

## IOWA MONTHLY WEATHER SUMMARY – MAY 2020

General Summary: Temperatures averaged 57.6 degrees or 2.5 degrees below normal while precipitation totaled 4.40 inches or 0.16 inch below normal. May 2020 ties 1929 as the 34<sup>th</sup> coldest; it also ranks as the 91<sup>st</sup> driest May in 148 years of statewide records. A colder May occurred just last year while a drier May last occurred in 2014.

Temperatures: Iowa experienced cooler than normal conditions statewide. Negative temperature departures were reported across the state with locations in eastern Iowa observing up to four degrees below normal. May's statewide average maximum temperature was 67.4 degrees, 4.0 degrees below normal while the average minimum temperature was 47.9 degrees, 0.9 degrees below normal. Battle Creek (Iowa County) and Sioux Center (Sioux County) reported the month's high temperature of 90 degrees on the 1<sup>st</sup>, on average 22 degrees above normal. Elkader (Clayton County) and Stanley (Buchanan County) reported the month's low temperature of 21 degrees on the 9<sup>th</sup>, on average 23 degrees below normal.

Heating Degree Days: Home heating requirements, as estimated by heating degree day totals, averaged 11% less than last May and 17% more than normal. Heating degree day totals are running 9% more than last year at this time and 1% less than normal.

Precipitation: Pockets of above and below average precipitation were reported across Iowa during May. Western Iowa experienced negative departures between 1.00" – 2.00" while other sections of the state reported above average totals of similar magnitude. Monthly precipitation totals ranged from 1.83" at Sioux Center 2.6 N (Sioux County) to 7.55" in St. Ansgar (Mitchell County).

Spotty showers moved through central Iowa during the late morning hours on the 3<sup>rd</sup> with another wave a light to moderate rain pushing into the state on the 4<sup>th</sup> ahead a low pressure system over the Dakotas, leaving measurable rain across much of Iowa. The system spun into southern Minnesota early on the 5<sup>th</sup> and southeast through central Iowa clearing the state's southeast corner close to midnight. Two-day rain totals reported at 7:00 am on the 6<sup>th</sup> were highest in eastern Iowa with multiple stations in Scott County reporting from 0.97 inch to 1.07 inches. Totals into western Iowa were generally between 0.25 inch to 0.50 inch; the statewide average was 0.42 inch. Another low pressure center moved slowly through western Iowa into the evening hours of the 7<sup>th</sup>, bringing moderate rainfall across the region. Rain amounts were generally at or under 0.50 inch in Iowa's southwest corner with lighter amount moving into central Iowa; Clarinda (Page County) observed 0.54 inch while on the eastern periphery of the system, Indianola (Warren County) reported 0.05 inch.

A warm front lifted across southern Iowa overnight into the 14<sup>th</sup> in advance of a strong low pressure center, forcing showers and thunderstorms in southern Iowa. Moderate to heavy rain fell across southeastern Iowa as another complex of thunderstorms slowly moved over the same areas. Two-day rainfall totals at 7:00 am on the 15<sup>th</sup> showed nearly 40 stations reporting over two inches; half of the state's rain gauges observed at least 0.63 inch with a statewide average rainfall of 0.84 inch. Ottumwa

Industrial Airport (Wapello County) reported 4.43 inches, breaking its rainfall record for the date as well as tying its existing May daily record set in 1993.

A broad system of showers and thunderstorms entered western Iowa and propagated through the state during the early evening and overnight hours on the 16<sup>th</sup>. Measurable totals were reported statewide with a concentrated rain band along the low's attendant cold front bringing at least 0.50 inch to much of Iowa's western two-thirds. The heaviest amounts fell across northern Iowa, where the low slowly spun before exiting the state into the morning of the 17<sup>th</sup>; Mason City (Cerro Gordo County) reported 2.25 inches while Ringsted (Emmet County) observed 2.43 inches. The statewide average rain total was 0.86 inch. The low moved slowly as it lacked the large-scale steering flow to move it out of the region. A lingering band of showers left measurable rain totals across northern and eastern Iowa. Kanawha (Hancock County) reported 1.13 inches while Le Claire Lock and Dam (Scott County) reported 1.17 inches. Totals tailed off to a few tenths of an inch in east-central Iowa.

