

Montana Weather/Precipitation Summary

May 2007 By NOAA's National Weather Service Great Falls Montana

May's temperatures could be characterized as a roller-coaster-like. The month started with temperatures 10 to 20°F above normal, then cooled. The cooling, then warming trends continued through most of the month. The warmest period of the month occurred mid-May, when temperatures peaked in the upper 80s and 90s on the 17th. This again preceded a cool-down, when temperatures remained in the 40s on the 22nd, with heavy snow in the mountains. Some mountain locations in the southwest recorded over two feet of snow during this storm. Heavy rain fell across central and eastern Montana. Some locations in central Montana received over three inches of rain during this storm. The upper air pattern showed a mean ridge over Montana for the month (Figure 1).

Overall, temperatures were near to slightly above normal (Figure 2). Good precipitation amounts fell over most of the state. There were some exceptions, however. The extreme west and northwest came up short, as did pockets in the south central (Figure 3). Many areas recorded their wettest Mays in many years (see table below). The upper air pattern showed a mean ridge over Montana (Figure 1).

With the changeable weather during the month, several days of thunderstorms were observed. Severe weather related to thunderstorms occurred on 10 days, much higher than the average of 4 days. Large hail occurred on several days over scattered areas in eastern Montana. Downburst winds on the 10th produced some tree blow-down in the Boulder vicinity. Even a funnel cloud was sighted on the 23rd near Bozeman. Winds averaged near normal. The highest wind speed average was 12.4 mph at Glasgow.

Snow did make a comeback as noted earlier, with the large amounts occurring mainly over mountainous areas around the 22nd-25th. Several locations in the mountains of central, southwest and western Montana received from 6 to 24 inches of snowfall. A period of heavy rain accompanied the snow at lower elevations. The Roundup area received over 3 inches of rain. Glasgow recorded 2.24" in a 24-hour period on the 22nd and 23rd. On the 29th, Bozeman recorded 7.3" of snow for a new daily record.

City		
Billings	Wettest Calendar Year since 1981	Wettest May since 1996
Bozeman MSU	Wettest Water Year since 1951	4 th wettest Water year of record
Glasgow	3 rd wettest Calendar Year	Wettest May of record
Havre	Wettest Water Year since 1985	
Helena		Wettest May since 1981
Lewistown	Wettest Water Year since 1994	Wettest May since 1982
Livingston	Wettest Water Year since 1980	
Miles City	Wettest Calendar Year since 1996	Wettest May since 1996
Cut Bank	6 th Driest May	
Mullan Pass	7 th Driest May	

Month's summary information:

High Temperature	95°F at Albion (18 th)	Greatest Precip	7.77" Bradshaw Creek
Low Temperature	9°F at Wisdom (4 th)		8.90" Stahl Peak Snotel
Warmest Ave Temp	58.2°F at Plevna	Peak Wind Gust	84 mph near Livingston (10 th)
Coollest Ave Temp	43.8°F at Mullan Pass		
Range of Temp departures	-0.9°F at Sweet Grass to 4.3°F at Bozeman Apt	Highest Ave Wind	14.1 mph at McDonalds (NE)

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

Location	May	% of Norm	Rank	Pcntl	Oct 1 – May 31	% of norm	Rank	Pcntl	Years
Baker	4.00	254%			9.00	162%			9
Billings	3.93	158%	93	94	12.32	131%	92	94	98
Belgrade	2.76	111%	53	75	9.46	111%	53	80	66
Butte	2.84	141%	96	84	7.97	117%	78	69	113
Cut Bank	0.31	14%	5	5	M	M	M	M	100
Dillon	1.90	105%	40	59	6.51	131%	58	87	67
Glasgow	6.61	384%	110	100	10.15	202%	103	96	107
Great Falls	2.81	111%	79	69	9.72	117%	91	80	114
Havre	2.39	130%	100	78	7.91	136%	112	88	127
Helena	3.25	183%	115	89	7.18	123%	85	66	129
Jordan	6.11	436%			10.42	214%			7
Kalispell	2.59	127%	96	84	9.43	85%	16	14	113
Lewistown	4.93	169%	103	92	11.79	123%	92	83	111
Livingston	3.01	116%	74	70	11.77	127%	94	92	102
Miles City	4.51	206%	121	94	8.65	122%	107	82	130
Missoula	2.38	122%	100	77	9.32	106%	76	60	126
Mullan Pass	1.20	42%	6	9	39.22	141%	60	91	66
Wolf Point	5.29	280%			7.43	161%			9
Glendive	3.38	165%	93	83	8.33	129%	88	83	106
Sidney	2.03	100%	46	68	4.85	74%	18	27	66
BZN-MSU	5.41	168%	119	91	18.60	159%	125	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>

