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Weather Forecasting For Traders, Investors, and Businesses

WX INSIDERS

VOLUME 1 ISSUE 40 6 MAY 2017

TRADERS GUIDE TO BASIC UNDERSTANDING OF TELECONNECTIONS

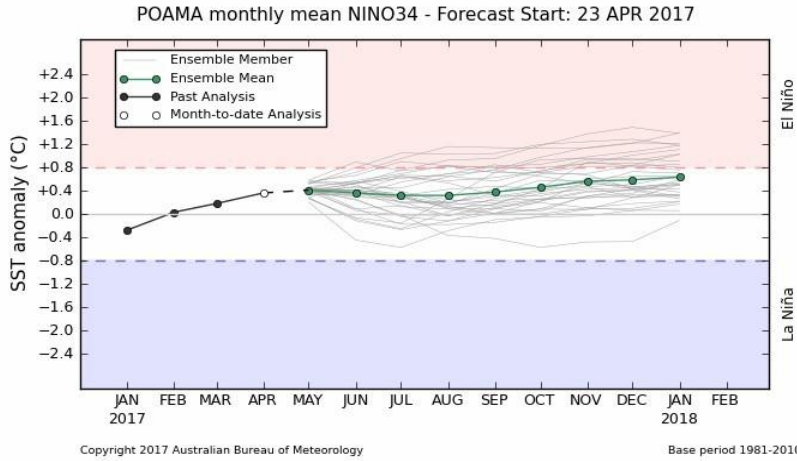
(what they are.. what they mean and how they work)

SUMMARY

In this edition of WEATHER INSIDER the focus will be two important aspects of the weather. FIRST the latest projections from the various El Nino models which continue show a weakening of the threat of an El Nino as we move into the Summer months. Obviously this has significant locations for the U.S. Grain ... South American grain markets as well as Australia ...India as well as Southeast Asia.

The SECOND issue has to do with the extended forecasts specifically in the 6 to 10 day forecast as of Thursday, May 4 and whether or not there is or is not going to be another rainy interval over portions of the central Plains and / or the Midwest next week. The weather models are having a great deal of difficulty figuring this out be cause of the convoluted extreme weather pattern that we have seen developinng over the western hemisphere over the past few days

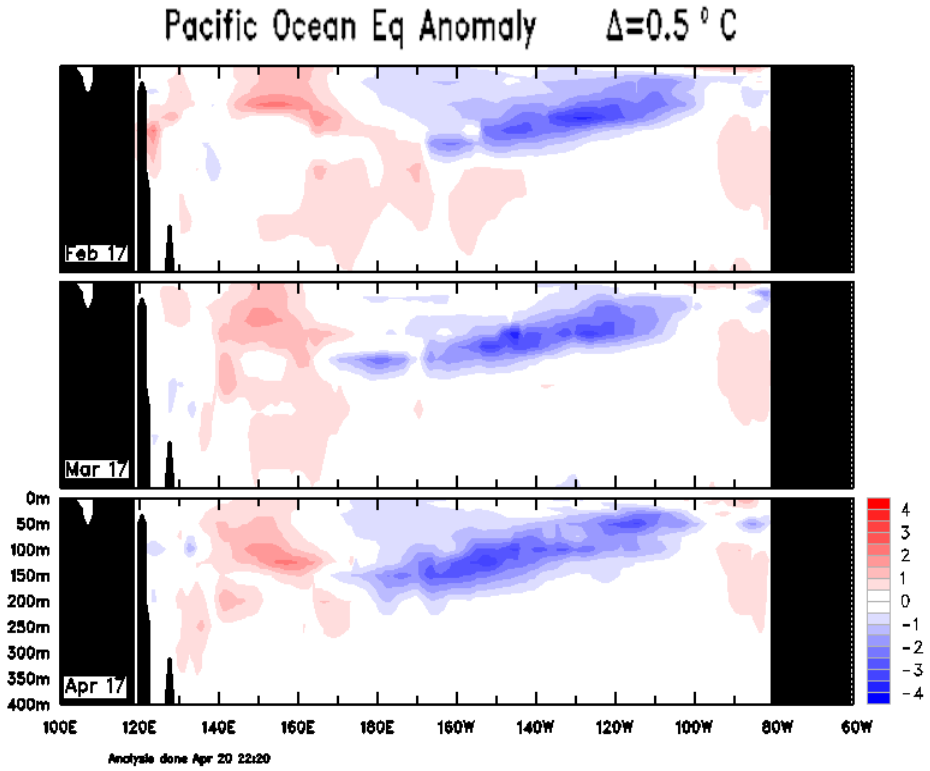
This image shows the latest projections from the Australian weather folks and as you can see ... their El Nino forecast continues to show a non event with respect to El Nino as we move into the Summer months. I have shown this map before but this is the latest update. (They should be a new update in the next few days). Technically Sea surface Water temperatures in the El Nino region along the equatorial Pacific are warmer than normal but they are not warm enough to qualify as an El Nino. But as you can see from the image clearly the Australian El Nino model is not forecasting conditions warm enough for a El Nino this Summer .



