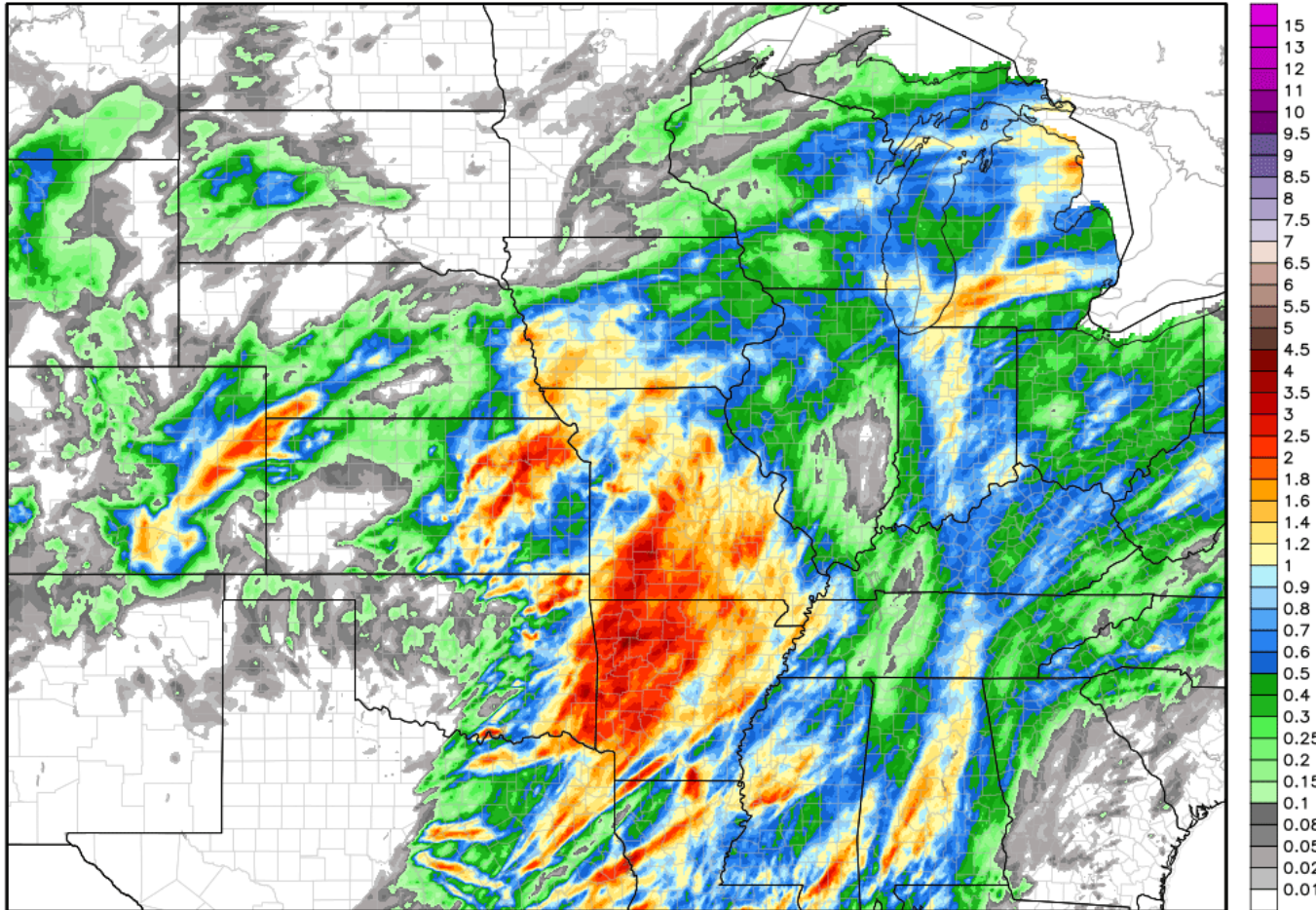
The pattern clearly turns drier in the 11 to 15 day but the issue is whether not the wet pattern is going to return as we move into the heart of April and clearly the data seems to suggest that.

RAINFALL LAST 3DAYS

This image shows the total rainfall from Friday into Monday morning... covering the entire weekend. As you can see large portions of ARK/ MO / northeast TX / eastern third of KS/ southern half of IA saw anywhere from 1-3"/ 25-75mm with 70 to 80% coverage.. Additional somewhat lighter rains of 0.5- 1.5"/ 12-38mm with 60% coverage can be found over AL TN KY OH IND MI and over central and eastern NEB/ eastern COL. Notice that most of western and southern KS the entire western half of OK and TX were completely rain free.

NWS Precipitation Analysis 4-km HRAP Grid -- 3-day Total Accumulation
Total Precipitation [inches] between 12Z24MAR2017 -- 12Z27MAR2017

