



# North Dakota Monthly Climate Summary

March 2020

Volume 14, No. 3

## Precipitation

North Dakota State Climate Office: Your Resource for Climate Information

**NDSU** NORTH DAKOTA STATE UNIVERSITY

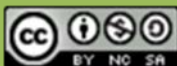
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and Natural Resources

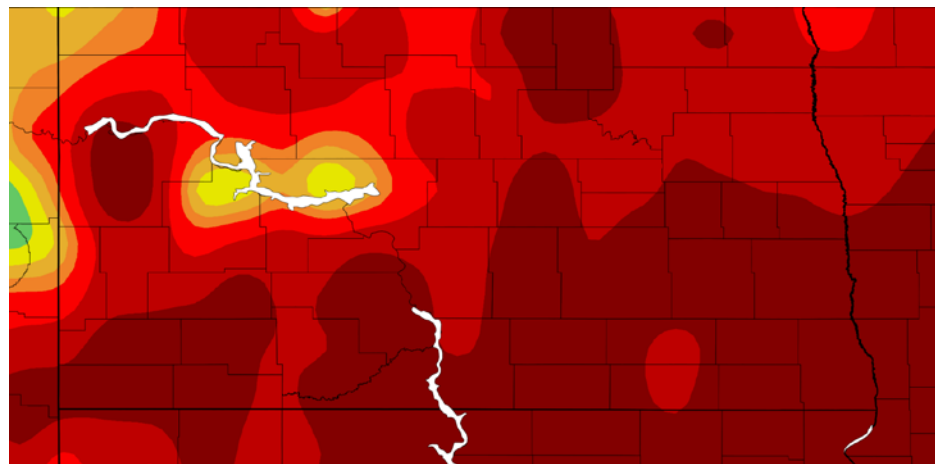
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Based on the National Centers for Environmental Information (NCEI), the statewide average March precipitation was 0.27 inch, which was 0.09 inch more than last month but 0.24 inch less than in March 2019. It also was 0.56 inch less than the 1981-2010 average, making it the 12th driest March in the 126-year period of record (Table 1). It was the driest March since 2001. The values less than 100 in Figure 1 below are shaded in yellow, orange and red to depict the region with below-average rainfall. In contrast, the values that are greater than 100 in the same figure are shaded in green, blue and purple to depict the region with above-average rainfall in March. The greatest monthly precipitation accumulation was 0.89 inch, recorded in Sherwood, Renville County. The greatest monthly snowfall accumulation was 10.4 inches, recorded in Grassy Butte, McKenzie County. Based on historical records, statewide March precipitation showed a slight negative long-term trend of 0.01 inch per century since 1895. The lowest and highest March precipitation for the state ranged from 0.11 inch in 1930 to 2.31 inches in 1902 (Figure 2).



