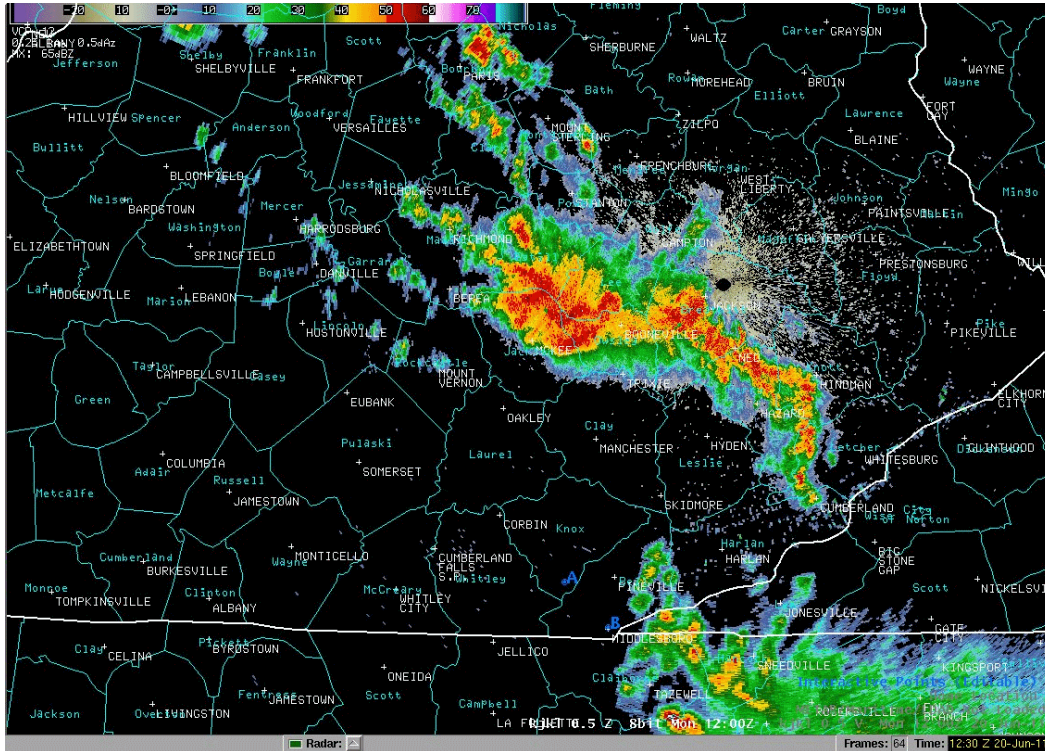


2011 Top 5 Weather Events

1. June 20 Flash Flooding

Prior to the morning of Monday June 20th, a series of rainy days had primed local creeks and streams, setting the stage for what would be one of the worst flash floods to impact eastern Kentucky, and the most significant event of the year. A warm front lifting north through eastern Kentucky on the 19th triggered an outbreak of strong thunderstorms during the afternoon and evening, leaving an outflow boundary across a portion of southeastern Kentucky heading into the overnight hours. This boundary would provide the focus for another round of nocturnal thunderstorms which began training along this boundary.

