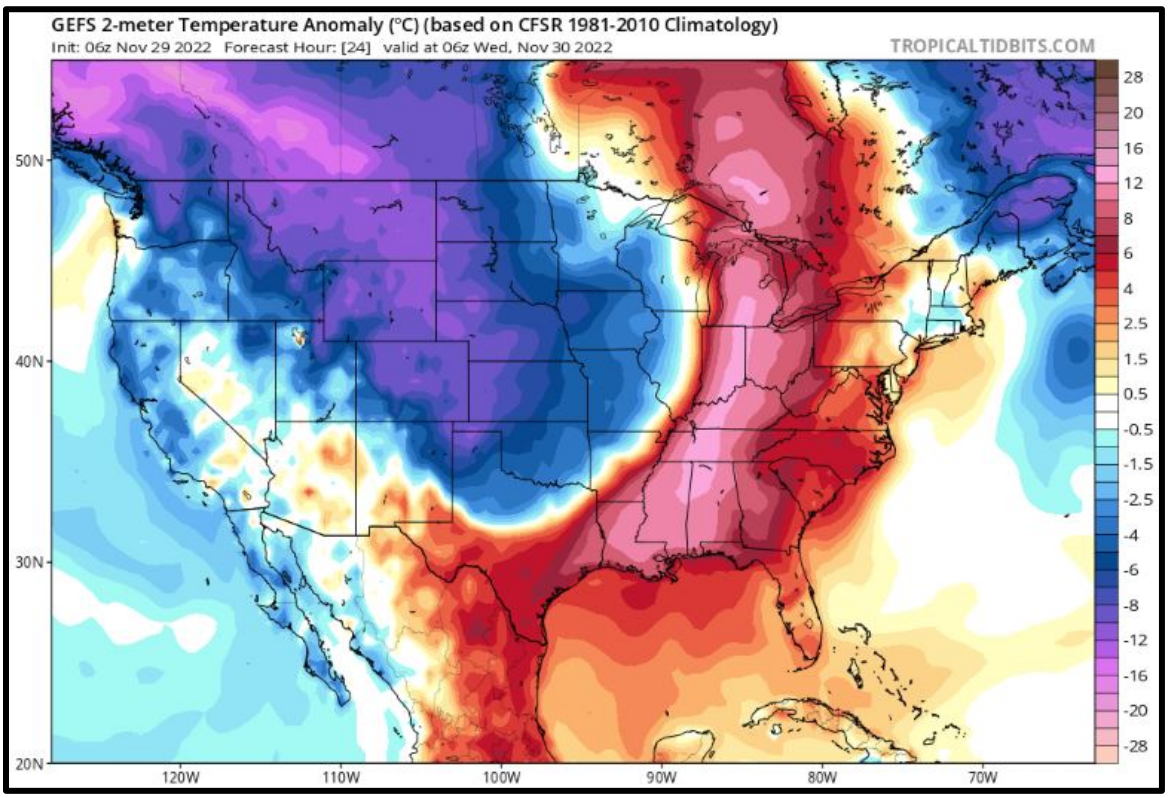
Arctic Airmass To Dip Into Continental US

By Scarlett Waters

Kansas City, November 29 (World Weather Inc.) – ***An arctic airmass is expected to drop southward from Canada in two waves during this coming week inducing some colder temperatures across the central and eastern United States.*** Both waves of cold are expected to be of short duration, but there is potential for additional bouts of cold later in December as the Arctic and North Atlantic Oscillation indices turn solidly negative supporting the potential for additional cold. Initially, the impact of this first week of cold will be low since, 1) temperatures are unlikely to drop below the damage threshold in unprotected winter wheat production areas and 2) the more heavily-populated eastern U.S. is not likely to see the cold perpetuated for an extended period of time sparing those regions from a prolonged high heating fuel demand. There is potential for change later in December, but these first two rounds of cold should have a low impact.



An arctic airmass will move into the Rocky Mountains and Great Plains beginning today, bringing lower than average temperatures for the Central and Northern US for the next two days. By the morning of November 30th, low temperatures will dip into the upper 20s Fahrenheit for much of the central Plains and Midwest with lows in the single digits for the Northern Plains. Freezing temperatures will extend as far south as the Texas Panhandle and as far east as Indiana. High temperatures will be in the middle to upper 30s for much of the Great Plains and Midwest. Wednesday highs are expected to be below freezing in much of Nebraska, Iowa, Northern Illinois and areas northward.

