



# THE OKLAHOMAN

THE STATE NEWSPAPER SINCE 1907

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## 1907-2007 a century of oklahoma weather

### Ice Storms

Freezing rain is a distinct wintertime hazard in Oklahoma. Its arrival normally brings widespread traffic disruptions and power outages. Heavy freezing rain events are known as ice storms. While ice storms are uncommon, storms that deposit several inches are even more rare and occur about once per decade. The state has seen a marked increase in the frequency of significant ice storms in recent years with four major storms since the turn of the millennium.

The consecutive winters of 2000-01 and 2001-02 each featured a major ice storm that deposited more than three inches of ice in 24 hours across much of southeast and central Oklahoma. December 2002 saw a third significant ice storm in as many years impact northwestern Oklahoma. After a respite of several years, Oklahoma was again visited by a major ice storm during January 2007 that deposited ice 4-5 inches thick across the southeast. The combined impacts of these four significant ice storms are staggering: more than half a million state residences and businesses without power for periods up to a month and over half a billion dollars in damage.



Photo courtesy of Chris Fiebrich

2001

### Woodward Tornado

The 1940s saw a rash of killer tornadoes in Oklahoma, most of which were obscured historically by World War II. During the evening of April 9th, 1947, a ferocious long-track supercell churned across three states, leaving severe tornado destruction in its wake. By 8:30 pm that evening, the storm had killed more than 70 people, razing the Texas panhandle towns of Higgins and Glazier in the process. At 8:42 pm, a large tornado plowed into the northwestern half of the City of Woodward, with no warning.

The scene at sunrise the next morning was tragic: more than 1,000 buildings lay in ruin across 100 city blocks. Worse yet, 107 people were killed in town by the storm, and at least nine others fell victim to the storm in neighboring counties. More than a thousand were injured, including hypothermia victims among those left homeless to face the following week's cold front. The storm caused an estimated \$7 million in damages (equivalent to nearly \$70 million today). The Woodward tornado remains the deadliest single storm in Oklahoma history.



Photo courtesy of The Oklahoman

1947

### Dust Bowl

Deep in the throes of The Great Depression, the nation paid little attention to reports of massive clouds of dust enveloping the High Plains during the early 1930s. As the dust spread east, however, the country could no longer ignore what had become one of the worst environmental disasters in world history, centered on the Oklahoma Panhandle. Tales of the region's natural history of severe decade-long droughts and extreme temperatures went unheeded by farmers in a frenzy of greed and poor conservation practices. In less than two decades, Over 100 million acres of native grasslands were plowed under and laid open to the fury of the wind.

The drought began during the summer of 1931 after a bumper wheat crop that spring. The dust started in earnest in 1932 with 14 massive storms. That total would soon be looked upon with envy, as the dust storms multiplied with each successive year. The storms struck 38 times in 1933; in 1934, when there was wind, there was dust. Cimarron County saw its wheat production diminish from nearly 6 million bushels in 1931 to 11,100 in 1933. The crop failed outright during 1935, 1937, and 1938. Only through sweeping land-use and conservation practices did the massive loss of topsoil begin to diminish. By the time the rains returned in 1941, the High Plains had lost one-quarter of its farmers and America had experienced the greatest mass-migration of people in its history.

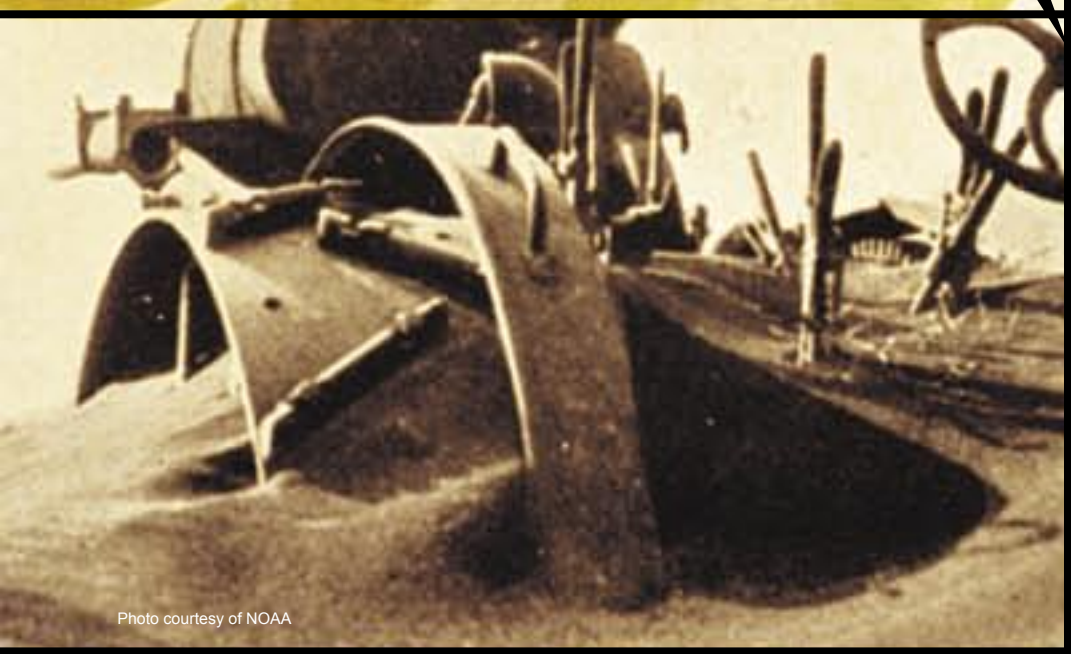


Photo courtesy of NOAA

1930s

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# 1910s

## The Extreme Teens

In many ways, Oklahoma's first full decade as a state delivered its most tumultuous weather and climate. The "four corners" of weather and climate catastrophe – severe weather, flooding, winter weather and drought – were all covered to the extreme during the decade.

