

South Dakota Climate Summary
May 2009
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Summary

May was generally cool and very dry across South Dakota. Precipitation amounts for the month ranged from 4.12 inches at DeSmet in Kingsbury County to 0.31 inches at Cottonwood in Jackson County. Most other areas received less than 2 inches. This left all but Kingsbury County below average for precipitation by as much as 3.5 inches. Most of the state was 90 to 25 % of normal precipitation. Based on preliminary data, four stations in the Haakon/Jackson area will be the dries May on record. Another 20+ stations were in the top five driest. The US Drought Monitor indicated an abnormally dry (D0) area along the Missouri River from the center of South Dakota to the southeast.

The average temperatures for the May were in the 50s and lower 60's. The departure from normal was from 5 degrees below normal to about 3 degrees above. Warmer than average temperatures were confined to the Black Hills and across the southern tier of the state. The coolest temperatures were confined to much of the northeast part of the state.

Severe weather

Overall there was little activity severe weather due to an overall lack of storms. A few storms did spawn severe weather worthy of note during the month.

The first system moved through the state May 6 bringing Rain to southeast South Dakota with hail reported at Hurley and rainfall amounts around half an inch in the southeastern portion of the state.

The next storm system that went through was on May 12. Two tornadoes touched down in Ziebach County. The first tornado was seen west of Red Elm. National Weather Service meteorologists confirmed a second tornado occurred after conducting a damage survey. Based on the observed damage, the second tornado touched down about five miles west of Dupree and traveled eight miles, with damage ending about three miles northeast of Dupree. Based on the type of damage, winds were estimated between 100 and 110 mph, giving the second tornado a rating of EF1 on a scale of EF0 to EF5 of the Enhanced Fujita Scale. Hail and winds of 60 mph or greater were reported from Butte County eastward to Edmunds and Faulk counties. In south central South Dakota Mellette and Tripp counties reported strong winds and hail that day.

On May 29 hail was reported in the north central part of the state in Corson, Walworth, and Sully Counties. On May 31 hail was reported in three areas: in the south central portion of the state in Tripp county, in the southwest corner of the state in Custer, Fall River and Shannon counties and in the northeastern portion of the state in Day, Clark, Beadle and Kingsbury counties.

Records

Several daily and monthly extremes occurred over the state in May.

Record Daily Low Temperatures ° F

East Rapid City	32 on 16 th	(Tied with 1942)
Rapid City Airport	24 on 16 th	(35 in 1999)
Pierre	29 on 16 th	(35 in 2009)
Mobridge	27 on 16 th	(Tied with 1929)

Record Daily High Temperatures ° F

East Rapid City	93 on 19 th	(91 in 1948)
Lead	87 on 19 th	(85 in 1948)
Spearfish	95 on 19 th	(89 in 1992)
Watertown	94 on 19 th	(93 in 1934)
East Rapid City	93 on 19 th	(91 in 1948)
Rapid City Airport	94 on 19 th	(93 in 1992)

Monthly precipitation summaries

Cottonwood	0.31	2 nd driest	1924 0.29
Interior 3NE	0.52	driest on record	(60 year record)
Ft. Meade	0.81	2 nd driest	0.76 1966
Edgemont	0.63	driest	previous 0.78 2000
Martin	0.61	3 rd driest	0.20 1940
Oglala 1S	0.74	driest	previous 0.76 2006 (60 year)
Oral	0.90	2 nd driest	0.63 1974
Philip AP	0.38	driest	previous 0.39 2006
Porcupine 11N	0.56	3 rd driest	0.35 1966
Rapid City AP	0.94	2 nd driest	0.33 1966
Hill City	1.28	4 th driest	0.03 1966
Pactola Dam	0.40	2 nd driest	0.27 1966
Spearfish	0.80	2 nd driest	0.62 1998
Ludlow 3SE	0.38	2 nd driest	0.07 1936 (incomplete)
Milesville 5NE	0.59	driest	previous 0.67 1994
Ipswich	0.42	4 th driest	0.03 1900
Blunt	0.85	4 th driest	0.55 2006
Murdo	0.66	5 th driest	0.30 1934
Mission	0.90	5 th driest	0.34 1992
Redfield	0.79	4 th driest	0.36 1952
Aberdeen	0.47	5 th driest	0.25 1900
Columbia 8N	0.84	3 rd driest	0.61 1967 (60 year)
Milbank 2SSW	0.70	5 th driest (t)	0.16 1976
Summit 1W	1.05	5 th driest	0.52 1976 (50 year)
Waubay NWR	0.98	4 th driest	0.56 1967

