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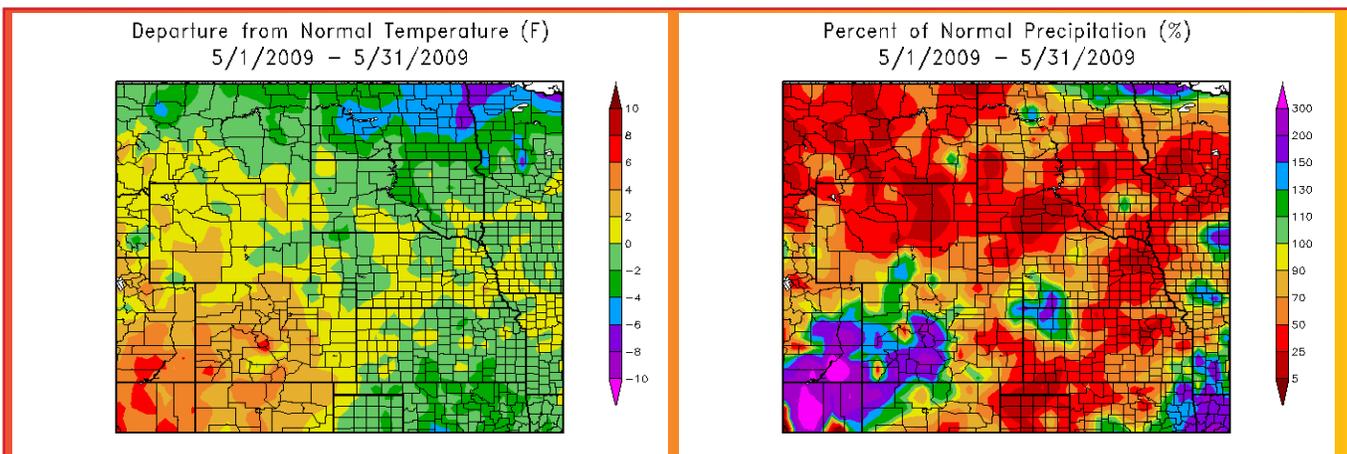
Platte River, looking northeast from the Highway 34 bridge just east of Grand Island, NE - Photo by Ken Dewey
<http://www.nebraskaweatherphotos.org>

May 2009 Climate Summary

Region Breakdown

May 2009 was a month of record setting dryness across the High Plains Region as a weak precipitation pattern dominated. Most of the Region received less than 70% of normal precipitation and large swaths received less than 50% of normal precipitation. Ultimately, several locations across the region recorded the driest May on record (see table on page 2).

Temperatures across the High Plains Region were near normal with common average monthly temperature departures ranging from 2°F (1.1°C) above normal to 2°F (1.1°C) below normal. The exceptions were North Dakota and Colorado where average monthly temperature departures were as large as 6°F (3.3°C) below normal and 8°F (4.4°C) above normal, respectively. The cool temperatures in North Dakota were not record breaking however, Cheesman, CO recorded its 4th warmest May with an average temperature of 55.0°F (12.8°C), which was 6.8°F (3.8°C) above normal.

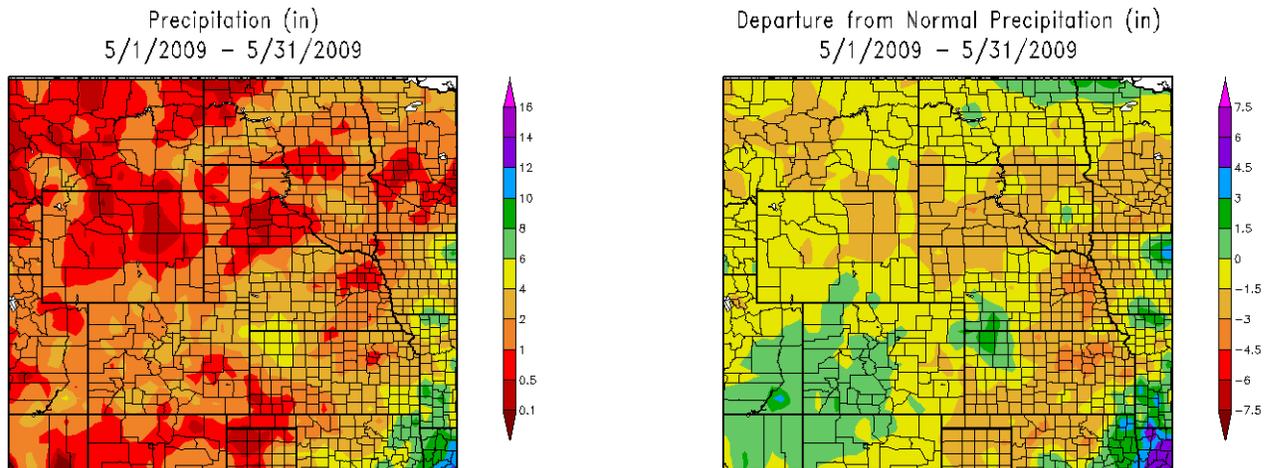


Departure from 1971-2000 Normal Mean Average Temperature (left) and Percent of 1971-2000 Normal Total Precipitation (right) for May 2009 in the High Plains Region. Map by High Plains Regional Climate Center. Available at: <http://hprcc.unl.edu/maps/current>

