



North Dakota

Monthly Climate Summary

December 2010

Precipitation:

The northwest, eastern, and central regions had above normal precipitation with many areas of greater than 200% in December. The central and southeast areas had greater than 300% of normal. The southwest corner of the state had below normal precipitation (Figure 1. High Plains Regional Climate Center).

Precipitation totals ranged from about 0.15 inches in the southwest to 2.5 inches in the central region. In summary, December was wet and cold for most of the state with several wide spread storm systems. The National Weather Service (NWS) reported breaking several liquid precipitation, snowfall, and at least one snow depth record in December. Williston had a record 35.3 inches of snow in December and a record snow depth set on the 21st of 23.0 inches. The first wide spread storm event was on the 3rd and 4th in which precipitation records were broken at Dickinson, Bismarck, Minot and Williston. The second wide spread system was on the 10th and 11th during which a record 14.3 inches of snow was recorded at Williston on the 11th. A light snow fell for most on the 13th. The 15th through the 17th had yet another wide spread storm system with only a few days before the next bout of snow fell on the 20th and 21st. The 24th again had light snow for most. The month closed with a final storm system on the 30th and 31st that brought high winds, freezing drizzle, and snow. White out conditions and snow drifts closed many roads and interstates in the east and southeastern parts of the state on the 31st.

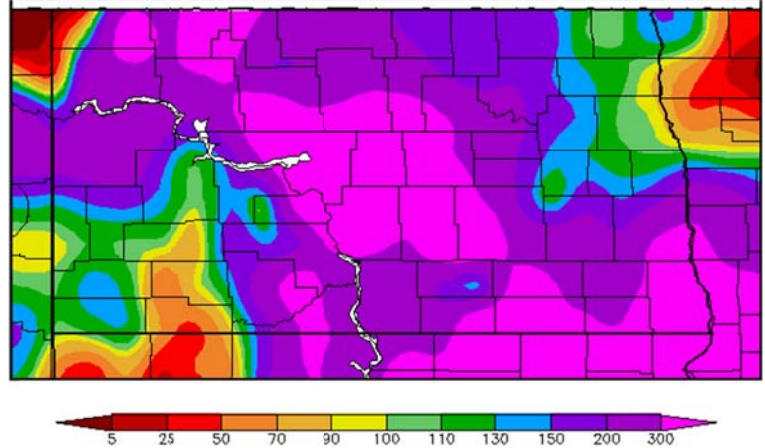


Figure 1. Precipitation Percent of Normal in December 2010 for North Dakota (High Plains Regional Climate Center)

Temperature:

The North Dakota Agricultural Weather Network (NDAWN) December average air temperatures ranged from 6 °F to 15 °F. NDAWN departure from normal temperatures ranged from 0 °F to -5 °F (Figure 2. North Dakota State Climate Office). Several days of cold arctic air brought the monthly average air temperatures down to below normal across the state. The 1st through the 19th had most days with below normal average air temperatures. The 11th through the 13th temperatures dipped farther to -10 to -20°F below normal for most. From the 20th through the 30th temperatures rebounded to near normal with a few above normal days. More arctic air moved in on the last day of December bringing temperatures down again to -9 to -17 °F below normal in the central and eastern region.

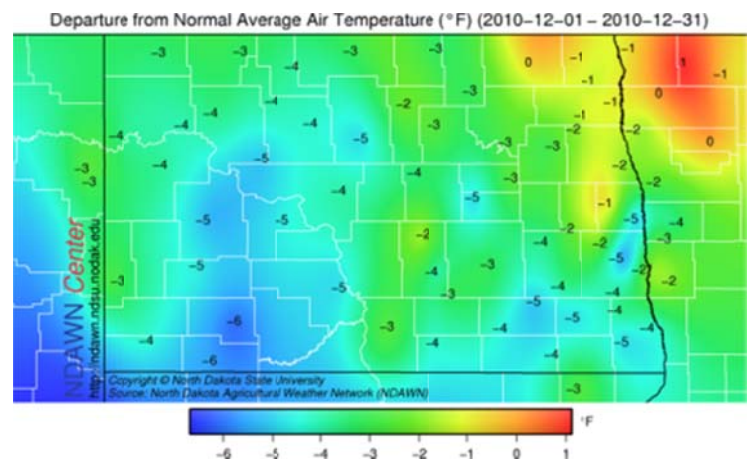


Figure 2. Temperature Departure from Normal in December 2010 for North Dakota (North Dakota State Climate Office)