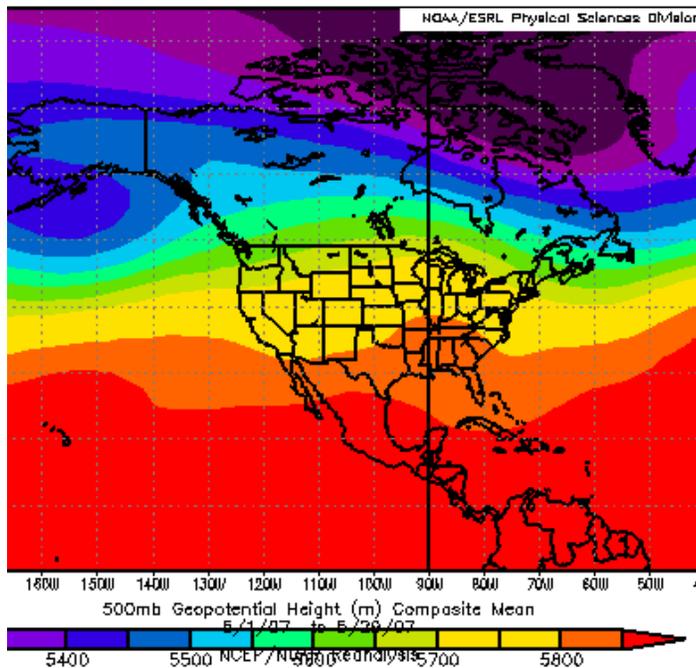


Figure 1. Mean flow at 500 millibars (~18,000 ft) May 2007. The heights were slightly above normal across most of the US.

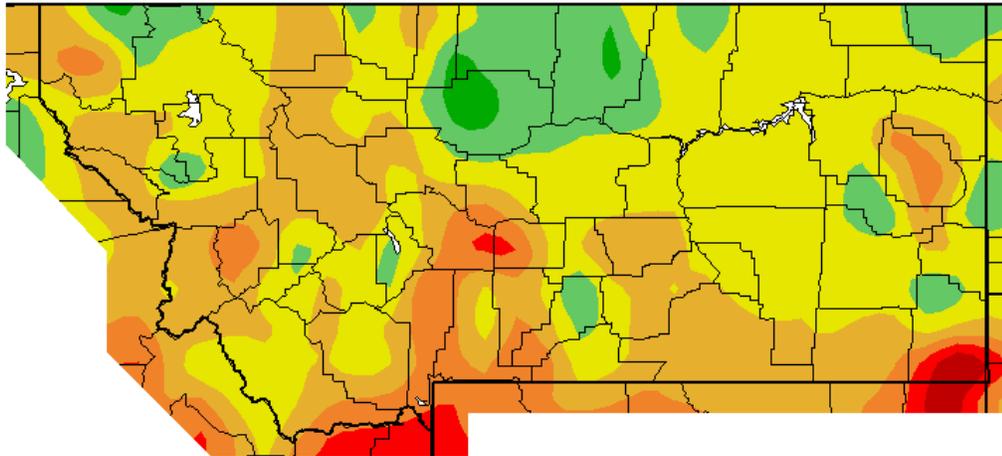


Figure 2. May temperature anomaly. Temperatures were near to slightly above normal most areas. An area of below normal was over north central Montana. (courtesy Western Region Plains Climate Center)

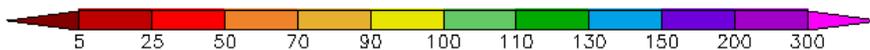
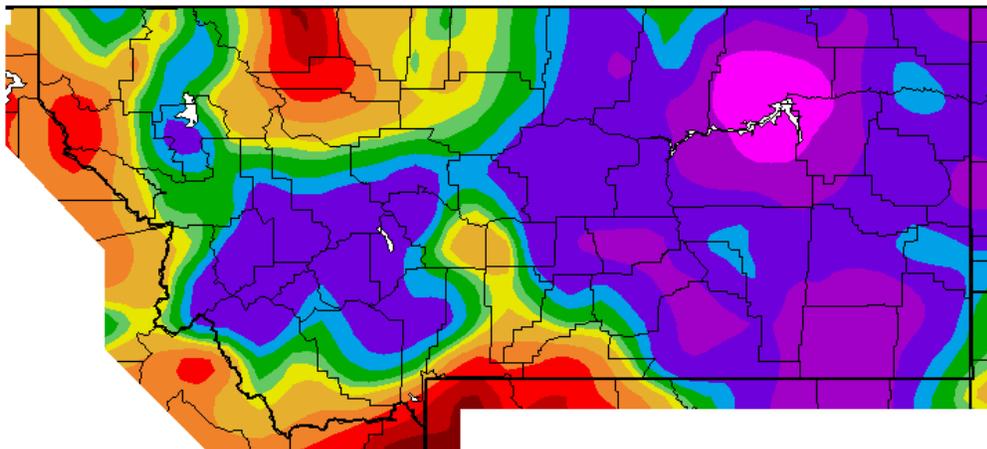


Figure 3. Precipitation anomaly (% of normal) for May. Much above normal precipitation occurred over southwest and much of eastern Montana (courtesy Western Region Climate Center).

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_pcnorm.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. 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>