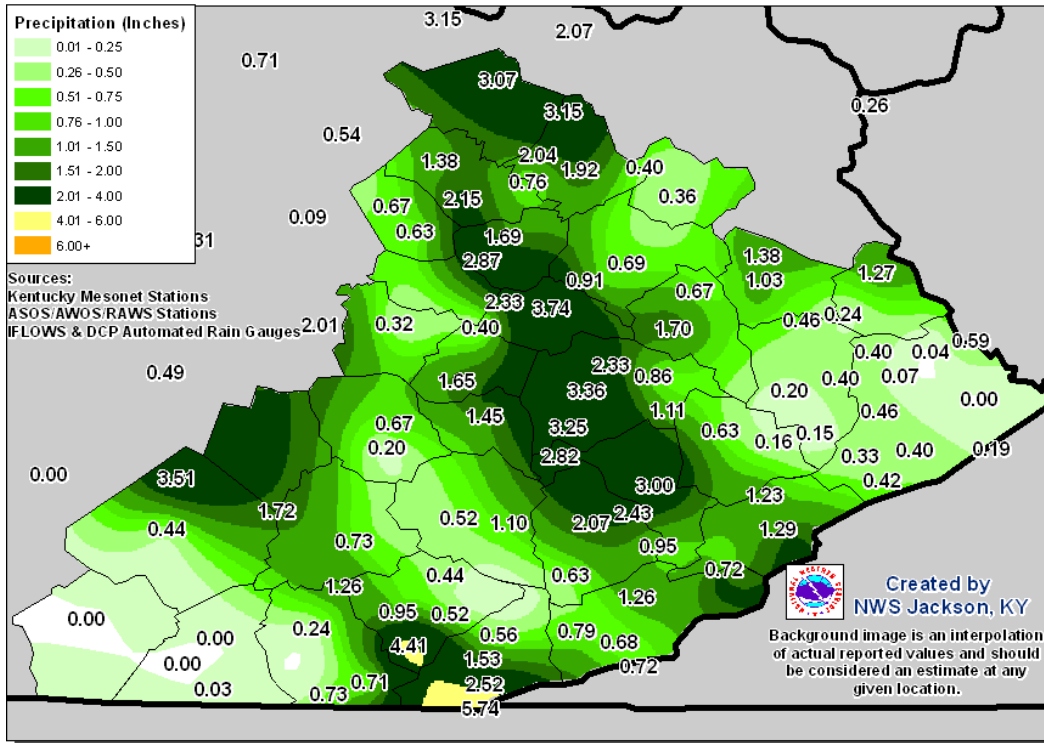


Radar loop from 1 a.m. through 8 a.m. E.D.T. (point A = Kayjay, point B = Middlesboro)

The 24 hours rainfall totals through 2 PM on Monday June 20th, combined with the rainfall totals over the previous weekend illustrates the amount of rainfall which led to the devastating flooding.

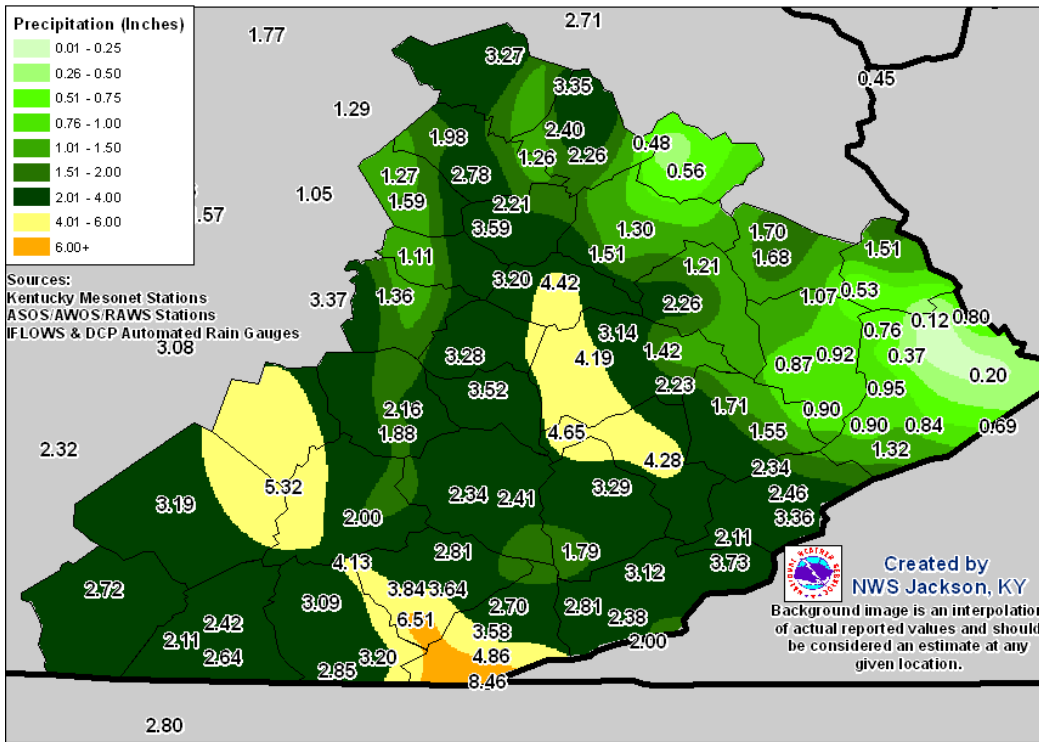
Rainfall Totals

24 Hour Period Ending 2 PM EDT Monday June 20, 2011



Weekend Rainfall Totals

8 am EDT Friday June 17 - 2 pm EDT Monday June 20, 2011



Among the hardest hit areas was the community of Kayjay in southern Knox County, where 1 death was attributed to the flooding when a trailer was swept off of its foundation. Middlesboro in Bell County was also among the areas which were severely impacted, in what many residents called the worst flooding in 20 years. Dozens of roads were inundated around eastern Kentucky, with numerous water rescues throughout Bell, Knox, Whitley and Perry counties during the early morning hours.