NINO34 probabilities

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017
NINO34 (°C)	0.4°C	0.4°C	0.3°C	0.3°C	0.4°C	0.5°C	0.6°C
below -0.8 °C	0%	0%	0%	0%	0%	0%	0%
neutral	100%	97.0%	90.9%	81.8%	84.8%	81.8%	66.7%
above +0.8 °C	0%	3.0%	9.1%	18.2%	15.2%	18.2%	33.3%

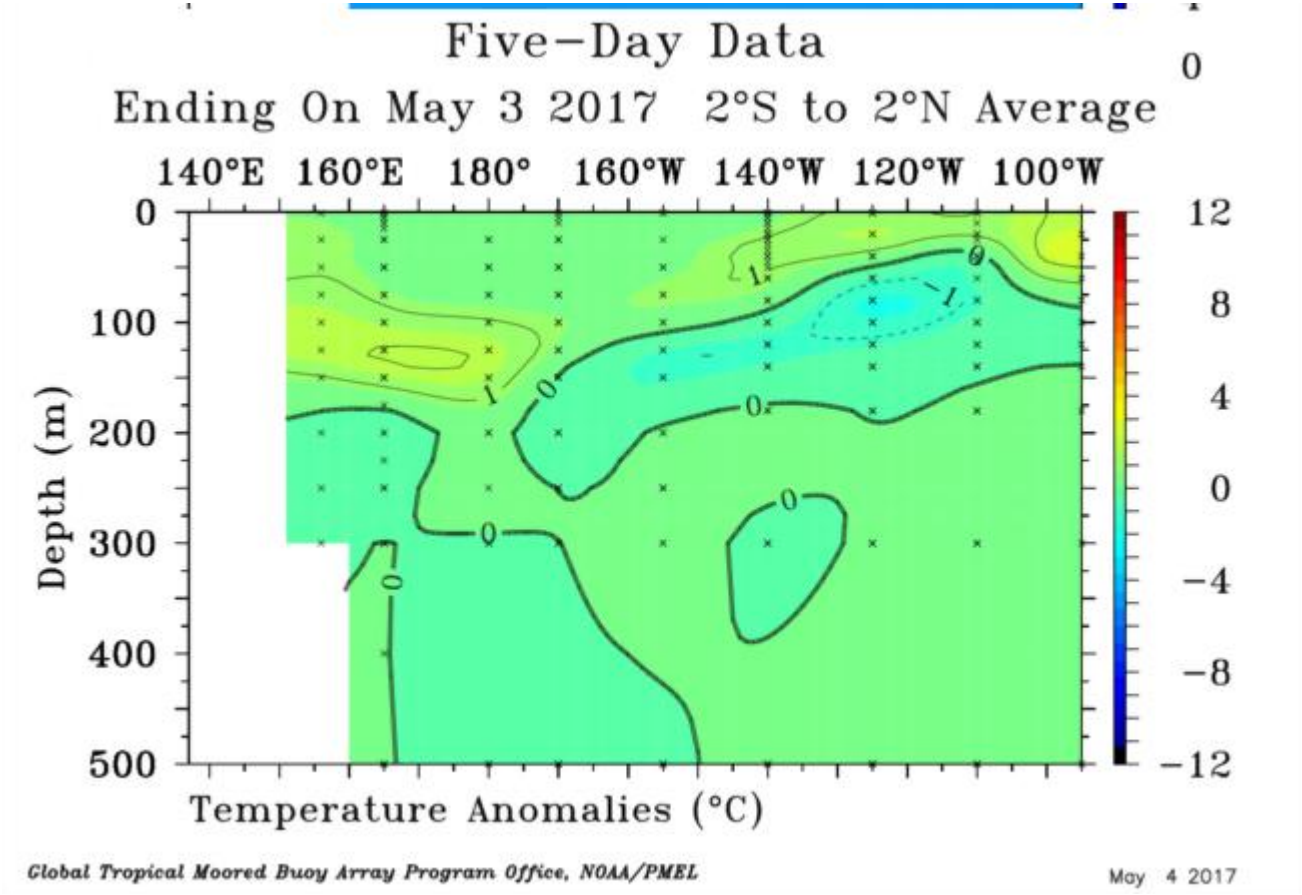
note the low % of El Nino in JUNE JUL AUG



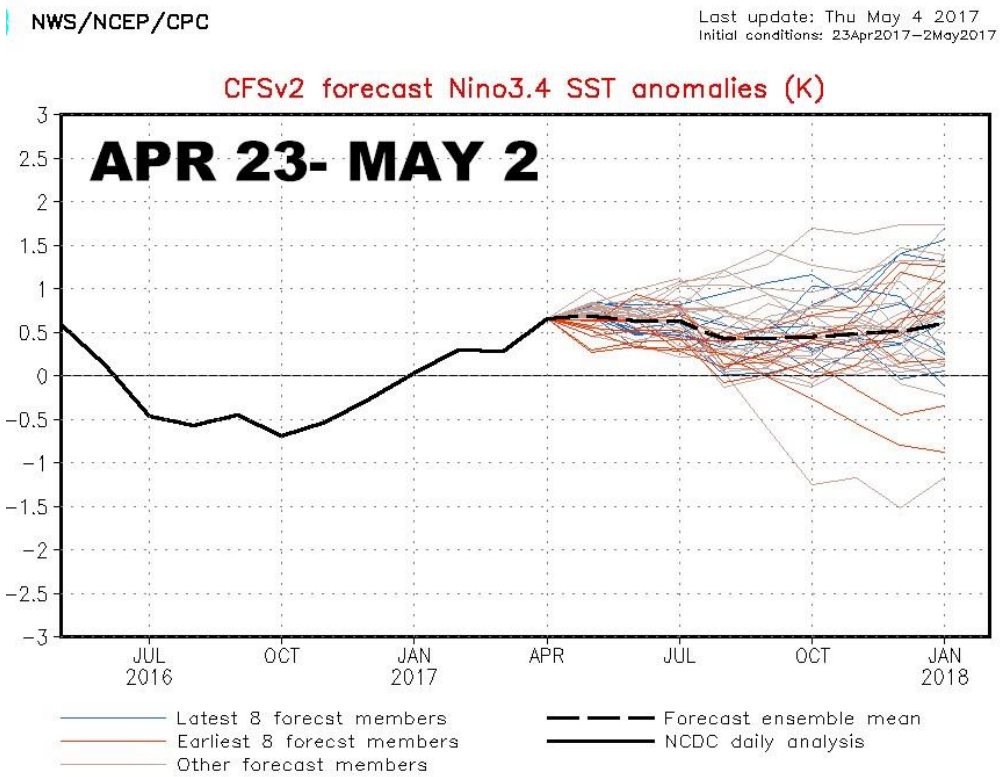
In fact the image on the ABOVE RIGHT shows the sub surface temperatures over the last several weeks across the equatorial Pacific from the surface down several hundred meters. As you can see there is a large pool of cold water which has been persistent since

