



The Winter of 2014-2015

Historical Perspective



NWS Jackson, KY – 02/16/15



HWY 160 - Black Mountain – 2/23/15

National Weather Service

Jackson, KY



US National Weather Service
Jackson KY



@NWSJacksonKY

<http://www.weather.gov/jkl>

Email: w-jkl.webmaster@noaa.gov

Phone: 606-666-8000



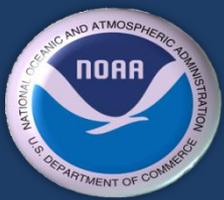


Winter 2014-15 Historical Perspective

A Winter to Remember



- The winter of 2014-2015 will be remembered for the series of winter storms and extreme cold weather that occurred during the last two weeks of February and first week of March.
- Eastern Kentucky experienced the most widespread 12" plus snowfall in over a decade, along with the coldest temperatures since the middle 1990s.
- Many areas experienced 20 below zero temperatures for the first time since the middle 1990s.

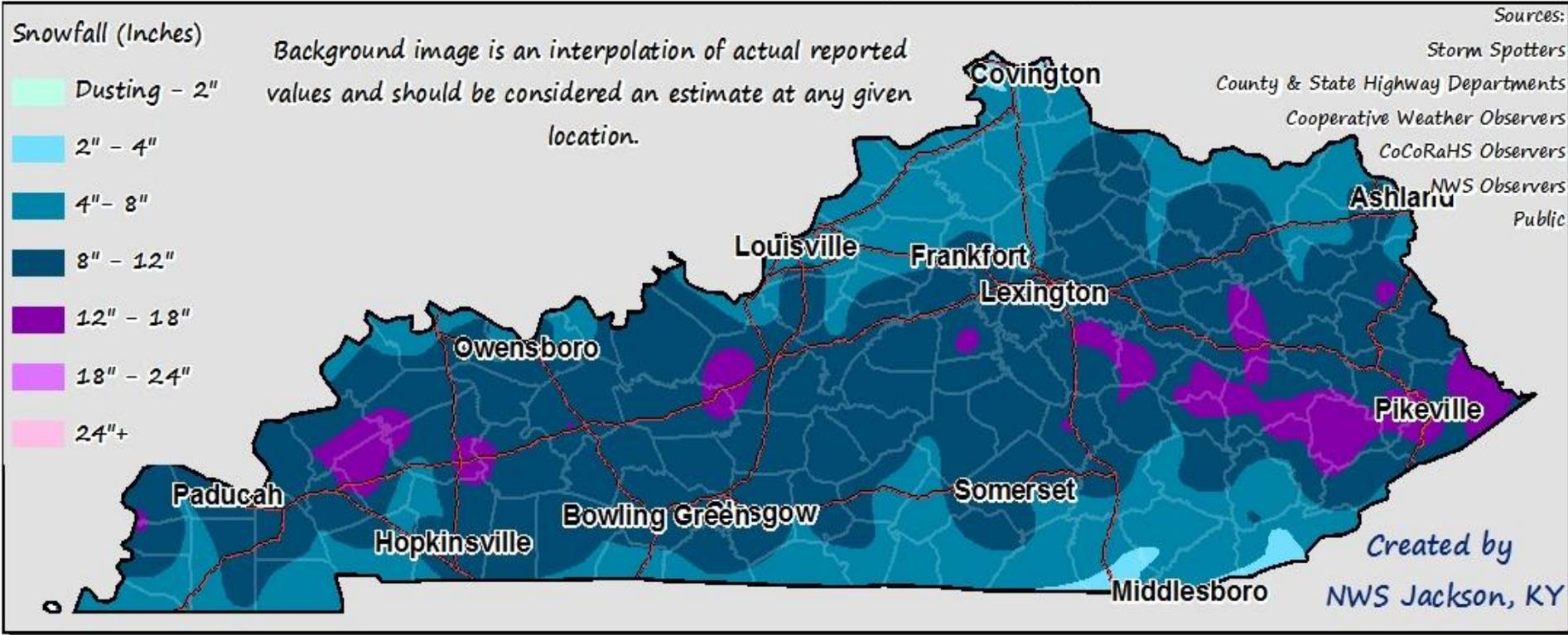


February 16, 2015 Snowstorm

Most widespread 12" snow for east KY in over a decade



Storm Total Snowfall - Monday February 16, 2015



Snowfall amounts of 8" to 12" were common across eastern Kentucky, with a stripe of 12" to 18" across the heart of central and eastern Kentucky. A period of sleet and freezing rain mixing with the snow cut into total snowfall amounts along the Tennessee border.