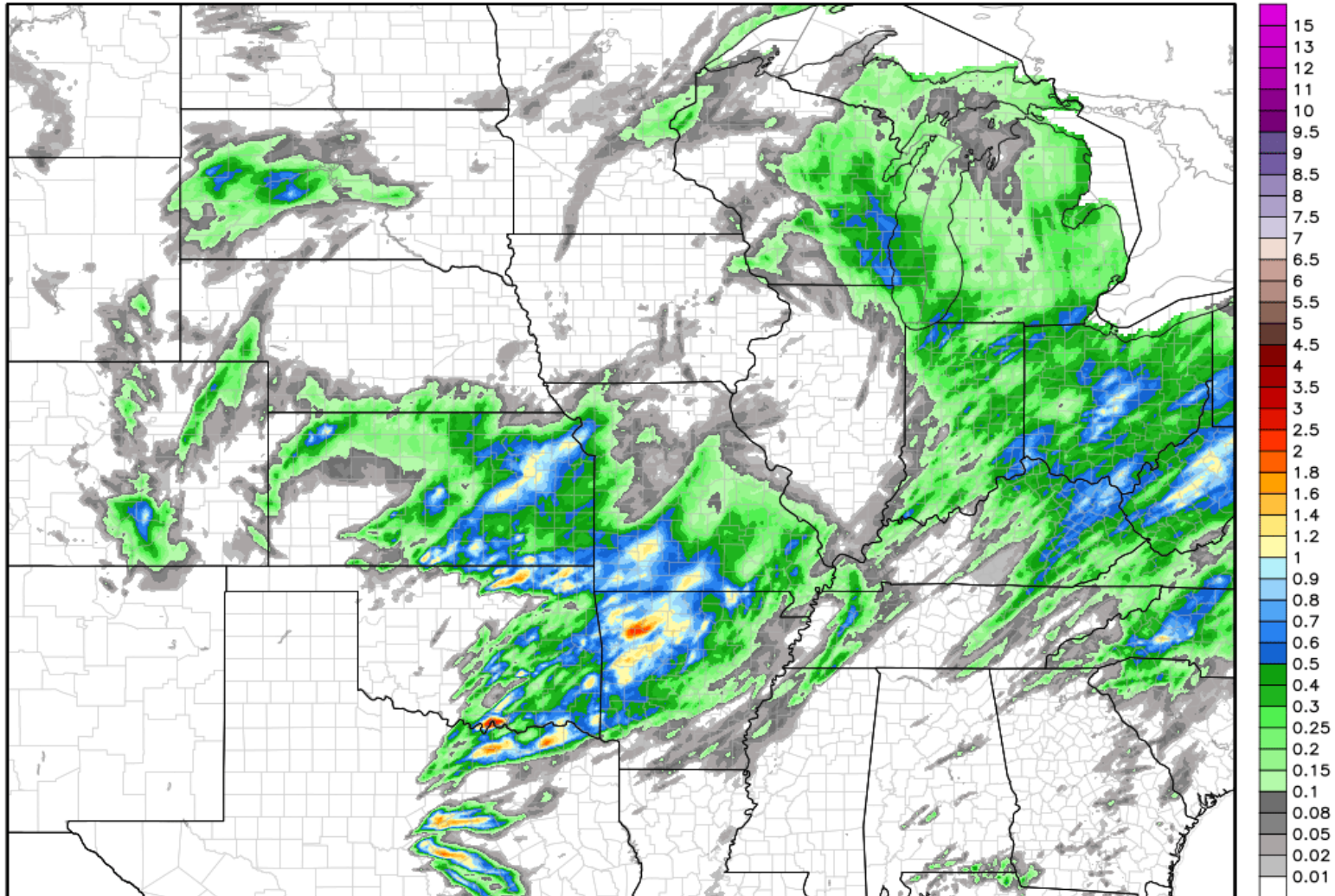
Domain Max: 4.3 in.



This next image shows the total rainfall and last 24 hours.. ending as of 0700 CDT. Rains of 0.25 -1.0"/ 6-25mm with 60% coverage fell in last 24 hours over eastern KS / northwest half of ARK and the southern half of MO. Rainfall amounts of 0.25-0.75"/ 6-20mm with 75%+ coverage fell over IND / OH/ MI and the northeast third of KY. There was a moderate area of rain over western portions of SD of 0.25-0.75"/-20mm.

NWS Precipitation Analysis 4-km HRAP Grid -- 1-day Total Accumulation
Total Precipitation [inches] between 12Z26MAR2017 -- 12Z27MAR2017

Domain Max: 2.7 in.



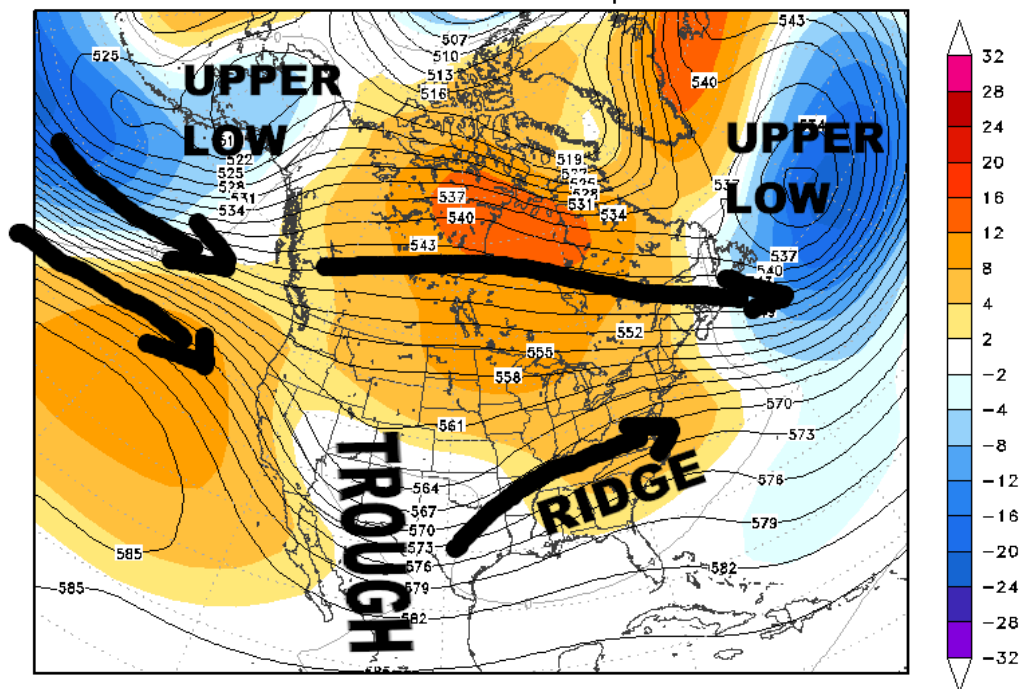
4 km HRAP grid | End of hydrological day at 1200 UTC | <http://water.weather.gov/precip>

RADAR <http://radar.weather.gov/Conus/full.php>

The mid morning radar shows moderate to heavy rains and embedded thunderstorms over 70% of MO and the southwest third of ILL. There are additional rains and some snow in New England and ME and moderate rain snow over portions of NV and UT.

