

South Dakota Climate Summary
February 2009
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A couple major storms impacted the state during the month. A strong storm across much of the western and central parts of the state on February 9-10 dropped a combination of rain and snow with some locations reporting over an inch of precipitation, much of it in the form of rain. A second large storm dropped over a foot of snow in some locations of the northeast on February 27-28 as well as deposit several inches of snow over most of the rest of the state. This storm also brought very cold temperatures to the state. Total precipitation for the month ranged from a high of 2.09" at Pollock to a low of 0.26" at Edgemont. The wettest areas were well over an inch above average for the month. The driest areas were at most a few tenths of an inch below average.

The heavy precipitation from the storms did set two monthly precipitation records. Cedar Butte 1NE and Mission set total precipitation records. Several other stations were in the top 5 wettest Februaries. Other daily records were set as well as one uncommon record – the lowest February pressure.

Average monthly temperatures across the state for February ranged from the single digits in the northeast corner to just above freezing in the Southwest. The snow pack did influence average monthly temperatures. Areas with consistently deep snow pack (roughly north of a Bison to Brookings line) were again below average in temperature for the month by 2- 4 F. The rest of the state had above average temperatures for the month ranging up to as much as 4 – 5 F above average in the west and southern border of the state. Winner and Hamill recorded the warmest temperature of the month at 70 F on 6 February and White River on 24 February. Cold temperatures returned near the end of the month as 27 February saw some stations with sub-zero highs in the northern part of the state. This is close to the latest day that the state has ever seen below zero highs. Below zero highs have only been recorded on a few days in March during the state's recorded climate history. During this cold outbreak Pollock had the coldest at temperature of the month at -27 F on 28 February.

Warmer temperatures began to remove the snow pack over large parts of the state in the earlier part of the month. The north central, northeast and east central areas were the only areas that maintained snow pack through the month. The main part of the snow pack was not removed but reduced in depth. Some areas along the North Dakota border still maintained over a foot of snow pack as of the end of the month. Most of the state had returned several inches of snow cover because of the 27-28 February storm.

Again this month drought has not been an issue. There were two small areas of D0. One in the far SW corner of the state. This area has persisted throughout the month. The second area is in the NW corner along the North Dakota border.

Daily records set

Rainfall

Mobridge	1.06 inches on the 9 th	(0.37 inches in 1944)
Pierre	0.76 inches on the 9 th	(0.45 inches in 1960)

Snowfall

Rapid City airport	2 inches on the 13 th	(2 inches in 1959)
East Rapid City	2.7 inches on the 13 th	(2.6 inches in 1915)

Water Equivalent Precipitation

Huron	0.29 inches on the 26 th	(0.17 inches in 1996)
Mobridge	0.51 inches on the 26 th	(0.31 inches in 1996)

Minimum Pressure for February

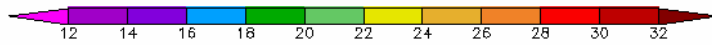
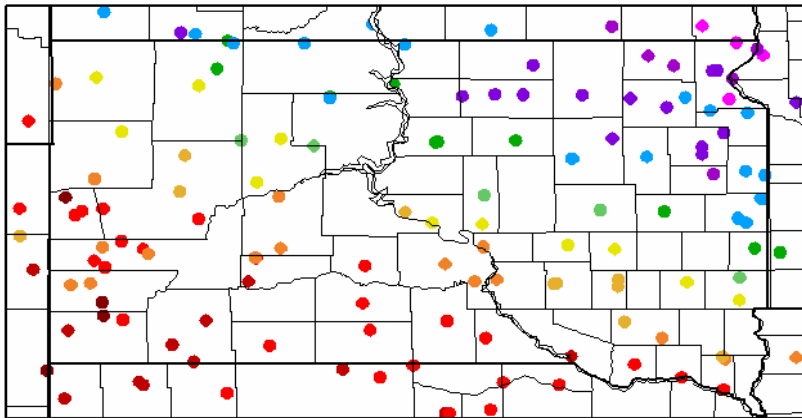
Sioux Falls 28.96 inches mercury on the 9th (29.03 inches of mercury on the 23rd in 1977)

