

## IOWA PRELIMINARY WEATHER SUMMARY – JULY 2013

General Summary. Iowa temperatures averaged 72.5° or 1.1° below normal while precipitation totaled 1.77 inches or 2.73 inches less than normal. This ranks as the 31<sup>st</sup> coolest and 9<sup>th</sup> driest July among 141 years of state records.

Temperatures. The month began with four days of below normal temperatures with Atlantic and Chariton recording morning lows of 49° on the 1<sup>st</sup>. This was followed by five days of above normal readings topped off by 95° maximums on the 8<sup>th</sup> at Clarion, Hampton and Pocahontas. The remainder of the month was evenly divided between one long warm spell (14<sup>th</sup>-22<sup>nd</sup>) and an equally long cool spell (23<sup>rd</sup>-31<sup>st</sup>). The month's highest temperature was a 98° reading at Keokuk on the 19<sup>th</sup> while heat indices (the estimated 'feel' of the air by combining temperature and humidity) maxed out at 102° at Monticello on the 17<sup>th</sup> and Des Moines, Iowa City and Knoxville on the 19<sup>th</sup>. The last nine days of the month all averaged cooler than usual with particularly cool weather from the 27<sup>th</sup> to the 29<sup>th</sup>. Battle Creek in Ida County reported a morning low of 39° on the 27<sup>th</sup> while Cresco saw an afternoon high of only 58° the same day. Battle Creek's low represented the first occurrence of sub-40° weather in July in Iowa since July 7, 1984. Daily record low temperatures were set over most of Iowa on the 28<sup>th</sup> and over portions of the state on the 27<sup>th</sup> and 29<sup>th</sup>.

Cooling Degree Day Totals. Home air conditioning requirements, as estimated by cooling degree day totals, averaged 45% less than last July and 7% less than normal. Degree day totals so far this cooling season are running 41% less than last year at this time and 3% less than normal.

Precipitation. The big weather story of the month was precipitation, or the lack of it. Following seven consecutive months of above normal precipitation July turned very dry. There were a few small areas in north central and south central Iowa receiving above normal rainfall but most of the southwest one-half of the state was very dry. Rain totals for the month varied from 0.13 inches at Atlantic to 6.72 inches at Lake Mills. Record low July precipitation totals were recorded at:

City	July 2013	Old July Record	Period of Record
Carroll	0.18 inches	0.23 inches in 1947	127 years
Sac City	0.20 inches	0.35 inches in 1901	137 years
Red Oak	0.42 inches	0.46 inches in 1959	102 years

Atlantic's total was the second lowest for July at that location with just a trace recorded in 2012. Fortunately subsoil moisture was plentiful statewide prior to the dryness and temperatures in July averaged 7.1° cooler than in 2012, thus placing much less stress upon crops than was seen last year (which was the fourth hottest and fifth driest July of record). While the mild late July temperatures greatly reduced moisture stress they also slowed crop development. This magnifies already existing concerns regarding the potential lack of maturity of some crops when the first freeze arrives. According to Iowa Agricultural Statistics figures the overall condition of the Iowa corn and soybean crops

has declined only slightly despite the recent dryness. The percentage of the crop rated in poor or very poor condition is much smaller than at this time last year. However, one then has to go back to the flood year of 1993 and the drought year of 1988 to find any other years with crops rated worse at this point in the season (2006 was very similar to 2013).

Severe Weather. The only widespread severe weather event of the month came on the afternoon and evening of the 22<sup>nd</sup> when large hail and/or high winds were reported from 25 counties. However, thus far the 2013 severe weather season has been an unusually quiet one. A total of 15 tornadoes have been confirmed in 2012, one less than reported in 2012 which saw the fewest tornadoes since at least 1953.

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