

# Montana Weather/Precipitation Summary

**April 1-16, 2006** By NOAA's National Weather Service Great Falls Montana

The first two weeks of April have brought above normal temperatures and precipitation to most of Montana. Isolated areas in the northeast have missed out on precipitation, but much of the rest of the state has recorded much above normal precipitation. Heavy snow also fell over the higher elevations, with several locations across the west and southwest receiving over a foot. The largest storm totals were near Marysville (16") on the 5<sup>th</sup> and near Stockett (18") on the 1<sup>st</sup>. Another round of heavy snow to higher elevations occurred around the 17<sup>th</sup>. Over one foot of snow fell at the highest points, with over one inch of precipitation commonplace. Several daily precipitation records fell during the first few days of the month. Missoula received 1.87" on the 6<sup>th</sup>, which is the largest daily amount on record. The heavy rains did cause some flooding of smaller streams during the first week. The high precipitation values resulted from a sustained southwest flow that moved moisture and storms into the state (Figure 1). This was a somewhat anomalous pattern for this time of the year, with a deep trough of low pressure off the west coast.

During the second week, the weather was a bit more benign. A storm over the 8<sup>th</sup>-9<sup>th</sup> dropped 10" of snow over the Bull Mountains and up to 1.50" of rain across south central and southeast Montana. After this storm, conditions dried and winds picked up. Logan Pass recorded a new April record for the state with gusts of 106 mph on the 12<sup>th</sup> and 13<sup>th</sup>. The old state record was 90 mph. At lower elevations, winds gusted to 72 mph near Babb on the 12<sup>th</sup>. Even so, winds have been below average across the state.

The warmest temperature thus far has been 82°F at Hardin on the 5<sup>th</sup>, with the coldest at Clover Meadow (in the southwest), recording 5°F on the 2<sup>nd</sup>. Temperatures have continued above average for the month. Anomalies have been from 0 to 8 degrees above normal. The heavy precipitation during this period has produced the wettest start to April of record at Butte, Dillon, Helena and Missoula. Missoula and Butte need less than one-quarter inch more to make the wettest April of record. Several other locations have had their second wettest first halves of April (Bozeman, Kalispell, Great Falls and Miles City). For precipitation, most of the state has fared very well for the water year-to-date. Small areas in the northeast and south central still have below normal pockets (Figure 2).

High precipitation amounts in March and early April produced the following (through April 14):

Wettest water year-to-date since:		Wettest calendar year-to-date since:	
Great Falls	1966	Miles City	1976
Miles City	1974	Great Falls	1982
Helena	1988	Kalispell	1996
Billings	1989		
Bozeman	1994		
Lewistown	1994		

Month's summary information (to date):

High Temperature	82°F at Hardin	Greatest Precipitation	3.22" at Neihart
Low Temperature	5°F at Clover Meadow		6.60" at Moss Peak
Warmest Average Temperature	54.2°F at Glendive	Peak Wind Gust	106 mph at Logan Pass
Coollest Average Temperature	31.8°F at Mullan Pass		
Range of Temperature Departures	-0.6°F at Thompson Falls +12.0°F at Glendive	Highest Average Winds	15.1 mph at Livingston

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

Location	Apr 1-16	% of Norm	Oct1 – Apr 16	% of norm	Years
Baker	0.88	190%	4.12	110%	7
Billings	0.51	60%	7.10	119%	96
Bozeman	1.88	227%	6.85	129%	64
Butte	2.74	571%	6.63	157%	111
Cut Bank	0.39	105%	1.81	64%	98
Dillon	1.73	412%	4.20	159%	65
Glasgow	0.55	172%	3.58	124%	105
Great Falls	2.46	378%	7.95	157%	113
Havre	0.61	44%	3.19	90%	125
Helena	2.35	573%	5.75	163%	127
Jordan	1.77	333%	5.49	180%	7
Kalispell	1.46	243%	9.53	114%	127
Lewistown	2.10	328%	7.86	133%	109
Livingston	1.24	177%	6.23	121%	102
Miles City	1.69	268%	6.37	154%	129
Missoula	2.93	862%	9.96	200%	125
Mullan Pass	2.51	166%	33.90	143%	64
Wolf Point	0.33	75%	2.41	100%	7
Glendive	1.15	217%	6.13	164%	105
Sidney	0.00	0%	5.20	132%	65
BZN-MSU	2.25	227%	11.26	152%	126

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>

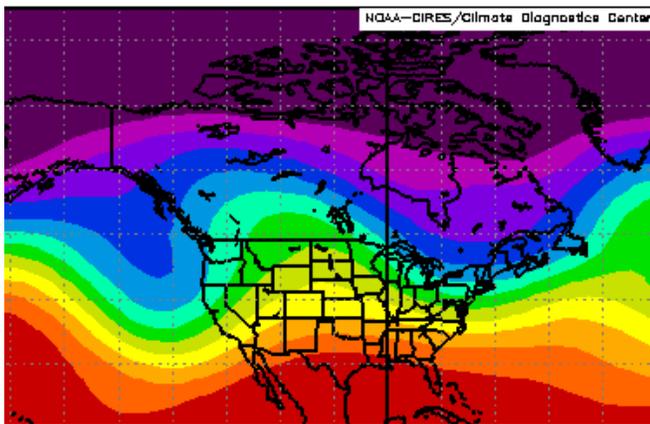


Figure 1. Mean flow at 500 millibars (~18,000 ft)

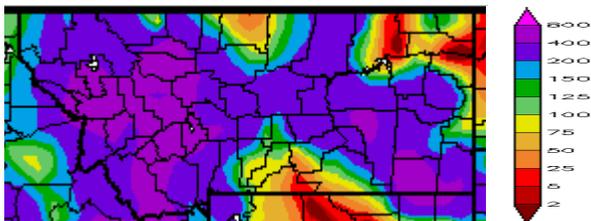


Figure 2. Precipitation anomaly (% of normal) for the water year to date (Oct. 1 – Apr. 14) (courtesy High Plains Climate Center).

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=afx&type=data&loc=hydro&fx=watyr\\_pcbtnorm.png](http://www.wrh.noaa.gov/tfx/image.php?wfo=afx&type=data&loc=hydro&fx=watyr_pcbtnorm.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=afx>