

THURSDAY FULL US GRAIN WEATHER

7/13/17 OVERVIEW

It looks like the seasonal pattern is going to hold. The heat dome is going to make it further to the east and will impact the WCB up for at least 3 or 4 days next week. The Persistent trough over the up the Great lakes and ECB which earlier appeared to weaken and dissipate ... no longer does so. The data over last 24 hours has shifted consistently tiwards the solution that the trough over the ECB will hold in place. It is a mistake to argue that there is no heat dome (or a some people refer to in a mega ridge) on any of the model data because that is not correct. It is correct to say that the heat dome is not going to make it into the ECB anytime all the next two weeks.

In addition the model data is pretty strong that a significant cold front will arrive late on July 21st which will force the heat dome back into the western U.S. and develop moderate rains or perhaps even significant rains over a good portion of the WCB and ECB areas. s we close out the last week of July the model data is pretty strong that the deep persistent trough over the eastern third of the country will remain in place and probably right into the first week of August. Assuming this new model trend is correct ... it is likely that the first half of August will not feature any areas with above normal temperatures in either the Pains or the Midwest regions and there could be some moderate timely rains in the first and second week of August over the WCB..

[FAST LOADING RADAR](#)

The west to east rain/ storms and which dropped that moderate to locally heavy rains last night is still in business this morning. There are moderate rains over northwest Missouri and far southern Iowa which becomes light rain over Central Illinois... and thunderstorms over central and southwest Ohio into western Pennsylvania.

TEMPS JULY 12-13

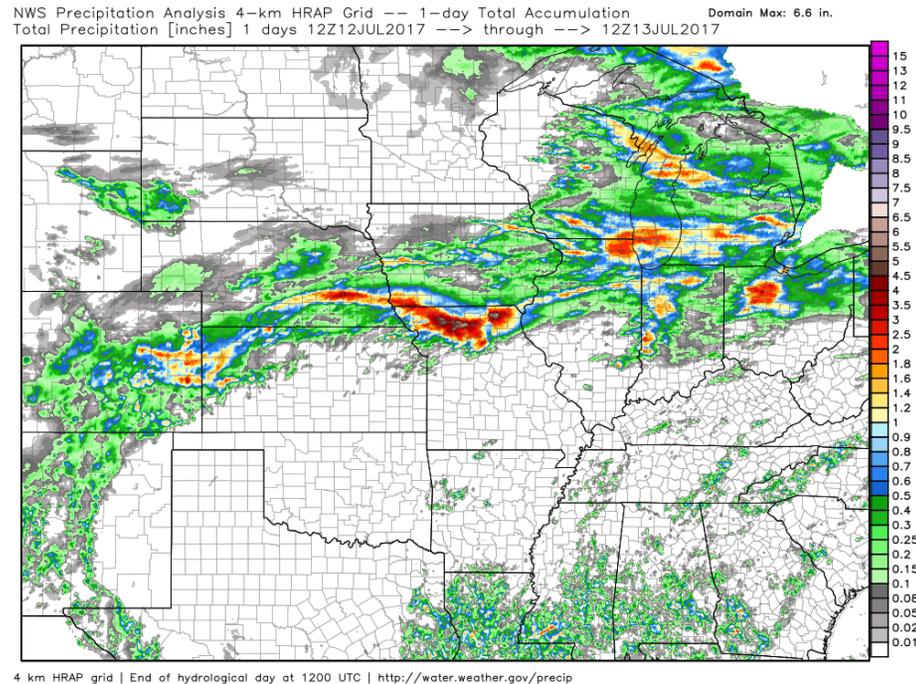
MAX TEMPS JULY 12 - NORMAL MAX TEMPS FOR MID JULY

MIN TEMPS JULY 12 NORMAL MIN TEMPS FOR MID JULY

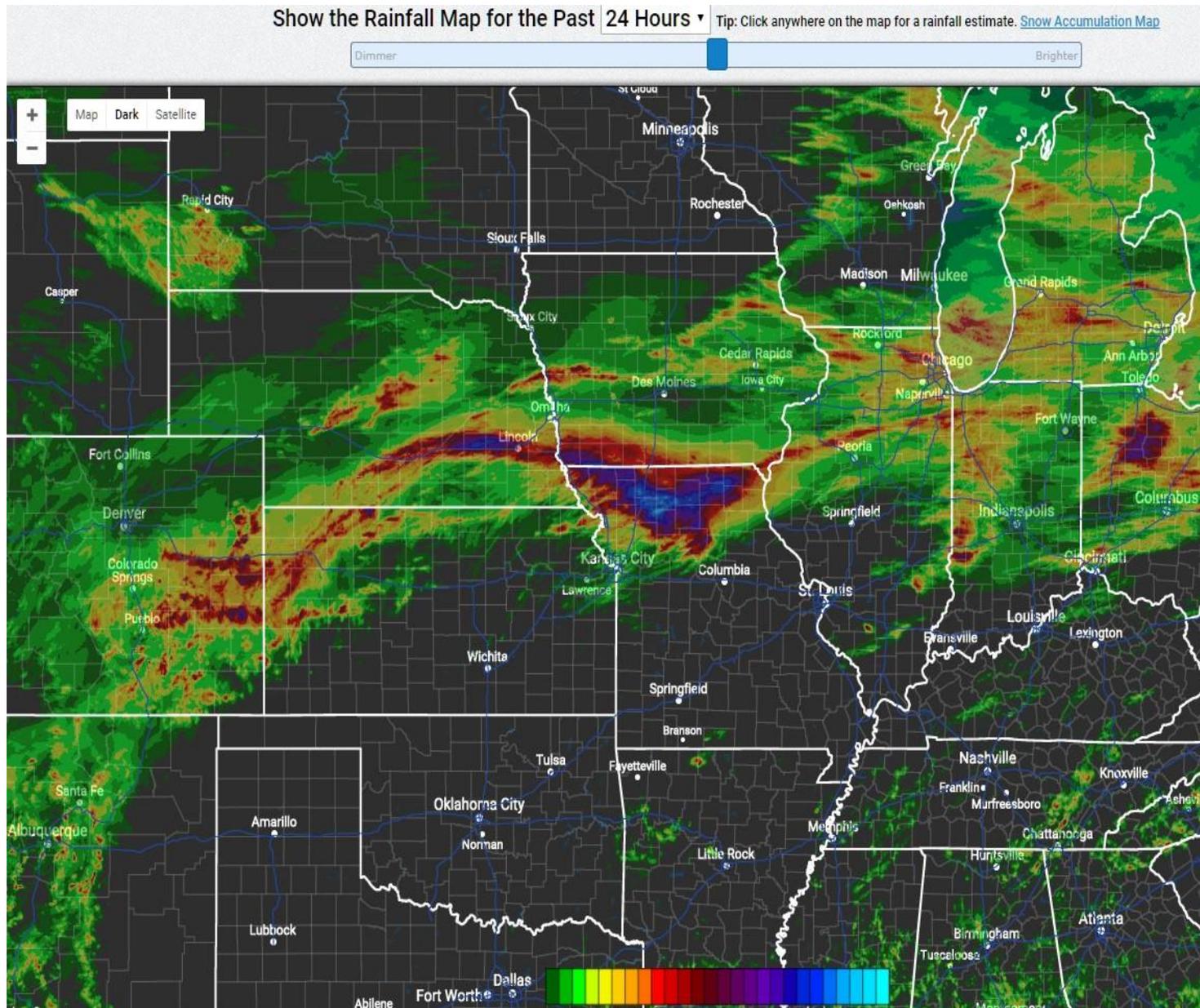
WEDNESDAY MAX TEMPS -- 70s over eastern MT ND north MN 80s over OH MI IND north ILL south MN IA SD NEB east WY..low 90s over IA KY TN ARK LA MS AL GA.. mid 90s southern ILL MO most of TX east OK... 95-105 over all of KS OK...

