

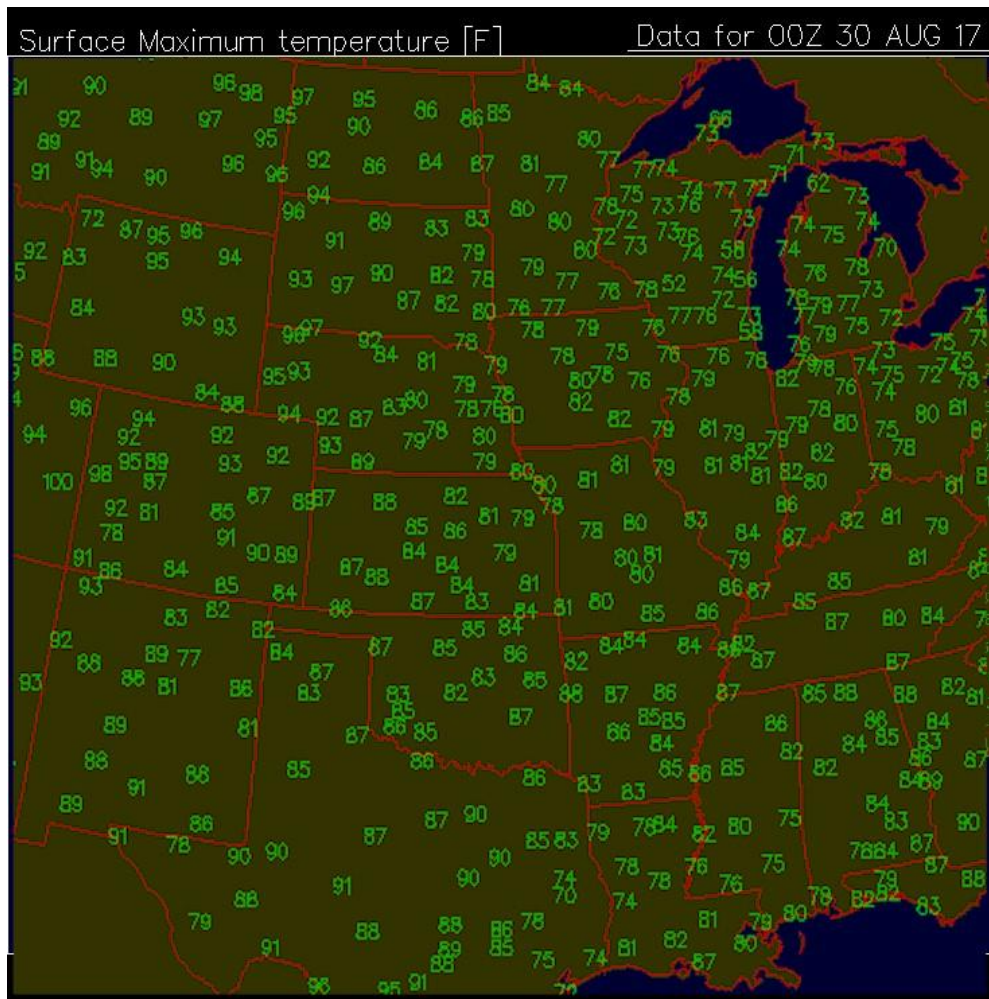
WEDNESDAY US GRAIN WEATHER

8/30/17 OVERVIEW

SUMMARY

There is no doubt that the interval at the Labor Day is going to turn substantially cooler than normal over most of the eastern Plains and all the Midwest and into the upper South and the East Coast. The question remains how cold. Certainly there will be numerous readings and temperatures getting down to the 40s on the morning of September 6 and 7. The issue is whether not there going to be readings in the middle 30s over states such as Minnesota Iowa and Wisconsin. The Wednesday morning GFS model certainly indicates that the readings will be that cold but the European and Canadian models are not as cold. In addition the Wednesday morning GFS model has a **SECOND** cold shot on September 9 and 10 which also does not show up on the other models. Given the overall pattern I think the second cold shot on September 9 and 10th is just a fantasy of the GFS model. The other concern is of course the potential for major hurricane which the European model develops near the Southeast Bahamas on September 8. The overall pattern clearly indicates that if the system tries to come up the East Coast the deep trough and cold front will kick out to sea but it's possible it may slide underneath a cold front and move into the Gulf of Mexico.

