

Annual Weather Summary 2018

West Central Research and Outreach Center

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2018 started off with about average temperatures for January. February was below average (-5.5°F) followed by a near average March. April, however, was the coldest on record with a mean temperature (-11.3°F) colder than average. May and June were above average followed by three months of near average temperatures. October and November temperatures were below average with a (-6.5°F) and (-7.2°F) departure from the mean. This was followed by an above average December (+5.0°F). The record cold April prevented early field work and delayed small grain and corn planting within the area to early to mid-May. However, a warm May and June helped with planting and crop development. Rainfall during the growing season was high with little moisture stress noted and with that many fields had drowned out areas. High amounts of rainfall in June (8.55 inches) and July (6.63 inches) resulted in lodged small grain fields and made harvesting hay and alfalfa difficult. Small grain yields in the area were poor, most likely due to the combination of late planting, warm temperatures, and abundant rain. These conditions also made small grain harvesting problematic. Even so, corn and soybean yields were very good in the area. Soil conditions were wet during fall harvest and numerous fields froze up before fall tillage could be done.

The mean annual temperature recorded at the WCROC in Morris (January - December 1886-2017) is 42.2°F. The annual temperature for 2018 was 41.2°F, which is 1.0°F cooler than the long-term annual mean. There were 44 days in January, February, March, April, November, and December with a minimum temperature of 0°F or lower. The average is 45 days. In 2018 there were 9 days of high temperatures at or exceeding 90°F. The average is 13 days. The high temperature for the year was 95°F occurring on May 27th. The low temperature for the year was -25°F which occurred on January 1st. The first killing frost (< 28°F) occurred on October 12th with a temperature of 22°F.

Several temperature records were tied or broken in 2018. April had the coldest average temperature on record back to 1886. Two low-temperature records were set on April 4th and 5th with a low temperature of 0F°. In addition, two other cold records were broken. On April 1st the recorded high temperature was 17F° and on April 7th the recorded high temperature was 16°F. Both of these temperatures were the lowest high temperatures recorded for that day. April 7th was also the coldest high temperature ever recorded in April from 1886. On May 27th we recorded a record high of 95F° and on September 17th we tied the record high of 92F°, which was originally set back in 1891.

In 2018, the total growing degree days for May through September is 2594. The average is 2354 which makes 240 growing degree days more than average. In 2017 we accumulated 2271 growing degree days.

Total precipitation was 29.6 inches which is 5.23 inches above normal. We received 21.16 inches of rain during the growing season of April through August. The average is 16.0 inches. Last year we had 19.9 inches of rain for this time. The annual evaporation pan measurements for May through September totaled 20.51 inches.

Several precipitation records were broken in 2018. Heavy rain occurred on June 17th which totaled 3.1 inches exceeding the old record of 1.51 inches set in 1915. The daily precipitation record for July 20th was broken with a rainfall total of 3.56 inches, exceeding the old record of 1.54 inches set in 1930. The daily precipitation record for December 27th was broken with a precipitation total of .35 inches. This exceeds the previous record of 0.30 inches set back in 1959. This precipitation also resulted in a record snowfall for the day of 4.3 inches exceeding the previous record of 3.5 inches in 1988.

For the winter of 2017-2018, (October through March) we had 30.0 inches of snow, the average is 36.0 inches. For the calendar year of 2018, we recorded 49.0 inches of snow. Heating Degree Days in 2018 totaled 9229, where the average is 8852. Frost depth on January 2, 2018, was 17.5 inches. The maximum frost depth was 29 inches in mid-March. Frost persisted at a depth of 25 to 26 inches until May 8th.