



IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

Bill Northey, Secretary of Agriculture

IOWA PRELIMINARY MONTHLY WEATHER SUMMARY – DECEMBER 2015

General Summary. Temperatures averaged 33.0° or 10.1° above normal while precipitation totaled 5.04 inches or 3.70 inches above normal. This ranks as the wettest and 7th warmest December among 143 years of records. The previous wettest December was recorded in 1982 with 3.43 inches. The last warmer December was recorded in 1965.

Temperatures. Unseasonably warm weather was the rule through nearly all of December. Only one day (the 31st) brought a statewide average temperature that was below normal. This warm pattern began on August 31 with only 25 of the last 123 days of 2015 averaging below normal. The final one-third of the year averaged 5.8° above normal. Only 1931 was warmer for this late year period (when September, November and December all ranked in the top 5 warmest for their respective months). Temperature extremes for the month ranged from highs of 64° at Donnellson and Keokuk on the 12th, Bloomfield and Keosauqua on the 13th and Keosauqua again on the 23rd while Sheldon, Sioux Center and Spencer recorded the lowest temperatures with -6° readings on the morning of the 31st. There were five days (10th, 12th, 13th, 14th and 23rd) during the month when temperatures exceeded 60° somewhere in the state while only two days (3rd and 31st) brought sub-zero readings.

Heating Degree Days. Home heating requirements, as estimated by heating degree day totals, averaged 24% less than normal and 13% less than last December. Heating degree day totals so far this season (since July 1) are running 23% less than normal and last year at this time.

Precipitation. A storm system brought heavy snow to far northwest Iowa on the last day of November with light rain and snow persisting over much of Iowa into the first two days of December. There was a welcome mostly dry period from the 3rd through the 11th. However, an unseasonably warm and humid air mass brought widespread heavy rainfall from the evening of the 12th through the morning of the 14th. An amazing statewide average of 2.80 inches of rain fell during this event. Only three winter *months* (December 1982, February 1881 and February 1915) have brought more precipitation to Iowa than this one storm system. Grundy Center recorded 5.98 inches of rain during this storm which easily exceeded their December monthly record precipitation total of 3.74 inches. Another storm system brought widespread rain on the 23rd with some central and northeast Iowa locations receiving over an inch of rain. The extended period of unseasonably warm and wet weather appeared to make a White Christmas impossible. However, a compact Christmas Eve storm system brought snow from southwest, through central and into northeast Iowa. Heavy snow fell from Council Bluffs to Ames with 14 inches reported at Persia in Harrison County. Finally, another large storm system brought heavy winter precipitation to much of Iowa on the 28th into the morning of the 29th. Heavy snow fell across the northern one-third of Iowa where 6 to 10 inch amounts were common. Meanwhile copious amounts of sleet and freezing rain fell over much of east central and southeast Iowa. Monthly precipitation totals (rain plus the liquid equivalent of snow and sleet) varied from 1.72 inches at Rock Rapids to 8.20 inches at Grundy Center. Grundy Center's total has been exceeded only once in Iowa during December when Keokuk recorded 8.56 inches in 1873. Dozens of cities set records for greatest December precipitation totals with a partial list below. Cherokee, Shenandoah and Storm Lake set record maximum totals for both November and December.

| City | Dec. 2015 (inches) | Previous Dec. Record | Period of Record |
|---------------|--------------------|----------------------|------------------|
| Grundy Center | 8.20 | 3.74 in 1982 | 123 years |
| Denison | 7.15 | 3.43 in 1984 | 120 years |
| Glenwood | 6.84 | 4.19 in 1984 | 127 years |
| Atlantic | 6.62 | 3.54 in 1982 | 126 years |
| Waterloo | 5.92 | 3.77 in 1982 | 132 years |
| Logan | 5.80 | 4.76 in 1984 | 146 years |
| Des Moines | 5.44 | 3.72 in 1931 | 140 years |
| Storm Lake | 4.80 | 2.46 in 1931 | 126 years |
| Cedar Rapids | 4.49 | 3.84 in 1982 | 133 years |

Snow totals varied from only a dusting in extreme southeast Iowa to 25.9 inches at Rock Rapids. The statewide average snowfall was 10.0 inches or 1.7 inches above normal and ranks as the 29th highest December total among 129 years of records.