Downtown Middlesboro (photo courtesy of Betty Jones)



Downtown Middlesboro (photo courtesy of Betty Jones)



Downtown Middlesboro (photo courtesy of Betty Jones)



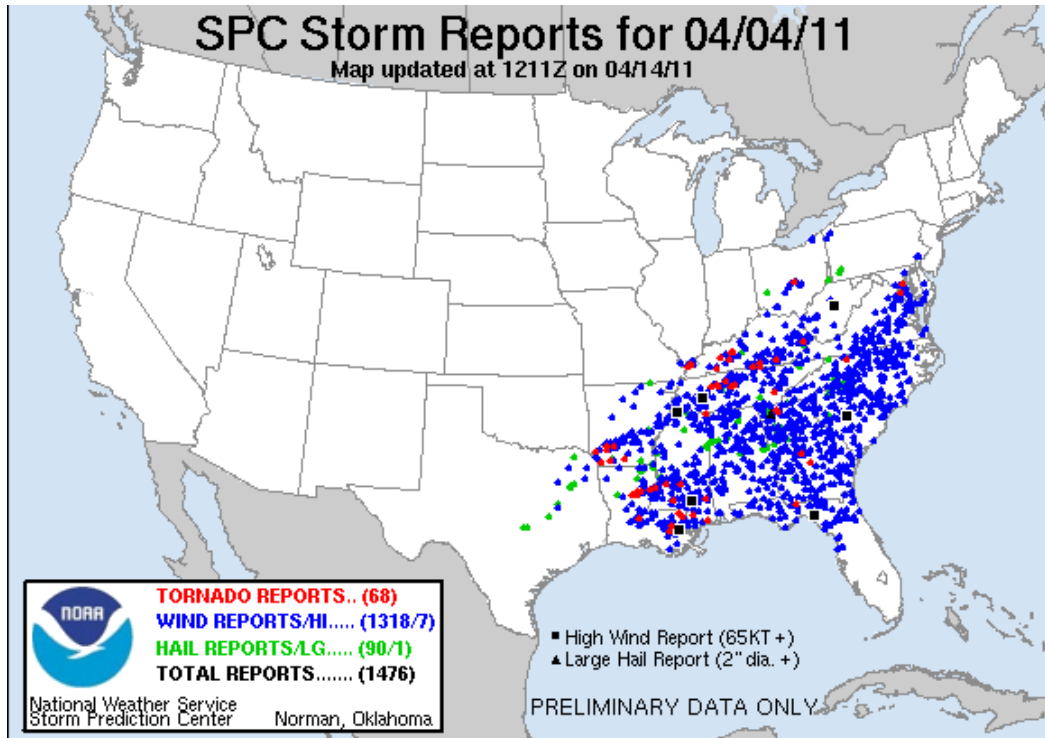
Downtown Middlesboro (photo courtesy of Betty Jones)

An Active April

April was an impressive month for severe and extreme weather, earning 3 spots in the Top 5 Weather Events of 2011.

2. April 4 Severe Weather

On April 4th 2011, a strong cold front swept across the Commonwealth as part of a low pressure system moving through the Great Lakes. Ahead of the front, a strong southerly flow which prompted a Wind Advisory across eastern Kentucky drove afternoon temperatures around the area into the mid 70s and lower 80s, providing an ample supply of moisture from the Gulf of Mexico and producing a very unstable atmosphere across the region. By early afternoon, a squall line had developed along the front which then moved through the area, prompting the NWS in Jackson to issue 7 tornado warnings along with over a dozen Severe Thunderstorm Warnings.



At the end of the day, over 70 reports of severe weather had been tallied across 33 counties of eastern Kentucky, including 2 confirmed EF-1 tornadoes. The first tornado touched down in Whitley County around 5 PM to the northwest of Williamsburg before crossing Hwy 25 and KY204, producing estimated wind speeds of 90-95 mph which uprooted trees and caused significant damage to several barns and outbuildings along its 2 mile path.



