

## Summer 2007 Northeast Montana Weather Summary

June had near average temperatures. As is often the case in June, precipitation was highly variable with much of it occurring in thunderstorms. Overall, more areas had near average or above average precipitation than below. The coldest temperature was observed at the Port of Morgan on the 16<sup>th</sup> with a low of 32 degrees. This was the only spot that observed freezing temperatures this past June, although several spots had occasional low temperatures in the 30s, even mid-late month. The weather turned hot the last couple of days of the month, with many areas well up into the 90s. Flatwillow took the top honors with a high of 103 degrees on the 29<sup>th</sup>. The least amount of precipitation was observed in Glendive where only 6 tenths of an inch was observed. Zortman had the most precipitation with 4.88 inches of rain.

By far the most significant event of the month occurred during the late afternoon and evening of June 16<sup>th</sup>. A supercell thunderstorm tracked from across northeast Montana. This was the most devastating hail storm to affect the area since at least 1999, and prompted 22 severe thunderstorm and 6 tornado warnings in the NWS Glasgow county warning area. The storm began early in the day just east of Glacier National Park and gradually moved eastward through the day. By 3 pm, the storm crossed into the Phillips County, where it started to make a turn to the southeast. The storm traveled for over 200 miles before decreasing in Richland County near the North Dakota border a little after 11 pm. Hail up to baseball size and wind gusts in excess of 85 mph accompanied the storm. Torrential heavy rainfall was also experienced, prompting seven flash flood warnings to be issued. The hail left a mark seen on satellites that had a path at least 225 miles long, and up to 12 miles wide. Property and crop damage is estimated at nearly \$35 million dollars across Valley, McCone and Richland Counties.

July was unusually hot, and was the hottest July on record for the state of Montana as a whole. Precipitation in most areas was below average, however, a few spots that had thunderstorms with heavy rainfall ended up with above average rainfall for the month. The coldest temperature observed was 41 degrees at Scobey 4NW on the morning of the 11<sup>th</sup> as well as Opheim 10N on the mornings of the 11<sup>th</sup> and 12<sup>th</sup>. The hottest temperature of 111 degrees was observed at Glendive on the 23<sup>rd</sup> and 24<sup>th</sup>. The 24<sup>th</sup> was a particularly hot day with Redstone, Scobey 4NW and Terry all reporting a high of 110 degrees. Although the entire month was unusually hot, the second half of the month was brutally hot with most areas reporting several days with high temperatures over 100 degrees. Glendive had 13 days with a high temperature over 100 degrees. Zortman was the only spot not to report a high temperature of 100 degrees all month.

The most significant event of the month was by far the prolonged heat. Even areas along the Canadian border that typically only experience 100 degree temperatures once every 2 to 3 years had a few to several days with high temperatures above 100 degrees. Opheim 10N which only averages a 100 degree day once every 5 years, and had not had a 100 degree day since 1988, had three. The low temperatures were also unusually warm. Glasgow had 7 nights with a low temperature in the 70s, including 5 in a row from the 20<sup>th</sup> through the 24<sup>th</sup>. Never before had one month had some many lows in the 70s, nor

had any month ever produced 5 consecutive nights with lows in the 70s. In Glendive where records date back to 1893 the low of 79 degrees on the 25<sup>th</sup> was the warmest low temperature since August 27, 1931. Sidney where records date back to 1910 had the warmest low temperature ever observed on the 25<sup>th</sup> with a low of 78 degrees. The high temperature of 107 degrees on the 24<sup>th</sup> and 25<sup>th</sup> were the hottest temperatures observed in Sidney since July of 1917 when the all-time high temperature of 110 degrees was established.

August had near average temperatures. Precipitation was highly variable with more areas observing below average precipitation than above, although there were some exceptions. The coldest temperature was observed at Scobey 4NW on the morning of the 29<sup>th</sup> with a low of 30 degrees. This was the first temperature below freezing observed all summer across northeast Montana. Glendive again took the top honors as the hot spot during the month with a high of 105 degrees on the 1<sup>st</sup>. In a month when most areas either did not have any, or very few 100 degree days, Glendive also had the most 100 degree days with a total of 7. Glendive had a total of 23 days with a high temperature of 100 degrees or hotter this past summer, which was the most since 1988. Precipitation ranged from only 5 hundredths of an inch at Hinsdale 21SW to 5.80 inches at Brockton 17N. Most of the area observed between a half an inch an inch and a half of rain. As can be typical during late August the nights turned cooler as the nights grew longer, and lows in the 40s were quite common during the last 10 days of the month.

The most significant event of the month was a severe weather outbreak on the 10<sup>th</sup> as a strong cold front crossed the area that prompted 18 severe thunderstorm warnings and 2 tornado warning. There were numerous reports of wind gusts over 70 mph and wind damage. Two tornadoes were observed. The first touched down 14 miles southeast of Malta, and was classified as a weak EF1 by a National Weather Service damage survey. The second tornado touched down 5 miles south-southwest of Opheim and was also classified as a weak EF1 by a National Weather Service damage survey. These were the first tornado occurrences in the area since the summer of 2005.