

## IOWA MONTHLY WEATHER SUMMARY – JUNE 2022

General Summary: Temperatures averaged 71.2 degrees or 1.3 degrees above normal while precipitation totaled 3.56 inches or 1.70 inches below normal. June 2022 ties 1874, 1889, 1940, 1984 and 2017 as the 42<sup>nd</sup> warmest; it was also the 40<sup>th</sup> driest June in 150 years of statewide records. A warmer and drier June last occurred just last year.

Temperatures: The month started with near-normal to slightly cooler than average temperatures with widespread rainfall. Around the middle of the month, unseasonably hot temperatures locked into the Midwest and persisted through the end of June.

June's statewide average maximum temperature was 82.7 degrees, 2.1 degrees above normal while the average minimum temperature was 59.7 degrees, 0.5 degree above normal. Little Sioux (Harrison County) reported the month's high temperature of 102 degrees on the 13<sup>th</sup>, 19 degrees above normal. Cherokee (Cherokee County) and Sioux Rapids (Buena Vista County) reported the month's low temperature of 40 degrees on the 2<sup>nd</sup>, on average 15 degrees below normal.

Cooling Degree Days: Home cooling requirements, as estimated by cooling degree day totals, averaged 21% less than last June and 15% more than normal. Cooling degree day totals are running 10% less than last year at this time and 14% more than normal.

Precipitation: While isolated pockets of above-average rainfall were reported in central and eastern Iowa, a majority of the state's observation stations measured below-average totals with departures of up to three inches in northwestern Iowa.

A disturbance approached from the northwest on the 3<sup>rd</sup>, bringing in light to moderate rain over northern Iowa through the evening and overnight hours. Rain totals measured at 7:00 am on the 4<sup>th</sup> were under Sibley's (Osceola County) 0.50 inch and generally in the 0.10 - 0.20-inch range at stations reporting rainfall over much of Iowa's northern two-thirds. Spotty showers persisted through the day, especially in eastern Iowa. Showers continued to skirt northern Iowa through the afternoon of the 5<sup>th</sup> with additional thunderstorms firing across west-central Iowa into the evening hours. A few of the thunderstorms were severe-warned in central Iowa due to scattered reports of one-inch hail in Clive (Polk County) and gusty straight-line winds; sluggish storms training over Dallas, Guthrie and Boone counties produced a flood warning as well as totals over four inches at several stations; two stations near Madrid (Boone County) measured 4.21 and 4.65 inches, respectively. The area of rain expanded across eastern Iowa with scattered showers behind the initial disturbance into the morning of the 6<sup>th</sup>. Only a handful of locations in southeastern Iowa received no rain while many stations across a central west-to-east swath of Iowa reported at least 0.75 inch with a statewide average rainfall of 0.68 inch. Another concentrated line of thunderstorms formed ahead of a cold front later in the morning and dove southeast through central Iowa. Heavy downpours were associated with the line through the afternoon with a gauge in Prole (Warren County) collecting 1.65 inches.

Clouds increased in western Iowa later in the evening on the 7<sup>th</sup> as thunderstorms formed ahead of a strong low pressure center. One cell spawned a tornado near Orient (Adair County) known as a landspout, as it was short-lived and relatively weak. As the rain shield filled in, additional severe thunderstorms produced hail and straight-line wind reports in southwestern Iowa. Moderate rainfall was reported across portions of southern Iowa as the disturbance moved out of the state. Rain totals reported on Wednesday (8<sup>th</sup>) were under 0.40 inch with a pocket of heavier totals near Clarinda (Page County) which measured 2.10 inches. Elma (Howard County) also observed 1.47 inches from a narrow line of thunderstorms that formed in northeastern Iowa just before sunrise. Rain

showers spread across Iowa through the day leaving measurable totals at most of Iowa's stations; amounts were in the 0.25 – 0.50 inch range over much of western Iowa though Ringsted (Emmet County) observed 0.93 inch. Showers persisted in eastern Iowa through the afternoon of the 10<sup>th</sup> with another weather disturbance bringing showers and thunderstorms into northwestern Iowa overnight and early into the 11<sup>th</sup>. Stronger storms fired in the late afternoon hours in southwestern Iowa with some cells turning severe; three-inch hail was reported near Harcourt (Greene County).