MAX TEMPS 29 AUGUST

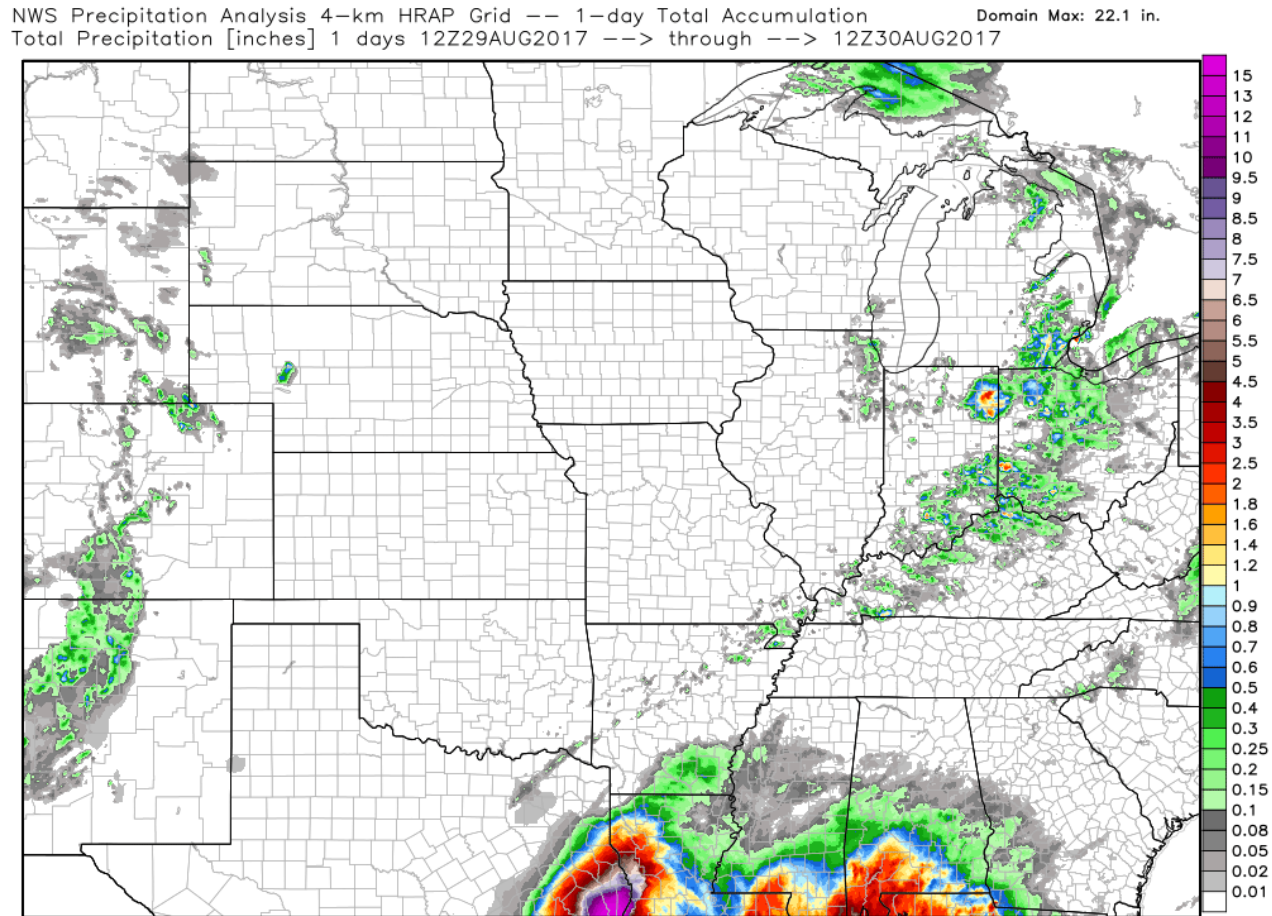


70s over eastern ND/ SD MN IA WI MO IND OH ... 80s KY TN
 ARK Tx Panhandle OK KS NEB western ND/ SD.... 90s over
 eastern MT/WY/ COL rest of TX LA MS AL

RAINFALL TUESDAY 28 AUGUST 0700 cdt - WEDNESDAY 30 AUGUST 0700 CDT

70s were common over MN IA WI MI northern ILL ... and over LA and southeast TX ...80s over southern OH KY
 ILL MO TN GA AL MS ARK rest of TX OK KS NEB eastern ND /SD 90s over western ND/ SD western NEB
 eastern MT/ WY/ COL

Most of the Plains and all the WCB were completely dry over the last 24 hours. In far southeastern Texas rainfall amounts greater than 14"/350mm were quite common mostly to the east of Houston while western Louisiana saw rainfall amounts between 2-10"/50-250mm. Additional heavy rains of 2-6"/50-150mm were common across far southern Mississippi .. the southern third of Alabama ...and the far western Florida panhandle. There were some widely scattered light rain showers across far northern Kentucky ...the eastern third of Indiana ..and western half of Ohio. The rainfall amounts here were under 0.50"/12mm