Monthly Records

Precipitation

<u>Station</u>	<u>Rank</u>	<u>2009</u>	<u>Record or old</u>	<u>Year</u>
Timber Lake	3 rd	1.87"	2.36"	1951
Roscoe	2 nd	1.65"	2.06	1969
Gettysburg	2 nd	1.24	2.24	1987
McIntosh 6SE	5 th	1.08	2.55	1922
Bison	2 nd	1.72	2.35	1998
Dupree	2 nd	1.43	2.23	1987
Lemmon	5 th	1.40	2.07	1939
Martin	2 nd	1.44	1.47	1960
Murdo	2 nd	1.76	2.14	1987
Cedar Butte 1NE	1 st	1.60	1.34	1953
Mission	1 st	1.47	1.46	1977
Pollock	2 nd	2.09	2.27	1987

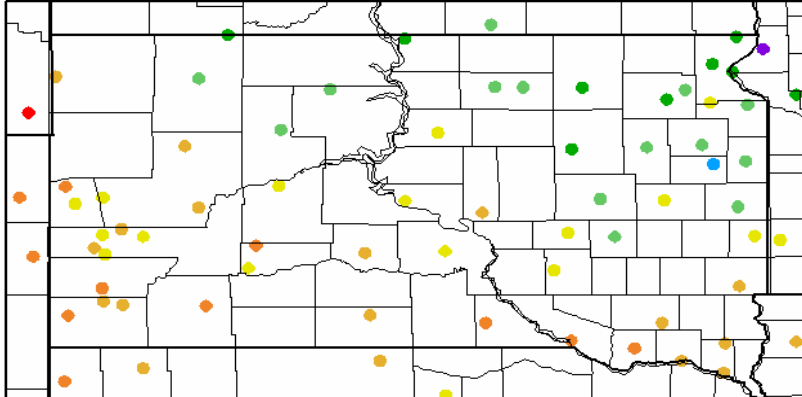
Temperature (F)
2/1/2009 - 2/28/2009



Generated 3/1/2009 at HPRCC using provisional data.

NOAA Regional Climate Centers

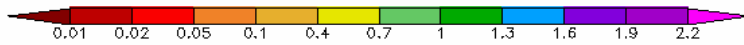
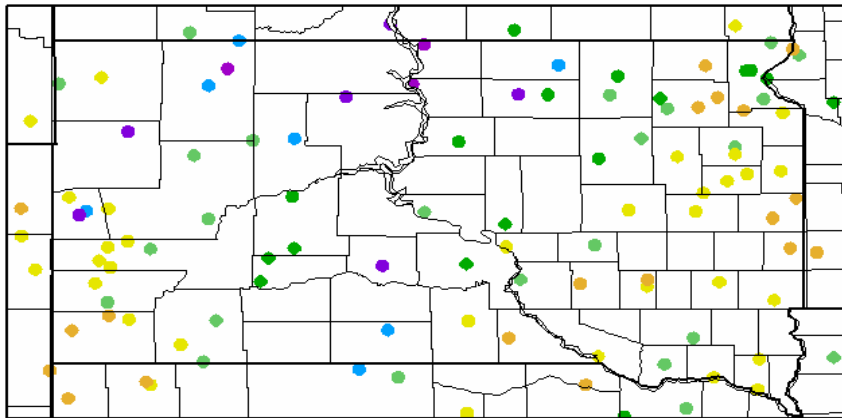
Departure from Normal Temperature (F)
2/1/2009 - 2/28/2009



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NOAA Regional Climate Centers

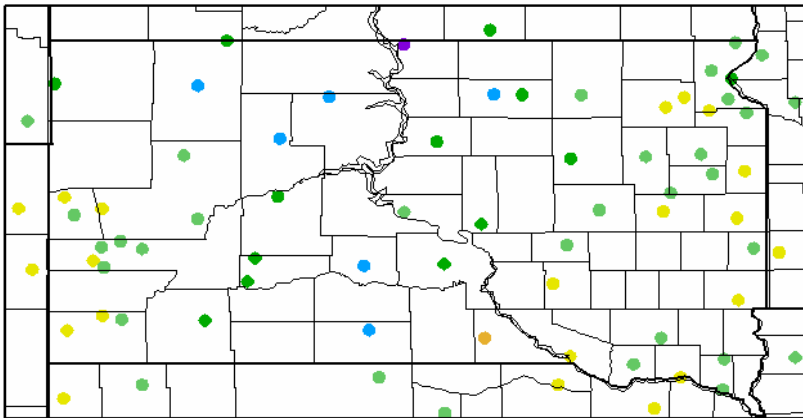
Precipitation (in)
2/1/2009 - 2/28/2009



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NOAA Regional Climate Centers

