

IOWA MONTHLY WEATHER SUMMARY – JULY 2025

General Summary: Temperatures averaged 75.4 degrees or 2.0 degrees above normal while precipitation totaled 9.20 inches or 5.03 inches above normal. July 2025 ties 1897 as the 46th warmest and ranks as the 2nd wettest July in 153 years of statewide records. A warmer July occurred in 2012, while 1993 was wetter and the wettest on record.

Temperatures: Statewide average temperatures in July were near-normal in pockets of north-central, and western Iowa; the warmest conditions were found in eastern Iowa, where departures approached four degrees above normal. Carroll reported the month's high temperature of 99 degrees on the 29th, 15 degrees above normal. Fayette (Fayette County) reported the month's low temperature of 50 degrees on the 18th, 10 degrees below normal.

Cooling Degree Days: Home cooling requirements, as estimated by cooling degree day totals, were 35% more than last July and 17% more than normal. Cooling degree day totals since January are running 11% more than last year at this time and 19% more than normal.

Precipitation: A majority of the state's National Weather Service co-op and Community Collaborative Rain, Hail and Snow (CoCoRaHS) stations reported above-average rainfall with widespread positive departures in the four-to-eight-inch range. Stations in central to eastern Iowa registered 300-400 percent of normal through July. Monthly precipitation totals ranged from 2.40 inches in Lansing (Allamakee County) to 16.55 inches in Winthrop (Buchanan County).

Isolated thunderstorms developed in northeastern Iowa as the sun set on the 2nd, with two cells receiving severe warnings for hail and gusty winds. A few more cells moved into northwestern Iowa several hours later but dissipated in the early morning. Rain totals covering the previous 24 hours were more prevalent in the northeast and southwest, with 0.38 inch in Lime Springs (Howard County) and between 0.45 and 0.60 inches in Council Bluffs (Pottawattamie County). Instability in eastern Iowa helped thunderstorms bubble into the late evening hours of the 3rd, some of which produced localized tree and outbuilding damage in Grundy and Jones counties. Stations from east-central to northeast Iowa reported a few tenths of an inch, though several stations measured totals nearing an inch; Garwin (Tama County) had 0.65 inch, while Independence (Buchanan County) reported 0.86 inch. Cloud cover gradually increased over western Iowa into the 5th as a cold front pushed east through the state. Several waves crossed central to eastern Iowa as the day progressed, leading to pockets of higher-end rain totals, particularly from south-central to north-central Iowa. Event totals reached or exceeded one inch at more than 200 stations, with over 40 stations receiving more than double that amount. The highest totals were found in east-central to north-central Iowa; Fort Dodge (Webster County) registered 4.76 inches, Pella (Marion County) reported 5.19 inches, and the statewide average was 1.15 inches. Winds shifted to the north behind the front as clouds cleared from west to east.

Daytime temperatures were in the low to mid-80s, with winds shifting to the south in advance of a squall line racing through South Dakota toward Iowa's northwest counties on the 7th. Showers and thunderstorms commenced by mid-evening and sped across western Iowa, with multiple severe-

