

WEATHER NOTIFICATION STATEMENT



FROST / FREEZE CHANCES THURSDAY SATURDAY & SUNDAY MORNINGS

STATEMENT #1 ISSUED 1700 hrs

6 MAY 2020

SUMMARY

This WEATHER NOTIFICATION STATEMENT is being issued because of

1) the threat of a Frost / Freeze in the Virginia Piedmont, the Shenandoah Valley, western Maryland southwest Virginia and portions of West Virginia on THURSDAY morning, Saturday morning MAY 9, and Sunday morning MAY 10.

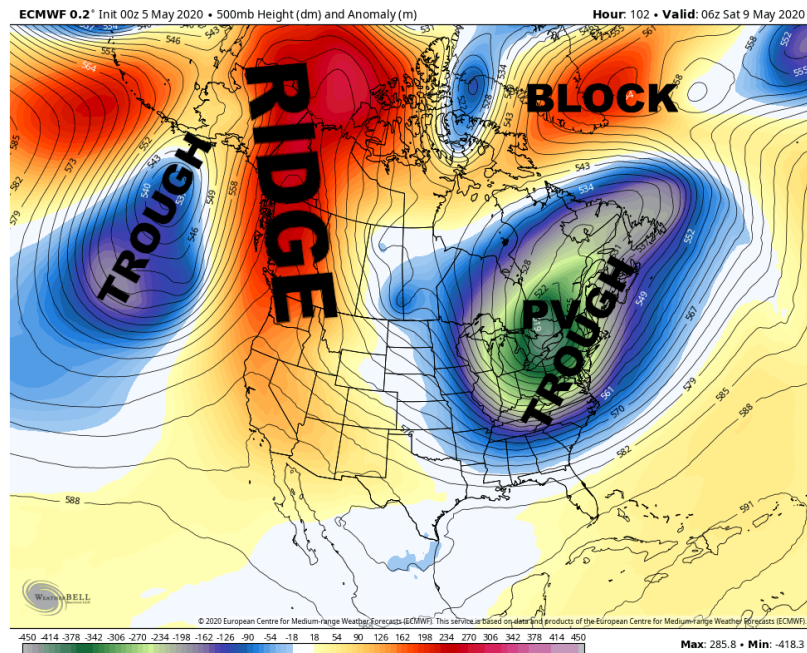
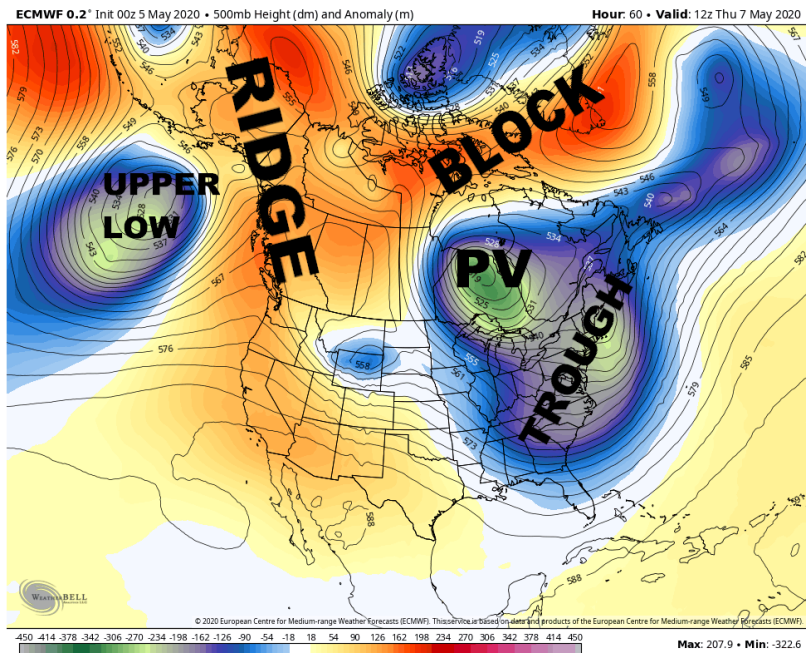
DETAILS

It certainly has been a very unusual spring with several significant cold air outbreaks which have produced important Frost and freezes across much of the Middle Atlantic region but especially in the Shenandoah Valley in Southwest Virginia areas as well as some portions of the Virginia Piedmont. This is somewhat unusual because the winter was so non-winter like and so non-threatening but instead of that mild pattern continuing we've moved into a very active and changeable spring season.

