

Montana Weather/Precipitation Summary

October 2006 By NOAA's National Weather Service Great Falls Montana

October temperatures averaged close to normal with variations throughout the month. The month started out very warm with 87°F recorded at Armells (Fergus County) on the 2nd. Generally warm temperatures continued for the first week, with a sharp cool-down for the second week. Rare October thunderstorms moved across western and central Montana on the 4th and 5th. Frost or freezing temperatures were seen most areas during the second week. Elk Park dropped to 8°F the morning of the 10th for the coolest temperature during this week. Lows in the teens were common over far eastern Montana.

Snow fell with a strong storm system that affected eastern Montana around the 9th. Many locations through central Montana recorded over an inch of precipitation, with over 2 inches at higher elevations. Glasgow set a daily precipitation record on the 7th, with 0.81" falling. Up to a foot of snow fell in south central Montana the 8th and 9th. During the transition from the warmer first week to the second week, Logan Pass recorded a gust of 66 mph on the 7th. Mild conditions did not last long as below normal temperatures and snow again fell mid-month. Great Falls picked up over 4 inches, with snow falling across much of eastern Montana. Five inches accumulated at Harlowton, and 7 inches at Wibaux. Cold temperatures for the season were felt across most of eastern Montana. Scobey dropped to 11°F on the 13th.

Another storm over the weekend of the 21st brought heavy snow to Montana. Over a foot of snow fell over higher elevations of central and south central Montana. Mild conditions returned for the last week, with temperatures in the lower 70s in eastern sections. Windy conditions accompanied the warmth. Logan Pass gusted to 88 mph on the 26th and 89 mph on the 28th. Nye recorded a gust to 84 mph on the 28th. A strong cold front on the 29th and 30th brought a sharp change in the weather. Temperatures fell 25 degrees in one hour as the front passed through north central Montana. Again, snow accompanied this system, with up to 5 inches falling in central Montana and 8 inches in northeast Montana. Blizzard conditions occurred in the Kalispell area. Up to a foot of snow fell in western Montana. Cold high pressure moved in behind this front. The coldest temperature of the month occurred at Elk Park on the 31st, at -23°F. This was the coldest October temperature since 1991.

Even through some strong wind periods existed during the month, they were generally below average. Havre and portions of northeast Montana recorded above average wind speeds. Helena saw their 9th calmest October of record.

Temperatures averaged mostly below normal in the state, ranging from nearly 1°F above normal over western, to 7.2°F below average in the northeast. Precipitation amounts varied from much above normal, to much below normal. Eastern border and western border areas came in with the smallest amounts. Refer to figure 2. Neihart recorded 4.24" and Big Timber had 4.44".

Figure 1 shows the average flow pattern during October. A mean west-northwesterly flow brought below normal temperature averages to much of eastern Montana. Above normal averages were restricted to the far west.

Month's summary information (to date):

High Temperature	87°F at Armells (central) (2 nd)	Greatest Precip	4.44" at Big Timber
Low Temperature	-23°F at Elk Park (31 st)		
Warmest Ave Temp	49.0°F at Thompson Falls	Peak Wind Gust	89 mph at Logan Pass (28 th)
Coolest Ave Temp	35.5°F at West Yellowstone		
Range of Temp Departures	-7.3°F at Westby to +0.8°F at Thompson Falls	Highest Ave Wind	19.5 mph at Logan Pass 14.2 mph at Livingston