February just below the surface of the El Nino regions. This is a very bad sign with respect to developing El Nino events. The reason is because El Nino and La Nina events both develop up from deep in the subsurface ocean water temperatures up and move up to the surface. Therefore if the Subs surface water temperature Anomalies are chilly there is little reason to think that the sea surface water temperatures will warm up and reach the El Nino criteria.

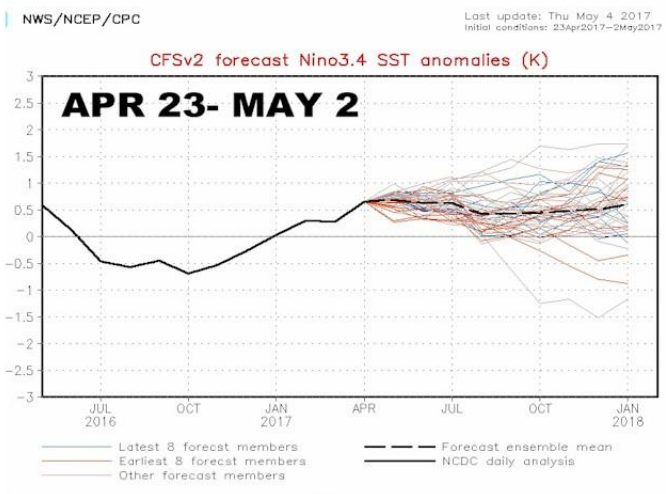
This is the latest subsurface temperature plots from the NWS CPC folks and we can see the same sort of thing. Right along the immediate surface and the upper right corner ... the Sea surface temperatures anomalies are n marginally warmer than normal. But just underneath that there is a large pool of below normal water temperatures.

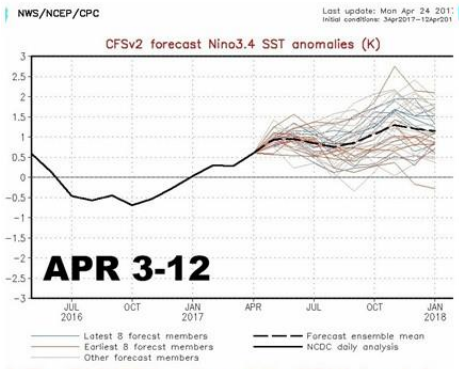


Here is the latest CFS model projection as of May 2 for El Nino region of 3.4 at which is the critical region which determines El Nino / La Nina conditions. What is important to note here is that the dashed Black Lines which show the mean of all the different model projections remains quite flat and does not show El Nino conditions developing over the next several months. This is a fairly close agreement with the Australian model.

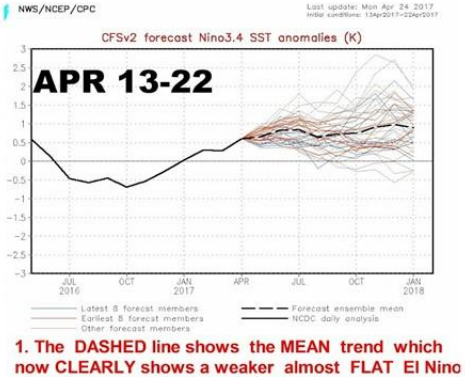


in this next image we compare the current CFS model projection with the recent CFS models from back in late march and April. As you can see the trend is clearly shifting weaker and weaker away from El Nino.





1. The DASHED line showed the MEAN trend of steady slow increase JUNE JUL AUG SEPT



1. The DASHED line shows the MEAN trend which now CLEARLY shows a weaker almost FLAT El Nino well below +1.0c 2. BLUE lines= NEWS RUNS & most of them show NO El Nino at all

The implications of this are significant because the trade clearly anticipates a El Nino developing in the U.S. this Summer which implies abundant rainfall and a lack of sustained heat over any portion of the Plains bnd the Midwest. If in fact we did not see a El Nino developing it does not necessarily mean we are going to see a hot dry summer. It does however mean that the weather market factor is back in play and we could see regional issues to develop in certain areas at certain times. With the El Nino off the table - assuming that is correct - it also brings for the first time the possibility of a hot and dry summer for various portions of the Plains and Midwest.

