

As in years past, the employees of the National Weather Service Office in Jackson have rated what they considered to be the most significant weather events of 2020. Without further ado, here are the Top 5 Weather Events of 2020:

1. Easter Gravity Wave Event, April 12 – 13, 2020

A strong storm system and associated cold front approached east Kentucky on Easter Sunday, with rainfall beginning during the afternoon. As the low pressure system intensified and moved into the Ohio Valley during the evening of the 12th, wind speeds began to drastically increase across eastern Kentucky. The Kentucky Mesonet station in Dorton, (positioned at 2774 feet elevation) recorded a 79 mph wind gust.

Several other gusts of 40+ mph occurred, leading to numerous instances of damage across east Kentucky. This includes downed trees, power lines, and structural damage, causing several roadways to be blocked for a period of time into the morning of the 13th. As many as 70,000 to 75,000 power outages were reported across eastern Kentucky. As a result of these winds, Kentucky Power reported 318 poles had to be replaced while a total of 33 miles of electric wire were downed. The Storm Reports map below gives much more detail regarding specific impacts. A few notable areas of damage include:



- Pikeville where widespread tree and structural damage occurred, including to a marina on Fishtrap Lake and to the roof of a grocery store. An amateur radio and radio station tower were also blown over.
- Roof damage in Hi Hat in Floyd County.
- A tree blown onto a car in Cumberland in Harlan County.
- Trees blown onto homes in Barbourville.
- Uprooted/snapped trees, power poles shifted several inches, and roof damage near Smilax in Leslie County.

Damage to high school scoreboard in Pikeville.
Courtesy of WYMT

- A barn destroyed in Stinnett in Leslie County.
- Roofs blown off of homes/apartments from Hollyhill to Whitley City, multiple trees downed on homes and across roadways, and hardwood trees snapped in McCreary County.
- A tree falling into a house in Corbin and one on top of a car in Williamsburg.
- A garage having its roof blown off and door blown out in Hazard.
- A tree falling onto a home in Pippa Passes in Knott County.
- A tree falling onto and destroying a home in Blackey in Letcher County.

Widespread rainfall of 1-2 inches fell, with 3-4 inches over portions of southeast Kentucky and the upper Cumberland Valley. A swift water rescue took place in Bell County as a motorist became stranded in flood waters.

For more information: [Easter Gravity Wave](#)

2. Christmas Eve Snow - December 24, 2020

A strong cold front passed through east Kentucky on Christmas Eve. Widespread rain accompanied the cold front through early afternoon. However, as the cold air spread into east Kentucky, it interacted with increasing moisture from a weather disturbance aloft, to provide a changeover to snow that occurred between 2 pm and 8 pm. A short period of sleet was also observed during the changeover time. Snow became very heavy at times with snowfall rates between 1 and 2 inches per hour observed. The snow continued into the evening hours, before the widespread snow pulled out of the area. However, snow showers persisted from Christmas Eve night through Christmas day, before finally winding down. As temperatures plummeted into the teens and 20s during the evening on Christmas Eve, icy conditions quickly developed area wide. These icy conditions continued through Christmas.



Kentucky Transportation District 10 Plow
Courtesy of Kentucky Transportation District 11

The most notable impact was related to travel across east Kentucky. The heavy snow created treacherous road conditions across east Kentucky. The Hal Rogers Parkway was shut down between London and Manchester for a short time. There were also numerous reports of cars off the road and significant backups due to poor weather conditions. In addition, there were many reports of trees knocked down due to the heavy snow along with thousands of power outages.

For more information: [Christmas Eve Snow](#)

3. Major Flooding from February 6-7, 2020

Beginning on February 3rd, numerous rounds of rainfall began to impact east Kentucky. This continued through February 7th, highlighted by heavy rainfall from the evening of February 5th through the first half of February 6th. Rain amounts of 4-6 inches fell across much of southeast Kentucky over this period. This led to major flooding and numerous mudslides across portions of Whitley, Perry, Letcher, Leslie, Knox, Harlan, Clay, and Bell Counties. The Governor subsequently declared a State of Emergency for these 8 counties.

Major flooding occurred along the Cumberland River at Pineville, Barbourville, and Williamsburg. Additionally, the communities of Loyall and Baxter experienced major flooding. Numerous roads became impassable across large portions of Whitley, Knox,

Clay, Leslie, Letcher, Harlan, Perry, and Bell counties. In particular, Harlan County was hit extremely hard with the Kentucky Mesonet site on Black Mountain (4031 foot elevation) receiving over 6.5 inches of rain over this stretch.

Flood gates were closed in Pineville and Harlan, further impacting local travel. A couple of mobile homes were flooded and swept down the Cumberland River in Harlan County, while swift water rescues took place in Bell and Harlan Counties. Elkhorn Dam in Jenkins had water rushing over it for a period of time on February 6. A man went missing in Whitley County and was later found deceased in his car on Kentucky Highway 779 after his attempt to drive into flood waters. A total of seven homes were reported to have been in or under water across Whitley County as the Cumberland River in Williamsburg crested to its third highest stage on record of 34.84 feet. The city of Pineville saw the river rise to its second highest crest in history at 1019.06 feet, leading to several families being stranded without homes.

While impacts were certainly greatest along the Cumberland River, several portions of the Kentucky River also flooded. Several roads were impacted in Hazard and Whitesburg, while Booneville, Heidelberg, and Ravenna also exceeded flood stage. Along the Levisa Fork of the Big Sandy River, a rarity occurred as Pikeville hit flood stage and forced the city to shut its flood gates.