Precipitation Summary

Several locations recorded the driest May on record and many others ranked in the top 10. However, only one location broke a record that was set over 100 years ago. This month's extreme dry location was Wamego 4W, KS which broke a 108 year record by receiving only 0.52 inches (13.2 mm) of precipitation. The old record of 0.92 inches (23.4 mm) was set back in 1901.

While the vast majority of the High Plains Region was dry, western Colorado, and small portions of Kansas, Nebraska, and North Dakota received above normal precipitation. This month's extreme wet location was Leadville, CO. The Leadville Lake County Airport recorded its wettest May with 2.66 inches (67.6 mm), or 422% of normal precipitation. Of this monthly total, 0.82 inches (20.8 mm) fell in one day (May 31), which set a daily record. Interestingly, this daily record was over 1000% of the previous record of 0.07 inches (1.8 mm) set back in 1983.



Above: Total precipitation (in inches) (left) and Departure from Normal Precipitation (in inches) (right) for May 2009 in the High Plains Region. These maps are produced by HPRCC and can be found on the Current Climate Summary Map page at: <http://hprcc.unl.edu/maps/current>.

May 2009 Precipitation Records - Highlights

Monthly Records			
Precipitation in inches			
Wettest	New Record	Old Record/Year	Period of Record
Leadville Lake County AP, CO	2.66	2.42/1995	1976-2009
Driest	New Record	Old Record/Year	Period of Record
Council Grove Lake, KS	0.79	1.06/1998	1964-2009
Wamego 4W, KS	0.52	0.92/1901	1893-2009
Norfolk, NE	0.38	0.69/1940	1893-2009
Wayne, NE	0.61	1.22/1994	1893-2009
West Point, NE	0.62	0.81/1989	1890-2009
Edgemont, SD	0.63	0.78/2000	1948-2009
Philip AP, SD	0.38	0.39/2006	1907-2009
Milesville 5NE, SD	0.59	0.67/1994	1911-2009
Midwest, WY	0.28	0.47/1940	1939-2009
Sheridan County AP, WY	0.22	0.29/1998	1948-2009

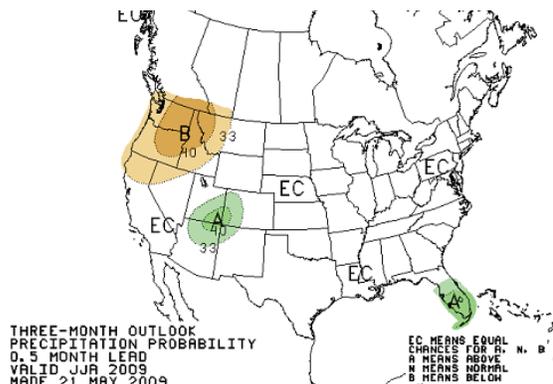
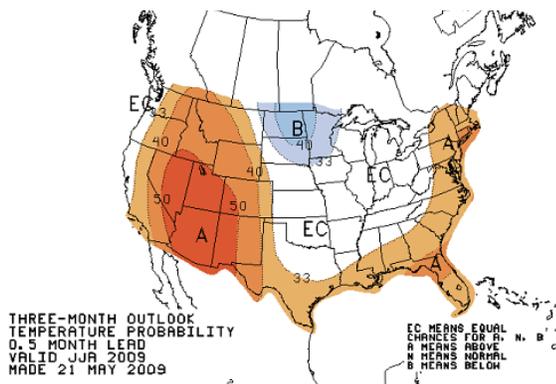
All Data are Preliminary and Subject to Change.
 Source: National Weather Service Cooperative Observation Network Data

The High Plains Regional Climate Center is one of the NOAA Regional Climate Centers, and is involved in the Applied Climate Information System (ACIS) development and management effort. Data found throughout this publication were derived using products built on the ACIS framework.



Climate Outlook

ENSO-neutral conditions are present and based on trends in both forecasts and observations, the ENSO-neutral conditions are expected to continue through the summer months. The temperature outlook indicates a higher probability of above normal temperatures for Colorado, Wyoming, and a small portion of western Nebraska, and a higher probability of below normal temperatures for North Dakota and the majority of South Dakota. Elsewhere in the region, equal chances of above, near, or below normal temperatures are predicted. The precipitation outlook indicates a higher probability of above normal precipitation for western Colorado. Elsewhere in the region, equal chances of above, near, or below normal precipitation is predicted. More information about these forecasts can be found here: <http://www.cpc.ncep.noaa.gov/>.