A stagnant line of storms also formed in eastern Iowa later in the night with thundershowers remaining in eastern Iowa after sunrise on the 12<sup>th</sup>. Pockets of heavy rainfall from stronger cells were observed in west-central and eastern Iowa with Perry (Dallas County) measuring 1.40 inches and 1.71 inches reported at Anamosa (Jones County). Cloud cover increased as a disturbance approached Iowa from the west, producing a strong cluster of thunderstorms over northwestern Iowa before sunrise on the 13<sup>th</sup>. Five stations in Lyon County measured at least an inch, ranging from 1.26 inches at Larchwood to 2.00 inches in Rock Rapids. A few severe thunderstorms fired in northeastern Iowa later in the morning as a shield of moderate rainfall spread to the Iowa-Wisconsin border. Stations from north-central to eastern Iowa reported 0.25 – 0.75 inch in their gauges with 1.25 inches falling at Cresco (Winneshiek County). On the following day, heat and instability fueled strong to severe thunderstorms from southwest to central Iowa during the late evening hours. Ample atmospheric moisture produced heavy downpours in numerous cells leaving behind a narrow swath of flooded fields and streets across multiple counties. Thirty-five stations reported at least 2.00 inches with nine gauges in Story County measuring more than 3.00 inches; the National Weather Service co-op station in Story City (Story County) observed 4.60 inches. Rain was observed in Iowa's northwestern half with a statewide average rainfall of 0.60 inch. Hail and high wind damage were also reported over Pottawattamie and Cass counties.

Thunderstorms continued to track over northern Iowa early on the 15<sup>th</sup> before dissipating after moving across the Minnesota border. Thunderstorms re-fired in eastern Iowa through the late afternoon and evening hours with multiple severe and tornado-warned cells racing east. Severe straight-line winds occurred from Muscatine (Muscatine County) to Mason City (Floyd County) along with a handful of 2.75-inch hail reports in Buchanan County. The line pushed out of southeastern Iowa just after midnight on Thursday (16<sup>th</sup>) with clearing skies. Rain totals from the previous day were highest across a swath of north-central Iowa where several stations reported over 1.50 inches with 2.03 inches in Dakota City (Humboldt County). Moderate rainfall was also observed in southeastern Iowa with many stations measuring at least 0.50 inch. Isolated thunderstorms popped up in extreme southwestern Iowa just after sunset and skirted the Iowa-Missouri border early into the 17<sup>th</sup>. Totals were generally a few tenths of an inch though a handful of stations in Appanoose and Wayne counties picked up from 1.01 to 1.30 inches.

Ample instability was present in southeastern Iowa to fire strong to severe thunderstorms along the surface boundary later in the evening on the 21<sup>st</sup>. Several stations in south-central Iowa measured at least 0.50 inch of rainfall with Rathbun Dam (Appanoose County) reporting 1.36 inches. Thunderstorms formed in western Iowa later in the night on the 23<sup>rd</sup> and persisted across central Iowa into the morning of the 24<sup>th</sup>. The complex lost some energy as showers moved into eastern Iowa into the afternoon hours. Several stations in Polk and Story counties measured from 1.07 inches to 1.50 inches. A secondary, narrow line popped up in southern Iowa during the evening hours. The main disturbance fired thunderstorms in the northwest and stretched over northern Iowa overnight into the 25<sup>th</sup> leading to flooding in Sioux and O'Brien counties. Heavy rainfall associated with stronger thunderstorms was also reported in eastern Iowa with 44 stations across the state observing at least an inch of rainfall; Iowa City (Johnson County) measured 3.75 inches while the statewide average total was 0.81 inch. An additional line of thunderstorms formed along and ahead of a cold front during the late afternoon hours dropping heavier rainfall in eastern Iowa with Muscatine (Muscatine County) picking up 1.36 inches.

Monthly precipitation totals ranged from 0.59” at Cherokee (Cherokee County) to 10.11” at a Community Collaborative Rain, Hail and Snow (CoCoRaHS) network gauge in Independence (Buchanan County). On the 28<sup>th</sup>, a passing cold front fired a few isolated severe thunderstorms in advance of the boundary, producing heavy rain and a handful of half-dollar-sized hail near Kendallville (Winneshiek County). A narrow band of moderate rain also fell across Allamakee, Clayton and Dubuque counties.

