



Monthly Climate Summary

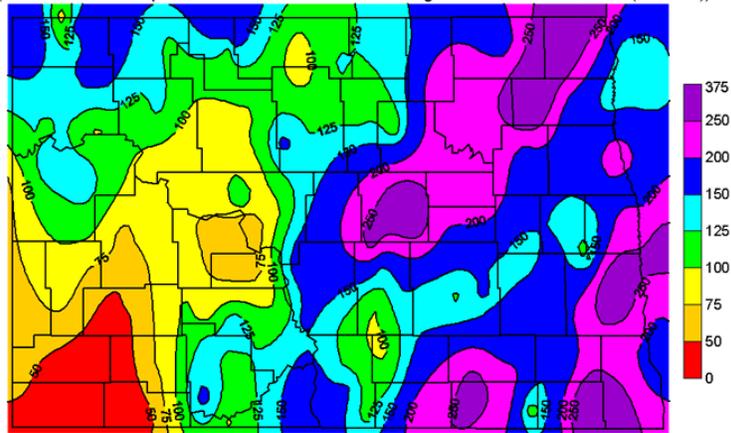
September 2008

The state average precipitation was 2.58 inches which is above the 1971-2000 normal of 1.74 inches. September 2008 state average precipitation ranked 18th wettest in the last 114 years with a maximum of 5.00" in 1900 and a minimum of 0.28" in 1897.

The first half of September had several events of scattered rains across ND. The second half of September was drier with the rain events falling on the 21st through the 24th. The eastern half of the state had greater than normal monthly precipitation with most areas between 125 and 375% of normal. The northwestern part of the state had near normal or slightly above normal monthly precipitation. The southwest part of the state had 25 to 50% of normal monthly precipitation (Figure 1).

The US Drought Monitor classified the northwest part of the state as abnormally dry and the southwest part of the state as extreme drought. The

North Dakota September 2008 Precipitation Percent of Normal
(Data from NWS Cooperative Network and North Dakota Agricultural Weather Network (NDAWMN))



ND State Climate Office

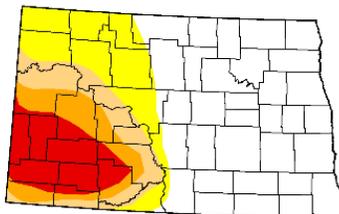
Figure 1 North Dakota Monthly Precipitation Percent of Normal (September 2008)

U.S. Drought Monitor

North Dakota

October 7, 2008
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	54.9	45.2	28.8	19.4	11.8	0.0
Last Week (09/30/2008 map)	54.9	45.2	28.8	19.4	11.8	0.0
3 Months Ago (07/15/2008 map)	38.5	61.5	45.4	31.4	0.0	0.0
Start of Calendar Year (01/01/2008 map)	19.8	80.2	55.5	16.4	0.0	0.0
Start of Water Year (10/07/2008 map)	54.9	45.2	28.8	19.4	11.8	0.0
One Year Ago (10/09/2007 map)	25.6	74.4	40.8	2.9	0.0	0.0



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements

<http://drought.unl.edu/dm>



eastern part of the state did not have drought conditions. Based on Figure 2, more than 10% of the state land is experiencing extreme drought and is confined to west-central and southwestern portions of the state. Counties under extreme drought conditions are:

- McKenzie
- Golden Valley
- Billings

Figure 2 Us Drought Monitor at the end of September 2008 (National Drought Mitigation Center).

- Dunn
- Stark
- Morton
- Grant
- Slope
- Hettinger
- Bowman
- Hettinger

The USDA, National Agricultural Statistics Service, North Dakota Field Office reported a topsoil moisture of 18% very short, 15% short, 62% adequate, and 5% surplus with a subsoil moisture reported as 23% very short, 21% short, 52% adequate, and 4% surplus (Weekly Weather and Crop Bulletin Vol. 95, No. 40).