NEXT 5 DAYS

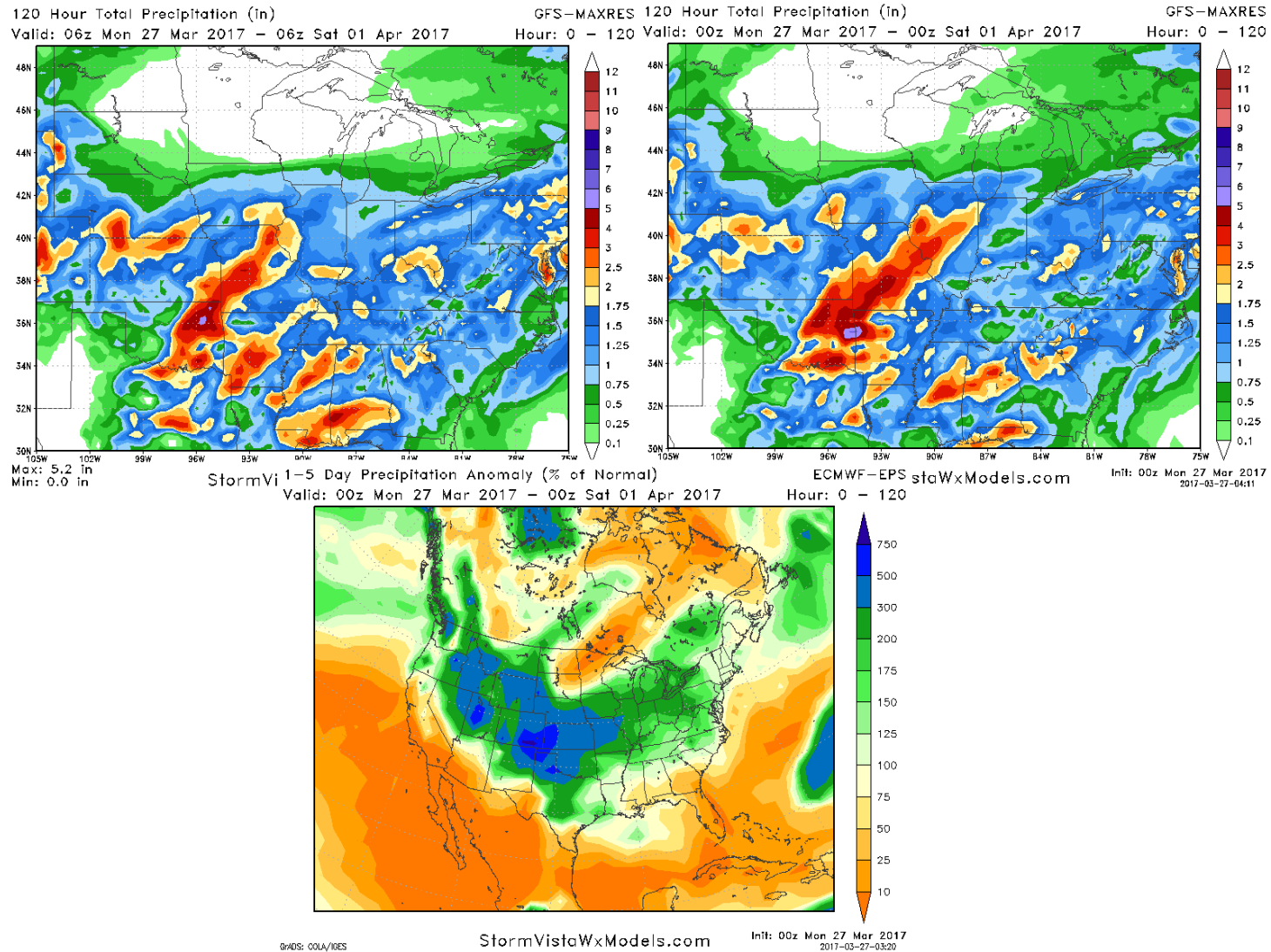
1-5 Day 500 mb Height Anomaly (dm) ECMWF-EPS
Valid: 00z Mon 27 Mar 2017 - 00z Sat 01 Apr 2017 Hour: 0 - 120



The active weather pattern will continue for the next 5 days. The pattern remains dominated strongly by the e Pacific jet which is being enhanced as it moves into the eastern Pacific. The position of the large UPPER LOW over Alaska and a strong RIDGE to the northeast of Hawaii is forcing the Pacific jet to constricted as it comes eastward passing between both of these features. As a result ...the Pacific jet is very strong or enhanced when it reaches the West coast of North America. This results in a persistent trough over California and the southwestern states with areas of LOW pressure coming out of this trough bringing moderate to heavy rains to various portions of the Plains and Midwest