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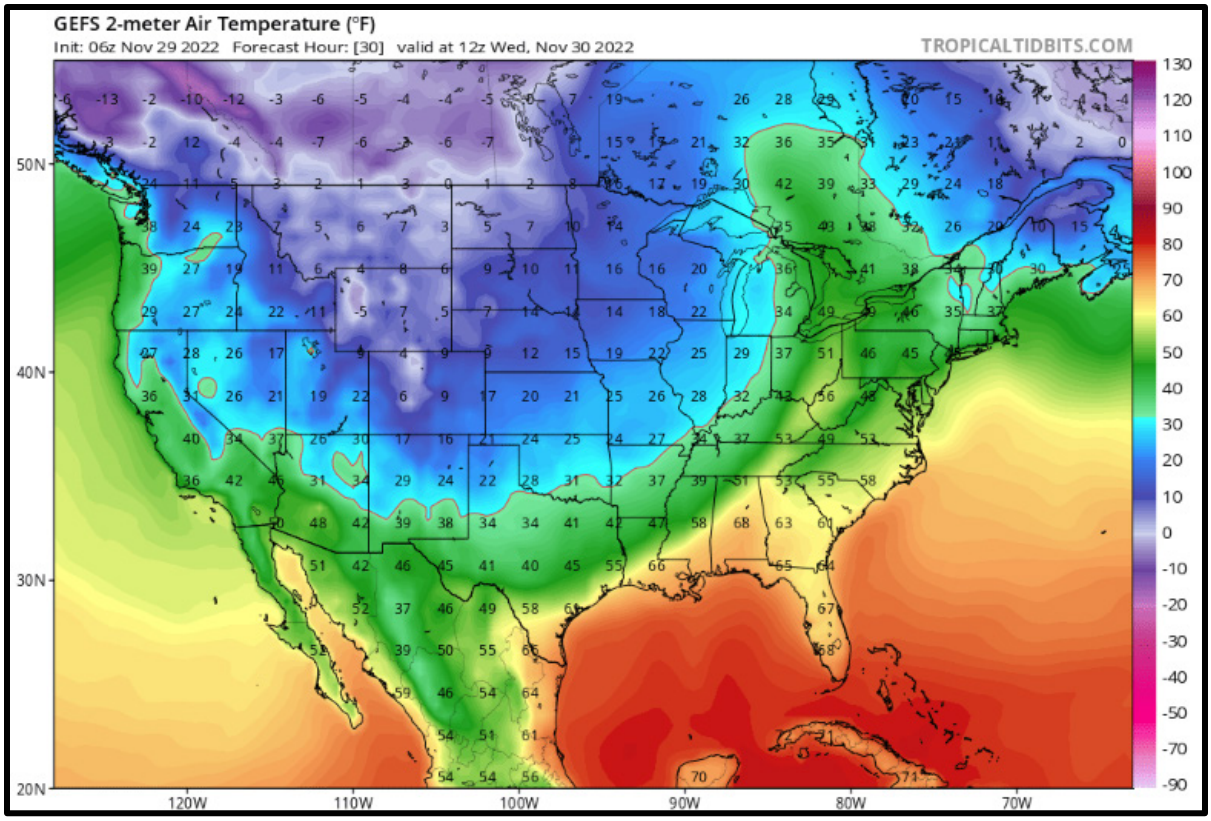

