

## IOWA MONTHLY WEATHER SUMMARY – FEBRUARY 2022

General Summary: Temperatures averaged 21.3 degrees or 2.8 degrees below normal while precipitation totaled 0.27 inch, 0.90 inch below normal. February 2022 ties 1879 as the 65<sup>th</sup> coldest and ties 1987/1996 as the 6<sup>th</sup> driest in 150 years of statewide observational records. A colder February last occurred in 2019 while a drier one occurred in 1970, which was the driest February on record.

Temperatures: Colder than average temperatures blanketed Iowa in February with the coldest conditions found across north-central Iowa; average temperature departures were three to four degrees below normal. Near-average conditions were observed in western Iowa, where a lack of snowpack allowed for warmer conditions; snowpack reflects a certain percentage of incoming sunlight, depending on various factors such as age and optical characteristics.

February's statewide average maximum temperature was 33.2 degrees, 0.1 degree above normal while the average minimum temperature was 9.3 degrees, 5.8 degrees below normal. Sioux City Airport (Woodbury County) reported the month's high temperature of 69 degrees on the 28<sup>th</sup>, 30 degrees above average. Elkader (Clayton County) and Rockwell City (Calhoun County) reported the month's low temperature of -17 degrees on the 4<sup>th</sup>, on average 24 degrees below normal.

Heating Degree Day Totals: Home heating requirements, as estimated by heating degree day totals, were 16% less than last February and 7% more than normal. Thus far this heating season, heating degree day totals are running 6% less than last year at this time and 4% less than normal.

Precipitation: Most of the state's National Weather Service co-op stations reported below-average precipitation in February, which is climatologically the third driest month for Iowa. Precipitation departures were generally around 0.50"; The driest conditions were found across portions of eastern Iowa where deficits approach an inch.

A split flow configuration was present in the storm track for much of February, with an active pattern north and south of Iowa. Given this setup, multiple winter systems clipped the boundaries of Iowa, leaving behind light precipitation totals across minor portions of the state. It wasn't until the last 10 days that two systems brought widespread snowfall, the first of which occurred on the 21<sup>st</sup> and 22<sup>nd</sup>. Snow fell across much of northern Iowa, though totals were generally under two inches; Community Collaborative Rain, Hail and Snow (CoCoRaHS) observers in Swea City (Kossuth County) and Nora Springs (Floyd County) measured two inches and three inches of snow, respectively. Stations across southern Iowa reported a wintery mix along with rainfall ranging from 0.54 inch in Cantril (Van Buren County) to several tenths of an inch at more than 20 stations.

The last and most widespread event occurred on the 24<sup>th</sup> as a relatively fast-moving system brought dry and very fluffy snow across central and eastern Iowa. Three to five-inch totals were measured in a band from Des Moines (Polk County) into Dubuque and Jackson counties in eastern Iowa; Des Moines International Airport reported 5.3 inches with a 6.0 inch totals at Cedar Rapids (Linn County). Much of the rest of the Iowa received totals in the one to two inch range with a statewide average total at 1.9 inches, a majority of the month's total accumulation.

Monthly precipitation (melted snow and sleet plus rain) totals ranged from 0.07” at Audubon Municipal Airport (Audubon County) to 2.60” at Keokuk Lock and Dam (Lee County). Statewide snowfall was well below normal with an average of 2.7”, 4.1” below normal, ranking the month as the 17<sup>th</sup> least snowy February in 135 years of snowfall records with 1998 measuring less snow. Keokuk Lock and Dam measured the highest accumulation of 9.6”.

Winter Summary: Temperatures for the three winter months of December, January and February (DJF) averaged 22.7 degrees or 0.2 degree below normal while precipitation totaled 1.94 inches, 1.57 inches below normal. Winter 2021 ties 1974 as the 69<sup>th</sup> warmest/79<sup>th</sup> coldest winter with a warmer/colder one occurring in 2019/2021. In terms of precipitation, DJF ranks as the 16<sup>th</sup> driest; 2002 was drier. The statewide average snowfall was 12.5 inches, 9.6 inches below normal, making it the 23<sup>rd</sup> least snowy winter in 135 years of records with 2002-2003 experiencing less snow.

Outlooks: March temperature outlooks from the Climate Prediction Center show Equal Chances (EC) of above/below/near-average behavior while elevated chances of wetter than normal conditions for the month. In terms of the meteorological spring months of March-April-May, there is an elevated chance of warmer than average temperatures and EC for precipitation.

A weak La Niña (LN) phase is still present and will impact the larger-scale atmospheric pattern through spring into early summer. A caveat here is that a transition from LN to the neutral phase of the El Niño-Southern Oscillation (ENSO) is somewhat likely with a 56% probability of ENSO-neutral remaining during the May to July 2022 timeframe. LN is the cold phase of ENSO while El Niño (EN) is the warm phase. When LN is present, thunderstorm activity over the Pacific basin occurs farther west and shifts the track of the jet streams that produce weather events over the United States. While we are in a difficult stretch of the season for forecasting what will happen with an ENSO transition, seasonal composites of rainfall behavior into summer show that if LN was present, drier conditions could prevail across portions of the Midwest; hence, we have a better probability of wetter conditions as opposed to the LN phase.

