



North Dakota Monthly Climate Summary

November 2018

Volume: 12, No: 11

Precipitation

North Dakota State Climate Office: Your Resource for Climate Information

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Based on the National Centers for Environmental Information (NCEI), the statewide average November precipitation was 0.75 inch, which was 0.71 inch less than last month but 0.44 inch more than in November 2017, and 1.46 inches more than the 1981-2010 average, making it the 34th wettest November in the 124-year period of record. It was the wettest November since 2016 (Table 1). The numbers less than 100 in Figure 1 below are shaded in yellow and red to depict the region with below-average rainfall. In contrast, the numbers that are greater than 100 in the same figure are shaded in green and blue to depict the region with above-average rainfall in November. The greatest monthly precipitation accumulation was 1.7 inches, recorded in Medora, Billings County. The greatest 24-hour precipitation was 0.66 inch, recorded 8 miles north of Watauga in Grant County, on Nov. 16. The greatest monthly snowfall accumulation was 18 inches, recorded in Fullerton, Dickey County. The greatest 24-hour snowfall was 11 inches, also recorded in Fullerton, on Nov. 6. Based on historical records, statewide November precipitation showed a slight negative long-term trend of 0.02 inch per century since 1895. The highest and lowest November precipitation for the state ranged from 2.33 inches in 2000 to 0.03 inch in 1939 (Figure 2).

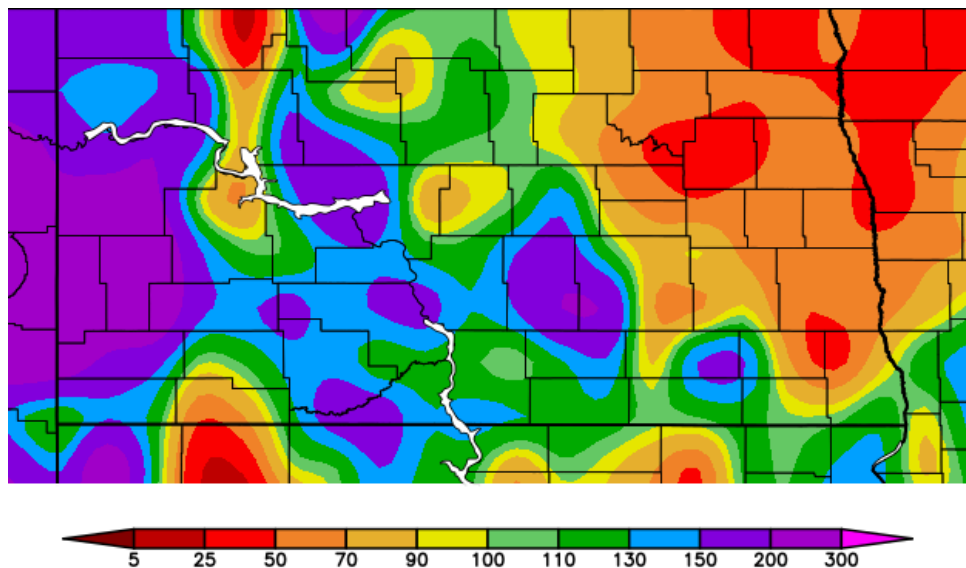


Figure 1. November 2018 precipitation percent of normal for North Dakota. (HPRCC)



