



North Dakota Monthly Climate Summary

February 2023

Volume 17, No. 2

Precipitation

North Dakota State Climate Office: Your Resource for Climate Information.



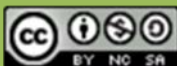
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Based on the National Centers for Environmental Information (NCEI), the statewide average February precipitation was 0.31 inches, which was 0.14 inches more than last month but 0.02 inches less than February 2022. It was also 0.16 inches less than the 1991-2020 average, making it the 40th driest February in the 129-year period of record (Table 1).

The counties shaded in green in Figure 1 indicate wetter-than-average conditions in February 2023. In contrast, the counties shaded in brown indicate drier-than-average conditions in February 2023. White indicates near-average conditions. The numbers inside the counties are the precipitation rankings with one being the lowest (driest) and 129 being the highest (wettest) ranking.

The greatest monthly precipitation accumulation was 1.21 inches, recorded in Garrison, McLean County. The greatest monthly snowfall accumulation was 15.3 inches, recorded in Bismarck, Burleigh County. Based on historical records, statewide February precipitation showed a slight negative long-term trend of 0.08 inches during the last century. The lowest and highest February precipitation for the state during this period ranged from 0.07 inches in 1934 to 1.59 inches in 1998 (Figure 2 and Table 1).

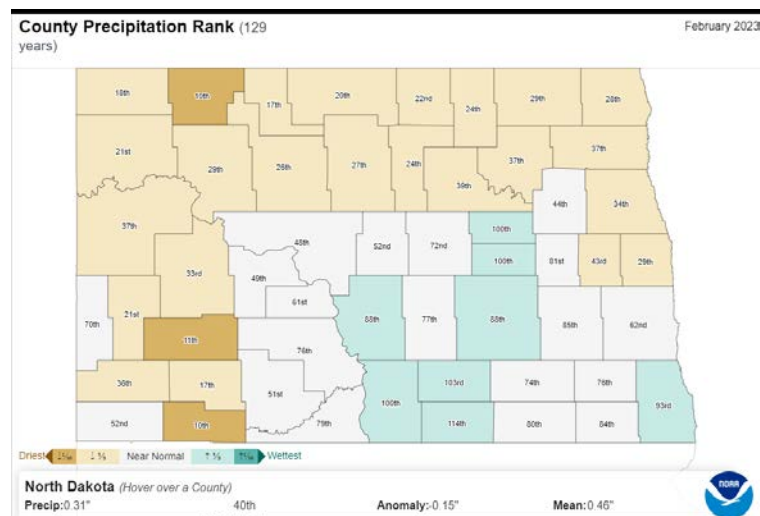


Figure 1. February 2023 county precipitation ranking map of North Dakota. (NCEI, National Oceanic and Atmospheric Administration [NOAA])



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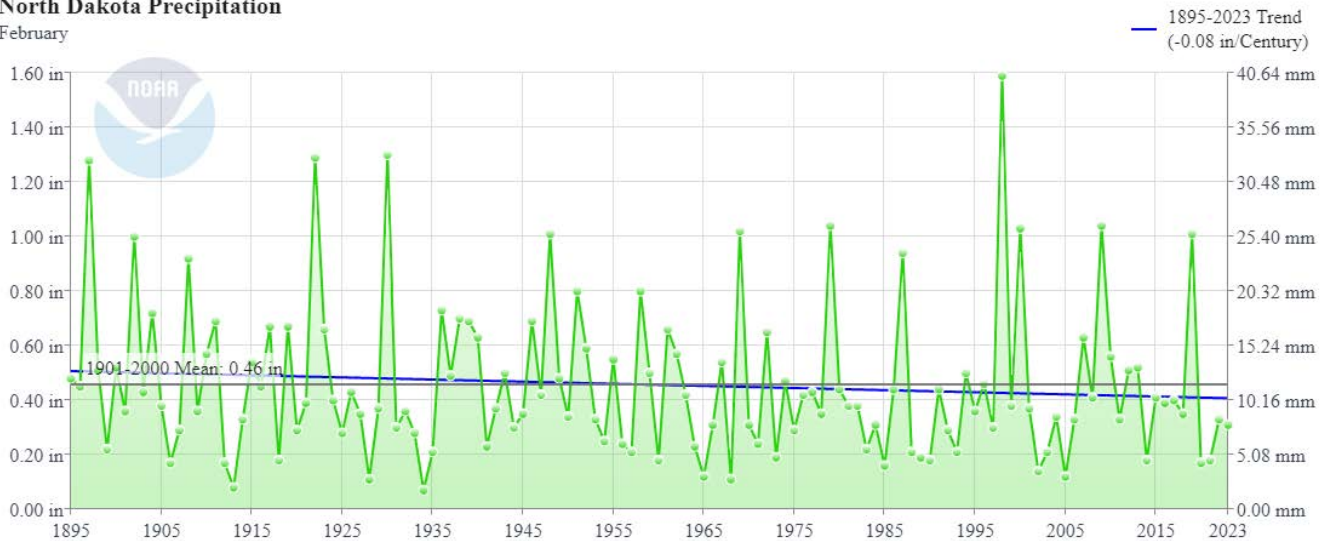


