

## IOWA MONTHLY WEATHER SUMMARY – AUGUST 2024

General Summary: Temperatures averaged 71.2 degrees or 0.2 degree above normal while precipitation totaled 3.00 inches or 1.13 inches below normal. August 2024 ties 1892 and 2002 as the 59<sup>th</sup> coolest/96<sup>th</sup> warmest August in 152 years of statewide records; it also ranks as the 52<sup>nd</sup> driest on record. August 2019 (2023) was cooler (warmer) while 2020 was drier and the 3<sup>rd</sup> driest on record.

Temperatures: August's statewide average maximum temperature was 81.7 degrees, which is the 30-year climatological normal while the average minimum temperature was 60.7 degrees, 0.4 degree above normal. Osceola (Clarke County) and Shenandoah (Page County) reported the month's high temperature of 100 degrees on the 26<sup>th</sup>, 17 degrees above normal. Mapleton (Monona County) reported the month's low temperature of 43 degrees on the 10<sup>th</sup>, 18 degrees below normal.

Cooling Degree Days: Home cooling requirements, as estimated by cooling degree day totals, averaged 14% less than last August and 1% more than normal. Cooling degree day totals are running 1% less than last year at this time and 5% more than normal.

Precipitation: Most of Iowa's National Weather Service co-op stations reported precipitation deficits through August with widespread one to two-inch departures; portions of central to north central Iowa had deficits over two inches. Stations along the northern and southern state lines along with eastern Iowa reported above average totals. Monthly precipitation totals ranged from 1.11 inches in Cedar Falls (Black Hawk County) to 6.82 inches in Muscatine (Muscatine County).

Isolated thunderstorms from earlier on the 4<sup>th</sup> dissipated, though showers reformed across northern Iowa overnight into the 5<sup>th</sup>. Only a handful of stations had measurable totals ranging from 0.01 inch in Mason City (Cerro Gordo County) to 0.51 inch at Grafton (Worth County). Cloudy conditions developed over the evening hours as showers and a few thunderstorms moved through northeastern Iowa. Gusty northwesterly winds built in as the low's attendant cold front swept west to east. Rainfall was observed from north-central to northeastern Iowa with eight stations registering an inch or more; Waucoma (Fayette County) had 1.00 inch while 1.89 inches was observed in Lansing (Allamakee County). Amounts tapered off southwest with general totals under 0.20 inch. Another weak cold front dropped through the state early on the 8<sup>th</sup> with light rain showers in southwestern Iowa. Several stations reported varying amounts from 0.01 inch in Atlantic (Cass County) to 0.35 inch in Pacific (Mills County). Isolated showers also developed mid-morning in central Iowa with lighter amounts just west of the Iowa State Fairgrounds; a gauge in Urbandale (Polk County) recorded 0.03 inch from a cell that quickly diminished.

Showers and a few thunderstorms pushed into Iowa overnight and expanded to cover most of the state by daybreak on the 12<sup>th</sup>. Light showers remained in east-central Iowa through the afternoon hours with most stations in the southwestern two-thirds of Iowa reporting at least 0.25 inch with widespread 0.50-1.00 inch readings across swaths of central and southern Iowa; two stations in Council Bluffs (Pottawattamie County) registered 2.19 and 2.70 inches. Winds shifted to an east-southeasterly direction through the early morning hours on the 14<sup>th</sup> as stronger storms with moderate to heavy rainfall moved into southwestern Iowa ahead of an outflow boundary. Rain continued over much of southern Iowa through late morning as a secondary complex of showers propagated over northern Iowa into the afternoon and early evening hours. A warm front

associated with a low pressure center over Minnesota lifted over southwestern Iowa and acted as a focusing mechanism for additional storms into the nighttime hours. More widespread development occurred through the early hours of the 15<sup>th</sup> with showers finally moving out of eastern Iowa by noon. More than half of Iowa's stations observed at least 0.80 inch of rainfall with nearly 155 stations hitting one inch or more. Forty stations in eastern and southern Iowa registered at least 2.00 inches; Truro (Madison County) collected 3.00 inches with an additional 3.48 inches in Council Bluffs. The statewide average for the event was 0.97 inches. A mid-level disturbance behind the exiting system fired isolated storms, some severe warned, across southern Iowa into the evening. Heavier rainfall was reported over counties adjacent to the Mississippi River, from 0.65 inch in Keokuk (Lee County) to 1.47 inches at Bellevue Lock and Dam (Jackson County). Totals into east-central Iowa tapered off to a few tenths. Scattered thundershowers developed in northeast Iowa on the backside of the low pressure feature over the Great Lakes on the 16<sup>th</sup>. A handful of stations reported measurable totals with 0.21 inch in Osage (Mitchell County) to 0.85 inch in Decorah (Winneshiek County).

Winds became variable after midnight on the 20<sup>th</sup> as light rain showers moved along the Iowa-Nebraska border. Showers expanded over northern and central Iowa through much of the day. Event rain totals were generally in the 0.10-to-0.25-inch range for most stations receiving rain. Pockets of southeast, central and northwest Iowa reported totals of more than 0.50 inch; Orange City (Sioux County) registered 0.51 inch while several stations in Lyon County had the highest totals, including a 0.71-inch reading at Larchwood. Cloud cover increased in southwestern Iowa through the nighttime hours with isolated thundershowers in west-central Iowa near sunrise on Saturday (24<sup>th</sup>). A handful of stations received measurable totals with 0.03 inch at Atlantic Municipal Airport (Cass County) and 0.41 inch in Jefferson (Greene County).

