

2018 Top 5 Weather Events

As 2018 comes to a close, the staff of the National Weather Service (NWS) Office in Jackson wanted to share what we consider to be the Top 5 Weather Events of the year.

1. February 10th -11th Flooding (Click for More)

A prolonged period of light to moderate rain led to flooding across portions of eastern Kentucky, particularly southeastern Kentucky, during the overnight hours of Friday, February 9 into Saturday, February 10, 2018. This occurred along and ahead of a slow moving frontal boundary as generally between 1.5 and 4.5 inches of rain fell across eastern Kentucky. The hardest hit area was Harlan County, where flooding occurred across much of the county as up to 5.5 inches of rain fell. A state of emergency was declared as the Cumberland River at Baxter reached major flood stage, prompting the closure of all of the City of Harlan's floodgates. The floodgate for the City of Pikeville was also closed as the Levisa Fork of the Big Sandy River breached 38 feet. Additional emergency declarations were made in Bell, Clay, Floyd, Knott, Knox, Leslie, Letcher, and Perry Counties, as well as for the City of Pineville, as numerous tributaries and the main stems of the Kentucky, Cumberland, and Levisa Fork of the Big Sandy Rivers exceeded bankfull.

Nearly 2,200 power outages were blamed on the widespread flooding, while thousands of boil water advisories were issued as shelters were opened to provide water. Several bridges were also inspected by engineers for structural integrity as the flood waters receded. A number of water rescues took place during the weekend and into Monday morning, including nearly half a dozen in and around Hazard. Hundreds of people were forced from their homes as river flooding along portions of the Kentucky and Cumberland Rivers continued well into the following week. In addition, the saturated ground led to several landslides and mudslides, including one along Kentucky Highway 74 near Middlesboro.



Highway 476 along Troublesome Creek south of Jackson.



KY Highway 7 in Letcher County.
Picture courtesy of Sheena

[2. September 9th, 2018 Flash Flooding Across the Bluegrass Region \(Click for More\)](#)

A slow moving low pressure system, in combination with the remnants of Tropical Cyclone Gordon, and abundant moisture, brought a long duration heavy rainfall event to much of the Bluegrass Region of eastern Kentucky. Southwesterly low level winds ahead of a very slow moving cold front ushered rich moisture into eastern Kentucky, which when combined with the available lift, resulted in copious amounts of rainfall. This, in combination with several inches of rain the past couple of days, led to widespread flooding and flash flooding.

Bath, Montgomery, and Menifee Counties all saw significant impacts. This includes 50-70 homes and 20-25 businesses, one of which was a school in Menifee County, being inundated with water. Numerous roads were damaged as culverts were washed out, forcing schools to close the following day. Disaster declarations were made for Montgomery and Menifee Counties while nearly a dozen water rescues were performed. A young boy died after he was swept away in a culvert in Morehead.



Significant flash flooding leading to a culvert on Dog Trot Road, west of Frenchburg, being

3. July 4th and 5th Microburst Winds in [Frenchburg](#) and [Paintsville](#) (Click for More)

These two events tied for 3rd place.

July 4th:

A thunderstorm produced microburst winds over portions of Paintsville during the early evening of July 4th, 2018. The storm hit Paintsville a little after 7 p.m. EDT and created winds of between 75 and 85 mph. The damaging winds lasted around a minute in duration and by the time they subsided, had lifted part of the roof off of an office building in the downtown area and removed the steeple off of a church as well. Many trees were felled or damaged. In addition, there were two residential buildings that had large trees fall on them.



Church Steeple toppled from top of church in downtown Paintsville.

July 5th:

Microburst winds, peaking at 100 to 110 mph, produced damage over about a mile stretch of Highway 36 north of the center of Frenchburg, KY early Thursday evening, July 5th, 2018. The damage began just east of the highway near the water treatment plant and ended east of Highway 36 near a salt storage structure, where the thick tarp covering was torn. Some damage was also noted just west of Highway 36 where some shingles were blown off of a small shed. Metal roofing was also peeled back off of a residential roof and numerous trees were felled or damaged. The most intense damage occurred along a 125 yard patch just south of Sorrell Road to Beaver Creek, where the winds broke trunks and uprooted several hardwood trees. The winds were most likely enhanced by the terrain as they descended from the west down a hollow. They were then directed to the south by a mountain barrier, creating an intense clockwise rotating eddy.



