

## IOWA MONTHLY WEATHER SUMMARY – DECEMBER 2022

General Summary: Temperatures averaged 21.4 degrees or 3.6 degrees below normal, ranking as the 50<sup>th</sup> coldest December on record. Precipitation averaged 1.62 inches or 0.25 inch more than normal, tying 1899 and 1990 as the 34<sup>th</sup> wettest. A colder December occurred in 2013 while a wetter one was last recorded in 2018.

Temperatures: Monthly average temperatures were below normal statewide with the coldest conditions reported across northwestern Iowa, where departures were up to six degrees colder than average. December's statewide average maximum temperature was 29.6 degrees, 3.6 degrees below normal while the average minimum temperature was 13.2 degrees, 3.5 degrees below normal. Donnellson (Lee County) reported the month's high temperature of 67 degrees on the 29<sup>th</sup>, on average 34 degrees above normal. Sibley (Osceola County) reported the month's low temperature of -20 degrees on the 22<sup>nd</sup>, 29 degrees below normal.

Heating Degree Day Totals: Home heating requirements, as estimated by heating degree day totals, averaged 31% more than last December and 8% more than normal. Thus far this heating season, heating degree day totals are running 24% more than last year at this time and 2% more than normal.

Precipitation: For the second month in a row and only the third month of 2022, Iowa saw above-average precipitation with widespread rainfall in early December. Stations across northern, central and south-central Iowa reported positive departures with the wettest conditions across the drought-stricken northwest. Pockets of southwestern and southeastern Iowa experienced the driest conditions with deficits approaching an inch at several stations. Monthly precipitation totals ranged from 0.46 inch at Hastings (Mills County) to 2.93 inches at Primghar (O'Brien County). The statewide average snowfall was 7.8 inches, 0.4 inch below normal.

December 8<sup>th</sup> and 9<sup>th</sup> experienced the first widespread rain and snow event of the month as a low pressure system spun through the Upper Midwest. Measurable snow fell across much of northern Iowa with general totals in the three to six-inch range; Spirit Lake (Dickinson County) reported 7.7 inches. Rain was also reported over much of Iowa with a majority of stations measuring at least 0.25 inch of rain or melted snow; Calamus (Clinton County) measured 1.07 inches of precipitation with a statewide average coming in at 0.41 inch.

Another stretch of wet days occurred from the 12<sup>th</sup> through the 16<sup>th</sup> as multiple weather disturbances pushed through the state. Stations from south-central to northwestern Iowa measured totals over an inch with Allerton (Wayne County) registering 2.37 inches; nearly 140 stations observed at least an inch. Measurable snow was also reported statewide with less than a half of an inch over Iowa's southern one-quarter with two to four inches in northern Iowa.

An Arctic blast brought frigid temperatures and dry, easily lofted snow across Iowa on the 21<sup>st</sup> and 22<sup>nd</sup>. Blizzard conditions were reported throughout the event with falling snow and snow on the ground in the presence of strong northwesterly winds. Snow totals were in the two to four-inch range with pockets of higher totals in north-central and eastern Iowa; Bellevue Lock and Dam (Jackson County) measured 4.0 inches. A fast-moving Alberta Clipper brought snowfall across Iowa on Christmas Day with totals generally under 3.5 inches; the statewide average was 1.5 inches.

US Drought Monitor: As of the first week of December, drought conditions covered 73% of Iowa with D0 (Abnormally Dry) conditions over 19% of Iowa. Drought coverage by category was as follows: D1 (Moderate Drought) – 43%, D2 (Severe Drought) – 18%, D3 (Extreme Drought) – 11% and D4 (Exceptional Drought) – 1%.

Overall drought and dryness in Iowa improved slightly through the month though the drought depiction remained generally status quo. Above-normal precipitation in northwest Iowa led to improvement in conditions with a reduction in the area designated as D3. The current categorical breakdown is: D0 – 23%, D1 – 37%, D2 – 21%, D3 – 8% and D4 – 1%.