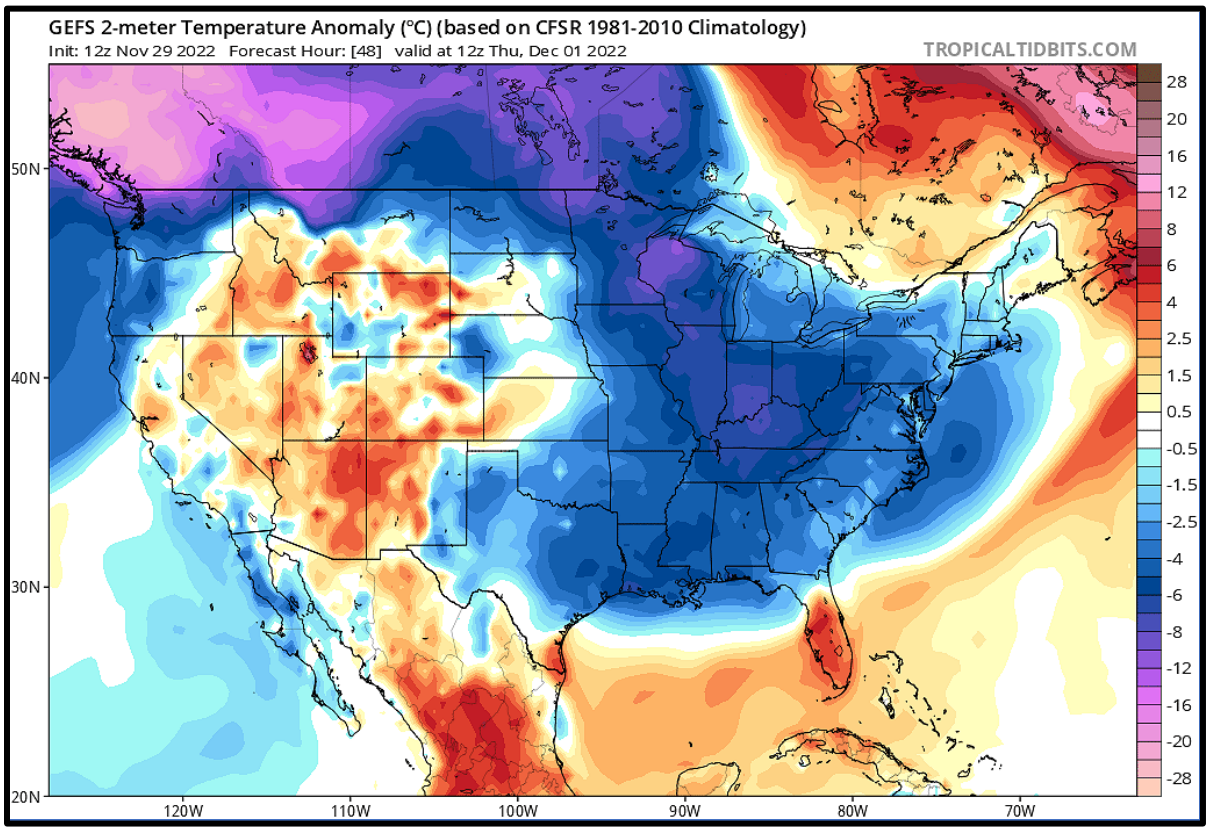

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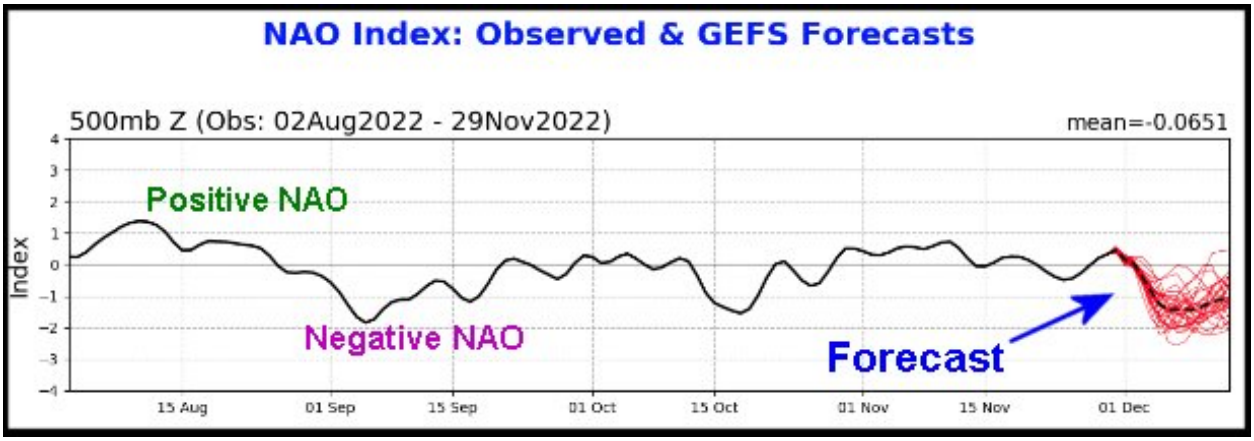
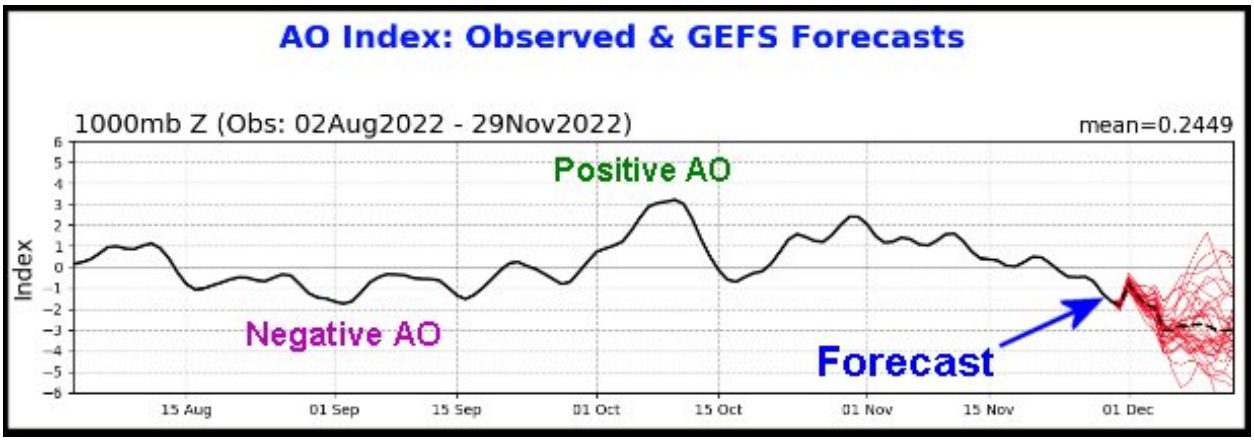
By December 1st, the system will push toward the east coast, bringing morning low temperatures below freezing for the New England region southward to northern Georgia. High temperatures for the Atlantic Coast States Thursday should be in the mid- to upper 30s, whereas high temperatures in the central Plains and Midwest will be returning to the mid- to upper 40s. Low temperatures Thursday will be in the negative and positive single digits in the far northern Plains near the Canada border while mostly in the single digits and teens from Nebraska to southern Montana and eastward into the northern Midwest.