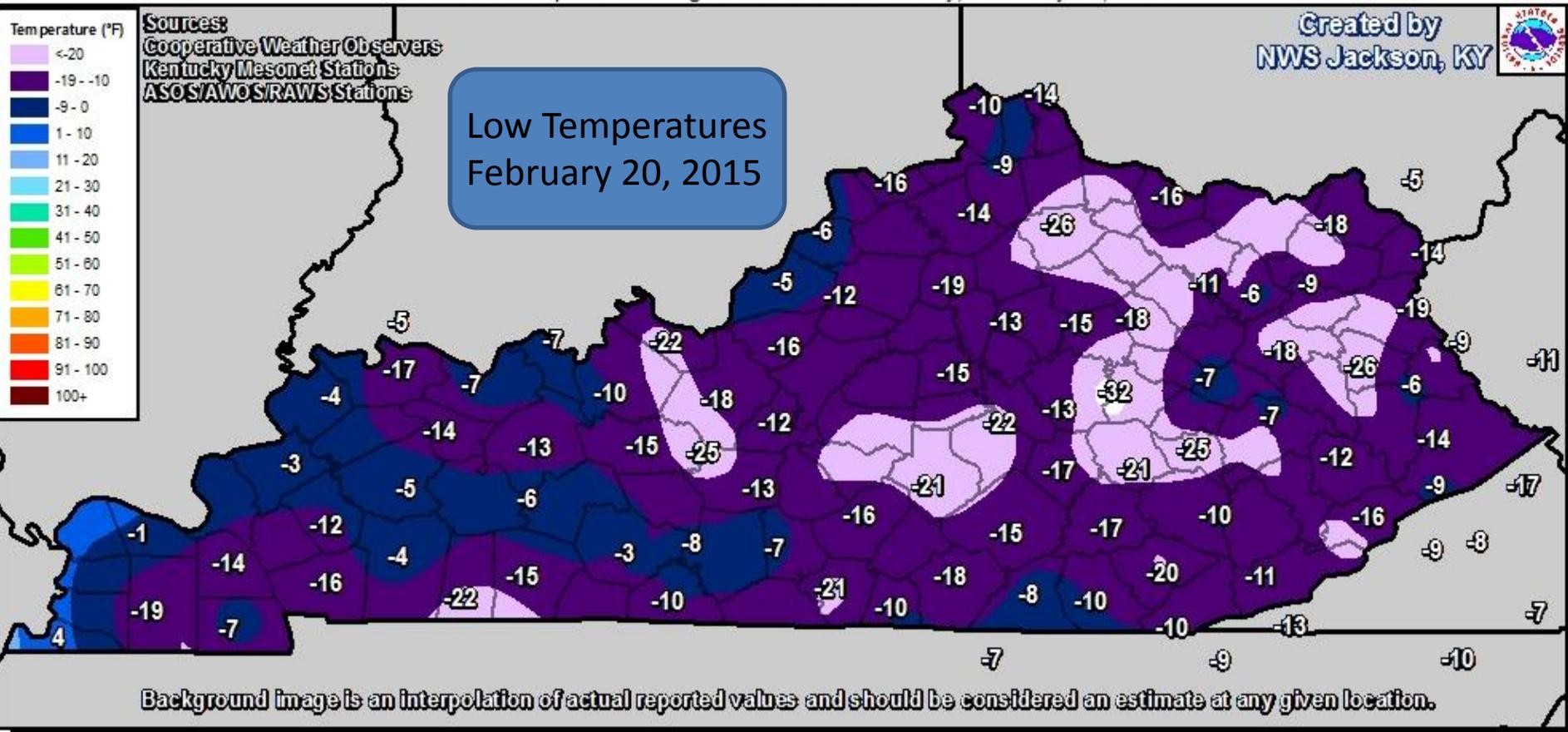
Widespread Sub Zero Temperatures

Feb. 20 - Coldest temperatures since 1994

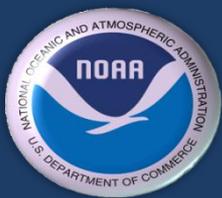


Minimum Temperatures

for the 24 hour period ending around 8 am ET Friday, February 20, 2015



The -32 at the Richmond Mesonet site tied the all time February record low for Kentucky. Other notable lows were -28 at both the Hillsboro and Cressy NWS COOP Sites.