Drought Monitor

After a short hiatus, South Dakota again received a D0 depiction on the US Drought Monitor with D0 being introduced from south east to central parts of the state in the last two weeks of the month. The introduction was due to significant dryness in April and May. In some areas of the southeast the dry period extended back to the beginning of the calendar year.

Climate Impacts

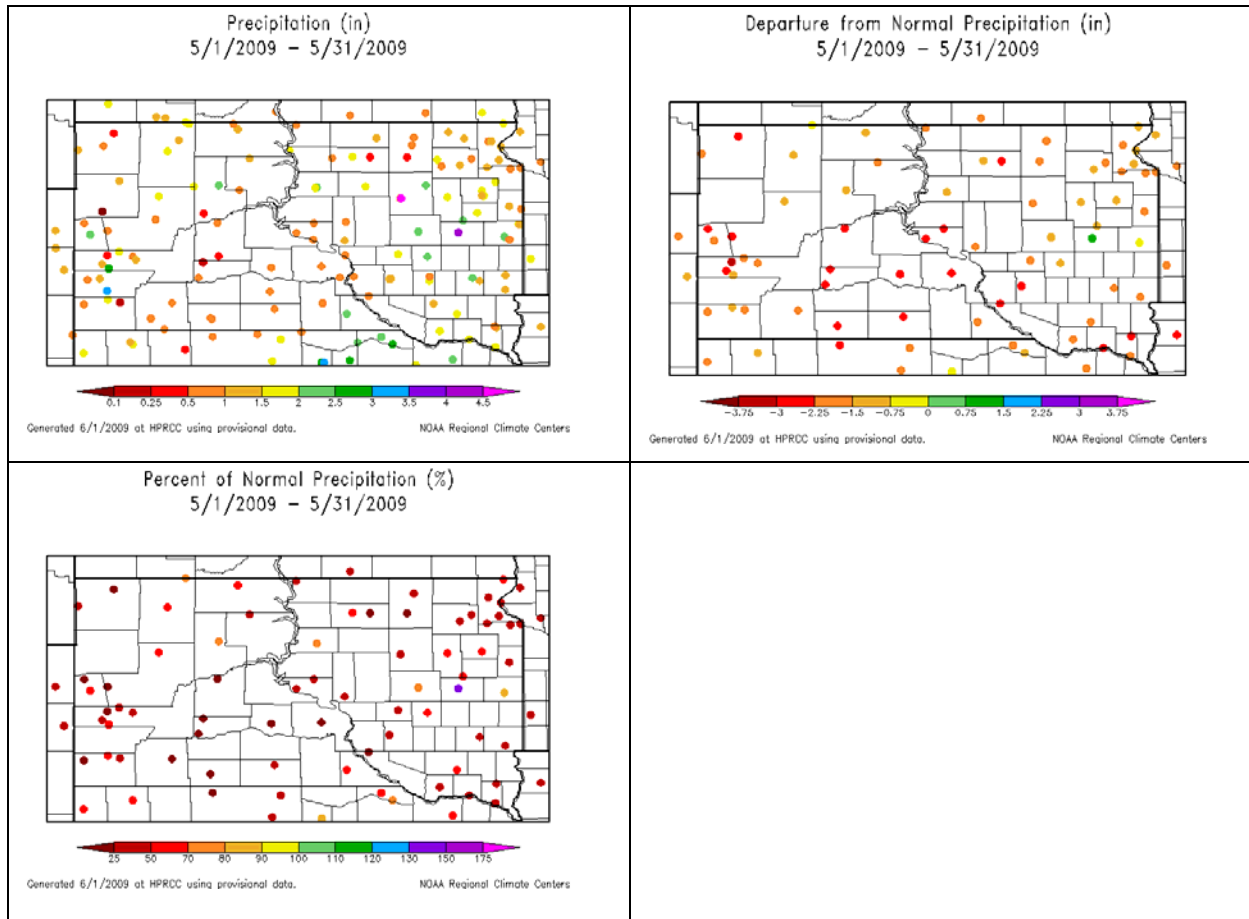
Overall impacts were mixed over the state. The wet conditions carrying over from the fall and winter delayed planting and soil warm-up in certain areas. In this case the dry conditions were a benefit to allow spring field work to occur. The cool air temperatures also slowed warming of soil temperatures in the northeast part of the state particularly throughout the month. Dry impacts were minimal so far because soil moisture conditions were generally good from heavy rain last fall. But near surface soils were drying quickly with because of the shorter-term dryness.

