

## IOWA MONTHLY WEATHER SUMMARY – FEBRUARY 2020

General Summary: Temperatures averaged 25.0 degrees or 1.0 degree above normal while precipitation totaled 0.36 inch, 0.69 inch below normal. February 2020 was the 13<sup>th</sup> driest and the 54<sup>th</sup> warmest in 148 years of statewide observational records. A warmer February last occurred in 2017 while a drier one last occurred in 2006.

Temperatures: Average temperature departures varied across Iowa during February. Western Iowa and parts of the southeast quadrant experienced the warmest conditions where positive departures of one to two degrees were reported in the monthly averages. Colder than normal conditions were experienced along the Iowa-Minnesota border though by only a few degrees below the 30-year climatology.

The first six days of the month were unseasonably warm with the average statewide temperature on the 1<sup>st</sup> at 19.4 degrees, 19.9 degrees above average. A cold snap was recorded from the 12<sup>th</sup> through 14<sup>th</sup> where the average daytime temperature was 21.5 degrees, 11.4 degrees below normal. Morning lows on the 14<sup>th</sup> averaged -12 degrees, 26 degrees below normal. Four days of warmer than average temperatures greeted the state from the 21<sup>st</sup> through the 24<sup>th</sup> before a stretch of five days of colder than average conditions. Leap Day ended February on a warm note with daytime highs reaching into the mid-60s across portions of southern Iowa; the average high was 48 degrees, 10 degrees above average.

February's statewide average maximum temperature was 34.1 degrees, 0.3 degrees above normal while the minimum temperature was 14.5 degrees, 0.1 degrees below normal. In terms of monthly temperature extremes, the warmest daytime high of 64 degrees was reported on the 23<sup>rd</sup> at multiple stations in southern Iowa; this reading was on average 24 degrees above normal. Cresco (Howard County) reported the coldest overnight low of -28 degrees on the morning of the 20<sup>th</sup>. This reading was 38 degrees below average.

Heating Degree Days: Home heating requirements, as estimated by heating degree day totals, averaged 19% less than last February and 1% less than normal. Heating degree day totals are running 9% less than last year at this time and 3% less than normal.

Precipitation: In February, almost all of Iowa's reporting stations observed below average precipitation with the largest negative departures of 1.00" to 1.40" across the state's southern quarter. Multiple National Weather Service coop stations reported their driest February on record. There were only a few notable systems that moved through Iowa, the first of which occurred on between the 8<sup>th</sup> and the 9<sup>th</sup>. Snow fell across northern Iowa while rain was reported in southern Iowa. Le Claire Lock and Dam (Scott County) reported 0.40 inch of rain while Cresco 1 NE (Howard County) reported 4.2 inches of snow; the statewide average precipitation was 0.70 inch.

A winter system moved through the state from the 11<sup>th</sup> through the 12<sup>th</sup> leaving behind measurable snow across much of Iowa; the heaviest totals were found across southeastern Iowa where two to four inches were reported from Wayne County northeast to Scott County; the CoCoRaHS station New London 1.5 SW (Henry County) reported 4.1 inches.

For the month, much of Iowa also experienced below normal snowfall with the preliminary average statewide total of 3.3", 3.5" below average. Only sections of the northernmost two tiers of counties reported above average totals. This ties 1984 as the 23<sup>rd</sup> lowest snow total for February, based on 133 years of records; Osage (Mitchell County) reported the highest total of 12.6 inches, double its normal February average. The lowest reported totals were found at multiple stations in southwest Iowa; the readings amounted to a trace of snow. Measurable precipitation generally

fell during the first half of the month with February totals ranging from a trace at multiple sites in the southwest quadrant to 1.14 inches at Dubuque Regional Airport (Dubuque County).

Winter Summary: Iowa temperatures for the three winter months of December, January and February averaged 25.7 degrees or 3.6 degrees above normal while precipitation totaled 2.99 inches, 0.32 inch less than normal. This ranks as the 24<sup>th</sup> warmest and ties 1952 as the 62<sup>nd</sup> driest winter among statewide records. With a preliminary average of 16.9 inches of snowfall, Winter 2019-2020 was the 42<sup>nd</sup> least snowiest in 133 years of records. A drier winter last occurred in 2018 while a warmer one last occurred in 2017.

Outlook: Soil profiles across Iowa's northwestern half are still frozen to a depth of between 11 to 18 inches as of the beginning of March. The southern part of the state has a frost depth less than 11 inches; four-inch soil temperatures are at or above freezing in this region with temperatures ranging into the mid to upper 30s. Soil temperatures across the northern one-third of Iowa are hovering around freezing.

Current Climate Prediction Center (CPC) short-term outlooks show high probabilities of warmer than average temperatures through the middle of the month. The CPC March outlooks favors warmer than normal conditions with an equal chance for above, below or climatologically normal precipitation. There also continues to be an elevated probability of wetter than average conditions moving into spring.

Much of the Midwest remains drought-free with abnormally dry (D0) conditions over southwestern Nebraska and northwest Kansas. Additionally, a small pocket of moderate (D1) and severe (D2) drought can be found in far southwest Kansas. Drought and abnormally dry conditions have not been present in Iowa since the week of September 12<sup>th</sup>, 2019 due to another wet autumn and continuing above average wetness across the state.