**Figure 1. March 2020 precipitation percent of normal for North Dakota. (High Plains Regional Climate Center)**



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Volume 14, No. 3

## North Dakota Precipitation

March

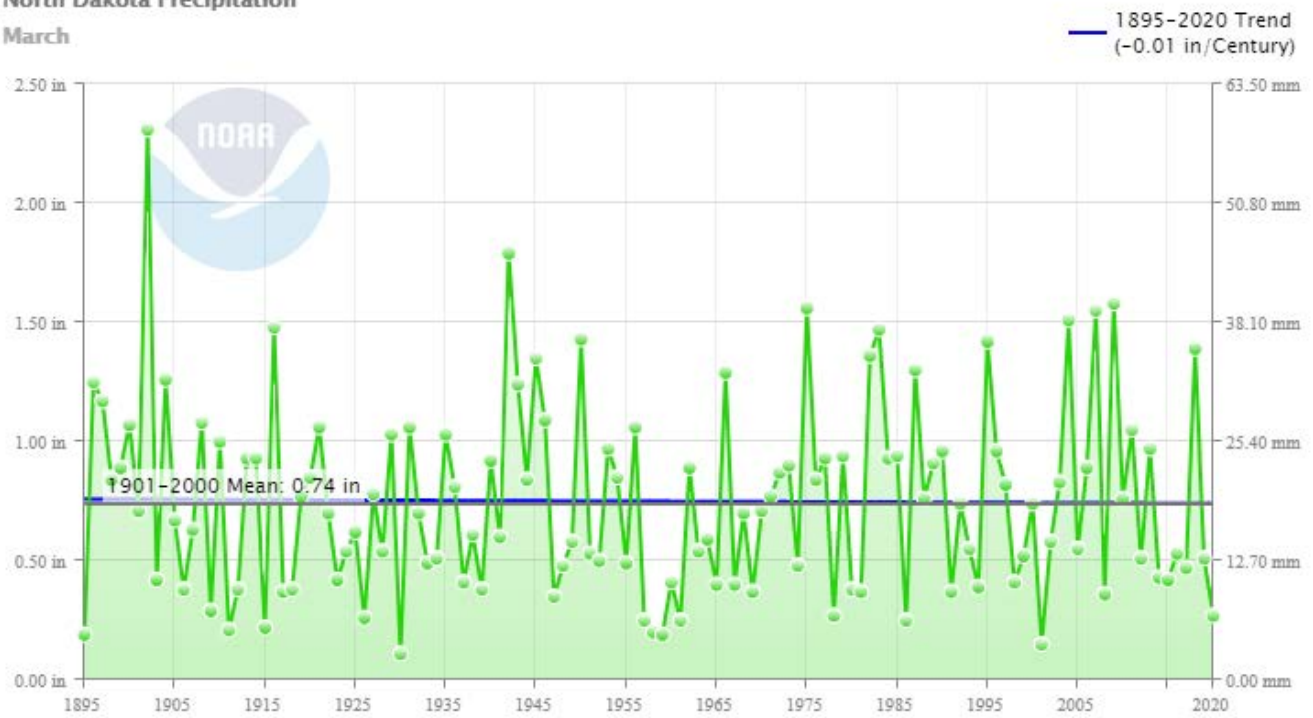


Figure 2. Historical March precipitation time series for North Dakota. (NCEI, NOAA)

Table 1. North Dakota March Precipitation Ranking Table.

Period	Value	Normal	Anomaly	Rank	Wettest/Driest Since	Record Year
March 2020	0.27"	0.83"	-0.56"	12th driest 115th wettest	Driest since 2001 Wettest since 2019	0.11" (1930) 2.31" (1902)



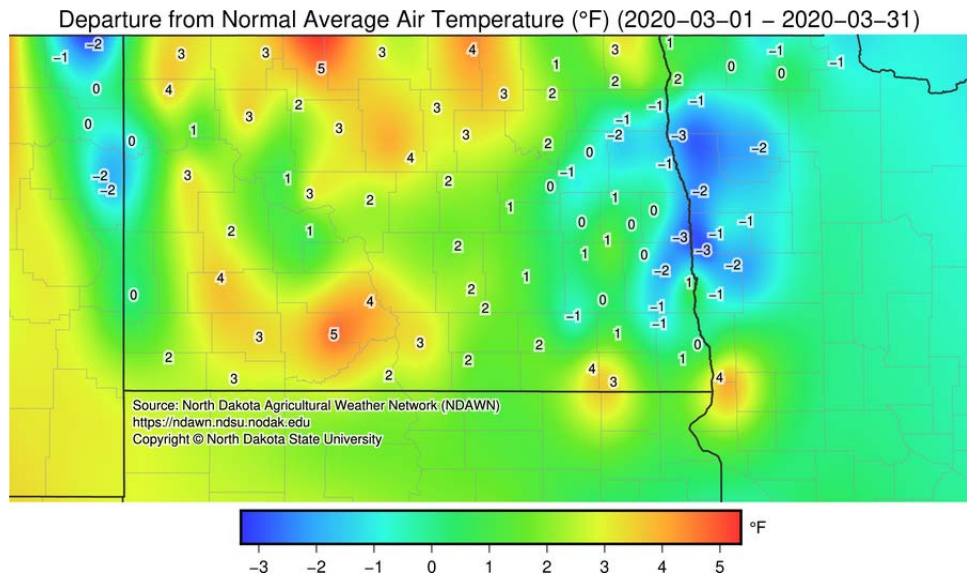
# North Dakota Monthly Climate Summary

March 2020

Volume 14, No. 3

## Temperature

The official state average March temperature was 29.8 F, which is 12.2 degrees warmer than last month and 9.2 degrees warmer than in March 2019. The average March temperature was 2.3 degrees warmer than the 1981-2010 average, which made it the 30th warmest March in the 126 years of record. It was the warmest March since 2016 (Table 2). The negative numbers in Figure 3 are shaded in



**Figure 3. March 2020 temperature departure from normal for North Dakota. (North Dakota Agricultural Weather Network)**

green and blue to depict the region with cooler-than-average temperatures in March. In contrast, the positive numbers in the same figure are shaded in red and orange to illustrate the region with warmer-than-average temperatures in March. The state's lowest and highest daily temperatures ranged from minus 15 F on March 20 in Garrison, McLean County, and Rugby, Pierce County, to 71 F on March 8 in Hettinger, Adams County, and Medora, Billings County, and on March 7 in New England, Hettinger County. Based on the historical records, the state average March temperature showed a hard positive long-term trend of 0.5 degree per decade since 1895. The lowest and highest monthly state March average temperatures ranged from 7 F in 1899 to 40.6 F in 2012 (Figure 4).