warned cells that produced scattered reports of strong straight-line winds. Much of western Iowa reported at least 0.50 inch, with a pocket of 2.00- to 3.00-inch totals in central Iowa; Adel (Dallas County) observed 2.09 inches, while the Des Moines (Polk County) metro area received 3.12 inches. The complex mostly dissipated by sunrise on the 8th, with a few additional thunderstorms developing in east-central Iowa. Several isolated thunderstorms also developed in eastern Iowa, while a stray storm in northwestern Iowa produced 0.45 inch in Milford (Dickinson County). The storms over eastern Iowa brought heavier totals and localized flash flood warnings; two stations in Scott County, Park View and Long Grove, reported 1.69 inches and 2.31 inches, respectively. Wind directions varied across the state on the 9th as a stationary front positioned itself from northwest to southeast across Iowa. This boundary created a path for a second disturbance to interact with, as a line of thunderstorms crossed into Iowa after midnight on the 10th and raced in a north-south orientation across the state. Moderate to locally heavy rainfall was reported before the line dissipated farther east. Daytime instability increased as discrete thunderstorms quickly developed, with a few cells becoming tornado-warned by late afternoon and into the evening; a brief tornado was observed near Canton (Jackson County). A separate grouping of storms propagated into western Iowa as the eastern batch was moving out of the state. Embedded severe thunderstorms sped into central Iowa, with a 74-mph wind gust reported at Des Moines International Airport. Behind the complex, a broad swath of 0.50- to 1.50-inch accumulations was reported as the line dissipated and moved east; eastern stations registered the highest totals, with 3.50 inches in Charlotte (Clinton County). The 11th was another active day as a warm front across southern Iowa became a focusing mechanism for sluggish supercells. Morning convection started over northern Iowa before storms fired south and east. Several waves of storms were severe and tornado-warned, producing extremely heavy rain from central into eastern Iowa. Two tornadoes were confirmed: one near Clarinda (Page County) and the other in Scott County, where a rare Flash Flood Emergency was issued by the National Weather Service. Numerous high wind reports were noted, including an 85-mph gust in Cascade (Jones County). Nearly 130 stations collected an inch or more, with two gauges in Davenport (Scott County) recording 2.95 inches and 3.21 inches, respectively.

Clouds increased over northwestern Iowa toward midnight on the 15th as thunderstorms fired along a cold front in eastern South Dakota. The line pushed across Iowa overnight into the 16th, weakening from central to eastern Iowa by daybreak. Much of western Iowa observed rainfall totals of at least 0.50 inch, while most stations on the eastern periphery received only a few tenths of an inch. Locations in northwestern Iowa registered the highest totals, with 1.11 inches in Westfield (Plymouth County) and 2.15 inches in Spencer (Clay County). Clouds redeveloped across northern Iowa after midnight on the 19th as an east-west-oriented squall line sped southeast through the state. The line's core thunderstorms became severe toward sunrise, with a weak tornado reported near Gilbert (Story County). The cell then produced several reports of strong straight-line winds, including a 71-mph gust a few miles southeast of the tornadic circulation. Several stations from north-central to eastern Iowa observed at least two inches of rain, with 2.07 inches in Eagle Grove (Wright County) and 3.25 inches at Mount Auburn (Benton County). Nearly 100 stations farther south and east of the highest totals collected an inch or more, with a statewide average of 0.61 inch. Showers and thunderstorms continued along the front through the overnight hours into the 20th. A concentrated line of heavier thunderstorms stretched from west-central Iowa southeastward, with an expanded shield of moderate rainfall to the north and south. Numerous flash flood warnings were issued due to high-intensity rainfall atop already saturated soils. Central to south-central Iowa saw the most significant totals, with several stations accumulating nearly a month's worth of rainfall; nearly 70 stations

reported at least two inches, with 4.10 inches in Allerton (Wayne County) and 4.49 inches in Osceola (Clarke County). The statewide average was 1.08 inches. Showers dissipated across eastern Iowa by noon, with isolated thunderstorms firing in central Iowa during the evening hours.

Temperatures quickly warmed into the mid- to upper 80s across western and central Iowa as the remnants of a mesoscale convective vortex moved northeast from Kansas through the daytime hours on the 22nd. The disturbance acted as a forcing mechanism for isolated severe thunderstorms to fire toward evening. The complex of storms moved from central Iowa and re-intensified a few hours later in northeast Iowa, where heavy rain and stronger winds were observed. Thirty northeastern stations registered at least an inch. A narrow swath of significant rainfall was found from Oelwein (Fayette County) to Strawberry Point (Clayton County), where totals of 2.03 inches and 4.90 inches were reported, respectively. The 23rd dawned unseasonably warm, with mostly clear skies and muggy, stagnant air. Southerly flow enhanced moisture advection into the state, with dew points climbing into the upper 70s and low 80s, while air temperatures reached the upper 80s. These were ideal conditions to support a squall line and a widespread shield of rainfall that crossed Iowa from northwest to southeast during the afternoon hours into the morning of the 24th. The line was strongest over west-central Iowa, where an 82-mph wind gust was observed in Coon Rapids (Carroll County). The heaviest rainfall was recorded in north-central and extreme southwest Iowa, with totals ranging from 2.50 to 5.00 inches, including 2.50 inches in Fort Dodge and 5.00 inches in Grafton (Worth County). Shenandoah (Page County) collected 1.81 inches, while Fort Madison (Lee County) observed 2.40 inches as the system persisted for several hours. Overall, nearly 120 stations reported at least an inch, with a statewide average of 0.78 inch.

