

Montana Weather/Precipitation Summary

February 2008 by NOAA's National Weather Service Great Falls Montana

February brought a variety of weather across Montana. With La Nina still in place, below normal temperatures occurred across the east (Fig. 1). The mean upper level flow was from the northwest, which likely caused the below normal temperatures in the east (Fig 3). Precipitation was highly variable, with the greatest positive anomaly across north central Montana (Fig. 2). Much of the state recorded below average precipitation. Snowpack at month's end was in the 120 to 130 inch range over the higher elevations in the west and southwest.

February started out on the mild side west, and very cold east. This evened out by the 6th, when warmer conditions were reported statewide, along with windy conditions. One of the colder temperatures was reported on the 1st, when Chinook fell to -20F. As winds picked up, a location south of East Glacier reported a gust to 81 mph on the 5th. Strong winds continued across the east slopes on the 6th, when Choteau reported a gust to 75 mph and Livingston reported 58 mph. While windy, downslope conditions were occurring east of the divide, up to 12 inches of snow fell in the West Glacier region west of the continental divide. The storminess continued into the 9th, with heavy snow falling along the east slopes, and some lighter amounts across south central Montana. The snow was accompanied by strong winds on the 7th, when roads in the Marias Pass vicinity were closed due to heavy snow and blizzard conditions. Four to 10 inches of snow fell, with gusts to 60 mph in the East Glacier area.

Windy conditions accompanied another brief snowstorm on the 13th. Wind gusts to 66 mph were reported at Judith Gap, with blizzard conditions. While another storm affected eastern Montana, dropping up to five inches of snow across extreme southeastern reaches, a warm up began in the west. Temperatures rose into the 50s and lower 60s on the 19th and 20th. Columbus recorded the highest for the month, 63F on the 19th. After this, mild temperatures with occasional light precipitation continued to influence the state's weather through the end of the month.

Other record or notable information for February:

- Bozeman had their highest February wind gust since 1952. Winds gusted to 55 mph on the 10th and 11th. They also recorded their 8th warmest water-year-to-date of record. The average temperature October through February has been 29.8F, compared with a normal of 24.8.
- Cut Bank recorded their 9th driest February of record at 0.09".
- Dillon had their highest February wind gust since 1982. Winds gusted to 56 mph on the 7th.
- Glasgow had their 5th calmest February of record (8.5 mph).

February summary information:

High Temperature	63°F at Columbus (19 th)	Greatest Precip	6.21" at Haugen
Low Temperature	-23°F at Westby (10 th)		9.4" at North Fork Jocko SNOTEL
Warmest Ave Temp	35.1°F at Thompson Falls	Peak Wind Gust	81 mph near East Glacier (5 th)
Coollest Ave Temp	8.7°F at Westby		
Range of Temp departures	-6.0°F at Westby and Plevna to 4.8°F at Belgrade fld	Highest Ave Wind	22.4 mph near East Glacier and 19.3 mph in Sweet Grass Hills
14 city mean monthly Temperature/Normal	27.1/25.6	14 city mean monthly wind speed/Normal	9.4mph/9.7mph
14 city mean monthly precipitation/Normal	0.36"/0.50" – 72% of normal		

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

Location	Feb	% of Norm	Rank	Pcntl	Oct 1 – Feb 29	% of norm	Rank	Pcntl	Years
Baker	0.31	96%	9	90	1.04	42%			9
Billings	0.07	12%	8	8	3.57	88%	67	68	99
Belgrade	0.27	50%	14	19	3.68	101%	42	63	67
Butte	0.36	77%	44	39	2.54	87%	45	39	114
Cut Bank	0.09	32%	22	22	0.91	48%			101
Dillon	0.28	140%	46	67	2.60	154%	60	88	68
Glasgow	0.36	138%	66	59	2.50	120%	68	62	109
Great Falls	0.43	84%	52	46	2.83	84%	41	36	114
Havre	0.66	183%	100	78	1.30	54%	10	8	128
Helena	0.31	82%	54	42	2.40	96%	41	32	130
Jordan	0.72	205%	8	89	3.79	180%			9
Kalispell	0.47	41%	17	15	4.26	64%	13	11	114
Lewistown	0.39	68%	32	29	2.85	70%	23	21	112
Livingston	0.33	47%	42	39	3.15	74%	41	39	104
Miles City	0.10	29%	17	13	0.62	21%	2	2	131
Missoula	0.94	122%	82	62	3.54	74%	23	18	128
Mullan Pass	0.86	23%	1	2	27.62	145%	53	79	67
Wolf Point	0.09	77%	5	50	1.19	72%			10
Glendive	0.41	111%	70	61	1.61	61%	23	21	108
Sidney	0.08	22%	7	10	1.60	55%	13	20	66
BZN-MSU	0.56	80%	53	41	7.00	139%	114	88	129