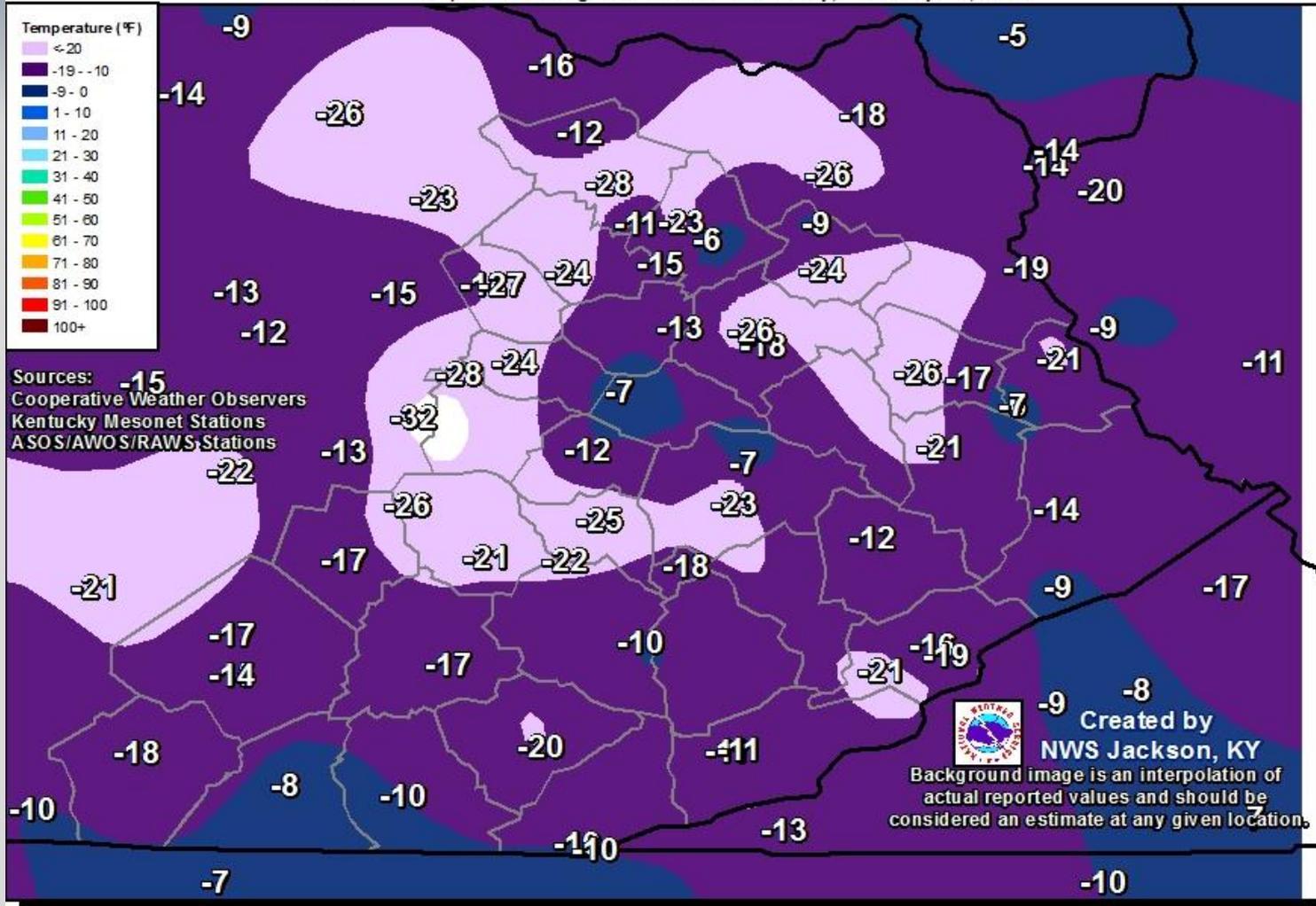
Widespread Sub Zero Temperatures

Close-up view of eastern KY lows on 2/20/15



Minimum Temperatures

for the 24 hour period ending around 8 am ET Friday, February 20, 2015



Minimum Temperatures Observed the Morning of February 20, 2015



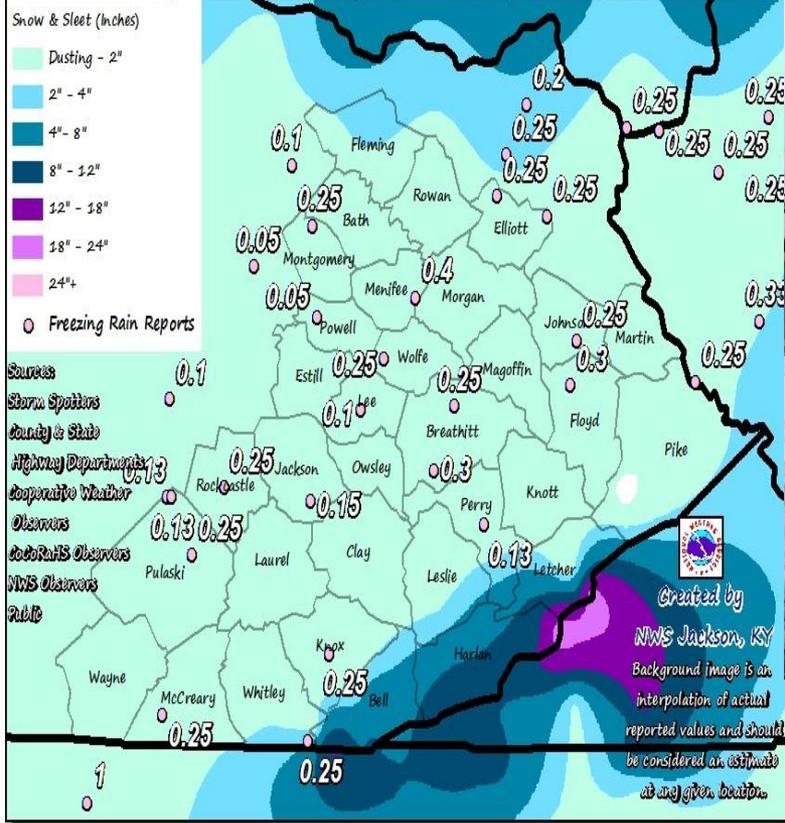
A second February Storm

Complex Storm System on February 20-21, 2015



Event Total Ice and Snow Amounts

Late Friday Evening February 20 - Saturday February 21, 2015

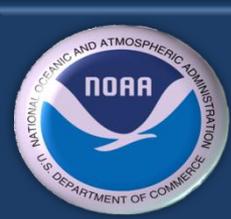


Building Collapse at Guthrie Memorial Airport near Harlan (photo courtesy of WYMT)



An ice jam caused this creek to overflow stranding a vehicle in the Minnie Community of Floyd County. (courtesy of WYMT)

A mixture of snow, sleet, freezing rain, and rain occurred on February 20-21. Ice jams formed and flooding occurred. Cold air remained in place south and east of Pine Mountain, where up to a foot of heavy wet snow led to structural damage.