RAINFALL LAST 24 HRS 0700cdt 12 JULY- 0700cdt 13 JULY

There was a band of significant rain running more less in a west to east direction during the late afternoon and overnight hours which saw 0.50-2.0"/ 12-50mm from eastern COL into nw KS east half of NEB central/ south IA north third of MO north half of ILL north IND north OH. Coverage ranged from 40-50%. ** There was a band of 2-8"/ 50-200mm over se NEB (Lincoln) into north MO (Kirksville Maryville Trenton Chillothe)

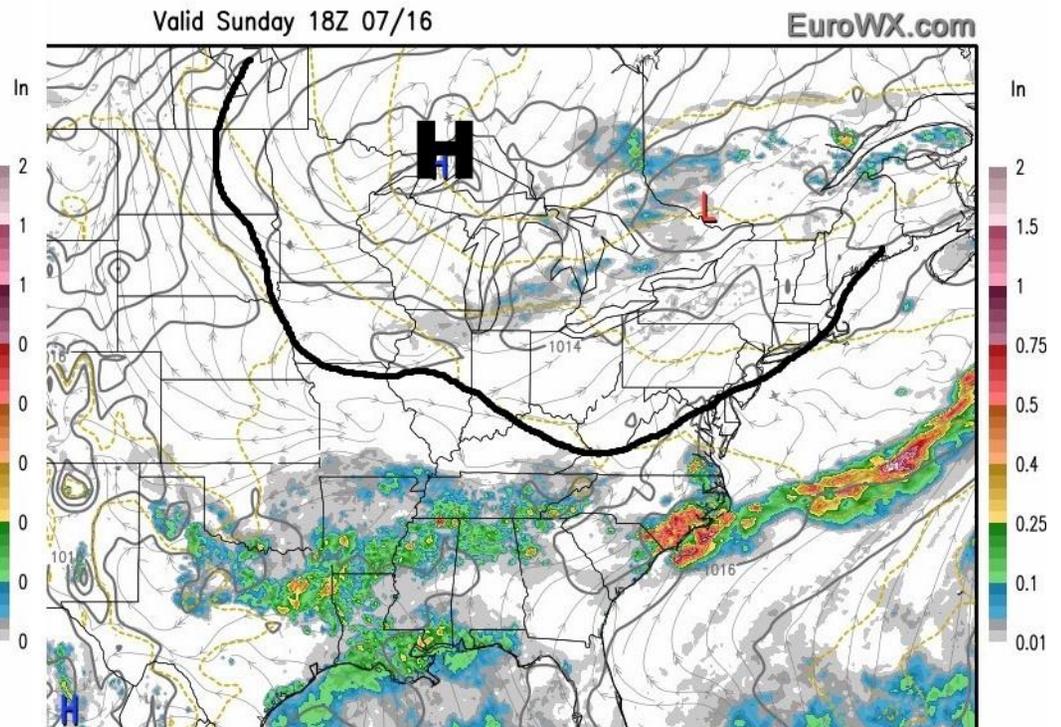
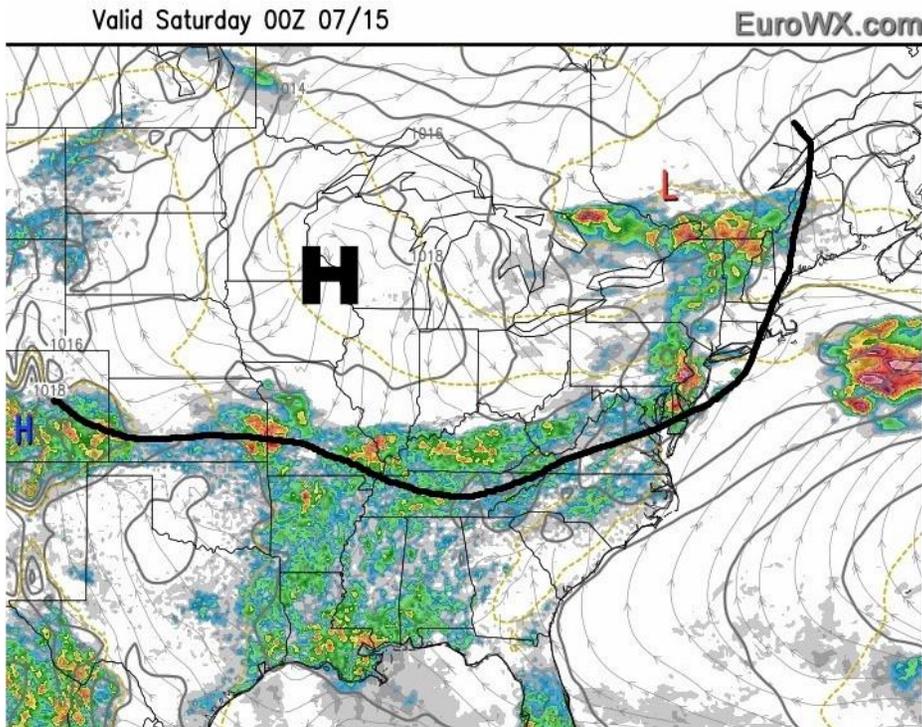


ENLARGED MIDWEST RAIN



1-5 DAY

The cold front and its upper level energy which is been bringing in these overnight pesky and sometimes moderate to heavy clusters of rain and thunderstorms is finally beginning to break down over the Midwest. The official NWS rainfall forecast for next five days shows no significant rain over any portion of the WCB as well as the central & upper Plains. HIGH pressure will move out of Manitoba and into the Midwest by Friday. This will be reinforced by another HIGH that drops out of Canada and moves into the Great Lakes this weekend. This high will still be over the ECB by Monday or Tuesday.