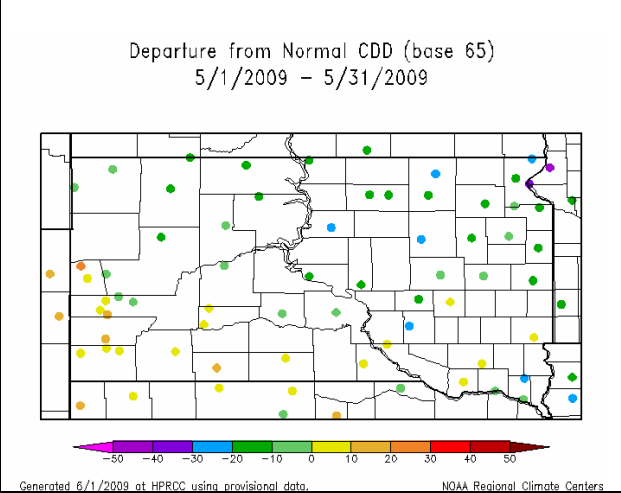
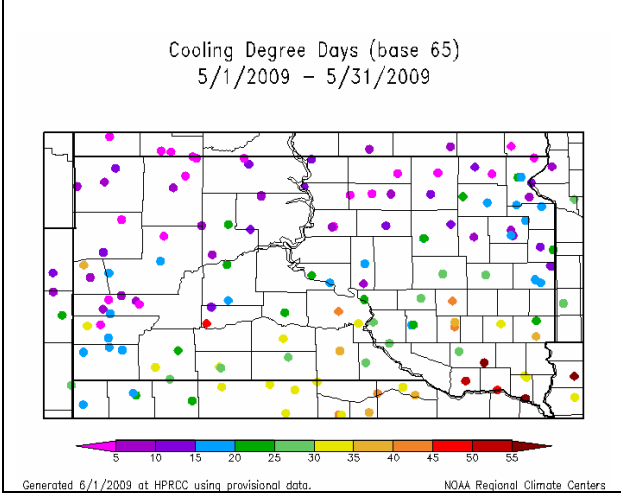
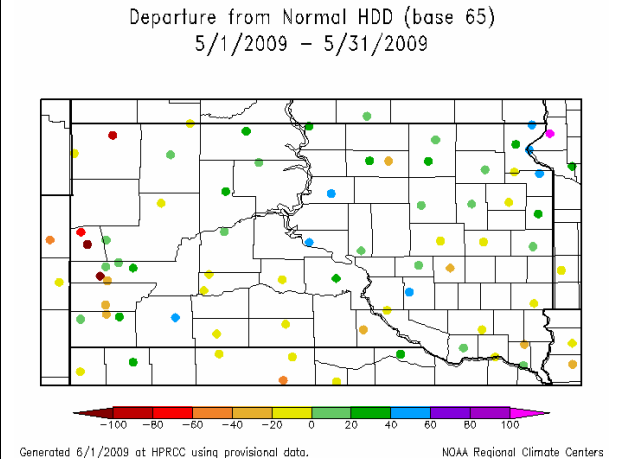
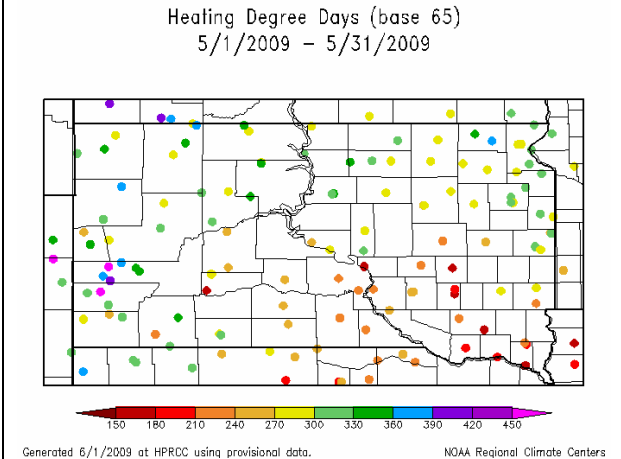
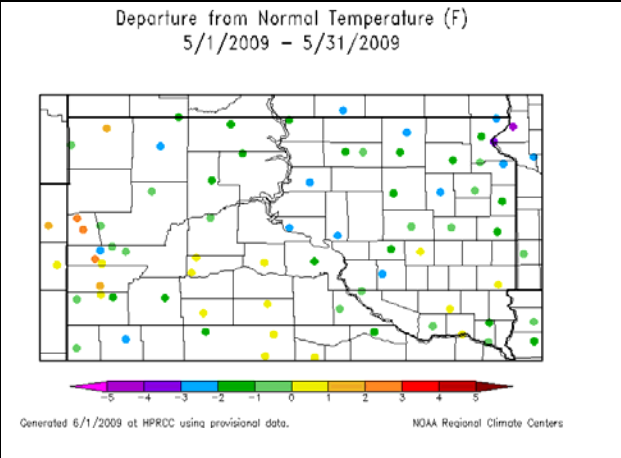
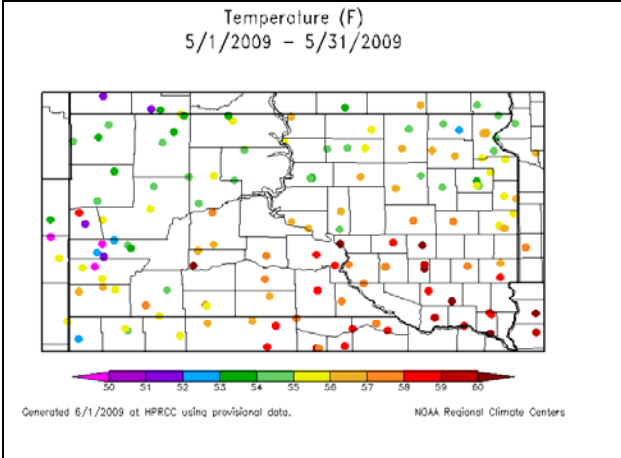
Flooding continues along the James River because of rapid release of water from reservoirs in the Jamestown, ND area to reduce reservoir levels. The flooding is going to prohibit planting of some fields in the river valley.