Whitley County 4/4/11

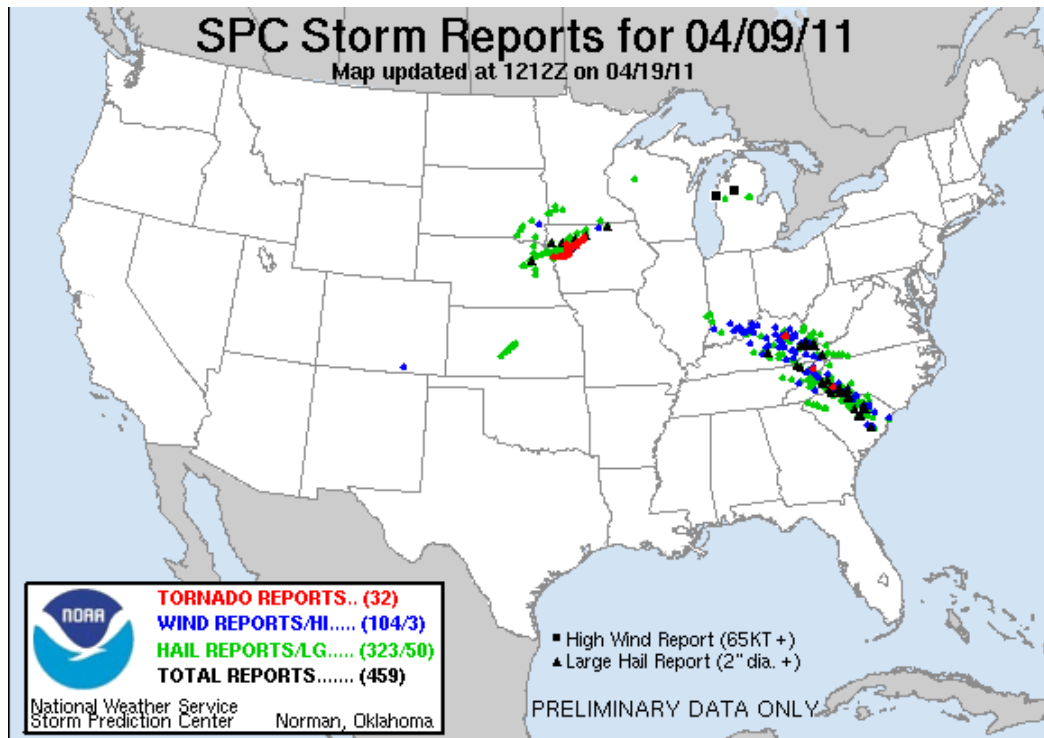
The second tornado touched down shortly after 6 PM in southeastern Floyd County, producing an estimated maximum wind speed of around 90 mph which destroyed 1 home near Teaberry, about 7 miles southwest of Pikeville.



Floyd County 4/4/11

3. April 9 Severe Weather

A stalled frontal boundary was draped across the Commonwealth from west to east, providing the focus for severe weather on both the 8th and the 9th, which capped off on the 9th with over 60 reports of severe weather across eastern Kentucky, including a pair of EF-0 tornadoes. In addition to the tornadoes, dozens of reports of severe thunderstorm wind damage and hail poured into the NWS office in Jackson, including numerous reports of baseball sized hail in Pulaski, Knott, Floyd and Pike counties, and one report from a trained spotter near Eubanks in Pulaski County of a hailstone measuring 4 inches.



The first tornado touched down around 2 PM near the Gladie Center at the Daniel Boone National Forest in Menifee County before crossing Hwy 715 into Wolfe County, twisting and uprooting hundreds of trees in the Daniel Boone National Forest with estimated wind speeds between 80 and 85 mph. About this time, a second tornado touched down in Wolfe County near Hwy 2027, traveling around a quarter of a mile and moving a barn, destroying a car port, and causing minor damage to two homes and a car near Valeria.



4. Wettest April on Record

Both the Jackson weather office and the London/Corbin airport received record setting rainfall for the month of April 2011. In Jackson, 10.20 inches of rain fell during the month, surpassing the previous record of 10.00 inches set back in April 1998. Fifteen days in the month recorded a tenth of an inch or more of rainfall, 10 of which saw a half of an inch or more. 1.42 inches fell on the 4th (a new daily record) amidst the severe weather that day, along with 1.47 inches tallied on the 27th, while a 24-hour period beginning on the 11th and ending on the 12th brought 1.82 inches of rainfall.