February 2015 Historical Perspective

Coldest Recorded Temperatures since mid 1990s



The low temperatures on February 20, 2015 were the coldest minimum temperatures since the mid 1990s, and in some locations approached or broke records for the month of February.

Location	Lowest Temperature February 2015	Coldest February temperature on record	All time record minimum temperature
Jackson	-7° F	-8° February 4, 1996	-18° on 1/19/1994, 1/21/1985, 1/20/1985
London	-17° F (Record for February)	-17° February 20, 2015	-25° on 1/19/1994
Farmers (Rowan Co.)	-17° F	-19° February 27, 1934	-28° on 1/28/1963
Williamsburg (Whitley Co.)	-10° F	-19° February 4, 1996	-21° on 1/20/1994, 1/19/1994

Record Low for Kentucky -37° in Shelbyville on January 19, 1994



February 2015 Historical Perspective

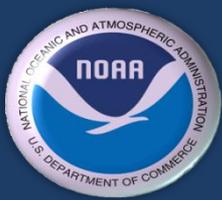


February Review - Very Cold and Snowy

For the state of Kentucky as a whole, February 2015 was the 5th coldest February on record, dating back to 1895. In eastern Kentucky February 2015 ranked in the top 5 coldest Februaries on record, and was the coldest February since 1978.

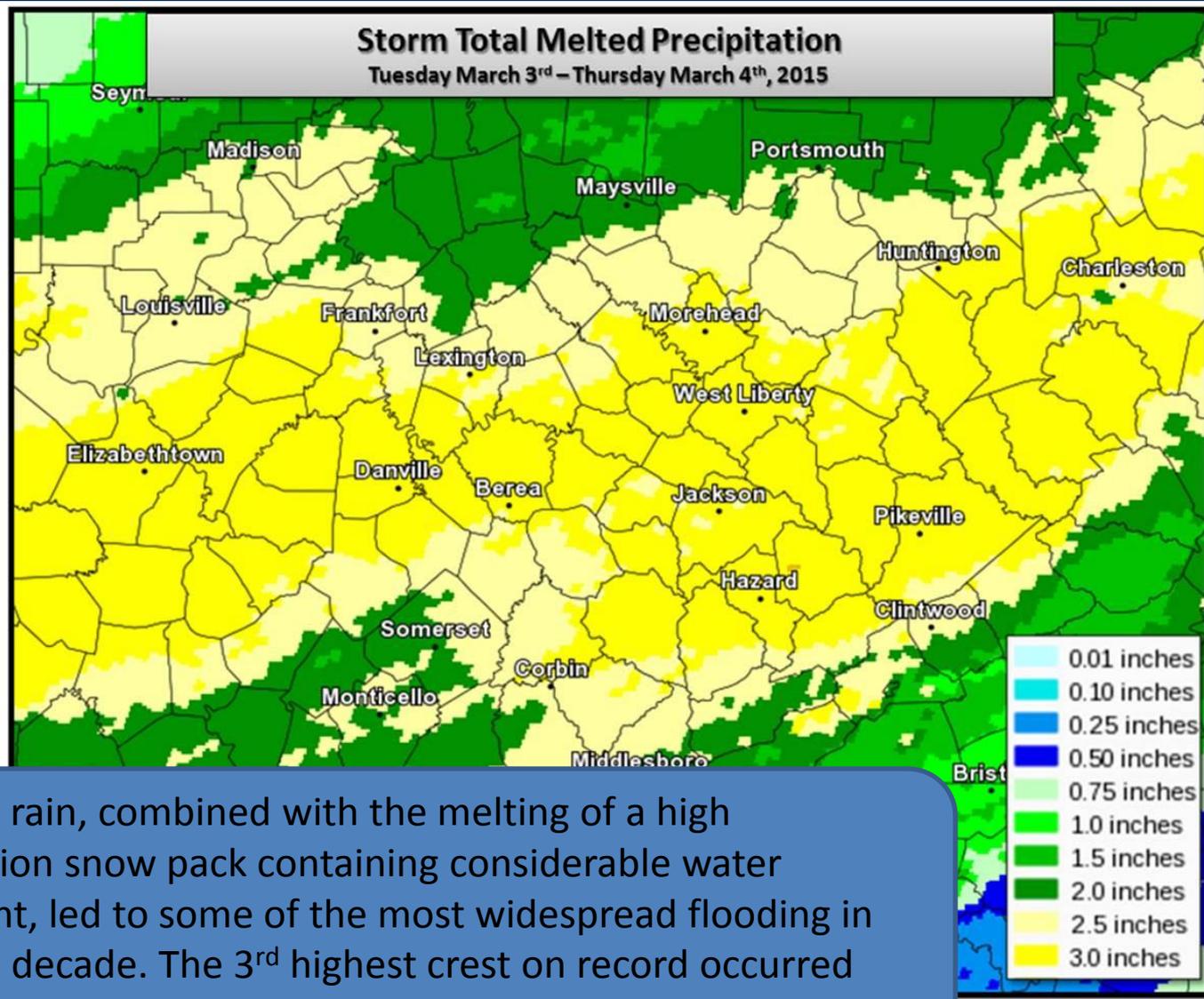
Location	Mean Temperature February 2015	February temperature rank	Coldest February on Record
Jackson	27.3° F	Coldest (35 years of data)	27.3° in 2015
London	28.6° F	4 th Coldest (61 years of data)	25.3° in 1978
Farmers (Rowan Co.)	24.1° F	2 nd Coldest (110 years of data)	20.0° in 1978
Williamsburg (Whitley Co.)	28.0° F	3 rd Coldest (116 years of data)	25.7° in 1978