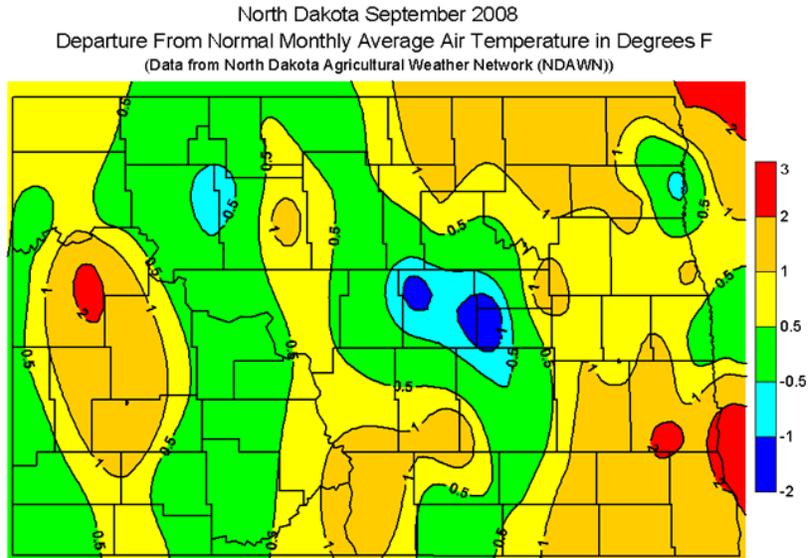
The National Weather Service (NWS) reported breaking three rainfall records on the 1st. Bismarck recorded 1.15 inches of rain breaking the previous record of 0.72 inches set in 1986. Grand Forks recorded 1.67 inches of rain breaking the previous record of 0.98 inches set in 1957. Fargo recorded 2.50 inches of rain breaking the previous record of 2.32 inches set in 1999. The top five September daily rainfall totals measured from the North Dakota Agricultural Weather Network (NDAWN) was 2.47” at Fargo on the 1st, 2.45” at Prosper on the 10th, 2.28” at Hillsboro on the 1st, 2.23” at Prosper on the 1st, and 2.21” at Ada MN on the 1st. The top five September daily maximum wind speeds recorded from NDAWN was 56.6 mph at McHenry on the 22nd, 45.5 mph at Galesburg on the 23rd, 44.0 mph at McHenry on the 6th, 42.9 mph at Ada MN on the 1st, and 41.9 mph at Robinson on the 22nd. NDAWN wind speeds are measured at a height of 10 feet (3 m).

According to the preliminary reports of the National Weather Service’s Storm Prediction Center (SPC), throughout September there were 3 reported high wind events, 9 reports of hail, and 0 reported tornadoes. The 28th had one report of hail in Richland County. The 24th also had one report of hail in Sargent County. One high wind event was reported on the 21st in Hettinger County.

The storm system that moved across ND on the 22nd produced some rain scattered across the state with the highest totals of over an inch in the northeast. Most of the wind and hail reports came from this September 22nd storm system. Hail was reported by SPC in Wells, Eddy, Nelson, Pembina, and Grand Forks Counties. SPC reported high winds in Pembina and Walsh Counties.

The state average air temperature was 56.4°F which is about the same as the 1971-2000 normal of 56.1 °F. September 2008 state average air temperature ranked 64th coolest in the past 114 years with a maximum of 63.4 °F in 1897 and a minimum of 45.2 °F in 1965.

September's average monthly temperatures ranged from around 65°F in the southeast to around 55°F in the northwest. For the most part, the east half of the state had 1 to 2°F above normal temperatures. The western part of the state was closer to normal. The central part of the state had a mix of near normal in the north central and slightly above normal in the south central with a few areas in the center as 1 to 2°F below normal. The western part of the state had scattered frost on the 24th and 29th.



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Figure 3 North Dakota Monthly Average Temperature Departure from Normal (September 2008)

The NWS reported a record high temperature at Dickinson of 89°F on the 19th which broke the previous record of 88°F set in 1960. NDAWN's highest recorded daily air temperature for September was 92.4°F at Wahpeton on the 1st. The lowest recorded daily air temperature was 29.8°F at Hillsboro on the 30th.