Yes we do have several significant cold air blasts coming over the next few days. Let's briefly explain why we have these cold blasts

are coming in from central Canada and why these blasts will reach all the way into the Middle Atlantic region as well as much of the Midwest and the Ohio Valley.

This image shows what is going to develop over the next several days. The jet stream is going to undergo a serious “convulsion” which is going to cause the pattern to become very extreme or amplified. In short, the jet stream pattern for the next week is going to resemble that of the middle of Winter as opposed to the middle of Spring. There is even a good chance that this weekend will see snow in mountains of northern Pennsylvania New York State and northern e New England which could accumulate. This is the kind of weather pattern that produces a severe widespread arctic outbreak if it were to occur in the middle of winter. Instead it will bring significantly below normal temperatures to all the Midwest as well as the East Coast for several days.

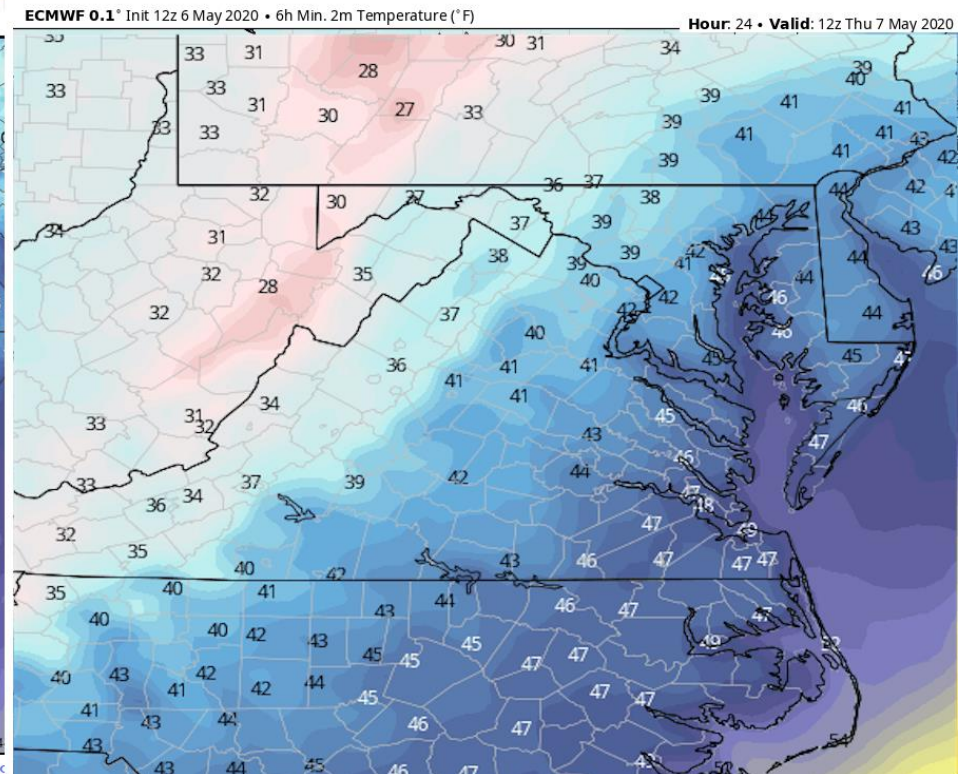
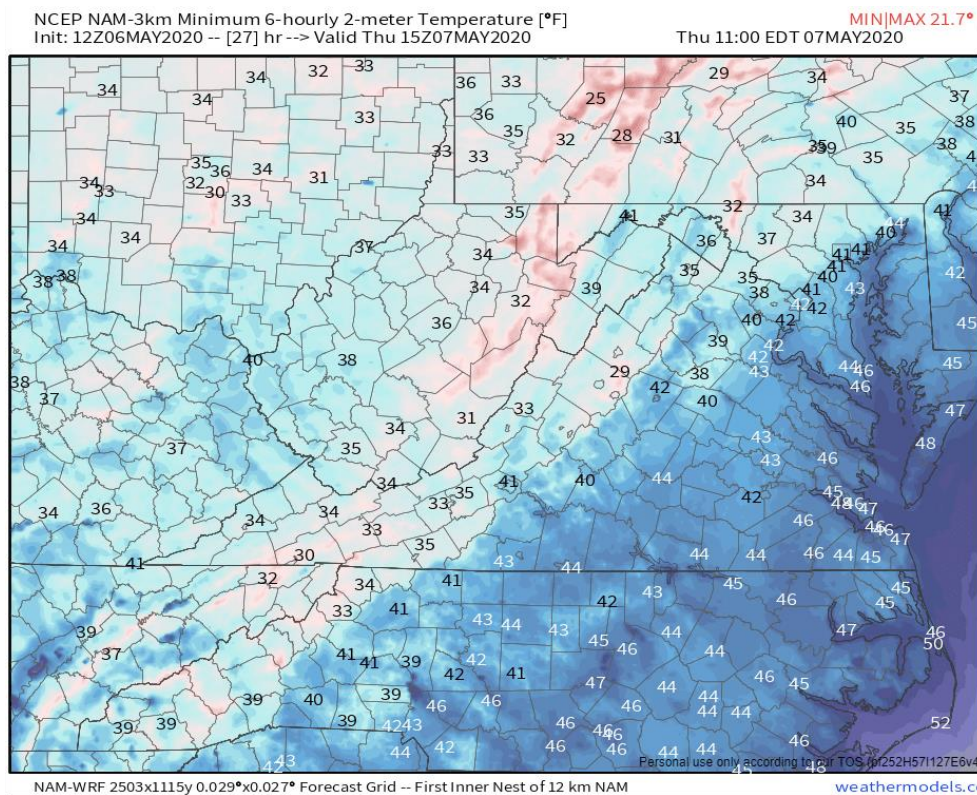