Salt Storage Facility Torn Cover

[4. April 3rd- 4th Line of Storms Brings Damaging Winds and Large Hail to Portions of Eastern Kentucky \(Click for More\)](#)

A complex of showers and thunderstorms developed across the Midwestern U.S. in the afternoon and later pushed through eastern Kentucky during the late evening and overnight hours. Initially, a few embedded supercell thunderstorms produced large hail due to their rotation and stronger updrafts. Damaging wind gusts ended up being the primary threat across eastern Kentucky as these features became organized into line segments later into the night.

Numerous reports of downed trees and power lines were received across southeastern Kentucky where the greatest amount of instability was present. Homes in Leslie, Letcher, and Pike Counties suffered extensive damage from trees falling onto them, including one at Willow Tree Hollow near Marrowbone and Regina southeast of Pikeville that led to an injury to a person inside. More scattered wind damage was also reported up toward and north of the Mountain Parkway as individual storm cells embedded within the larger line intensified.



Tree on top of home at Willow Tree Hollow in Pike County.
Picture courtesy of Dough Tackett



Subway in Shelby Valley in Pike County.
Picture courtesy of Jeremy Pinson

[5. December 9th Early Season Heavy Snow and Ice](#) [\(Click for More\)](#)

A winter storm system tracked across the south from the evening of December 8th through December 9th with a wintry mix of precipitation developing over southeastern Kentucky. The precipitation lifted northward into southeastern Kentucky overnight with a mixture of snow, freezing rain, and sleet. After dawn on Sunday, precipitation gradually changed over to heavy, wet snow across much of southeast Kentucky. The event came to an end on the evening of the 9th with some locations in far eastern Kentucky reporting over 6 inches of wet snow. Some locations also picked up a tenth to two tenths of an inch of ice. The combination of snow and ice resulted in fallen trees and power outages across southeastern Kentucky. Traffic impacts were also felt as the Kentucky State Police reported numerous accidents on Interstate 75 near and just south of London.



Snow near Prestonsburg, KY.
Photo Courtesy of Jonathan Pelton



Ice and Snow in London, KY.
Photo Courtesy of Johnnie Nicholson

Honorable Mentions

[March 11th – 12th Winter Storm \(Click for More\)](#)



Mount Vernon
Picture courtesy of
Jordan Smith

An upper level low moved into the TN and OH Valley region and then into the Appalachians from Sunday evening, March 11th into Monday, March 12th. At the same time, a surface low pressure system tracked into the TN Valley and southern Appalachians before redeveloping over the Southeastern U.S. during the night and then off the coast of the Carolinas on Monday. Temperatures on Sunday the 11th were mild, reaching the upper 40s to mid 50s. However, the upper level low brought colder air into the region and was strong enough to allow rapid cooling of the atmosphere to near or just below the freezing mark in most locations in East KY between 11 PM EDT on March 11 and 3 AM EDT on March 12. The development of heavier snow bands occurred at the same time over central KY, and with the cooling moving into eastern KY overnight, affected portions of east central KY first. These bands then moved east and affected areas generally north of KY Highway 80 to near the Mountain Parkway corridor. Within the bands, snowfall rates of up to 2 inches per hour occurred, with heavier amounts.

By 10 AM EDT on Monday, widespread accumulating snow had occurred over most of eastern Kentucky with the final band of snow working across the area. The snow finally exited into Virginia and West Virginia around 1 PM EDT. By that time, the heavy, wet snowfall totals ranged from as little as a half of an inch in some locations near the TN border to about 8 inches in areas near the Daniel Boone National Forest. A few localized higher amounts nearing 10 inches were observed on ridgetops from the Daniel Boone National Forest west.

At the height of the storm, at least 12,000 customers in East KY were without power. Slick and slushy conditions led to a 40 vehicle pileup on the Mountain Parkway in eastern Powell County, forcing the closure of the roadway between 1:30 AM and 2:30 AM EDT Sunday night. In addition to the falling snow, trees and limbs succumbed to the weight of the heavy wet snow and fell onto roadways. Although with temperatures near freezing, plowing and salting improved road conditions during the day on Monday. This process was slowed a bit as highway departments, first responders, and utility companies cleared snow, large limbs, and utility lines from roadways.