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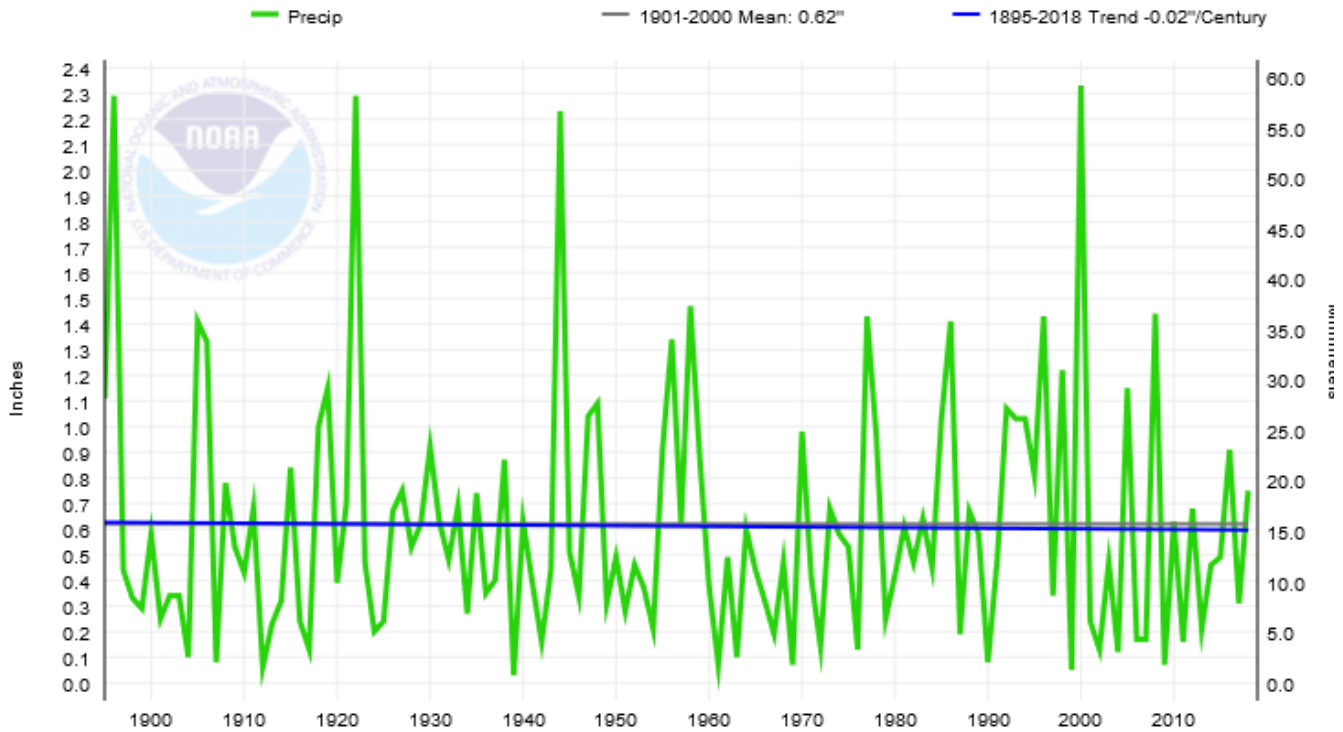


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North Dakota, Precipitation, November



November Precipitation Statistics

Record high value: 2.33 inches in 2000
 Record low value: 0.03 inch in 1939
 Trend: - 0.02 inch per century

November 2018 value: 0.75 inch
 1981-2010 average: 0.68 inch
 Monthly ranking: 34th wettest
 Record length: 124 years

Figure 2. Historical November precipitation time series for North Dakota.

Table 1. North Dakota November Precipitation Ranking Table.

Period	Value	Normal	Anomaly	Rank	Wettest/Driest Since
November 2018	0.75"	0.68"	0.07	91st driest 34th wettest	Driest since 2017 Wettest since 2016



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Temperature

The official state average November temperature was 22.7 F, 16.4 F cooler than last month and 3.7 F cooler than in November 2017. The average November temperature was 4.6 F cooler than the 1981-2010 average, making it the 30th coolest November in the 124-year period of record. It was the coolest November since 2014 (Table 2). The negative numbers in Figure 3 are shaded in green and blue to depict the region with much below-average temperature in November. The state's highest and lowest daily temperatures ranged from 81 F on Nov. 1 in Kildeer, Dunn County, to minus 16 F on Nov. 27, in Lake Metigoshe State Park, Bottineau County. Based on the historical records, the state average November temperature showed a positive long-term trend of 0.25 F per decade since 1895. The highest and lowest monthly state November average temperatures ranged from 39.2 F in 1999 to 6.1 F in 1896 (Figure 4).

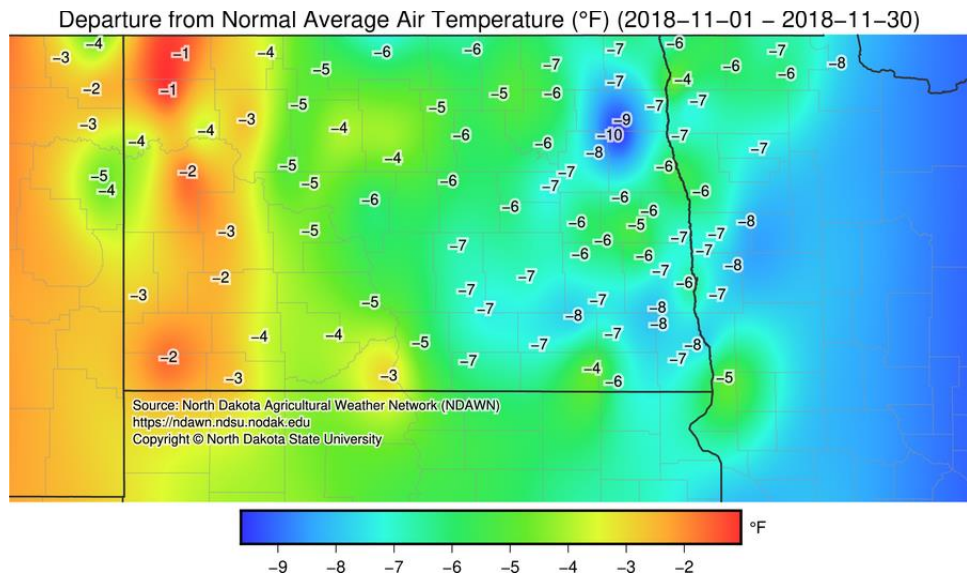


Figure 3. November 2018 temperature departure from normal for North Dakota. (NDAWN)