Some briefly warmer weather is advertised late this week and early in the weekend. A second round of colder air is then expected to move into the continental US later this weekend into early next week bringing similar to slightly colder conditions to the Plains and Midwest.

The North Atlantic and Arctic Oscillation Indices (NAO and AO) suggest arctic air may be poised to move farther south into the continental US over the first half of December as both indices are currently in their negative phase and are forecast to continue staying negative through mid-December. These negative indices reflect higher air pressure throughout the Arctic which is expected to force colder air from that region southward into the lower latitudes periodically during the coming two week period. That tendency will warrant a close watch on temperatures across the central and eastern U.S. for signs of more impactful effects on winter crops and heating fuel consumption.





Energy Impact

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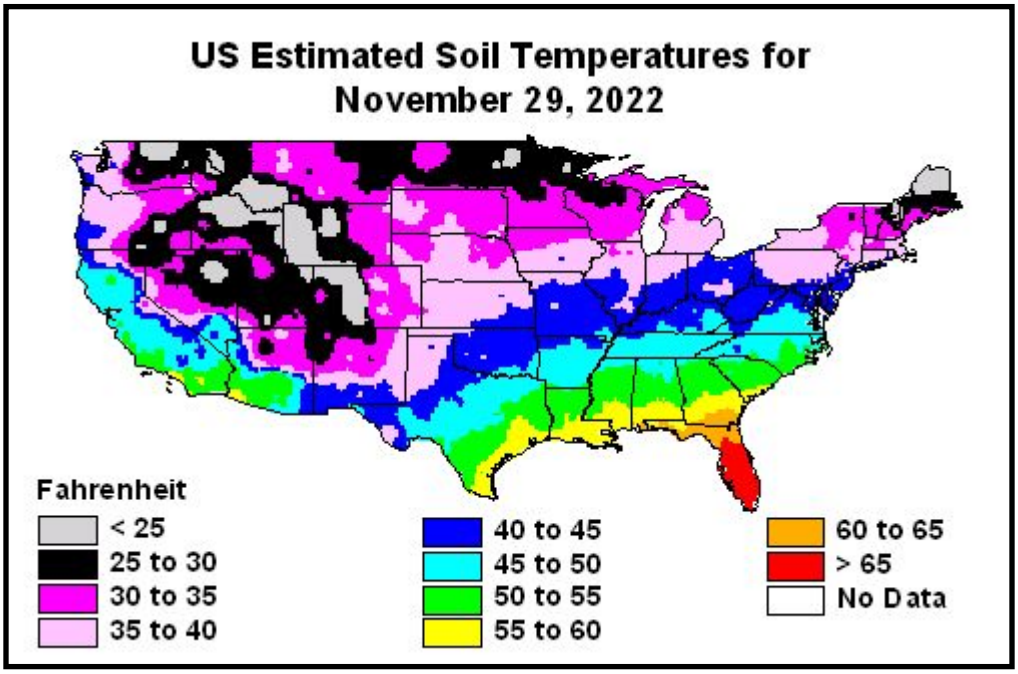
Energy consumption will increase across the regions affected by the incoming cold surge. Energy consumption should increase across the Great Plains and Midwest Wednesday and Thursday and a similar increase in heating fuel consumption will occur Thursday and Friday as the colder air reaches the Atlantic Coast States; however, the temperature anomalies are not likely to be great enough or persist long enough to have a huge impact on fuel supply.

