

North Dakota Monthly Climate Summary

July 2025

Volume 19. No. 7

NORTH DAKOTA STATE CLIMATE OFFICE



July 2025



Photo: Anti-Crepuscular Rays Shine through some Mammatus Clouds as Captured by the NDAWN Wing Station

July is climatologically the warmest month of the year in North Dakota. The month in many ways did not live up to those warm standards, as like June, much of the state either finished near or below average for the month.

The cooler weather meant less evaporation, plus, with many areas recording above average rain during the month, the dry conditions that were present in many areas was greatly reduced. In many ways, July 2025 could simply be described as cool and wet for the state.

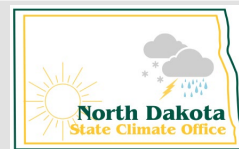


Figure 1: A Shelf Cloud approaches the NDAWN New Salem station on the morning of July 28, 2025.

Daryl Ritchison, North Dakota State Climatologist

Precipitation

2



About 75% of the NDAWN (North Dakota Agricultural Weather Network) stations in North Dakota recorded above average rainfall during the month (Figure 2). The exceptions were parts of the south central, northeastern and southeastern North Dakota.

Percent of Normal Precipitation (%)

07-01-2025 - 07-31-2025

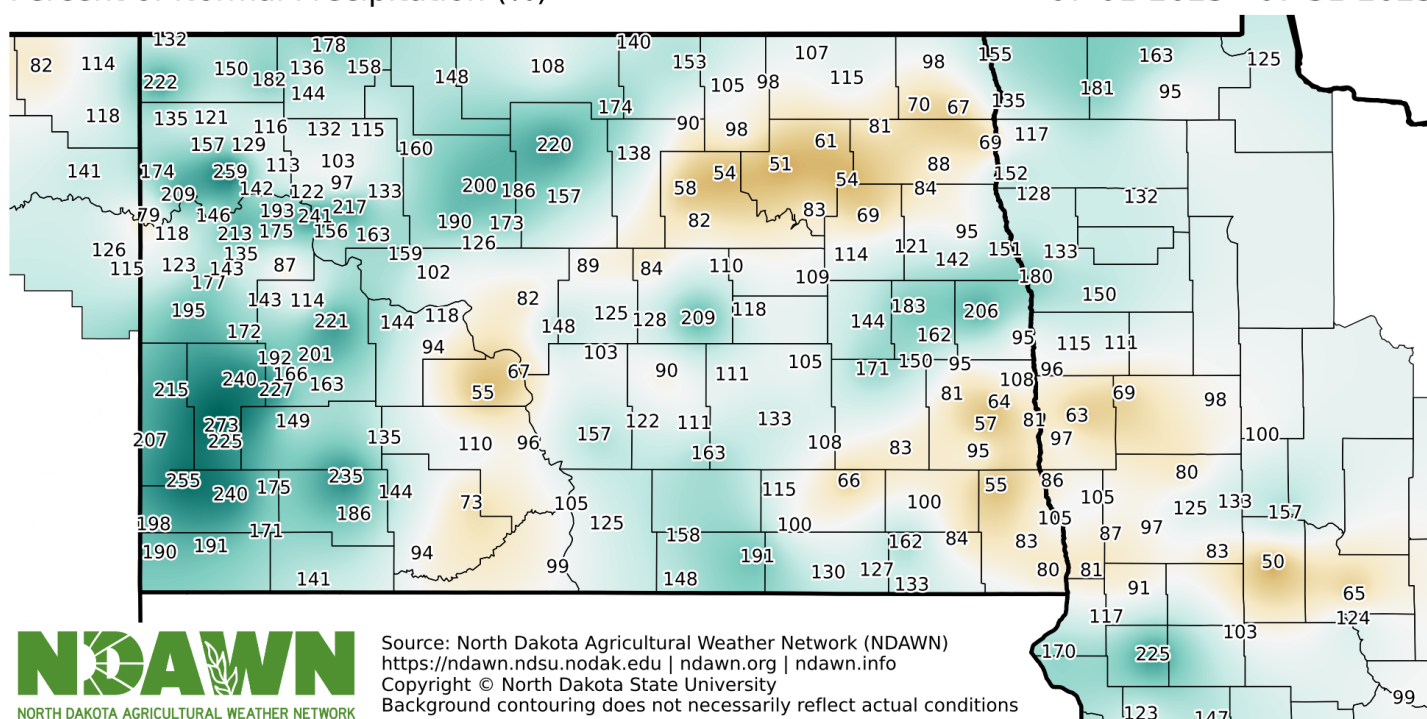
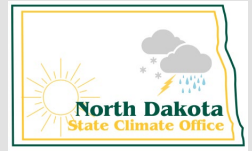


