



# IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

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SECRETARY OF AGRICULTURE

## IOWA ANNUAL WEATHER SUMMARY – 2004

General Summary. Iowa temperatures averaged 48.5° or 0.7° above normal while precipitation totaled 35.87 inches or 1.79 inches greater than normal. This ranks as the 55<sup>th</sup> warmest and 28<sup>th</sup> wettest year among 132 years of state records.

Temperatures. The year began with unseasonably mild weather with temperatures soaring to 67° at Burlington and Keokuk on January 2. However, colder than normal weather prevailed for most of the period from January 4 through February 17. Sibley reported the year's lowest temperature with a -22° reading on the morning of January 27. Winter cold did not persist as long as usual as there were no subzero readings anywhere in Iowa after February 17. Temperatures averaged mostly above normal from late February through mid to late May with Iowa recording its 20<sup>th</sup> warmest spring on record. The temperature reached 95° at Sioux City on May 5. However, this was not a sign of things to come as Iowa went on to experience its 3<sup>rd</sup> coolest summer on record. Fort Madison reported the highest temperature of the year with 96° on July 13. Only in 1992 has the temperature failed to exceed 95° somewhere in the state. There was an average of only 3 days with temperatures of 90° or higher during the year. Summer temperatures dropped as low as 39° on June 25 and 36° on August 21. Once again there was a fundamental and persistent change in the weather pattern as temperatures averaged above normal for most of the final four months of the year. Temperatures reached 80° at Glenwood and Sioux City on November 6 and 67° at Glenwood and Shenandoah on December 30. The winter season's first subzero temperatures did not arrive until December 19.

Degree Day Totals. Annual air conditioning requirements, as estimated by cooling degree day totals, averaged 22% less than in 2003 and 27% less than normal. This was the coolest air conditioning season since 1992 and ranks 6<sup>th</sup> coolest among 132 years of state records. Meanwhile, home heating requirements, as estimated by heating degree day totals, averaged 5% less than in 2003 and 7% less than normal.

Precipitation. The precipitation early in the year was characterized by several major snowstorms. The first storm on January 4 brought 5 to 9 inches of snow to southern Iowa. There were three major storms centered on January 26, February 2 and February 5. This was among the snowiest periods ever in Iowa with a statewide average of 18.8 inches falling in only 12 days. The statewide average snowcover reached an average depth of 14.9 inches on the morning of February 6 when Onawa had 28 inches on the ground. Finally, the largest snow event of the winter season came on March 15-16 when Sioux City received 19 inches. That last storm, plus widespread rainfall both early and late in the month, combined to make March the 8<sup>th</sup> wettest March on record. This

moisture largely eliminated the soil moisture deficits resulting from the very dry late summer of 2002. Practically no rain fell during the first half of April with less than normal precipitation continuing into mid May. This relatively dry (and warm) period was perfect for allowing rapid planting progress and gave crops what turned out to be a much needed (owing to the very cool summer) early start to the growing season. Very heavy rain fell on May 21 and 22 with widespread flooding in northeast Iowa where Lansing recorded their wettest month ever with 14.87 inches of rain. Summer rainfall averaged just a little less than usual, which is somewhat atypical of unusually cool summers in Iowa. Very heavy rain struck northwest and extreme northern Iowa in mid-September with Spencer (14.08 inches), Sanborn (11.04) and Alton (10.48) all recording their wettest months ever. However, precipitation was generally a little less than normal over most of Iowa during the last four months of the year. Overall, this was Iowa's wettest year since 1998. Precipitation versus normal varied from 6.96 inches less than usual at Toledo to 13.24 inches above normal at Le Mars. Annual precipitation totals varied from 25.72 inches at Sioux City to 48.82 inches at New Hampton. Some north central and northeast Iowa locations approached record annual precipitation totals during 2004.

Severe Weather. A record total of 120 tornadoes were recorded in Iowa in 2004. This broke the previous annual record of 105 set in 2001. May set the pace with a monthly record total of 57 tornadoes (old record 48 in June 1984). Fortunately, however, there were injuries reported with only one of these storms, the May 21 Bradgate tornado.

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