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December 2015

WEATHER BY DISTRICTS

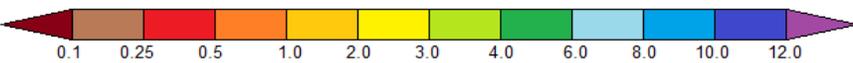
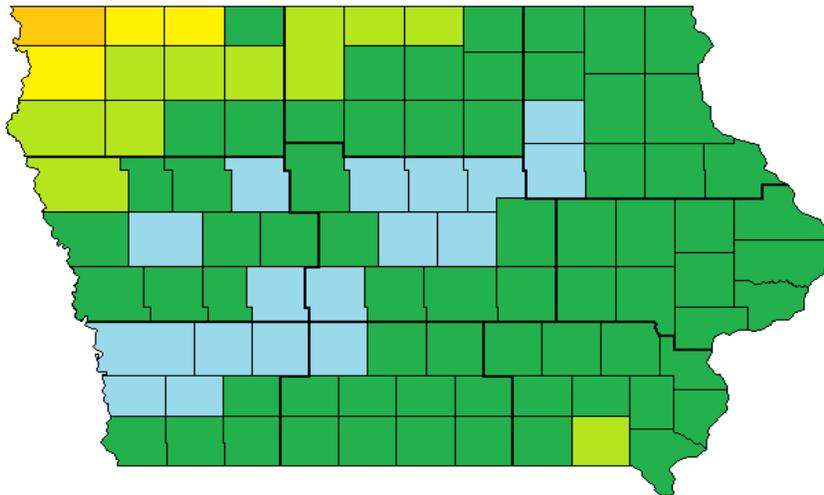
| DISTRICT | TEMPERATURE (F) | | HEATING DEGREE DAYS | | | | PRECIPITATION (inches) | | | | SNOWFALL Dec 2015 Average |
|---------------|-----------------|------------|---------------------|------------|---------------------|------------|------------------------|------------|--------------------|------------|---------------------------------|
| | December 2015 | | December 2015 | | Since Jan., 1, 2015 | | December 2015 | | Since Jan. 1, 2015 | | |
| | Average | Departure* | Average | Departure* | Average | Departure* | Average | Departure* | Average | Departure* | |
| Northwest | 27.6 | +7.9 | 1153 | -251 | 2432 | -605 | 3.30 | +2.40 | 35.46 | +5.07 | 17.7 |
| North Central | 30.4 | +10.9 | 1066 | -344 | 2368 | -681 | 4.60 | +3.36 | 39.97 | +5.68 | 12.0 |
| Northeast | 33.7 | +12.4 | 962 | -391 | 2229 | -674 | 5.35 | +3.86 | 37.36 | +1.08 | 10.5 |
| West Central | 30.3 | +8.0 | 1080 | -244 | 2259 | -554 | 5.45 | +4.36 | 45.78 | +12.80 | 14.2 |
| Central | 33.2 | +10.4 | 975 | -334 | 2126 | -642 | 6.11 | +4.79 | 46.82 | +10.46 | 10.2 |
| East Central | 36.4 | +11.9 | 884 | -370 | 1974 | -641 | 4.78 | +3.04 | 43.65 | +6.98 | 4.9 |
| Southwest | 33.1 | +7.7 | 985 | -242 | 2000 | -544 | 5.97 | +4.73 | 50.17 | +14.53 | 7.0 |
| South Central | 35.3 | +9.6 | 907 | -312 | 1856 | -684 | 5.13 | +3.75 | 48.14 | +10.43 | 6.4 |
| Southeast | 38.6 | +11.6 | 818 | -359 | 1707 | -684 | 4.67 | +2.86 | 44.09 | +5.45 | 3.7 |
| STATE | 33.0 | +10.1 | 988 | -316 | 2138 | -621 | 5.04 | +3.70 | 43.28 | +8.01 | 10.0 |

* Departures are computed from 1981-2010 normals.

Monthly estimates are preliminary and are likely to change.

The weather data in this report are based upon information collected by the U. S. Dept. of Commerce, NOAA National Weather Service.

State Climatologist, Iowa Dept. of Agriculture & Land Stewardship
 PRELIMINARY COUNTY PRECIPITATION ESTIMATES, DECEMBER 2015 (inches)



State Climatologist, Iowa Dept. of Agriculture & Land Stewardship
 PRELIMINARY COUNTY SNOWFALL ESTIMATES, DECEMBER 2015 (inches)