I will not speculate as to when the trade recognizes that the El Nino scenario is no longer in play --- such speculation is beyond my purview . But I will state however that any Summer forecast that is being considered based upon a weak to moderate El Nino event developing this Summer have to be taken with a large amount of salt and the forecaster or weather information provide which issued a Summer forecast based on El Nino has to redo it or release an alternate scenario.

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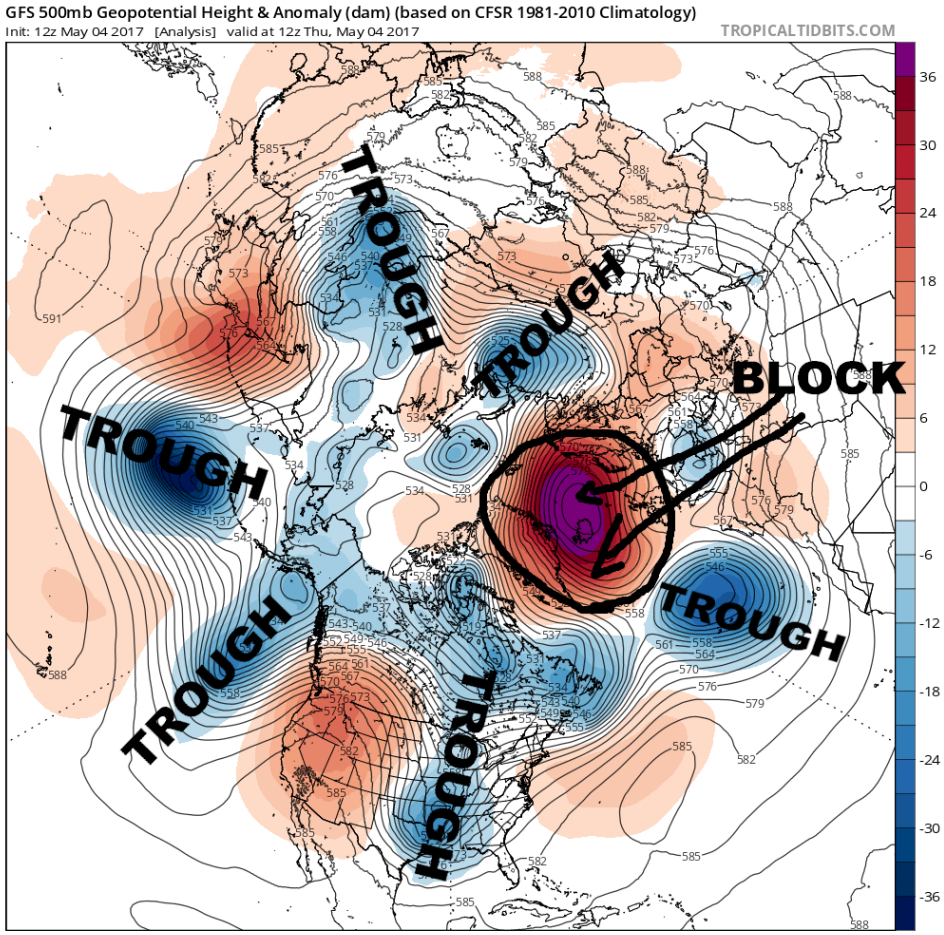
When Meteorologists and weather forecasters use the term "BLOCKING PATTERN" we are referring to an unusual configuration which has developed in the jet stream -usually at the mid levels or upper levels -- 500 mb or 200mb. The term "BLOCKING PATTERN" refers to a large upper low which has closed off or separate itself from the main jet stream (picture an eddy or small whirlpool in a stream which spins around for several hours before Dissipating).

The term "BLOCKING PATTERN" can also refer to a area of very warm air which is seen as a bulge or mountain of very warm temps (relative to its surroundings). This is referred to a RIDGE or DOME of High pressure in the jet stream. (picture an island which exist in the middle of the small stream or creek).

In both cases such features can and do have significant impacts on the overall weather pattern for thousands of miles in either direction.



