



THE ATMOSPHERIC RESERVOIR

Examining the Atmosphere and Atmospheric Resource Management

A SURPRISING SEPTEMBER

By Mark D. Schneider

The month of September usually brings to mind drier conditions, harvest weather, leaves changing color, and cooler temperatures. This year, Mother Nature had something else in mind for North Dakota including a record number of tornadoes, abundant rains over Central North Dakota, and above normal temperatures for much of our state. Looking at the numbers, there were 20 confirmed tornadoes by the National Weather Service during the September 14 outbreak, bringing our yearly total to 80 tornadoes. This toppled our previous annual record of 61 tornadoes in 1999. The background photo shows tornado damage to a mobile home near Denhoff that was rolled several times during the September 14 outbreak.

September's precipitation provided much needed soil moisture across the state and even though harvest was delayed in certain areas, farmers and ranchers were thankful for the rains that will help conditions for next growing season. Central North Dakota received an abundance of precipitation from September 13-19 when Bismarck recorded 4.08", or more than its normal meteorological Fall (September 1 through November 30) average of 3.84". The result of the widespread rains in September was that the *Drought Monitor* finally depicted all of North Dakota in drought free conditions. The last time this occurred was July of 2022.

If September felt warm, that's due to the above average temperatures recorded statewide. The table shows that major reporting stations ended the month about three to five degrees Fahrenheit above average. There weren't many record highs for the month; however, many days saw highs in the 80s and 90s and low temperatures in the 60s which were well above average.

Looking ahead to winter, North Dakota's temperatures and precipitation will be difficult to predict because the long-range seasonal forecasts just aren't showing strong signals. The one surety though is that September won't be forgotten anytime soon.

Photo Courtesy of National Weather Service Bismarck Storm Survey.



Location	Above Average September Monthly Temperatures
Bismarck	+4.6F
Dickinson	+4.9F
Fargo	+4.5F
Grand Forks	+5.0F
Jamestown	+3.7F
Minot	+2.8F

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