Figure 2: Percent of Average Precipitation measured at all NDAWN stations in July 2025

Precipitation

3



The maximum monthly precipitation recorded by NDAWN during the month of July was 7.09 inches at the Epping station in central Williams County. That was 259% of average. On the dry side of things, in central Oliver County, North Dakota, the Center NDAWN station recorded 1.52 inches of precipitation, 55% of normal (Figure 3).

Total Precipitation (in)

07-01-2025 - 07-31-2025

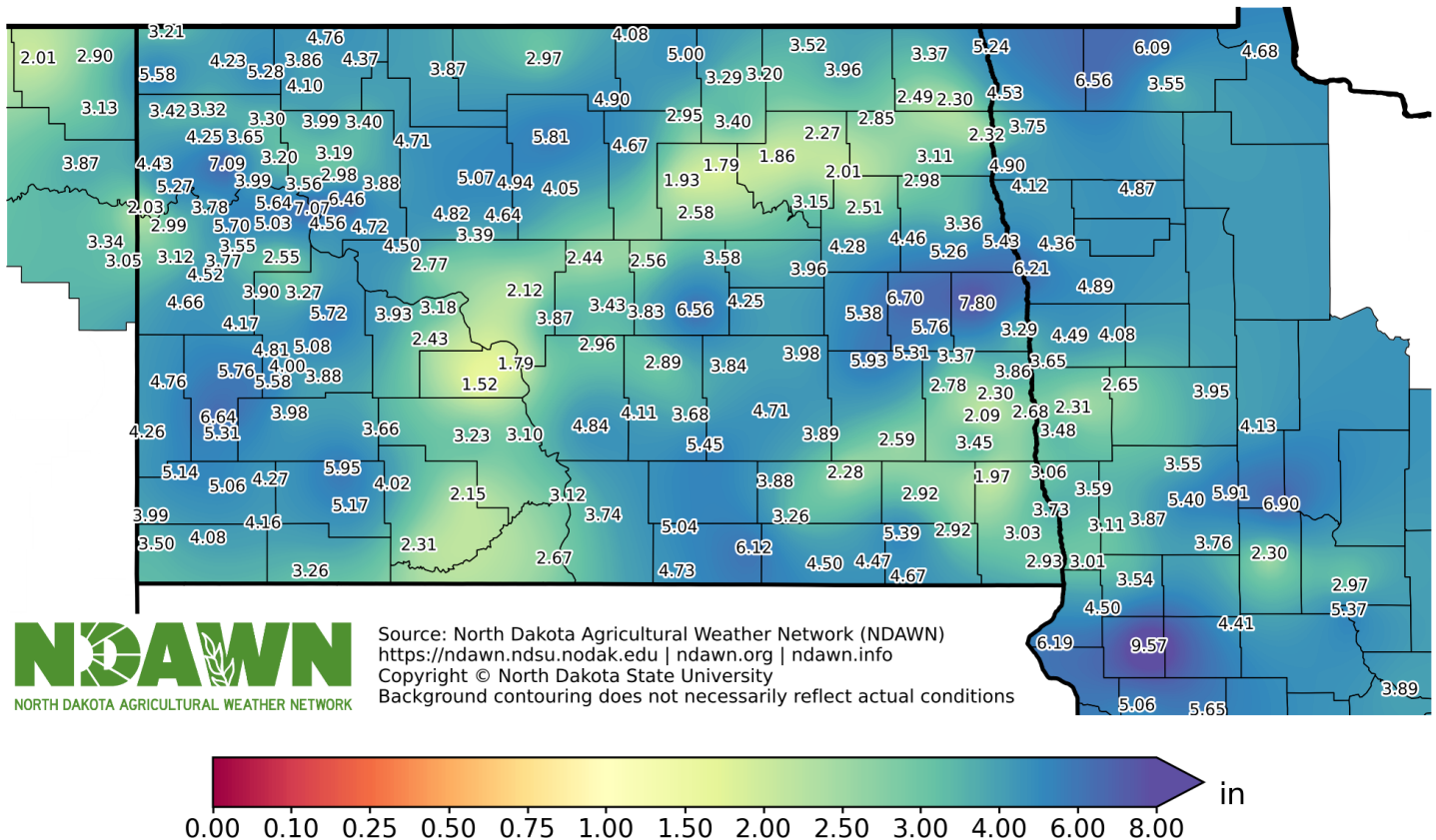
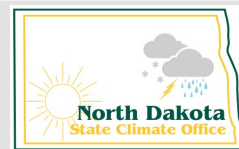


