

# Montana Weather/Precipitation Summary

**March 2006** By NOAA's National Weather Service Great Falls Montana

March brought more typical spring weather to Montana. Snow continued to accumulate at the higher elevations, with over 100 inches on the ground at a few locations in the Rockies and other western mountains. Most high elevation points in western Montana had near to over 100% of their seasonal precipitation through the end of March. Elsewhere, precipitation totals varied widely. Some areas were well below the monthly average, with others well above average. The temperature pattern was likewise, with below average areas in north central and southwest Montana, and warmer than normal areas in the southeast and Helena/Butte areas, and again around Kalispell. The upper air pattern was generally southwest to westerly flow across the state. This was normal for the season.

Scattered precipitation fell across the state during the first week. Heavier amounts occurred in the western mountains. Temperatures were above average west, with below average conditions in the east. A significant storm brought 13.5 inches to the Harlem area and Blaine County on the 4<sup>th</sup>. Nearly two inches of liquid were recorded at Harlem with this storm. This set a statewide daily precipitation record for the 4<sup>th</sup>. The previous record was 1.19" in 1918 at Butte. This storm reached the Lewistown area, dropping 7 inches of snow. A change in the weather brought the windiest period of the month, with 61 mph gusts at Cut Bank, and a gust to 107 mph at Logan Pass on the 9<sup>th</sup>. During this period, the westerly flow brought 6 to 12 inches of snow to higher mountains of western Montana.

No big storms or weather changes occurred until the 18-20<sup>th</sup>. A spring storm affected southeast Montana, bringing 6-12 inches of snow. A period of near to below normal temperatures followed this storm for the next few days. Mild conditions returned, with temperatures in the mid 60s back by the 25<sup>th</sup>. A sharp cold front brought another round of precipitation on the 26<sup>th</sup>. Great Falls and Bozeman both set new daily precipitation records on the 26<sup>th</sup>. Great Falls received 0.41". Unsettled weather continued through month's end. Temperatures warmed to 72°F at Hardin on the 28<sup>th</sup>, for the month's warmest temperature. This occurred prior to a major late month storm that dumped 1.88" of rain at Billings on the 29-30<sup>th</sup>. This set daily high precipitation amounts at Billings on both days. Areas further north picked up three inches of snow (Jordan area). This heavy precipitation resulted in the second wettest March of record at Billings.

Temperature averages ranged from three degrees below normal at Havre and Dillon, to one degree above normal at Kalispell and Miles City. Other areas that averaged slightly above normal included: Bozeman, Helena, and Butte. Temperatures extremes were 72°F at Hardin on the 28<sup>th</sup> and -26°F at Whiskey Creek on the 11<sup>th</sup>. Precipitation amounts varied widely. Billings' 2.67" was the second wettest March of record at Billings. This was the wettest March since 1987 at Great Falls. For the water-year, the driest area of the state is in the Cut Bank area of the northern Rocky Mountain Front. Elsewhere, precipitation values are near to much above normal. Winds were again somewhat below the long-term average. Bozeman/Belgrade recorded the highest March gust of record (51 mph). Cut Bank saw their third calmest March of record, and the lowest March wind average speed since 1992.

High precipitation amounts in March produced the following:

| Wettest water year-to-date since: |      | Wettest calendar year-to-date since: |      |
|-----------------------------------|------|--------------------------------------|------|
| Miles City                        | 1977 | Miles City                           | 1967 |
| Billings                          | 1978 | Billings                             | 1989 |
| Great Falls                       | 1992 | Great Falls                          | 1989 |
| Bozeman                           | 1994 | Kalispell                            | 1997 |
| Lewistown                         | 1994 |                                      |      |

Month's summary information:

|                                 |  |                        |                         |
|---------------------------------|--|------------------------|-------------------------|
| High Temperature                | 72°F at Hardin                         | Greatest Precipitation | 2.78" at Mullan Pass    |
| Low Temperature                 | -26°F at Whiskey Creek                 |                        | 6.20" at Banfield Mtn   |
| Warmest Average Temperature     | 40.0°F at Thompson Falls               | Peak Wind Gust         | 107 mph at Logan Pass   |
| Coolest Average Temperature     | 21.8°F at Wisdom                       |                        |                         |
| Range of Temperature Departures | -4.5°F at Wisdom<br>+1.6°F at Glendive | Highest Average Winds  | 17.1 mph at Norris Hill |