At Jackson 21.5 inches of snow fell during February. This broke the old February monthly record of 21.0 inches set in 1985. February 2015 was the 4th snowiest month on record for Jackson (records back to 1981).

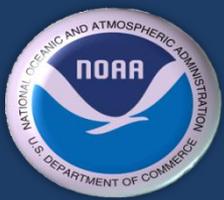


March 3-5, 2015 Winter Storm

Heavy Rain followed by Snow and Record Cold



Heavy rain, combined with the melting of a high elevation snow pack containing considerable water content, led to some of the most widespread flooding in over a decade. The 3rd highest crest on record occurred on the Cumberland River at Pineville.



March 3-5, 2015 Winter Storm

Heavy Rain followed by Snow and Record Cold



Storm Total Snowfall - March 4th & 5th, 2015

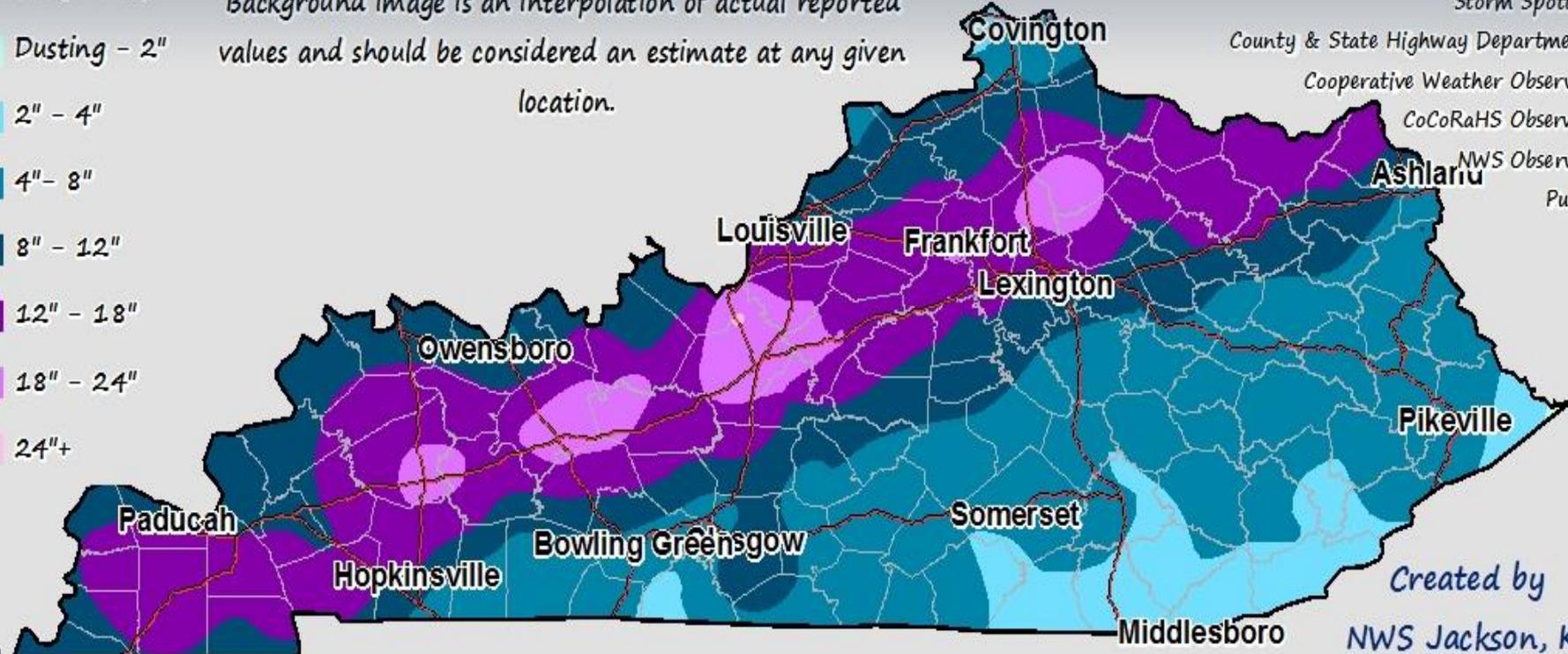
Snowfall (Inches)

- Dusting - 2"
- 2" - 4"
- 4" - 8"
- 8" - 12"
- 12" - 18"
- 18" - 24"
- 24"+

Background image is an interpolation of actual reported values and should be considered an estimate at any given location.

