



IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

Mike Naig, Secretary of Agriculture
www.IowaAgriculture.gov

Henry A. Wallace Building
502 E. 9th Street, Des Moines, IA 50319

IOWA MONTHLY WEATHER SUMMARY – SEPTEMBER 2018

General Summary: Iowa temperatures averaged 66.2°, 3.0° above normal, while precipitation totaled 7.89 inches or 4.51 inches above normal. This ranks as the 22nd warmest September, tying 1921 and 1990. This was the 3rd wettest September among the observational record. September 2017 was slightly warmer, while a wetter September was last recorded in 1965.

Temperatures: September had periods of above and below average temperatures, but overall the month was unseasonably warm. There were three periods of extended warmth from September 1st – 5th, September 12th – 21st, and September 24th and 25th; a total of 17 days. Of particular note was the time period from September 14th - 21st, where average daytime highs hovered in the mid-80s to lower 90s, up to 16 degrees above normal. The month's highest temperature was 96 degrees in Williamsburg (Iowa County) on September 17th. This reading was 21 degrees warmer than expected. There were also three periods of below average temperatures: September 7th – 10th, September 22nd – 23rd, and September 26th – 30th. September 25th – 30th was the coolest stretch of the month. Average highs on the 29th and 30th were well below average with Sanborn (O'Brien County) and Sibley (Osceola County) recording September's coolest daytime high temperature of 46 degrees on the 29th, around 21 degrees below average. Cresco, Fayette, and Stanley observed an overnight low of 30 degrees on the 29th, the coldest reading of the month.

Cooling Degree Day Totals: Home air conditioning requirements, as estimated by cooling degree day totals, averaged 20% more than last September and 66% more than normal. Thus far this air conditioning season, cooling degree day totals are running 25% more than last year at this time and 27% more than normal.

Precipitation: September was an extremely wet month for Iowa, especially the northeastern part of the state. Many stations reported rainfall accumulations 8 – 10 inches above average. Nashua (Floyd County) reported the month's highest accumulation of 14.58 inches, 11.16 inches above average. A station near Council Bluffs (Pottawattamie County) recorded 3.86 inches, which is 0.22 inches above average. Waterloo Airport (Black Hawk County) recorded 13.35 inches of rain, its highest one-month rainfall on record. The drought region in southern Iowa benefited from above-average rainfall. Bloomfield (Davis County) reported 5.77 inches of rain, 1.76 inches above climatology. Centerville (Appanoose County) observed 6.55 inches, 2.74 inches above normal. Notable precipitation events occurred September 5th - 6th as a cold front moved across Iowa. Flash flood warnings were issued as slow-moving storms lingered over central and eastern Iowa. Two-day rainfall totals averaged above one inch across 75 counties; Montezuma (Poweshiek County) reported 5.20 inches. The week of September 10th was abnormally dry as no National Weather Service Coop stations recorded measurable rainfall. Thunderstorms with heavy rain returned to the northern third of Iowa September 19th - 20th, leading to widespread flood warnings. Two-day rain totals were 2.00 to 5.19 inches above average for over 30 stations; Everly (Clay County) reported 5.51 inches. The final week of September had above normal accumulations across central and northeastern Iowa. Accumulations ranged from 1 – 2 inches above average. Toledo (Tama County) reported the week's highest accumulation of 2.18 inches.



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Severe Weather: Severe weather was reported on eight days during the month with the most widespread event occurring on September 20th; thirteen counties observed tree and minor structural damage from severe straight-line winds ahead of a strong cold front. Gruver (Emmet County) reported wind gusts up to 75 mph. Tornado activity also occurred on four days with September 3rd having the strongest tornadoes. Two EF-1 tornadoes with winds between 100 and 110 mph were reported near Cedar Rapids. Minor structural damage, uprooted trees, and blown over crops were observed. Vinton (Benton County) also reported two EF-0 tornadoes with winds in excess of 80 mph. On September 4th, a weak tornado touched down near Algona (Kossuth County). On September 20th, a brief EF-1 tornado was reported in Dickinson County in northern Iowa and Jackson County in eastern Iowa. Both tornadoes produced wind speeds near 100 mph. On September 25th, a short-lived EF-1 tornado was reported in Alburnett (Linn County). Two weaker tornadoes were also reported in Cedar and Henry counties. Snapped trees, crop damage, and minor structural damage were reported. The remaining days in which severe weather was reported were September 1st, 17th, 18th, and 19th; large hail and severe straight-line winds were reported across more than 10 counties.