Figure 3: Rain Totals for the July 2025 at NDAWN Weather Stations

Precipitation

4



From a long-term perspective, northern North Dakota still overall was dry for the year (Figure 4). This was especially true for areas in northern North Dakota where D1, Moderate Drought, was expanded in areas north of Highway 2.

Total Precipitation (in)

01-01-2025 - 07-31-2025

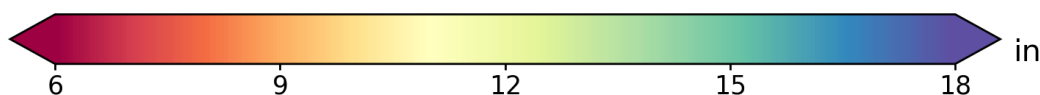
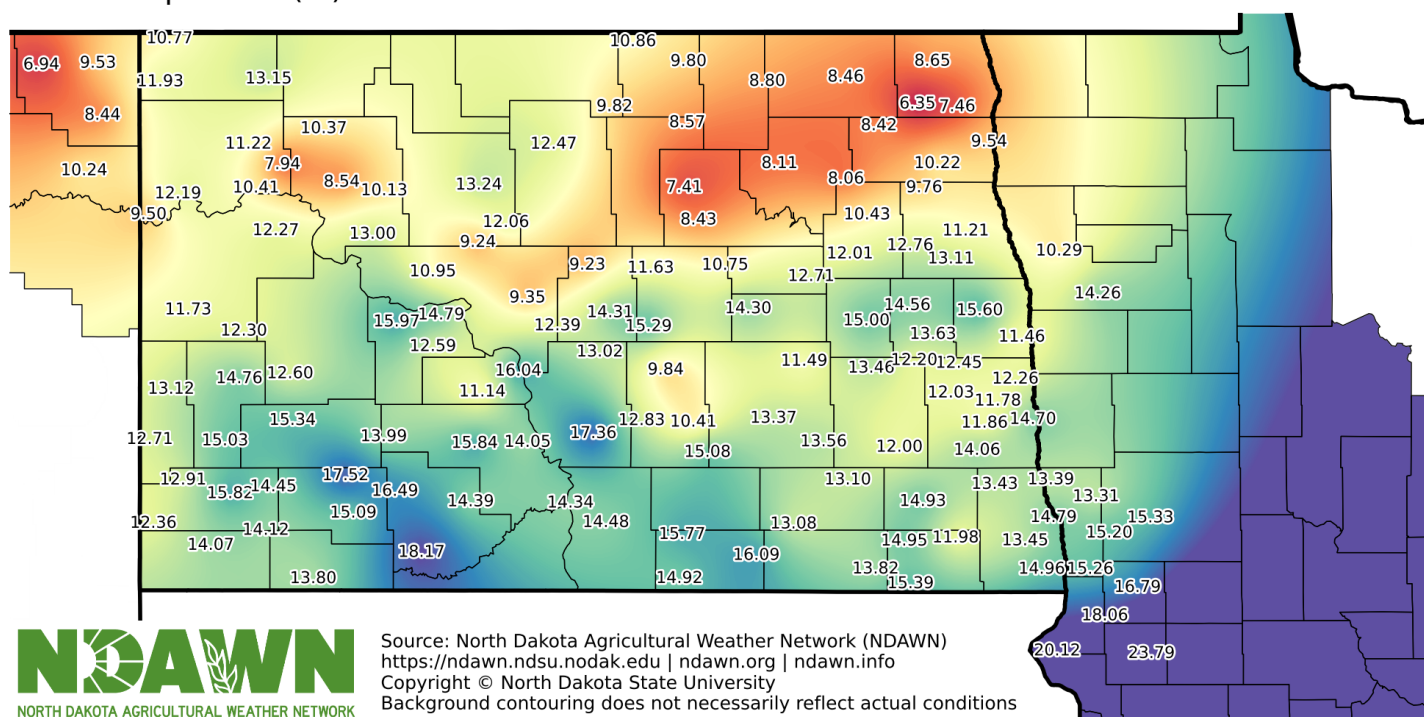