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# December 2022

## WEATHER BY DISTRICTS

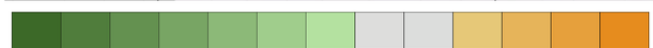
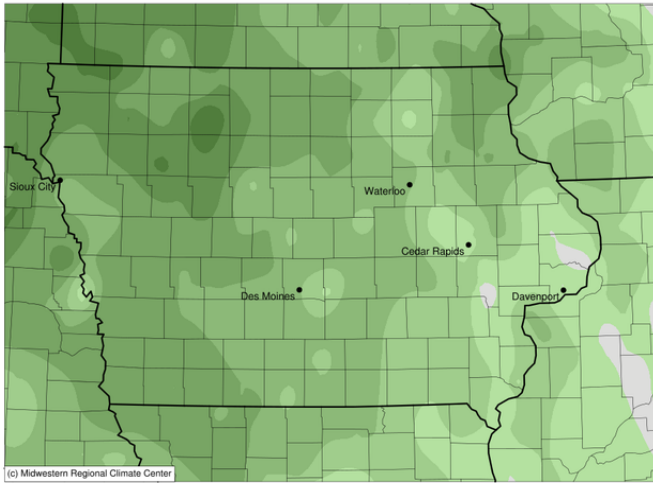
DISTRICT	TEMPERATURE (F)		HEATING DEGREE DAYS				PRECIPITATION (inches)				SNOWFALL Dec 2022 Average
	December 2022 Average Departure		December 2022 Average Departure		Since Jul., 1, 2022 Average Departure		December 2022 Average Departure		Since Jan. 1, 2022 Average Departure		
Northwest	16.8	-5.1	1494	+159	3014	+99	2.18	+1.19	21.03	-9.71	13.1
North Central	18.6	-3.5	1438	+110	2992	+83	1.34	+0.07	27.02	-8.19	15.0
Northeast	20.0	-3.2	1395	+100	2912	+65	1.84	+0.30	33.72	-4.28	10.1
West Central	20.4	-4.3	1383	+134	2783	+101	1.57	+0.41	22.70	-10.44	5.5
Central	21.5	-3.6	1348	+110	2734	+85	1.63	+0.27	28.75	-7.29	8.5
East Central	24.1	-2.0	1268	+62	2597	+31	1.75	+0.05	31.14	-6.42	5.2
Southwest	23.4	-4.0	1290	+124	2581	+119	1.00	-0.30	25.01	-10.48	2.5
South Central	24.5	-3.4	1256	+105	2510	+76	1.78	+0.35	29.32	-7.79	3.6
Southeast	25.7	-2.7	1218	+83	2463	+89	1.30	-0.37	27.41	-10.44	3.0
STATE	21.4	-3.6	1334	+101	2718	+74	1.62	+0.25	27.25	-8.30	7.8

\* 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

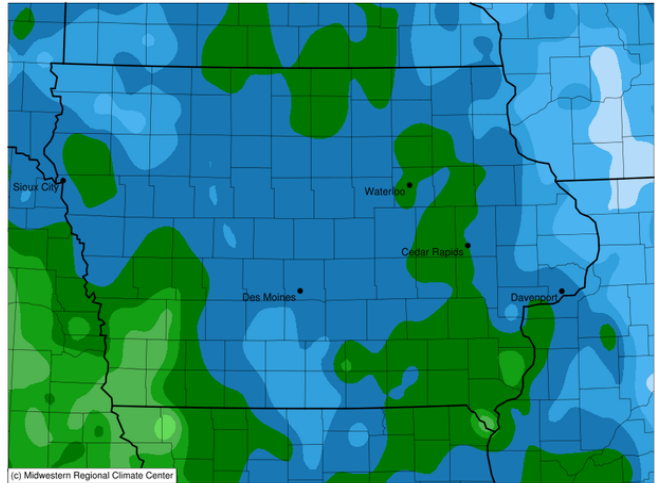
December 01, 2022 to December 31, 2022



Stations from the following networks used: WBAN, COOP, FAA, GHCN, ThreadEx, CoCoRaHS, WMO, ICAO, NWSLI, Midwestern Regional Climate Center  
 ci-MATE: MRCC Application Tools Environment  
 Generated at: 1/10/2023 10:42:56 AM CST

### Accumulated Precipitation (in)

December 01, 2022 to December 31, 2022



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

December 01, 2022 to December 31, 2022