Aerial view of Harlan from near the Dayholt Community
Courtesy of Stacy Steward via WYMT

For more information: [Major Flooding - February 6-7, 2020](#)

4. Flash Flooding - September 12-13, 2020

Deep moisture anchored across east Kentucky, combined with a stalled frontal boundary, then a cold front, led to several rounds of heavy rain from the evening of September 12th through the early afternoon hours on September 13th. This rain led to many reports of flooding with several water rescues occurring during the late evening hours of September

12th. Rainfall amounts ranged from 2 to 5.5 inches in the area where the heaviest rains fell.

In Powell County, at the Middlefork Campground, a truck was caught up in flood waters, but all passengers were able to get to safety. Powell County Search and Rescue were also involved in getting people to safety in the Indian Creek area of the Red River Gorge.

In Menifee County, 30 to 40 campers had to seek higher ground as the Red River Adventure Campground saw extensive flooding. Two other campers had to be rescued who were camping near Brushy Creek in the northern part of the county.

In Morgan County, the Cow Branch community saw extensive flooding, along with significant flooding in and around West Liberty. Several roads sustained damage in West Liberty. There was also extensive flooding along Spaws Creek. Bethany Enterprise Baptist Church along War Creek also saw some damage to their property. Finally, in Jackson County, there were several instances of roads being shut down due to flash flooding, especially late Sunday morning into Sunday afternoon with a second surge in



rainfall.

Mildred Road near Tyner in Jackson County
Courtesy of the Jackson County High School Weather Team

For more information: [Flash Flooding- September 12-13, 2020](#)

5. Dual Rounds of Wind Damage – April 8-9, 2020

Supercell thunderstorms developed along a west to east oriented boundary early on the afternoon of the 8th near the Ohio River, congealing into a broken line as they pushed south into east Kentucky throughout the afternoon. Several instances of wind damage and hail were observed along with a couple of funnel cloud reports in Rowan County.

A strong cold front sparked a second line of showers and thunderstorms that pushed east of Interstate 75 and into east Kentucky during the late evening hours of April 8th. These continued to move through the coalfields through the early morning hours of the 9th, producing numerous reports of wind damage. The most extensive of this was found in portions of Fleming County, as well as near Brodhead in Rockcastle County.



Hotel Building near Renfro Valley
Courtesy of Jordan Smith

For more information: [Dual Rounds of Wind Damage April 8-9, 2020](#)

Honorable Mentions:

Although these events did not make the Top 5, we felt they deserved an honorable mention:

1. EF-1 Tornado and Thunderstorm Wind Damage- March 12 -13, 2020

A supercell thunderstorm tracked across McCreary County during the late evening hours of March 12th. A National Weather Service Jackson survey team found intermittent damage along the entire path. There were three distinct areas of damage where the tornado touched down. On Chitwood Ridge Rd, several hardwood trees were snapped off. There was also a house with some roof damage.

The next area of tornado damage was on the northern side of Whitley City along north Highway 1651, where more hardwood trees were snapped off along with some damage to a few two-story buildings.

Finally, the third area of tornado damage was northeast of Whitley City on Stephens Farm Rd. A tree landed on a house, leading to major damage. There were also several more houses with roof damage and additional trees snapped off.



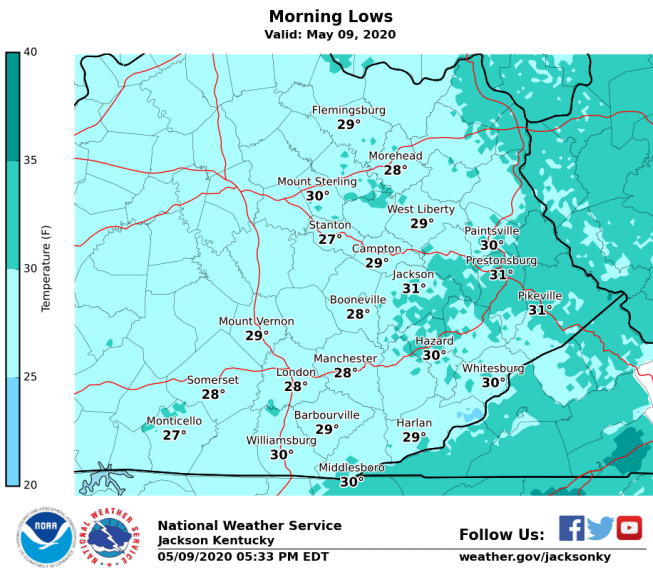
For more information: [Whitley County Tornado March 12, 2020](#)

2. Late East Kentucky Freeze – May 9-10, 2020

A late-season push of Arctic air brought a freeze and record-breaking cold temperatures across east Kentucky May 9-10th. The Jackson National Weather Service Office, on top of Sugar Camp Mountain, dropped to 30 degrees on the morning of the 9th, setting an all-time record low temperature for the month of May. Jackson then fell to 36 degrees on the morning of the 10th, setting a new daily record low. Record cool daily maximum temperatures of 54 degrees were also set at the Jackson office on both the 8th and 9th.

Many valley locations saw temperatures falling to near or below 30 degrees on the morning of the 9th.

Temperatures were overall slightly warmer on the morning of the 10th, but still dropped to between 29 and 32 degrees in many sheltered valley locations. The first night generally featured the coldest sub-freezing temperatures, but the lateness of the frontal passage on the evening of the 8th kept the coldest air from settling over the area for more than a few hours, possibly resulting in a less damaging freeze than what would have typically occurred with cold temperatures of this magnitude. That being said, impacts were still felt, especially in terms of horticulture. Apples were taken out in Rowan County, while Pulaski County had about all of their peaches frozen out. Pears and winter wheat were also damaged across eastern Kentucky.



For more information: [Late Season Freeze](#)
[May 9-10, 2020](#)

