



North Dakota Monthly Climate Summary

March 2022

Volume 16, No. 3

Precipitation

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



North Dakota State University

College of Agriculture, Food Systems, and Natural Resources

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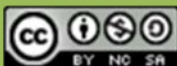
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Based on the National Centers for Environmental Information (NCEI), the statewide average March precipitation was 0.21 inches, which was 0.2 inches less than last month but 0.08 inches more than March 2021. It was also 0.53 inches less than the 1991-2020 average, making it the 7th driest March in the 128-year period of record (Table 1).

The counties shaded in brown indicate drier-than-average conditions in March 2022. White shading indicates near-average conditions. The numbers inside the counties are the precipitation rankings with one being the lowest (driest) and 128 being the highest (the wettest) ranking.

The greatest monthly precipitation accumulation was 0.85 inches, recorded in Walhalla, Pembina County. The greatest monthly snowfall accumulation was 7.5 inches, recorded in Kenmare, Ward County. Based on historical records, statewide March precipitation showed a slight negative long-term trend of 0.06 inches during the last century. The lowest and highest March precipitation for the state during this period ranged from 0.11 inches in 1930 to 2.31 inches in 1902 (Figure 2 and Table 1).

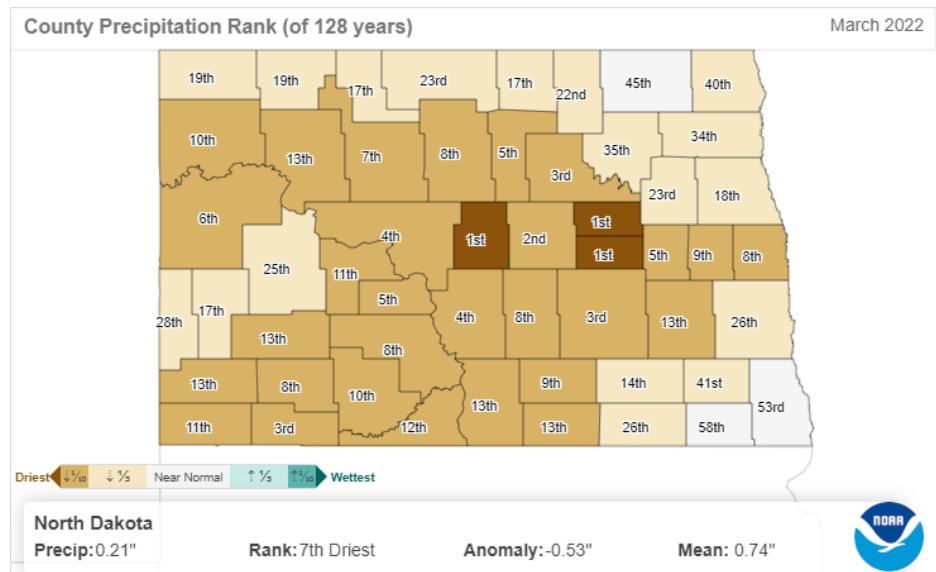


Figure 1. March 2022 county precipitation ranking map of North Dakota. (NCEI, National Oceanic and Atmospheric Administration [NOAA])



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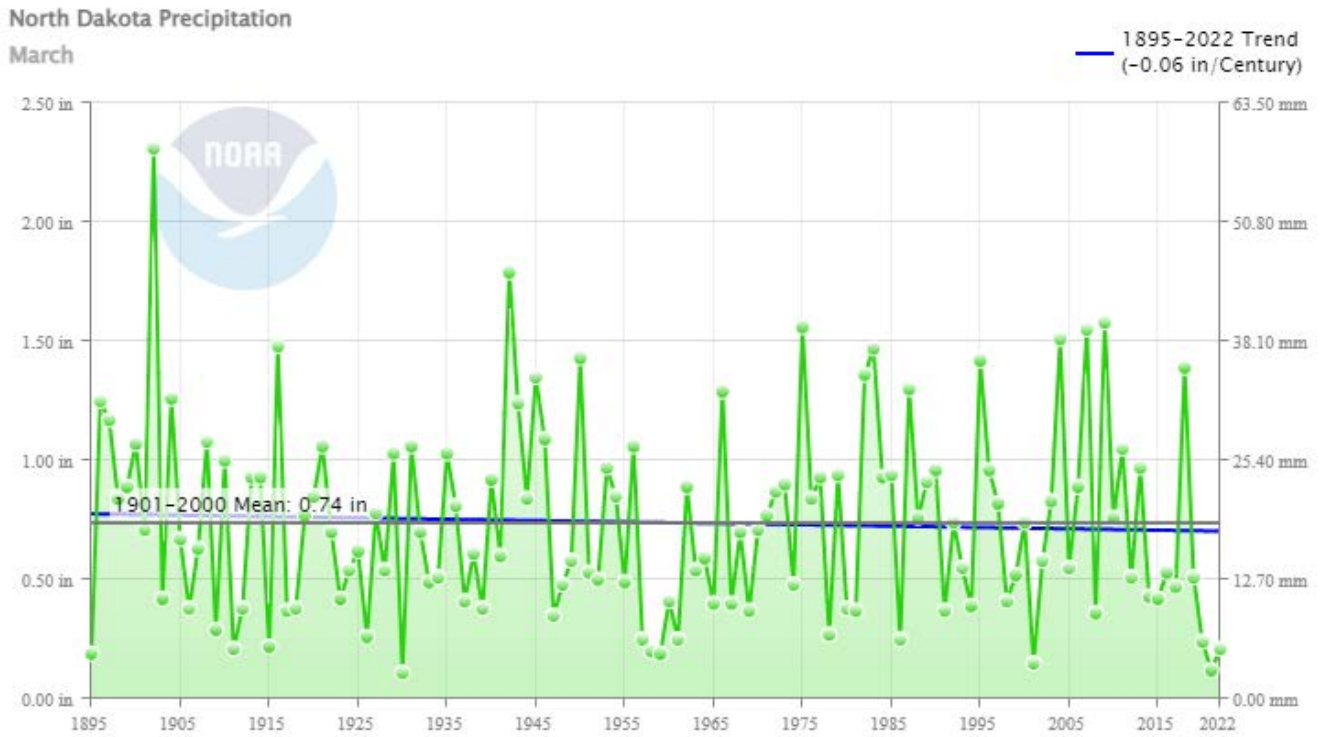


