## My name is Keith Heidorn.

If you asked me to describe myself in the context of the Weather Doctor, I would tell you that I am both an artist and a scientist who is deeply involved with the weather and other atmospheric phenomena on many levels.
I have had a love affair with the weather for about 45 years.
You see, I think that weather is the most sensual aspect of life, stimulating all my senses at one time or another and often several at once.
I was born in Chicago and grew up in northeastern Illinois where I first fell in love with the weather.
The Great Lakes region has its variety of weather extremes generally with a rapid turnover of daily weather events.
"http://www.glenallenweather.com/historylinks/wxdoc/jan.htm" Ref. Wx.Doctor

## United States

1 July 1792, Pennsylvania/New York: A tremendous storm hits Philadelphia and New York City. Many young people are drowned while on a Sunday boating excursion.

2 July 1833, Northern Vermont: A tornado, one half to three quarters of a mile ( 0.8 to 1.2 km ) wide - unusually large for New England - leaves a path of destruction from Salem Pond to Norton Pond before crossing into Canada.

3 July 1987, Kiowa, Colorado: Hail as large as golf balls accumulates to a depth of 12 inches ( 30 cm ).

3 July 1873, Hancock County, Illinois: A tornado destroys several farms. A child dies after being carried 500 yards ( 455 m ); ten others are injured.

4 July 1776, Philadephia, Pennsylvania: Thomas Jefferson buys his first thermometer then goes to sign the Declaration of Independence. Temperature at $2 \mathrm{pm}, 76^{\circ} \mathrm{F}\left(26^{\circ} \mathrm{C}\right)$ and cloudy according to Jefferson's diary.

4 July 2007, St. George, Utah: St. George hits an unofficial temperature reading of $118^{\circ} \mathrm{F}$ $\left(47.8^{\circ} \mathrm{C}\right)$, which would top the state's all-time record of $117^{\circ} \mathrm{F}\left(47.2^{\circ} \mathrm{C}\right)$, set in St. George in 1985.

4 July 2009, Lakeland, Florida: About 100 people from a church group at a Fourth of July gathering are playing soccer and volleyball when a lightning bolt or series of strikes hit nearby. The lightning strike kills one person and hospitalizes 18 others.

5 July (15 July on current calendar) 1643, Plymouth Colony: A violent windstorm hits the Plymouth Colony, the "sudden gust" fells trees and kills one Native American. May have been first documented American tornado or microburst.

5 July 2003, Rockford, Illinois: An early morning band of severe thunderstorms blows across Northern Illinois with peak winds reported at 104 mph . Over 80,000 people are without power for various durations after the storm.

6 July 1997, Juneau, Alaska: The remnants of a western Pacific tropical storm dump a 24hour record July rainfall of 2.14 inches ( 544 mm ).

6 July 2007, Death Valley, California: Death Valley reaches $129^{\circ} \mathrm{F}\left(53.9^{\circ} \mathrm{C}\right)$ the fourth time it has been so hot at this site since 1913.

7 July 1981, Glacier National Park, Montana: A snowstorm with winds to $90 \mathrm{mph}(145 \mathrm{~km} / \mathrm{h})$ dumps 10 inches ( 25 cm ) on Glacier National Park.

7 July 2004, Sequoia National Park, California: A tornado hits Rockwell Pass in Sequoia National Park. The ground-level base of the tornado is estimated to be 12,000 feet ( 3660 m ), making it the highest elevation tornado ever observed in the US.

8 July 1993, Iowa: A wild weather night in the middle of the Great Flood of 1993 across lowa as the State records its 37th day of rain in the last 40 days. Many tornado sightings reported. Manilla, Iowa records 7.5 inches ( 19 cm ) of rain; 7.83 in ( 19.9 cm ) in Jefferson.

8 July 1886, Sleepy Eye, Minnesota: Nearly every home in the small community are moved off its foundation by the severe thunderstorms which come in the night. Across Swift and Brown Counties, the storms produce high winds and intense hail.

9 July 1882, Cheyenne, Wyoming: Ice forms on the city streets during a rare summer freeze.
9 July 2003,Anchorage, Alaska: A new July maximum temperature record is set $84^{\circ} \mathrm{F}$ $\left(28.9^{\circ} \mathrm{C}\right)$.

9 July 2007Death Valley, California : Death Valley records its 32nd consecutive day over $100^{\circ} \mathrm{F}\left(37.8^{\circ} \mathrm{C}\right)$ with a $121^{\circ} \mathrm{F}\left(49.4^{\circ} \mathrm{C}\right)$ reading.

