

IOWA MONTHLY WEATHER SUMMARY- DECEMBER 2010

General Summary. December temperatures averaged 18.9° or 3.7° below normal while precipitation totaled 1.29 inches or 0.06 inch greater than normal. This ranks as the 27th coolest and 55th wettest December among 138 years of state records.

Temperatures. Cooler than usual weather prevailed throughout most of the early and mid portions of December with 16 of the first 19 days averaging on the cold side of normal. The season's first sub-zero readings were recorded in a few northeast Iowa locations on the 5th with most of the state falling below zero on the 13th and 14th. Elkader reported the lowest temperature of the month with a -22 degree reading on the 14th. Milder air prevailed late in the month with nine of the final 12 days of December averaging on the warm side of normal. Unseasonably warm and humid air on the 29th, 30th and 31st melted most of the snowcover across the southwestern two-thirds of Iowa. The mildest day by far came on the 30th when Shenandoah soared to 66 degrees. However, deep snow cover held high temperatures down to the upper 30's over northeastern areas. Monthly temperatures averaged 4 to 8 degrees below normal over northeast Iowa where deep snow prevailed for most of the month while the far southwest averaged within one degree of normal.

Heating Degree Day Totals. Home heating requirements, as estimated by heating degree day totals, averaged 2% more than last December and 8% more than normal. Degree day totals so far this heating season (since July 1) are running 4% less than last season and 5% less than normal.

Precipitation. A very persistent storm track brought a parade of storms to northeastern areas of Iowa while the south was unusually dry. A total of eight storms brought an inch or more of snow to the state and all but one were centered over the northeast. The largest storms brought snow totals of seven inches or more on the 3rd-4th, 11th-12th, 20th and 23rd-24th. Monthly snow totals varied from only 1.5 inches at Sidney to 36.9 inches at New Hampton. At New Hampton and Waukon this was the snowiest calendar month of record. The statewide average snowfall was 13.5 inches or 6.2 inches greater than normal and ranks as the 10th highest December total among 124 years of records. Yet another storm event on the 10th-11th brought widespread rain to the state with greatest amounts again over the northeast. Cresco and Decorah both recorded their wettest Decembers ever. At Cresco a 3.60 inch amount was the highest December total among 105 years of record (old record 3.55 in 1982). At Decorah 3.29 inches of precipitation fell, surpassing the 3.12 inch total recorded set just last December among 124 years of record. Precipitation totals varied from only 0.17 inch at Sidney to 3.96 inches at Waukon.

The most disruptive storm of the month was a blizzard on the 11th-12th when wind gusts of 50 to 60 mph over western Iowa coincided with moderate to heavy snowfall. Nearly all highways over the northwest one-third of the state were closed by drifts and very poor visibility. Audubon Airport reported the highest wind gust at 70 mph while Waukon had

the most snow with 12 inches. Meanwhile wind chills dipped to -30 degrees at Estherville near day break on the 12th.

Annual Summary. Temperatures during 2010 averaged 48.1° or 0.3° above normal while precipitation totaled 45.10 inches or 11.02 inches above normal. This ranks as the 66th coolest and second wettest (behind 48.22 inches in 1993) year among 138 years of records. Annual precipitation totals varied from 30.93 inches at Onawa to 66.77 inches at Rathbun Dam. The Rathbun Dam total is second only to Muscatine's 1851 total of 74.50 inches of precipitation for one year. 2010 precipitation totals were above normal at all but five of the state's 127 stations with long-term averages. Record annual precipitation totals were set at numerous locations scattered across Iowa including:

City	2010 Total	Old Annual Record	Length of Record
Centerville	64.99"	59.23 in 2008	104 years
Oskaloosa	63.76	53.84 in 1951	120 years
Mount Ayr	58.08	55.71 in 2008	108 years
Chariton	59.45	55.95 in 1902	113 years
Grinnell	57.77	56.35 in 1881	110 years
Albia	56.92	56.18 in 1973	109 years
Washington	57.79	53.68 in 1965	125 years
Keokuk	56.82	56.10 in 1973	135 years
Indianola	56.31	54.58 in 1993	117 years
Knoxville	56.25	54.09 in 1973	104 years
Audubon	50.01	48.53 in 1973	108 years
Hampton	49.70	49.33 in 1902	110 years
Fort Dodge	49.51	47.27 in 1993	111 years
Sioux Center	42.99	39.74 in 1983	96 years

Harry J. Hillaker, State Climatologist
Iowa Dept. of Agriculture & Land Stewardship
Wallace State Office Bldg.
Des Moines, IA 50319
Telephone: (515) 281-8981
E-mail: Climatology@IowaAgriculture.gov