



**Weather  
Observer**

February 6, 2014

**BAE**

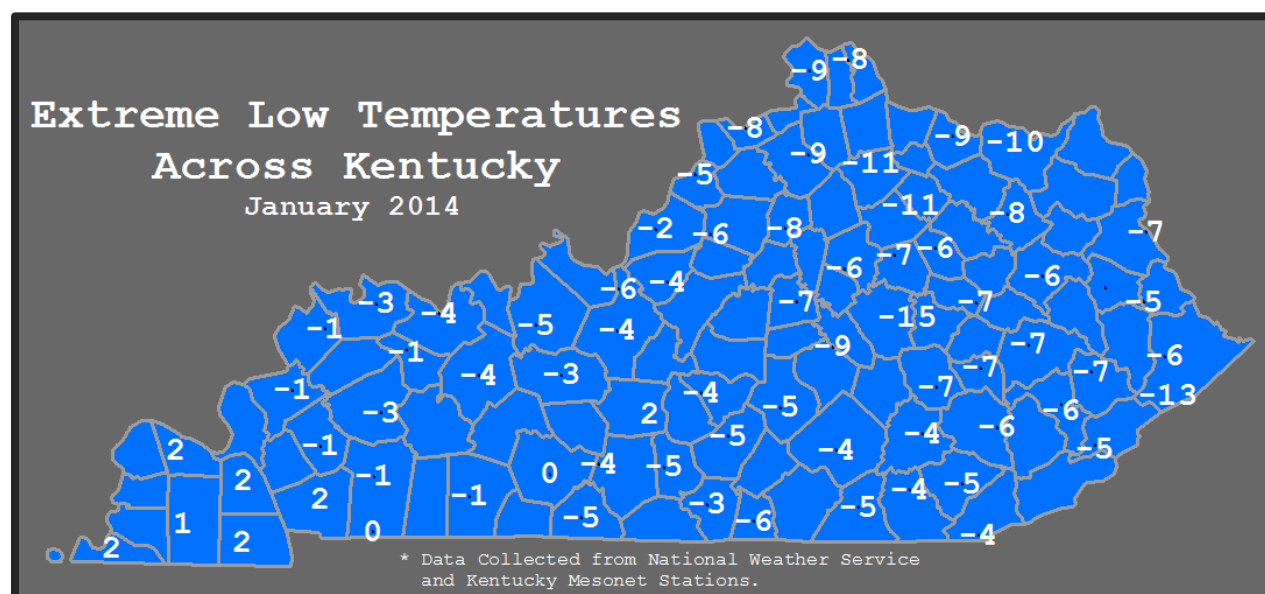
Visit us at <http://weather.uky.edu/> for the latest weather products

**Come meet and learn more about the UK Ag Weather Center at the upcoming National Farm Machinery Show February 12<sup>th</sup> – 15<sup>th</sup> at the Kentucky Exposition Center in Louisville, KY.**

**January 2014 Monthly Summary**

Frigid conditions left much of the Commonwealth in a deep freeze through the month of January. On multiple occasions, Arctic air pushed into the state and sent temperatures well below zero. Over the course of the month, low temperatures only averaged 18 degrees across the state, which is 6 degrees below normal. The National Weather Service in Louisville reported that this was the coldest January since 2003 for the cities of Lexington and Louisville. In addition, the state average temperature of 28 degrees was the 13th coldest on record going back to 1895. Saying this, it was still nowhere near the record set back in 1977 when the area averaged a temperature of 18 degrees. Overall, this cool trend has led to 4 of the first 5 weeks of 2014 seeing below normal temperatures.

The first round of dangerously cold temperatures came on January 6<sup>th</sup>. Highs only got into the single digits before dropping well below zero that night. Temperatures mostly ranged between 0 and -10 across much of the state, which were the coldest statewide temperatures witnessed since January of 2011. Saying this, Pikeville did get down to a low of -13. Breezy northwesterly flow pushed the wind chill down to below -20 at times. Click [here](#) for a link to wind chill readings recorded over eastern portions of the state over this time. According to this dataset, Pikeville got down to a wind chill of 36 below zero! During this time, the livestock cold stress index became solidified in the emergency category. Figure 1 below shows the lowest observed temperatures from various locations across the state for the month of January.



**Figure 1**

University of Kentucky Agricultural Weather Center  
 Contacts: Tom Priddy at 859-257-3000 ext. 84364, Matt Dixon at ext. 84363,  
 or Dr. Wanhong Wang at ext. 84365



Figure 2

The most prolonged cold-spell came over the third week of the month. The state’s average minimum temperature over the course of the week was only 13 degrees. This week featured another Arctic blast with temperatures falling well below normal. This time around, the Richmond Mesonet Station recorded a low of -15 degrees. It even got cold enough to freeze the North Fork of the Kentucky River near Jackson, Kentucky as seen in Figure 2 above, which was provided by the National Weather Service in Jackson.

