

Montana Weather/Precipitation Summary

July 1-15 2008 by NOAA's National Weather Service Great Falls Montana

July 2008 has been mostly dry and warm. There was an unsettled period early in the month that brought heavy rains to central and northwest Montana, but most areas were very dry. Temperatures have been a bit above normal for the month so far (Fig. 1).

The warmest temperature reported so far has been 103F at Billings and Huntley on the 4th. Bozeman set a new record high of 102F on the 4th. This was ahead of a strong cold front that brought severe weather across the state. Winds gusted to 83 mph at Elkhorn from a thunderstorm, with scores of reports of strong winds and hail damage. After this system moved through, temperatures cooled with windy conditions on the 10th and 11th. Winds gusted to 91 mph at Snowslip and 70 mph at Logan Pass on the 10th. Gusts to 55 mph were common in northeast Montana. With the cooler temperatures, record lows were set in central Montana on the 11th, 12th and 13th. A very cool day on the 11th caused some locations to record their coolest high temperature of record for the day, with highs in the mid-60s. The lowest reported temperature was 25F at Gates Park on the 12th, with some areas in central Montana falling to freezing.

Greater precipitation amounts have occurred in northwest and central Montana (Fig. 2). Most areas are very dry. Severe weather has occurred on 6 of the first 15 days in July. Reports have been large hail and strong winds. On the 4th, tennis ball size hail fell in the Philipsburg area, prompting the deployment of snowplows to clear area roads of the hail.

Snow has mostly melted out, even at the higher elevations. The greatest amount on the 15th was about 5 inches at Beagle Springs SNOTEL in Beaverhead County and at Garver Creek SNOTEL in northwest Montana.

Soil moisture conditions have been drying at the climatological average in central Montana. Deeper levels have retained a bit more moisture for this time of the year (Fig. 3).

July 1-15 summary information:

High Temperature	103°F at Billings and Huntley (4 th)	Greatest Precip	1.83" at Rogers Pass
Low Temperature	25°F at Gates Park (12 th)		1.7" at Nevada Ridge SNOTEL
Warmest Ave Temp	73.7°F at Glendive	Peak Wind Gust	91 mph at Snowslip (Glacier Park) (10 th)
Coolest Ave Temp	58.5°F at Wisdom		
Range of Temp departures	-1.8°F at Ekalaka to +4.3°F at Troy 18N	Highest Ave Wind	11.1 mph at Glendive

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

Location	Jul 1-15	% of Norm	Oct1 – Jul 15	% of norm	Years
Baker	0.06	8%	8.75	99%	10
Billings	0.06	9%	9.39	79%	99
Bozeman	0.02	3%	12.03	104%	67
Butte	0.48	65%	7.86	82%	112
Cut Bank	0.13	16%	8.88	101%	100
Dillon	0.00	0%	6.08	83%	68
Glasgow	0.13	15%	10.58	130%	108
Great Falls	1.08	149%	12.67	112%	114
Havre	0.61	81%	7.86	93%	128
Helena	0.33	49%	7.59	91%	130
Jordan	0.13	15%	10.84	131%	9
Kalispell	1.53	217%	10.76	77%	114
Lewistown	0.18	17%	12.83	95%	112
Livingston	0.03	4%	10.71	88%	101
Miles City	0.09	11%	6.89	67%	131
Missoula	0.30	55%	9.22	83%	123
Mullan Pass	0.05	6%	33.23	106%	66
Wolf Point	0.06	6%	5.64	67%	10
Glendive	0.06	7%	7.35	74%	104
Sidney	0.02	2%	5.03	48%	66
BZN-MSU	0.03	4%	19.22	126%	125