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>

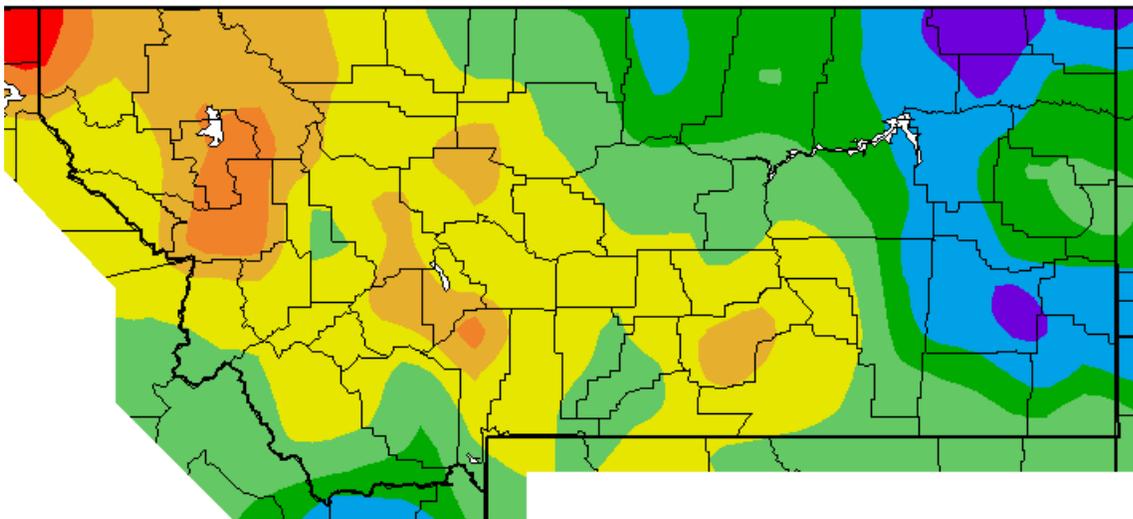


Figure 1. Temperature anomaly for February. The state experienced above normal temperatures across the central and west, with below normal temperatures across the northeast and east, and the extreme southwest. (Western Regional Climate Center).

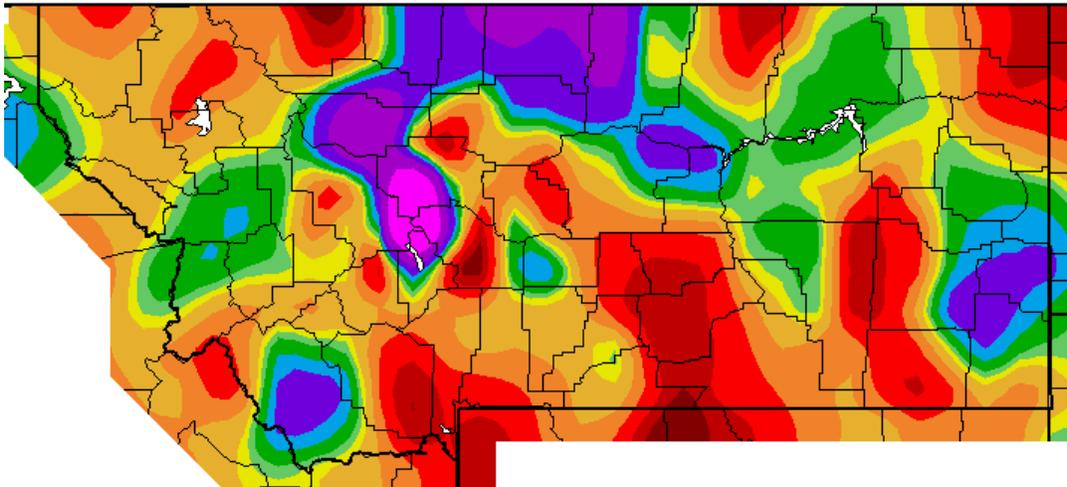


Figure 2. Precipitation anomaly (% of normal) for February. The precipitation was highly variable, with many areas having below average precipitation (Western Regional Climate Center)

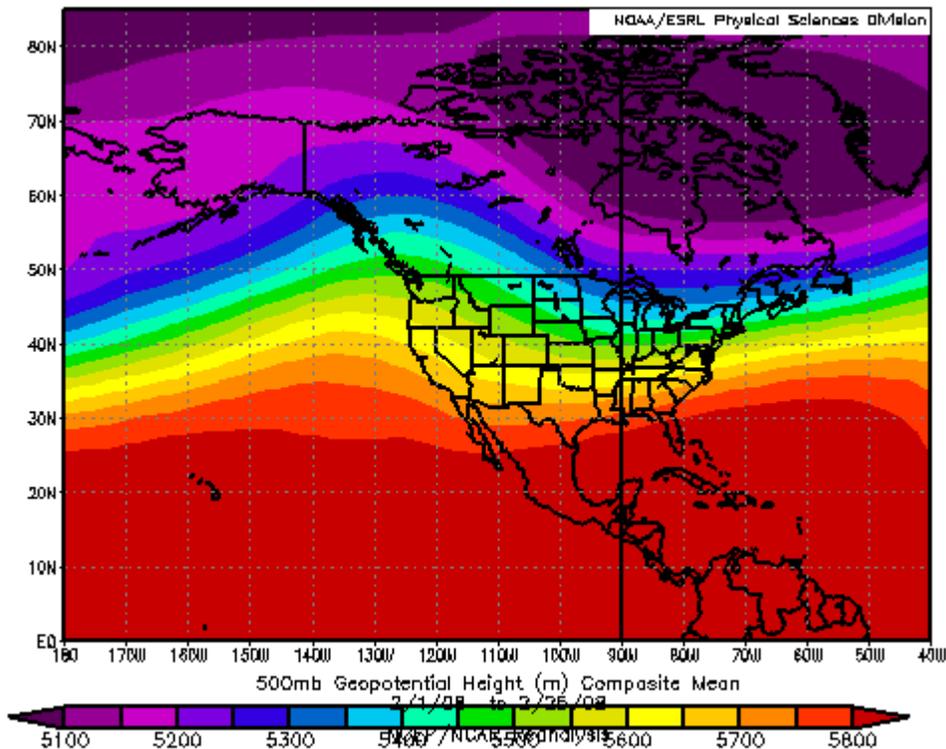


Figure 3. Mean flow at 500 millibars (~18,000 ft) February 2008. The trough of low pressure over eastern North America contributed to the below average temperatures over eastern Montana.

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=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. 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>