Figure 4: Total Precipitation from January through July at NDAWN with all-season gauges

Improvements to the Drought Monitor that started in May, slowed down in June, but reappeared in July. Much of southwestern North Dakota had all dryness removed, or changed from D1, Moderate Drought, to D0, Abnormally Dry (Figure 5).

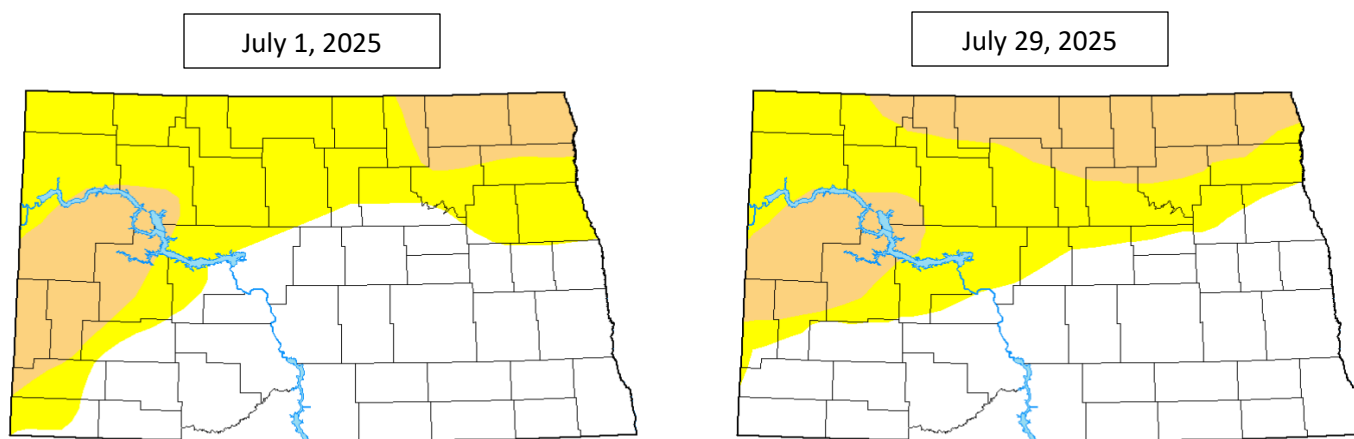


Figure 5: U.S. Drought Monitor conditions change between July 1, 2025 (left) to July 29, 2025 (right)