Sources:

- Storm Spotters
- County & State Highway Departments
- Cooperative Weather Observers
- CoCoRaHS Observers
- NWS Observers
- Public



Created by
NWS Jackson, KY

Rain changed to snow, and the second major nearly statewide snowstorm of the winter brought a band of snow ranging from 12" to a little over 24" from west central to north central Kentucky. Some of the higher snowfall amounts in eastern Kentucky included 15.8" at Flemingsburg, and 12" at both Owingsville and Morehead.



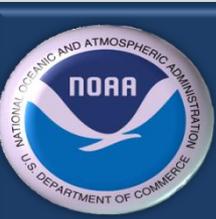
Historic Early March Cold Wave

Coldest March Temperature Ever Recorded in KY



- On the morning of March 6th the temperature fell to 16 below zero at the National Weather Service Cooperative (COOP) Observation Site in Hillsboro in Fleming County. This is the coldest March temperature ever recorded in the state of Kentucky.
- The previous record low temperature for March for the state of Kentucky was -14 at Bonnieville, on March 6, 1960.

Location	Minimum Temperature – March 6, 2015
Hillsboro (COOP)	-16 (New State Record for March)
5 N Mount Sterling (COOP)	-12
Monticello Airport	-11
Mount Sterling Airport	-9
4 S Owingsville (KY Mesonet)	-9



Winter 2014-15 Historical Perspective

Second Winter in a Row With Widespread Severe Cold



- The low temperatures experienced during the February 2015 cold wave were colder than those experienced during the repeated cold waves of January 2014.
- Many areas of eastern Kentucky saw temperatures of 20 below zero or colder on the morning of February 20. While the minimum at the Jackson National Weather Service was -7, valley locations, including the city of Jackson were much colder. The low temperature on February 20 at the Quicksand Mesonet station just outside of Jackson was 23 below zero.
- This was the second winter in a row with widespread major cold weather outbreaks, and the second winter in a row that the North Fork of the Kentucky River at Jackson froze over.



Winter 2014-15 Historical Perspective

Second Winter in a Row With Widespread Severe Cold



- The absence of widespread major cold weather outbreaks from the mid 1990s until 2014 was unusual when compared to the historical record dating back to the late 1890s.
- Historical records show significant cold waves with minimum temperatures well below zero were fairly common until the mid 1990s, when they became extremely rare. The past two winters have had cold waves more typical of the weather before the mid 1990s. This is illustrated on the following four slides which show the coldest observed minimum winter temperatures at 4 sites across eastern Kentucky.