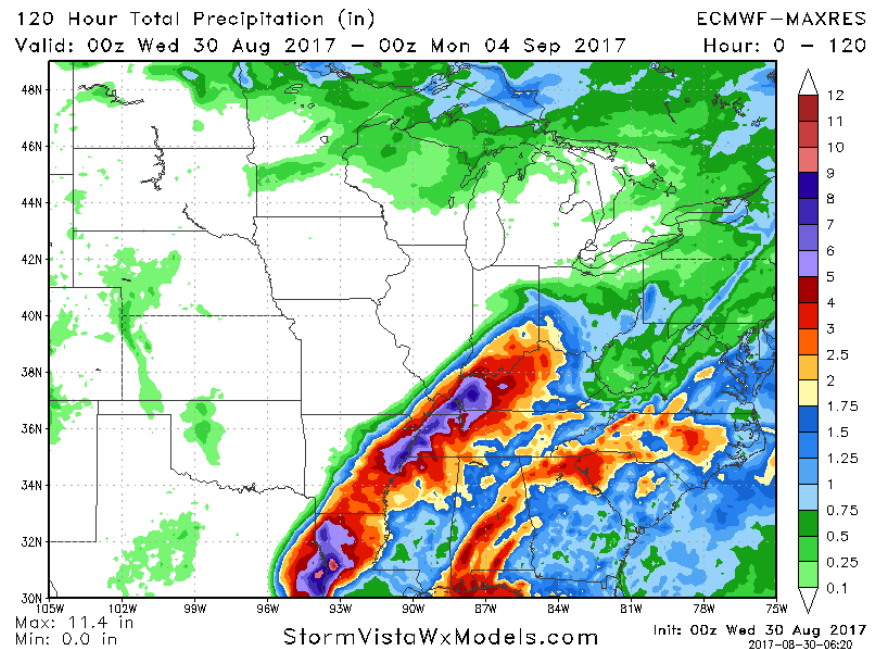
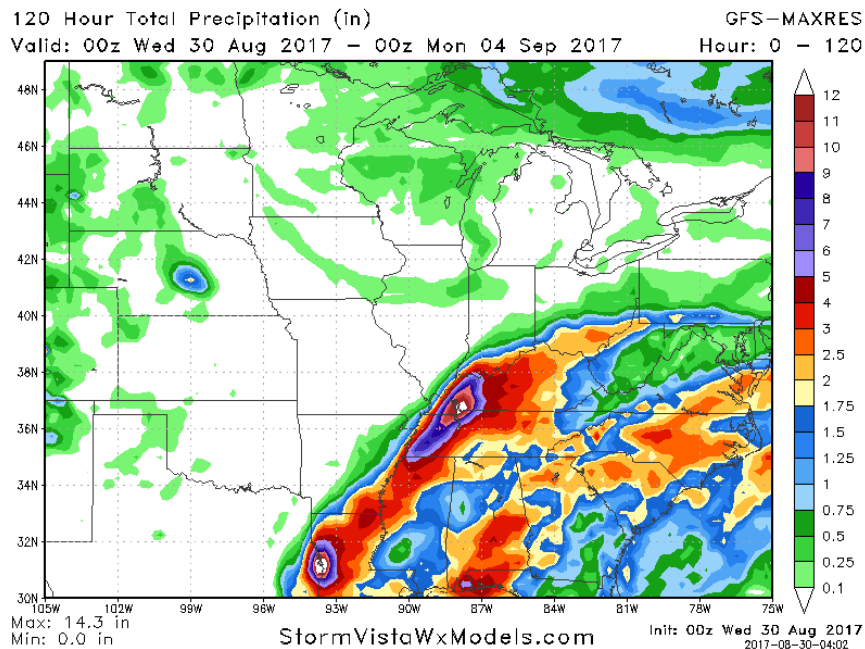
4 km HRAP grid | End of hydrological day at 1200 UTC | <http://water.weather.gov/precip>

WEDNESDAY MIIDDAY RADAR HERE

The wed morning radar shows remains tropical storm Harvey on the Texas Louisiana border bringing heavy torrential rains to far southeastern Texas and moderate / heavy rains over 50 to 60% of Louisiana and into the southern half of Alabama. Additional moderate to heavy rains and showers can be found across southeastern Arkansas ...and northern Mississippi with about 50% coverage.

1-5 DAY

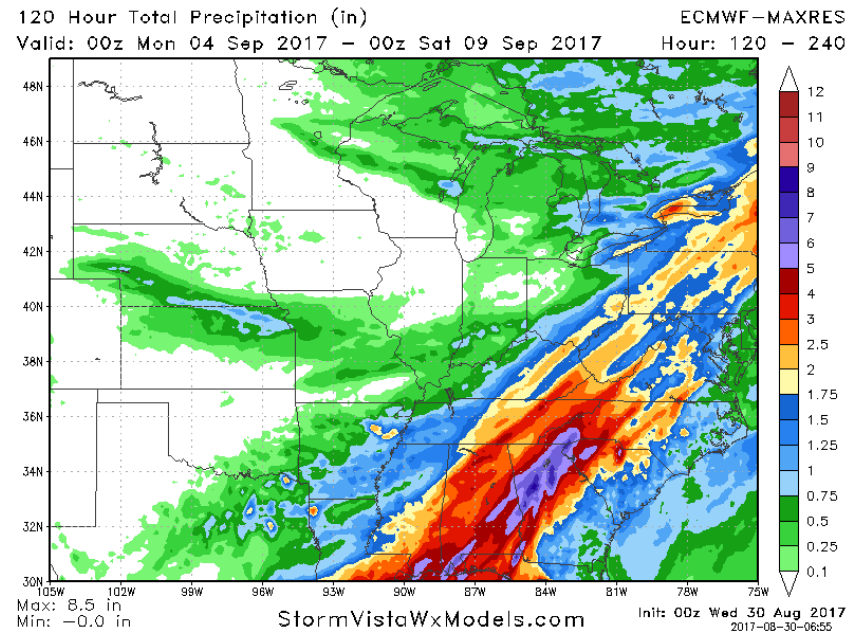
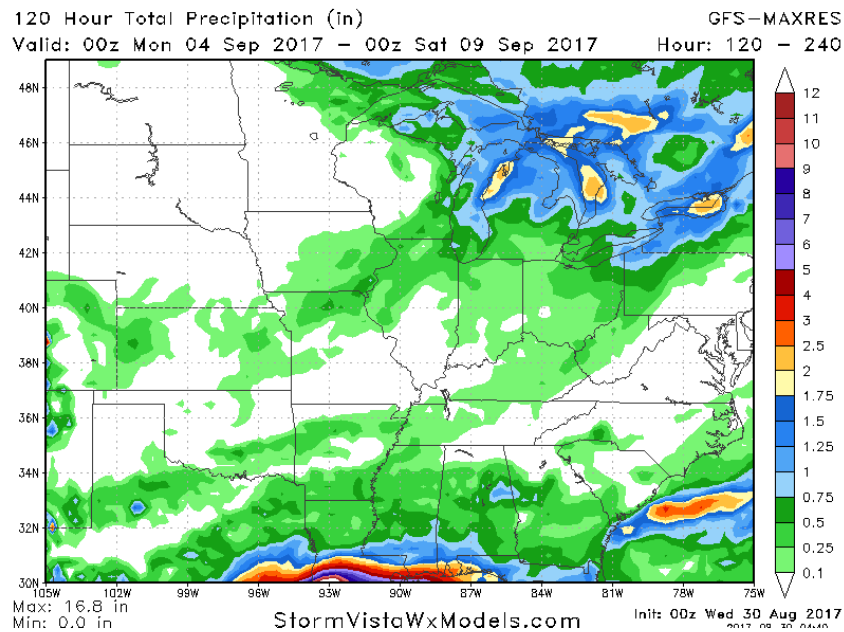
Over the next 5 days the weather models are in pretty good agreement with regard to what i going to happen to the remains of Harvey. All three models show significant rains over the next 5 days stretching from the northwest half of Louisiana ...into the southeast half of Arkansas ...the northern half of Mississippi ...all of western and central Tennessee ...all of western and central Kentucky ...into the far southeast tip of Illinois and the southern third of Indiana. The rains in this area will range from 2-8"/ 50-400mm and have coverage of 70 to 80%. In addition a second area of 1-3"/ 25-75mm rains covering much of Alabama ...Georgia ...eastern TennesseeSouth CarolinaNorth Carolina ...and eastern Virginia. And yes this means that the WCB and the rest of the Plains will be dry..