As it can be seen with very cold temperatures, most of the precipitation falling across the state was in the form of snow. The brunt of the powder came throughout the Bluegrass Region where areas saw in excess of 8 inches. The 8.6 that Lexington saw over the course of January was over 4 inches above normal. Most of the time, each system that moved through the area put another 1 to 2 inches on ground. The only exception came through the third week of the month, when an Alberta Clipper traveling southeast into the area on the 21st laid 3 to 6 inches on the ground. Below is a map created by the National Weather Service in Louisville showing the extensive snowfall totals across the region.



Figure 3

Summarized and averaged data for the period 20140101 to 20140131 (Last 31 Days)  
 (Not for Legal purposes. Departure from Norms based on climate divisional Averages)

STATION	AIR TEMPERATURE						PRECIPITATION			ExtremeTemp	
	MAX	DEV	MIN	DEV	AVR	DEV	TOTAL	DEV	%NORM	HI	LO
WEST (CD1)	40	-3	20	-5	30	-4	2.00	-1.93	51	62	-5
CENTRAL (CD2)	39	-3	19	-6	29	-4	2.29	-1.70	57	61	-6
BLUEGRASS (CD3)	36	-5	17	-6	26	-6	2.19	-1.03	68	58	-15
EAST (CD4)	39	-5	18	-5	28	-5	2.44	-1.35	64	62	-14
STATE	38	-4	18	-6	28	-5	2.23	-1.50	60	62	-15

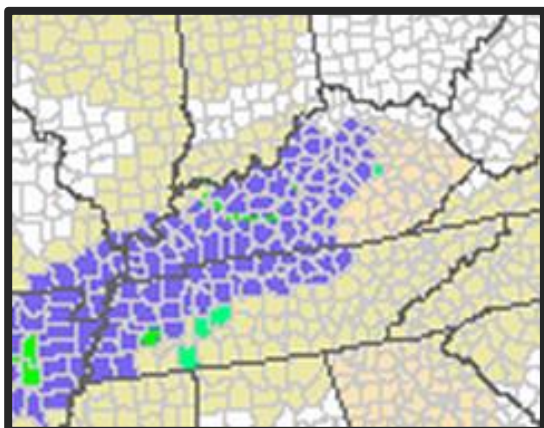
Data obtained from KY Mesonet and NWS Station

### Two Week Forecast

Conditions will remain active heading into this weekend (2/7-2/8) with multiple chances of seeing some snow. The first will come tonight and into tomorrow with the passage of an upper level disturbance. A Winter Weather Advisory has been

issued for much of the western half of Kentucky as shown in Figure 4. This system is anticipated to be weaker than disturbances seen earlier this week, but nonetheless, 1 to 2 inches of new accumulations is expected. This trend will continue with another

round of light snow Saturday night and through the day Sunday.



**Figure 4**

Below normal temperatures are expected to continue throughout much of the month of

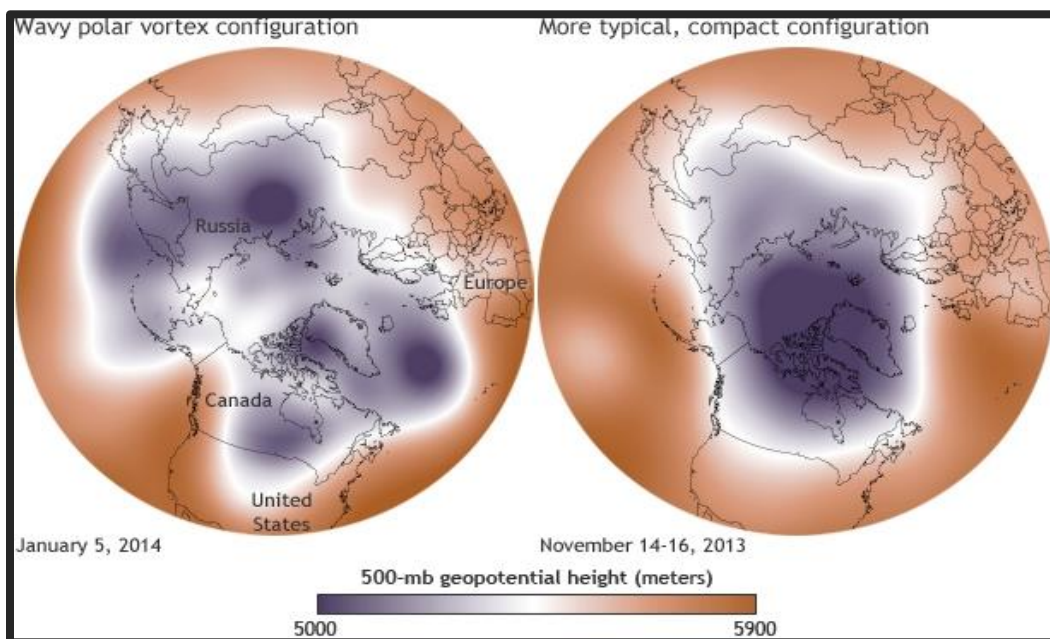
**February.** Highs over the weekend are only expected in the 30s for much of the state, before decreasing slightly going into next work week. Normal highs for the month of February usually begin in the low to mid 40s before increasing to the low to mid 50s by the end of the month. Average low temperatures are typically in the upper 20s to lower 30s.