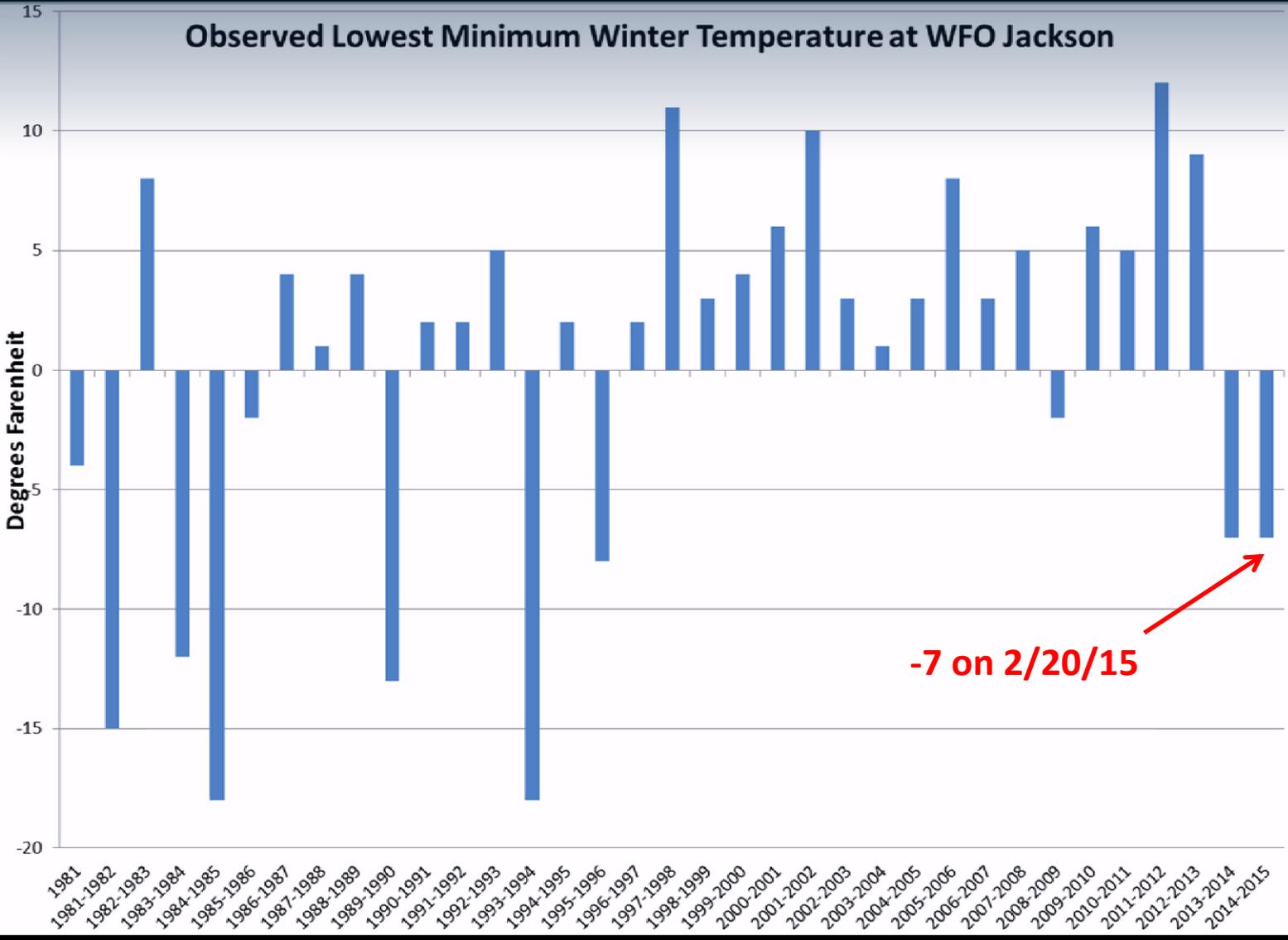


Coldest Minimum Temperatures

National Weather Service Jackson 1981-2015



Observed Lowest Minimum Winter Temperature at WFO Jackson



Zero or below 34 times 1981-2015.

Zero or below 25 times 1981-1996.

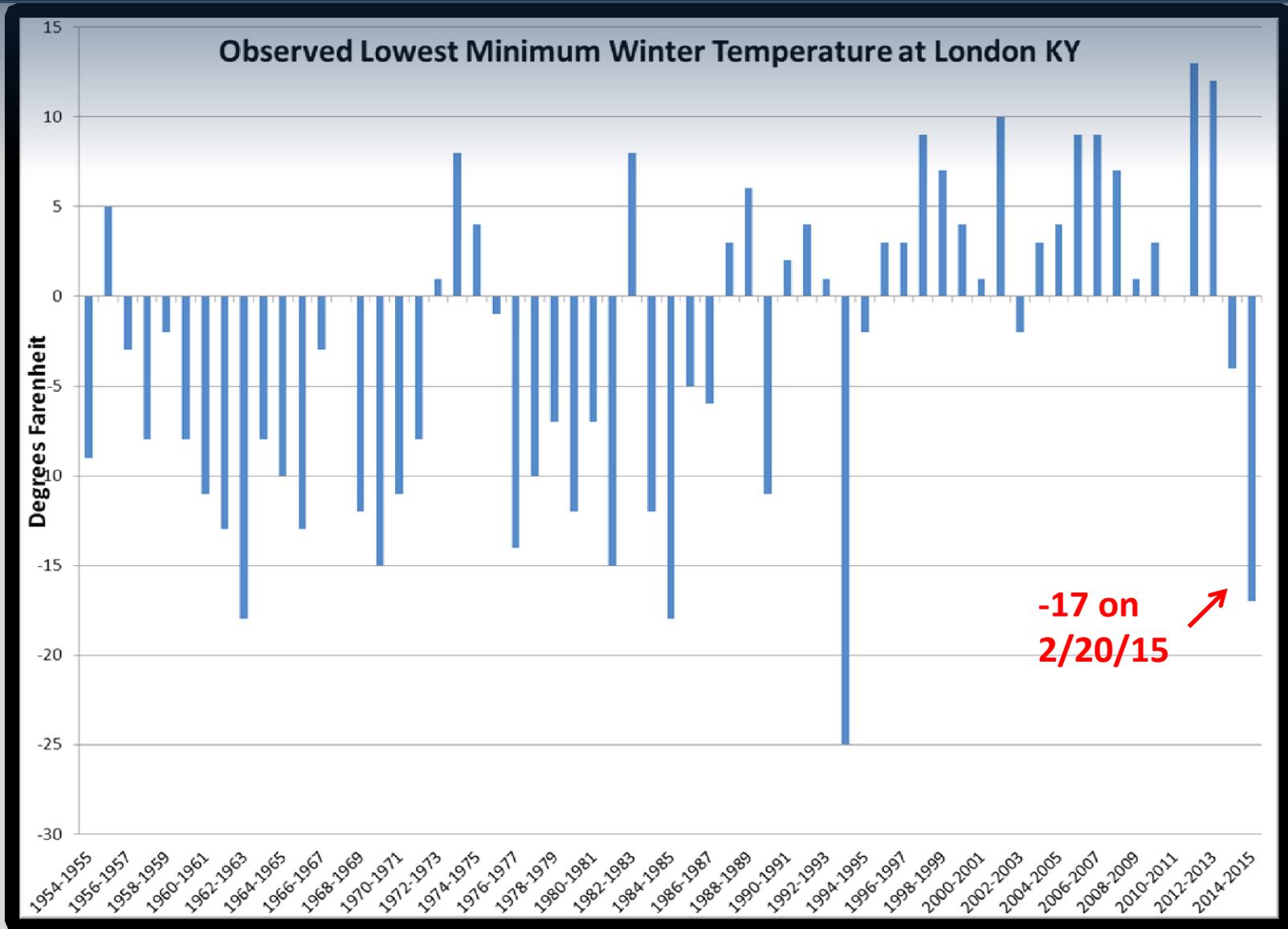
Zero or below 9 times 1997-2015, including 8 times in the past two winters.