A slow-spinning low pressure system along the Kansas-Nebraska border pushed into Iowa during the late night hours on the 22<sup>nd</sup>, bringing showers and thunderstorms over the next two days. A secondary line of strong thunderstorms pushed into western Iowa overnight into the 24<sup>th</sup>, bringing locally heavy rain. Two-day totals were generally at or above 0.20 inch across much of the state with the highest amounts reported in northwest Iowa; Sioux Rapids (Buena Vista County) reported 1.81 inches with the statewide average of 0.51 inch. The line, with locally heavy rain continued moving through western Iowa into the afternoon hours of the 24<sup>th</sup> before quickly dissipating as it moved into central Iowa. Southerly winds along with warm temperatures allowed instability to build in ahead of another disturbance that pushed into southwestern Iowa during the evening. This system produced a few strong thunderstorms along with a wide area of measurable rainfall. Totals reported at 7:00 am on the 25<sup>th</sup> were highest along a swath from southwestern to north-central Iowa with amounts generally at or above 0.50 inch; nearly 30 stations reported totals above an inch with Oakland (Pottawattamie County) reporting 2.42 inches. The following day was again active as a low pressure center spun into Iowa. Multiple bands of showers and thunderstorms moved through the state leaving the highest rain totals in western Iowa; a majority of stations across Iowa reporting measurable rainfall.

Another line of showers and thunderstorms crept through the state ahead of a sluggish frontal boundary overnight and through the 28<sup>th</sup>. The front finally pushed out of eastern Iowa overnight as cloud cover thinned. Rain totals were highest in the northeast where Guttenberg Lock and Dam (Clayton County) reported 3.80 inches. General totals from 0.25 inch to 1.00 inch were reported from central to eastern Iowa with another pocket of heavy rainfall reported in southeastern Iowa; Brighton (Washington County) observed 2.25 inches.

Severe Weather: Severe weather was reported on five days during the month with four of the five days occurring between May 22<sup>nd</sup> and the 26<sup>th</sup>. There were also preliminary reports of 13 weak tornadoes during May, four of which were rated at EF-1. Climatologically, Iowa expects 12 tornadoes in May. The first severe weather event occurred on the 14<sup>th</sup> as a warm front lifted across southern Iowa overnight in advance of a strong low pressure center. This system forced showers and thunderstorms in southern Iowa. Additional storms, some strong to severe, formed during the evening hours across central Iowa with multiple reports of hail and straight-line winds; a 3.00-inch-sized hail stone was reported in New Virginia (Warren County)

A slow-spinning low pressure system along the Kansas-Nebraska border pushed into Iowa during the late night hours on the 22<sup>nd</sup>, bringing showers and thunderstorms through the 23<sup>rd</sup>. Some thunderstorms turned severe across eastern Iowa shortly after noon. A few weak tornadoes were reported, including one with an EF-1 rating in Morse (Johnson County), which caused some minor structural damage on a farm. Southerly flow brought waves of showers and thunderstorms through the day with isolated severe thunderstorms across central Iowa. Johnston (Polk County) reported a brief EF-1 tornado with an estimated peak wind speed of 95 mph. The 26<sup>th</sup> was another active day as a low pressure center spun into Iowa forcing several severe thunderstorms during the afternoon hours. Three weak tornadoes were observed in Dallas, Guthrie and Wright counties, though no significant damage was reported.

Spring Summary: Temperatures for the three spring months of March, April and May averaged 48.3 degrees, which is equal to the 30-year climatological normal, tying 1914; this ranks as the 81<sup>st</sup> coldest/68<sup>th</sup> warmest. Precipitation totaled 8.72 inches or 1.5 inches below normal. This ranks as the 68<sup>th</sup> driest May in 148 years of records with a drier spring last occurring in 2018.