A weak cold front dropped southeast through the state on the 27<sup>th</sup>, producing showers over northern Iowa while stronger thunderstorms fired along an outflow boundary in southeastern Iowa through the evening hours. Rainfall totals were highest over southern Iowa with nearly 30 stations collecting at least an inch of rain. Three stations in Burlington (Des Moines County) registered from 2.13 to 2.53 inches. Totals farther north and west were generally under a few tenths of an inch. A small complex of thundershowers formed in the early morning hours of the 28<sup>th</sup> in northeast Iowa, leaving behind 1.55 inches at Lime Springs (Howard County) with lesser totals at a handful of stations. A strong cold front propagated across Iowa on the 29<sup>th</sup> leaving widespread totals of over one inch at more than 230 stations National Weather Service (NWS) and Community Collaborative Rain, Hail and Snow (CoCoRaHS) gauges. Eastern Iowa received the highest totals as the front slowly moved out of the state early on the 30<sup>th</sup>; Marion (Linn County) registered 2.85 inches with a statewide average rainfall of 1.06 inches.

Summer Summary: Temperatures for the three summer months of June, July and August averaged 71.8 degrees, which is 0.4 degree above normal. Precipitation totaled 13.48 inches or 0.08 inch below normal. This ties 1898, 1910, 1966 and 1989 as the 86<sup>th</sup> warmest summer on record. It also ranks as the 52<sup>nd</sup> driest summer in 152 years of records. Summer 2023 was warmer while 2018 was wetter and the 8<sup>th</sup> wettest on record.

US Drought Monitor (USDM): After starting the month with almost no dryness or drought, rainfall deficits have resulted in an increase of Abnormal Dryness (D0) to more than 43% of the state. It is worth noting that D0 is used to indicate abnormally dry areas that could be entering or recovering from drought and is not considered drought. One year ago, over 90% of Iowa was in some form of drought, including about 25 percent of the state in Extreme Drought (D3). According to the Iowa Drought Plan (IDP), all five monitoring regions are drought free, with conditions stabilized. After nearly a year of normal to above normal precipitation, all areas of the state are now in "Normal" condition.

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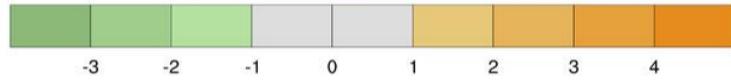
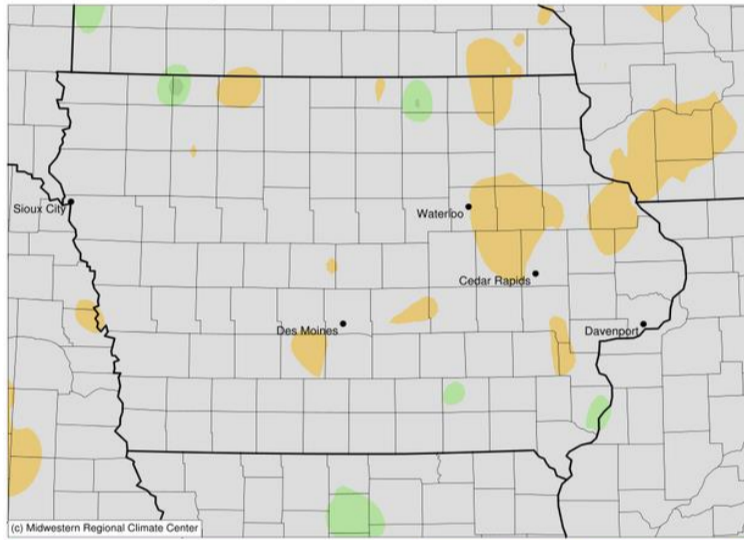
August 2024										
WEATHER BY DISTRICTS										
DISTRICT	TEMPERATURE (F)		COOLING DEGREE DAYS				PRECIPITATION (inches)			
	August 2024 Average Departure*		August 2024 Average Departure*		Since Jan., 1, 2024 Average Departure*		August 2024 Average Departure*		Since Jan.1, 2024 Average Departure*	
Northwest	70.2	+0.2	188	0	688	+22	2.45	-1.25	30.85	+8.00
North Central	69.8	+0.5	177	+6	627	+15	3.34	-0.81	33.56	+7.14
Northeast	70.0	+0.6	183	+10	609	+23	2.71	-1.48	31.60	+3.81
West Central	71.1	0.0	213	-5	767	+19	2.87	-1.38	25.38	+0.60
Central	71.2	+0.2	213	+1	761	+28	2.43	-1.85	29.80	+3.09
East Central	71.8	+0.5	227	+9	798	+62	3.65	-0.49	31.64	+4.54
Southwest	72.4	-0.3	248	-12	889	+24	3.75	-0.42	25.87	-0.39
South Central	72.7	0.0	256	-3	935	+90	3.43	-0.77	28.29	+1.14
Southeast	72.3	-0.5	243	-18	902	+39	2.81	-1.25	31.18	+3.77
STATE	71.2	+0.2	216	+2	768	+39	3.00	-1.13	29.85	+3.65

\* 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**

August 01, 2024 to August 31, 2024



**Accumulated Precipitation (in)**

August 01, 2024 to August 31, 2024