Hydrologic conditions across much of the state continue to be good because of heavy rains in the fall and overall precipitation in the winter. Most ponds, dug-outs and wetlands are wetter than most of the time in the last 7-8 years.

Freezes did occur in several locations of the state as late as 16 May (note record lows). For Pierre this would be in the 10 latest spring freezes. Extension educators did report some damage to alfalfa due to the freeze. Alfalfa would not be killed, but would reduce its productivity for the year.

May Climate Images





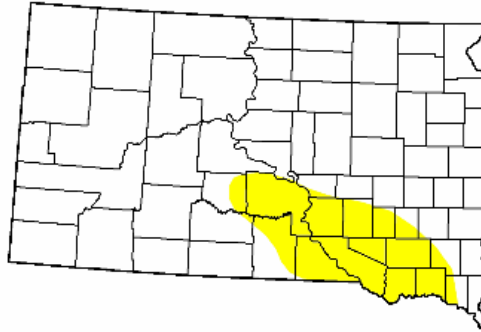
U.S. Drought Monitor

South Dakota

May 26, 2009
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	86.9	13.1	0.0	0.0	0.0	0.0
Last Week (05/19/2009 map)	88.0	12.0	0.0	0.0	0.0	0.0
3 Months Ago (03/03/2009 map)	98.9	1.1	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 (05/27/2008 map)	67.1	32.9	2.6	0.4	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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Reports include information from:

- National Weather Service
- High Plains Regional Climate Center
- National Drought Mitigation Center