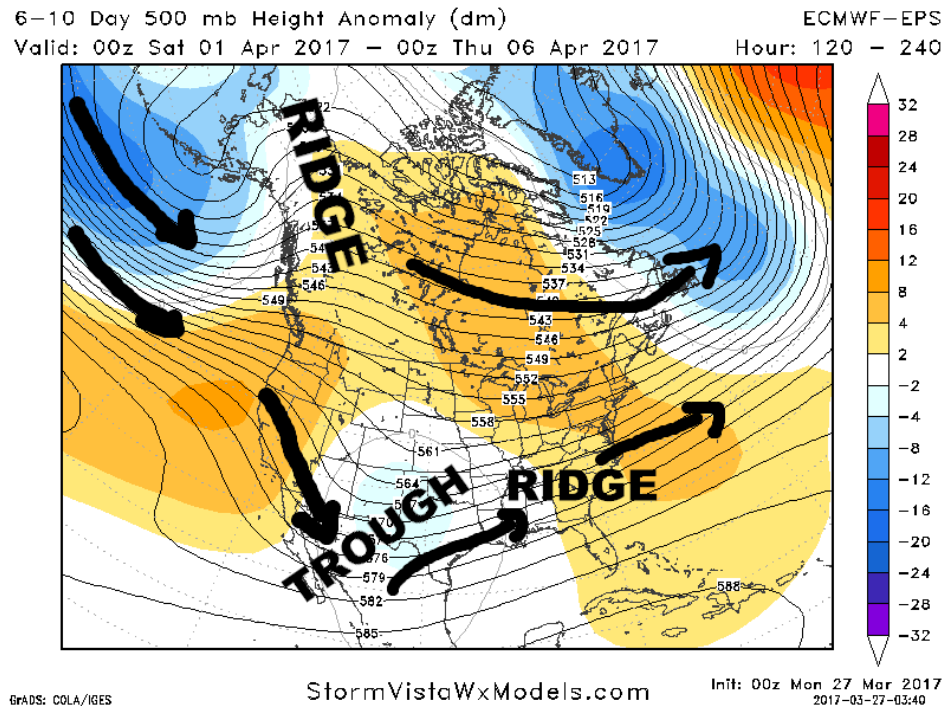
The weather models are in pretty good agreement over the next 5 days with regard to rainfall amounts and coverage. As you can see the GFS and the Europeans seem to have a concentrated area of 2-5"/50-125mm rains centered over central and northeastern OK/ far southeastern KS/ western & central MO ...

perhaps reaching into western portions of ILL. There are some secondary area of 1-3" /25-75mm rain over MS & AL. In addition KS sees significant rains of 0.75 -2.0"/ 20-509mm with 60 to 70% coverage. Notice that 1) western TX / Texas panhandle does not see significant rain in this pattern and 2) that most the rain does not reach for north of interstate 80. The rainfall coverage in the ECB is also pretty good with amounts range from 0.75 -1.5" / 20-75mm and coverage of 60% and the rainfall anomalies are also quite impressive with 300% rainfall anomalies over the next 5 days across eastern COL / western KS and 150 to 300% rainfall anomalies covering the rest of the central Plains into central TX ... across MO and most of the Midwest.



6-10 DAY

The overall pattern does not really change in the 6-10 day. The Pacific jet stream remains quite strong but we are beginning to see a bit of a Ridge develop over Western Canada. **Even though the mean trough position is still over the SW states and Texas ... the Ridge over western Canada will shift the rains south and east... with most of the rain in the 6-10DAY staying south of Interstate 70.**

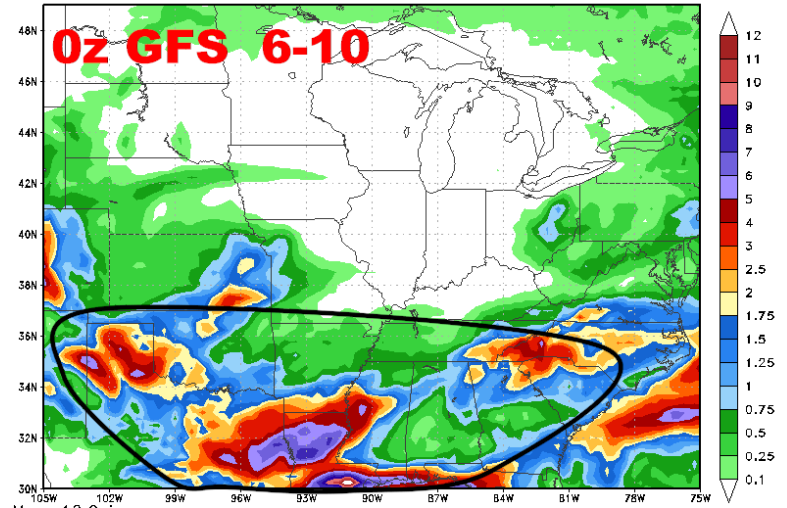


The operational GFS models at 0z and 6z clearly have most of the rain south of I- 70 but there are also have significant gaps in the rainfall coverage. Both of these models also have significant rains into the TX and OK Panhandles. Notice that both models have significant rainfall gaps in the coverage across MO and western KS and over significant portion of the Southeastern states. On the other hand both models have significant rains up to 4 to 10" 100-250mm over southern ARK Northeast TX and much of LA and western MS.

The 0z and 6z GFS ensemble are much more uniform and make better sense. Notice of both models have significant or heaviest rains

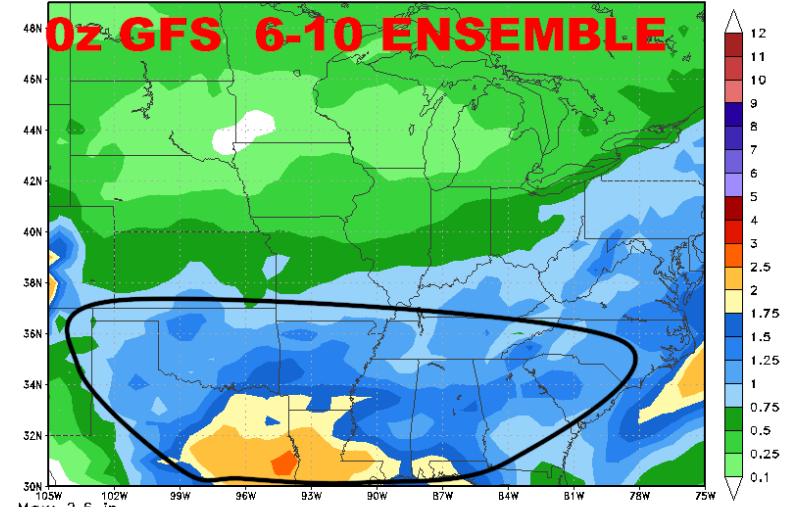
over central and Eastern Texas Louisiana Mississippi and Southern Arkansas and they also do not have large gaps the rainfall coverage over Missouri northwestern Kansas and over the southeastern states.