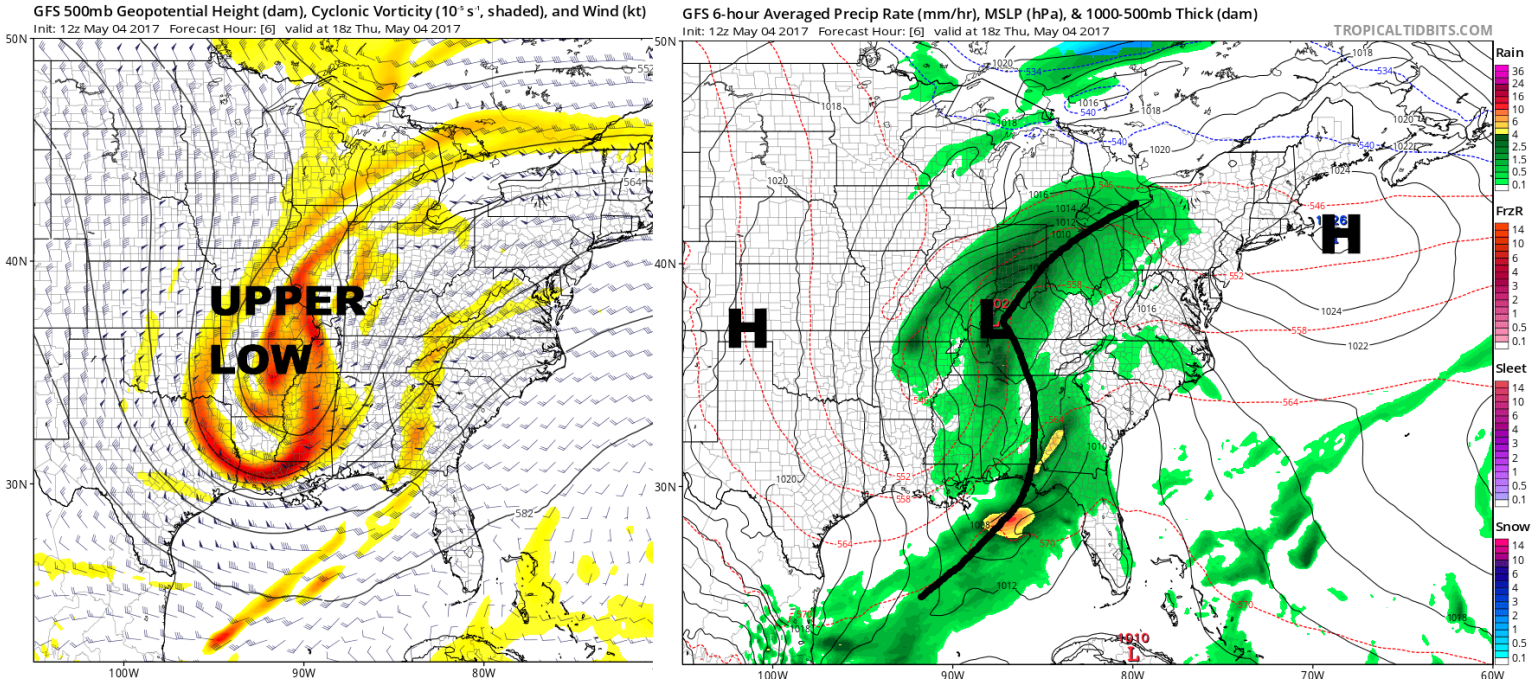
This image shows the jet stream map valid as of Thursday, May 4. We have highlighted some key features but the most important feature is the "BLOCKING PATTERN" which has developed over eastern Canada and Greenland. And we have highlighted this feature so you can see where it is exactly.

This block over Greenland is extremely powerful and quite unusual. The last time we saw a block that strong over Greenland in the month of MAY was back in the season of 1993.... which as I am sure you recall also featured widespread heavy rains and flooding. **Of course that just because that one atmosphere of parameter matches the 1993 season does not mean we are looking at another flooding season like had in 1993 over the Midwest. But there are other parameters where 1993 shows up such as the sea surface temperature anomalies in the Atlantic Ocean and the QBO feature.**

The point here is that the 1993 analog keeps coming up in various different parameters. That does not mean one should

now forecast a return to massive historic flooding that we saw in the Summer of 1993. But it should provide some support for the idea that some portion of the plains and Midwest could end up with a wetter than normal summer. And the possibility exists for an excessively wetter than normal Summer in some areas.

Now we turn to the actual forecasts issues. This image is the current surface and upper air map as of Thursday morning May 4. The strong intensifying area of LOW w pressure over the Tennessee Valley is the feature that has brought in the new round widespread flooding rains to much of northern Arkansas ...eastern and southern Missouri ...the southern half of Illinois ..most of Indiana and Ohio. This LOW is going to move up the spine of the Appalachians on Friday then into New England because the developing upper Low drags the also moves from TN to Maine. Once this big Low moves up into New England it will push up against the block over Greenland then stall.



The result of the stall will cause a deep and persistent trough to cover the eastern half of the country throughout this weekend into much of next week. This will keep temperatures below normal for the upper Plains and all the Midwest for next few day. For the areas east of

Mississippi River the temperatures will remain below normal right to the middle of MAY. Areas west of the Mississippi River will see temperatures will recover rapidly by Sunday May 7