Figure 2. Historical March precipitation time series for North Dakota. (NCEI, NOAA)

Table 1. North Dakota March Precipitation Ranking Table.

Period	Value	Normal	Anomaly	Rank	Wettest/Driest Since	Record Year
March 2022	0.21"	0.74"	-0.53"	7th driest 122nd wettest	Driest since 2021 Wettest since 2020	0.11" (1930) 2.31" (1902)



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Temperature

The official state average March temperature was 27.2 F, which is 17.6 degrees warmer than last month, but 8.6 degrees cooler than in March 2021. Furthermore, the average March temperature was only 0.2 degrees warmer than the 1991-2020 average, making it the 44th warmest March in the 128 years of record (Table 2).

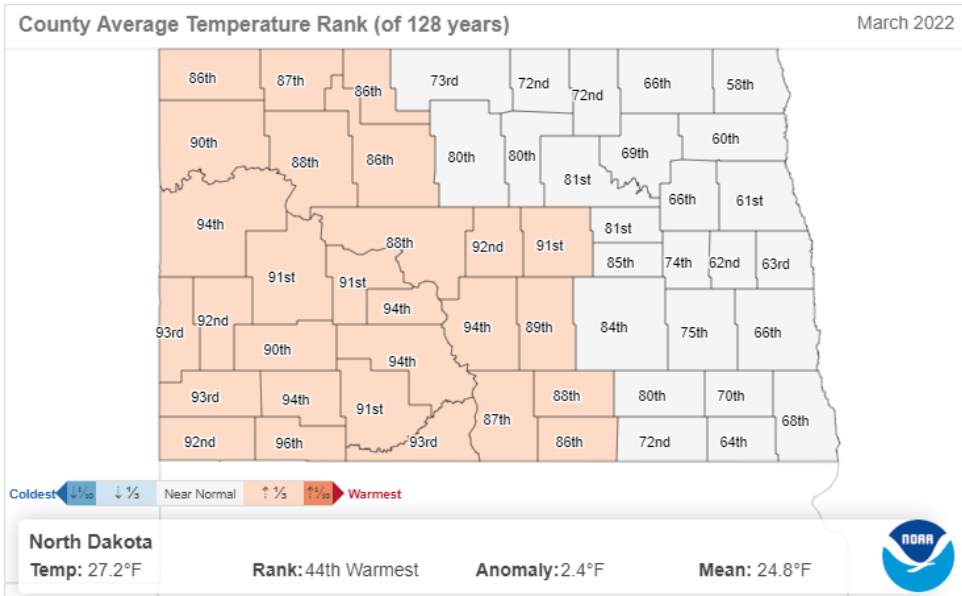


Figure 3. March 2022 county temperature ranking map of North Dakota. (NCEI, NOAA)

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 128 being the highest (warmest).

The state's highest and lowest daily temperatures ranged from 70 F on Mar. 24 in Bismarck, Burleigh County, to -19 F on Mar. 11¹ in Bottineau, Bottineau County. Based on the historical records, the state average March temperature showed a strong positive long-term trend of 5.2 degrees during the last century. The lowest and highest monthly state March average temperatures during this period ranged from 7 F in 1899 to 40.6 F in 2012 (Figure 4 and Table 2).

¹ Multiple dates exist.