120 Hour Total Precipitation (in) GFS-MAXRES
Valid: 00z Sat 01 Apr 2017 - 00z Thu 06 Apr 2017 Hour: 120 - 240



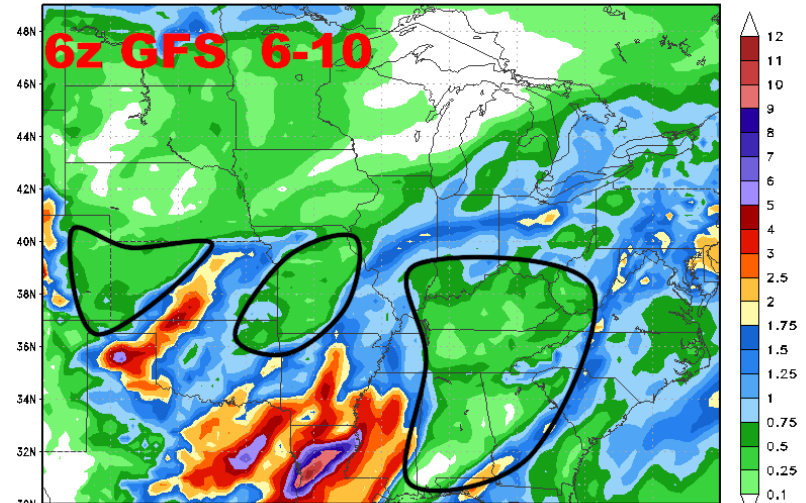
Max: 12.9 in Min: 0.0 in StormVistaWxModels.com Init: 00z Mon 27 Mar 2017 2017-03-27-04:40

120 Hour Total Precipitation (in) GFS-ENS-MAXRES
Valid: 00z Sat 01 Apr 2017 - 00z Thu 06 Apr 2017 Hour: 120 - 240

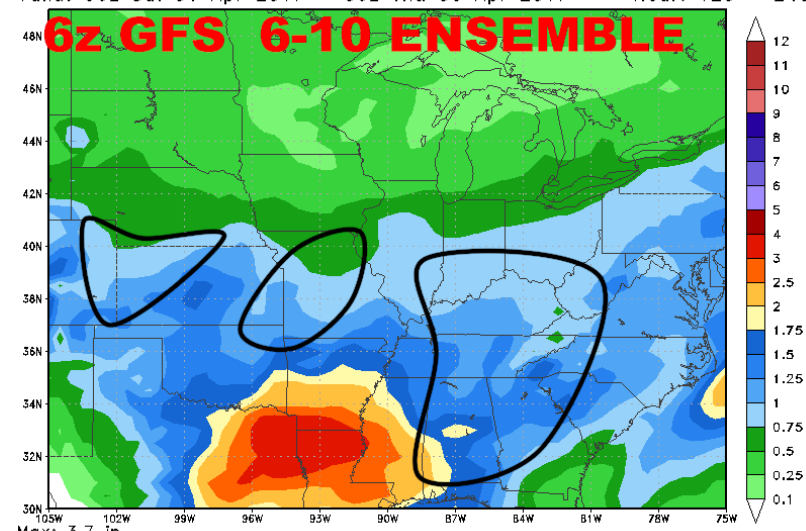


Max: 2.6 in Min: 0.0 in StormVistaWxModels.com Init: 00z Mon 27 Mar 2017 2017-03-27-05:20

