

2011 Iowa Weather in Review

The following events were some of the top weather stories in Iowa during 2011. This information was provided by Harry Hillaker, the state climatologist. The information is generally in chronological order and in no way represents the order of the significance of the events.

1. Eastern Iowa Blizzard

January 31 - February 2

Snow fell statewide with over a foot of snow across southeast and east central Iowa. Storm totals of 18.5 inches at Lowden and a record-tying 18.4 inches at the Quad Cities. Wind gusts to 66 mph at Clinton. The simultaneous occurrence of the highest winds with the most intense rate of snowfall resulted in very poor visibility. The storm produced a statewide average of 7.4 inches of snow.

2. April Tornado Outbreak

April 9

A total of twenty tornadoes were reported on the evening of April 9th, mostly across west central and northwest Iowa. The most damaging of the series was the very first storm which brought EF-3 damage to Mapleton.

3. May Chill

May 3

A nearly statewide freeze occurred with temperatures as low as 20 degrees at Sibley and Spencer. Lower May temperatures have been recorded only four times in the past 100 years in Iowa.

4. May Heat

May 10

Temperatures soared into the nineties over nearly all of Iowa with Jefferson reaching 100 degrees. This was the earliest occurrence of triple digit heat in Iowa since April 22nd, 1980.

5. Wet June

June 1 – June 31

Very wet weather prevailed across southeast Iowa with Keosauqua (16.14 inches) and Bloomfield (14.60 inches) recording the most rain on record at those locations for any calendar month.

6. Missouri River Flooding

May - September

Easily the largest weather event of 2011 for Iowa was the flooding along the Missouri River. Record crests were set at gaging points near Mills County (June 30th) and Fremont County (June 28th). Major flooding persisted for several months in response to very wet antecedent conditions in the Upper Missouri basin. A large winter snowpack and rapid snow melt following an unusually cold spring and excessive upstream spring rainfall led to the major flooding. Fortunately, no major rain events occurred in the Iowa portion of the watershed during 2011.

7. July Heat

July 1 – July 31

Preliminary data show Iowa experienced its hottest July since 1955 and hottest calendar month since August 1983. Actual temperatures peaked at 102 degrees at Keosauqua on July 18 with a peak official heat index of 117 degrees at Spencer (also on the 18th).

8. Powerful Derecho

July 11

Widespread very high winds occurred across parts of east central Iowa in the pre-dawn hours of July 11 with winds estimated as high as 130 mph in Benton County. Later that same day Iowa's last tornado of the year touched down in Webster County.

9. July Deluge

July 26 – July 27

Very heavy rain fell across portions of northeast Iowa on the night of July 26 with the heaviest rains falling in the Dubuque area where the airport saw a record 24-hour total of 10.62 inches of rain and unofficial totals were as high as 14.50 inches. The rain contributed greatly to a record monthly total of 16.01 inches at the Dubuque Airport (old record 15.46 inches in September 1965 among 158 years of data in the area).

10. August Heat**August 2**

Temperatures soared across southeast Iowa in advance of a cool front with Fairfield recording an actual temperature of 106 degrees. This was Iowa's highest official reading since Washta reached 106 on July 19th, 2006. Iowa City saw the highest official heat index that afternoon with a reading of 117 degrees.

11. Late Year Drought**Late July - December**

The high mid and late summer temperatures were a reflection of very dry conditions that rapidly developed in July. Southeast Iowa was the first area to turn dry (ironically after seeing record rains in June) with Fairfield recording only 0.17 inches of rain in July. Dry conditions spread to all but portions of east central and northeast Iowa by September. Relief in the form of several large rain events came to many areas in November and December but severe drought conditions persist at year's end over about the northwest one-quarter of the state. The late year dryness allowed for a very rapid completion of Iowa's harvest (98% of the soybeans harvested by the end of October). However, at the same time the state's pastures were in their worst condition in eight years.

12. Early Freeze**September 15**

Nearly half of Iowa saw a freeze on the morning of September 15th with Mason City reporting a low of 26 degrees. This was Iowa's lowest temperature for so early in the fall since Sibley reported 23 degrees on September 11th, 1955. At Jefferson and Cedar Rapids this tied for the earliest freeze on record.

13. Warm December**December 11 – December 31**

The last three weeks of the year were very mild with temperatures averaging 12.6 degrees above normal while an average of only 0.3 inches of snow fell across Iowa. This was a huge contrast from the previous four Decembers which were all unusually cold and snowy. However, more seasonal weather occurring during the first ten days of the month will keep the month out of the top ten for warmth and lack of snow (in fact, December 2006 was warmer and had less snow).

Statewide Annual Statistics

Overall, the preliminary statewide averages for 2011 are 32.00 inches of precipitation or 3.27 inches less than normal with a temperature of 48.8 degrees or 0.7 degrees above normal. This ranks as the 68th driest and 50th warmest year among 139 years of records. The lowest temperature of the year was -30 degrees at Elkader on January 21st and the lowest wind chill was -42 degrees at Storm Lake on February 8th. As stated above, the highest temperature of the year was 106 at Fairfield on August 2nd. (The highest temperatures are noted in the weather event summary).

A total of 50 tornadoes struck Iowa in 2011 according to statistics gathered by the National Weather Service. This number is quite close to the annual average of 47 for the state of Iowa. April and May were very active months, with 34 of the 50 tornadoes occurring in this two-month span. The last tornado of the season occurred on July 11th, which is the earliest cessation of tornado activity since reliable records started in 1980. The previous earliest cessation was July 24th in 1992.