Spotty showers moved into southern Iowa during the afternoon of the 25th and continued through the overnight hours, becoming sluggish with moderate to heavy rainfall in southeastern Iowa. The complex of showers exited the state by noon on the 26th, leaving behind significant totals amounting to nearly a month's worth of rainfall at several stations. Six stations in Muscatine and Van Buren counties observed 4.95 to 5.38 inches, while nearly 50 stations recorded at least two inches. Clouds increased in northern Iowa after midnight on the 27th as a line of strong thunderstorms pushed south through the state. Numerous reports of strong straight-line winds were noted over northern Iowa as the line advanced before dissipating after sunrise on the 28th in southern Iowa. Many northern stations registered totals in the 0.50- to 1.50-inch range, with amounts tapering off farther south. Eastern Iowa locations reported the highest amounts, from 2.10 inches in Waucoma (Fayette County) to 2.48 inches in Asbury (Dubuque County). Later in the evening, severe thunderstorms in South Dakota coalesced into a bow echo that rapidly propagated through northern Iowa. Two spin-up tornadoes were observed near Alvord (Lyon County), producing a swath of damage to corn and soybean fields. As the complex—later classified as a “derecho” by the Storm Prediction Center—moved into north-central Iowa, it dove southeast and sped across eastern Iowa. Numerous reports of significant wind gusts were logged along its path, including 99 mph at Sioux Center (Sioux County), 92 mph at both Orange City (Sioux County) and Spencer, and 83 mph in Cedar Rapids (Linn County). Rain totals reported at 7:00 a.m. on the 29th ranged between 0.75 and 1.00 inches along the axis of movement, with 1.56 inches in Osage (Mitchell County) and 1.99 inches in Sigourney (Keokuk County). The existing surface boundary served as a forcing mechanism for an initial line of storms in west-central Iowa through the evening hours. A broader line of thunderstorms developed along a cold front as it crashed into the warm and humid air mass over Iowa. A widening shield of moderate to heavy rain continued into the morning of the 30th, with more than 220 stations reporting at least 1.00 inch and more than 50

registering totals above 2.00 inches. A swath of stations from Polk City (Polk County) to Jefferson (Greene County) collected totals from 3.08 to 3.62 inches, respectively, with a statewide average of 1.18 inches.

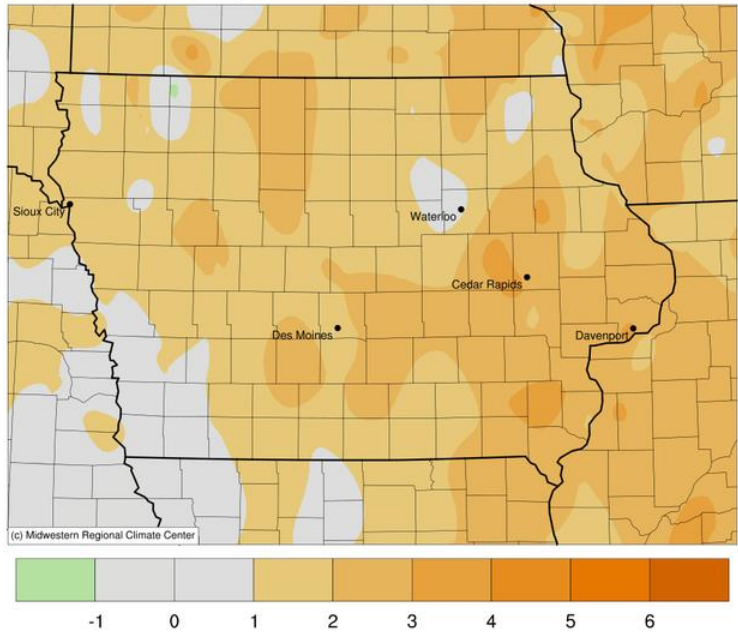
US Drought Monitor (USDM): As of July 1st, nearly 5% of Iowa was classified in Moderate Drought (D1) with 38% of the state in Abnormal Dryness (D0). After an exceedingly wet month, all D1 was removed as on the USDM map released on August 5th with only a small portion of southwest Iowa in D0. According to the Iowa Drought Plan (IDP) trigger tables updated on August 7th, all Drought Regions are classified as “Normal.”