120 Hour Total Precipitation (in) GFS-MAXRES
Valid: 06z Sat 01 Apr 2017 - 06z Thu 06 Apr 2017 Hour: 120 - 240

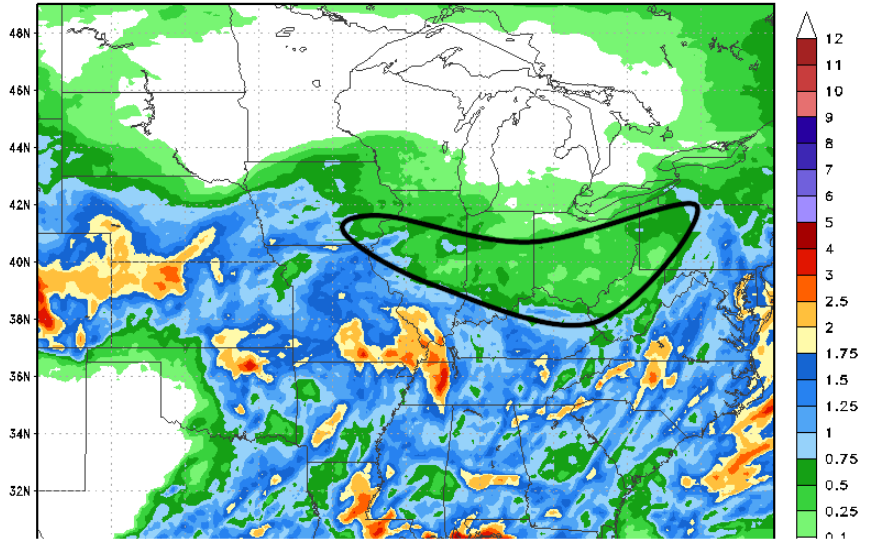


120 Hour Total Precipitation (in) GFS-ENS-MAXRES
Valid: 06z Sat 01 Apr 2017 - 06z Thu 06 Apr 2017 Hour: 120 - 240

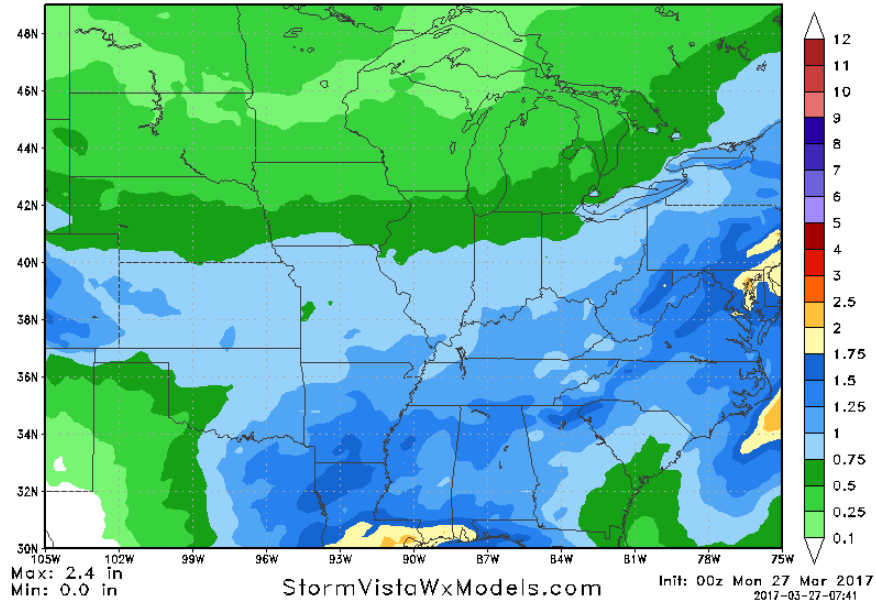


Max: 3.7 in Min: 0.0 in StormVistaWxModels.com Init: 06z Mon 27 Mar 2017 2017-03-27-11:20

120 Hour Total Precipitation (in) ECMWF-MAXRES
 Valid: 00z Sat 01 Apr 2017 - 00z Thu 06 Apr 2017 Hour: 120 - 240



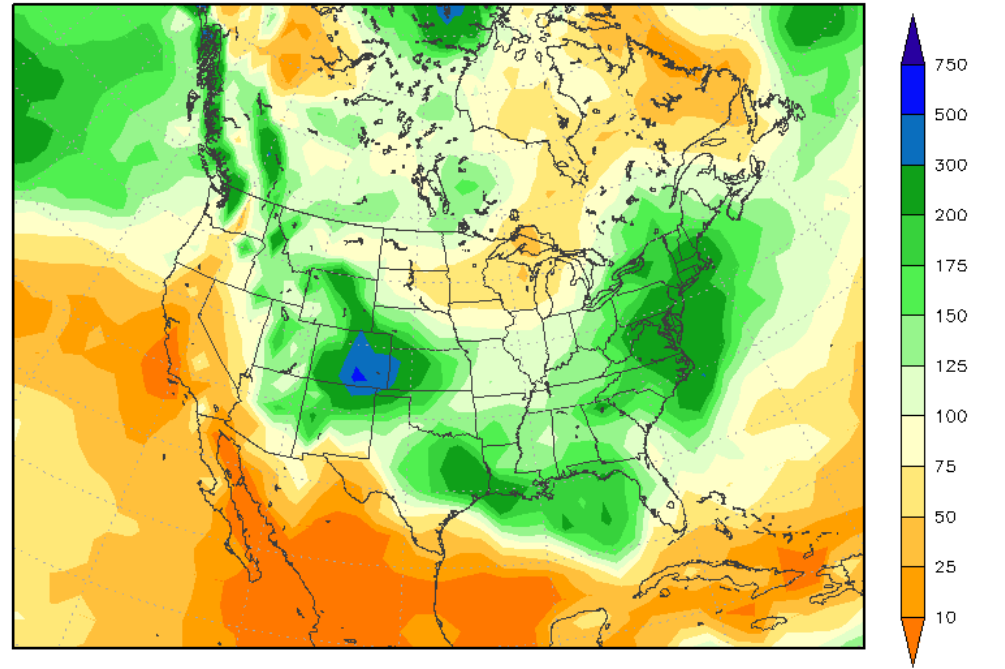
120 Hour Total Precipitation (in) ECMWF-EPS-MAXRES
 Valid: 00z Sat 01 Apr 2017 - 00z Thu 06 Apr 2017 Hour: 120 - 240



Not surprisingly the European model seems to make a lot more sense and it also has significant differences from the GFS models. To begin with all of TX and western OK is either dry or almost dry on the European operational model and on the ensemble. The models agree that there is going to be a widespread 0.75-1.5" /20-35mm rains over eastern COL / most of KS / the southern half of NEB.

Also the European operational and it's ensemble are much strong agreement and have a more uniform rain shield. The only real discrepancy is the amount of rain which falls north of I-70 over the ECB.

6-10 Day Precipitation Anomaly (% of Normal) ECMWF-EPS
 Valid: 00z Sat 01 Apr 2017 - 00z Thu 06 Apr 2017 Hour: 120 - 240