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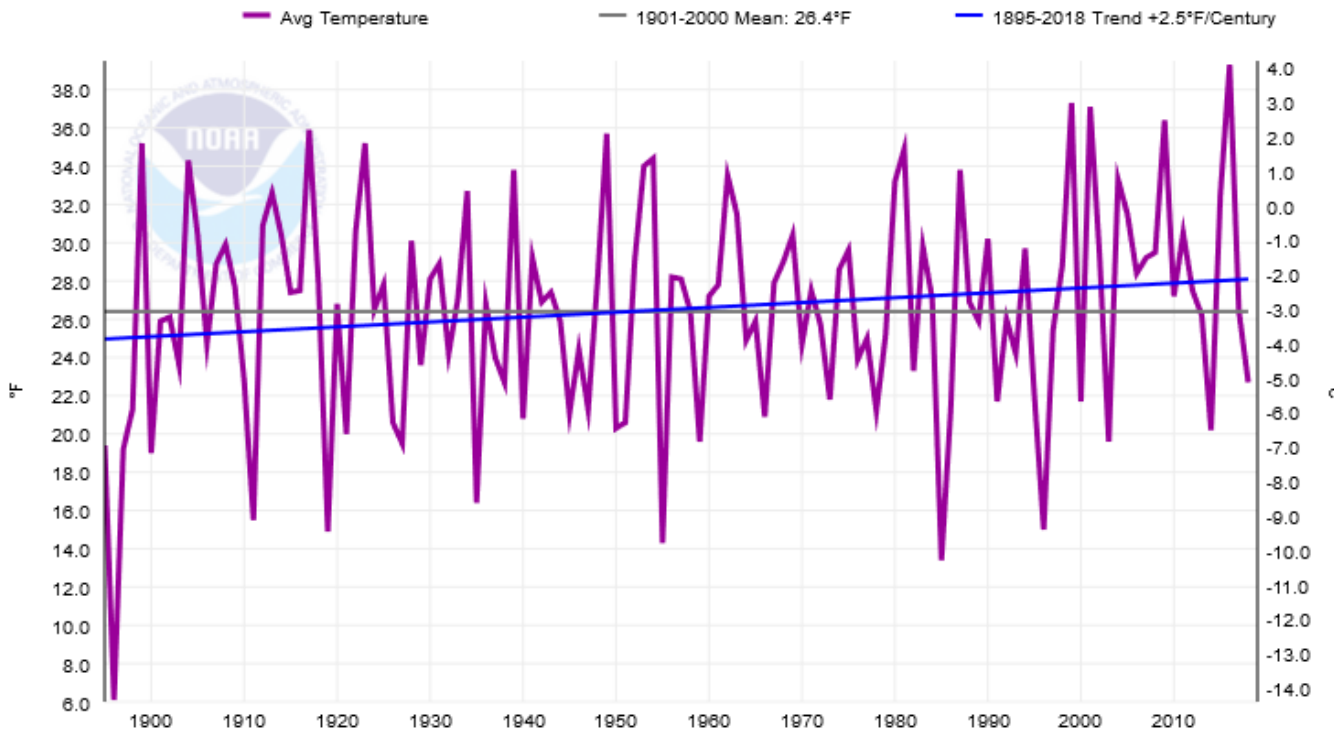


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North Dakota, Average Temperature, November



November Temperature Statistics

Record high value: 39.2 F in 1999

Record low value: 6.1 F in 1896

Trend: 0.25 F per decade

November 2018 value: 22.7 F

1981-2010 average: 27.3 F

Monthly ranking: 30th coolest

Record length: 124 years

Figure 4. Historical November temperature time series for North Dakota.

Table 2. North Dakota November Temperature Ranking Table.