[March 24th Heavy Snow in Bluegrass and Big Sandy Regions \(Click for More\)](#)

A strong early spring storm system impacted eastern Kentucky on March 24, 2018. Precipitation began as rain across the Lake Cumberland region during the early morning hours, while starting out as snow along and north of a line from about Lexington to Harlan. The highest snowfall amounts of 4 to 6 inches, with isolated higher amounts, occurred northeast of an Owingsville to Prestonsburg line, due to a strong dome of cold air remaining in place on the southwestern extent of a high pressure system residing from Quebec into northeastern Kentucky.

Due to the strength of this low pressure system, thunderstorms developed across portions of south central to southeast Kentucky during the afternoon and evening. Pea sized hail was observed in London with temperatures only in the low to mid 40s! Additionally, total precipitation amounts of 1.5 to over 2 inches attributed to rises on portions of the Kentucky and Cumberland Rivers.



Hatfield, KY
Picture courtesy of Mary Reed Runyon



Ezel, KY
Picture courtesy of Kristi Gullett

[May 5th Storms Cause Damaging Winds and Large Hail](#) [\(Click for More\)](#)

A complex weather system set up as an area of low pressure pushed across the Tennessee Valley on Saturday, May 5, 2018. Initially, a few supercell-like thunderstorms produced large hail due to their rotation and stronger updrafts near the Virginia border. A bowing line of storms then brought damaging wind gusts into the Lake Cumberland region later in the afternoon. There were multiple reports of large hail in some of the stronger storms in southeast Kentucky, with the largest hail occurring in Harlan County near Loyall.



2.5 inch hail seen NW of Loyall
Picture courtesy of Tammy Hyatt
from Andrew Dockery WYMT Facebook



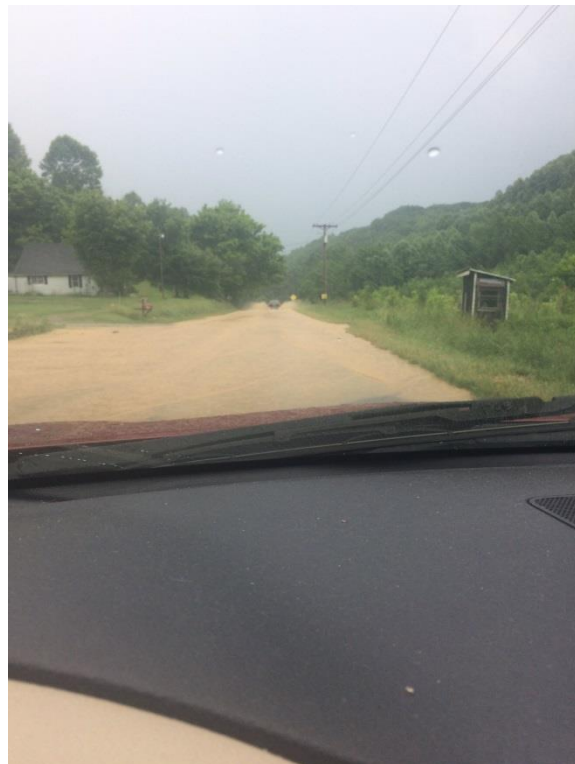
Large hail near Harlan Animal
Hospital
Picture courtesy of Arlene Blanton
Facebook

May 31st Dual Storm Complexes Produce Damaging Winds and Flash Flooding

Two storm complexes, often referred to as mesoscale convective systems, moved through eastern Kentucky during the day. The first tracked through during the early to midafternoon hours, while the second followed in its wake from midafternoon through the evening. Strong to severe winds along the leading edge of each complex led to scattered damage throughout eastern Kentucky, mainly consisting of downed trees. Additionally, isolated flash flooding occurred in Jackson and Whitley Counties due to the multiple rounds of heavy rainfall. Clover Bottom in particular saw very heavy rainfall as over 3 inches of rain in a short period of time damaged a portion of U.S. Highway 421.



Shelf Cloud in Monticello.
Picture courtesy of Dakotah Harper



Flash Flooding Clover Bottom.
Picture courtesy of Mrs. Gabbard