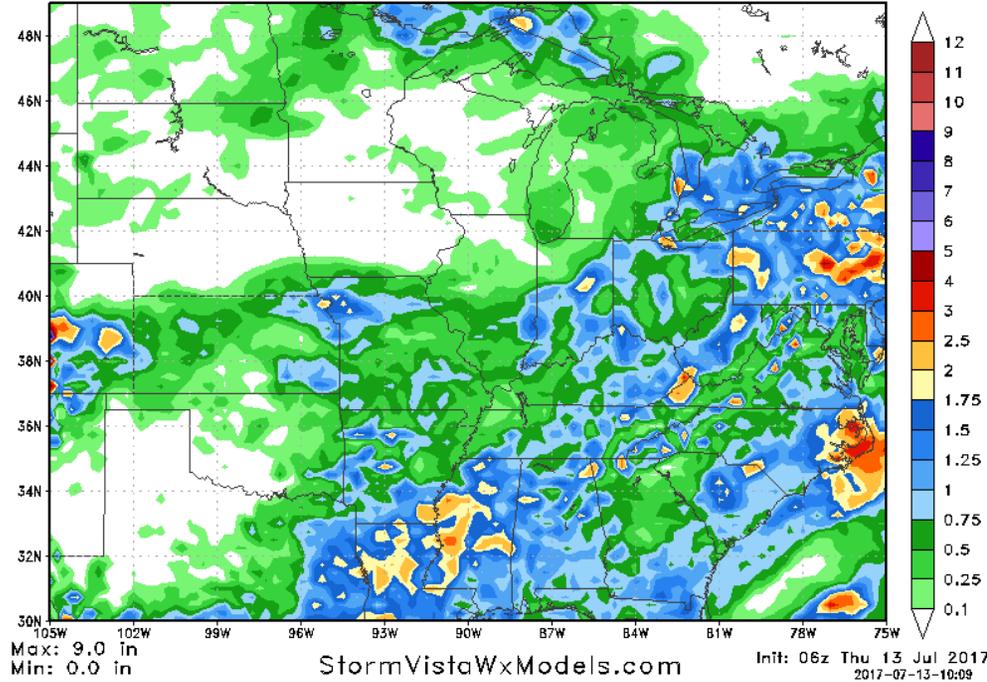


120 Hour Total Precipitation (in)

Valid: 06z Thu 13 Jul 2017 - 06z Tue 18 Jul 2017

GFS-MAXRES

Hour: 0 - 120

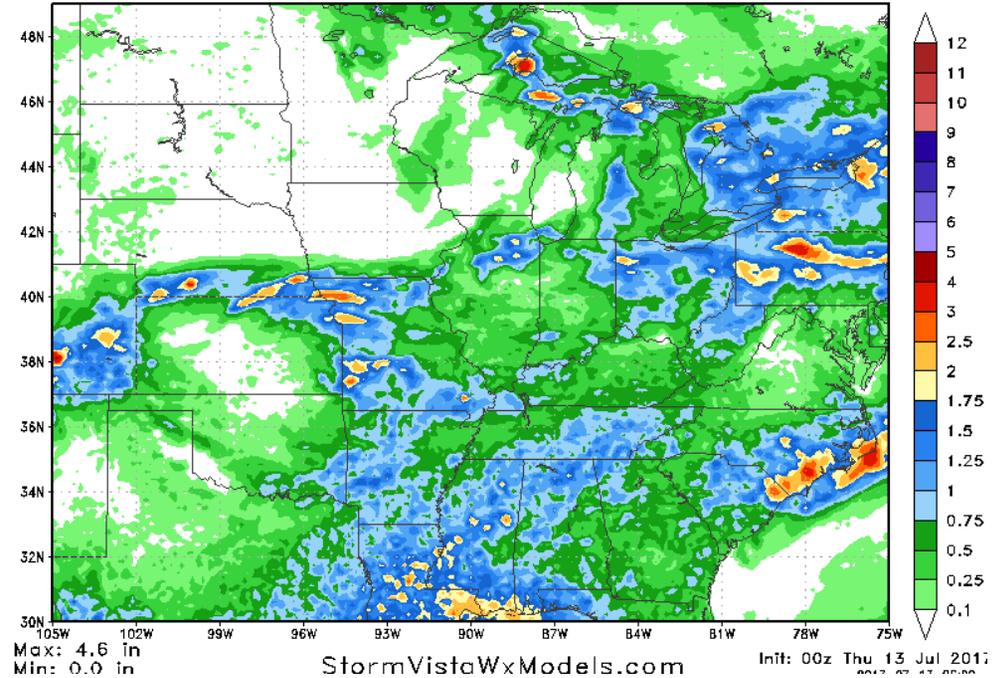


120 Hour Total Precipitation (in)

Valid: 00z Thu 13 Jul 2017 - 00z Tue 18 Jul 2017

ECMWF-MAXRES

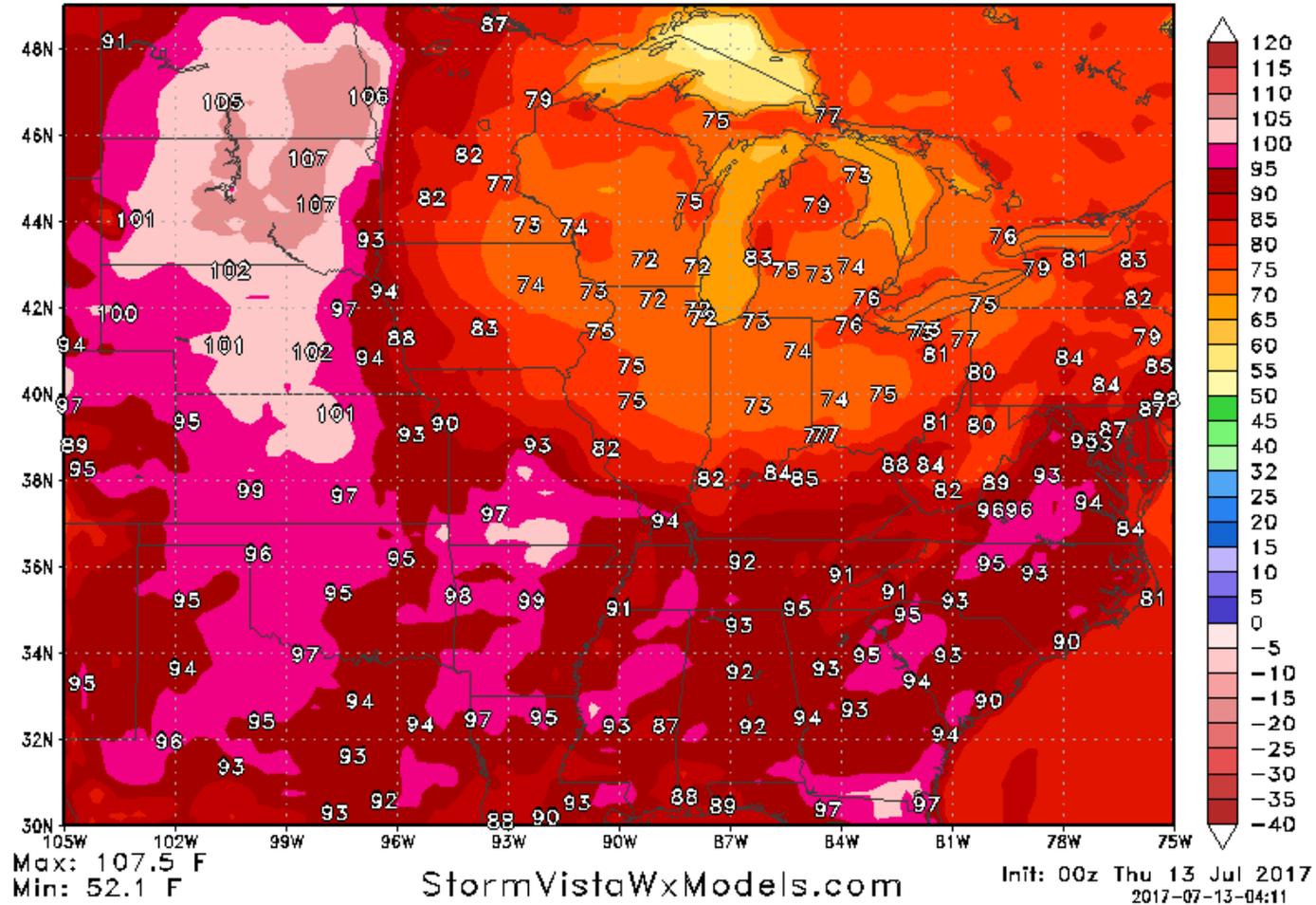
Hour: 0 - 120



Meanwhile the heat will rapidly and rebuild over the Plains states. Many of the weather models show temperatures between 95 and 105° in South Dakota Nebraska Kansas Oklahoma Arkansas and southern Missouri on developing by Friday and continuing through the weekend. The Plains remain beastly hot into early next week but the heat does not reach Des Moines or St. Louis. For example next Monday on the GFS model Max temperatures at St. Louis is 82° at Des Moines is 83° but Omaha is 94 Columbia Missouri 93 and Pierre South Dakota 107

2 m Max Temperature (F)
Valid: 00z Tue 18 Jul 2017

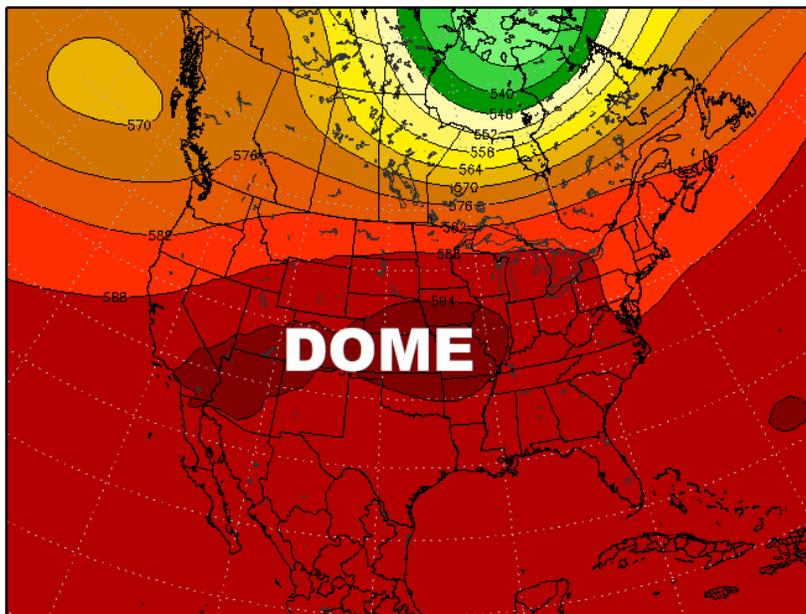
GFS-MAXRES
Hour: 120



6-10 DAY

There have been some changes and models overnight. The heat dome does build into the WCB but it only last for few days and all model data now shows the heat dome never gets into the ECB in the 6-10D. There will be a significant temperature contrast across the WCB for much of next week. All of the model data shows that by July 21 the heat dome will break down and slide back into the southwest U.S. and this in turn will allow a new cold front to press into the Midwest and reestablishes the mean trough position over the Midwest and East Coast regions.