6-10 DAY

There is widespread model disagreement in the 6-10 day with regard to the forecast between the GFS and European models and this includes the hurricane potential threats and the frost threat after Labor Day.

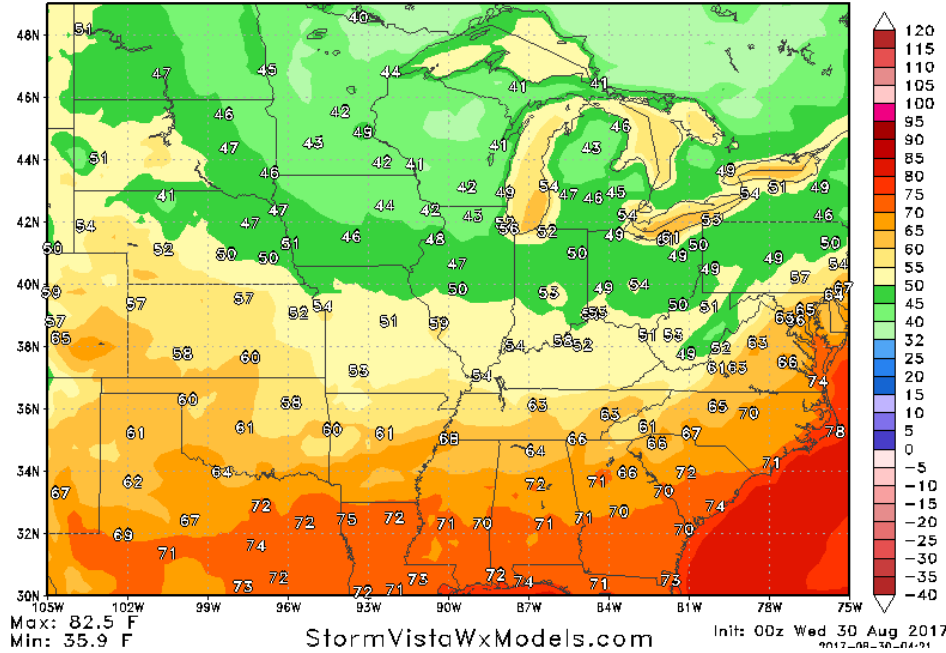
As we stated above the early Wednesday morning GFS model and European models have substantially different solutions for the 6-10-day period and this impacts the potential for FROST and the potential for a Gulf of Mexico or East coast hurricane. To begin with because the GFS is significantly colder as it has two different chilly air mass is coming southward from Canada ...it is much drier over all the Midwest. Since the European models weaker and has a stronger Southeast Ridge ...it has significant rains over the Louisiana Delta ...all of Mississippi ...Alabama ...Georgiathe western Carolinas into central and eastern Kentucky ...Tennessee .. West Virginia and then up into Pennsylvania and New England.



The Wednesday morning GFS model shows 2 distinct cold blasts of Autumn like temperatures in the period from September 6-12. Surge #1 arrives on the morning of September 6 which has many areas in the eastern Dakotas ...Iowa ...Minnesota ...Wisconsin northern Illinois/ Indiana/ Ohio with temperatures in the low to middle 40s. However the morning European model is vastly different. The cool air masses are handled significantly different on this model and as result ...the morning of September 6 only see some 40s over the Dakotas and northern Minnesota with most the Midwest is staying in the lower 50s.

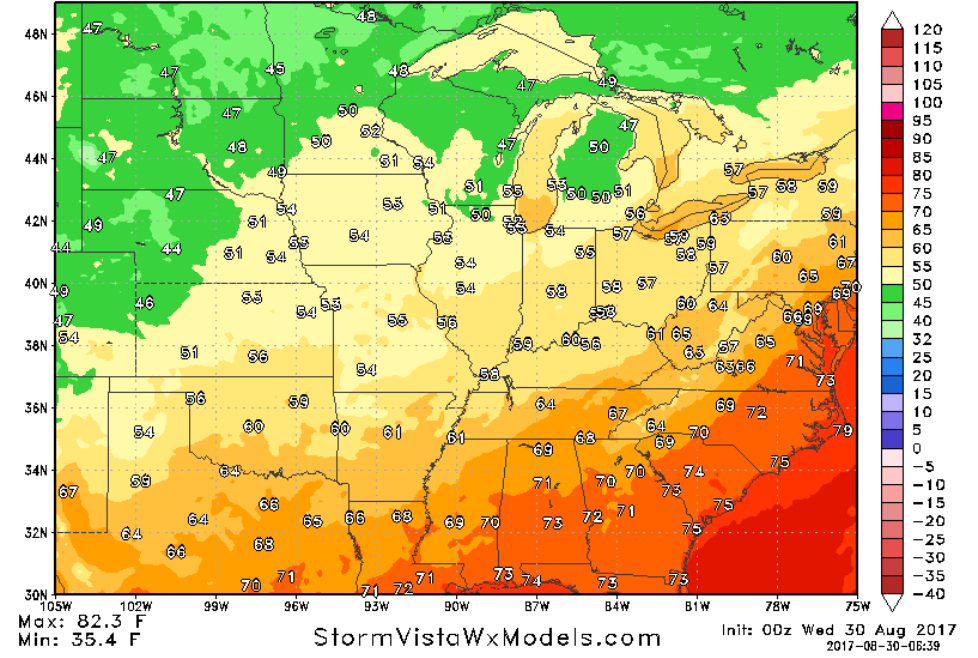
2 m Min Temperature (F)
Valid: 12z Wed 06 Sep 2017

