



North Dakota Monthly Climate Summary

September 2021

Volume 15, No. 9

Precipitation

North Dakota State Climate Office: Your Resource for Climate Information



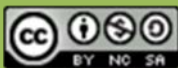
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Based on the National Centers for Environmental Information (NCEI), the statewide average September precipitation was 1.2 inches, which was 1.22 inches less than last month but 0.67 inches more than in September 2020. It was 0.67 inches less than the 1991-2020 average, making it the 52nd driest September in the 127-year period of record (Table 1).

The counties shaded in brown in Figure 1 indicate drier-than-average conditions in September 2021. On the other hand, the counties shaded in green in the same figure indicate wetter-than-average conditions in September 2021. White shading indicates near-average conditions. The numbers inside the counties are the precipitation rankings with one being the lowest (driest) and 127 being the highest ranking (the wettest).

The greatest monthly precipitation accumulation was 4.42 inches, recorded in Fargo, Cass County. Based on historical records, statewide September precipitation showed a sharp positive long-term trend of 0.35 inches during the last century. The lowest and highest September precipitation for the state during this period ranged from 0.2 inches in 1912 to 5.9 inches in 1919 (Figure 2 and Table 1).

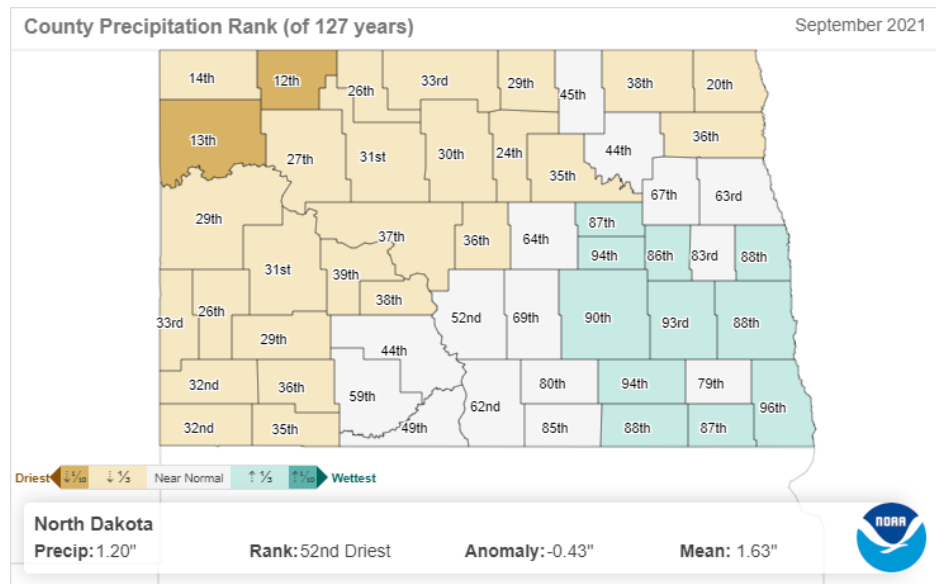


Figure 1. September 2021 county precipitation ranking map of North Dakota. (National Centers for Environmental Information, NOAA)



