“To provide weather and flood warnings, public forecasts and advisories for all of the United States...and it territories...for the protection of life and property.

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National Hazard Risk Assessment
Information For:
Hickory County Missouri

Information Provided By
WFO Springfield, Mo

2009 Update
Includes data and information through December 2008
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This document is intended to provide general information on severe weather that has affected Hickory County and the communities within the county.

By Gene Hatch
Meteorologist Intern WFO Springfield, Mo.

Local Climatology

Averages and records for Pomme De Terre, Missouri in Hickory County

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<td>6.0</td>
<td>15.7</td>
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Links for Climate information
- www.crh.noaa.gov/sgf/
- www.cpc.ncep.noaa.gov/
- www4.ncdc.noaa.gov
- web.missouri.edu/~moclimat/
- mrcc.sw.illinois.edu/
- agebb.missouri.edu/weather/index.htm
Historic Weather in Southwest Missouri

Jan. 8th-1997. Six inches or more of snow fell over much southwest, south central and central Missouri from noon on the eighth to noon on the ninth. The heaviest snow fell in a band from Cassville to Springfield north to Hermitage where up to ten inches was recorded. Damage estimates at 670K dollars were due to the cost of snow removal.

Mar. 12th-1961. A tornado touched down at 745 am in southern Greene County and moved northeast from near Plainview road towards the KWTO towers. The tornado blew down 2 of KWTO’s towers, damaged the roof on the Disney school and damaged 3 other homes.

Apr. 23rd-1967. A severe thunderstorm formed over the northwest portion of the city of Springfield, MO spawning a tornado. The weather service towers. The tornado blew down 2 of KWTO’s towers, damaged the roof on the Disney school and damaged 3 other homes.

May 4th-2005. When a cold front, which had previously moved into the region, met a warm, moist air mass, a severe thunderstorm formed over central Missouri. This event surpassed the December 17-18, 2002 tornado event in both loss of lives and property damage, and exceeded tornado events that occurred over the past 100 Years for this part of Missouri. This was a very rare event for this part of Missouri since many of the tornadoes experienced across this area are short lived small tornadoes.

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Jun. 9th-1975. Thunderstorms that developed over Springfield during the afternoon of this day produced a tornado over the Springfield area dropped 3.62 inches of rainfall in one hour. This was the greatest hourly rainfall rate recorded for Springfield.

Jun. 19th-1982. A cold front, which had previously moved into the region, met a warm, moist air mass, a severe thunderstorm formed over central Missouri. This event surpassed the December 17-18, 2002 tornado event in both loss of lives and property damage, and exceeded tornado events that occurred over the past 100 Years for this part of Missouri. This was a very rare event for this part of Missouri since many of the tornadoes experienced across this area are short lived small tornadoes.

Tornadoes by county for the Springfield County Warning Area from 1950 to 2008
Severe Weather in Hickory County

In 2000, a private company looked at 277 cities across the United States. They rated each city on variations in temperature, precipitation and other factors. Of all the cities in their study Springfield, Missouri rated number one as the city with the most variable weather in the U.S.

From www.weatherpages.com

Hickory County Missouri is located on the Ozark Plateau along the eastern edge of tornado alley. Because of its location Hickory County is subjected to severe thunderstorms, heavy rainfall, winter storms, flooding, ice storms, droughts, tornadoes and other wind storms.

When does severe weather occur?
Severe weather in the Ozarks can occur in any month of the year. While the months of April through June are the peak severe weather season, there is a secondary peak from September to November.

Severe thunder storms in Hickory County have dropped hail up to 2 3/4” in diameter, created winds in excess of 80 miles an hour and rainfall rates greater than 2” in an hour. While southwest Missouri receives nearly 11 tornadoes a year, Hickory County averages an event every 6 years.

During the winter season Hickory County averages 6.2 inches of snow. With the most snow in one season at 19.3 inches, falling during the 1985 to 1986 winter season. Ice storms also affect the county during the winter season causing significant damage to homes, trees and utilities.

