



## IOWA MONTHLY WEATHER SUMMARY – OCTOBER 2024

General Summary: Temperatures averaged 56.8 degrees, 5.8 degrees above normal while precipitation totaled 1.70 inches or 0.99 inch below normal. October 2024 ties 1931 as the 14<sup>th</sup> warmest in 152 years of statewide records. It also ties 1904 as the 51<sup>st</sup> driest October on record. October 1973 was warmer while 2022 was drier.

Temperatures: Iowa's National Weather Service (NWS) stations reported above-average temperatures for the month. October's statewide average maximum temperature was 71.6 degrees, 9.3 degrees above normal while the average minimum temperature was 42.1 degrees, 2.5 degrees above normal. Atlantic (Cass County) reported the month's high temperature of 96 degrees on the 5<sup>th</sup>, 26 degrees above normal. Mapleton (Monona County) reported the month's low temperature of 17 degrees on the 16<sup>th</sup>, 20 degrees below normal.

Heating Degree Days: Home heating requirements, as estimated by heating degree day totals, averaged 24% less than last October and 36% less than normal. Thus far this heating season, heating degree day totals are running 16% less than last year at this time and 36% less than normal.

Precipitation: The first 29 days of the month were among the driest on record for the month of October. National Weather Service (NWS) stations and Community Collaborative Rain, Hail and Snow (CoCoRaHS) gauges across Iowa's northwestern half reported deficits on the order of 1.00 - 2.00 inches. Portions of southeastern Iowa experienced slightly wetter conditions. Monthly precipitation totals ranged from 0.44 inch in Lake Park (Dickinson County) to 4.29 inches in Vining (Tama County).

The month started off with winds turning east as a low pressure center approached Iowa from the southwest on the 3<sup>rd</sup>. Clouds increased across the state as the cold front swung southeast. A line of showers and elevated thunderstorms formed just after midnight along and south of I-80. Several storms were severe-warned after quickly intensifying as they moved through southeastern Iowa, producing moderate to heavy rain and pea-sized hail. The highest rain totals ranged from 0.50 inch in Muscatine (Muscatine County) to over 1.00 inch in Ottumwa (Wapello County) and Columbus Junction (Louisa County). Lesser amounts, at or under 0.20 inch, were reported at several central and northeastern Iowa stations. There was an significant period of quiet weather stretching through mid-month until showers pushed into western Iowa through the evening hours of the 22<sup>nd</sup> with additional thundershowers forming across northern Iowa into the next morning. Many north-central stations reported amounts between 0.25-0.75 inch with widespread totals over the state's northern half in the 0.10-0.25 inch range. Isolated strong storms fired in northwestern Iowa just before midnight, leaving behind 1.00-inch hail and 0.34 inches of rain in Spencer (Clay County). Showers streamed into southern and eastern Iowa through the 24<sup>th</sup> ahead of a low pressure center moving toward the state. Pockets of rainfall persisted in eastern Iowa overnight into the 25<sup>th</sup>. Widespread totals of around 0.10 inch were reported with several north-central and southeast stations registering totals in the 0.50-1.00 inch range; Burt (Kossuth County) hit 0.60 inch with 1.32 inches near Keokuk (Lee County).

Showers and some thunderstorms held on over eastern Iowa into the late evening of the 26<sup>th</sup> with additional cells forming as the low pressure center and cold front propagated east. Rain totals for the previous 48 hours reported at 7:00 am on the 27<sup>th</sup> highlighted more the 120 stations observing at least an inch with heavier totals in eastern Iowa; an observer in Cedar Rapids (Linn County) reported 2.02 inches with 2.45 inches in Monticello (Jones County) and a statewide average of 0.83 inch. Overcast skies continued into morning of the 28<sup>th</sup> as moderate snow showers pushed into northwestern Iowa before

daybreak. Light snow and flurries continued over portions of northern Iowa through much of the day; measurable snow was observed at 34 stations and varied from trace amounts to 4.00 inches at Cherokee (Cherokee County), Sioux City (Woodbury County) and Spencer (Clay County). Cloud cover increased over western Iowa overnight into the 30<sup>th</sup> with a strong Colorado Low pressure center moving into Iowa as thundershowers popped up in eastern Iowa. Stronger thunderstorms, some severe warned, developed in western Iowa over the afternoon and evening hours. Showers and thunderstorms expanded in aerial coverage across much of Iowa through the end of the day and into the 31<sup>st</sup> as the system moved into the Great Lakes. More than 300 National Weather Service and Community Collaborative Rain, Hail and Snow (CoCoRaHS) gauges collected at least 1.00 inch with nearly 100 hitting 2.00 inches; the highest totals were found from south-central to eastern Iowa with 3.00 inches in Dubuque (Dubuque County) and Williamson (Lucas County) to 3.52 inches in Jasper County. The statewide average rainfall was 1.49 inches with a few stations in northwest Iowa reporting measurable snowfall as cold air wrapped in behind the disturbance; Sheldon measured 0.1 inch while 1.7 inches was observed in Sibley (Osceola County).