10 July 1913, Death Valley, California (Greenland Ranch): The highest temperature ever recorded in North America: $134^{\circ} \mathrm{F}\left(59.4^{\circ} \mathrm{C}\right)$.

10 July 2004, Kodiak, Alaska: The daily high ties the highest July temperature for Kodiak: $82^{\circ} \mathrm{F}\left(27.8^{\circ} \mathrm{C}\right)$.

11 July 1911, North Bridgton, Maine: The highest temperature ever recorded in Maine: $105^{\circ} \mathrm{F}$ $\left(40.6^{\circ} \mathrm{C}\right)$ at North Bridgton.

12 July 1988, Mesquite, Texas: 6.59 inches 167.4 mm of rain falls in just an hour and a quarter.

12-20 July 2005, Reno, Nevada: A record string of days with temperatures above $101^{\circ} \mathrm{F}$ $\left(38.3^{\circ} \mathrm{C}\right)$ : nine straight days.

12-14 July 1936, United States: The hottest three-day period in US history averages $88.5^{\circ} \mathrm{F}$ $\left(31.4^{\circ} \mathrm{C}\right) \mathrm{F}$; the second warmest such period was three days earlier.

13 July 1975, Dover, Delaware: Dover is deluged with 8.50 inches ( 215.9 mm ) of rain to establish a 24 hour record for the state.

14 July 1936, Iowa: Famous hot day in lowa, 113 temperature-recording sites in the state averaged $108.7^{\circ} \mathrm{F}\left(42.6^{\circ} \mathrm{C}\right)$ for the maximum temperature.

14 July 1954, East St. Louis, Illinois: The highest temperature ever reported in Illinois: $117^{\circ} \mathrm{F}$ $\left(47.2^{\circ} \mathrm{C}\right.$ ).

14-19 July 2005, Death Valley, California: Death Valley records 6 consecutive days (July 1419) with high temperatures above $125^{\circ} \mathrm{F}\left(51.7^{\circ} \mathrm{C}\right)$.

15 July 1995, Upstate New York: A extremely severe derecho sweeps across upstate New York. Wind gusting to $106 \mathrm{mph}(170 \mathrm{~km} / \mathrm{h})$ devastates over one million acres ( $400,000 \mathrm{ha}$ ) of trees, felling tens of millions. Five campers are killed by the falling timbers.

15 July 2003, Phoenix, Arizona: A daily maximum temperature above $90^{\circ} \mathrm{F}\left(32.2^{\circ} \mathrm{C}\right)$ is usually considered a hot day, but this date, the official minimum temperature at Phoenix Sky Harbor International Airport never dipped below $96^{\circ} \mathrm{F}\left(35.6^{\circ} \mathrm{C}\right)$. It is the highest low temperature in Phoenix history.

15 July 2006, Pierre, South Dakota: Pierre sets its new all-time daily maximum temperature record: $117^{\circ} \mathrm{F}\left(47.2^{\circ} \mathrm{C}\right)$.

16 July 1920, Northeast Nebraska: A severe hailstorm over parts of Antelope and Boone counties in northeastern Nebraska strips bark and foliage from trees, ruins roofs and breaks nearly every northfacing window in the area.

16 July 2005, Casper, Wyoming: Casper ties its daily maximum temperature record: $104^{\circ} \mathrm{F}$ ( $40^{\circ} \mathrm{C}$ ).

16 July 2006, Valentine, Nebraska: Mercurt soars to daily maximum temperature of $113^{\circ} \mathrm{F}$ ( $45^{\circ} \mathrm{C}$ ).

17 July 2003, Denali National Park, Alaska: One inch of snow falls at Denali National Park Headquarters, the first occurrence of measurable snow ever recorded in July.

17 July 2005, Kingman, Arizona: The day's high sets a new daily maximum temperature record for the community: $113^{\circ} \mathrm{F}\left(45^{\circ} \mathrm{C}\right)$.

18 July 1942, Smethport, Pennsylvania: A record deluge of 30.7 inches ( 780 mm ) in just six hours floods this northern Pennsylvania community .

19 July 1960, Cow Creek and Greenland Ranch, Death Valley, California: Both Cow Creek and Greenland Ranch report morning lows of $102^{\circ} \mathrm{F}\left(38.9^{\circ} \mathrm{C}\right)$. The afternoon highs reach 124 ${ }^{\circ} \mathrm{F}\left(51.1^{\circ} \mathrm{C}\right)$ and $126^{\circ} \mathrm{F}\left(52.2^{\circ} \mathrm{C}\right)$ at Greenland Ranch and Cow Creek, respectively.

19 July 1886, Northern Florida: A hurricane crosses Florida from the Gulf of Mexico causing great damage from Cedar Keys to Jacksonville.