The second insurgence of cold air expected late this weekend into early next week may have a little more impact; however, there is still a general lacking of brutally cold air and the duration of this second wave of coolness is not likely to have a huge impact on energy consumption. Demand for natural gas and heating oil will increase briefly.

If the NAO and AO indices are correct in their prevailing negative trend, it is perceivable that there will be additional bouts of cold later in December that "might" have a greater impact on energy consumption rates.

Agriculture Impact

Given that temperatures are not expected to plummet below zero Fahrenheit for a large majority of the winter crop area, it is unlikely that there will be significant crop damage to winter wheat while this airmass passes through the US. Winter wheat is dormant or semi-dormant from the western Texas Panhandle through Kansas and Nebraska to the northern Plains, but the crop will require snow cover before bitter cold settles in to protect the poorly established crop from possible winterkill. Drought has already impacted some of the crop and new damage could occur if snow is not present when subzero degree temperatures evolve. For now, though, there is no risk of such intensive cold in snow free areas.



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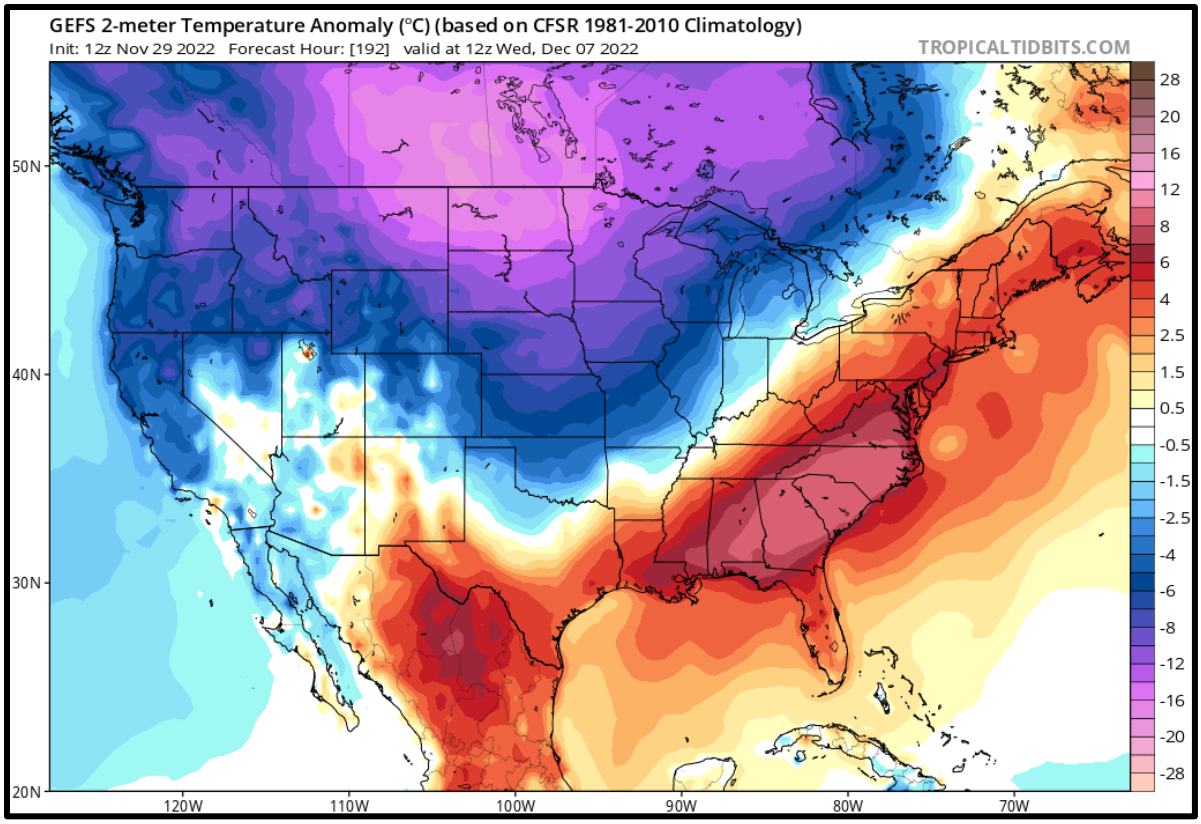

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