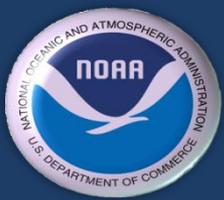
-7 on 2/20/15



Coldest Minimum Temperature

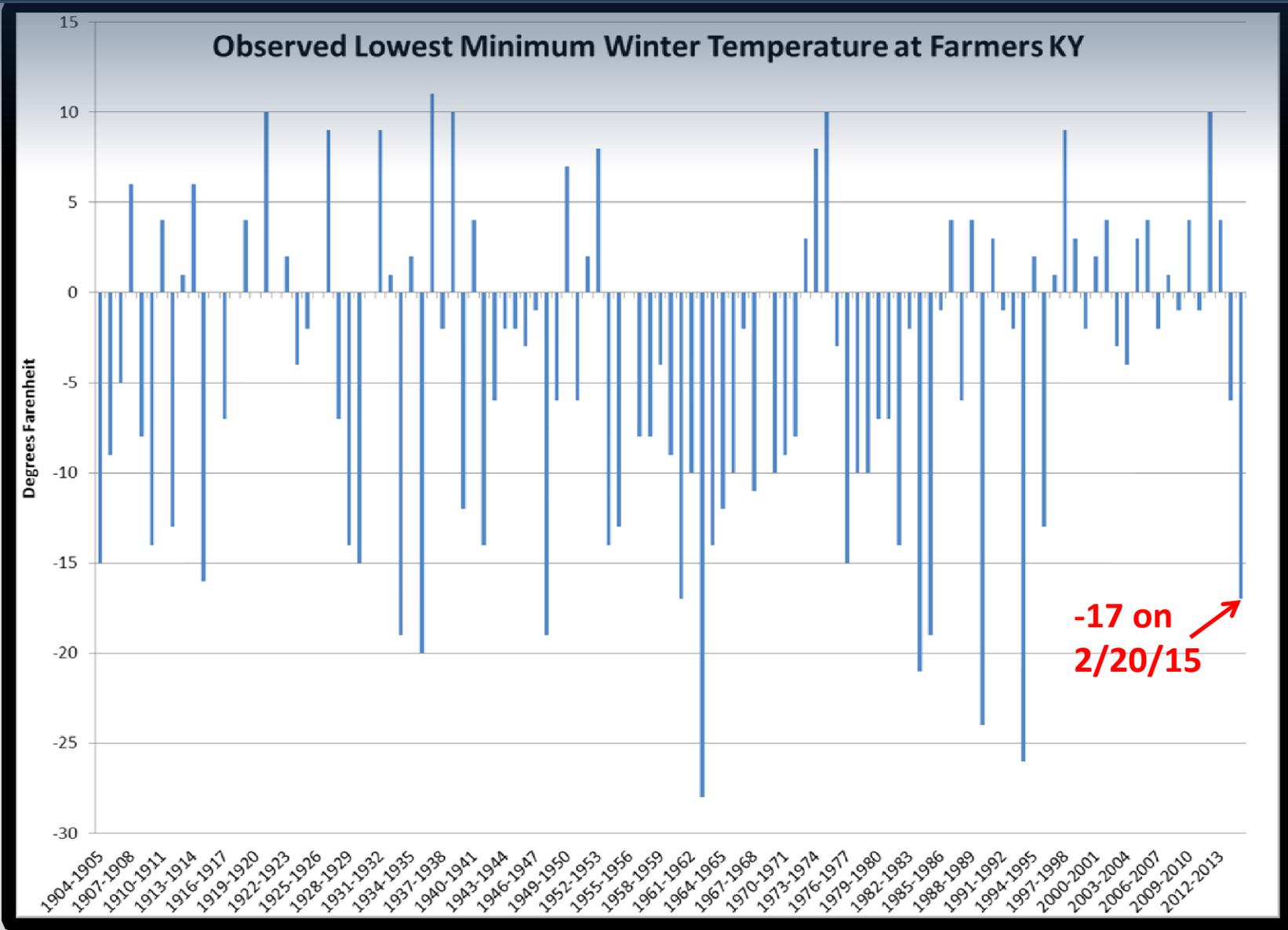
London, KY 1954-2015

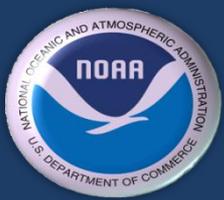




Coldest Minimum Temperature

Farmers, KY 1905-2015





Coldest Minimum Temperature

Williamsburg, KY 1897-2015