What is going to happen is that a strong bubble of warm air in the jet stream --which in the weather business is referred to as a “blocking pattern” now in Greenland will continue to retrograde (move backwards) onto northeast Canada. This in turn will force a piece of the Polar Vortex (PV) to drop southward into eastern Canada and eventually passing over the northern portions of the Great Lakes by this weekend. This will force a strong cold front out of Canada that will sweep through the Plains the Midwest ...and the East Coast ..on May 7-8. The cold front will bring significant rain to Ohio and Tennessee valleys on Thursday which will reach the East

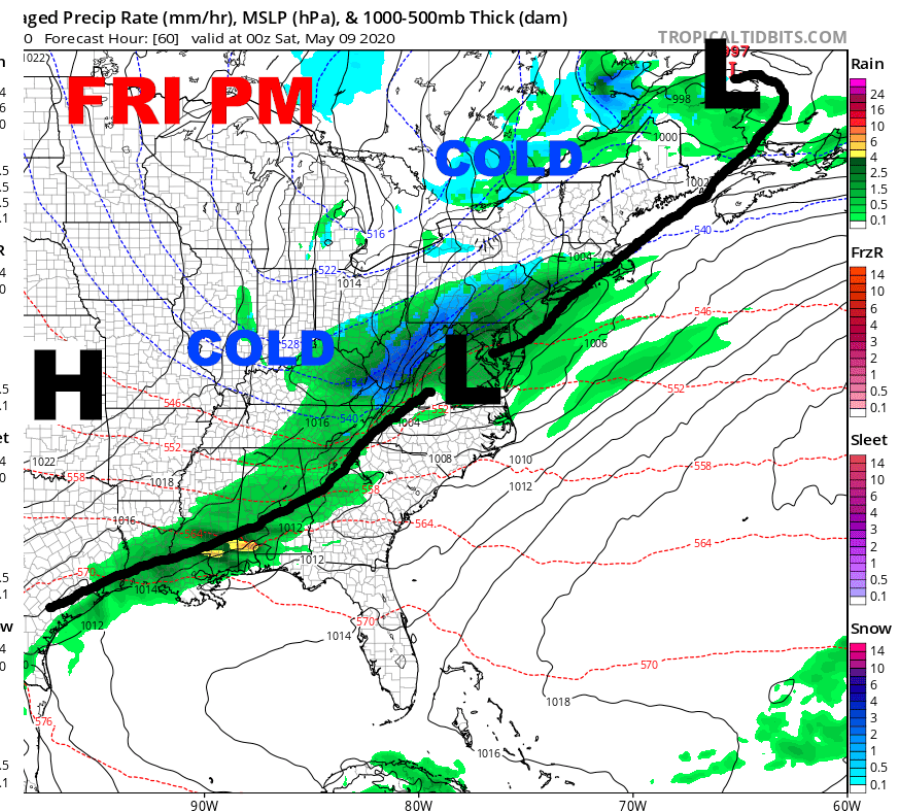
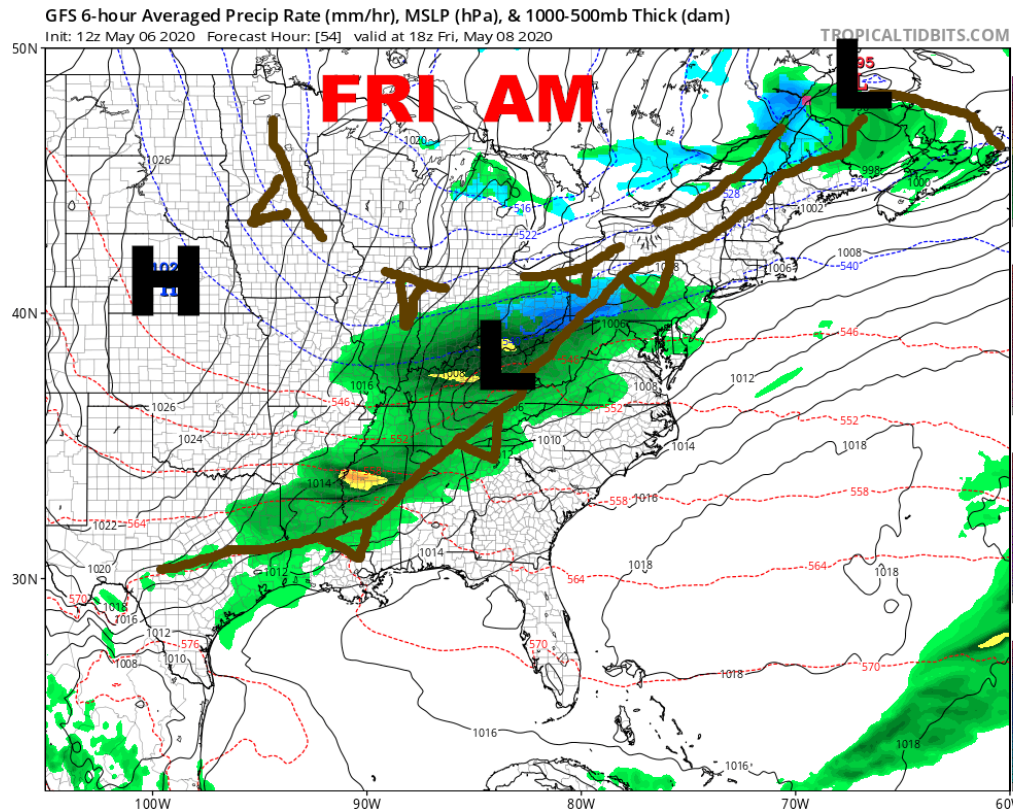
Coast on Friday. As the cold air comes pouring southward some of the rain COULD change to snow in portions of northeast West Virginia and western and northern Pennsylvania late on May 8 and into the morning of May 9 across northern New England.