Number of Tornadoes in Hickory Co.
(1950 to 2008)

<table>
<thead>
<tr>
<th>F0/F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>F5</th>
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<tbody>
<tr>
<td>8</td>
<td>1</td>
<td>1</td>
<td>0</td>
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</tbody>
</table>

Severe thunderstorms: 100%
F1: 80%, F2: 10%, F3: 10%, F4: 0%, F5: 0%

Historical information for Hickory County, Missouri

Dam Failure

Dams in Hickory County
Hickory County contains 6 dams. While the majority of these dams are small and used primarily for storm water management, irrigation and recreation, some are a part of local reservoirs. Most of the dams in Hickory County are of earthen construction and there have been no recorded failures. Pomme De Terre Dam is a concrete construction dam.

Where are they located?

- Alley Lake Dam: Weaubleau Creek, Weaubleau
- Vandaford Dam #1: Panther Creek, Weaubleau
- Vandaford Dam #3: Weaubleau Creek, Weaubleau
- Pomme De Terre Dam: Pomme De Terre River, Hermitage
- Talbot Dam: Starks Creek, Edwards
- Kulger Lake Dam: Turkey Creek, Lakeview Heights

Most of the dams in Hickory County are less than 100 feet high. Many are located on private land and fall under private ownership.

Pomme De Terre Dam is a concrete construction dam under the corps of engineers. This is one of the significant dams in the Ozarks and is a hydroelectric dam.
**Heat, Drought and Wildfires**

Excessive heat is the leading cause of weather fatalities in the nation. With the variability of the weather in southwest Missouri, it is not surprising that excessive heat impacts Hickory county on almost a yearly basis.

Hickory County averages 17 days a year with temperatures at or above 95 degrees. July and August are the two warmest months, which average 7 days at or above 95 degrees.

### Longest periods without rainfall in Hickory County

- 33 days: 7 Sept 1979 ~ 9 Oct 79
- 33 days: 25 Jan 1996 ~ 26 Feb 96
- 32 days: 22 Nov 1979 ~ 23 Dec 79
- 31 days: 19 Nov 1962 ~ 19 Dec 62
- 31 days: 21 Nov 1988 ~ 21 Dec 88
- 29 days: 3 Jan 1966 ~ 31 Jan 66

While no major wildfires have affected Hickory County, small grass fires do pose a hazard.

A twenty year study by the Missouri Department of Conservation, from 1970 to 1989 determined that over 2200 fires occurred during that time in the Clinton fire district which includes Cass, Bates, Vernon, Johnson, Henry, St. Clair, Pettis, Benton and Hickory counties. This represented nearly 4% of the wildfires in the state with over 49,000 acres burned.

There are numerous ways wildfires can be started, but when dealing with weather related phenomenon, namely lightning, only 0.8% of the wildfires in the Clinton fire district were the result of lightning.

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**Tornado Information**

Hickory County lies at the eastern edge of tornado alley and receives on average a tornado every six years. From 1950 to 2008 Hickory county recorded 10 tornadoes of up to F3 strength. The strongest tornado, an F3, passed across the county on the evening of March 12th, 2006. Along its 17 mile track it caused 1.0 million dollars in damage.

### Historical Tornadoes of Hickory County

- Mar 26, 1882 (F2) 2 inj, 0 dead
- Apr 20, 1929 (F2) 12 inj, 0 dead
- Jan 21, 19 (F3) 2 inj, 0 dead

For the Record

- Has experienced one F3 tornadoes.
- No F4 or F5 tornadoes
- Most recent Tornado March 31, 2008 (F0)
- 0 deaths and 21 injuries since 1880.

---

At approximately 235 am an F0 tornado touched down 6 miles east of Stockton Cedar county. The tornado tracked northeast to near Humansville, Mo. where it was rated F1. The tornado damaged 18 homes and uprooted numerous trees. The tornado resulted in 1 injury. The tornado continued northeast into southwest Hickory county about 5 miles southeast of Weaubleau before dissipating.