US Drought Monitor (USDM):

The improvement of conditions seen over late spring reversed in June, as the US Drought Monitor indicated worsening conditions. June started with only a small area of D2 (Severe Drought) in northwest Iowa, and more than 70 percent of Iowa free from dryness and drought. By the end of June, however, half of Iowa was experiencing some form of dryness or drought, with an expanding area of D3 (Extreme Drought) in Woodbury, Plymouth, and Cherokee counties in northwest Iowa. D2 conditions extended as far east as central Palo Alto County and cover another five percent of Iowa. Pockets of D0 Abnormally Dry conditions are shown in southwest and southeast Iowa and cover more than one-third of the state.

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# June 2022

## WEATHER BY DISTRICTS

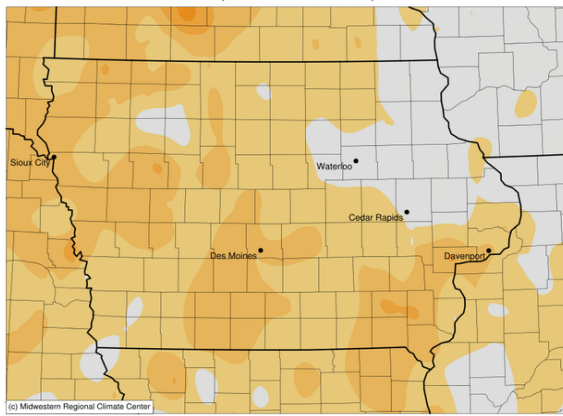
DISTRICT	TEMPERATURE (F)		COOLING DEGREE DAYS				PRECIPITATION (inches)			
	June 2022		June 2022		Since Jan., 1, 2022		June 2022		Since Jan. 1, 2022	
	Average	Departure*	Average	Departure*	Average	Departure*	Average	Departure*	Average	Departure*
Northwest	70.8	+1.6	200	-16	253	+30	2.36	-2.48	10.19	-5.38
North Central	70.0	+1.2	181	-14	232	+24	4.00	-1.42	14.31	-3.61
Northeast	68.9	+0.7	154	-10	201	+14	3.96	-1.95	15.46	-3.47
West Central	71.7	+1.5	220	-14	284	+34	2.85	-2.11	12.36	-4.32
Central	71.6	+1.5	218	-13	286	+39	4.48	-0.94	16.16	-2.06
East Central	71.2	+1.0	204	-9	286	+40	4.84	-0.52	15.62	-3.02
Southwest	72.2	+1.0	233	-8	309	+21	2.92	-2.28	14.50	-3.41
South Central	72.5	+1.6	239	-11	318	+46	3.56	-1.56	15.26	-3.40
Southeast	72.8	+1.6	246	-9	340	+52	2.96	-2.17	14.09	-5.14
STATE	71.2	+1.3	208	-12	277	+34	3.56	-1.70	14.15	-3.75

\* 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**

June 01, 2022 to June 30, 2022



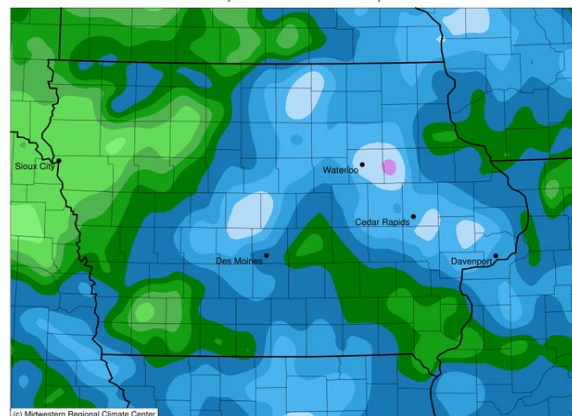
(c) Midwestern Regional Climate Center



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  
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**Accumulated Precipitation (in)**

June 01, 2022 to June 30, 2022



(c) Midwestern Regional Climate Center



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