

## IOWA MONTHLY WEATHER SUMMARY – APRIL 2019

General Summary: Iowa temperatures averaged 49.2 degrees or 0.3 degrees above normal while precipitation totaled 3.03 inches or 0.48 inches below average. This ties 1988 and 2000 as the 72<sup>nd</sup> warmest April in 147 years of observational records. April 2019 was also the 77<sup>th</sup> driest. A warmer April last occurred in 2017 while 2018 was drier.

Temperatures: Temperatures across the state were generally near average for the month with southern Iowa trending about a degree above average. Eastern Iowa also had some locations slightly below average. The monthly behavior can be explained by multiple periods of unseasonable warmth and coolness divided by transition days. These multi-day temperature swings effectively averaged out. April 4<sup>th</sup> – 9<sup>th</sup> saw the longest stretch of warmer than average conditions with temperatures averaging 5 – 10 degrees above normal. A strong low pressure system moved across northern Missouri on April 10<sup>th</sup> ushering in colder than normal conditions through April 14<sup>th</sup>, the longest period of unseasonable coldness. Average temperatures were coldest across northern Iowa by up to 12 degrees. April 11<sup>th</sup> was the coldest day of the month with average highs 17 degrees below normal. The middle of the month saw short see-saw type periods where temperatures fluctuated above and below average. April 21<sup>st</sup> was the month's warmest day with highs in the low to mid 80s statewide, 16 degrees above average. The month ended with five consecutive days of unseasonable coolness. The month's high temperature of 87 degrees was reported on the 21<sup>st</sup> in Clarinda (Page County), Lamoni (Decatur County) and Red Oak (Montgomery County). These readings were on average 22 degrees above normal. Denison (Crawford County) and Little Sioux (Harrison County) reported a low of 16 degrees on the 1<sup>st</sup>, 15 degrees below average.

Heating Degree Days: Monthly home heating requirements, as estimated by heating degree day totals, averaged 1% more than normal. Heating degree day totals so far this season (since July 1st, 2018) are running 2% more than last season at this time and 63% less compared to last April, which was the coldest April on record.

Precipitation: The distribution of precipitation across Iowa varied from unseasonably wet conditions in northwestern and eastern Iowa, to very dry conditions across the southwestern quadrant; the driest parts of Iowa are located along a southwest to northeast line from Fremont County to Madison and Guthrie counties with deficits at or above 2.50 inches. Locations across eastern Iowa, especially Cedar and Muscatine counties, saw above average totals between 2.00 to 2.50 inches. During April, Iowa experienced an active weather pattern that brought measurable precipitation over several days. Notable events include the first week of the month where much of Iowa experienced measurable rainfall from multiple frontal passages. Rainfall totals through 7:00 am on Thursday (4<sup>th</sup>) were above one inch at eight stations in northwest Iowa; Storm Lake (Buena Vista County) reported 1.73 inches. A low pressure system moved through Iowa on Saturday night into Sunday (7<sup>th</sup>). Dubuque (Dubuque County) reported 0.75 inches of rain. On Tuesday (9<sup>th</sup>) rain showers formed across a northwest to southeast swath of Iowa. Over 40 stations reported totals between 0.50 – 1.00 inches; Marshalltown (Marshall County) observed 1.04 inches. Wednesday (10<sup>th</sup>) began a stretch of active weather statewide. As the day progressed, a strong Colorado low pressure moved towards Iowa bringing very windy conditions to the region. Much of Iowa's northern

three-quarters received measurable rainfall; two-day totals were highest in northwest Iowa with many stations reporting between 1.00 to 1.50 inches. A low pressure center spun through Iowa on Monday (22<sup>nd</sup>), leaving rainfall totals in the range of 0.20 – 0.60 inches across northern Iowa; a few stations reported over an inch including Bellevue Lock and Dam (Jackson County) reported 1.37 inches of rain, 1.25 inches above average. During the last full week of April, a late season spring storm brought snow across northern Iowa with the northeast receiving amounts between two to five inches. Much of Iowa also received measurable rainfall, generally between 0.20 to 0.50 inches. Showers and thunderstorms swept across Iowa late Sunday (28<sup>th</sup>) evening and exited Iowa during the morning on Monday (29<sup>th</sup>). A low pressure moved through the state late Monday through Wednesday morning. A widespread area of moderate rainfall moved over the southeastern third of Iowa for much of the day. Rainfall totals through 7:00 am Wednesday (30<sup>th</sup>) exceeding one inch at 21 stations with Burlington (Des Moines County) reporting 2.94 inches; three other stations observed totals above two inches. Monthly precipitation totals varied from 1.02 inches at Red Oak (Montgomery County), 2.61 inches below average to 6.04 inches at Clinton (Clinton County), 3.12 inches above average. The statewide average snowfall was 1.20 inches or 0.40 inches below average. Dubuque (Dubuque County) reported 5.0 inches of snow, 1.6 inches above average. This ranks as the 77<sup>th</sup> lowest April total in 132 years of statewide observational records

Severe Weather: Iowa experienced five days in which some form of severe weather was reported with all reports involving either hail and/or straight-line winds. A handful of severe hail and wind reports occurred on the 7<sup>th</sup>, 10<sup>th</sup> and 17<sup>th</sup> across seven counties, though the reports were isolated; a farm shed was destroyed in Alleman (Polk County) by strong winds on the 17<sup>th</sup>. April 22<sup>nd</sup> was the most active severe weather day of the month with six counties in eastern Iowa reporting severe thunderstorms producing strong straight-line winds from Cedar Rapids (Linn County) to Delmar (Clinton County). Sustained winds reached 60 miles per hour and caused tree and power line damage. Muscatine (Muscatine County) reported one-inch hail. An isolated severe thunderstorm formed in southwestern Iowa during the late evening hours of the 28<sup>th</sup> and raced into central Iowa; dime to quarter sized hail was reported from Madison County to Polk County.

Flooding: An active convective pattern over the last month has led to a continuation and expansion of major flooding along the Mississippi River, especially south of Dubuque (Dubuque County). These conditions were exacerbated by existing conditions left behind from Fall 2018 (3<sup>rd</sup> wettest), Winter 2019 (3<sup>rd</sup> wettest) and the 2<sup>nd</sup> wettest year on record (2018). Davenport (Scott County) set a preliminary unofficial record high Mississippi River flood crest at 22.70 feet at 5:50 pm on May 2<sup>nd</sup> according to the National Weather Service. This crest would break the previous record crest of 22.63 feet set on July 9<sup>th</sup> during the Great Flood of 1993.

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