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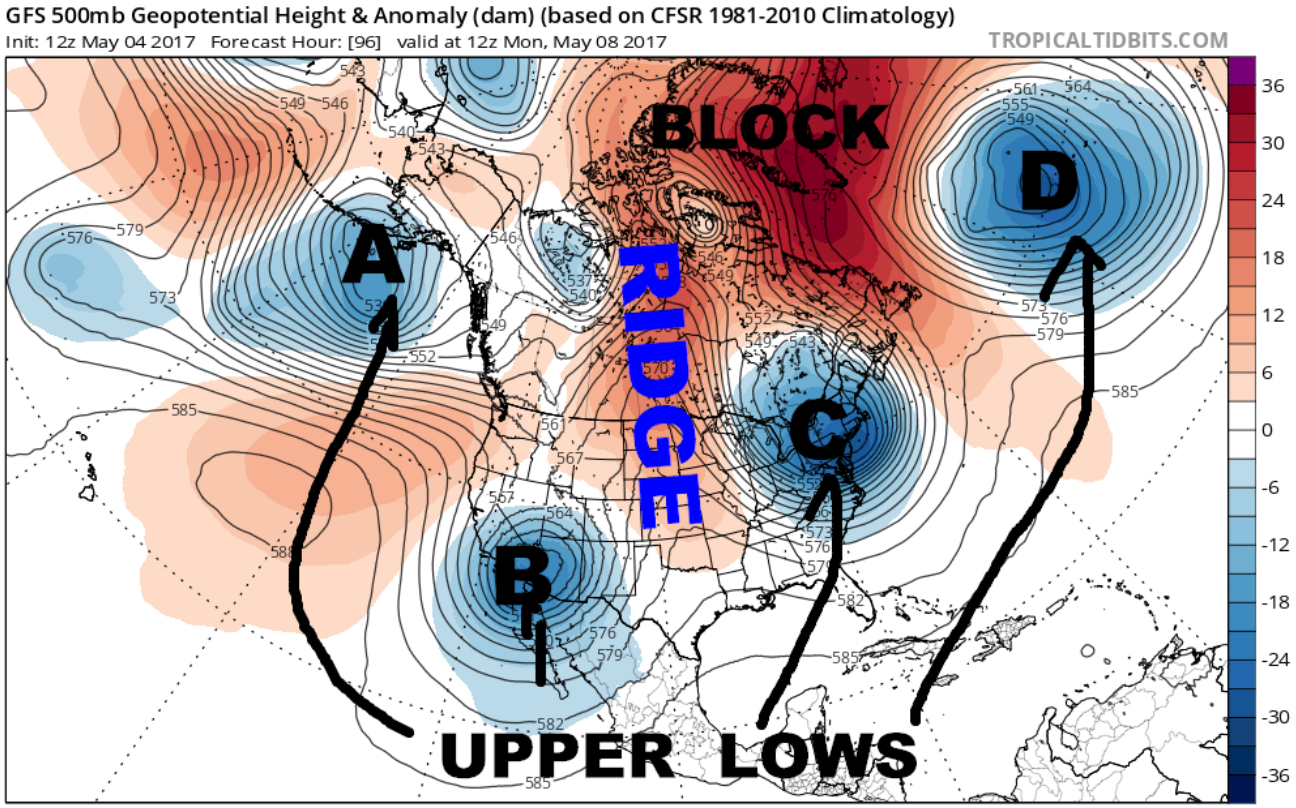
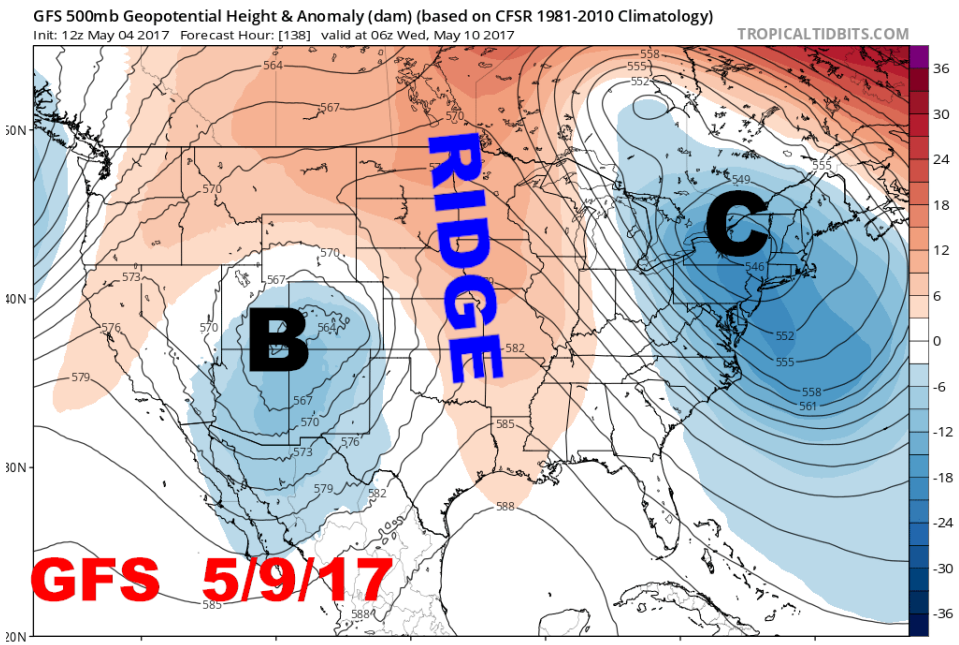
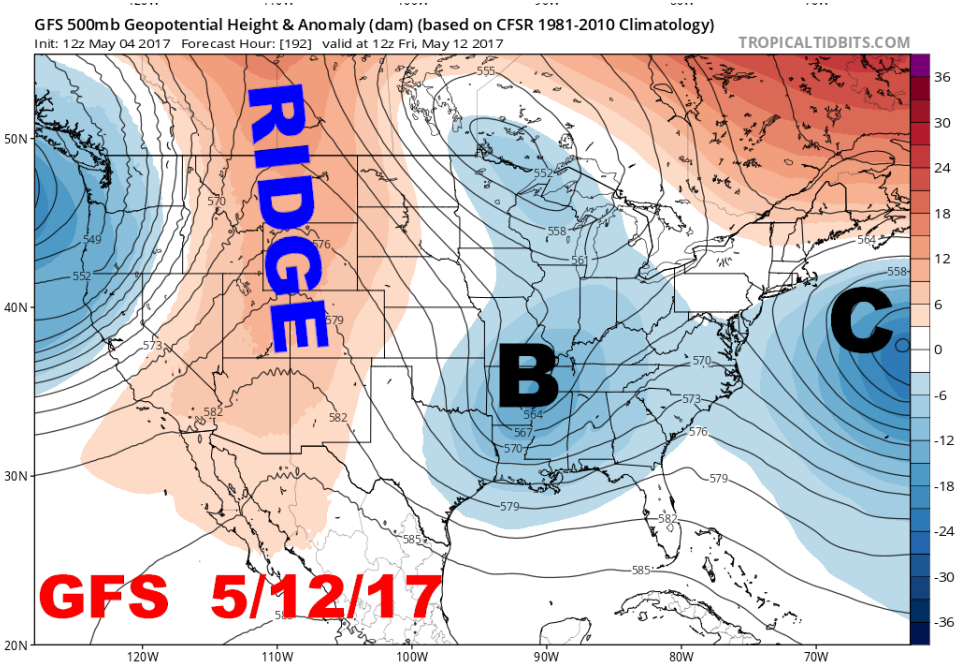