Period	Value	Normal	Anomaly	Rank	Warmest/Coolest Since
November 2018	22.7	27.3	-4.6	30th coolest 95th warmest	Coolest since 2014 Warmest since 2017



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Notable Impacts

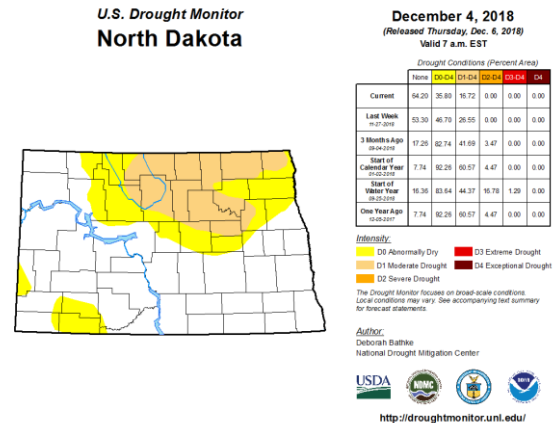
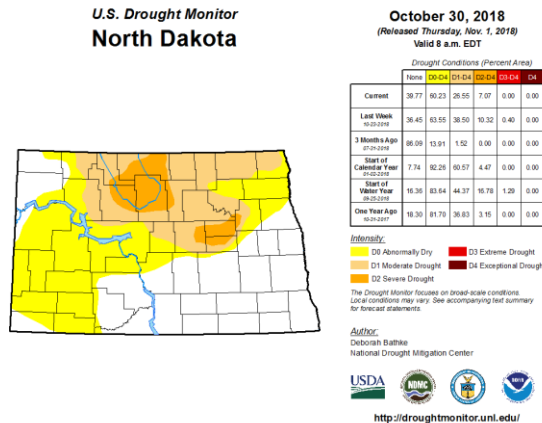


Figure 5. Drought Monitor map comparison for North Dakota in the beginning (on the left) and at the end (on the right) of November 2018.

Drought Monitor (DM): In general, overall drought conditions improved throughout the month. By the end of November, D1 (moderate drought) or worse covered nearly 17 percent of the state, a 10 percent decrease in coverage, compared with the previous month. Figure 5 shows a comparison of the drought conditions across the state from the beginning to the end of the month. Figure 6 on the right shows the statewide drought coverage in percentage and intensity (D0 and D1) in a time scale representing the state from the beginning to the end of the month, with a one-week resolution.

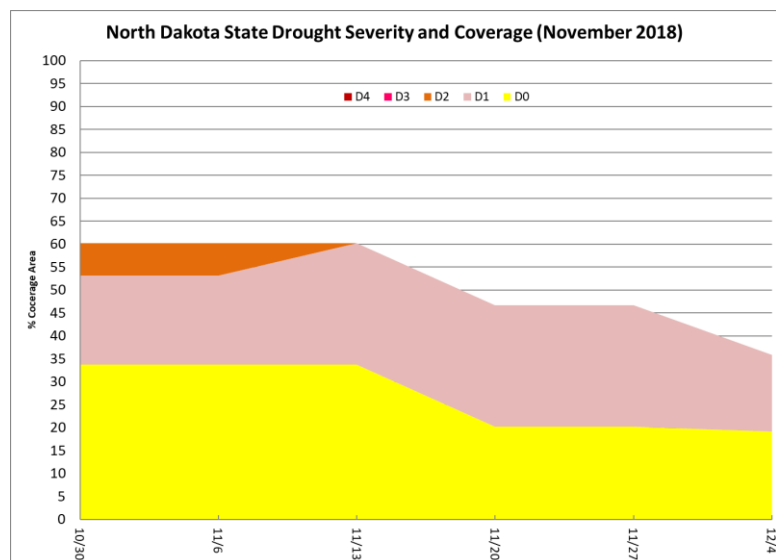
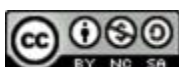


Figure 6. North Dakota drought severity and coverage for November 2018.



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Storm Reports: NDAWN's highest 10-meter peak gust in November was 42 mph, recorded at the Bowman weather station in Bowman County on Nov. 6, 2018.

Daily Record Events in November: Across the observation network of weather stations with at least 30 years of history, a total of one daily high and 26 daily low-temperature-related records were set or tied. A total of 19 highest daily precipitation-related records were set or tied. Details of the records are in Table 3 below.

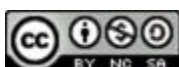
Table 3. Summary of daily records broken or set in North Dakota in November. (NCEI Daily Weather Records)

<i>Category</i>	Number of Records
<i>Highest daily max. temp.</i>	0
<i>Highest daily min. temp.</i>	1
<i>Lowest daily max. temp.</i>	15
<i>Lowest daily min. temp.</i>	11
<i>Highest daily precipitation</i>	12
<i>Highest daily snowfall</i>	7
Total	46

*Highlight of the Month**

*A lowest daily minimum temperature of minus 11 F was set in **Bismarck** on **Nov. 17**, breaking the previous record for that date by 2 degrees, which was set in 1959 (years on record: 70).*

**The records in this box may be different than the record on Pages 1 and 3 due to the fact that this page only includes records for stations with at least 30 years of history.*



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