GFS-MAXRES
Hour: 180



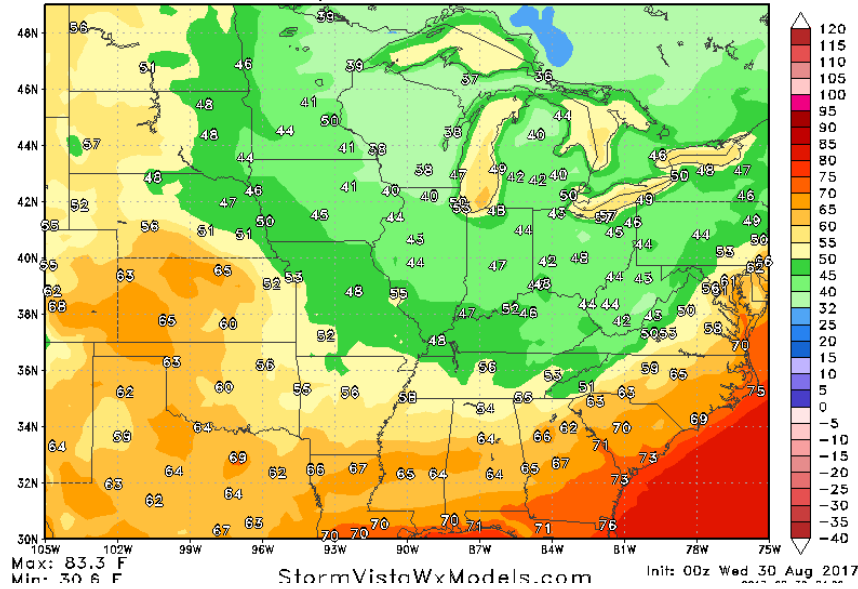
2 m Min Temperature (F)
Valid: 12z Wed 06 Sep 2017

ECMWF-MAXRES
Hour: 180

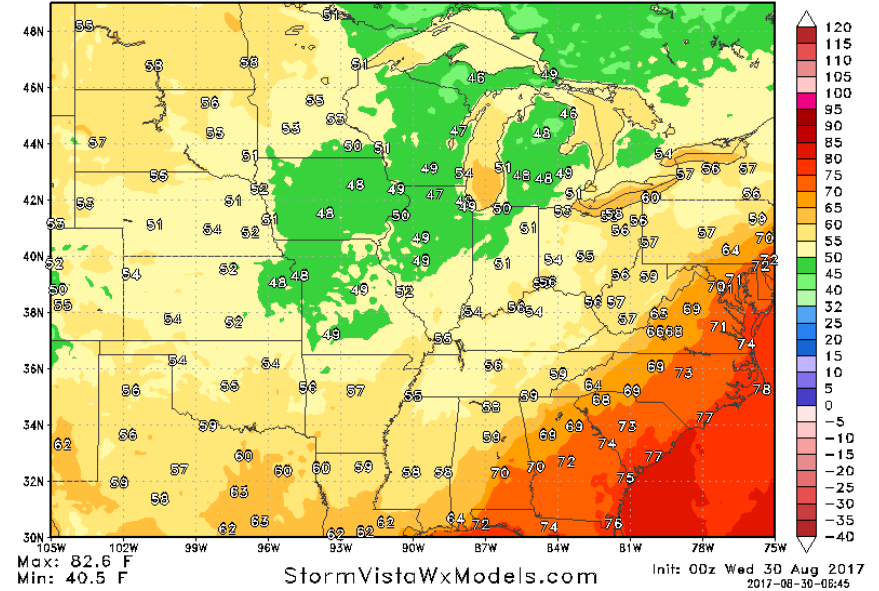


The morning of September 7 on the GFS model is even colder and it does show temperatures getting down to the middle 30s over eastern Montana ...far northeast Iowa and most the Wisconsin and low 40s over the rest of the Midwest region and this includes Kentucky... Tennessee ...eastern Nebraska and the eastern Dakotas. The European model the morning of September 7 there are few areas in Missouri Iowa ...Wisconsinand Illinois that would see temperatures in the middle 40s but that is about it and all other areas of the Plains the Midwest are in the 50s.