North Dakota Precipitation

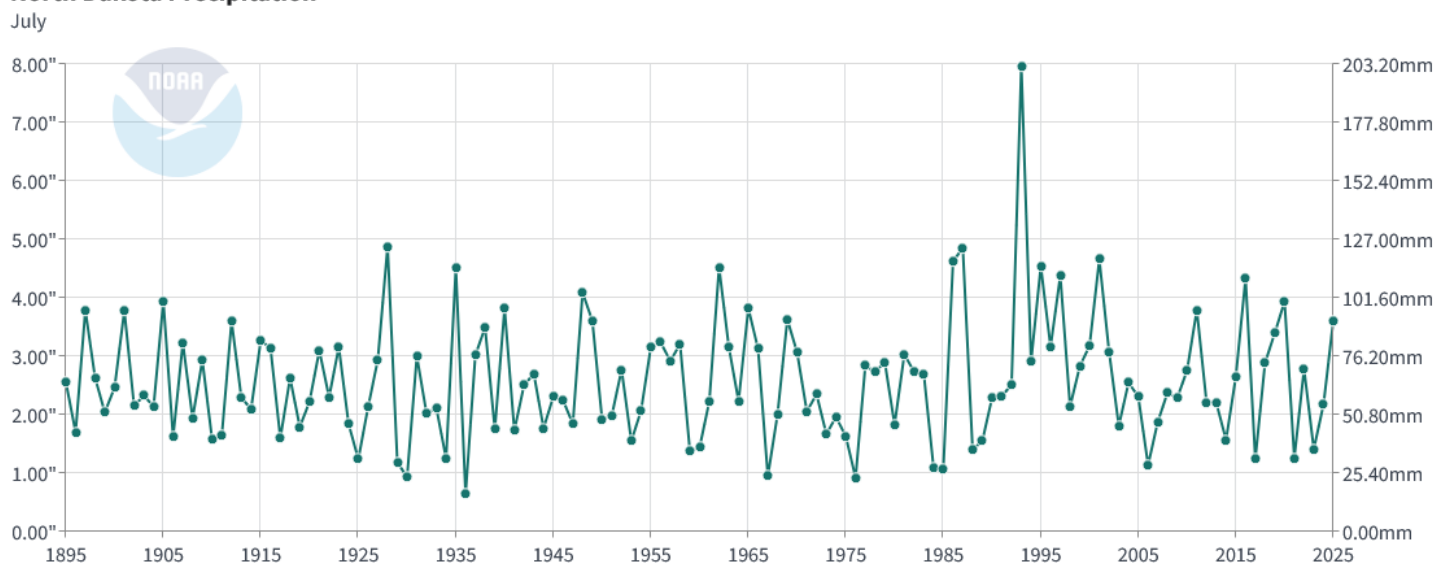


Figure 6: Average Precipitation in North Dakota for the month of July (via NCEI)

Precipitation

6

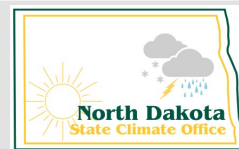


Figure 7: A rainbow after a thunderstorm with 1" hail fell over the NDAWN Belfield rain gauge only station.

North Dakota July Precipitation Summary

	Precipitation	Normal	Anomaly	Rank	Record Year
July 2025	3.61"	2.59"	1.02"	20th Wettest	1993
				112th Driest	1936

Temperature

7



July overall was cooler than average with few days with extreme heat. (Figure 8). This is very similar to the conditions observed in June. The National Center of Environmental Information (NCEI) had the month right at the average, but NDAWN data showed the state was clearly below normal for temperatures.

Departure from Normal Average Air Temperature (°F)

07-01-2025 - 07-31-2025

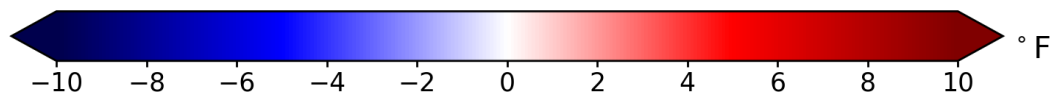
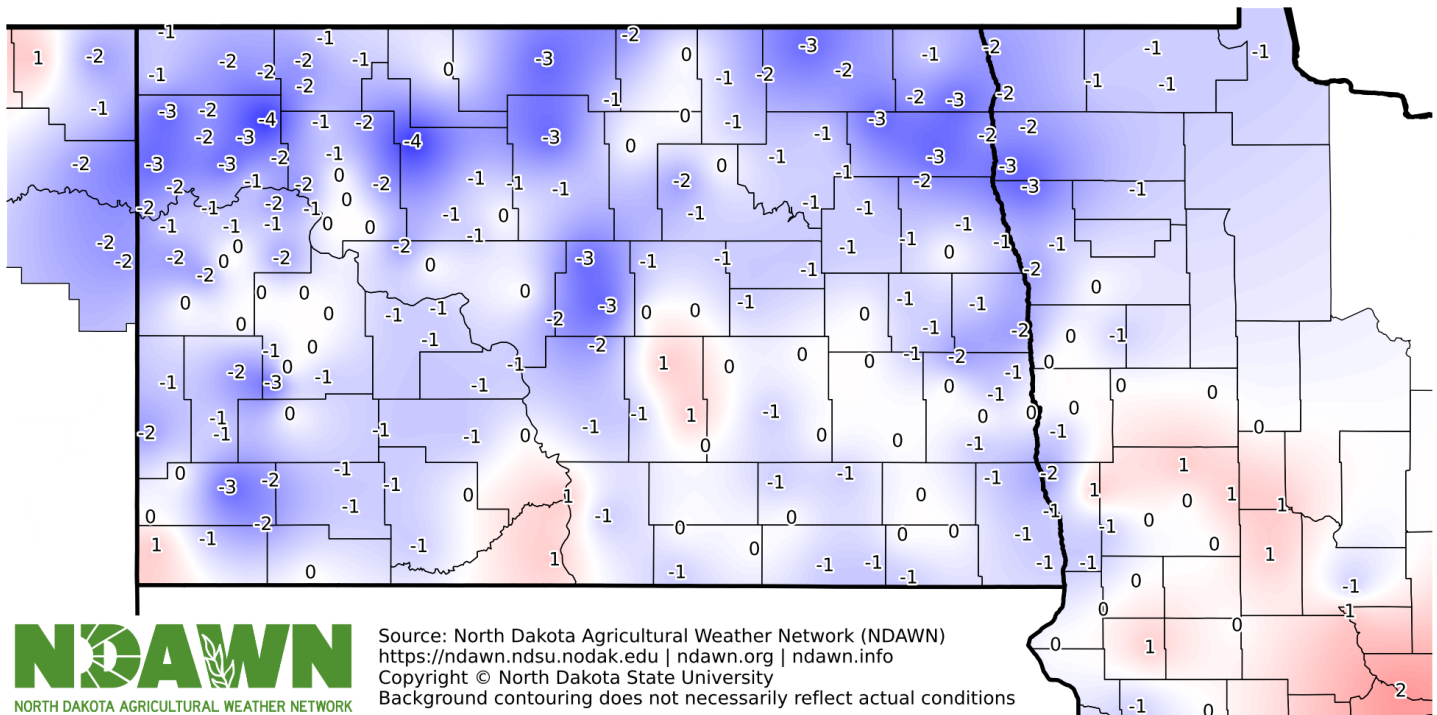