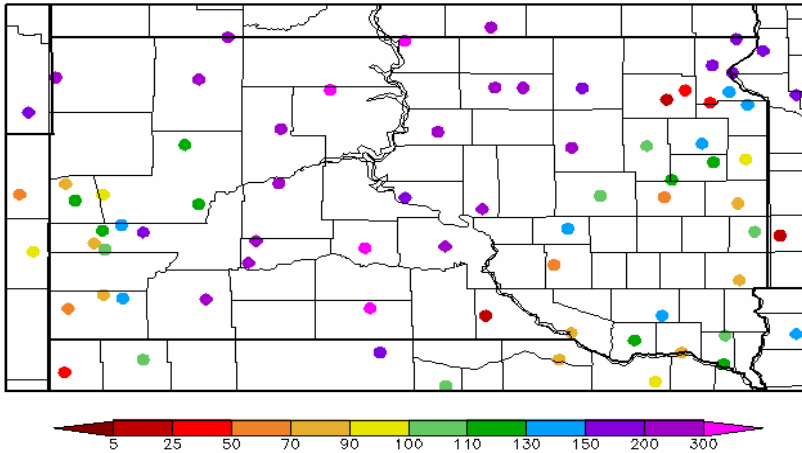
Departure from Normal Precipitation (in)
2/1/2009 - 2/28/2009



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NOAA Regional Climate Centers

Percent of Normal Precipitation (%)
2/1/2009 – 2/28/2009



Generated 3/1/2009 at HPRCC using provisional data.

NOAA Regional Climate Centers

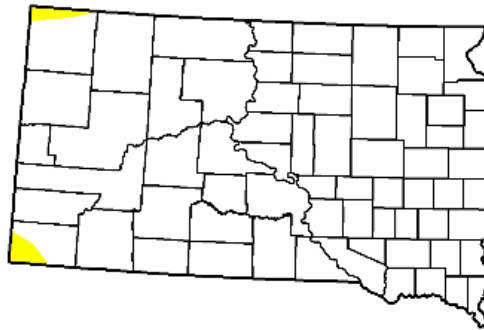
U.S. Drought Monitor

South Dakota

February 24, 2009
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	98.9	1.1	0.0	0.0	0.0	0.0
Last Week (02/17/2009 map)	99.4	0.6	0.0	0.0	0.0	0.0
3 Months Ago (12/02/2008 map)	99.5	0.5	0.0	0.0	0.0	0.0
Start of Calendar Year (01/06/2009 map)	99.5	0.5	0.0	0.0	0.0	0.0
Start of Water Year (10/07/2008 map)	73.9	26.1	0.8	0.0	0.0	0.0
One Year Ago (02/26/2008 map)	30.1	69.9	33.1	9.3	0.0	0.0



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements

<http://drought.unl.edu/dm>



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Author: Rich Tinker, CPC/NOAA

Looking ahead

The National Weather Service has issued a Spring Flood outlook stating minor flooding from melting snow is possible in the northern Black Hills and foothills, while the rest of western South Dakota has little potential for snowmelt flooding. Minor flooding is also likely on the upper parts of the James and Big Sioux Rivers. Additional details can be found in the Hydrologic Outlook

bulletin and the Advanced Hydrologic Prediction System web page (<http://www.weather.gov/ahps/forecasts.php>) .

Reports include information from:

National Weather Service (<http://www.weather.gov>)

High Plains Regional Climate Center (<http://www.hprcc.unl.edu>)

National Drought Mitigation Center (<http://www.drought.unl.edu/dm>)

South Dakota State Climate Office (<http://climate.sdstate.edu>)