The state's driest decade delivered the driest year on record (1910, when about 19 inches fell across the state). On the other extreme, the rare rains that did occur brought great flooding. The first of Oklahoma City's great early-century floods of the North Canadian came in June 1915. One year later, the Wheeler Park area was underwater again.

The winters of the 1910s were especially harsh, in that they were bitterly cold with extreme snowfall amounts. The state record for winter snowfall (87" at Beaver in 1911-12) has held for 95 years. The winters of the 1910s also brought hazards beyond typical winter weather. The deadliest January tornado in state history tragically occurred at the Choctaw Boarding School in Vireton on January 4th, 1917. One year prior, heavy sleet, snow and rain caused tremendous flooding of the state's major northeastern rivers.



Western History Collections, University of Oklahoma

# 1920s

## Canadian River Flood

Severe flooding along the North Canadian resulted in a breach of Lake Overholser Dam and forced the evacuation of 15,000 residents in Oklahoma City. The flood began in Woodward where the river crested over its banks and flooded the business district there. Much of western Oklahoma reported "semi-famine" conditions after being cut off from outside contact. The surge of water rushing toward Oklahoma City rose to 25 feet tall. This flood led to a radical redistribution of housing patterns in the city as higher income families moved northward, away from the river.



Photo Courtesy of The Oklahoman

# 1950s

## The Wet 1980s and 1990s

The last 20 years of Oklahoma's first century brought precipitation in unprecedented amounts. The precipitation of these two decades was unique in three different ways. First of all, the **magnitude** of the wetness was unlike any other wet period in the state's history. Secondly, the **duration** of the wet period was longer than any other precipitation "era" – wet or dry – on the record. Finally, the **consistency** was remarkable. Of the 19 years that spanned 1982-2000, only one of those years brought precipitation below the state's long-term average value of 33.90".



Photo Courtesy of The Oklahoman

# 1970s

## Blizzard of '71

Winds of up to 50 mph and snowfall amounts greater than 30 inches turned this classic high plains blizzard into Oklahoma's worst snowstorm in history. By the morning of the 22nd, Buffalo had a reported 36 inches of snow on the ground, a record which still stands today. Snow drifts of over 20 feet paralyzed northwestern Oklahoma, and 15,000 head of livestock were lost. Army and National Guard helicopters were needed to airlift food and medicine for residents and to feed stranded livestock. The storm resulted in over \$2 million in property losses.



Photo Courtesy of Jean McVicker

## The Great Droughts of the mid-1950s

The Dust Bowl Era is widely known as a decade-long reign of droughts and related calamities in Oklahoma's history. What is less well-known is that the droughts of the mid-1950s were, in many ways, statistically more severe than those of the 1930s. In fact, the rains of autumn 1956 ended the driest twelve-month stretch, and the driest five-year stretch in Oklahoma 1954 remains the hottest year in the state's history.

For most of the state, the social impacts of extreme climate were much smaller during the 1950s. Part of that might be attributed to better economic conditions, but a large part of the success came directly from the lessons learned during the Dust Bowl Era. Better conservation methods, improved agri-business decisions, more climate-appropriate crop selection and a reservoir of their parent's drought experience helped the sons and daughters of the Dust Bowl generation make it through the more extreme 1950s.

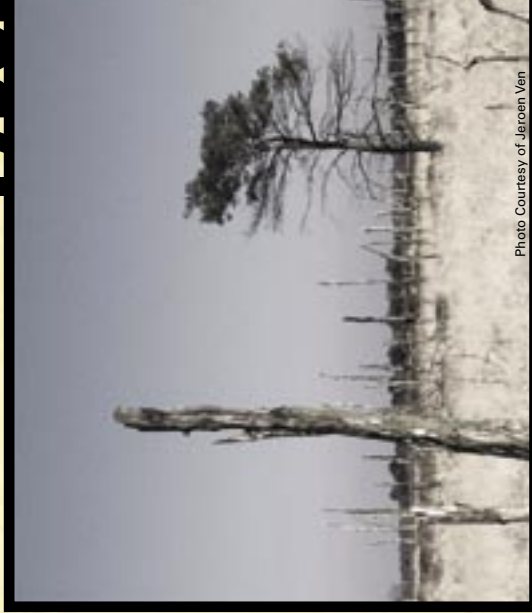


Photo Courtesy of Jacree Van

# 1980s & 1990s

## Tulsa Floods

On Memorial Day Weekend of 1984, nearly ten inches of rain fell across parts of Tulsa. Several local creeks swelled out of their banks and claimed fourteen lives. Several victims were residents of low-lying areas; some were trapped in their cars, as are most Oklahoma flood fatalities.