London also experienced more than their share of rain over the month, totaling 10.23 inches, which destroyed the previous record of 8.62 inches set back in 1977. In addition to being the wettest April on record, it also stands as the 6th wettest month of all time at London, where records date back to 1954. Twelve days out of the month saw a tenth of an inch or more rainfall, 8 of which received a half of an inch or more. Four days out of the month reported more than 1 inch, including the 4th (1.31"), 11th (1.32"), 15th (1.53"), and of course the 27th, which had 2.57 inches of rainfall, setting a new daily record, when almost 3 inches of rain fell over parts of the Cumberland and Kentucky River basins, resulting in several reports of flash flooding around McCreary, Whitley, Knox and Laurel counties, along with 2 occurrences of areal flooding around the Irvine area in Estill County.

Several long standing CO-OP observers also experienced record rainfall during the month, including the Army Corps of Engineers at Cave Run Lake who witnessed the wettest month on record there, with a climatological record dating back to 1904. As a result, the lake rose to a record level of 759.67 feet (above sea level), surpassing the previous record of 755.05 feet established in 1979, which was almost broken in 1989 when the lake rose to 755.03 feet.

Station	April 2011 Precip	Ranking	Records Began
Mt Sterling (Montgomery Co)	13.02"	Wettest April	1892
Cave Run Lake (Rowan Co)	12.53"	Wettest Month on Record	1904
Clay City 1WNW (Powell Co)	11.51"	Wettest April	1955
West Liberty 3NW (Morgan Co)	10.30"	Wettest April	1941
London/Corbin Apt (Laurel Co)	10.23"	Wettest April	1954
NWS Jackson (Breathitt Co)	10.20"	Wettest April	1981
Monticello 3NE (Wayne Co)	9.49"	Wettest April	1936

Baxter (Harlan Co)	9.33"	3rd Wettest April	1948
Somerset 2NE (Pulaski Co)	9.24"	2nd Wettest April	1950
Buckhorn Lake (Perry Co)	8.49"	Wettest April	1961

The copious April rains also helped vault many locations around eastern Kentucky into the 2011 books as one of the wettest years on record.

5. February Tornado

Rounding out the Top 5 Weather Events of 2011 was a tornado which occurred on February 28th, early on a Monday morning near Gilmore in Wolfe County. This was only the 5th time a tornado occurred in eastern Kentucky in February since 1950. In a typical synoptic setup, a low pressure system moving through the Great Lakes was sweeping a cold front up the Ohio Valley, when a squall line developed out ahead of the front and raced across central and eastern Kentucky. Embedded within the line was a well developed thunderstorm with enough rotation to produce the short lived tornado, which was only on the ground for less than one minute as it crossed KY 1419 just south of the Mountain Parkway.

