



North Dakota Monthly Climate Summary

June 2019

Volume 13, No. 6

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 June precipitation was 2.79 inches, which was 0.5 inch more than last month, but 1.77 inches less than in June 2018 and 0.55 inch less than the 1981-2010 average, making it the 37th driest June in the 125-year period of record. It was the driest June since 2017 (Table 1). The numbers 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 numbers 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 June. The greatest monthly precipitation accumulation was 6.32 inches, recorded in Rolette, Rolette County. The greatest 24-hour precipitation was 2.95 inches, recorded in Belcourt, Rolette County, on June 22. The greatest monthly snowfall accumulation was a trace, recorded in Grassy Butte, McKenzie County. The greatest 24-hour snowfall was a trace, recorded also in Grassy Butte, McKenzie County, on June 1, 9, 24 and again on June 30. Based on historical records, statewide June precipitation showed a negative long-term trend of 0.18 inch per century since 1895. The highest and lowest June precipitation for the state ranged from 7.01 inches in 2005 to 1.11 inches in 1974 (Figure 2).

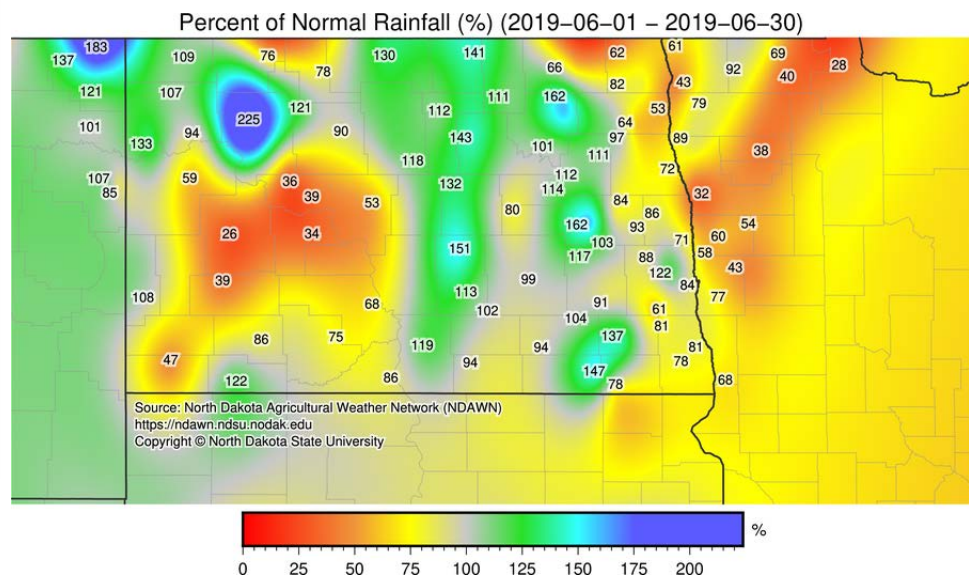


Figure 1. June 2019 precipitation percent of normal for North Dakota. (North Dakota Agricultural Weather Network)