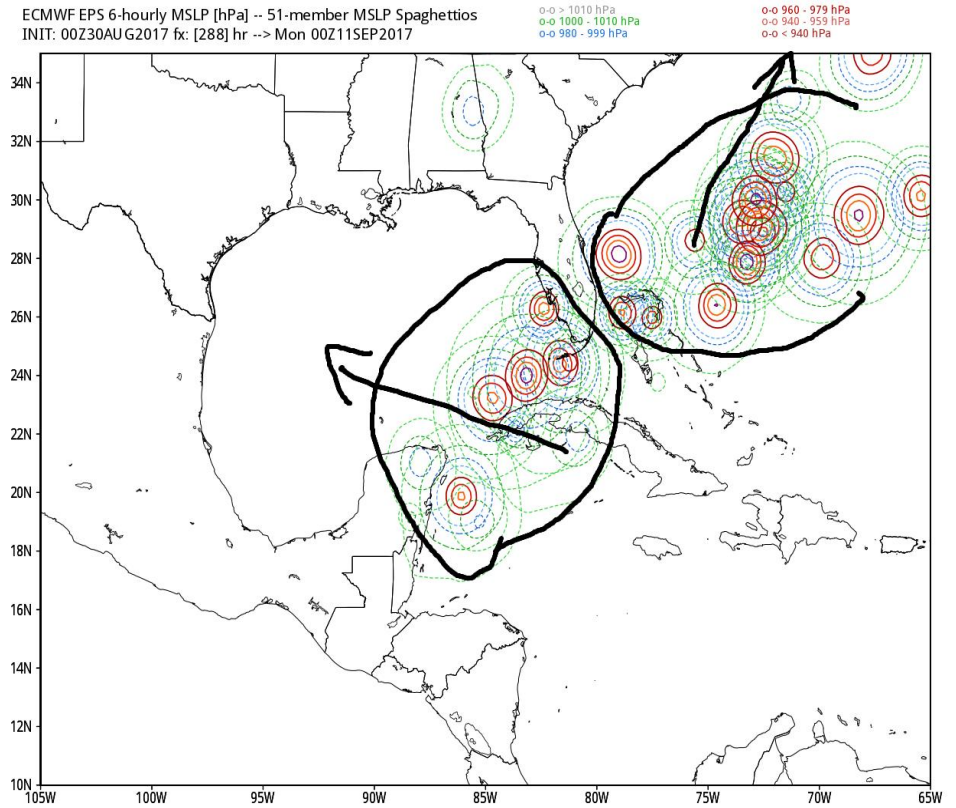
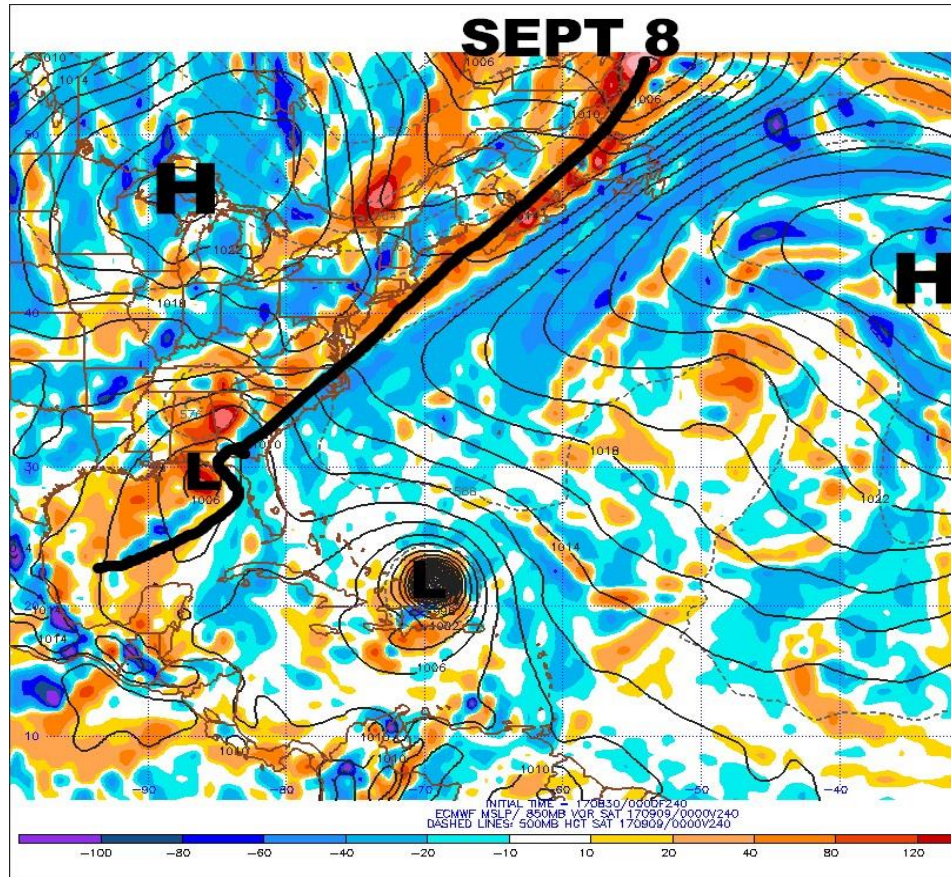
2 m Min Temperature (F)
Valid: 12z Thu 07 Sep 2017



2 m Min Temperature (F)
Valid: 12z Thu 07 Sep 2017



The European model continues to show a extremely powerful category 4 hurricane that passes north of Puerto Rico and approaches the Southeastern Bahamas on the morning of September 8. At the same time that strong cold front and a deep trough the jet stream will be approaching the East Coast. There is a lot of uncertainty here but most of the model data takes this hurricane and turns it to the north just skirting the Southeast us coast and perhaps passing close to Cape Hatteras North Carolina. It is also possible that the system stays south and cuts across the Bahamas in Florida into the Gulf of Mexico. Most of the model data does not support this scenario but a few in some bowl members do.