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>

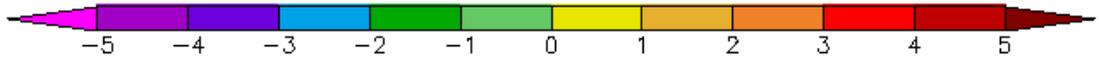
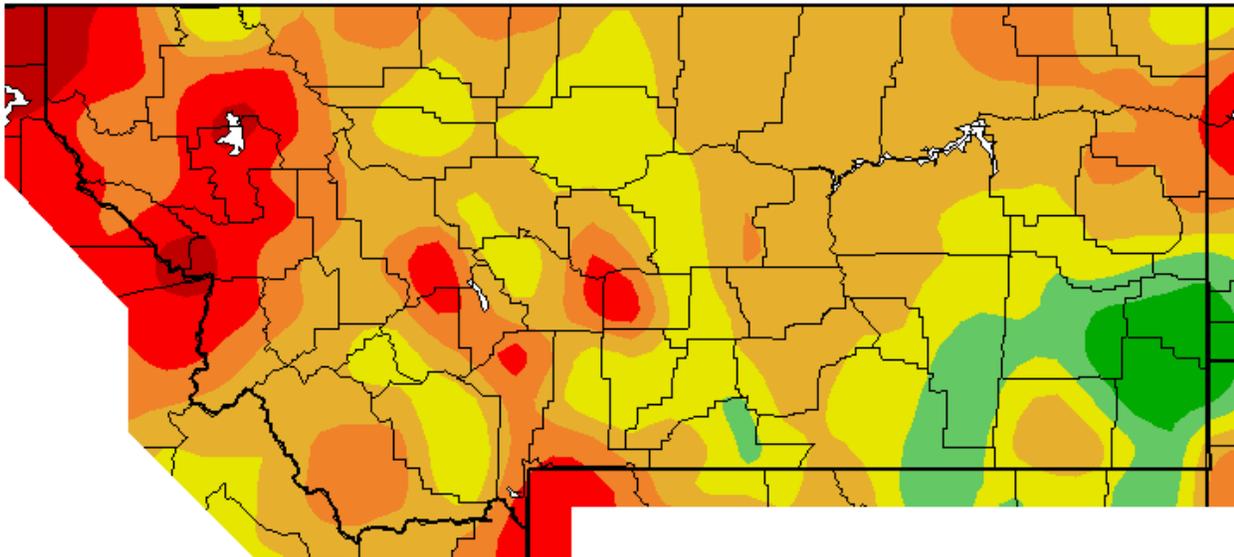


Figure 1. Temperature anomaly for July 1-15. Montana experienced temperatures above normal in all but the southeast. (Western Regional Climate Center).

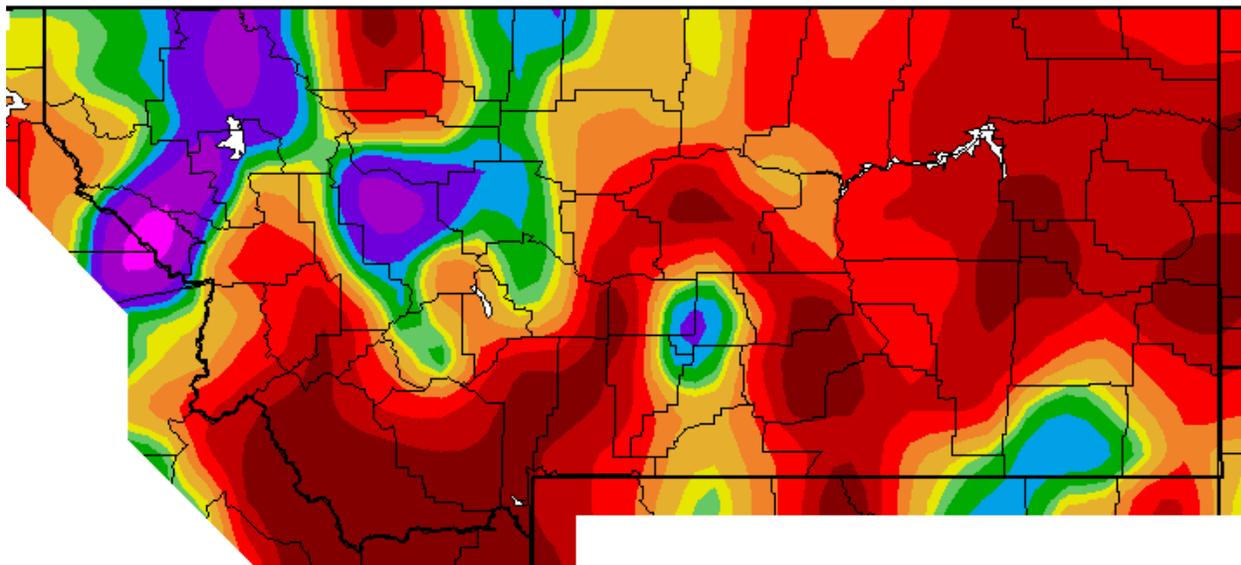


Figure 2. Precipitation anomaly (% of normal) for July 1-15. (Western Regional Climate Center).