19 July 2005, Las Vegas, Nevada: Las Vegas ties its all-time record high temperature: $117^{\circ} \mathrm{F}$ $\left(47.2^{\circ} \mathrm{C}\right)$.

20 July 1953, Dickinson North Dakota: 22 inches ( 56 cm ) of hail reported to have fallen northeast of Dickinson.

20 July 2004, Portales, New Mexico: Two New Mexico State Police officers are struck by a lightning while helping motorists on a road flooded during a thunderstorm.

21 July 1987, Teton Wilderness and Yellowstone National Park, Wyoming: An F4 tornado ravages the Teton Wilderness and Yellowstone National Park in Wyoming . Its violent winds destroy millions of trees on a 24.3-mile ( 38.9 km ) track that traverses the Continental Divide at an elevation of 10,170 feet ( 3100 m ).

21 July 2006, Western Washington: An unusual heat wave in western Washington breaks five maximum temperature records: Vancouver at $104^{\circ} \mathrm{F}\left(40^{\circ} \mathrm{C}\right)$; Olympia at $100^{\circ} \mathrm{F}\left(37.8^{\circ} \mathrm{C}\right)$;
Seattle at $97^{\circ} \mathrm{F}\left(36 \cdot 1^{\circ} \mathrm{C}\right)$; and Hoquiam at $90^{\circ} \mathrm{F}\left(32 \cdot 2^{\circ} \mathrm{C}\right)$.
21 July 2006, San Francisco, California: San Francisco International Airport's high of $83^{\circ} \mathrm{F}$ $\left(28.3^{\circ} \mathrm{C}\right)$ broke a 52 -year-old record of $80^{\circ} \mathrm{F}\left(26.7^{\circ} \mathrm{C}\right)$.

22 July 1918, Wasatch National Forest, Utah: A single bolt of lightning strikes 504 sheep dead in their tracks.

22 July 2006, Palm Springs, California: Mercury soars to $121^{\circ} \mathrm{F}\left(49.4^{\circ} \mathrm{C}\right)$.
23 July 2003, Boise, Idaho: With a reading of $107^{\circ} \mathrm{F}\left(37.8^{\circ} \mathrm{C}\right)$, a new record is set for the number of consecutive days with temperatures above $100^{\circ} \mathrm{F}\left(37.8^{\circ} \mathrm{C}\right)$. July 23 marks the 9th consecutive day.

23 July 2008, Rhode Island: A waterspout forms at about 4 pm just off Rumstick Point near Barrington then moves onto land as a tornado in Warren before moveing into the Ocean Grove section of Swansea, Massachusetts. The tornado's path is estimated as 4.2 miles (6.7 km ) long and 40 yards ( 37 m ) wide. No injuries are reported, but damage to trees, power lines and houses is reported.

24 July 1942, Las Vegas, Nevada: Las Vegas sets its all-time record high temperature: $117^{\circ} \mathrm{F}$ (47.2 ${ }^{\circ} \mathrm{C}$ ).

24 July 2007, Miles City, Montana: Miles City hits $110^{\circ} \mathrm{F}\left(43.3^{\circ} \mathrm{C}\right)$.
24 July 2008, Central New Hampshire: A tornado fluctuated between the category EF1 and the more destructive EF2 strikes Northwood and Pittsfield, as well as nine other towns. It first touchs down in Deerfield, then travels through Northwood, Epsom, Pittsfield, Barnstead and Alton. From there, it rages through New Durham, Wolfeboro, Freedom, Ossipee and Effingham. The storm destroys several homes, damages dozens of others and kills at least one person.

25 July 1936, Lincoln, Nebraska: An all-time record high temperature: $115^{\circ} \mathrm{F}\left(46.1^{\circ} \mathrm{C}\right)$. Nighttime low only dips to $91^{\circ} \mathrm{F}\left(32.8^{\circ} \mathrm{C}\right)$, and the average temperature for the day is $103^{\circ} \mathrm{F}$ (39.4 ${ }^{\circ} \mathrm{C}$ ).

25 July 2005, Sand Point, Alaska: Residents of Sand Point, population 908, looking across Popof Strait to nearby Unga Island watch a very rare tornado touch its uninhabited mountains. Sand Point is on Popof Island, one of a dozen or so Shumagin Islands at the start of the Aleutian Chain, 570 miles ( 915 km ) southwest of Anchorage near the tip of the Alaska Peninsula.

25-26 July 1979, Alvin, Texas: The heaviest 24-hour rainfall ever recorded in the United States 43 inches ( 1092 mm ) falls on Alvin, Texas.