**Historical Rank of Precipitation (inches)  
for the Current Month and Water Year to Date**

| Location    | Mar  | % of Norm | Rank | Pcntl | Oct 1 – Mar 31 | % of norm | Rank | Pcntl | Years |
|-------------|------|-----------|------|-------|----------------|-----------|------|-------|-------|
| Baker       | 0.55 | 88%       |      |       | 3.14           | 101%      |      |       | 8     |
| Billings    | 2.67 | 238%      | 96   | 99    | 6.63           | 128%      | 87   | 90    | 97    |
| Belgrade    | 0.73 | 72%       | 28   | 42    | 4.98           | 107%      | 46   | 71    | 65    |
| Butte       | 0.52 | 63%       | 26   | 23    | 3.89           | 104%      | 65   | 58    | 112   |
| Cut Bank    | 0.25 | 45%       | 33   | 33    | 1.42           | 58%       | 24   | 24    | 99    |
| Dillon      | 0.38 | 72%       | 28   | 42    | 2.47           | 111%      | 42   | 64    | 66    |
| Glasgow     | 0.22 | 47%       | 24   | 22    | 3.04           | 119%      | 68   | 64    | 107   |
| Great Falls | 1.70 | 168%      | 102  | 89    | 5.52           | 126%      | 94   | 82    | 114   |
| Havre       | 0.22 | 31%       | 33   | 26    | 3.00           | 96%       | 55   | 44    | 126   |
| Helena      | 0.60 | 95%       | 60   | 47    | 3.40           | 109%      | 47   | 37    | 128   |
| Jordan      | 0.69 | 193%      |      |       | 3.72           | 151%      |      |       | 7     |
| Kalispell   | 0.62 | 56%       | 37   | 29    | 8.07           | 104%      | 18   | 14    | 128   |
| Lewistown   | 1.27 | 109%      | 78   | 70    | 5.76           | 110%      | 79   | 72    | 110   |
| Livingston  | 0.41 | 43%       | 23   | 22    | 4.99           | 96%       | 66   | 64    | 103   |
| Miles City  | 1.38 | 238%      | 116  | 90    | 4.68           | 133%      | 102  | 79    | 129   |
| Missoula    | 1.15 | 120%      | 89   | 69    | 6.99           | 122%      | 94   | 75    | 126   |
| Mullan Pass | 2.93 | 94%       | 24   | 38    | 31.14          | 141%      | 52   | 80    | 65    |
| Wolf Point  | 0.59 | 264%      |      |       | 2.08           | 111%      |      |       | 8     |
| Glendive    | 0.71 | 125%      | 72   | 65    | 4.83           | 150%      | 97   | 91    | 107   |
| Sidney      | 0.88 | 157%      | 56   | 84    | 4.96           | 143%      | 61   | 94    | 65    |
| BZN-MSU     | 1.16 | 83%       | 60   | 47    | 8.41           | 131%      | 109  | 86    | 127   |

Rankings and Percentiles are 1=driest, higher numbers=wetter.

For an automated version of this chart, updated daily, go to

<http://www.wrh.noaa.gov/tfx/dx.php?wfo=tfx&type=&loc=products&fx=PCPNTOTALS>

For a state map of % of normal water year precipitation (updated around the 7<sup>th</sup> of each month), go to:

[http://www.wrh.noaa.gov/tfx/image.php?wfo=tfx&type=data&loc=hydro&fx=watyr\\_pcntnorm.png](http://www.wrh.noaa.gov/tfx/image.php?wfo=tfx&type=data&loc=hydro&fx=watyr_pcntnorm.png)

For the latest information on mountain snow pack from the NRCS, go to:

<http://www.mt.nrcs.usda.gov/snow/index.html>

For the latest U.S. Drought Monitor, issued weekly by the Climate Prediction Center (CPC), go to:

<http://www.drought.unl.edu/dm/monitor.html>

All reported data is preliminary. Further inquiries about the moisture conditions can be directed to Dave Bernhardt or Gina Loss at (406) 453-2081. Many more links can be found on the Drought Information Page of the NWS Great Falls web site at

<http://www.wrh.noaa.gov/tfx/main/drought.php?wfo=tfx>