US Drought Monitor: As of the beginning of February, drought conditions remained generally unchanged with Abnormally Dry (D0) to Moderate Drought (D1) conditions covering 55% of Iowa; the largest aerial coverage was that of D1 at 14%. With a dry pattern setting up through the first half of the month, D1 conditions expanded in eastern Iowa by 9%. Precipitation deficits in western Iowa through the end of the month along with shorter-term dryness necessitated a further expansion on D0 and D1 conditions in western Iowa as the month ended. As of March 1, 92% of Iowa has D0-D1 coverage with D0 at 56% and D1 at 36%. [Update with numbers tomorrow]

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# February 2022

## WEATHER BY DISTRICTS

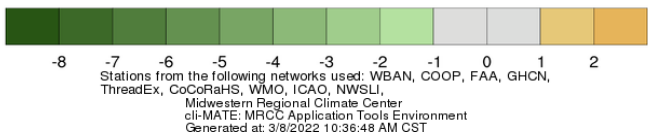
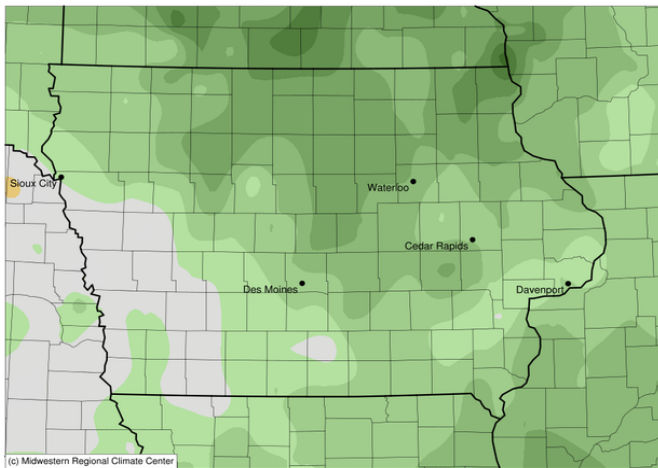
DISTRICT	TEMPERATURE (F)		HEATING DEGREE DAYS				PRECIPITATION (inches)				SNOWFALL Feb 2022
	February 2022		February 2022		Since Jul., 1, 2021		February 2022		Since Jan. 1, 2022		
	Average	Departure*	Average	Departure*	Average	Departure*	Average	Departure*	Average	Departure*	Average
Northwest	18.5	-2.9	1302	+82	5310	-338	0.26	-0.59	0.77	-0.79	1.5
North Central	16.3	-4.5	1364	+125	5521	-161	0.25	-0.79	1.12	-0.81	2.7
Northeast	17.5	-4.0	1330	+113	5431	-139	0.27	-0.96	0.96	-1.40	3.0
West Central	23.0	-1.3	1176	+38	4833	-408	0.11	-0.86	0.65	-1.09	0.9
Central	20.6	-3.5	1243	+97	4988	-234	0.18	-0.94	1.12	-0.92	3.7
East Central	21.9	-2.9	1207	+82	4910	-176	0.37	-1.08	0.97	-1.70	3.1
Southwest	26.3	-1.0	1084	+27	4466	-379	0.20	-0.91	0.94	-1.00	0.7
South Central	25.2	-2.1	1114	+58	4553	-260	0.28	-1.06	1.66	-0.66	2.8
Southeast	24.7	-2.8	1128	+77	4562	-175	0.55	-1.07	1.49	-1.45	3.5
STATE	21.3	-2.8	1226	+84	4977	-229	0.27	-0.90	1.06	-1.08	2.7

\* 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.

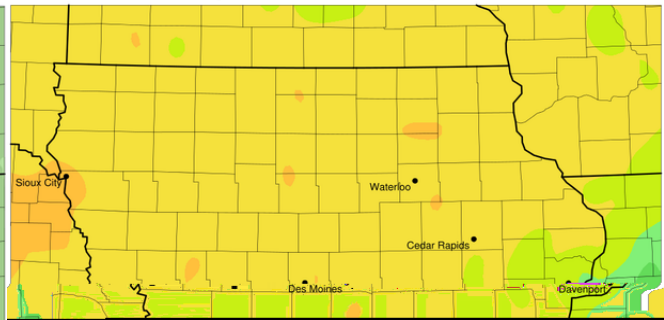
### Average Temperature (°F): Departure from 1991-2020 Normals

February 01, 2022 to February 28, 2022



### Accumulated Precipitation (in)

February 01, 2022 to February 28, 2022



### Accumulated Snowfall (in)

February 01, 2022 to February 28, 2022