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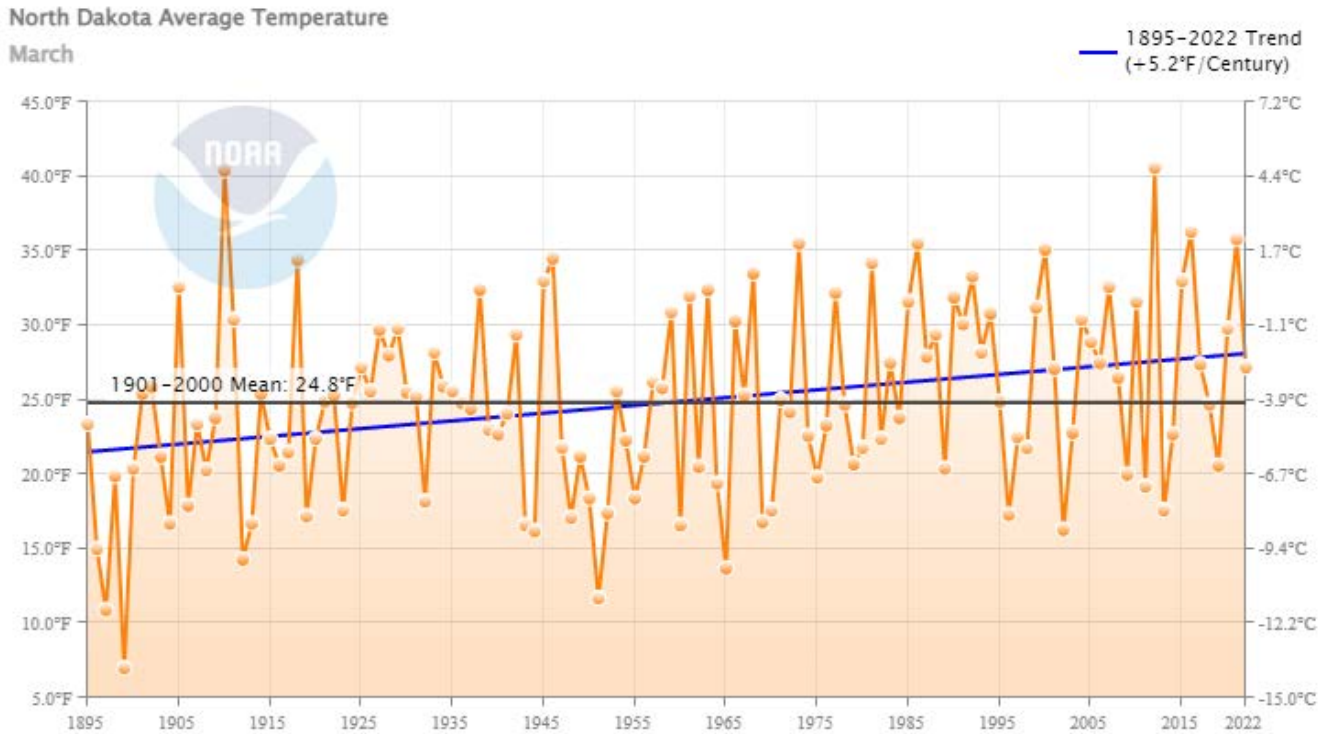


Figure 4. Historical March temperature time series for North Dakota. (NCEI, NOAA)

Table 2. North Dakota March Temperature Ranking Table.

Period	Value	Normal	Anomaly	Rank	Warmest/Coollest Since	Record Year
March 2022	27.2°	27°	-0.2°	85th coolest 44th warmest	Coollest since 2019 Warmest since 2021	7 F (1899) 40.6 F (2012)



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

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

Table 3. Summary of March 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

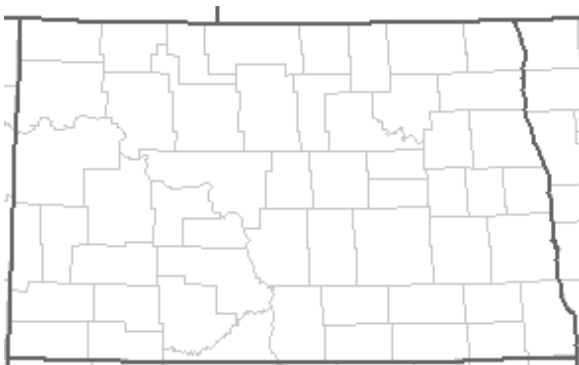


Figure 5. Map of March 2022 North Dakota storm events (red: tornado; blue: wind; green: hail). (Storm Prediction Center, NOAA)



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

Category	Number of Records
Highest daily max. temp.	1
Highest daily min. temp.	6
Lowest daily max. temp.	4
Lowest daily min. temp.	0
Highest daily precipitation	1
Highest daily snowfall	1
Total	12

The Highlight of the Month*

A lowest daily maximum temperature record of **2 F** was broken in **Cavalier** on **Mar. 12**, exceeding the previous record that was set in 2017 by **5** degrees (years on record: 87).

*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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