Figure 8: Average Air Temperature Departure from average for the month of July at all NDAWN Stations

Temperature

The extreme heat in North Dakota was shorted lived, yet, impressive, especially in western North Dakota. The Alexander NDAWN station recorded a maximum of 105° on July 9, which was the warmest for the state not only in July but for the year through July 31. Eastern North Dakota recorded their warmest temperatures, including a 96° reading at the Gardner, NDAWN station on Independence Day. Temperatures at 90° or above occurred on very few days, with many stations in northeastern part of the state not recording any 90° temperature during the month.

Maximum Temperature (° F)

07-01-2025 - 07-31-2025

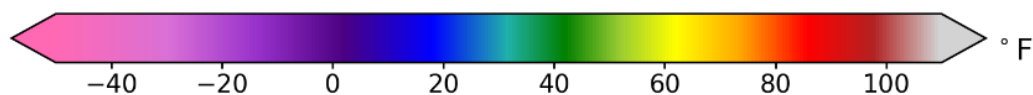
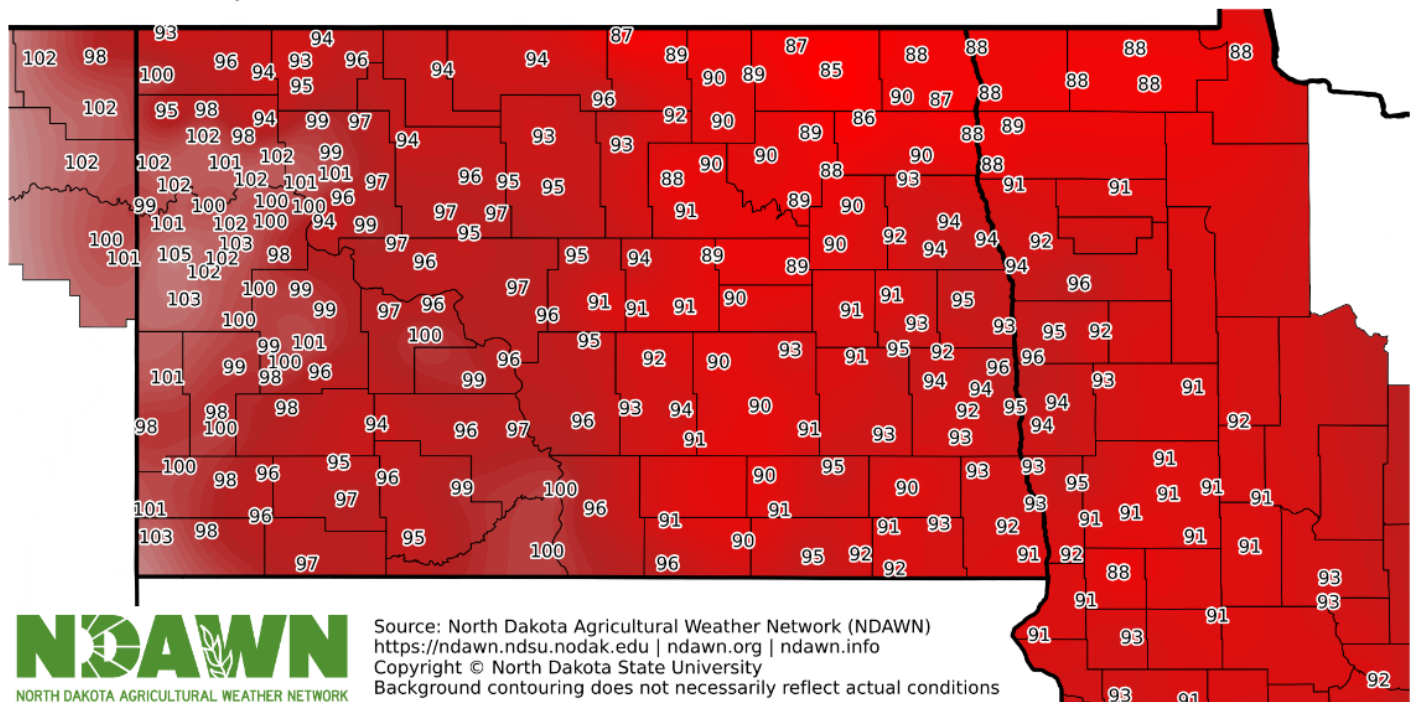