Current modeled soil moisture rankings have most of Iowa between the 90<sup>th</sup> and 95<sup>th</sup> percentile; if you consider a sponge, there is anywhere from 5 to 10% of available moisture capacity. Southeast Iowa has drier soils and currently is ranked at the 80<sup>th</sup> percentile. These percentile rankings indicate surplus top and sub-soil moisture moving into the growing season. Existing snowpack is found across a small region across northern Iowa, generally east of Algona and north of Waterloo. The snow water equivalent in is the two to four inch range. Combined with ample sub-surface moisture, infiltration of additional precipitation or melted snow may be impeded and increase surface run-off into streams and rivers. There is also extensive snowpack and near-record sub-soil conditions in the upper basins of the Missouri and Mississippi rivers. Hence, flooding continues to be a concern on both sides of the state.

Justin Glisan, Ph.D.  
State Climatologist of Iowa  
Iowa Dept. of Agriculture & Land Stewardship  
Wallace State Office Bldg.  
Des Moines, IA 50319  
Telephone: (515) 281-8981  
E-mail: Justin.Glisan@IowaAgriculture.gov

# February 2020

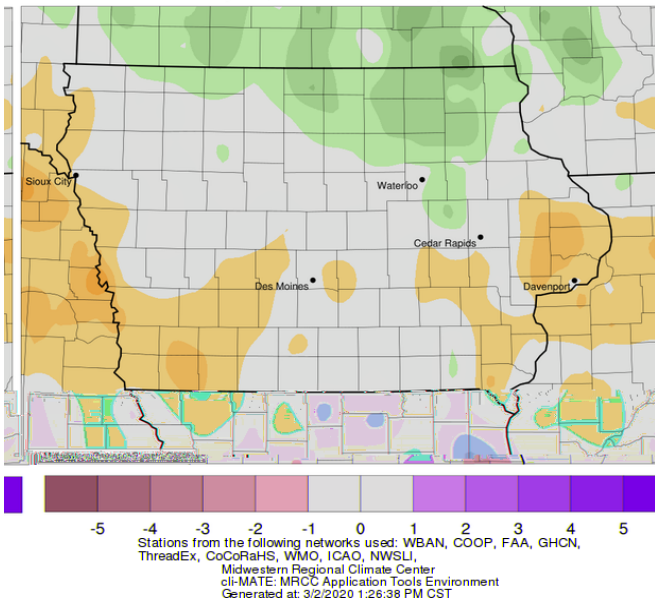
## WEATHER BY DISTRICTS

DISTRICT	TEMPERATURE (F)		HEATING DEGREE DAYS				PRECIPITATION (inches)				SNOWFALL Feb 2020
	February 2020		February 2020		Since Jul., 1, 2019		February 2020		Since Jan. 1, 2020		
	Average	Departure*	Average	Departure*	Average	Departure*	Average	Departure*	Average	Departure*	Average
Northwest	22.1	0.8	1201	-2	5669	-50	0.26	-0.38	1.23	-0.08	3.0
North Central	20.4	0.0	1249	+27	5651	-107	0.58	-0.28	1.76	+0.07	6.8
Northeast	21.3	-0.5	1224	+22	5443	-207	0.70	-0.40	1.94	-0.18	5.3
West Central	26.3	2.4	1084	-40	5111	-192	0.27	-0.55	1.33	-0.27	3.2
Central	24.9	1.1	1123	-11	5121	-167	0.37	-0.65	1.57	-0.37	2.1
East Central	26.2	1.0	1086	-29	4946	-197	0.44	-0.90	2.08	-0.41	2.5
Southwest	29.6	2.7	991	-59	4703	-207	0.07	-0.97	1.15	-0.70	0.4
South Central	28.0	1.4	1036	-13	4733	-136	0.15	-1.09	2.10	-0.03	2.0
Southeast	28.4	0.5	1025	-17	4647	-129	0.30	-1.26	2.43	-0.40	2.9
STATE	25.0	1.0	1116	-14	5100	-170	0.36	-0.69	1.71	-0.26	3.3

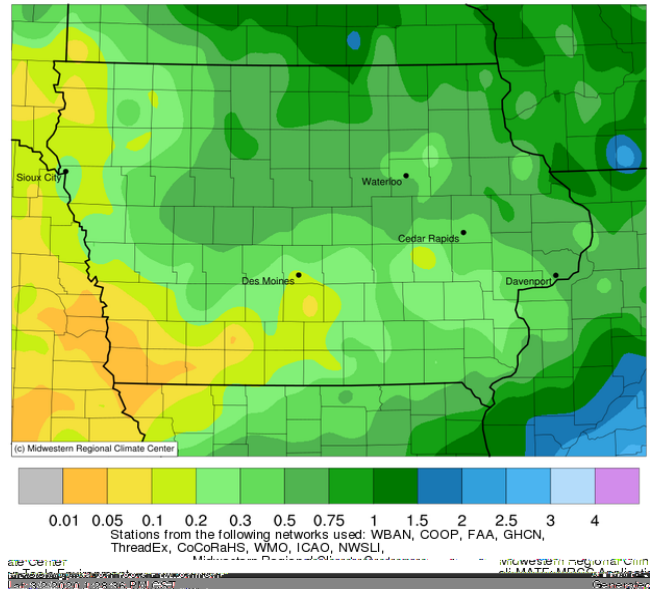
\* Departures are computed from 1981-2010 normals.

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 Normal:**  
February 01, 2020 to February 29, 2020



**Accumulated Precipitation (in)**  
February 01, 2020 to February 29, 2020



**Accumulated Snowfall (in)**  
February 01, 2020 to February 29, 2020