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North Dakota Precipitation

September

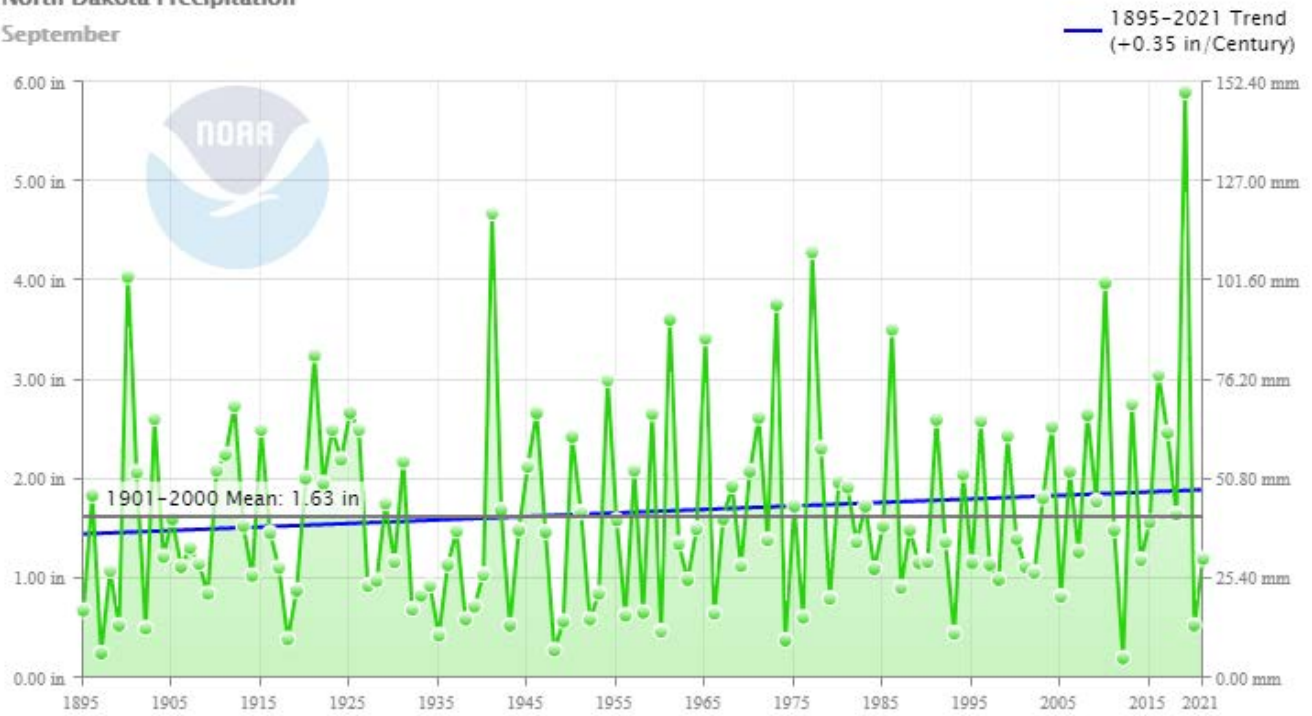


Figure 2. Historical September precipitation time series for North Dakota. (NCEI, NOAA)

Table 1. North Dakota September Precipitation Ranking Table.

Period	Value	Normal	Anomaly	Rank	Wettest/Driest Since	Record Year
September 2021	1.2"	1.87"	0.67"	52nd driest 76th wettest	Driest since 2020 Wettest since 2019	0.2" (2012) 5.9" (2019)



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Temperature

The official state average September temperature was 62.2 F, which is 6.7 degrees cooler than last month but 5.1 degrees warmer than in September 2020. Furthermore, the average September temperature was 4.3 degrees warmer than the 1991-2020 average, making it the fourth warmest September in the 127 years of record (Table 2).