500 mb Height
Valid: 06z Wed 19 Jul 2017



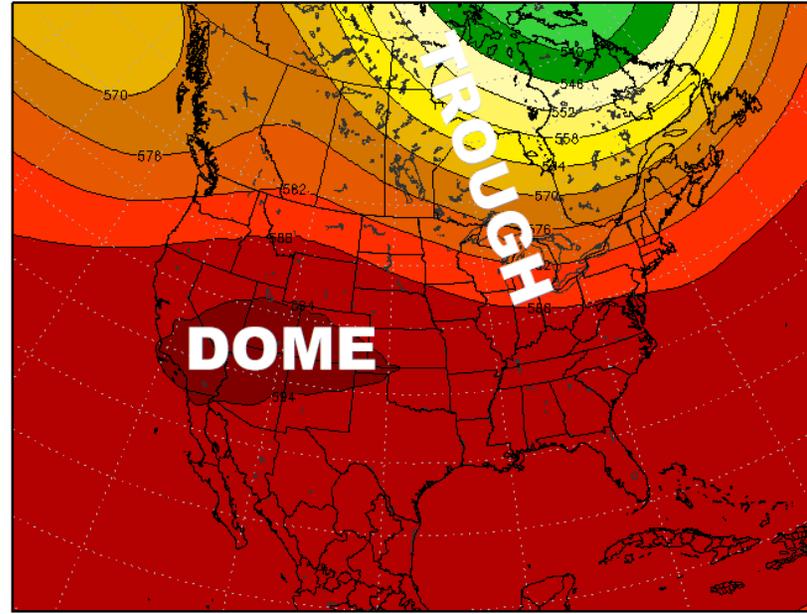
GRADS: COLA/IGES

StormVistaWxModels.com

Init: 06z Thu 13 Jul 2017
2017-07-13-07:03

GFS-ENS
Hour: 144

500 mb Height
Valid: 06z Fri 21 Jul 2017



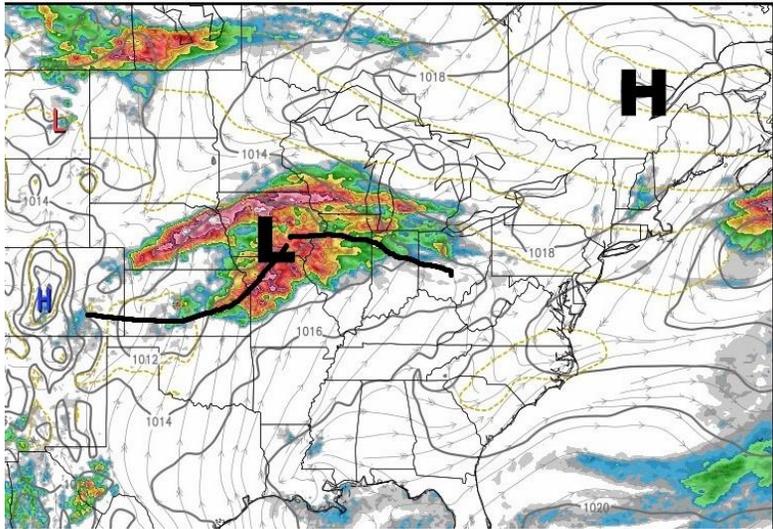
GRADS: COLA/IGES

StormVistaWxModels.com

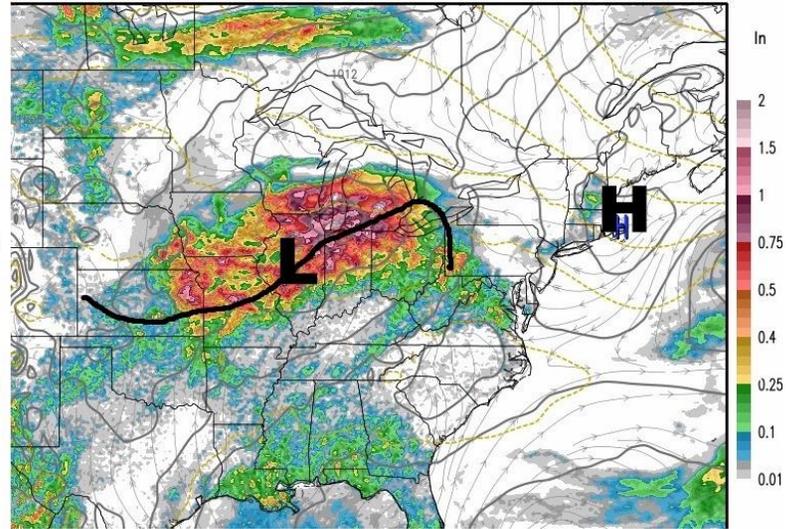
Init: 06z Thu 13 Jul 2017
2017-07-13-07:10

Until that cold front comes through late on the 20th or the 21st the temperature contrasts over the WCB and the eastern Plains will be impressive. The arrival of this cold front late on the 20th to 21st will bring some areas significant rain. The GFS is a large area of 1-3"/ 25-75mm rains over central and southern Minnesota Wisconsin and Northern Iowa. The European model has but similar rainfall amounts - 0.75-2.5"/ 20-60mm -- but it covers all of the ECB and 60 to 70% of Iowa Missouri and Eastern Nebraska