US Drought Monitor: The current US Drought Monitor (USDM) map shows the impact of the driest September on record as well as a dry October. As of October 1<sup>st</sup>, about 22% of Iowa was rated in Moderate Drought (D1), and slightly over 1% was Severe Drought (D2). By the end of October these categories had expanded to 37% and 50%, respectively; all of Iowa was rated as Abnormally Dry (D0) or in some form of drought. This rapid expansion of drought conditions is known as “rapid onset drought or “flash-drought.” Rainfall that came at the end of October and into early November helped alleviate these conditions. The most recent USDM, released on November 7, shows one class improvement across most of the state, with only one area of D2 covering about 13% of northwest Iowa.

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# October 2024

## WEATHER BY DISTRICTS

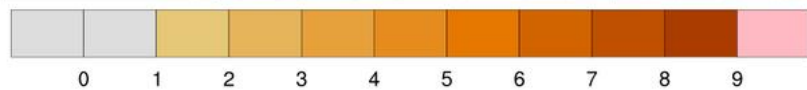
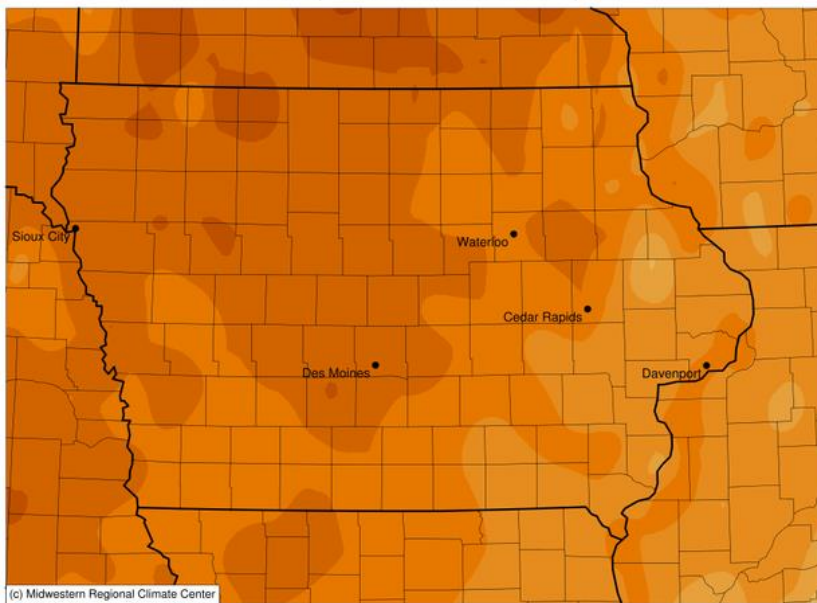
DISTRICT	TEMPERATURE (F)		HEATING DEGREE DAYS				PRECIPITATION (inches)				SNOWFALL Oct 2024 Average
	October 2024 Average	Departure*	October 2024 Average	Departure*	Since Jul., 1, 2024 Average	Departure*	October 2024 Average	Departure*	Since Jan.1, 2024 Average	Departure*	
Northwest	55.9	+6.6	298	-191	411	-267	0.81	-1.54	32.35	+4.00	0.0
North Central	55.8	+6.7	303	-191	428	-259	1.07	-1.43	35.37	+3.07	0.0
Northeast	54.8	+5.4	330	-157	461	-220	1.83	-1.01	34.20	-0.23	0.0
West Central	57.6	+6.5	254	-182	351	-243	1.12	-1.34	27.10	-3.38	0.0
Central	57.2	+6.1	266	-170	360	-225	1.94	-0.73	32.57	-0.27	0.0
East Central	56.3	+4.7	288	-135	378	-178	2.27	-0.66	34.25	+0.57	0.0
Southwest	58.9	+6.2	223	-167	315	-205	1.66	-1.14	28.65	-3.86	0.0
South Central	58.3	+5.7	239	-155	323	-196	2.46	-0.37	32.35	-1.32	0.0
Southeast	57.4	+4.3	259	-121	342	-146	2.50	-0.43	34.29	+0.33	0.0
STATE	56.8	+5.8	278	-158	377	-209	1.70	-0.99	32.34	-0.04	0.0

\* Departures are computed from 1991-2020 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 1991-2020 Normals**

October 01, 2024 to October 31, 2024



**Accumulated Precipitation (in)**

October 01, 2024 to October 31, 2024