Drought: Drought conditions improved significantly throughout September. Extreme drought (D3), which covered Davis County, much of Appanoose County, and parts of surrounding counties, was completely removed. As of early October, the D2 category covered less than 1% of southern Iowa. Abnormally dry (D0) conditions covered around 4% of Iowa; combined D0 – D3 conditions covered around 31% of Iowa. At this time last year, D0 – D3 drought covered a little over 57% of the state. From this time last month, the area of severe to extreme drought has decreased by 8.80%, with abnormally dry conditions decreasing by around 24%.

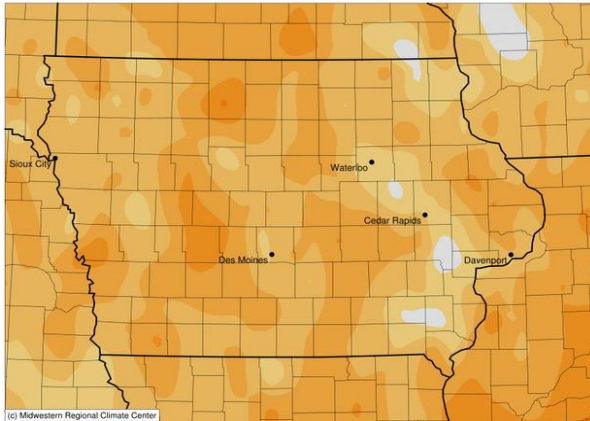
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| September 2018 | | | | | | | | | | |
|----------------------|-----------------|------------|---------------------|------------|---------------------|------------|------------------------|------------|-------------------|------------|
| WEATHER BY DISTRICTS | | | | | | | | | | |
| DISTRICT | TEMPERATURE (F) | | COOLING DEGREE DAYS | | | | PRECIPITATION (inches) | | | |
| | September 2018 | | September 2018 | | Since Jan., 1, 2018 | | September 2018 | | Since Jan.1, 2018 | |
| | Average | Departure* | Average | Departure* | Average | Departure* | Average | Departure* | Average | Departure* |
| Northwest | 65.0 | +3.2 | 92 | +39 | 894 | +176 | 7.51 | +4.28 | 37.68 | +11.96 |
| North Central | 64.8 | +3.5 | 82 | +37 | 836 | +172 | 9.39 | +6.20 | 42.10 | +13.27 |
| Northeast | 64.4 | +2.5 | 73 | +32 | 807 | +182 | 11.34 | +7.99 | 44.37 | +14.46 |
| West Central | 66.6 | +3.5 | 117 | +47 | 997 | +175 | 5.28 | +2.12 | 33.82 | +5.98 |
| Central | 66.4 | +3.3 | 109 | +43 | 1031 | +230 | 8.78 | +5.46 | 38.29 | +8.02 |
| East Central | 66.6 | +2.8 | 105 | +44 | 1010 | +214 | 8.06 | +4.74 | 36.11 | +6.48 |
| Southwest | 67.9 | +3.1 | 141 | +50 | 1173 | +221 | 7.05 | +3.64 | 32.49 | +2.65 |
| South Central | 67.5 | +3.3 | 131 | +44 | 1222 | +292 | 6.99 | +3.17 | 29.28 | -1.94 |
| Southeast | 67.5 | +2.1 | 125 | +39 | 1177 | +218 | 6.15 | +2.37 | 29.45 | -1.75 |
| STATE | 66.2 | +3.0 | 106 | +42 | 1006 | +211 | 7.89 | +4.51 | 36.32 | +7.04 |

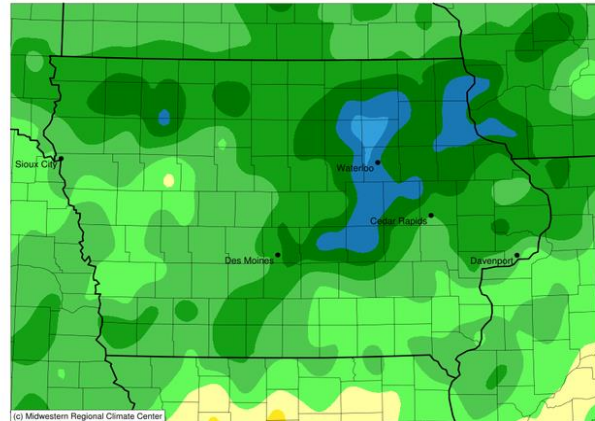
* Departures are computed from 1981-2010 normals.

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 Accumulated Precipitation (in): Departure from 1981-2010 Normals
 September 01, 2018 to September 30, 2018



(c) Midwestern Regional Climate Center
 -1 0 1 2 3 4 5 6 7 8
 Stations from the following networks used: WBAN, COOP, FAA, GHCN, ThreadEx, CoCoRaHS, WMO, ICAO, NWSLI, Midwestern Regional Climate Center
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(c) Midwestern Regional Climate Center
 -2 0 2 4 6 8 10
 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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