



North Dakota Monthly Climate Summary

April 2023

Volume 17, No. 4

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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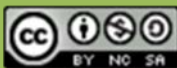
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Based on the National Centers for Environmental Information (NCEI), the statewide average April precipitation was 0.91 inches, which was 0.2 inches more than last month but 2.79 inches less than April 2022. It was also 0.34 inches less than the 1991-2020 average, making it the 35th driest April in the 129-year period of record (Table 1).

The counties shaded in green indicate wetter-than-average conditions in April 2023. Likewise, the counties shaded in brown indicate drier-than-average conditions. The numbers inside the counties are the precipitation rankings with one being the lowest (driest) and 129 being the highest (the wettest) ranking.

The greatest monthly precipitation accumulation was 3.54 inches, recorded in Jamestown, Stutsman County. The greatest monthly snowfall accumulation was 24 inches, recorded in Petersburg, Nelson County. Based on historical records, statewide April precipitation showed a slight positive long-term trend of 0.02 inches during the last century. The lowest and highest April precipitation for the state during this period ranged from 0.11 inches in 1987 to 3.71 inches in 1986 (Figure 2 and Table 1).

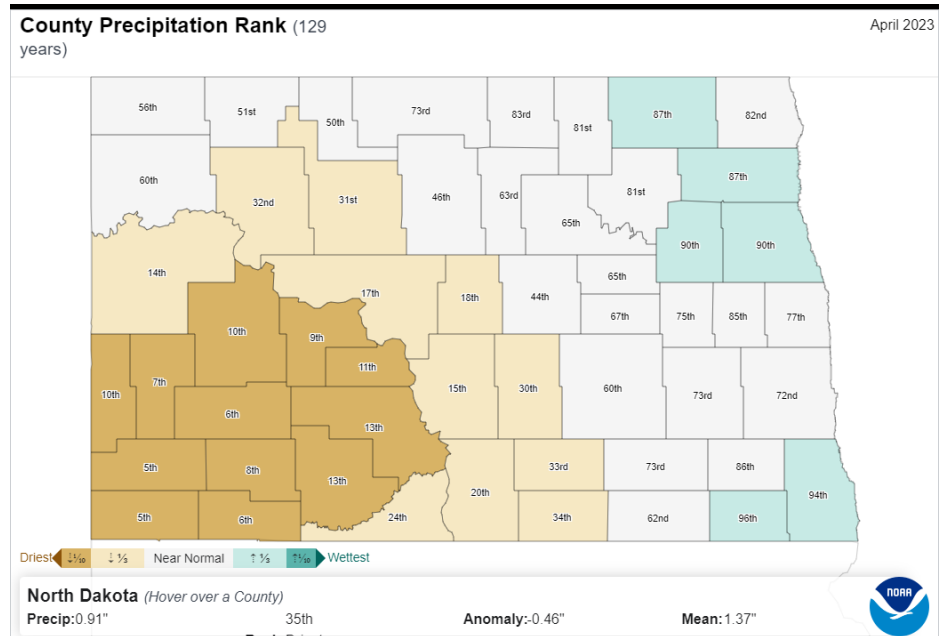


Figure 1. April 2023 county precipitation ranking map of North Dakota. (NCEI, National Oceanic and Atmospheric Administration [NOAA])



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North Dakota Precipitation April