Notice on this image that we can see another strong system coming in from the Pacific Ocean which moves into California and the Rockies this weekend. However because the blocking pattern over Greenland and the large Upper Low and deep trough over southeastern Canada and New England for next week... this big upper Low over the West Coast and Rockies also becomes trapped in the atmosphere.

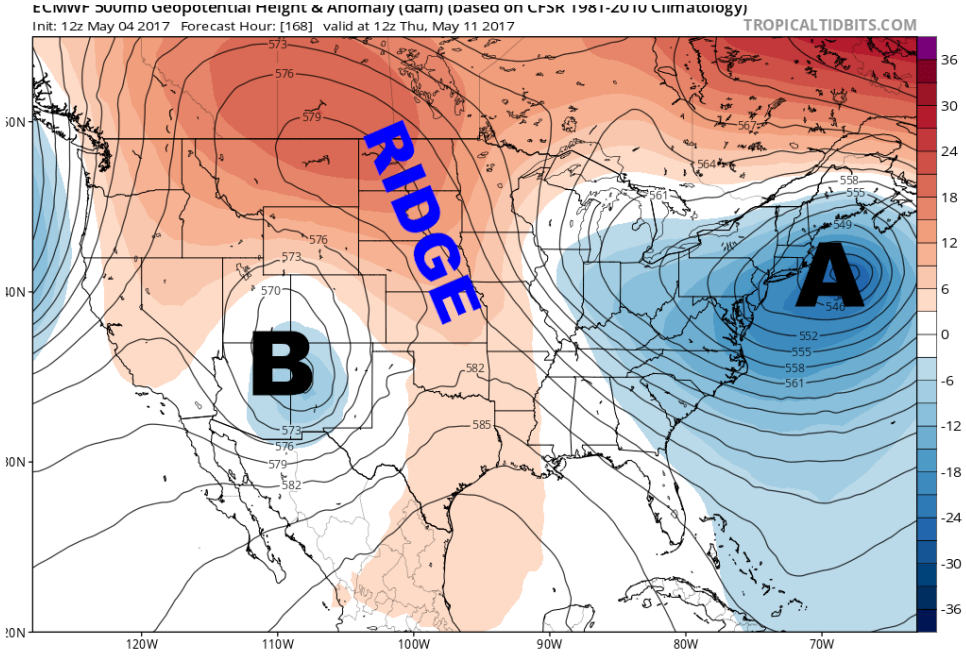
In between the Upper Low coming in from the West coast and the Rockies and the deep trough upper low over Southeastern Canada is a ridge develops over the Plains states.

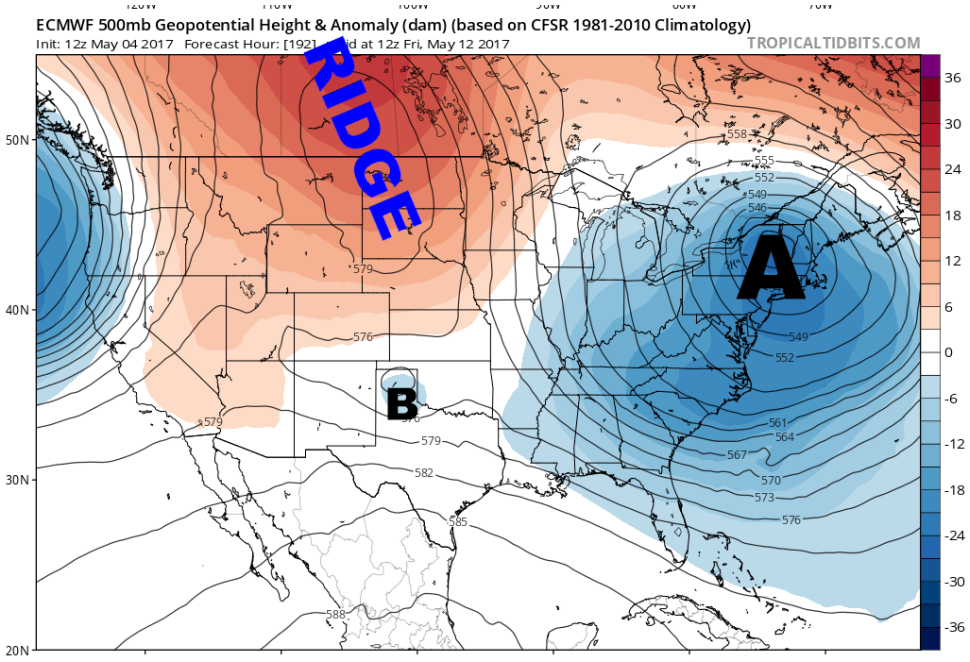
The reason that the various weather models are having trouble with has to do with the movement of this Upper Low as it comes out of the Rockies. One scenario has this feature "undercutting" large ridge over the Plains. In doing so it becomes a significant Low pressure area and rainmaker for the central Plains and much of the Midwest including Missouri ...Illinois ...Indiana ...Kentucky... and Ohio. The GFS model has been showing this solution for days.