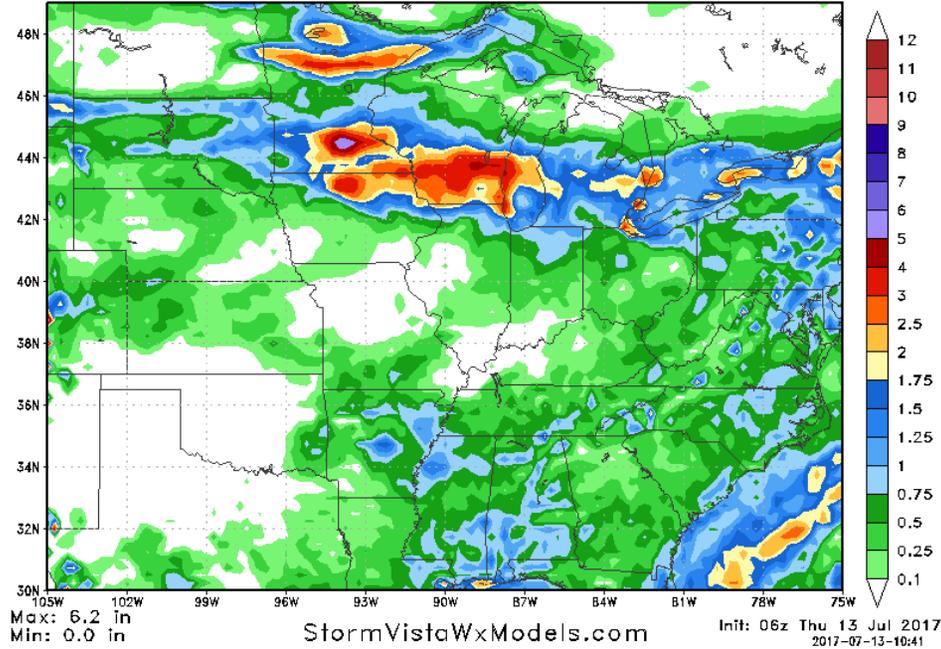
2f Valid Friday 12Z 07/21 EuroWX.com



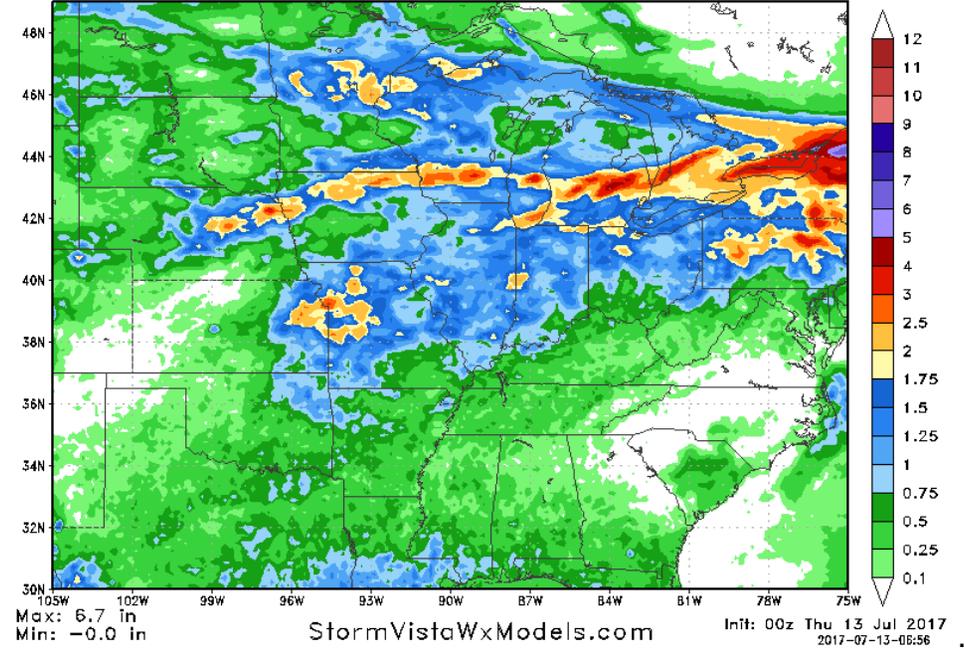
Valid Saturday 00Z 07/22 EuroWX.com



120 Hour Total Precipitation (in)
Valid: 06z Tue 18 Jul 2017 - 06z Sun 23 Jul 2017

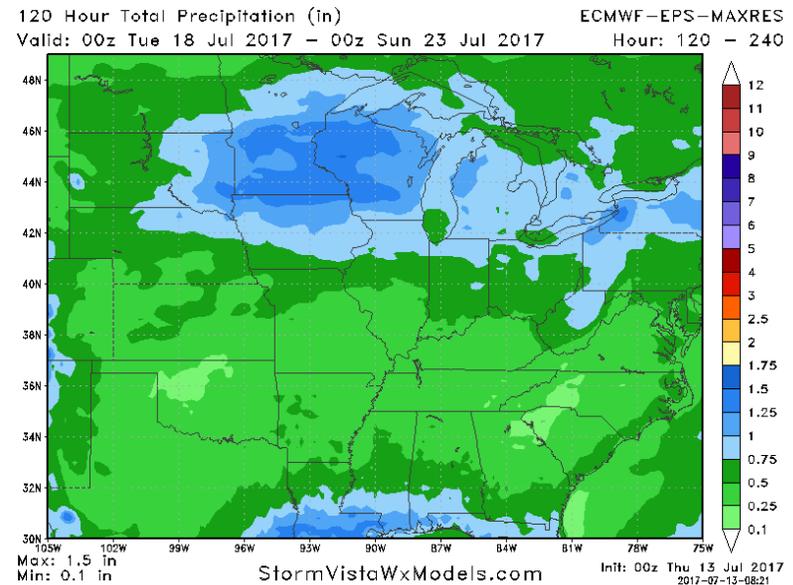
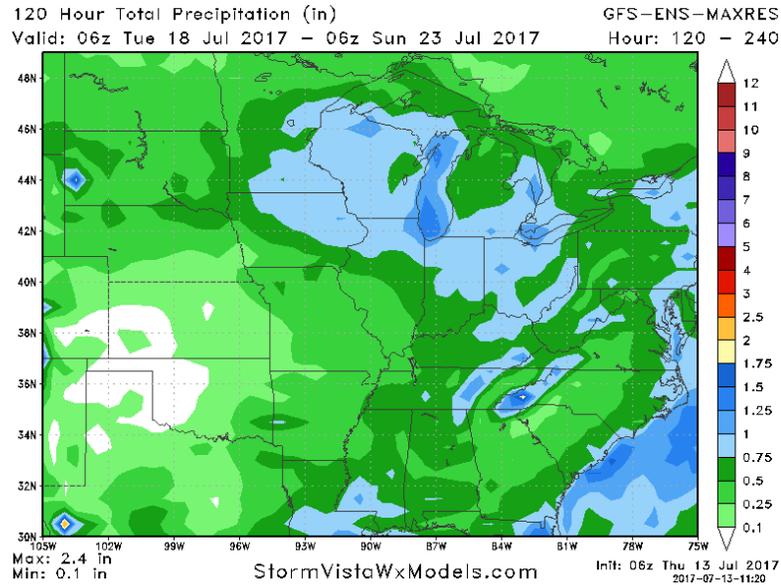


GFS-MAXRES 120 Hour Total Precipitation (in) Hour: 120 - 240
Valid: 00z Tue 18 Jul 2017 - 00z Sun 23 Jul 2017
ECMWF-MAXRES 120 Hour Total Precipitation (in) Hour: 120 - 240



6-10 DAY ENSEMBLE RAINFALL

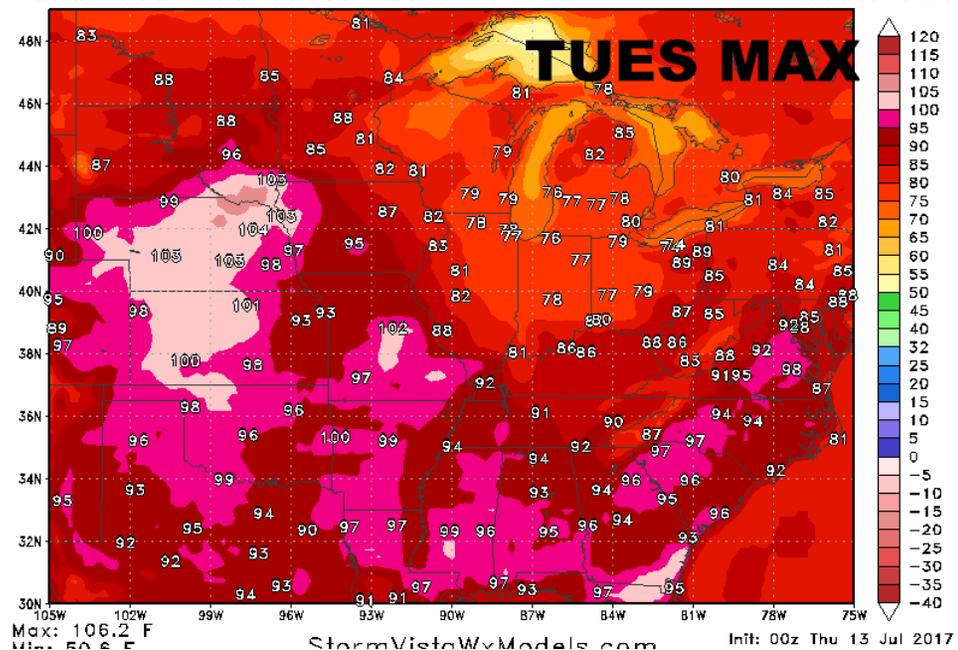
