

IOWA WEATHER SUMMARY – SEPTEMBER 2004

General Summary. September temperatures averaged 66.5° or 3.6° above normal while precipitation totaled 2.73 inches or 0.68 inches less than normal. This ranks as the 22nd warmest and 51st driest September among 132 years of state records.

Temperatures. Warm weather made a surprising return in September after the third coolest summer of Iowa record. The higher temperatures were very welcome news for crop development that had been slowed by persistent cool weather. The month's highest temperatures were 94° readings reported at Mapleton on the 1st, at Onawa on the 13th and at Glenwood on the 13th and 19th. There were only 8 days with temperatures averaging below normal (6th-9th, 16th-17th and 28th-29th). The season's first freeze was recorded over about 6% of the state (mainly north central sections) on the morning of the 29th when Guthrie Center reported a low of 29°. Typically, 18% of the state will have recorded a freeze by the end of September. The September average temperature was just 0.02° cooler than that of August 2004. Only in 1897, among the 132 years of state records, has September averaged warmer than the previous August.

Cooling Degree Days. Home air conditioning requirements, as estimated by cooling degree day totals, averaged 87% greater than last September and 58% more than normal. However, cooling requirements for the 2004 season are running 22% less than last year and 27% less than normal.

Precipitation. Very heavy rain struck northwest and extreme northern Iowa at mid-month. An area of thunderstorms, bringing mostly 1 to 2 inch rain amounts, fell across northwest Iowa on the night of the 13th and morning of the 14th. This was soon followed by a procession of thunderstorms from mid-day on the 14th to sunrise on the 15th when an additional 6 or more inches of rain fell on a wide area from O' Brien and Cherokee Counties northeastward into southeast Minnesota. At Spencer (7.13 inches), Estherville (6.45) and Swea City (6.82) the rainfall for the period ending at 7 a.m. on September 15 was the heaviest ever recorded for a 24-hour period. Official 24-hour totals peaked at 8.71 inches at the Estherville Airport with unofficial amounts reported of as much as a foot of rain. Still more rain fell in the area on the 17th and 21st. At Spencer this was the wettest month ever with 14.08 inches (old record 12.13 inches in August 1975). Sanborn, 11.04 inches (old record 10.34 in August 1974) and Alton, 10.48 inches (old record 9.23 inches in June 1983) also set records for most rain any month. By contrast, very dry weather prevailed over much of eastern and southern Iowa where a few locations reported their driest September ever. A summary of the September precipitation records set is given below:

Station	Sep. 2004	Old Sep. Record	Years of Record
Primghar	14.95	12.26 in 1975	74
Spencer 1 N	14.08	12.00 in 1938	97
Milford 4 NW	13.00	9.41 in 1964	74
Lake Park	11.15	10.47 in 1938	85
Sanborn	11.04	9.84 in 1926	92
Alton	10.48	9.17 in 1970	100
Lansing 4 SE	0.44	0.48 in 1952	102

Elkader 5 SSW	0.24	0.40 in 1979	114
Manchester	0.16	0.17 in 1990	128

Severe Weather. Preliminary reports indicate that 12 tornadoes touched down in Iowa on September 5. Although these storms were all relatively small, this put the preliminary annual tornado total up to 114 which breaks the previous annual record of 105 set in 2001.

Harry Hillaker
State Climatologist
Iowa Dept. of Agriculture & Land Stewardship
Wallace State Office Bldg.
Des Moines, IA 50319
Phone: (515) 281-8981
E-mail: Harry.Hillaker@idals.state.ia.us