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# May 2020

## WEATHER BY DISTRICTS

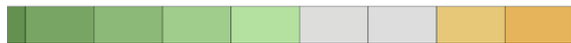
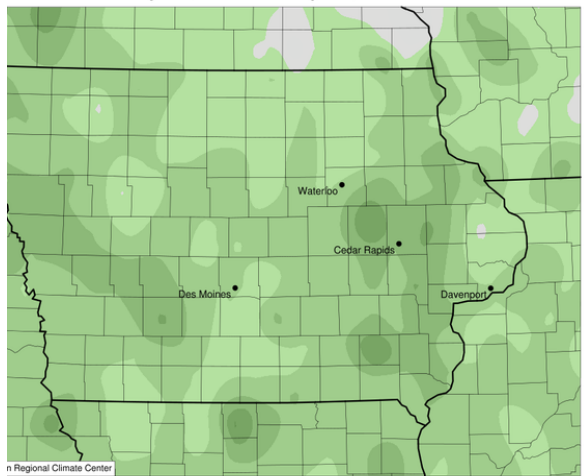
DISTRICT	TEMPERATURE (F)		HEATING DEGREE DAYS				PRECIPITATION (inches)				SNOWFALL
	May 2020		May 2020		Since Jul., 1, 2019		May 2020		Since Jan.1, 2020		May 2020
	Average	Departure*	Average	Departure*	Average	Departure*	Average	Departure*	Average	Departure*	Average
Northwest	56.5	-2.6	292	+54	7407	-31	3.88	+0.16	8.75	-1.38	0.0
North Central	56.9	-1.7	281	+37	7393	-102	4.63	+0.16	10.57	-1.13	0.0
Northeast	56.2	-2.6	295	+45	7239	-133	4.74	+0.36	11.33	-0.85	0.0
West Central	57.8	-2.4	256	+46	6642	-219	3.38	-1.11	8.57	-3.06	0.0
Central	57.8	-2.2	257	+46	6661	-187	4.53	-0.16	10.88	-1.55	0.0
East Central	57.4	-3.3	265	+60	6563	-105	4.52	+0.18	12.14	-0.35	0.0
Southwest	58.9	-2.5	228	+44	6076	-247	4.42	-0.80	9.95	-2.81	0.0
South Central	59.0	-1.6	225	+36	6098	-187	4.76	-0.36	12.05	-1.14	0.0
Southeast	59.0	-3.0	226	+48	6062	-95	5.06	+0.17	12.79	-1.08	0.0
STATE	57.6	-2.5	261	+48	6831	-146	4.40	-0.16	10.70	-1.49	0.0

\* 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.

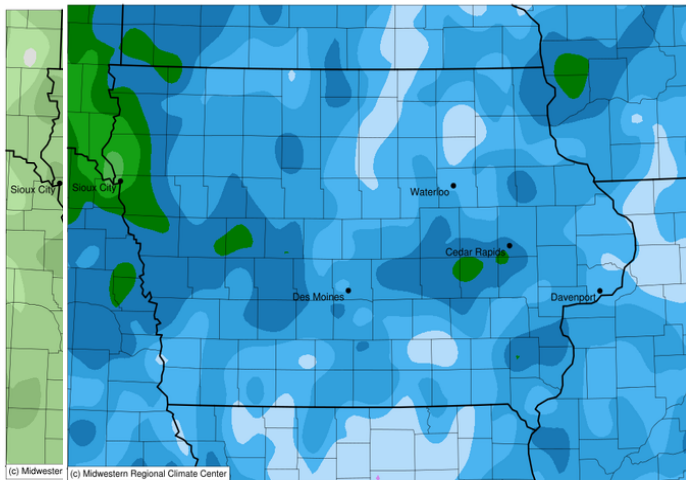
**Average Temperature (°F): Departure from 1981-2010 Normals**

May 01, 2020 to May 31, 2020



**Accumulated Precipitation (in)**

May 01, 2020 to May 31, 2020



Stations from the following networks used: WBAN, COOP, FAA, GHCN, ThreadEx, CoCoRaHS, WMO, ICAO, NWSLI, Midwestern Regional Climate Center, cli-MATE: MRCC Application Tools Environment. Generated at: 6/16/2020 7:15:32 AM CDT