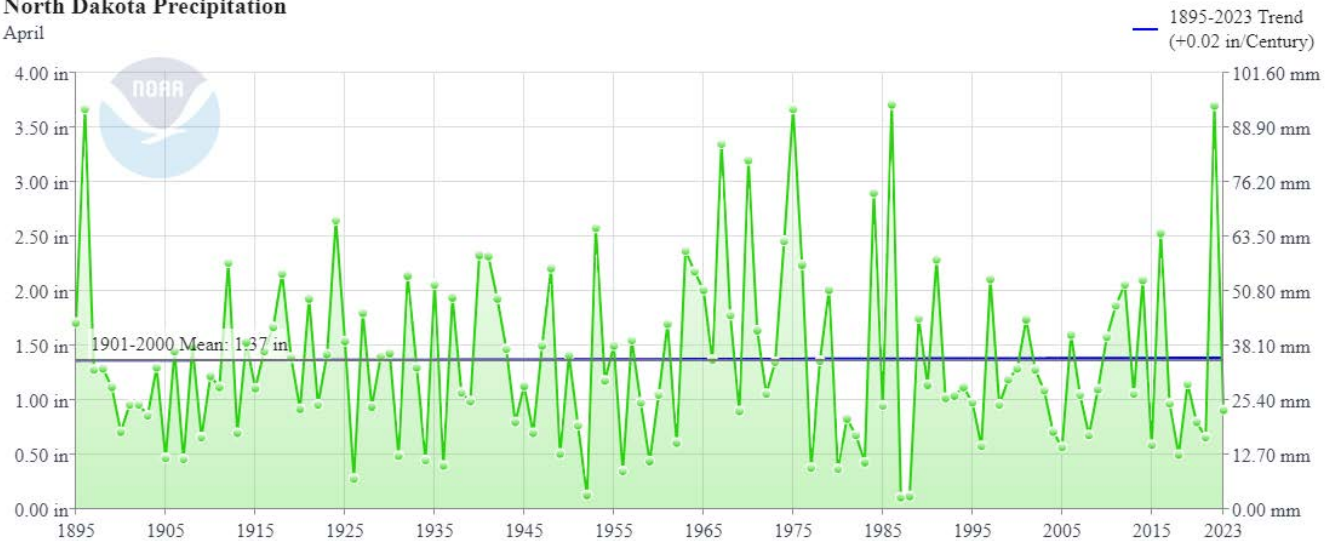


Figure 2. Historical April precipitation time series for North Dakota. (NCEI, NOAA)

Table 1. North Dakota April Precipitation Ranking Table.

| Period | Value | Normal | Anomaly | Rank | Wettest/Driest Since | Record Year |
|------------|-------|--------|---------|-----------------------------|---|------------------------------|
| April 2023 | 0.91" | 1.25" | 0.34" | 35th driest 95th wettest | Driest since 2021 Wettest since 2022 | 0.11" (1987) 3.71" (1986) |



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Temperature

The official state average April temperature was 34.8 F, 20.7 degrees warmer than last month and 1.2 degrees warmer than in April 2022. However, the average April temperature was 6.4 degrees cooler than the 1991-2020 average, making it the 10th coldest April in the 129 years of record (Table 2).

The counties shaded in blue in Figure 3 indicate cooler-than-average conditions. The numbers inside the counties are the temperature rankings, with one being the lowest (coldest) and 129 being the highest (warmest).

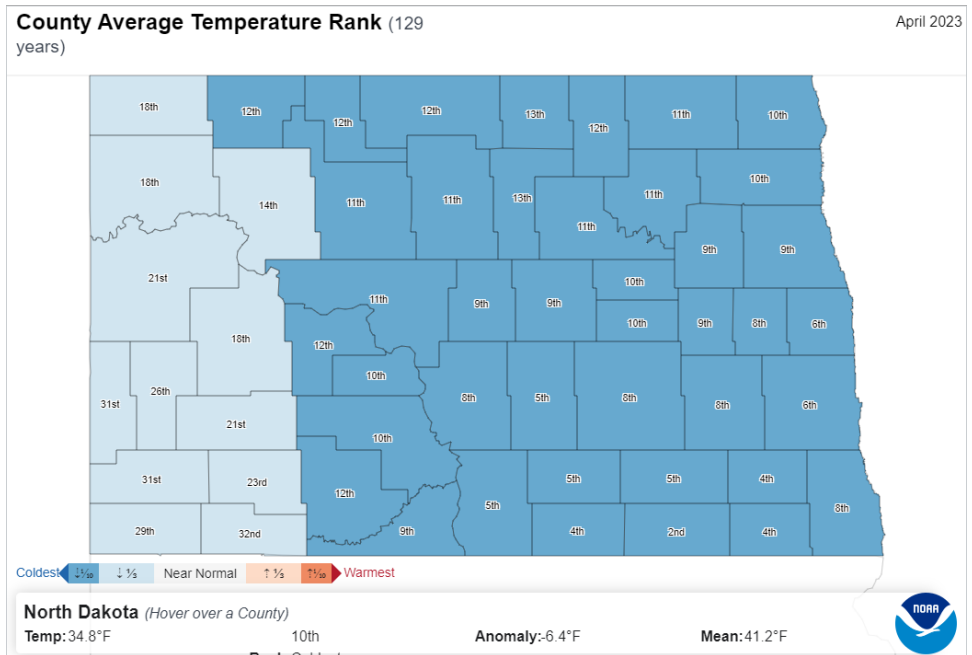


Figure 3. April 2023 county temperature ranking map of North Dakota. (NCEI, NOAA)

The state's highest and lowest daily temperatures ranged from 89 F on Apr. 11 in Hettinger, Adams County, to -7 F on Apr. 8 in Cavalier, Pembina County. Based on the historical records, the state average April temperature showed a slight negative long-term trend of 0.6 degrees during the last century. The lowest and highest monthly state April average temperatures during this period ranged from 31.3 F in 2013 to 50.2 F in 1987 (Figure 4 and Table 2).