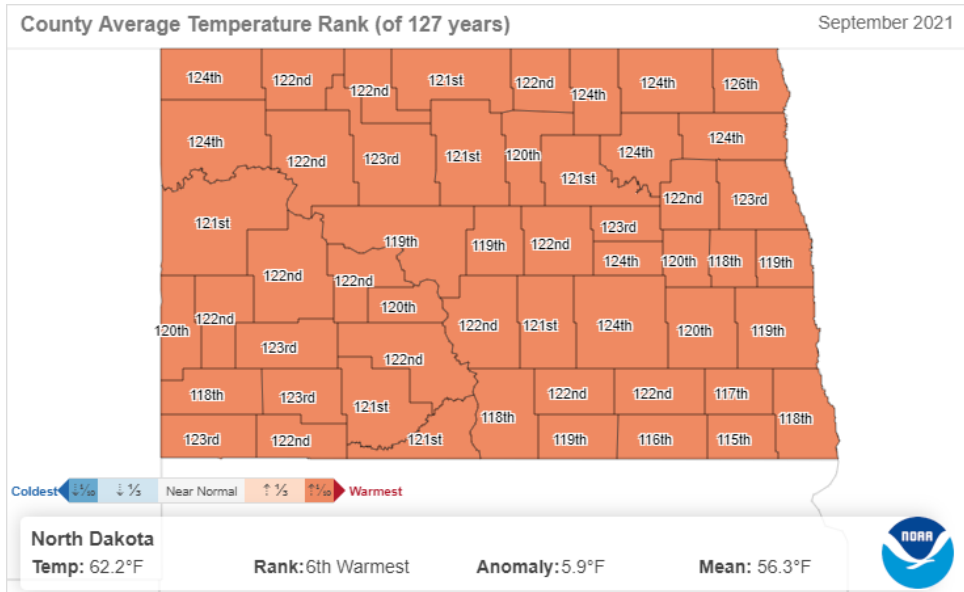


Figure 3. September 2021 county temperature ranking map of North Dakota. (NCEI, NOAA)

The counties shaded in peach in Figure 3 indicate warmer-than-average conditions. The numbers inside the counties are the temperature rankings, with one being the lowest (coldest) and 127 being the highest (warmest).

The state's highest and lowest daily temperatures ranged from 100 F on Sept. 29 in Dickinson, Stark County, to 27 F on Sept. 24 in Lostwood, Burke County. Based on the historical records, the state average September temperature showed a positive long-term trend of 1.9 degrees during the last century. The lowest and highest monthly state September average temperatures during this period ranged from 45.1 F in 1965 to 63.3 F in 1897 (Figure 4 and Table 2).



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North Dakota Average Temperature
September