11-15 DAY

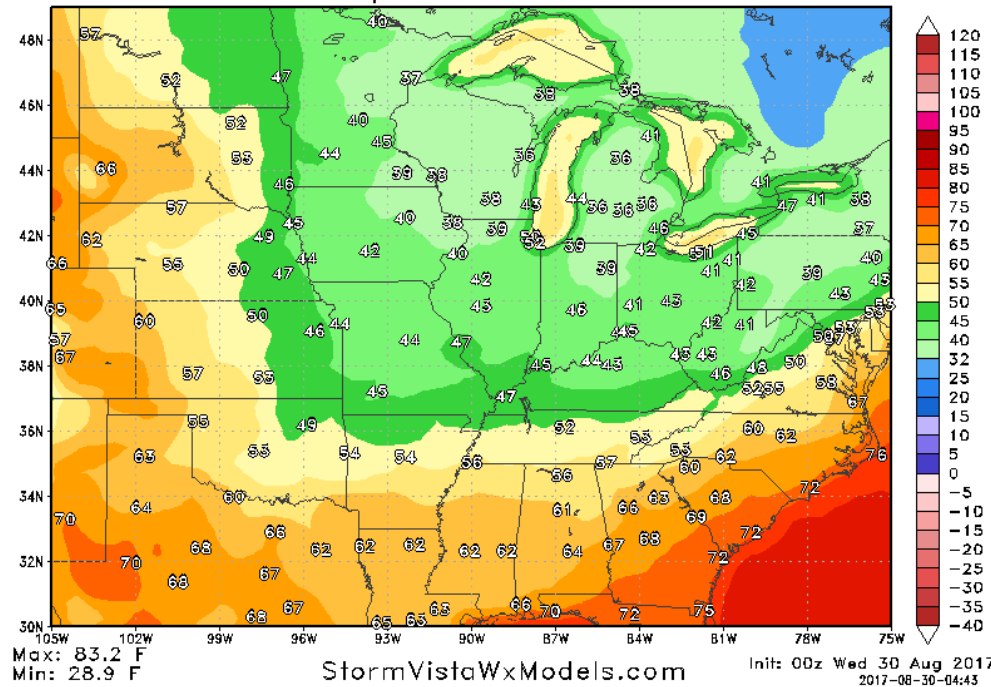
The morning of September 8 is not as cold with temperatures will stay mostly in the 50s but the Wednesday morning GFS has a second blast of chilly autumn like air which arrives on September 9 and 10th. The blast on the 9th appears to be the coldest with much of Iowa ... eastern Nebraska ..the eastern Dakotas ...all of Minnesota and Wisconsin ...and the northern third of Illinois seeing temperatures in the low to middle 30s which would be cold enough for a frost. The temperatures shift to the east on the morning of September 10 but there still could be another frost over eastern Minnesota ...all of Wisconsin ... northeast Iowa and Michigan

And the European model does not have a second blast of cold air which comes in on September 9-10h

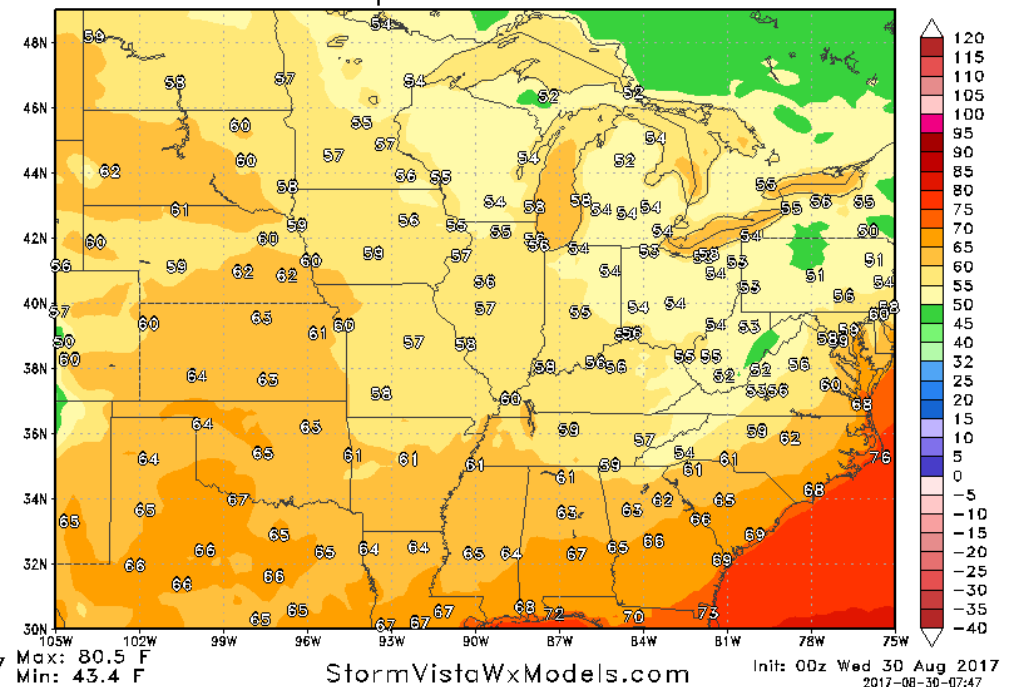
In this sort of model disagreement creates a lot of uncertainty with regard to the frost potential and it should. The updated GFS at 6z is however substantially warmer and closer towards the European model with regard to the frost potential on September 7-8. The 6z GFS model does not have the second cold shot on September 9 and 10th.

In addition the GFS ensemble also does not have the second cold shot on September 9 and 10th.