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July 2025										
WEATHER BY DISTRICTS										
DISTRICT	TEMPERATURE (F)		COOLING DEGREE DAYS				PRECIPITATION (inches)			
	July 2025		July 2025		Since Jan., 1, 2025		July 2025		Since Jan.1, 2025	
	Average	Departure*	Average	Departure*	Average	Departure*	Average	Departure*	Average	Departure*
Northwest	75.1	+2.4	288	+33	551	+73	8.88	+5.30	22.49	+3.34
North Central	73.2	+1.3	264	+31	510	+70	9.87	+5.52	27.88	+5.60
Northeast	73.7	+2.0	269	+42	505	+90	9.10	+4.42	25.08	+1.47
West Central	75.2	+1.6	314	+34	609	+80	8.78	+4.93	23.76	+3.24
Central	75.8	+2.4	316	+43	624	+103	11.33	+7.11	28.53	+6.10
East Central	76.3	+2.8	338	+66	641	+123	8.46	+4.14	22.55	-0.41
Southwest	76.3	+1.4	339	+22	651	+46	5.59	+1.40	18.48	-3.62
South Central	76.2	+1.4	355	+40	677	+90	8.10	+3.80	23.00	+0.05
Southeast	77.3	+2.4	363	+48	683	+81	10.11	+5.99	24.13	+0.78
STATE	75.4	+2.0	318	+46	612	+97	9.20	+5.03	24.38	+2.30
* 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.										

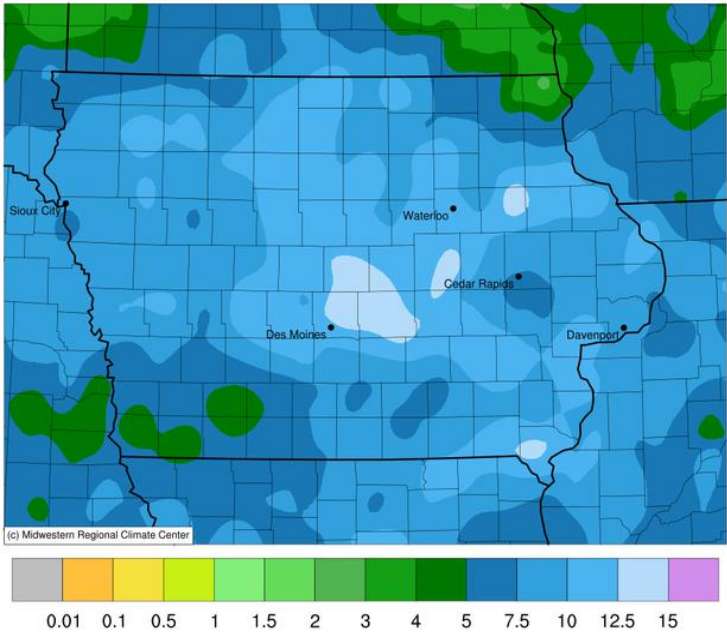
Average Temperature (°F): Departure from 1991-2020 Normals

July 01, 2025 to July 31, 2025



Accumulated Precipitation (in)

July 01, 2025 to July 31, 2025



Accumulated Precipitation (in): Departure from 1991-2020 Normals

July 01, 2025 to July 31, 2025