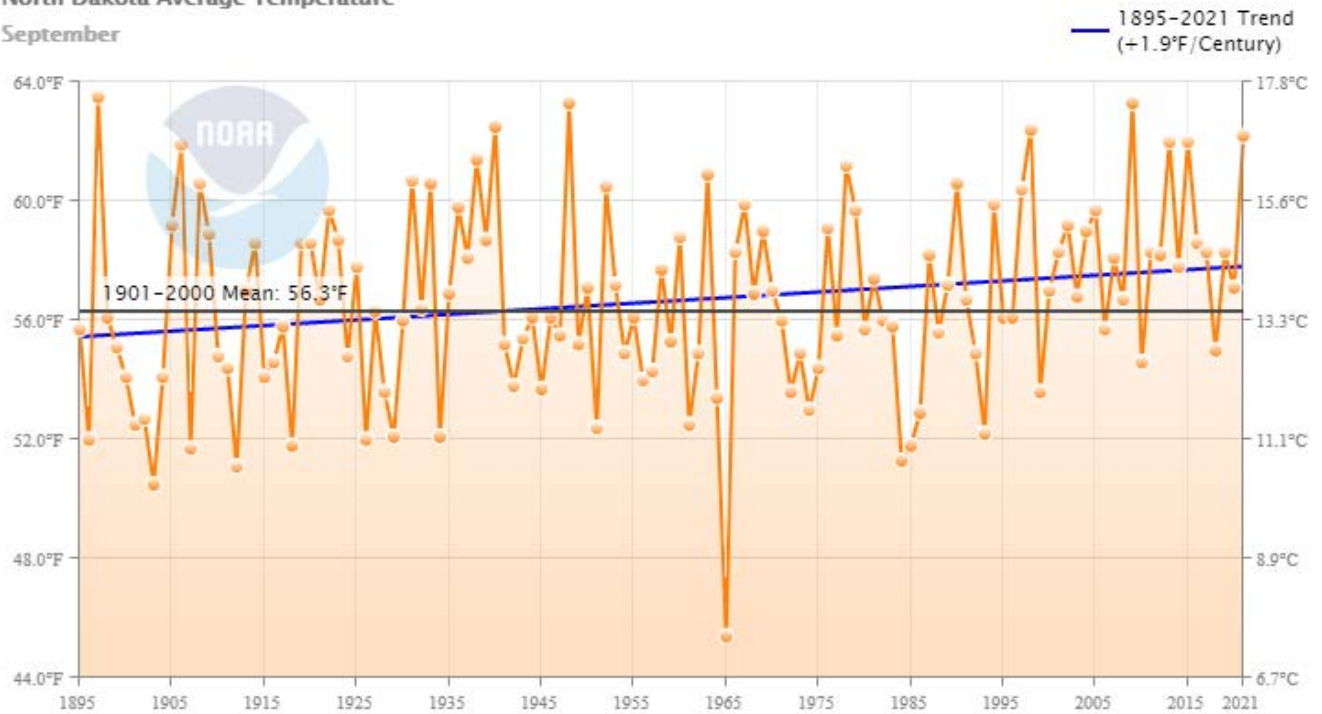


Figure 4. Historical September temperature time series for North Dakota. (NCEI, NOAA)

Table 2. North Dakota September Temperature Ranking Table.

Period	Value	Normal	Anomaly	Rank	Warmest/Coollest Since	Record Year
September 2021	62.2°	57.9°	4.3°	122nd coolest 6th warmest	Coollest since 2020 Warmest since 2009	45.1 F (1965) 63.3 F (1897)



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Storm Reports: Table 3 below shows the summary of September severe storm reports in North Dakota (Storm Prediction Center, NOAA).

The NOAA Storm Report recorded zero tornados, five hail and one damaging wind report, with six significant storm events in September. Table 3 summarizes the number of tornado, hail and damaging wind reports in September, while Figure 5 geographically displays the locations of these storms.

Table 3. Summary of September Severe Storm Reports in North Dakota. (Storm Prediction Center, NOAA)

Category	Number of Reports
<i>Tornado reports</i>	0
<i>Hail reports</i>	5
<i>Wind reports</i>	1
Total	6

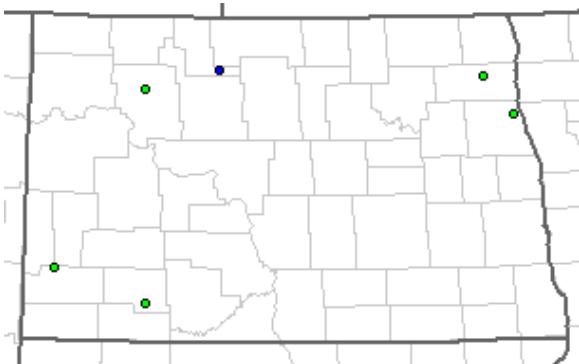


Figure 5. Map of September 2021 North Dakota storm events (red: tornado; blue: wind; green: hail). (Storm Prediction Center, NOAA)



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Daily Record Events in September: Across the observation network of weather stations with at least 30 years of history, 81 daily high- and only one daily low-temperature records were set or tied. In addition, a total of six highest daily precipitation-related records were set or tied. Details of the records are in Table 4.

Table 4. Summary of daily records broken or set in North Dakota in September. (NCEI Daily Weather Records)

<i>Category</i>	Number of Records
<i>Highest daily max. temp.</i>	49
<i>Highest daily min. temp.</i>	33
<i>Lowest daily max. temp.</i>	1
<i>Lowest daily min. temp.</i>	0
<i>Highest daily precipitation</i>	6
<i>Highest daily snowfall</i>	0
Total	89

The Highlight of the Month*

A highest daily maximum temperature record of **100 degrees** was broken in **Dickinson on Sept. 29**, exceeding the previous record that was set in 1980 by **12 degrees** (years on record: 72).

**The records in this box may differ from those on Pages 1 and 3 because this page only includes records for stations with at least 30 years of history.*

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