## ndsco <br> North Dakota Monthly Climate Summary

## North Dakota <br> State Climate Office

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Based on the National Centers for Environmental Information (NCEI), statewide averaged monthly accumulated precipitation was $2.27 ", 0.68 "$ greater than last year, 0.17 " greater than the 1981-2010 average August precipitation and was the wettest August since 2014. The statewide average precipitation was ranked the 45th wettest on record since 1895. A majority of the central and eastern parts of the state received above to much-above-normal precipitation (Figure 1). On the contrary, northwestern parts of the state stayed dryer than normal. The largest amount of monthly accumulation was $7.45 "$ and was recorded in Oakes, Dickey County by a Coop observer. The least amount of monthly accumulation was $0.45^{\prime \prime}$ and recorded at Williston Sloulin Int. Airport, Williams County. The greatest $24-\mathrm{hr}$ rainfall was $3.89^{\prime \prime}$ and was recorded in Fullerton on August 10 by a Coop observer. Based on historical records, the state average annual precipitation accumulation showed no long-term trend since 1895 . The highest and the lowest monthly state August precipitation ranged from 4.54 " in 1900 to 0.73 " in 1929.


Figure 1. Precipitation Percent of Normal in August 2016 for North Dakota (NDAWN)

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August 2016
Volume: 10, No: 8

## Temperature

The state average temperature in August based on NCEI was $67.9^{\circ} \mathrm{F}$, nearly as warm as last year, $0.4^{\circ}$ warmer than the 1981-2010 average and was the warmest August since 2015. It was ranked the 50th warmest August on record since 1895. As the northern parts of the state showed warmer than normal conditions, eastern parts of the state were cooler than normal and southern parts of the state were near normal


Figure 1. Temperature Departure from Normal in July 2016 for North Dakota (NDAWN) (Fig. 2). The state's highest and lowest daily temperatures ranged from $99^{\circ}$ on August 1 in Watford City, McKenzie County to $58^{\circ}$ on August 29 in Taylor, Stark County. Based on historical records, the state average annual temperature showed an increasing trend of $0.02^{\circ} \mathrm{F}$ per decade since 1895 . The highest and the lowest monthly state August average temperatures ranged from $80.1^{\circ}$ in 1936 to $61.8^{\circ}$ in 1992. our Creative Commons license and our Rules for Use.

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## Notable Impacts

Based on the Drought Monitor (DM) on August 30, 2016, less than 2\% of the state was under a drought designation (Figure $3)$.

Out of that, only $0.29 \%$ was designated in a severe category, or D2, based on the index used by the DM from DO (Abnormally Dry) to D4 (Exceptional Drought).

## Counties in the severe drought areas as of August 30: Bowman.



Figure 3. Drought Monitor map for North Dakota as of August 30, 2016.

Counties in moderate drought areas as of August 30: Bowman and Adams.
Nearly $90 \%$ of the state stayed in the clear avoiding any designation including abnormally dry conditions.

NWS Storm Prediction Center reported 13 tornadoes, 77 hail, and 48 high wind events in ND. Figure 4 shows the storm reports in August 2016. In that figure, red, blue and green dots represent tornado, wind, and hail respectively. NDAWN's highest peak gust in July was 80 mph recorded at the Linton weather station on August 9, 2016.

On August 3, thunderstorms embedded in a very strong upper level low produced tornadoes (mostly concentrated in Devils


Figure 4. August 2016 North Dakota Storm Events (Red: Tornado; Blue: Wind; Green: Hail). Lake Basin) with numerous wind damage to crops and other property.

By the end of the summer, the ND Ag Statistical Service reported corn 8\% mature (near average), soybean dropping leaves 29\% (slightly ahead of average). our Creative Commons license and our Rules for Use.

