

CLIMATE SUMMARY: October 2008

Precipitation:

The North Dakota (ND) state average precipitation was 2.24 inches which was above to the 1971-2000 normal state average of 1.41 inches. October 2008 state average precipitation ranked the 11th wettest in the past 114 years with a maximum of 4.71 inches in 1982 and a minimum of 0.10 inches in 1952.

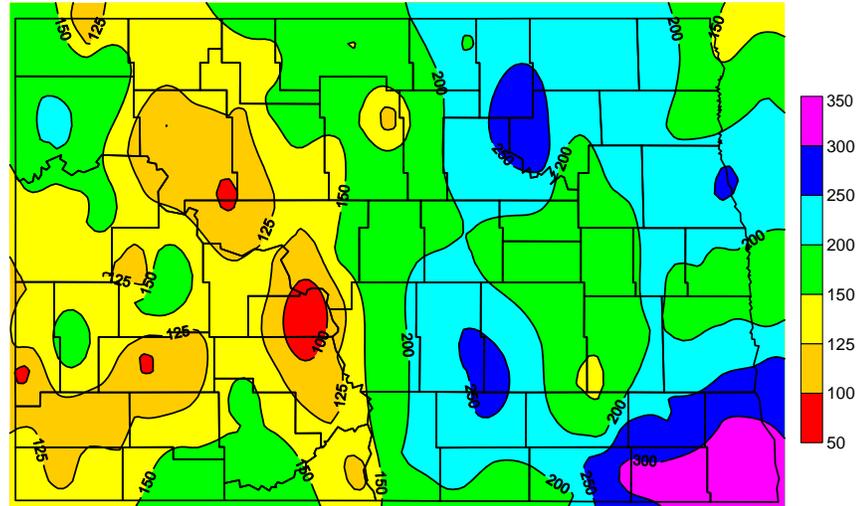


Figure 1. Precipitation Percent of Normal in October 2008 for North Dakota (North Dakota State Climate Office)

The October precipitation percent of normal was normal to above normal with a general range of around 100% to 200% for the western half of ND. The precipitation percent of normal was above normal in the eastern half of the state with a general range of 150% to 300%. The southeast corner of the state had the greatest amount of rainfall with greater than 300% of normal precipitation (Figure 1, North Dakota State Climate Office). The highest rainfall event was on the 10th in which the top four daily rainfall totals were reported from the North Dakota Agricultural Weather Network (NDAWN). The totals were 2.28” at Wyndmere, 2.17” at Wahpeton, 2.01” at Oakes, and 1.83” at Ekre, all of which are located in the south east corner of the state. The precipitation event from the 10th through the 13th included snowfall in the western third of the state. National Weather Service (NWS) reported that Williston had a record snowfall of 7 inches on the 12th which broke the previous record of 0.5 inches set in 1899.

The US Drought Monitor classified the areas to the north and east of the Missouri river as having no drought conditions. Most of the south west corner of the state was classified as severe drought conditions. The USDA, National Agricultural Statistics Service, North Dakota Field Office reported a topsoil moisture of 8% very short, 17% short, 63% adequate, and 12% surplus with a subsoil moisture reported as 20% very short, 17% short, 52% adequate, and 11% surplus (Weekly Weather and Crop Bulletin Vol. 95, No. 45).

The National Weather Service (NWS) reported breaking five rainfall records. Grand Forks recorded a record 1.16 inches of rain on the 11th which broke the previous record of 0.70 inches set in 1961. On the 12th, Grand Forks had a record 1.12 inches (breaking the 1981 record of 0.94), Fargo a record 1.23 inches (breaking the 1997 record of 0.84), and Williston a record 0.75 inches (breaking the 1994 record of 0.47). Minot recorded a record 0.53 inches of rain on the 21st which broke the previous record of 0.52 inches set in 1953. NWS also reported that Fargo had a record snowfall of 1.4 inches on the 27th which broke the previous record of 1.2 inches set in 1925.

The top eight October daily maximum wind speeds recorded from the North Dakota Agricultural Weather Network (NDSWN) all fell on the 26th and were over 50 mph. The top five were 54.8 mph at McHenry, 53.3 mph at Marion, 53.0 mph at Robinson, 53.0 mph at Wyndmere, and 51.9 mph at Dazey. NDAWN wind speeds are measured at a height of 10 feet (3 m).

Temperature

The state average air temperature was 44.1 °F which is slightly above the 1971-2000 normal of 43.6°F. October 2008 state average air temperature ranked the 60th coolest in the past 114 years with a maximum of 54.8°F in 1963 and a minimum of 32.5°F in 1925.

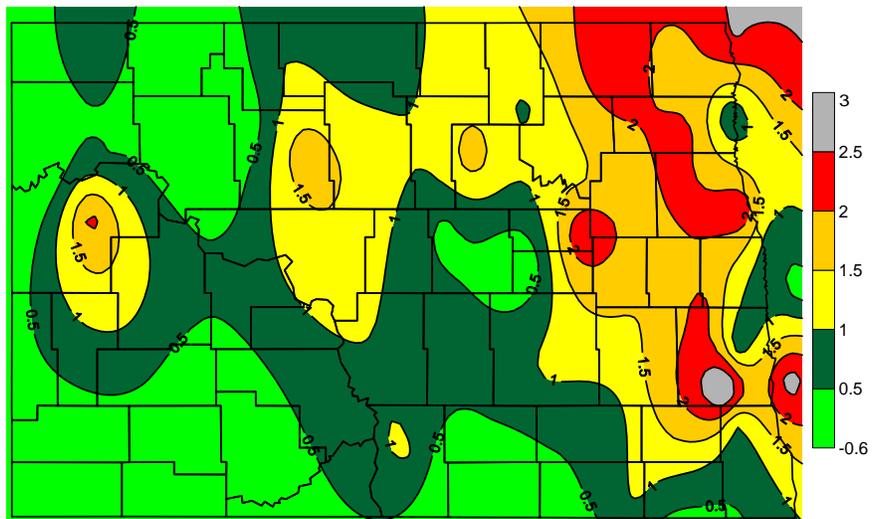


Figure 2. Temperature Departure from Normal in October 2008 for North Dakota (North Dakota State Climate Office)

The October departure from normal temperatures ranged from around -1°F below normal in the south west corner to about 3°F above normal in the northeast (Figure 2, North Dakota State Climate Office). The northern third of the state had October average temperatures in the low 40's. The lower two-thirds of the state had average October temperatures in the mid40's. By mid October most of the state had experienced a killing frost. All areas received a killing frost on the 27th when minimum air temperatures ranged from 11°F in the west to 27°F in the east.

The National Weather Service (NWS) reported that Bismarck had a record latest first fall freeze date on October 14th with 32°F which broke the previous fall freeze date set on October 11, 1980. The NWS reported that Dickinson had a record high temperature of 78°F on the 29th which broke the previous record of 77°F set in 1968.

NDAWN's highest recorded daily air temperature for October was 80.9°F at Sidney, MT on the 4th. The lowest recorded daily air temperature was 11.0°F at Ross on the 27th.