



IOWA MONTHLY WEATHER SUMMARY – SEPTEMBER 2016

General Summary. Iowa temperatures averaged 67.3° or 4.1° above normal while precipitation totaled 6.19 inches or 2.81 inches above normal. This ranks as the 15th warmest and 13th wettest September among 144 years of state records. A wetter September last occurred in 1986 while a warmer one came just last year.

Temperatures. Above normal temperatures were the rule for most of the month with below normal readings confined to the 1st-3rd, 10th-11th, 13th and 28th. There were six days averaging more than ten degrees above normal (6th and 20th through 24th) while the 2nd was the most unusually cool at just 3.7 degrees below normal. Temperatures extremes varied from highs of 94° at Burlington on the 6th and at Algona, Atlantic, Clarion, Indianola and Sigourney on the 21st. The lowest temperatures occurred at Spencer Airport on the mornings of the 29th and 30th with 38° readings, which was also matched at Sheldon on the 29th. This was the highest statewide September minimum temperature on record (old record of 36° in 1905 and 1987).

Cooling Degree Day Totals. Home air conditioning requirements, as estimated by cooling degree day totals, averaged 62% greater than normal but 24% less than last September. Cooling degree day totals for the year-to-date are running 21% greater than last year and 17% greater than normal.

Precipitation. The big weather news for the month was the excessive rains over central and northern Iowa on the 9th-10th, 15th-16th and 21st-23rd. The first of these three events brought rain statewide with Clarksville reporting the most rain with 4.35 inches. The second event brought the most widespread heavy rains of the month with a maximum of 5.35 inches near Blencoe in Monona County. However, the most destructive event was the final one. This last event largely left the southern one-third of Iowa dry but dumped 10.56 inches of rain near Nora Springs and 9.44 inches near Nashua. Major flooding occurred across much of north central and northeast Iowa and locations downstream of the heaviest rains. The Shell Rock River at Shell Rock set a record flood crest 1.15 feet higher than the old record of June 2008. Flooding along the Cedar River at Cedar Falls, Waterloo and Cedar Rapids was the second highest of record behind the disastrous floods of 2008. Monthly rain totals of ten inches or more were fairly common across the north one-third of the state while parts of southeast Iowa were unusually dry. Monthly rain totals varied from only 0.90 inches at Fairfield (less than one-third of normal) to 17.25 near Nora Springs. A higher September rain total than that at Nora Springs has been recorded in only two other years in Iowa (1926 and 1970). Record high September rain totals were set at the following locations:

Station	Sept. 2016 Total	Previous Sept. Record	Period of Record
Charles City	15.83 inches	12.51 in 1965	134 years
Decorah	11.66	11.21 in 1972	134 years
Tripoli	11.49	8.02 in 1965	69 years
New Hampton	11.17	9.82 in 1965	115 years
Postville	10.78	8.82 in 1931	75 years
Emmetsburg	10.03	9.82 in 1964	75 years
Sheldon	9.69	9.52 in 1926	106 years

September was the fourth consecutive very wet month across parts of northeastern Iowa. As a result, with three months remaining in the year, record annual precipitation totals have already been established at the following locations:

Station	2016 Total	Previous Annual Record	Period of Record
Charles City	51.93 inches	51.35 in 1999	133 years
Decorah	51.71 inches	48.74 in 2007	128 years
Cresco	50.90 inches	47.87 in 1951	110 years
Osage	45.98 inches	45.72 in 1999	112 years

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September 2016

WEATHER BY DISTRICTS

DISTRICT	TEMPERATURE (F)		COOLING DEGREE DAYS				PRECIPITATION (inches)			
	September 2016		September 2016		Since Jan., 1, 2016		September 2016		Since Jan.1, 2016	
	Average	Departure*	Average	Departure*	Average	Departure*	Average	Departure*	Average	Departure*
Northwest	65.3	+3.5	94	+31	822	+127	7.49	+4.26	31.37	+5.65
North Central	65.4	+4.1	85	+30	716	+88	10.31	+7.12	40.13	+11.30
Northeast	65.8	+3.9	83	+21	772	+116	8.50	+5.15	40.01	+10.10
West Central	66.5	+3.4	115	+37	927	+123	5.78	+2.62	30.82	+2.98
Central	67.6	+4.5	130	+54	935	+158	6.80	+3.48	33.88	+3.61
East Central	68.6	+4.8	145	+63	1003	+181	4.71	+1.39	34.16	+4.53
Southwest	68.9	+4.1	165	+67	1016	+76	4.92	+1.51	36.77	+6.93
South Central	68.9	+4.7	161	+71	1063	+182	3.81	-0.01	28.58	-2.64
Southeast	70.0	+4.6	181	+74	1168	+171	2.08	-1.70	26.89	-4.31
STATE	67.3	+4.1	126	+48	927	+136	6.19	+2.81	33.66	+4.38

* Departures are computed from 1981-2010 normals.

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
COUNTY PRECIPITATION ESTIMATES, SEPTEMBER 2016 (inches)