GrADS: COLA/IGES

StormVistaWxModels.com

Init: 00z Mon 27 Mar 2017
 2017-03-27-03:40

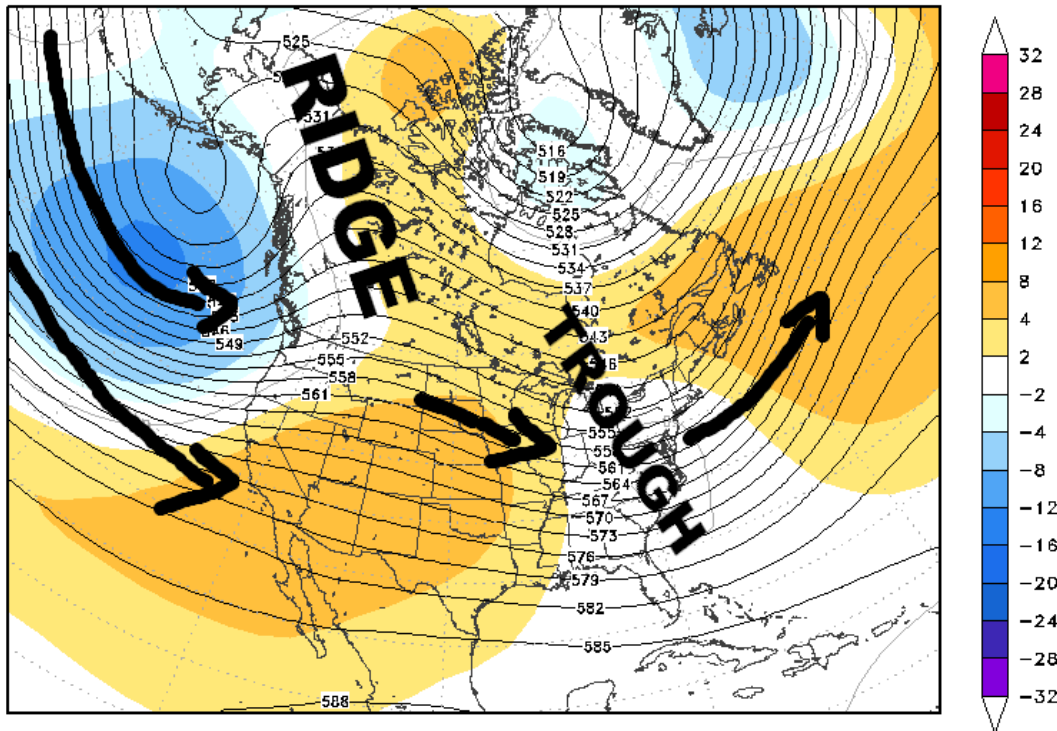
11-15 DAY

11-15 Day 500 mb Height Anomaly (dm)

ECMWF-EPS

Valid: 00z Thu 06 Apr 2017 - 00z Tue 11 Apr 2017

Hour: 240 - 360



Significant changes in the jet stream pattern force the surface weather patterns to turn drier. The models develop a fairly strong ridge in the jet stream over the western U.S. This places the mean trough over the East Coast. As a result rainy pattern over the central lower Plains and much of the Midwest shuts off and they shifted well to the south and east.

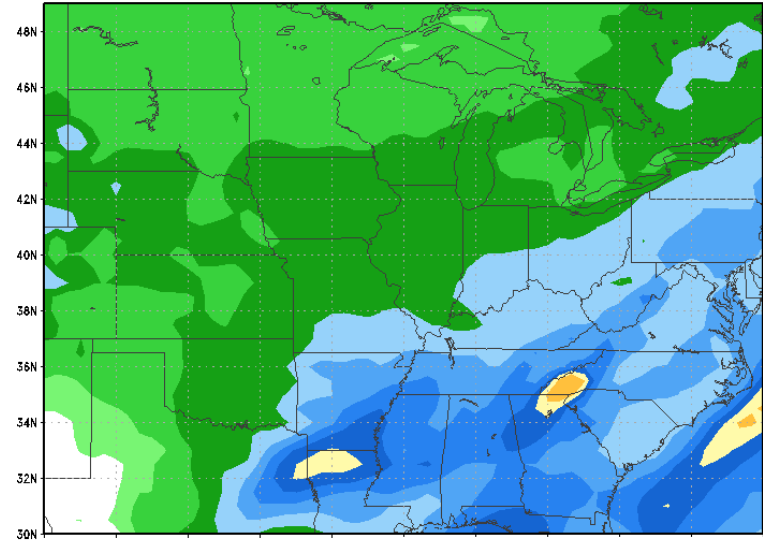
GrADS: COLA/IGES

StormVistaWxModels.com

Init: 00z Mon 27 Mar 2017
2017-03-27-04:00

Here the GFS ensemble at 0z and 6z as well as the European ensemble are compared and we can clearly see a shift in the rainfall patterns east of Mississippi River. Only the Delta area west of the Mississippi on these models see some rain..and even there the rainfall amounts are not that significant. The central Plains and WCB are not completely dry But they certainly see less rain then what they'll see all the next five days or in the 6-10 DAY

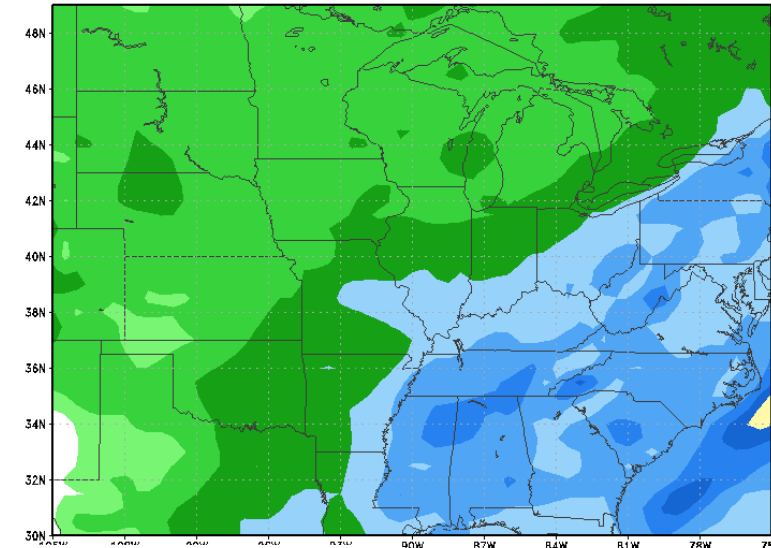
120 Hour Total Precipitation (in)
Valid: 00z Thu 06 Apr 2017 - 00z Tue 11 Apr 2017