With respect to the actual weather conditions in Virginia Piedmont and the Shenandoah Valley there are three mornings that we need to focus on: Thursday morning May 7th, Saturday morning May 9th, and Sunday morning May 10th.

THURSDAY MAY 7 : Temperatures will be fairly cold west of the Blue Ridge throughout most of the Shenandoah Valley as well as all of Southwest Virginia ... western Maryland and most of West Virginia. Readings will range between 32 and 36 degrees in most of these areas. This could be cold enough to support a frost in some areas **but the low-level surface winds will still be quite strong during the early morning hours on Thursday - between 7 and 12 mph . This will prevent any sort of significant Frost in most of these areas.**



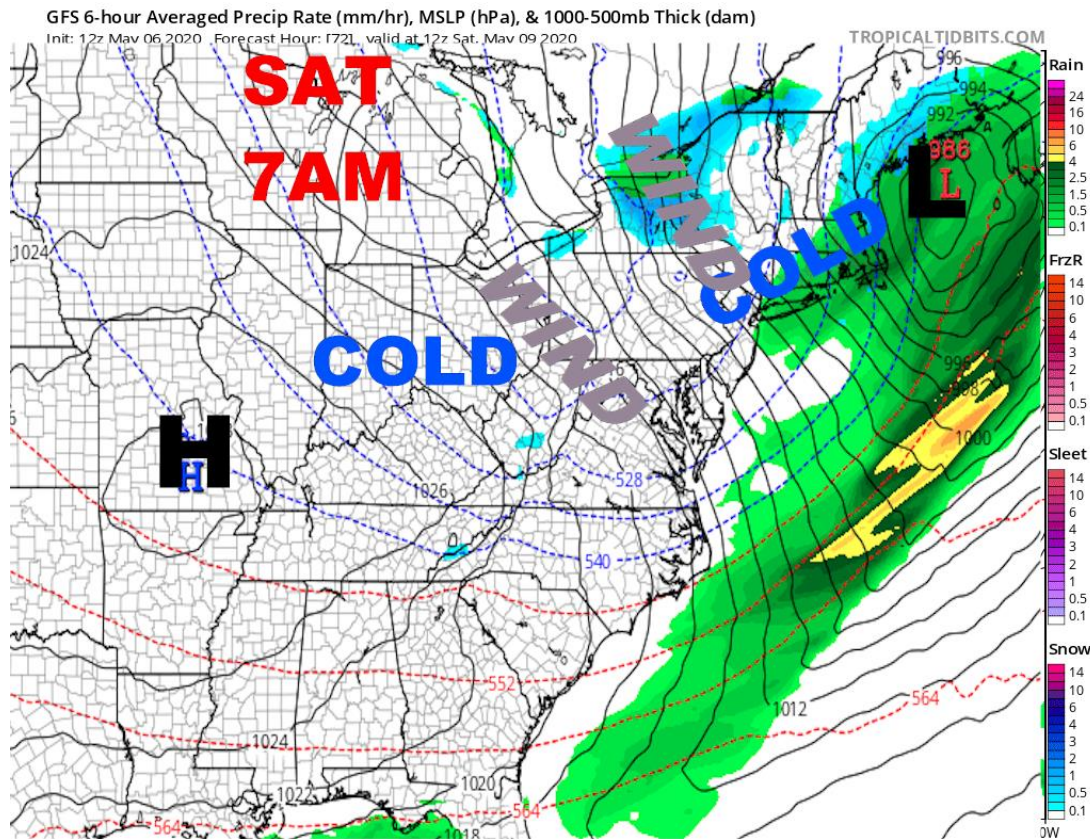