Great Falls Soil Moisture 2008 Average is 2003-2007

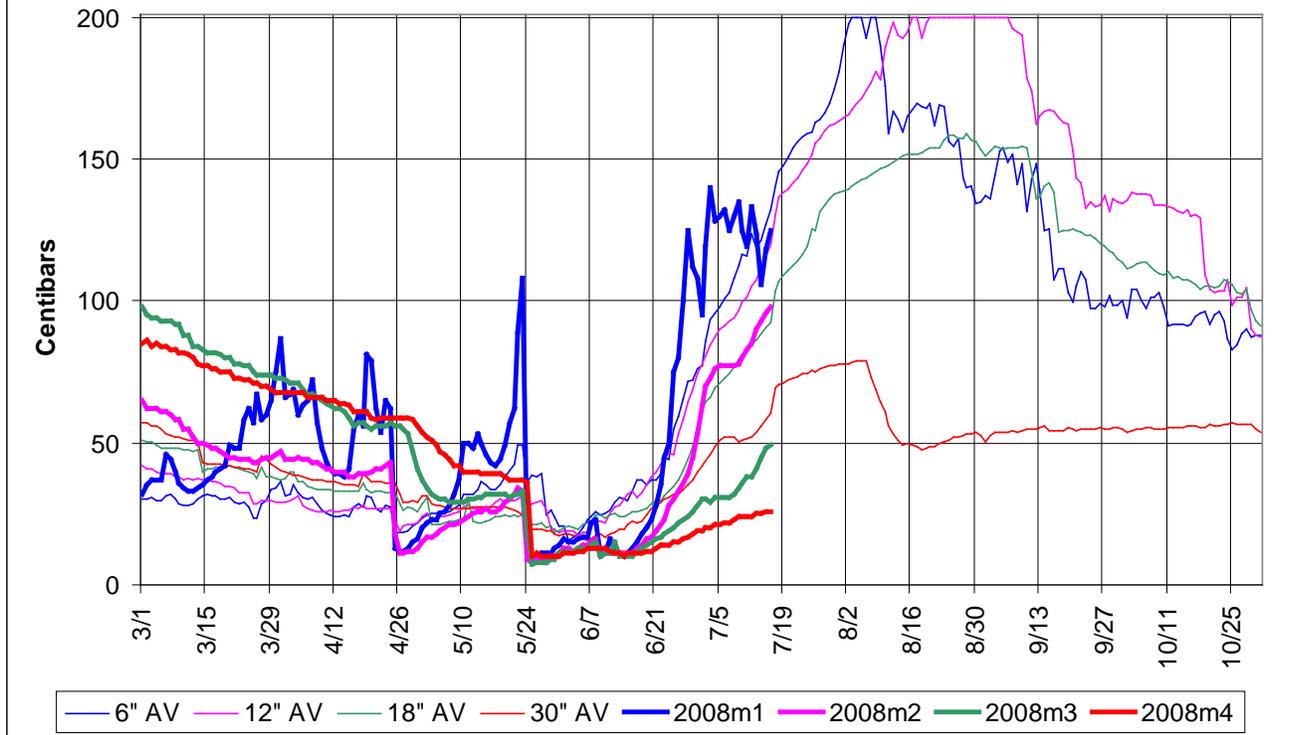


Figure 3. Soil moisture (centibars) at Great Falls at the 6 inch (blue), 12 inch (purple), 18 inch (green), and 30 inch (red) depths from March through the end of July 15 2008. The thicker lines are for 2008, with the thinner lines being the 2003-2007 climatological period. This graph indicates that soil moisture levels at the shallower depths (6 and 12 inches) are drying at near the mean, with the deeper levels retaining more moisture for this time of the year. Values near zero are wet soils, with values increasing relating to drying conditions.

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>

These data are preliminary and have not undergone final QC by NCDC. Therefore, these data are subject to revision. Final and certified climate data can be access at the National Climatic Data Center (NCDC) <http://www.ncdc.noaa.gov>. 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=tfx>