26 July 1874, Pittsburgh, Pennsylvania: 30-minute cloudburst results in flash floods which kills more than 133 people.

26 July 1993, Pueblo, Colorado: Record high for date, $101^{\circ} \mathrm{F}\left(38.3^{\circ} \mathrm{C}\right)$, and record low for date, $52^{\circ} \mathrm{F}\left(11.1^{\circ} \mathrm{C}\right)$, set on same day!

26 July 2006, Death Valley National Park, California: The low temperature for the day bottoms out at a scorching $104^{\circ} \mathrm{F}\left(40^{\circ} \mathrm{C}\right)$. The day's high was only $116^{\circ} \mathrm{F}\left(46.7^{\circ} \mathrm{C}\right)$.

26 July 2009, Rio Grande Valley, Texas: Since June 12th, San Antonio has registered 31 days with temperatures in the 100Fs (above $37.7^{\circ} \mathrm{C}$ ) . Across the Rio Grande Valley, extreme heat in McAllen this month has been staggering with 20 days of record-setting high temperatures. This day made it the 11th day in a row that new record highs were set..

27 July 1943, Galveston, Texas: Lt. Col. Joe Duckworth and Lt. Ralph O'Hair fly an AT-6 Texan training aircraft into the eye of a hurricane, the first flight to ever penetrate a hurricane.

28 July 1819, Bay Saint Louis, Mississippi: A small but intense hurricane destroys most of the houses at Bay Saint Louis and at Pass Christian. Much of the Mississippi coast is left desolate by the storm., which struck the same area that was later hit by Hurricanes Camille (1969) and Katrina (2005).

29 July 1898, Prineville, Oregon: The heat establishes the Oregon state record for hottest day: $119^{\circ} \mathrm{F}\left(48.3^{\circ} \mathrm{C}\right.$ ), the mark would be tied a few weeks later (10 August) at Pendleton.

29 July 1898, Seattle, Washington: A continuing heat wave allows Seattle to record its hottest temperature in its history. The National Weather Service in Seattle measures $102^{\circ} \mathrm{F}\left(38.9^{\circ} \mathrm{C}\right)$ degrees by midday at Seattle-Tacoma International Airport, breaking a previous record of $100^{\circ} \mathrm{F}\left(37.7^{\circ} \mathrm{C}\right)$. In nearby Tacoma, the high hit s $105^{\circ} \mathrm{F}\left(40.6^{\circ} \mathrm{C}\right)$, marking the first time the city has ever endured triple-digit heat.

29-30 July 1999, Chicago, Illinois: Chicago records its highest ever dew point temperatures $82^{\circ} \mathrm{F}\left(27.7^{\circ} \mathrm{C}\right)$.

30 July 1949, Greenville, Connecticut: The maximum temperature measured in the town of Greenville, $102{ }^{\circ} \mathrm{F}\left(38.9^{\circ} \mathrm{C}\right)$ establishes the Connecticut state record high. The mark has since been surpassed with a reading of $106^{\circ} \mathrm{F}\left(41.1^{\circ} \mathrm{C}\right)$ at Danbury.

30 July 2008, Missouri: Heavy rains from the remnants of Hurricane Dolly drench section of Missouri. Total rainfalls of note include 3.05 inches ( 77.5 mm ) at Lees Summit; 2.78 inches ( 70.6 mm ) at Kansas City; and 1.63 inches ( 41.4 mm )at St. Louis.

31 July 1976, Thompson River Canyon, Colorado: A stationary thunderstorm producing more than 10 inches ( 254 mm ) of rain funnels into the narrow Thompson River Canyon of northeastern Colorado. A wall of water 6 to 8 feet high ( 1.9 to 2.4 metres) brings a 25 mile ( 40 km ) path of destruction from Estes Park to Loveland, Colorado, killing 156 persons.

July 2003, Western United States: A month of heat establishes new record high monthly mean temperatures (all months) at many locations including: Phoenix, Arizona, $97.6^{\circ} \mathrm{F}\left(36.4^{\circ} \mathrm{C}\right)$; Grand Junction, Colorado, $84.1^{\circ} \mathrm{F}\left(28.9^{\circ} \mathrm{C}\right)$; Salt Lake City, Utah, $83.4^{\circ} \mathrm{F}\left(28.6^{\circ} \mathrm{C}\right)$; Sacramento, California, $81.6^{\circ} \mathrm{F}\left(27.6^{\circ} \mathrm{C}\right)$; Cheyenne, Wyoming, $75.1^{\circ} \mathrm{F}\left(23.9^{\circ} \mathrm{C}\right)$