FRIDAY MAY 8: It will be a much milder morning as winds will be out of the Southwest and clouds will be increasing ahead of the strong cold front coming in from the Ohio Valley. Readings in most areas will stay in the 40s. Rain will move in from west to east Friday midday into the evening hours with the rain ending early Friday evening.



SATURDAY MAY 9

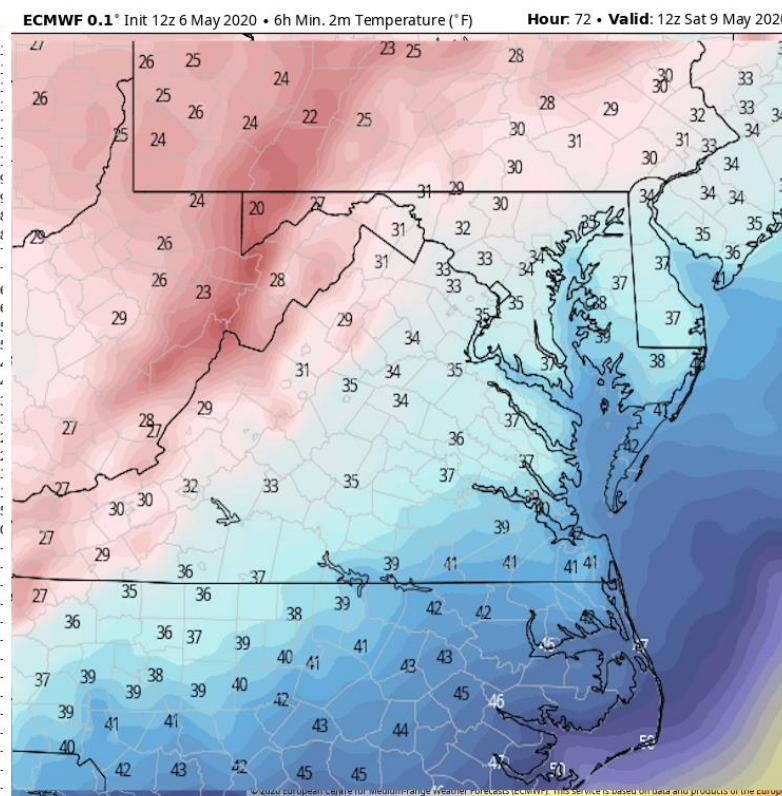
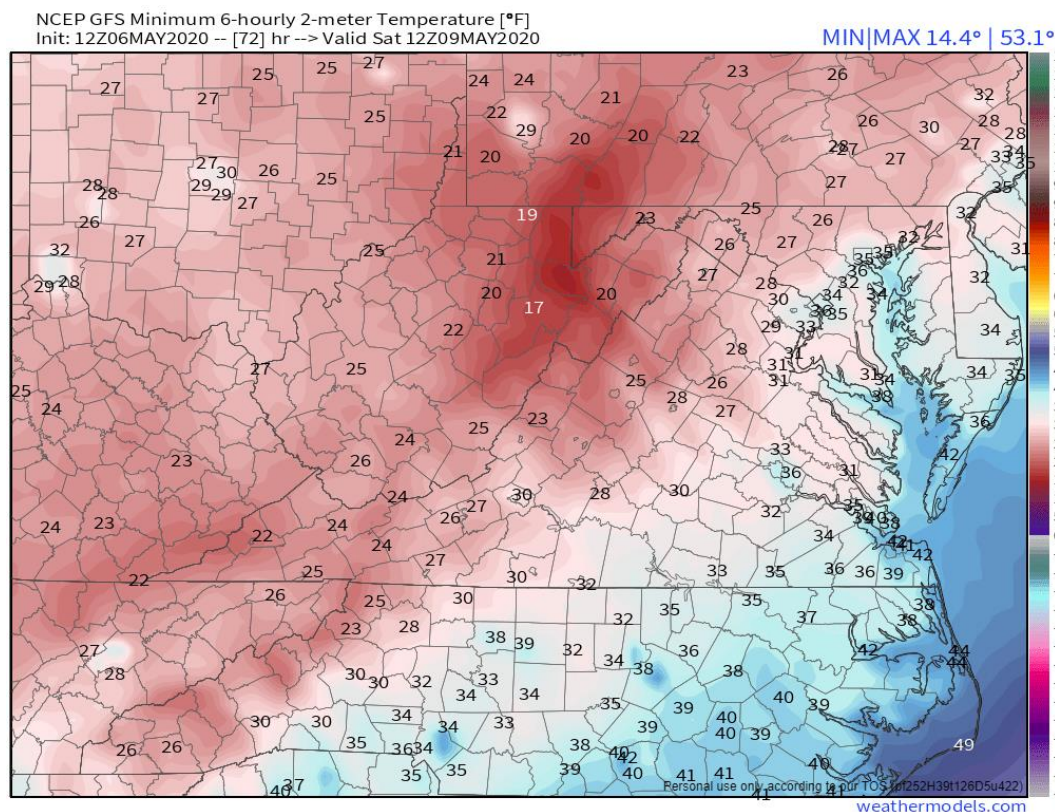
However, the interaction between the strong area of LOW pressure along the New Jersey and New England coast and strong Canadian HIGH pressure over eastern Kansas and Missouri, will produce strong Northwest winds Friday night into all day Saturday. These winds will prevent a Frost / Freeze even though there will be very cold temperatures on Saturday morning May 9th. This map shows what