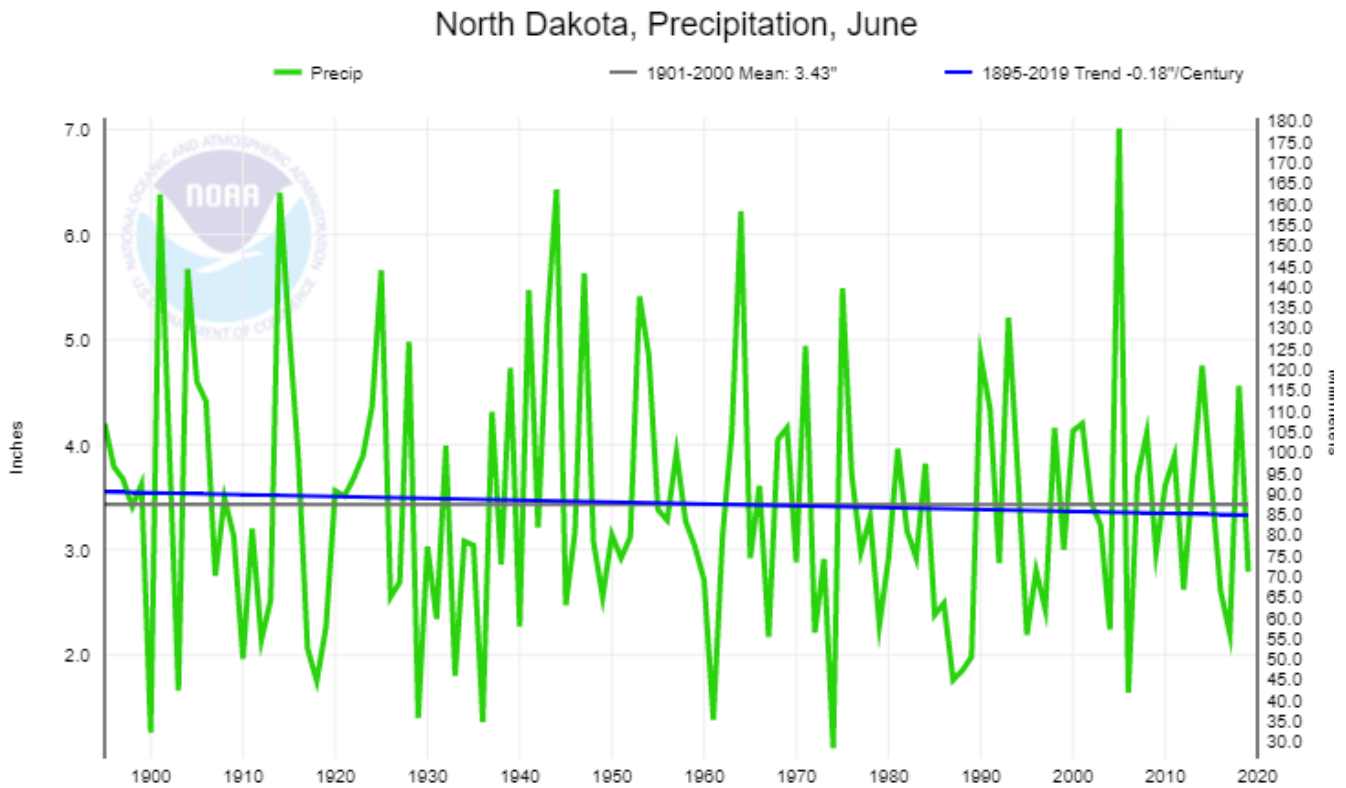
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June Precipitation Statistics

Record high value: 7.01 inches in 2005
 Record low value: 1.11 inches in 1974
 Trend: minus 0.18 inch per century

June 2019 value: 2.79 inch
 1981-2010 average: 3.34 inch
 Monthly ranking: 37th driest
 Record length: 125 years

Figure 2. Historical June precipitation time series for North Dakota.

Table 1. North Dakota June Precipitation Ranking Table.

Period	Value	Normal	Anomaly	Rank	Wettest/Driest Since	Record Year
June 2019	2.79"	3.34"	- 0.55	37th driest 89th wettest	Driest since 2017 Wettest since 2018	1974 2005



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Temperature

The official state average June temperature was 63.9 F, which is 14.4 F warmer than last month but 3.5 F cooler than in June 2018. The average June temperature was 0.6 F warmer than the 1981-2010 average, which made it the 45th warmest June in the 125-year period of record. It was the warmest June since 2018 (Table 2). It also halts the five consecutive cooler-than-average run started since January

2019. The negative numbers in Figure 3 are shaded in green and blue to depict the region with cooler-than-average temperatures in June. In contrast, the positive numbers in the same figure are shaded in red and orange to depict the region with warmer-than-average temperatures in June. The state's highest and lowest daily temperatures ranged from 98 F on June 8 in Pembina, Pembina County, to 32 F on June 9 in Williston, Williams County. Based on the historical records, the state average June temperature showed a slight positive long-term trend of 0.1 F per decade since 1895. The highest and lowest monthly state June average temperatures ranged from 74.1 F in 1988 to 56.8 F in 1915 (Figure 4).