But there is another scenario says that this Upper Low gets trapped over the Rockies and the Plains and by the time it reaches the Midwest ... it has completely fallen apart. In this scenario they would only be significant rains in the 6-10DAY and over the central Plains. The Midwest region would be a more or less dry.

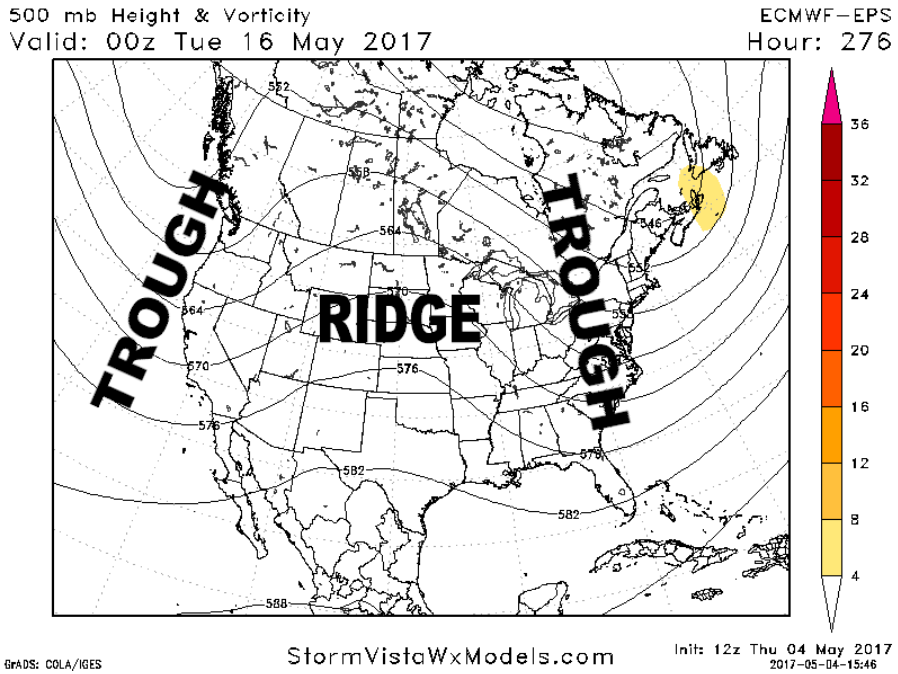


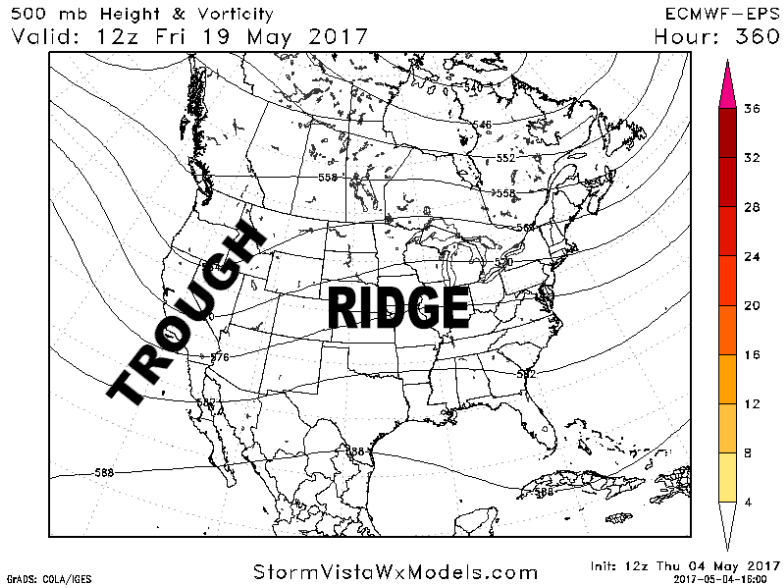


A case can be made for either scenario working out and being the 6-10 day solution. The model solutions that show the Upper Low over the Rockies undercutting the big Ridge over western Canada and the northern U.S. Rockies ends up producing significant rains over Kansas Nebraska Missouri Arkansas Illinois and Indiana. But the other scenarios which show this system falling apart as a reaches the Mississippi River are substantially drier.

Beyond this threat eventually the deep trough and Upper Low over northeastern Canada and New England break down and fall apart. This allows for a significant ridge to form over the Plains and the Midwest and the 11 to 15 day looks a lot warmer and drier than it did only few days ago.

That being said it should be pointed out that there is another deep trough coming in from the Pacific Ocean California. That feature has the potential to bring more rain in the 16 to 20 day to a good portion of the Plains and Midwest.





David Tolleris ('DT') http://wxrisk.com
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