surface conditions will be like on Saturday morning. NOTE the black lines which are very close to each other across all of New England as well as New York state, Pennsylvania New Jersey Maryland/ Delaware and Virginia. This is called PESSURE GRADIENT in the weather biz which means strong winds.

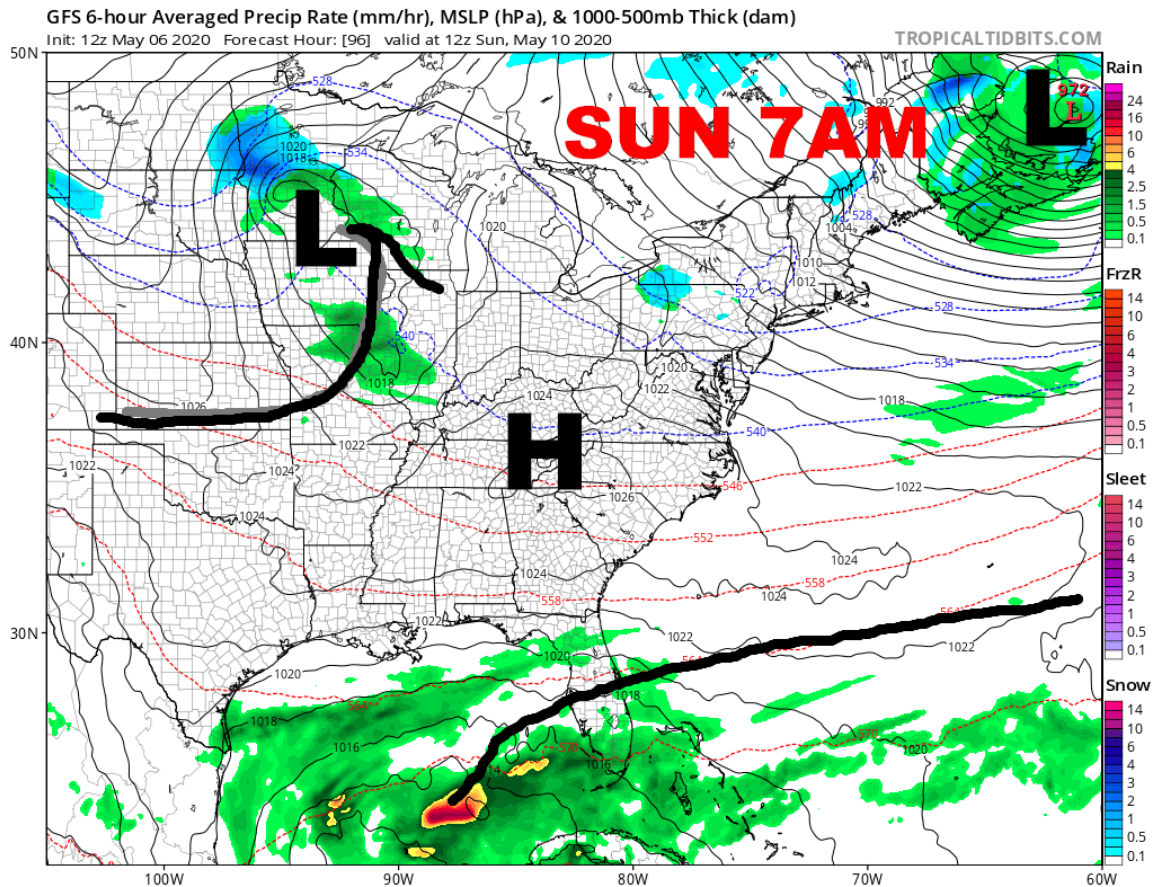


Now lets look at the forecast temps for Saturday morning. This image shows a comparison of two different weather models showing Min temperatures on Saturday morning dawn. The image on the LEFT is the GFS model and as you can see it has very cold temperatures in the Shenandoah Valley with many areas seeing readings between 22 and 28 degrees. Even areas in the Virginia Piedmont as far east as Interstate 95 are at or below 32 degrees on the GFS MODEL. This would be very impressive if temperatures were actually that cold.

The image on the right side however is the European model and it is not nearly as cold as the GFS. It is still impressively cold for May 9th and it still shows readings below 32 degrees in all of the Shenandoah Valley as well as western Maryland, most of West Virginia and southwest Virginia. But it is not quite as cold as the GFS. However as you can see from this surface map for Saturday morning we still have strong Northwest winds at 10 mph + across all of Virginia, Maryland, and West Virginia. This will be strong enough to prevent a frost or freeze even if temperatures drop down below 30 degrees in portions of Southwest Virginia or the Shenandoah Valley.

