

IOWA MONTHLY WEATHER SUMMARY –SEPTEMBER 2012

General Summary. Iowa temperatures averaged 62.1° or 1.1° below normal while precipitation totaled 1.64 inches or 1.74 inches less than normal. This ranks as the 18th driest and 44th coolest September among 140 years of state records.

Temperatures. The month began with six consecutive warmer than normal days; however, only six of the final 24 days of the month managed to exceed normal. The month's highest temperatures were 98° readings on the 4th at Indianola, Little Sioux, Logan and Sioux City and again on the 11th at Little Sioux and Sioux City (the latter being a record high for the date). The final 90° reading of the month was recorded at Glenwood on the 19th. There was a statewide average of three days with daily maximum temperatures of 90° or higher during September. This brings the annual total to 41 such days, the highest total since 1988 when there was an average of 47 days at or above ninety. Meanwhile, the season's first freeze was recorded at a few northwest Iowa locations on the 18th and 22nd. However, a widespread freeze came on the morning of the 23rd when 69% of the state reported temperatures of 32 degrees or lower. Sheldon and Spencer reported the lowest temperature with 22° readings. This was the most widespread freeze in Iowa for so early in the season since September 22-23, 1983, as well as the earliest 22° reading since September 23, 1983. An additional 6% of the state (mostly in eastern Iowa) recorded a freeze the next morning with Belle Plaine the cold spot at 24°. There were also scattered light freezes on the 26th, 27th and 28th. Very dry air, which heats and cools much more rapidly than moist air, allowed wide swings in temperature with afternoon highs often more than forty degrees higher than morning lows.

Cooling Degree Day Totals. Home air conditioning requirements, as estimated by cooling degree day totals, averaged 24% more than last September but 6% less than normal. Nevertheless, year-to-date totals are running 18% greater than last year at this time and 40% more than normal for the highest totals since 1988.

Precipitation. Several statewide rain events dampened Iowa early in the month. However, very dry conditions returned for the last two and one-half weeks of September. The statewide average precipitation was 1.47 inches from the 1st to the 13th, just slightly less than the 1.66 inch normal for the period. Then, an average of just 0.17 inches fell for the rest of the month or 10% of the normal 1.72 inches for the 14th to the 30th. A handful of locations in northeast Iowa recorded above normal rain totals for the month thanks to locally heavy rain on the 4th-5th. Monthly totals varied from 4.51 inches at Dorchester and Elkader to only 0.40 inches at Oskaloosa. Albia (0.46") and Oskaloosa recorded their lowest September precipitation totals since 1940 while on the other side of the state Sioux Center had their lowest total (0.45") since 1899. For the state as a whole the year-to-date precipitation deficit has climbed to 8.54 inches, the largest deficit for the first three-fourths of the year since 1988 and ninth lowest among 140 years of records.

Severe Weather. There were two severe weather episodes during the month. The first on the night of the 4th brought numerous reports of report hail and high winds to northern

and eastern Iowa. Two nights later thunderstorms produced a few more hail and high wind reports along a line from near Spencer to near Muscatine. There have been no confirmed tornado reports in Iowa since May 24 and the annual total stands at 16. This is the lowest total since 1963 when tornado reporting was far less complete than it is today.

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