

IOWA MONTHLY WEATHER SUMMARY – OCTOBER 2019

General Summary: Iowa temperatures averaged 47.1 degrees, 3.7 degrees below normal, while precipitation totaled 4.78 inches or 2.17 inches above normal. This ties 1883 as the 13th coldest October on record, tying 1883. It was also the 8th wettest October among 147 years of statewide records. A colder October last occurred in 2009 with a wetter October in 2017.

Temperatures: A majority of October days had below average temperatures with two extended stretches of unseasonable cold, the first of which occurred between the 10th and 16th. Stations across Iowa's northwestern quadrant began registering the first freezing and below freezing temperatures of the season during the morning hours on the 11th. The longest span of unseasonably cold days happened at the end of the month, from the 20th through the 31st, where the average temperature was 38.0 degrees, 10.2 degrees below normal. October 6th through the 9th was the longest period of warmer than expected temperatures with a statewide average at 56.1 degrees, 3.5 degrees above normal. Donnellson (Lee County) and Lamoni (Page County) reported the month's high temperature of 90 degrees on the 1st. This reading was about 20 degrees warmer than expected. Sanborn (O'Brien County) observed the month's overnight low temperature of 13 degrees on the 31st, 18 degrees below normal.

Heating Degree Day Totals: Home heating requirements, as estimated by heating degree day totals, averaged 7% more than last October and 15% more than normal. Thus far this heating season, heating degree day totals are running 3% more than last year at this time and 5% more than normal.

Precipitation: A majority of Iowa reported above average precipitation with a southwest to northeast band of three to five inch departures through the middle of Iowa. Southeastern Iowa observed near to below average precipitation. Monthly precipitation totals varied from 1.40 inches in Bloomfield (Lucas County) to 9.09 inches in Grinnell (Poweshiek County). The statewide average snowfall for the month was 2.30".

Light showers moved through extreme southeastern Iowa on the afternoon of the 6th with only a handful of stations reporting between one to two tenths of an inch. The weather pattern began to shift through the afternoon as a strong low pressure system over the Dakotas continued to move through the upper Midwest. Showers and thunderstorms slowly moved into western Iowa during the evening of the 11th and expanded across much of Iowa's eastern half. Waves of rain continued across the state through the 12th with the low pressure gaining strength over Minnesota as the attendant cold front slowly moved across Iowa. Precipitation totals topped 1.00 inch at over 20 reporting sites with a gauge in Churdan (Greene County) observing 1.81 inches. The first snowflakes of the season were also reported in northern and eastern Iowa with Swea City (Kossuth County) reporting two inches of snow. Multiple stations reported a trace to 0.80 inch in Sanborn (O'Brien County).

A weak low pressure system propagated across northern Iowa into Minnesota on the 15th. The attendant cold front swept across the state, producing gusty northwest winds. A narrow band of showers and a few

embedded thunderstorms streamed into Iowa ahead of a low pressure system through the evening hours on the 20th. The complex expanded and covered much of the state's eastern half into the early morning hours of the 21st. Another wave of showers formed across central Iowa and moved east as the low propagated to the northeast. Two-day rain totals were highest across central Iowa with Clive (Polk County) reporting 2.17 inches of rain. Over 100 stations reported totals at or above one inch with the statewide average at 0.73 inch. Rain showers moved through Iowa during the morning and afternoon hours of the 23rd as a low pressure center moved through the state's southern half. Measurable totals were highest in northwestern Iowa with Storm Lake (Buena Vista County) reporting 0.40 inch. Totals across the rest of Iowa were generally between 0.10 inches and 0.30 inches. The remnants of Tropical Storm Olga brought light rain showers into southeastern Iowa during the afternoon hours on the 26th. Partly cloudy conditions were observed across the rest of the state. Rain totals ranged from 0.06 inch in Muscatine (Muscatine County) to 0.34 inch at Le Claire Lock and Dam (Scott County).

During the evening and nighttime hours on the 28th, the first widespread snow event of the season developed as a system moved across Iowa. Measurable snow was reported across the southeastern two-thirds of the state with the highest totals in east-central Iowa. Accumulations ranged from a trace at multiple stations to 4.2 inches in Coralville (Johnson County) with the statewide average of 1.20 inches. A second weather system greeted the state with snow on the 30th as a low pressure center south of Iowa propagated east. As with the first system, accumulating snow was confined to southeastern Iowa. Stations from Cedar Rapids (Linn County) reported totals in the three to four-inch range with Davenport Municipal Airport (Scott County) and Dubuque (Dubuque County) observing 3.00 inches and 5.20 inches, respectively. Totals below an inch were reported from Decorah (Winneshiek County) to Creston (Union County); the statewide average snowfall was 1.60 inches.

Severe Weather: Widespread severe weather occurred on only one day during October. A strong cold front swept across Iowa on the 1st, colliding with an unstable atmosphere across the central southwest to northeast third of the state. A weak, short-lived EF-0 rated tornado was reported in Shenandoah (Page County). There were also several reports of large hail in Polk County, varying in size from a quarter to a golf ball. Northeastern Iowa experienced severe straight-line winds as the front moved through during the late evening hours.