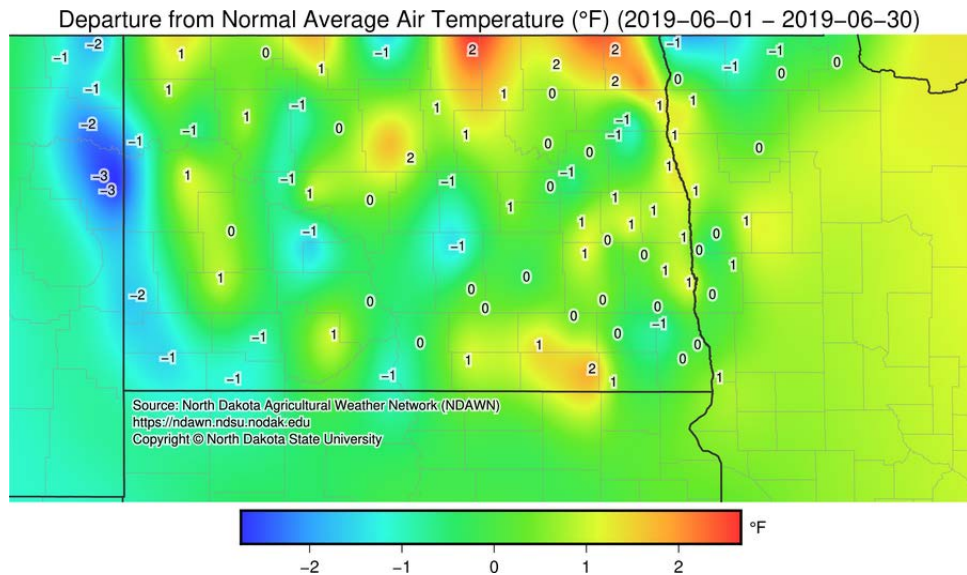


Figure 3. June 2019 temperature departure from normal for North Dakota. (North Dakota Agricultural Weather Network)



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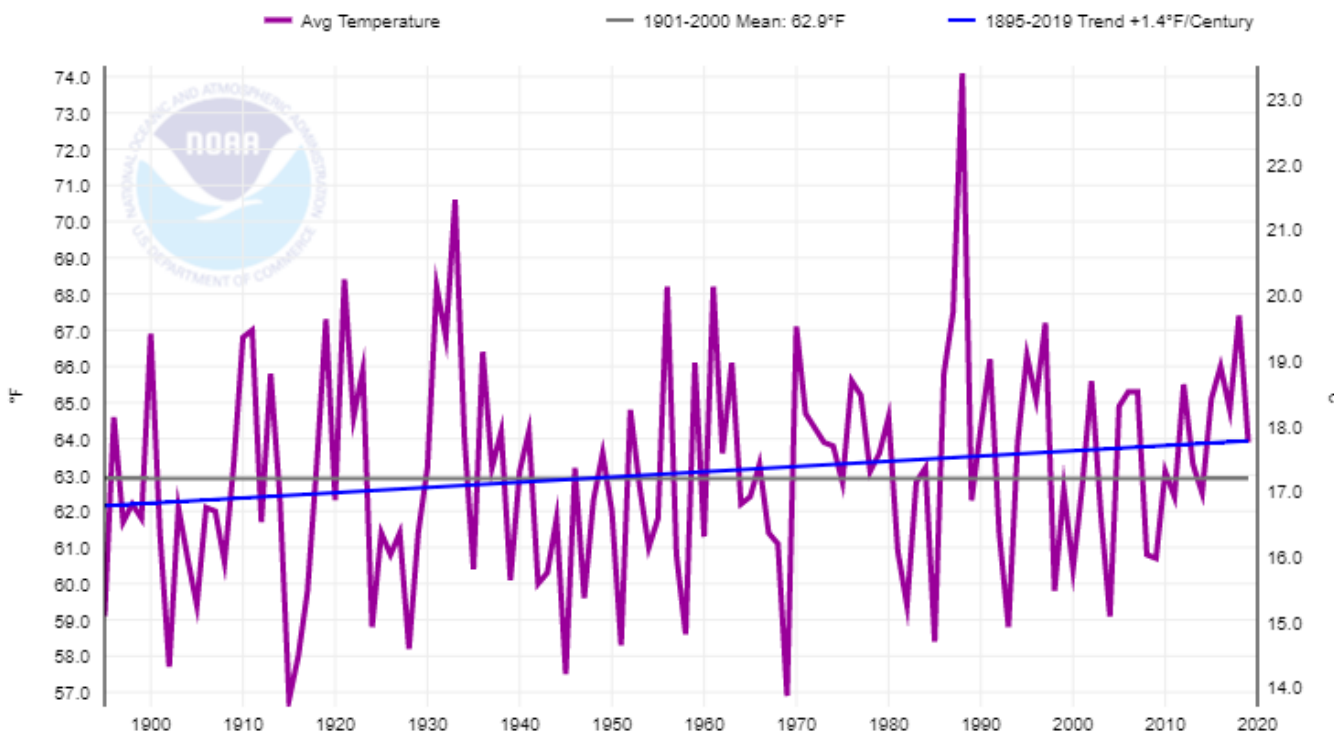