Figure 9: Maximum Temperature recorded at all NDAWN stations during the month of July.

Temperature

The lowest temperature recorded during July at NDAWN stations was at the Willow City station with a minimum of 34° (Figure 10). Temperatures near freezing aren't necessarily unusual in any month when you live in North Dakota, but it was certainly colder than the usually coldest temperature observed during the warmest month of the year.

Minimum Temperature (°F)

07-01-2025 - 07-31-2025

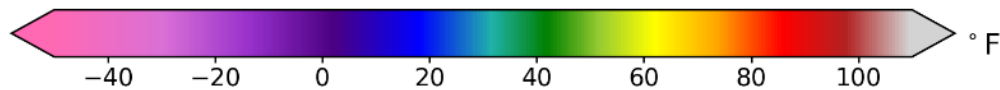
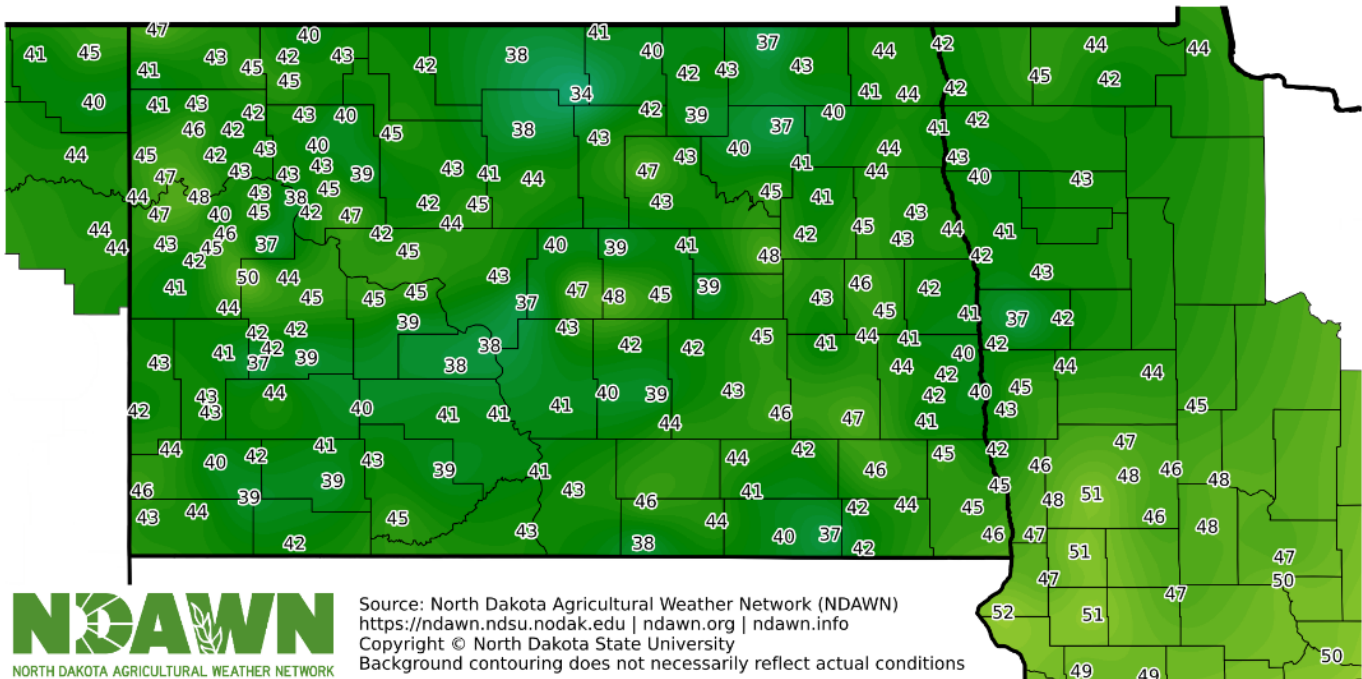