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October 2019

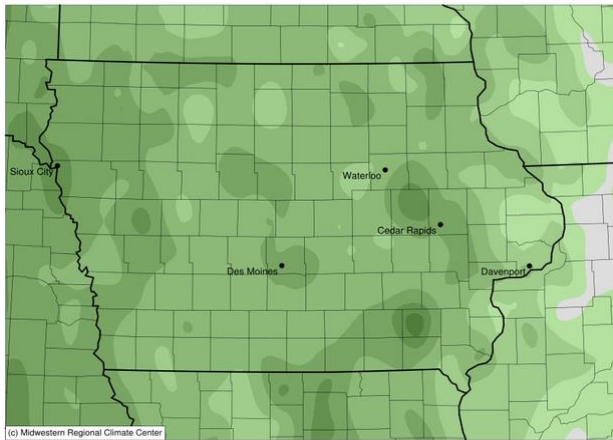
WEATHER BY DISTRICTS

DISTRICT	TEMPERATURE (F)		HEATING DEGREE DAYS				PRECIPITATION (inches)				SNOWFALL Oct 2019 Average
	October 2019 Average	Departure*	October 2019 Average	Departure*	Since Jul., 1, 2019 Average	Departure*	October 2019 Average	Departure*	Since Jan.1, 2019 Average	Departure*	
Northwest	44.9	-4.1	623	+129	743	+47	4.70	+2.46	36.03	+8.07	0.1
North Central	45.4	-3.5	608	+109	729	+26	5.62	+3.25	36.68	+5.48	0.6
Northeast	46.1	-3.5	586	+92	710	+11	6.13	+3.55	42.63	+10.14	3.1
West Central	47.1	-3.4	555	+112	640	+32	4.65	+2.24	33.77	+3.52	0.3
Central	47.2	-3.5	552	+109	633	+34	5.85	+3.23	37.50	+4.61	1.8
East Central	48.2	-3.5	521	+91	581	+11	4.12	+1.23	41.82	+9.31	5.2
Southwest	48.5	-3.9	512	+115	571	+38	4.86	+2.25	39.01	+6.56	0.7
South Central	48.6	-3.7	508	+110	562	+33	3.87	+1.02	41.90	+7.83	2.5
Southeast	49.2	-4.3	490	+109	541	+49	2.55	-0.51	42.51	+8.25	4.3
STATE	47.1	-3.7	547	+104	628	+27	4.78	+2.17	38.86	+6.98	2.3

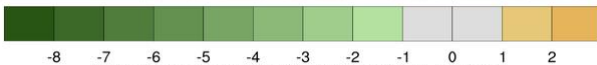
* Departures are computed from 1981-2010 normals.

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

Average Temperature (°F): Departure from 1981-2010 Normals
October 01, 2019 to October 31, 2019



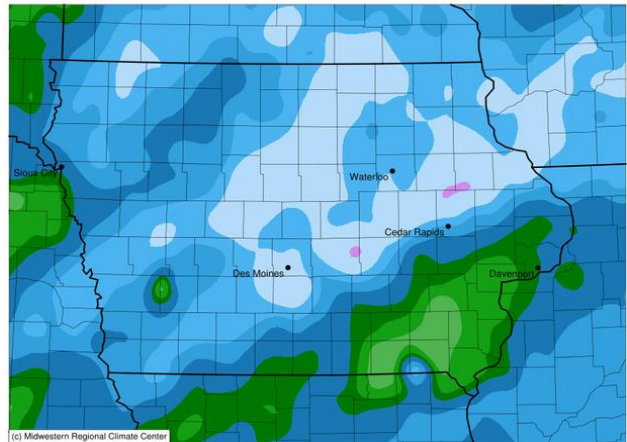
(c) Midwestern Regional Climate Center



Stations from the following networks used: WBAN, COOP, FAA, GHCN, ThreadEx, CoCoRaHS, WMO, ICAO, NWSLI, Midwestern Regional Climate Center, cli-MATE: MRCC Application Tools Environment
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Accumulated Precipitation (in)

October 01, 2019 to October 31, 2019



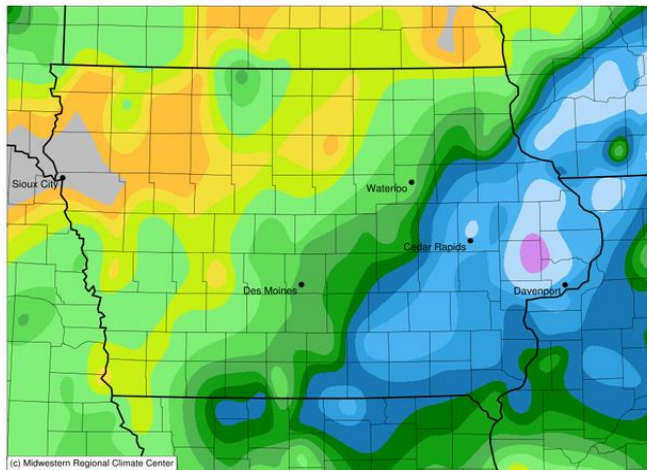
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Accumulated Snowfall (in)

October 01, 2019 to October 31, 2019



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