Figure 2. Historical February precipitation time series for North Dakota. (NCEI, NOAA)

Table 1. North Dakota February Precipitation Ranking Table.

Period	Value	Normal	Anomaly	Rank	Wettest/Driest Since	Record Year
February 2023	0.31"	0.47"	-0.16"	40th driest 90th wettest	Driest since 2021 Wettest since 2022	0.07" (1934) 1.59" (1998)



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Temperature

The official state average February temperature was 14.6 F, 1.6 degrees warmer than last month and 5.1 degrees warmer than in February 2022. Furthermore, the average February temperature was the same as the 1991-2020 average, making it the 40th warmest February in the 129 years of record (Table 2).

The counties shaded in peach in Figure 3 indicate warmer-than-average conditions and white shading indicates near-average conditions.

The numbers inside the counties are the temperature rankings, with one being the lowest (coldest) and 129 being the highest (warmest).

The state's highest and lowest daily temperatures ranged from 58 F on Feb. 13 in Hettinger, Adams County, to -34 F on Feb. 24 in Willow City, Bottineau County. Based on the historical records, the state average February temperature showed a strong positive long-term trend of 5.6 degrees during the last century. The lowest and highest monthly state February average temperatures during this period ranged from -14.1 F in 1936 to 29.6 F in 1954 (Figure 4 and Table 2).

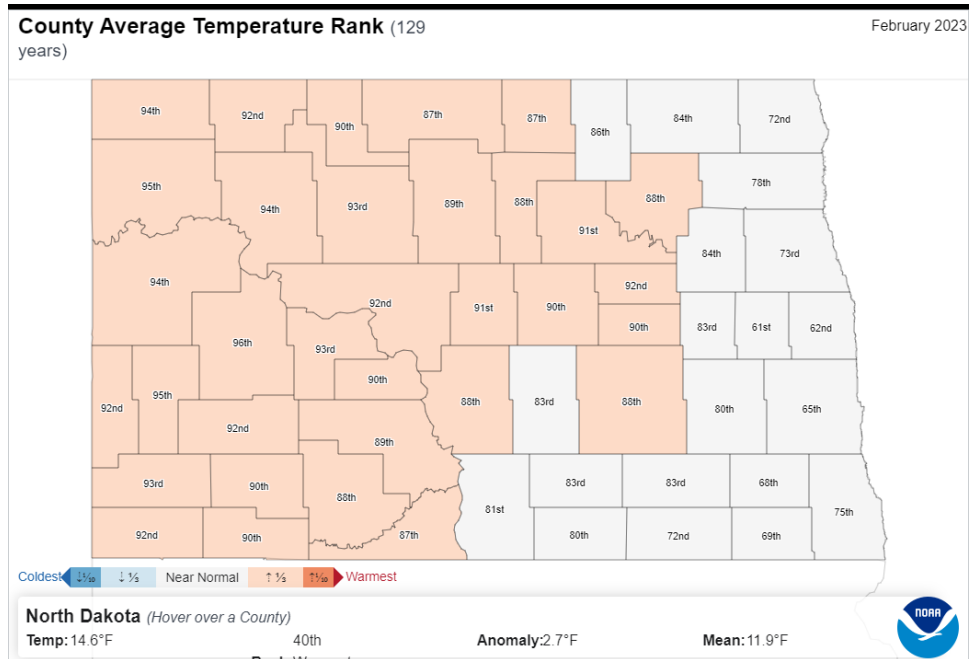


Figure 3. February 2023 county temperature ranking map of North Dakota. (NCEI, NOAA)