The ensembles are in good support of the operational models with respect to the rainfall coming into the Midwest late in the 6-10 day



For example next Tuesday on the GFS model Max temperatures at St. Louis is 88° at Des Moines is 95° Omaha is 98 Columbia Missouri 102 Grand Island Neb 105 On 7/19 the GFS model Max temperatures at St. Louis is 93° at Des Moines is 97° Omaha is 104 Columbia Missouri 98 Grand island NEB 107 and Pierre South Dakota 85

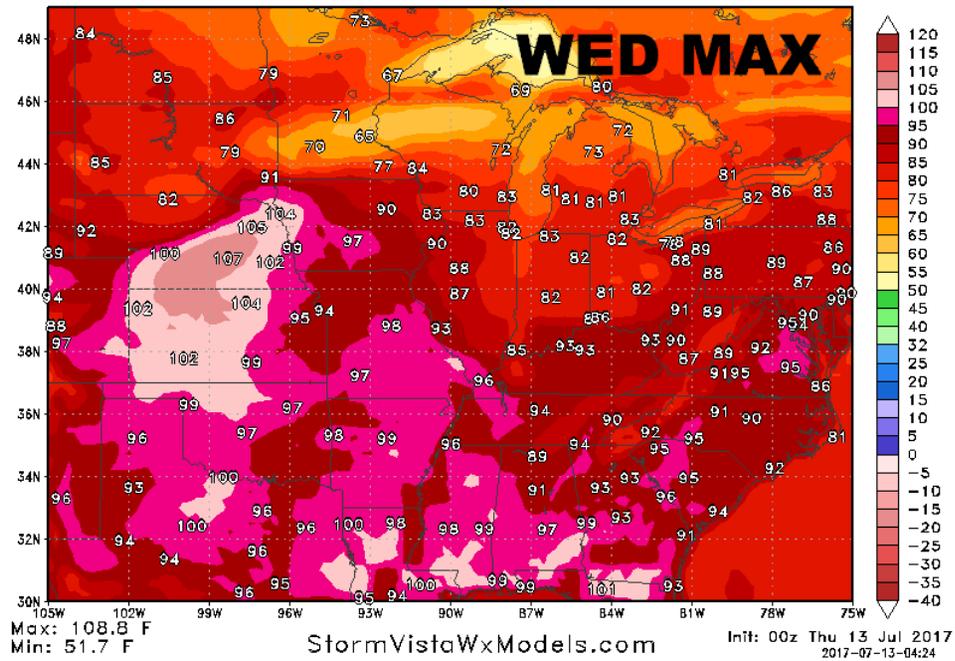
2 m Max Temperature (F)
Valid: 00z Wed 19 Jul 2017