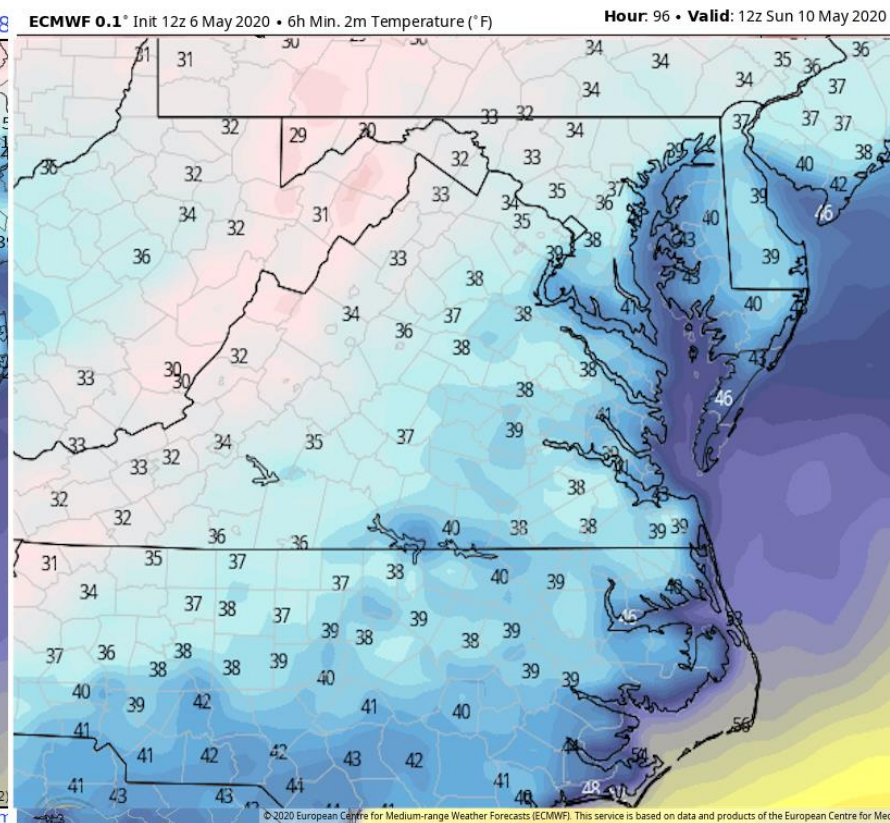
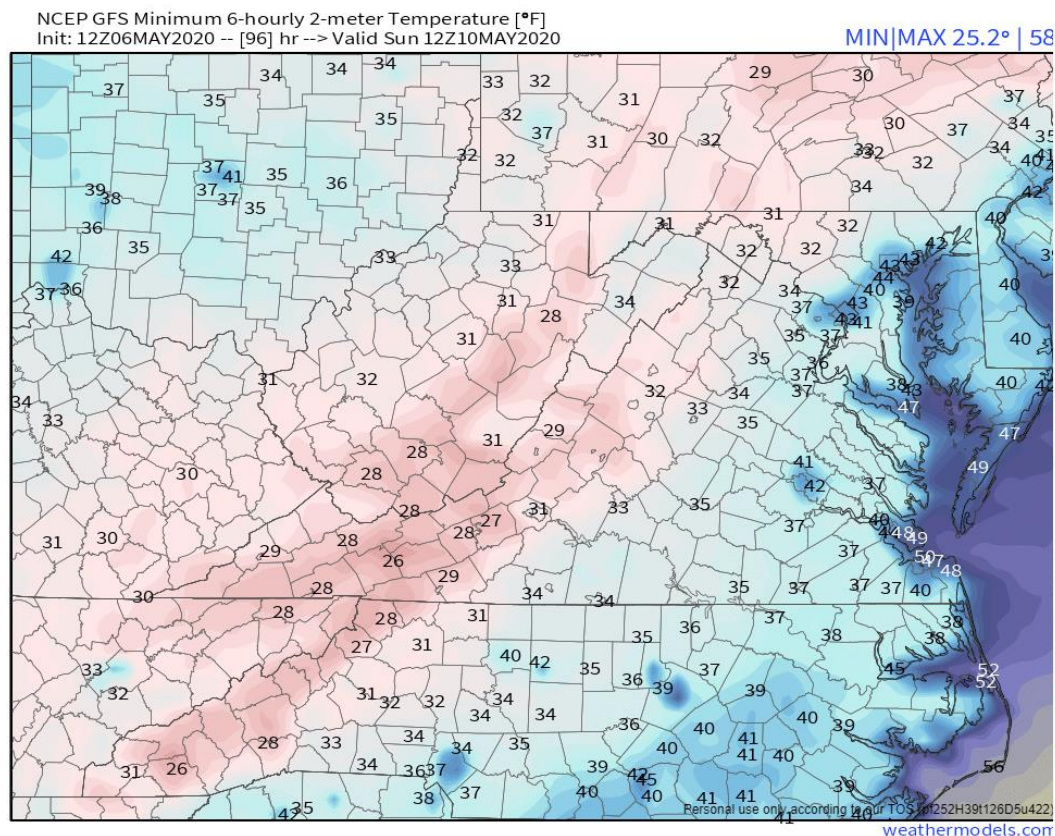


SUNDAY MAY 10 The morning that I am most concerned about is Sunday morning May 10th. At that point the HIGH pressure area will be located in the eastern Kentucky or perhaps the western portion to West Virginia. The winds will have dropped off significantly and skies will be clear throughout the night This image shows the GFS and European temperature forecast for Sunday May 10th.



Again the GFS image on the left side is significantly colder than the European model. But even the European model does show temperatures around 32 degrees throughout the Shenandoah Valley and in Southwest Virginia which would be cold enough for a frost with no wind. The GFS model in particular is quite cold in Southwest Virginia and these temperatures cannot be ruled out as a worst-case scenario.

In summary I believe that Sunday morning May 10th is the really important date that has the best risk for seeing a frost and or possible freeze - although at this point I am definitely favoring a Frost scenario as opposed to a Freeze. .



The good news is that after May 10th the pattern over North America begins to shift significantly which ends the threat for anymore Frost and freeze potentials . There is significant reason to believe that a substantially warmer pattern is going to develop after May 15th across North America and this should end the threat of any sort of frost and freezes for the Mid-Atlantic region and especially in Virginia probably for the rest of this growing season. If you want to see more information about the extended forecast for May 15th through June 15th you can contact me and get the latest 30-day eastern US forecast which I will send to you free of charge .

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