- **F-0**: 40-72 mph, chimney damage, tree branches broken
- **F-1**: 73-112 mph, mobile homes pushed off foundation or overturned
- **F-2**: 113-157 mph, considerable damage, mobile homes demolished, trees uprooted
- **F-3**: 158-205 mph, roofs and walls torn down, trains overturned, cars thrown
- **F-4**: 207-260 mph, well-constructed walls leveled
- **F-5**: 261-318 mph, homes lifted off foundation and carried considerable distances, autos thrown as far as 100 meters.

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**For the Record**

- Has experienced one F3 tornadoes.
- No F4 or F5 tornadoes
- Most recent Tornado March 31, 2008 (F0)
- 0 deaths and 21 injuries since 1880.

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**Years with above average summer heat**

<table>
<thead>
<tr>
<th>Year</th>
<th>Days 95°+</th>
<th>Days 100°+</th>
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<td>17</td>
<td>7</td>
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<tr>
<td>1970</td>
<td>30</td>
<td>7</td>
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<td>1976</td>
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<td>6</td>
<td>13</td>
</tr>
<tr>
<td>1980</td>
<td>60</td>
<td>34</td>
<td>17</td>
</tr>
<tr>
<td>1983</td>
<td>38</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>1991</td>
<td>34</td>
<td>15</td>
<td>8</td>
</tr>
<tr>
<td>Normal # of Days</td>
<td>17</td>
<td>4</td>
<td>Above 95°+</td>
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</table>
Severe Hail, Lightning, Wind and Winter Weather

With any thunderstorm, lightning will be present and the safest place to be is indoors. In August of 2002, four people were killed near Willard in Greene County during a funeral. As a thunderstorm moved into the area, the victims sought shelter under a tree.

Nationally, Missouri ranks 27th in Lightning fatality rate, 44th in injuries and 38th in property damage related to lightning. During the period from 1960 to 1994, the total number of lightning casualties in Missouri was 165. This is nearly five casualties per year in the state.

Winter weather across the Ozarks comes in many forms. Freezing rain or drizzle, sleet and ice storms are common occurrences during the winter season. In the past the Ozarks have had up to 54 inches of snow, Sleet storms that produced inches of sleet and ice storms that laid a covering of one to two inches of ice on most surfaces. While the immediate impact of these storms is to travel, winter storms cause hundreds of thousands of dollars in damages across the region on a near yearly basis.

Floods in Hickory County

23 Sept 1996: Heavy rains dumped more than 2 inches of rain in a short time over much of the county. Flooding highways and streets in the Pittsburg, Wheatland, and Weaubleau areas. Highway 64 just north of Pittsburg was reported impassable for a brief time.

12 July 2001: Numerous secondary roads and low water crossings were impassable across northern Hickory County. Small creeks and streams, or tributaries of the Pomme de Terre River between Wheatland and Cross Timbers were the main areas affected by the flood waters. Deer Creek, especially east of Edwards, was flooded along Highway 7 in extreme southeast Benton County.

10 July 2001: Numerous low water crossings were impassable across southern Benton and northeast Hickory Counties. Along Turkey Creek southeast of Fristoe, a bridge was covered by three feet of flowing water during the height of the storm.

19 Aug 1997: Brief flooding occurred along Crane Creek. A large complex of thunderstorms produced 3 to 5 inches of rain in a band from just north of Nevada to near Rolla. The previous three weeks had been very dry across the region, so flooding problems were minor.

19 Mar 1998: Heavy rain falling on saturated ground resulted in flooding of low water crossings in the county. Highway D between Preston and Nemo and Highway P east of Cross Timbers were among roads that were closed during this period.

Floods in Hickory County

From 1993 to 2002 Flooding has occurred in Hickory County in every year. While usually nuisance flooding such as water on city streets, significant flooding has caused numerous problems in the county. During the previous decade, only one injury and no deaths have been attributed to flooding in Hickory County. Hickory County contains numerous low water crossings.

Typically, flooding in the county is caused by heavy rainfall associated with high rain producing thundertstorms which move very slowly. In towns, rainfall of one to two inches will cause streets and ditches to flood and make some low water crossings impassable. When rainfall rates reach 3 to 4 inches, major flooding can occur, and amounts over four inches creates significant flooding that affects most of the county.