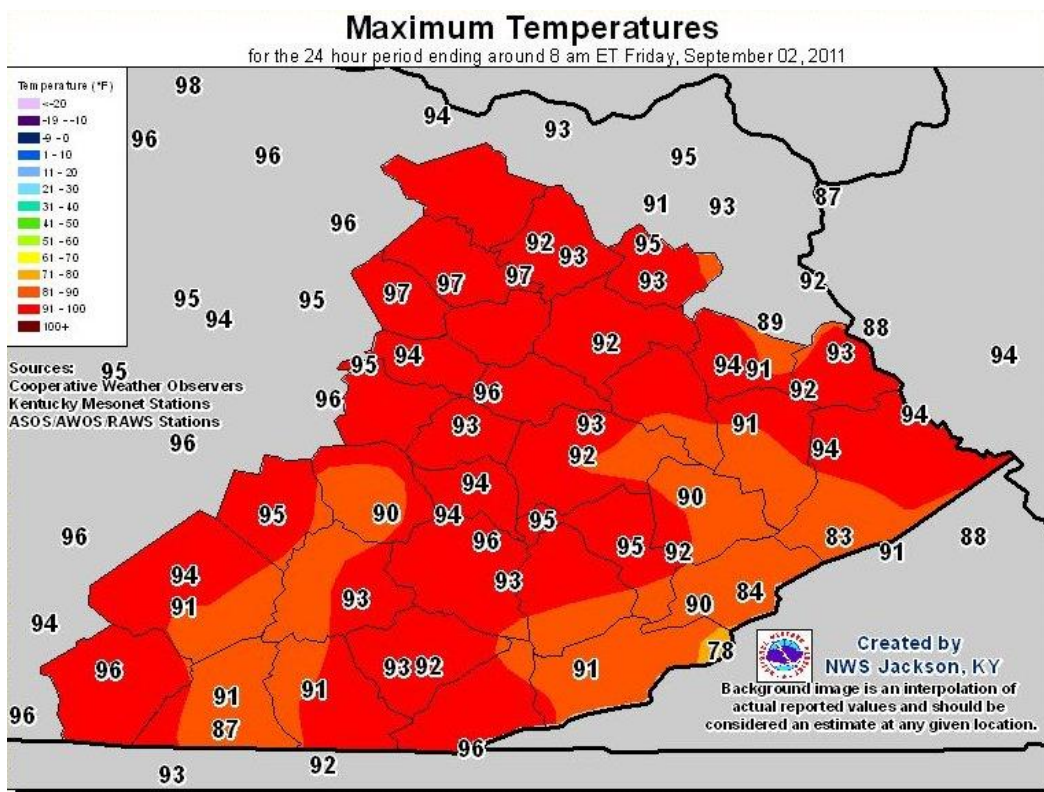


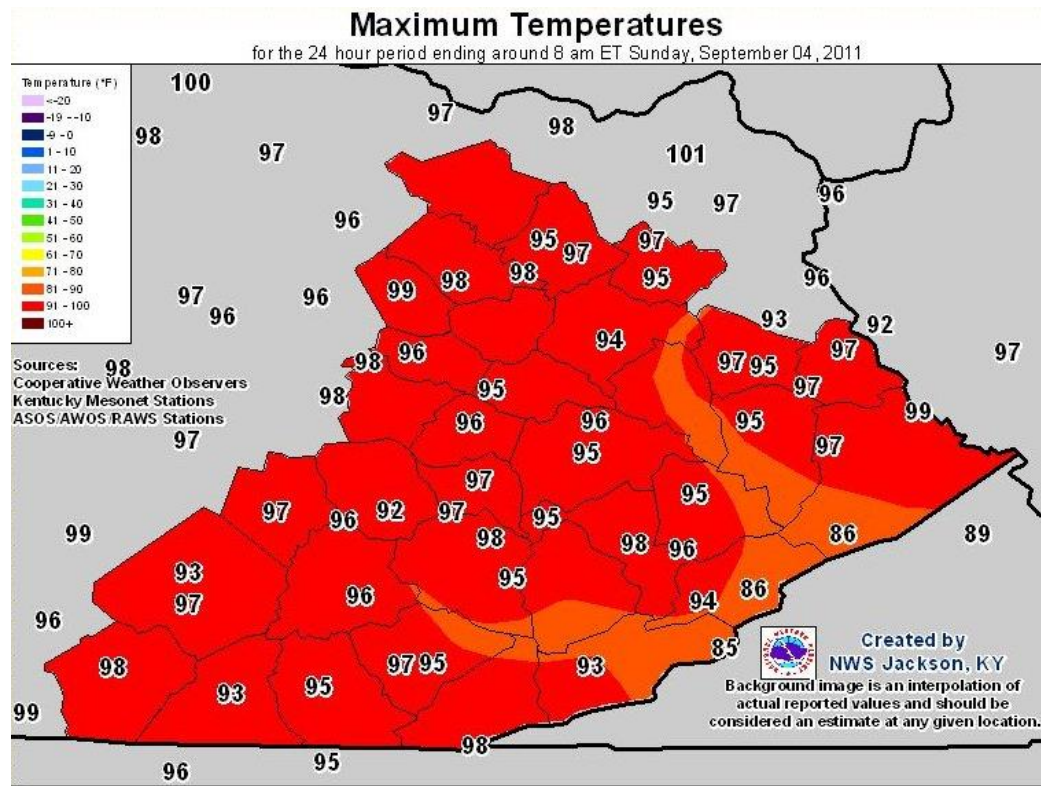
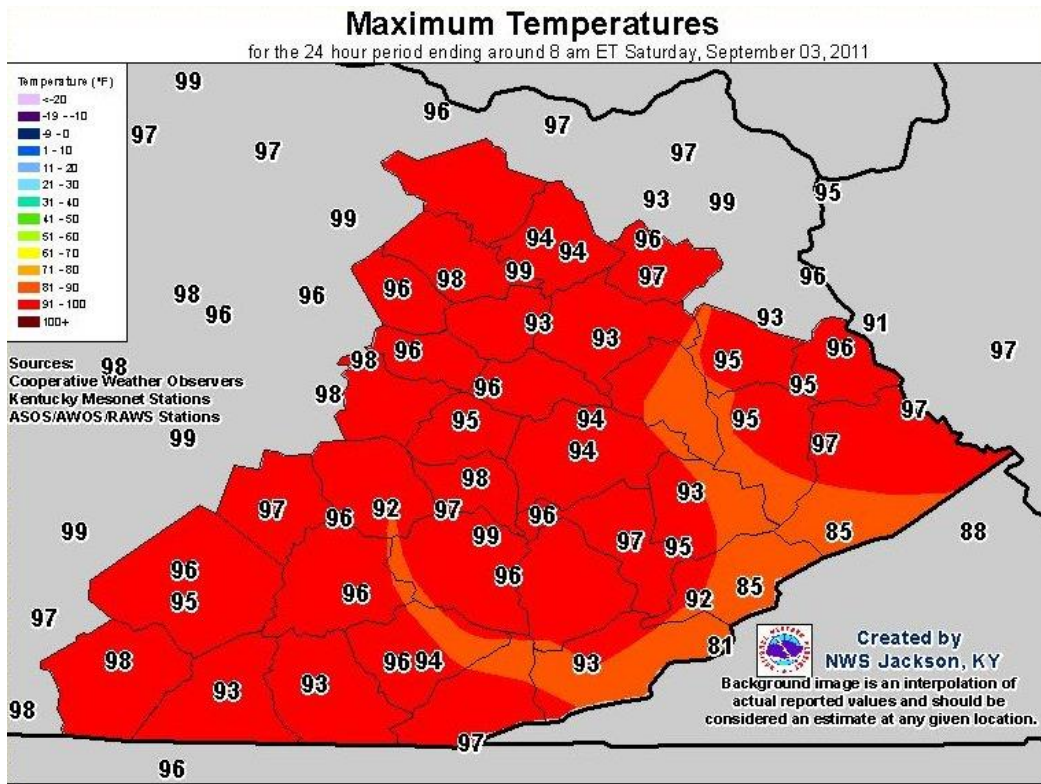
The tornado tore the roof off of one mobile home while moving the home about 5 feet off of its foundation. Two more homes had their roof and siding torn off, and one barn was completely destroyed by the tornado, along with another small building.