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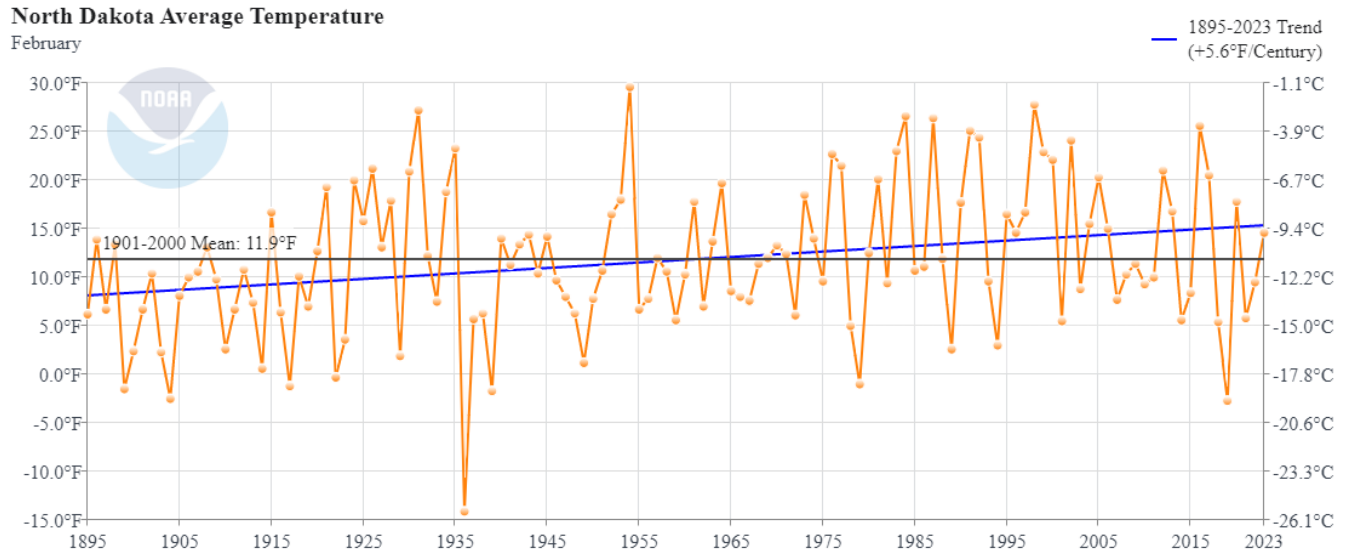


Figure 4. Historical February temperature time series for North Dakota. (NCEI, NOAA)

Table 2. North Dakota February Temperature Ranking Table.

Period	Value	Normal	Anomaly	Rank	Warmest/Coollest Since	Record Year
February 2023	14.6 F	14.6 F	0 F	90th coolest 40th warmest	Coollest since 2022 Warmest since 2020	-14.1 F (1936) 29.6 F (1954)



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Storm Reports: Table 3 below summarizes the February severe storm reports in North Dakota (Storm Prediction Center, NOAA).

In February, the NOAA Storm Report recorded no tornado, hail or damaging wind reports. Table 3 summarizes the number of tornado, hail and damaging wind reports in February, while Figure 5 geographically displays the locations of these storms.

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

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

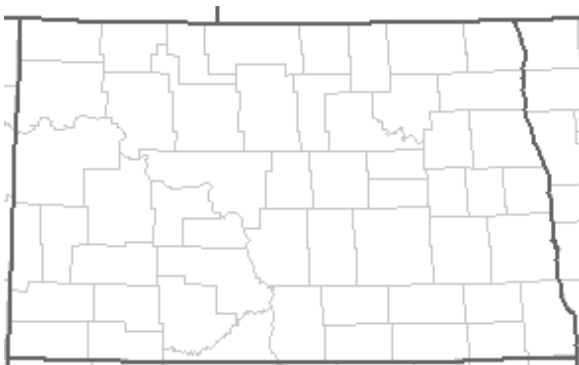


Figure 5. Map of February 2023 North Dakota storm events (red: tornado; blue: wind; green: hail). (Storm Prediction Center, NOAA)



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Daily Record Events in February: Across the observation network of weather stations with at least 30 years of history, four daily high and 85 daily low-temperature records were set or tied. In addition, a total of 16 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 February. (NCEI Daily Weather Records)

Category	Number of Records
Highest daily max. temp.	2
Highest daily min. temp.	2
Lowest daily max. temp.	60
Lowest daily min. temp.	25
Highest daily precipitation	7
Highest daily snowfall	9
Total	105

The Highlight of the Month*

A lowest daily temperature record of **-32 F** was broken in **Drake** on **Feb. 25**, exceeding the previous record that was set in **2003** by **4** degrees (years on record: 58).

*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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