GFS-MAXRES
Hour: 144



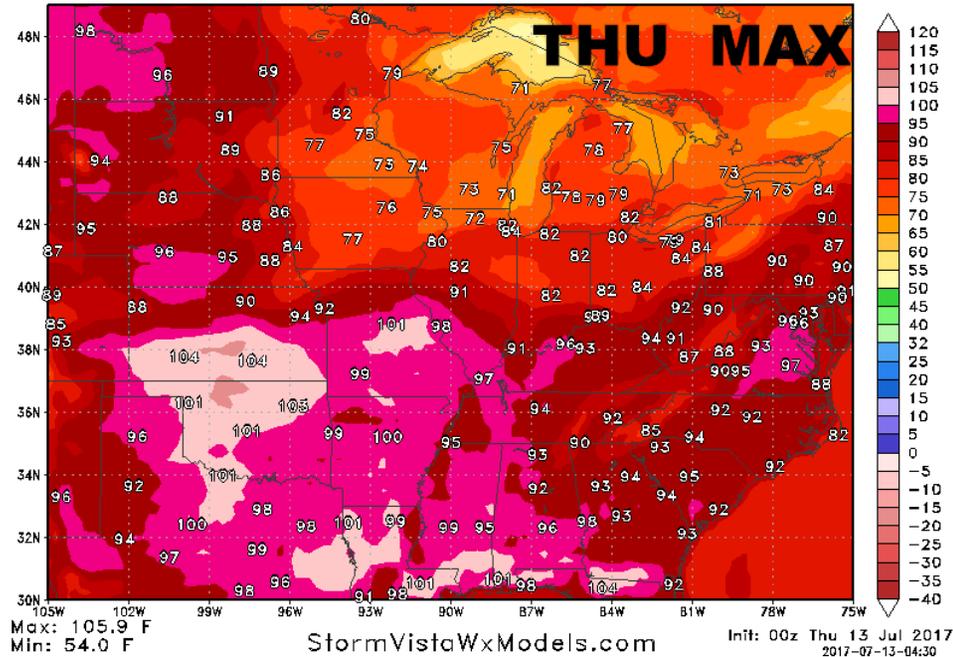
2 m Max Temperature (F)
Valid: 00z Thu 20 Jul 2017

GFS-MAXRES
Hour: 168



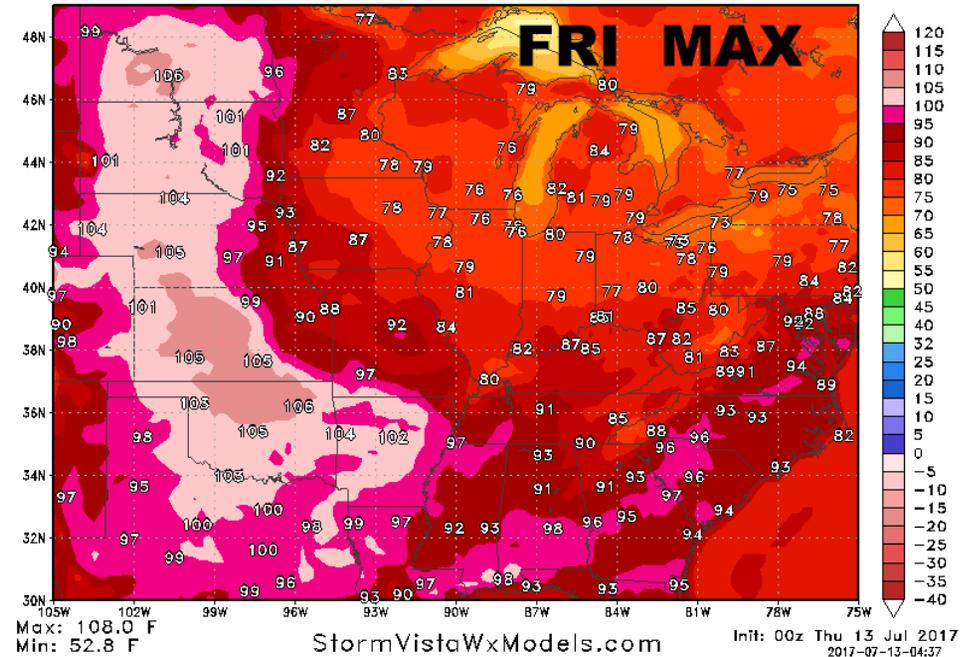
By 7/20 when the next strong cold front begins to press southward the GFS model Max temperatures at St. Louis is 98 at Des Moines is 77° Omaha is 86 Columbia Missouri 101 and Pierre South Dakota 92 On 7/21 on the GFS model Max temperatures at St. Louis is 83° at Des Moines is 87° Omaha is 88 Columbia Missouri 92 and Pierre South Dakota 108 central NEB 105 western KS 105 okc 105

2 m Max Temperature (F)
Valid: 00z Fri 21 Jul 2017



GFS-MAXRES
Hour: 192

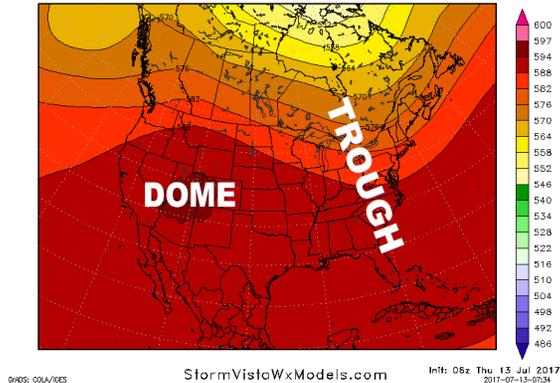
2 m Max Temperature (F)
Valid: 00z Sat 22 Jul 2017