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North Dakota Average Temperature
April

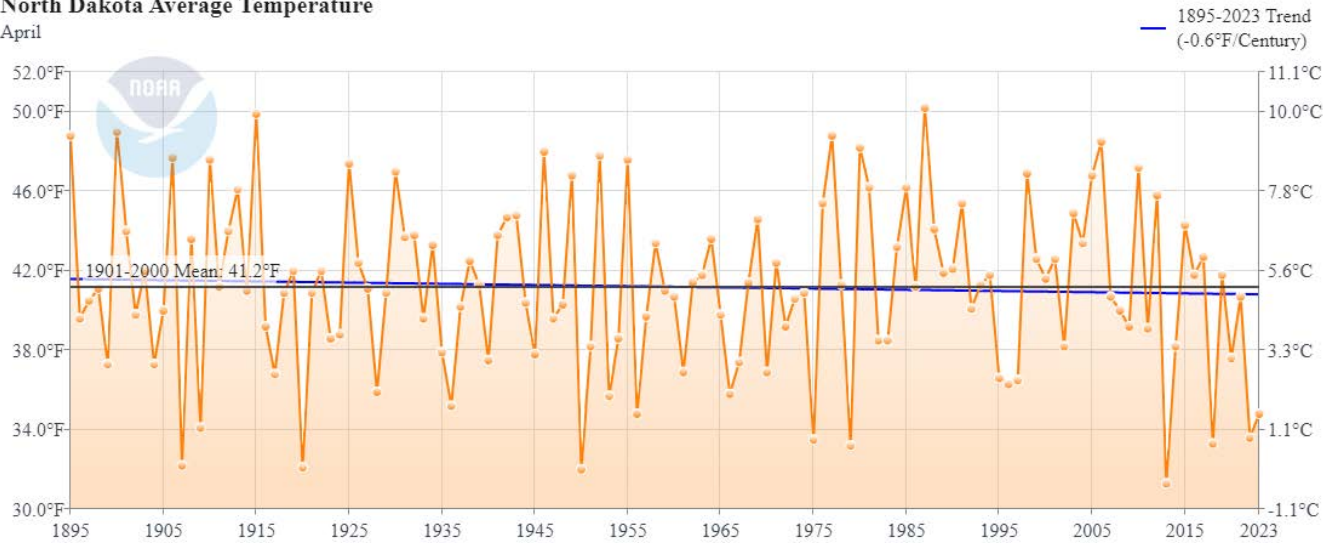


Figure 4. Historical April temperature time series for North Dakota. (NCEI, NOAA)

Table 2. North Dakota April Temperature Ranking Table.

| Period | Value | Normal | Anomaly | Rank | Warmest/Coollest Since | Record Year |
|------------|--------|--------|---------|-------------------------------|---|--------------------------------|
| April 2023 | 34.8 F | 41.2 F | -6.4 F | 10th coolest 120th warmest | Coollest since 2022 Warmest since 2021 | 31.3 F (2013) 50.2 F (1987) |



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

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

Table 3. Summary of April 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 April 2023 North Dakota storm events (red: tornado; blue: wind; green: hail). (Storm Prediction Center, NOAA)



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Daily Record Events in April: Across the observation network of weather stations with at least 30 years of history, three daily high and 36 daily low-temperature records were set or tied. In addition, a total of 37 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 April. (NCEI Daily Weather Records)

| Category | Number of Records |
|-----------------------------|-------------------|
| Highest daily max. temp. | 1 |
| Highest daily min. temp. | 2 |
| Lowest daily max. temp. | 27 |
| Lowest daily min. temp. | 9 |
| Highest daily precipitation | 6 |
| Highest daily snowfall | 31 |
| Total | 76 |

The Highlight of the Month*

A highest daily maximum snowfall record of **14.5 inches** was broken in **Ashley on April 5**, exceeding the previous record set in 1947 by **12 inches** (years on record: 126).

*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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