# North Dakota Monthly Climate Summary

March 2020

Volume 14, No. 3

North Dakota Average Temperature  
March

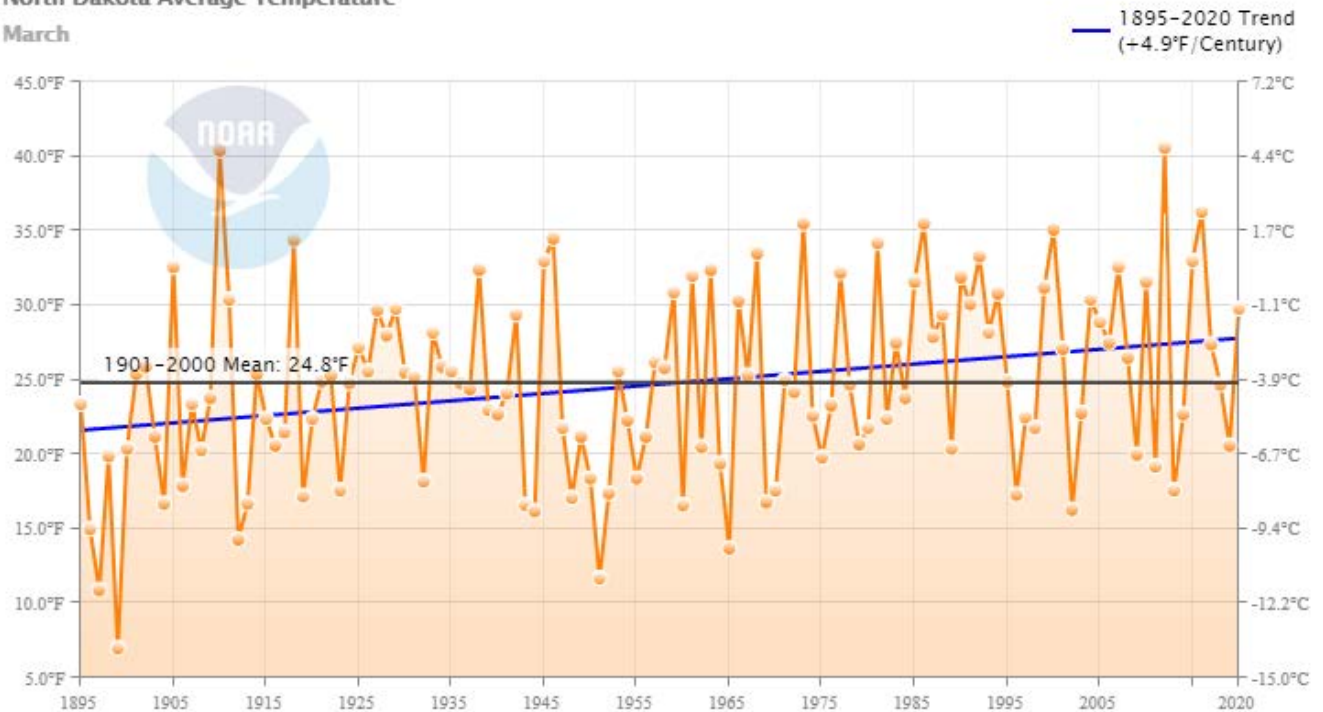


Figure 4. Historical March temperature time series for North Dakota. (NCEI, NOAA)

Table 2. North Dakota March Temperature Ranking Table.

Period	Value	Normal	Anomaly	Rank	Warmest/Coollest Since	Record Year
March 2020	29.8°	27.5°	2.3°	97th coolest 30th warmest	Coollest since 2019 Warmest since 2016	7 F (1899) 40.6 F (2012)



# North Dakota Monthly Climate Summary

March 2020

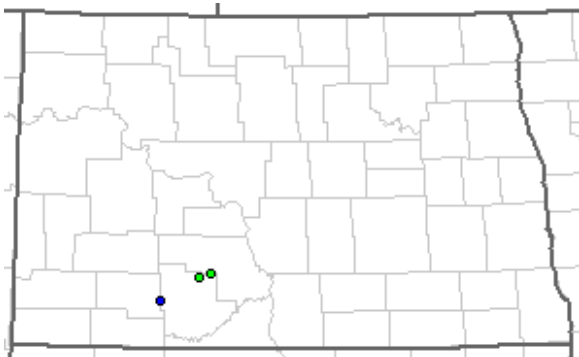
Volume 14, No. 3

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

The NOAA Storm Report showed two hail and one wind reports, with a total of three 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)*

<b>Category</b>	<b>Number of Reports</b>
<i>Tornado reports</i>	0
<i>Hail reports</i>	2
<i>Wind reports</i>	1
<b>Total</b>	<b>3</b>



*Figure 5. Map of March 2020 North Dakota storm events (red: tornado; blue: wind; green: hail). (Storm Prediction Center, NOAA)*



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March 2020

Volume 14, No. 3

**Daily Record Events in March:** Across the observation network of weather stations with at least 30 years of history, nine daily high- and two daily low-temperature records were set or tied. A total of 15 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.	7
Highest daily min. temp.	2
Lowest daily max. temp.	1
Lowest daily min. temp.	1
Highest daily precipitation	8
Highest daily snowfall	7
<b>Total</b>	<b>26</b>

## The Highlight of the Month\*

A highest daily snowfall record of 5 inches was set in **Petersburg on March 19.** (years on record: 79).

\*The records in this box may be different from the record on Pages 1 and 3 because this page only includes records for stations with at least 30 years of history.

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