The City of Tulsa immediately took aggressive steps to minimize flooding risk, by purchasing radar and field chasers. The city established an early-warming flood system and deployed rain gauges throughout the affected areas. These events led to the development of the Oklahoma Mesonet, the state's weather observing network.

Today, the City of Tulsa and the Oklahoma Mesonet are seen as world leaders in flood hazard mitigation and mesoscale weather monitoring, respectively.



# 1984

## May 3rd Tornado

The May 3-4, 1999, tornado outbreak is easily the worst in state history based on the number of tornadoes alone. This outbreak saw 75 tornadoes hit areas of southern Kansas, Oklahoma, and northern Texas in less than 24 hours. The F5 tornado that hit the Oklahoma City metro area on May 3rd produced winds that were detected by Doppler radar at an incredible 318 mph – the highest wind speeds ever measured on earth. That monster twister was on the ground for 38 miles and plowed through Moore and southern parts of Oklahoma City, killing 36 and injuring nearly 600. There were 40 deaths and close to 700 injuries during the outbreak, which caused over \$1 billion in damages.



Photo Courtesy of Randy Peppier

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# 1999

1910 1920 1930 1940 1950 1960 1970 1980 1990 2000 2010

- Nov 16, 1907: Oklahoma City's inaugural day at state capital began with a crisp morning low of 29, which gave way to a sunny Saturday afternoon high of 59.
- 1908-09: Driest Winter (1.24")
- 1910: Driest Year (19.04")
- 1910: Driest Autumn (2.44")
- Nov 11, 1911: OKC's record high (83 F) and low (17 F) occurred on same day.
- 1912: Coolest Year (57.3 F)
- 1917-12: Beaver winter snowfall of 87".
- 1915: Coolest Summer (74.9 F)
- Dec 1908 - Nov 1918: Driest 10-year stretch in state history
- May 2, 1920: Peggs tornado kills 71
- 1923: Wettest Autumn (18.15")
- 1924: Coolest Spring - tie (54.3 F)
- April 1927: Severe flooding of Arkansas River below Tulsa
- Jan 18, 1930: Coldest month in state history (23.5 F)
- Jan 18, 1930: -27 F at Watts, coldest temperature
- 1931: Warmest Autumn (66.3 F)
- 1931: Coolest Spring - tie (54.3 F)
- June 3, 1932: Flooding in OKC leaves 3200 homeless
- Mar 25, 1934: Warmest Summer (85.2 F)
- April 3, 1934: Washita River floods near Hammon, killing 17
- Spring 1935: Peak occurrences of dust storms that define the decade
- Summer 1936: State-record temperature of 120 F reached four times
- 1939: Driest Summer (2.79")
- Oct 1941: Wettest month in state history (11.32")
- Nov 1940 - Oct 1941: Wettest 12-month stretch in state history
- Spring 1942: Multiple tornado outbreaks kill 100+ during season
- 1945: Tornadoes kill 80+ in Antlers and Muskogee
- 1947: Tornado kills 116 in and near Woodward
- Mar 25, 1948: World's first scientific tornado forecast at Tinker AFB
- June 23-24, 1948: Severe flooding of Canadian at Hydro kills 11
- 1950: Wettest Summer (17.27")
- 1954: Warmest Year (62.8 F)
- May 25, 1955: Tornado kills 20+ in and near Blackwell
- Nov 1955 - Oct 1956: Driest 12-month stretch
- 1957: Wettest Year (48.23")
- 1957: Wettest Spring (22.74")
- 1957: 84.47" precipitation at Kiamichi Tower is most of any station
- 1964-65: Wettest Winter (10.37")
- Jan 1966: Driest 6-month period
- June 24, 1973: Union City tornado is first successfully "chased" with Doppler radar and field chasers
- Oct 11, 1973: 15.68" rain at Enid is state's 24-hour record
- 1976: Coolest Autumn (56.2 F)
- 1978-79: Coolest Winter (31.4 F)
- Aug 1980: Warmest month (88.1 F)
- Summer 1980: OKC exceeds 100 degrees 50 times
- 1984-85: Wettest Winter (10.37")
- Jan 1986: Driest month (0.04")
- 1991-92: Warmest Winter (44.0 F)
- Dec 1984 - Nov 1984: Wettest 10-year stretch
- 1998-99: 2-year total of 220 tornadoes is largest of statehood
- Oct 4, 1998: 27 tornadoes in 12 hours breaks national record for the entire month of October
- May 1999: 91 tornadoes (75 on May 3) is Oklahoma's record monthly total
- 1999: 137 tornadoes - state record
- Jan 29-30, 2002: Severe ice storm in northwest Oklahoma leaves quarter-million without power
- 2003-04: 292 days without a tornado - longest known streak in state history
- 2005-06: Severe winter wildfire season sees 100,000 acres burned
- 2006: Warmest Spring (62.8 F)