

## IOWA PRELIMINARY ANNUAL WEATHER SUMMARY – 2020

### Precipitation:

Based on 148 years of statewide observations, Iowa experienced its 36th driest year on record in 2020 with a statewide average precipitation accumulation of 28.92 inches, 6.18 inches below normal. A wetter year last occurred in 2012.

### Temperature:

Iowa experienced variable temperature behavior during 2019, though eight months of the year had below average temperatures. January was trending warmer than average until the last three days of the month as an Arctic intrusion brought bitterly cold temperatures to much of the Midwest. Daytime highs, overnight lows and wind chill values were the lowest observed since 1996. Multiple overnight lows and record low daytime highs were also broken. The coldest conditions were reported near sunrise on January 30th with temperatures ranging from the -20s in southern Iowa to -30s in northern Iowa. Wind chill readings plummeted into the -50s in northern Iowa; Estherville Municipal Airport (Emmet County) reported a wind chill temperature of -59 degrees. Coldness persisted into February, where temperatures averaged 8.6 degrees below normal and ranking it as the 16th coldest February on record. Winter ended slightly below normal at 20.7 degrees, 1.4 degrees below normal. Spring into early summer trended on the cooler side with Spring 2019 ending up 2.6 degrees below normal. Summer conditions were cooler than average as well with only July having unseasonable warmth. Summer ended slightly below average at 71.3 degrees, 0.3 degrees below normal.

Late year warmth returned to Iowa with the 9th warmest September on record. Statewide conditions were above average for a majority of the month with the average temperature five degrees above the normal of 63.2 degrees. October conditions reversed course and ended up at 3.7 degrees below normal and ranking it as the 13th coldest on record. November and December repeated behavior similar to the end of 2018. At 32.5 degrees, November's average temperatures was 4.1 degrees below normal, while December's average temperature of 29.1 was 6.2 degrees above normal. In terms of historical ranking, 2019 will be the 29th coldest on record at 46.8 degrees, 1.2 degrees below normal.

### Drought Monitor:

The year began with no abnormally dry (D0) or drought conditions across Iowa, as surface conditions were saturated from the third wettest fall and winter on record. Wet conditions continued through the spring months. It wasn't until early summer did conditions start to dry out across parts of Iowa. On July 23rd, Abnormally Dry (D0) conditions were introduced into Iowa for the first time since October 30th, 2018. Eleven counties in eastern Iowa and eight counties in southwestern Iowa had partial to full coverage representing 11.23% of the state.

On July 30th, the eastern D0 regions expanded northwest into seven new counties and a new region encompassing nine counties was introduced into central Iowa. With this expansion, D0 conditions covered 23.48% of Iowa. Abnormally Dry (D0) conditions continued to expand across Iowa in August, covering a little over 41% of the state. Moderate Drought (D1) conditions were also introduced into eastern and central Iowa on August 13th, as precipitation deficits continued to accumulate. As of September 3rd, D1 conditions covered almost 12 percent of Iowa.

Abnormally Dry (D0) conditions peaked during the first week of September, covering 41% of the state. Moderate Drought (D1) conditions also covered the largest aerial extent at 12%, concentrating in central and eastern Iowa. As rainfall totals increased across the state through the month, D0 conditions continued to shrink from west to east; D1 also followed this pattern and were completely removed during the week of September 24th. With abnormally wet conditions during September into October, abnormally dry (D0) conditions were completely removed from Iowa as of the first week of October.

\*The full 2020 annual report will be issued in late February.