GFS-MAXRES
Hour: 216

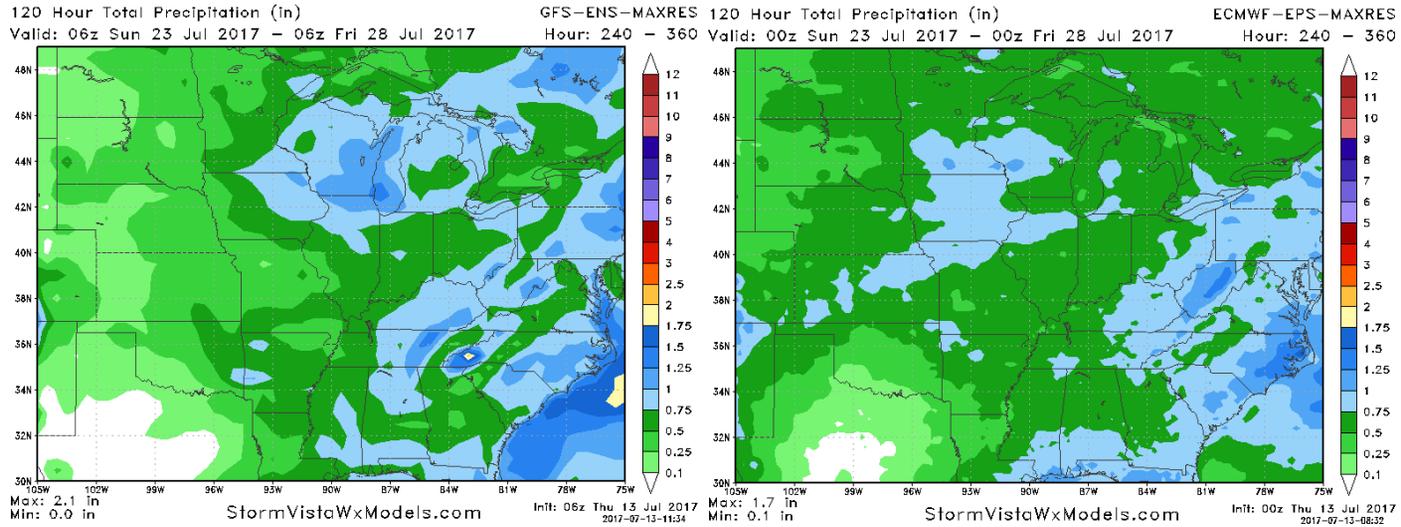
11-15 DAY ENSEMBLE

500 mb Height
Valid: 06z Fri 28 Jul 2017



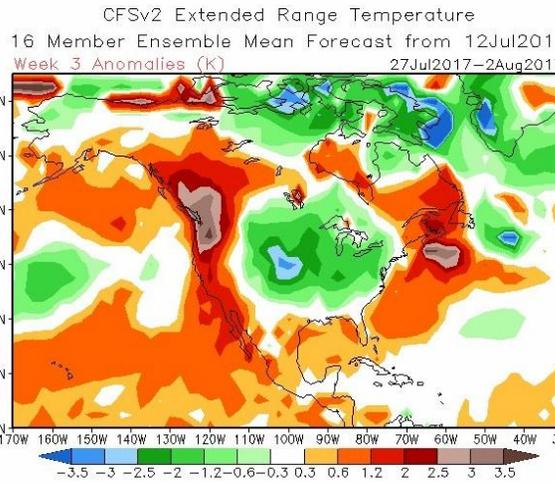
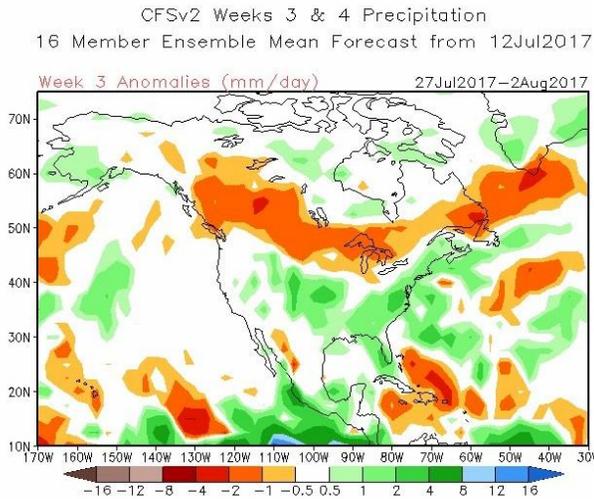
GFS-ENS
Hour: 360

There is widespread model agreement that the last week of July is going to feature a deep trough over the eastern half of the country. This trough will be surprisingly deep for late July reaching down into the Tennessee Valley. This will ensure that all the Midwest as well as the eastern Plains will see more seasonal temperatures for late July--and east of Mississippi River temperatures could actually be below normal. It also means that the rainfall pattern should be normal over the WCB and probably above normal again over the ECB regions. This remains however a dry pattern for the Plains states.

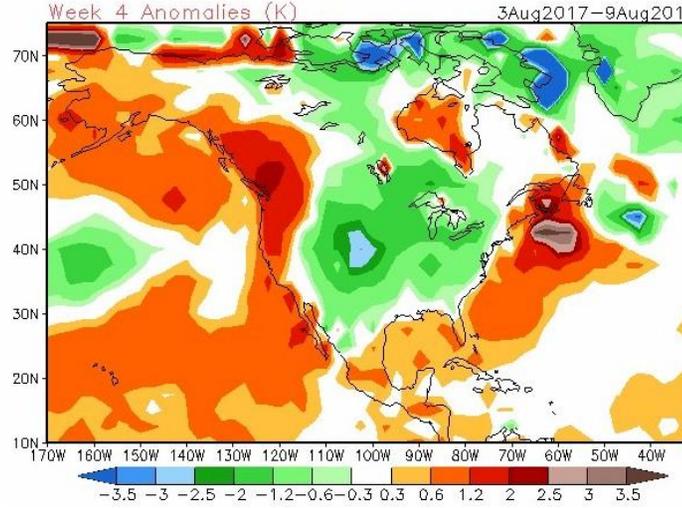
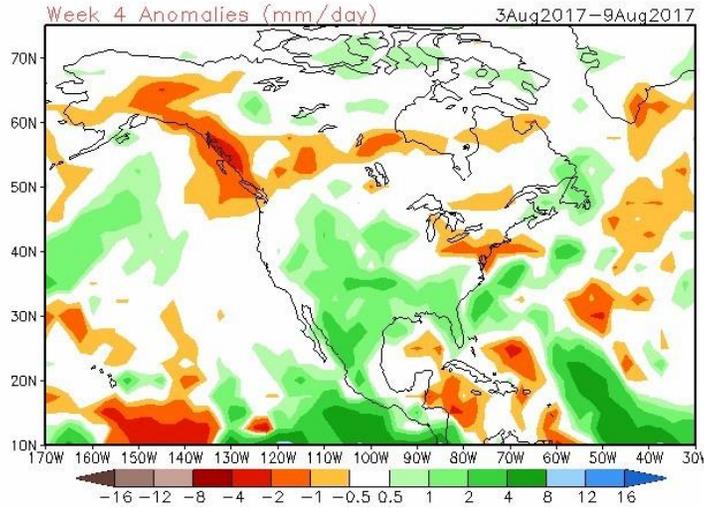


WEEK 3 and WEEK 4

Finally lets take a look at week 3 from the latest from the CFS model ... All of southern Canada stays very dry as does the Upper Plains into the Great Lakes while areas to the south of I-80 turn wetter than Normal. LOOK HOW COOL TEMPS ARE IN WEEK 3 OVER PLAINS AND MIDWEST!! .



Week 4 - first week of August show several areas of Above Normal rainfall over the Plains and WCB along with more Much Below Normal temps over all of the Plains Midwest and Below Normal temp over Midwest.



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