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

Location	Oct	% of Norm	Rank	Pcntl	Oct 1 - 31	% of norm	Rank	Pcntl	Years
Baker	1.80	150%			1.80	150%			9
Billings	2.09	166%	86	88	2.09	166%	86	88	98
Belgrade	2.86	258%	69	99	2.86	258%	69	105	66
Butte	2.12	268%	110	97	2.12	268%	109	96	113
Cut Bank	M				M				100
Dillon	1.66	259%	63	94	1.66	259%	62	93	67
Glasgow	1.26	177%	91	83	1.26	177%	91	83	110
Great Falls	1.48	159%	99	87	1.48	159%	99	87	114
Havre	0.69	111%	77	61	0.69	111%	77	61	127
Helena	1.32	200%	107	84	1.32	200%	107	84	127
Jordan	1.21	128%			1.21	128%			9
Kalispell	0.69	72%	89	79	0.69	72%	88	78	113
Lewistown	2.76	260%	109	98	2.76	260%	109	98	111
Livingston	3.21	218%	103	99	3.21	218%	103	99	104
Miles City	0.89	79%	80	62	0.89	79%	80	62	130
Missoula	1.60	193%	108	85	1.60	193%	106	83	127
Mullan Pass	1.86	62%	17	25	1.86	62%	17	25	67
Wolf Point	0.59	65%			0.59	65%			9
Glendive	1.08	109%	83	75	1.08	109%	83	75	110
Sidney	0.37	36%	20	30	0.37	36%	20	30	67
BZN-MSU	4.16	258%	126	98	4.16	258%	126	98	128

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>

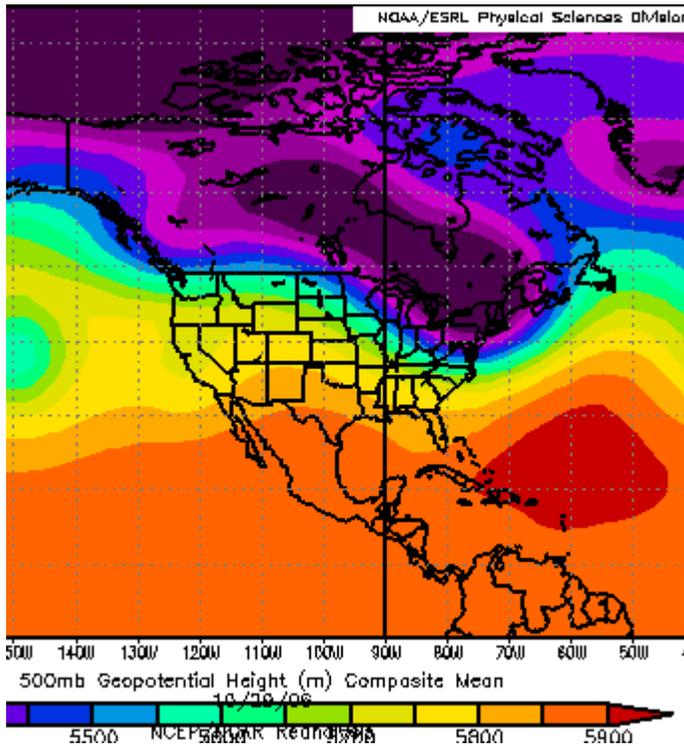


Figure 1. Mean flow at 500 millibars (~18,000 ft) October 2006. The heights were below normal over western Canada, which contributed to the below normal temperatures across much of the state.

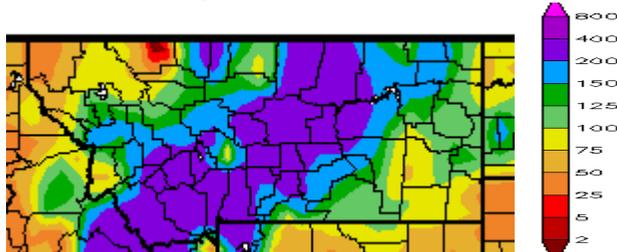


Figure 2. Precipitation anomaly (% of normal) for October (courtesy High Plains Climate Center).

For a state map of % of normal water year precipitation (updated around the 7th of each month), go to:
http://www.wrh.noaa.gov/tfx/image.php?wfo=tx&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 are on the Drought Information Page of the NWS Great Falls web site at
<http://www.wrh.noaa.gov/tfx/main/drought.php?wfo=tx>