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North Dakota, Average Temperature, June



June Temperature Statistics

Record high value: 74.1 F in 1988
 Record low value: 56.8 F in 1915
 Trend: 0.1 F per decade

June 2019 value: 63.9 F
 1981-2010 average: 63.3 F
 Monthly ranking: 45th warmest
 Record length: 125 years

Figure 4. Historical June temperature time series for North Dakota.

Table 2. North Dakota June Temperature Ranking Table.

Period	Value	Normal	Anomaly	Rank	Warmest/Coollest Since	Record Year
June 2019	63.9	63.3	+0.6	81th coolest 45th warmest	Coollest since 2014 Warmest since 2018	1915 1988



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Storm Reports: Table 3. Below shows the summary of June Severe Storm Reports in North Dakota (Storm Prediction Center, NOAA).

The NOAA Storm Report showed 56 significant storm events in June. Table 3 summarizes the number of tornado, hail and damaging wind reports in June, while Figure 5 geographically displays the locations of these storms.

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

Category	Number of Reports
Tornado reports	2
Hail reports	22
Wind reports	32
Total	56

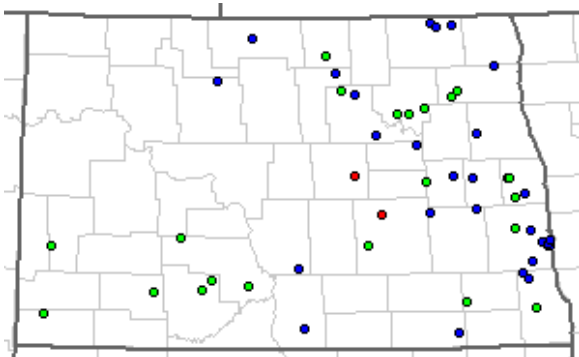


Figure 5. Map of June 2018 North Dakota storm events (red: tornado; blue: wind; green: hail).



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Daily Record Events in June: Across the observation network of weather stations with at least 30 years of history, 17 daily high- and eight daily low-temperature-related records were set or tied. A total of three highest daily precipitation-related records were set or tied. Details of the records are in Table 4 below.

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

Category	Number of Records
Highest daily max. temp.	9
Highest daily min. temp.	8
Lowest daily max. temp.	6
Lowest daily min. temp.	2
Highest daily precipitation	3
Highest daily snowfall	0
Total	28

The Highlight of the Month*

A highest daily temperature record of 97 degrees was set in **Cavalier** on **June 8**, breaking the previous record for that date by one degree, which was set in 1988 (years on record: 84).

*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.

This work is supported by the USDA National Institute of Food and Agriculture, Hatch/Multi State project ND1005365.



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