



North Dakota Monthly Climate Summary

June 2016

Volume 10 Number 6

Precipitation

Based on the NCEI calculations, the state averaged 2.34" of precipitation, which is 0.29" below the 1981-2010 average. It was 1.05" drier than last year and was the driest June since 2006. The statewide average precipitation was ranked the 23rd driest on record since 1895. As the northern parts of the state received well-above to slightly-above

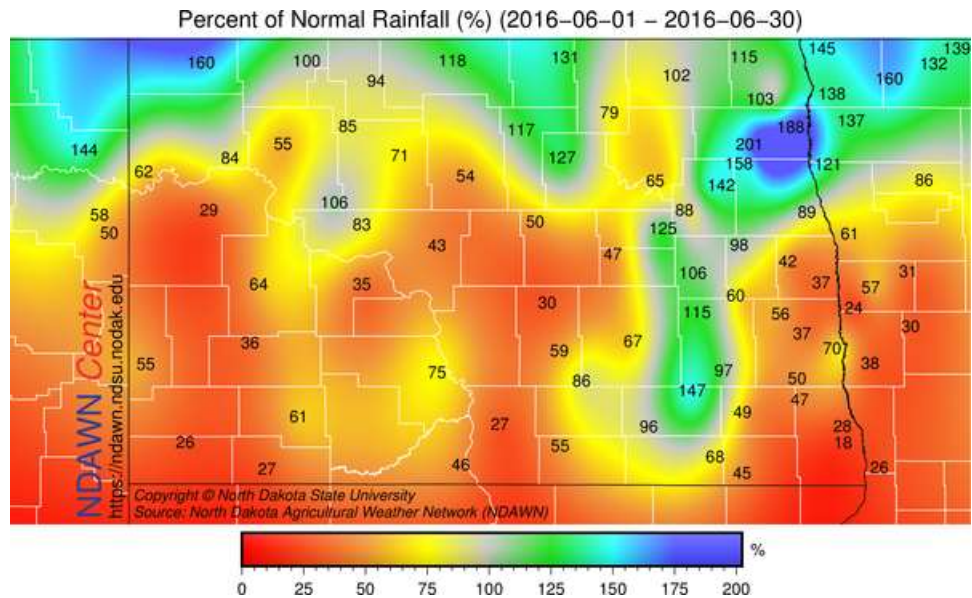


Figure 1. Precipitation Percent of Normal in June 2016 for North Dakota (NDAWN)

precipitation, the southern 2/3 of the state received below-normal amounts (Fig. 1). Some areas in the northeastern parts of the state received between 2-3" rain on the first week of June causing crops to drown. However, wide-spread precipitation, for the most part, helped replenish soil moisture for seed germination. In the second week, the northern locations benefited from needed moisture, but some areas had heavy rain and hail caused crop damage. The southern half of the state, by the end of the second week, showed crop stress due to dry and windy conditions. Windy conditions also caused a delayed herbicide application in these regions. The largest amount of accumulated precipitation in June was 7.14", recorded in Northgate, Burke County. The least amount of accumulated precipitation in June was 0.48", recorded in Pretty Rock, Grant County. The highest 24-hr rainfall was recorded in Bismarck as 2.62" on June 14, which was also the daily 24-hr rainfall record for BIS. Based on the historical records since 1890, the state average annual precipitation accumulation showed a decreasing trend by 0.02" per decade.

Temperature

The state average temperature in June was 65.9°F, which is the 20th warmest June on record since 1895. It was 0.8°F warmer than last year and was the warmest June since 1997. Most of the state ranged between slightly-above to much-above the 1981-2010 average. There were some small pockets where the monthly average was near normal (Fig. 2). The state's highest and lowest temperatures ranged from 101° on

June 25 in Flasher to 37° on June 23 in Hettinger, ND. The daily maximum of 101°F that was recorded on June 25 in Flasher was the only 100-degree day to this date in ND. Based on the historical records since 1890, the state average annual temperature showed an increasing trend by 0.13°F per decade. The highest and the lowest monthly state average temperatures ranged from 74.1° in 1988 to 56.8° in 1915.