**3 Month Outlook (FMA)  
Above Normal Precipitation and  
Temperatures**

Precipitation-wise, all the outlooks are generally anticipating above normal precipitation through the month of February. After a rather significant January when it comes to snow totals, another 3 to 5 inches of snow is usually seen on average throughout the month of February.

**Polar Vortex?**

This past month supplied some of the coldest temperatures in recent memory, but why did it happen? It all goes back to a new weather term that most people found familiar by the end of the month: “Polar Vortex”. This refers to an upper level low pressure system that is normally seen hovering over the North Pole. Throughout the month of January, this vortex weakened and a piece of the vortex sank to just south of the Hudson Bay. Winds rotate counter-clockwise around these low pressure systems and its location put much of the United State in prime territory to see multiple Arctic outbreaks. Figure 5 below was put together by the National Oceanic and Atmospheric Administration (climate.gov). The image on the left shows the inherent break-down in the vortex with one such piece sinking well into Canada and the United States.



**Figure 5**

### Other News

This past month, the UK Ag Weather Center premiered the NEW version of the [Ag Weather website](#). By popular demand, the new web site is much simpler and easier to navigate. We've added some new tools and deleted much of the old and less useful links. Some of the new tools are displayed in the screen shot below. Now the front page has each county's weather forecasts by mousing over the dates for the upcoming 5 day period. In addition, a 7 day summary of Ag Weather is available through the city tabs at the bottom of the page.

The screenshot shows the UK Ag Weather Center website interface. A yellow circle highlights the 'News Section' on the left sidebar. Another yellow circle highlights a map of Kentucky with temperature data points, labeled 'Statewide 5-Day Weather Conditions'. A third yellow circle highlights a detailed weather table for Lexington, labeled '7-Day Daily Summary'.

DAY	TUE	WED	THU	FRI	SAT	SUN	MON
TEMP HI/Low	11 / -4	32 / 9	39 / 25	46 / 21	49 / 39	48 / 35	49 / 36
Rain/Poss(%)	0 / 3	0 / 2	0.04 / 26	/ 21	/ 53	/ 20	/ 30
RH(%) HI/Low	72 / 54	87 / 51	81 / 61	92 / 82	100 / 89	96 / 76	100 / 83
Dew PT HI/Low	0 / -13	18 / -1	29 / 19	38 / 29	44 / 39	39 / 35	43 / 37
Windspeed HI/Low	15 / 7	12 / 3	6 / 2	8 / 3	8 / 6	6 / 2	13 / 7
Evapotranspiration	0.02	0.04	0.03	0.03	0.03	0.03	0.03
GDD/Acc GDD	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	/ 2

Check out the new website and let us know what you think. We want to hear your comments; both likes and dislikes. Also, what should we add, delete or change? We will continue to maintain the old web site for at least one year. Our contact information is as follows:

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The UK Ag Weather Center has joined social media. Click [here](#) and 'Like' our new Facebook page or follow us [@UKAGweather](#) on Twitter.



**February Garden Safe Planting Dates**

	Earliest Safe Planting Date		Latest Safe Planting	
	Date	Area of KY	Date	Area of KY
<b>Peas</b>	February 20th	Western	-----	-----
<b>Snow Peas</b>	February 20th	Western	-----	-----
<b>Spinach</b>	February 15th	Western	-----	-----

**February Vegetable Gardener’s Calendar**

<b>February 1st</b>	Start seeds indoors for BRUSSEL SPROUTS
<b>February 15th</b>	Start seeds indoors for BROCCOLI, CABBAGE, CAULIFLOWER, KOHLRABI, LETTUCE, and CHINESE CABBAGE
<b>NOTE:</b> Add 10 days for Central KY and 15 for Eastern KY to these dates for spring and summer crops.	

**February Beef Operations**

<b>Spring Calving Herd</b>	<ul style="list-style-type: none"> <li>• Calving season BEGINS</li> <li>• Have calving equipment, labor, and facilities arranged prior to calving</li> </ul>
<b>Fall Calving Herd</b>	<ul style="list-style-type: none"> <li>• Breeding season ENDS (season should be over)</li> <li>• Provide clean windbreaks and shelter for young calves</li> </ul>
<b>All Cattle</b>	<ul style="list-style-type: none"> <li>• Increase feed intake as the temperature drops</li> <li>• Provide clean water at all times. Be aware of frozen pond hazards</li> </ul>
<b>Forages</b>	<ul style="list-style-type: none"> <li>• Begin pasture renovation with legumes</li> <li>• Apply nitrogen fertilizer by mid to late February to promote early grass growth</li> <li>• Plan pasture utilization strategy (fencing, water, shade)</li> <li>• Chain harrow pastures as needed for more uniform manure distribution</li> </ul>