Figure 10: Minimum temperature recorded at each NDAWN Station during July 2025

North Dakota July Temperature Summary

July 2025 Temperature Summary	Average T	Avg max T	Avg min T	Maximum	Minimum
	69°F	81.1°F	56.9°F	105°F	34°F
Anomaly	+0.0°F	-1.2°F	+1.2°F		
Rank					
Warmest	74th warmest	87 th Warmest	49 th warmest		
Coolest	58th Coldest	45 th Coldest	83rd Coldest		
Record					
Warmest	80.1°F (1936)	96.6°F (1936)	63.7°F (1936)		
Coolest	61.8°F (1992)	72.2°F (1993)	50.3°F (1992)		

Table 2: June temperature summary for North Dakota. 2025 statistics from NDAWN station data. Ranking and records based on NCEI climate data (1895-2025) (NOAA).

North Dakota Average Temperature

July

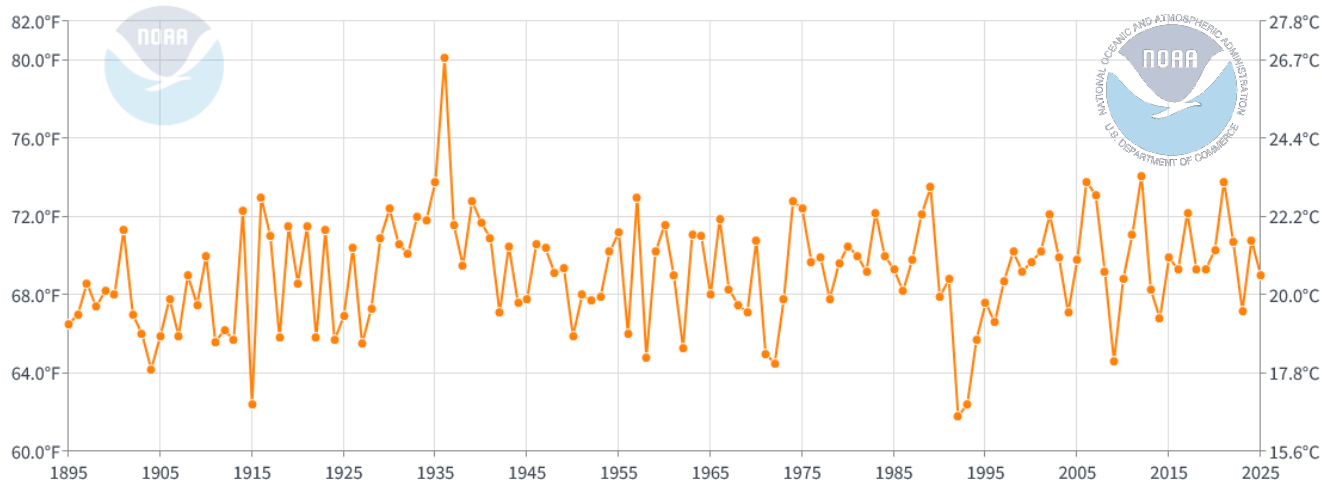


Figure 11: Average July Temperatures since 1895 based on NCEI analysis. NDAWN data suggested much cooler readings.