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SEVERE STORMS IN KENTUCKY
1959 - 1977

By Glen Conner and Robert Ashby

Although tornadoes are more spectacular, other severe storms are more common in Kentucky. These severe storms are most often associated with thunderstorms, but snow, glaze, and heavy rains also produce damage. Severe thunderstorms produce destruction by lightning, hail, high winds, and heavy rain. Flash flooding sometimes results from the high rainfall rates. Although it is probable that damage from severe storms often goes unreported, the existing records are nevertheless impressive and verify the need for recognition of the destructiveness which can result from non-tornadic storms.

Wind damage from severe storms was the most frequent type reported. Damaging winds have been reported in all months but were most numerous in July, June, and April. These three months contained over 54 percent of the reported occurrences. Deaths and injuries from wind were greatest in March, April, and July. During the period 1959-1977, 12 deaths and 334 injuries were attributed to high winds. Sometimes damage was localized. On March 7, 1975 a severe thunderstorm moved through Ohio County and the associated wind destroyed over twenty mobile homes, damaged several houses, severely damaged a service station, and snapped utility poles. On March 20, 1976, winds from a thunderstorm passing through Barren County caused major damage to over 100 homes. Damage was assessed at over $500,000. High winds collapsed a fairground tent in Bowling Green in July, 1967, injuring fifteen people. Occasionally, severe storms with damaging winds affect all or most of the Commonwealth. December 23, 1976, reported that hailstones as large as baseballs had pelted the area for about twenty minutes. Some of the hailstones were five inches in diameter and weighed nearly one half pound. In November, 1967, two miles south of Summer Shade in Metcalfe County, hail one fourth to one half inches in diameter accumulated to a depth of three to six inches. The Bluegrass region suffered a severe hail-producing storm on July 10, 1966. Hail averaged one quarter to two inches in diameter but some reached four inch diameter. The peak months for hail are during the growing season and damage is greatest to agricultural crops.

Another hazard of thunderstorms is hail. During the period 1959-1977, 316 damaging hail storms were recorded with 89 percent of them occurring from April through August. Over 45 percent of the total was reported in July and April but all months have recorded hail. On April 3rd, 1974, Caldwell County reported that hailstones as large as baseballs had pelted the area for about twenty minutes. Some of the hailstones were five inches in diameter and weighed nearly one half pound. In November, 1967, two miles south of Summer Shade in Metcalfe County, hail one fourth to one half inches in diameter accumulated to a depth of three to six inches. The Bluegrass region suffered a severe hail-producing storm on July 10, 1966. Hail averaged one quarter to two inches in diameter but some reached four inch diameter. The peak months for hail are during the growing season and damage is greatest to agricultural crops. No deaths were attributed to hail but four injuries were reported during the period of record.

Heavy rains and flash flooding sometimes result from severe thunderstorms. The occurrence may be regional like the 9.68 inches of rain that fell in Allen County in a seven hour period in June, 1969. Property damage exceeded 100 million dollars, three were killed and 100 homes were damaged or destroyed. The heavy rains may be widespread. Heavy rains from March 8th to 10th, 1964 throughout northern and western Kentucky caused serious flooding. About 6000 families were affected and 497 homes, 100 house trailers, 315 farm buildings, and 208 small businesses were damaged or destroyed by floods covering over 100,000 acres. From 1959 to 1977, 46 people were killed and 559 injured by heavy rains and flooding. The threat of flash floods is evident in the 5.35 inches of rain that fell in 45 minutes over Paducah on June 15th, 1977.

Lightning is a well known hazard of thunderstorms and has been recorded in all months. Reports of damage from lightning are most frequent in July, June, and August. Deaths and injuries from lightning closely follow the outdoor activity cycle. Of the 42 deaths and 113 injuries recorded, over ninety-five percent of each occurred from May through September. June and July were the peak months and accounted for 48 percent of the deaths and 64 percent of the injuries from lightning. The hazards are evident in the variety of circumstances in which death or injury occurred. In August, 1963, a Daviess County man was killed while sitting on his front porch. In July, 1969, a Morgan County youth lost the tip of two fingers when lightning coursed through a telephone he was dialing. In August, 1959, in Robertson County, two were killed and three injured while housing tobacco. The greatest number of injuries in a single strike occurred in June, 1969, at Fort Knox when eighteen men were treated for shock and burns after lightning ran through communications wiring.

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Severe storms in winter are often in the form of snow or ice. The blizzard of January 23rd and 24th, 1963 produced heavy snow with high winds and record cold temperatures. Property and crop damage were extensive. The 1963 peach crop was a total loss. Ice storms are less common with only 14 recorded during the period. However, ice storms can be devastating. One such ice storm struck on January 2nd and 3rd, 1974, over virtually the entire state. Three died and over 75 were injured as a result of the glaze. Power lines, trees, and buildings were damaged over much of the state.

The Kentucky records for the period 1959 through 1977 reveal that severe non-tornadic storms produced 123 deaths, 1126 injuries, and millions of dollars of damage and destruction. To reduce this type of destruction, the National Weather Service established a Severe Storms Forecast Center. The Center issues watches and warnings for severe conditions. A watch means that conditions make the forecasted condition imminent and a warning means that the conditions exist. These watches and warnings may be issued for severe thunderstorms, flash floods, heavy snow, blizzard, cold wave, or hazardous driving. The Weather Warning Radio network in Kentucky broadcasts these watches and warnings throughout the Commonwealth.

*365 additional severe storms were recorded as regional or statewide.*