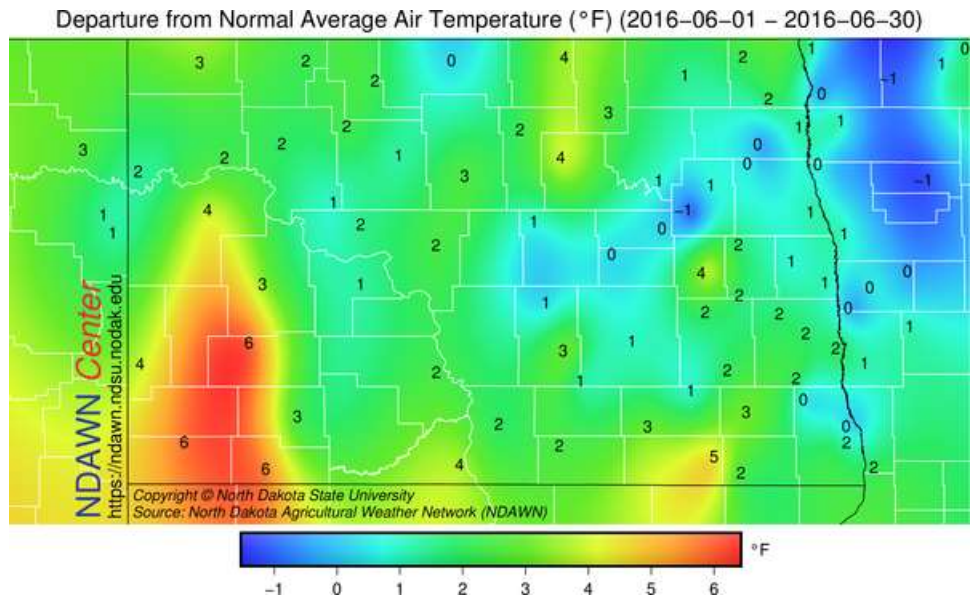


Figure 2. Temperature Departure from Normal in June 2016 for North Dakota (NDAWN)

Drought and Other Notable Impacts:

Crops in the south central region showed stress from dry conditions according to the USDA Agricultural Statistic Service (NASS). NWS Storm Prediction Center reported 3 tornadoes, 62 hail event, and 97 high wind events in ND (Figure 3). Two tornadoes were reported through social media near Watford City on June 21. However, no known damage was reported with these tornadoes. One of these tornados was reported near Mott on June 21 also with Emergency Management reporting minor roof damages. This storm near mott also produced hail with a 2.5" diameter. NDAWN's highest peak gust in June was recorded at McHenry weather station as 78.5 mph at 5:58 am on June 17, 2016. Locations receiving excessive rain and hail especially in the northeastern portions of the state reported crop damage due to hail. Excessive moisture also caused crop disease issues according to NASS.

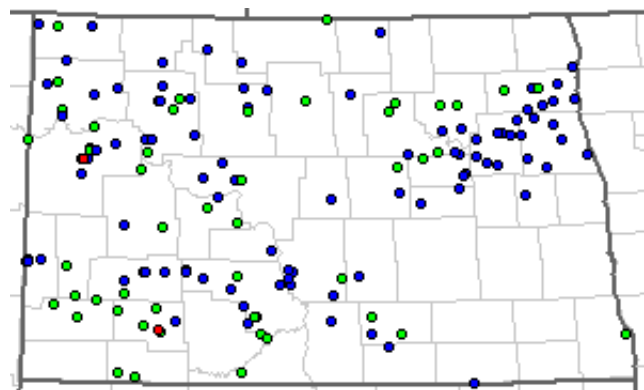


Figure 3. June 2016 North Dakota Storm Events (Red: Tornado; Blue: Wind; Green: Hail).

By the end of the month, less than 1% of the state (SW corner of Richland County) experienced severe drought while less than 4% of the state experienced moderate drought (Figure 4). The counties in the moderate drought areas are Bowman, Adams, Hettinger, Grant and Sioux in the southwest; Sargent and Richland counties in the southeast. More than 80% of the state did not have any drought or abnormally dry conditions.

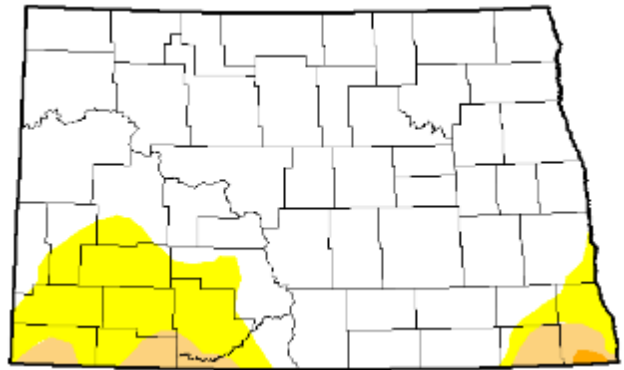


Figure 4. Drought Monitor Map of North Dakota as of June 28, 2016.