Max: 2.5 in
Min: 0.0 in

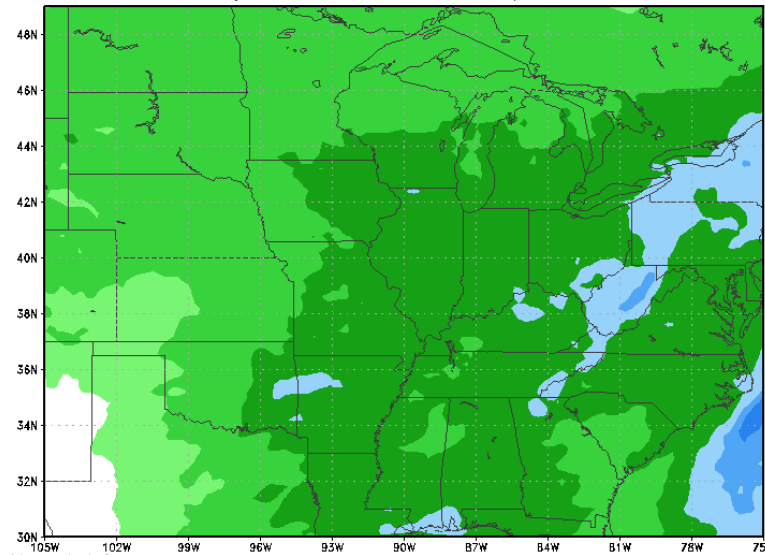
GFS-ENS-MAXRES
Hour: 240 - 360

120 Hour Total Precipitation (in)
Valid: 06z Thu 06 Apr 2017 - 06z Tue 11 Apr 2017



GFS-ENS-MAXRES
Hour: 240 - 360

StormVis: 120 Hour Total Precipitation (in)
Valid: 00z Thu 06 Apr 2017 - 00z Tue 11 Apr 2017



Max: 1.4 in
Min: 0.0 in

StormVistaWxModels.com

ECMWF-EPS-MAXRES
Hour: 240 - 360

WxModels.com

Init: 06z Mon 27 Mar 2017
2017-03-27-11:34

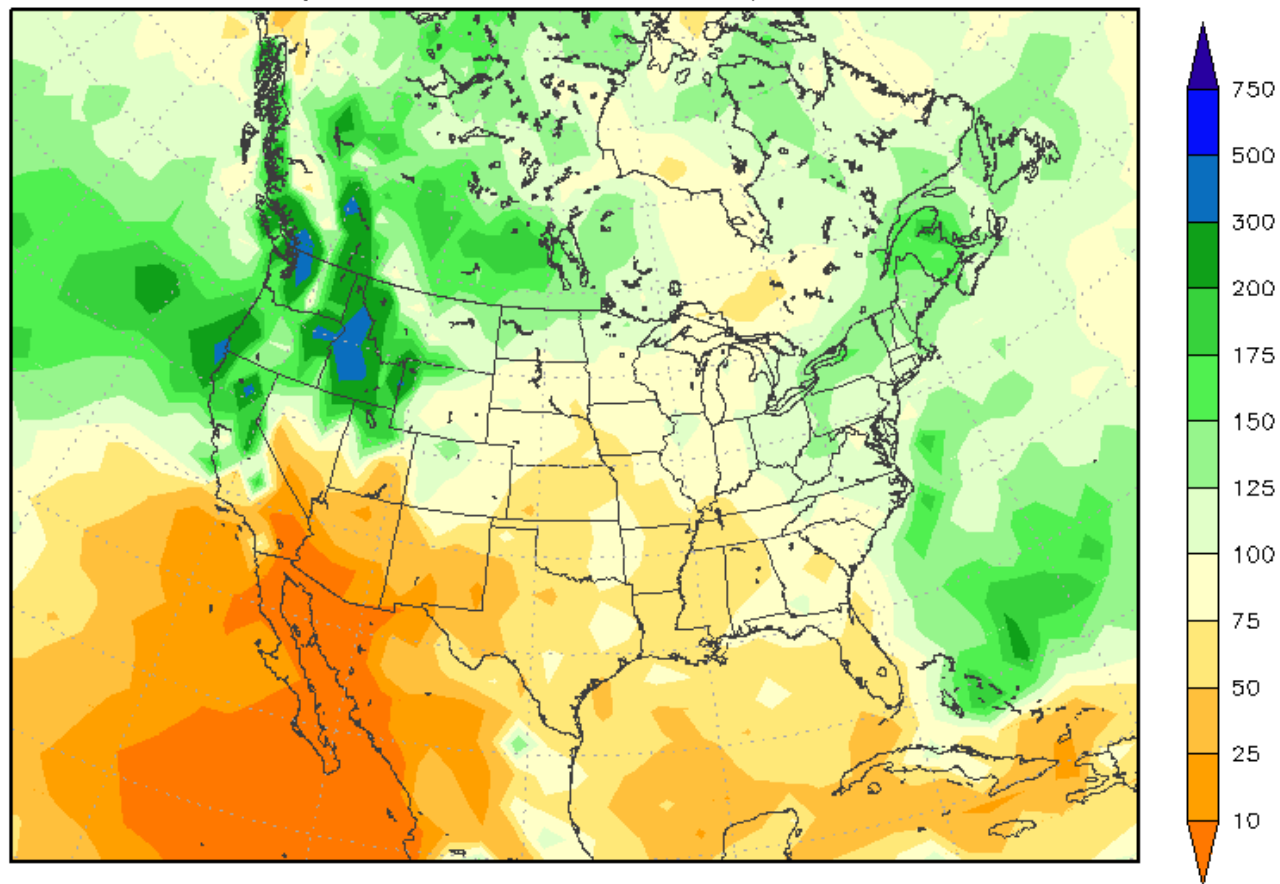
11-15 DAY TEMP ANOMALIES PRECIP ANOMALIES

11-15 Day Precipitation Anomaly (% of Normal)

ECMWF-EPS

Valid: 00z Thu 06 Apr 2017 - 00z Tue 11 Apr 2017

Hour: 240 - 360



GRADS: COLA/IGES

StormVistaWxModels.com

Init: 00z Mon 27 Mar 2017
2017-03-27-04:00

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