Honorable Mentions:

Record Heat in September and Remnants of Tropical Storm Lee

The first week in September brought two relatively unique events to residents of eastern Kentucky. Record breaking heat arrived just in time for the unofficial end of summer as the Labor Day weekend saw temperatures soar into the lower and mid 90s across eastern Kentucky under the influence of a departing ridge of High pressure over the central Appalachians and Mid Atlantic coast. At the NWS in Jackson, the mercury topped out at 93 and 94 degrees on the 1st and 2nd days of the month, respectively, establishing new records for both days. On Friday September 3rd the mercury continued climbing, topping out at a sweltering 96 degrees and setting a new daily record, as well as the record for warmest temperature ever recorded in September at the Jackson office. In London, afternoon temperatures peaked at 96 degrees on the 2nd and 3rd, setting new daily records there as well, but coming in just 1 degree shy of the all-time warmest September temperature for London of 97 degrees, established on September 5th, 2007.





During this time, Tropical Storm Lee slowly began making landfall along the Gulf Coast as a reinvigorated Tropical Depression. Lee would ultimately end up dumping over 15 inches of rain over parts of southern Louisiana, and more than 10 inches of rain over portions of Mississippi, Alabama and Tennessee. Closer to home, residents of eastern Kentucky began to see the remnants of Lee moving into the area on Sunday the 4th, with the rains spreading across the Commonwealth over the next few of days. By Wednesday the 8th, an average of 2 to 3 inches of rain had fallen over much of eastern Kentucky, with widespread reports of 4 to 6 inches along the Virginia border, and a 3-day total of 7.16 inches at the Kingdom Come State Park in Harlan County. Fortunately, the remnants of Lee came on the heels of a

relatively dry spell, and while local rivers saw significant rises, only a handful of occurrences of nuisance flooding were reported.