2 m Min Temperature (F)
Valid: 12z Sun 10 Sep 2017

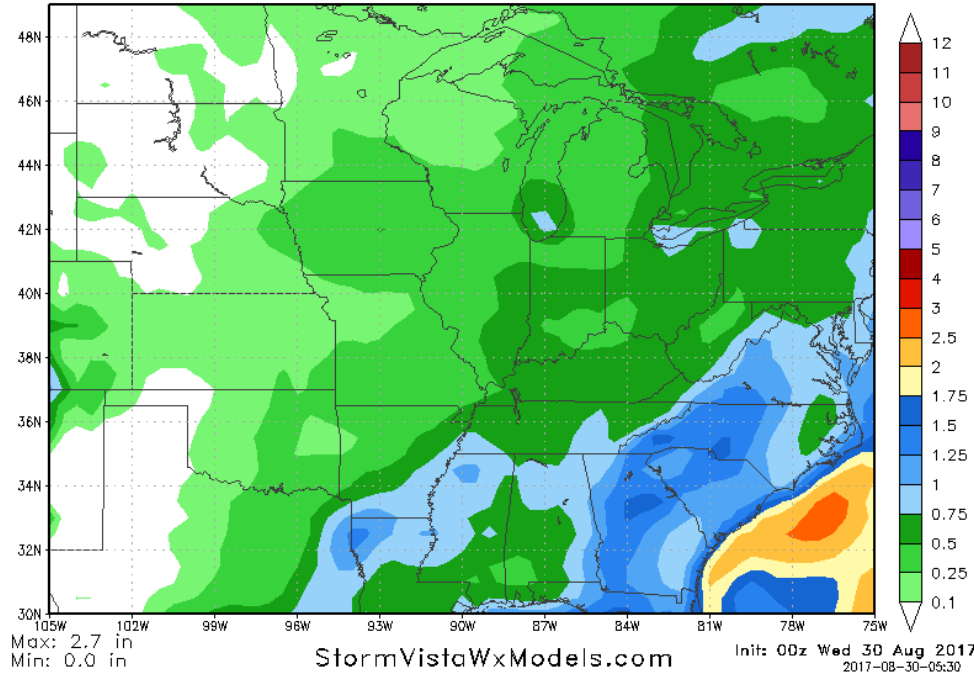


GFS-MAXRES 2 m Min Temperature (F)
Hour: 276 Valid: 12z Sun 10 Sep 2017

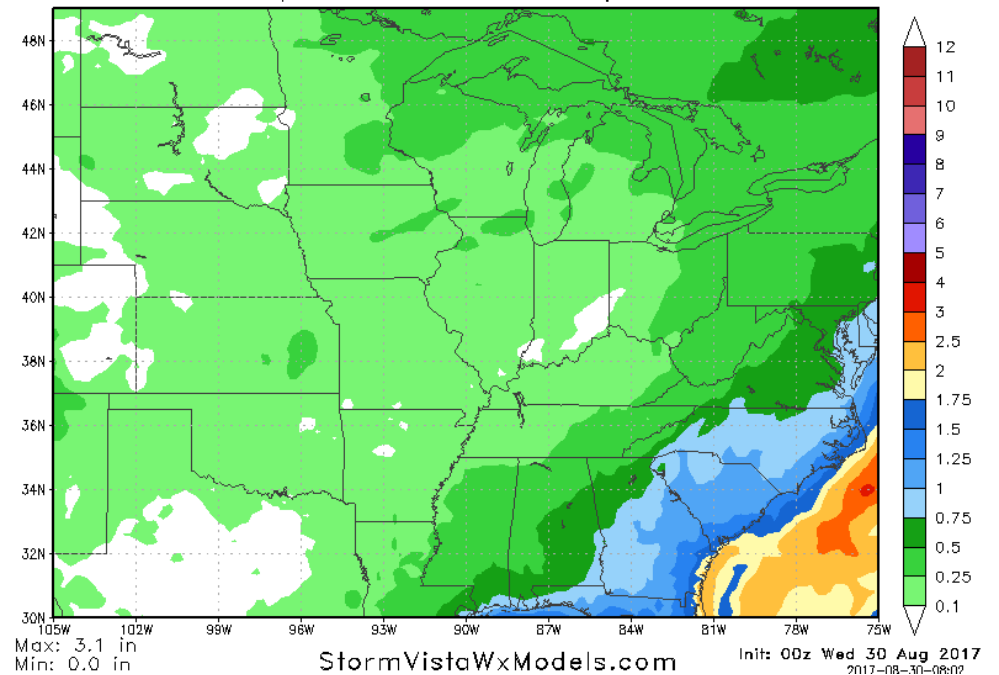


All models are fairly dry in the 11 to 15 day with the only significant rain along the East Coast and the Southeast states. Most areas of the plains and the Midwest or even drier are mostly dry and temperatures are very close to normal.

120 Hour Total Precipitation (in)
 Valid: 00z Sat 09 Sep 2017 - 00z Thu 14 Sep 2017
 GFS-ENS-MAXRES
 Hour: 240 - 360



120 Hour Total Precipitation (in)
 Valid: 00z Sat 09 Sep 2017 - 00z Thu 14 Sep 2017
 ECMWF-EPS-MAXRES
 Hour: 240 - 360



SUMMARY as we have been saying the **FROST SCARE** potential for after Labor Day is substantial but we believe most of the frost talk will be **OVER** done. If it occurs it will be only on September 6 or September 7. We do not think there will be a second cold shot on the 9th and 10th. If the frost occurs it will be mostly Minnesota and Wisconsin ..it might perhaps reach into far northeast Iowa but this is uncertain. We are still a long way from the event and long holiday weekend is going to cause more of an uncertainty factor with regard to how much frost may or may not occur

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