Above: 3-Month Outlook Maps Courtesy the NOAA Climate Prediction Center - <http://www.cpc.ncep.noaa.gov>
 (left) The Three-Month Temperature Probability Outlook, (right) The Three-Month Precipitation Probability Outlook

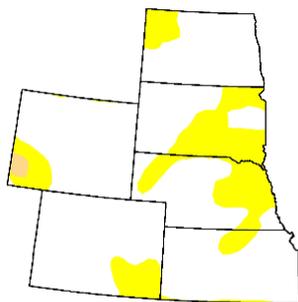
Drought Watch

May was another dry month for portions of the High Plains Region with many locations currently 3-6 inches (76.2-152.4 mm) below normal for the year. The combination of cool temperatures and ample soil moisture staved off drought conditions, but stress on some emerging crops is now evident. Since last month, the abnormally dry conditions (D0) in eastern Nebraska and north-central Kansas have expanded to include much of South Dakota and a portion of the Nebraska panhandle. In the western portion of the High Plains Region, drought conditions have improved. In south-central Colorado moderate drought conditions (D1) have been downgraded to D0 and portions of the D0 in both Wyoming and Colorado have been erased. According to the U.S. Seasonal Drought Outlook released on May 21, drought conditions in Colorado and Wyoming are expected to improve through August 2009.

U.S. Drought Monitor High Plains

June 2, 2009
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	78.1	21.9	0.6	0.0	0.0	0.0
Last Week (05/26/2009 map)	88.9	11.1	0.6	0.0	0.0	0.0
3 Months Ago (03/10/2009 map)	59.0	41.0	8.3	0.0	0.0	0.0
Start of Calendar Year (01/06/2009 map)	65.1	34.9	7.0	0.0	0.0	0.0
Start of Water Year (10/07/2008 map)	60.8	39.2	11.6	3.5	1.6	0.0
One Year Ago (06/03/2008 map)	62.0	38.0	21.3	10.9	5.9	0.0



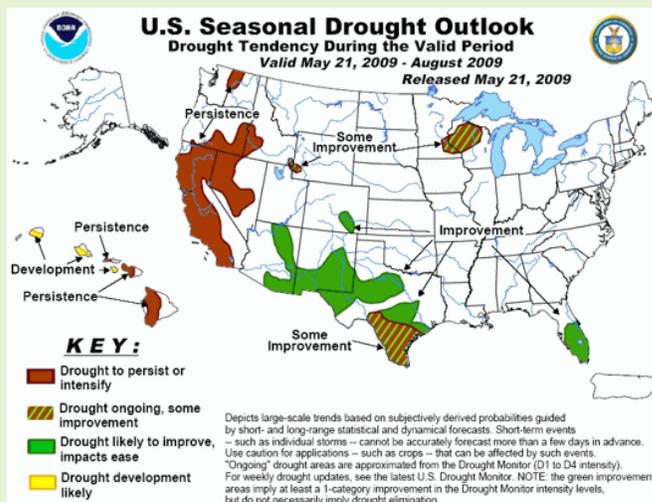
Intensity:
 D0 Abnormally Dry
 D1 Drought - Moderate
 D2 Drought - Severe
 D3 Drought - Extreme
 D4 Drought - Exceptional

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

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



Released Thursday, June 4, 2009
 Author: Brian Fuchs, National Drought Mitigation Center



The U.S. Drought Monitor is produced as a joint effort of the U.S. Department of Agriculture (USDA), National Drought Mitigation Center, U.S. Department of Commerce and the National Oceanic and Atmospheric Administration (NOAA). Real-time data provided through ACIS from the NOAA Regional Climate Centers are often used by the agencies involved in the U.S. Drought Monitor when determining the area and intensity of drought conditions, although the product itself is not produced by HPRCC. For current Drought Monitor information, please see: <http://www.ndmc.unl.edu/dm/monitor.html>
 Portions of this Drought Watch are courtesy the Drought Monitor Text Discussion found on the Drought Monitor webpage.

State Summaries

Colorado	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Alamosa San Luis Airport	71.8	38.4	55.1	4.7	82	5/18	29	5/03	1.17	0.47	167
Akron Washington County Airport	70.5	45.7	58.1	1.1	93	5/19	35	5/01	2.69	-0.46	85
Colorado Springs Municipal Airport	69.8	44.5	57.1	2.5	88	5/19	37	5/14+	2.39	0.00	100
Grand Junction Walker Field Airport	78.6	50.3	64.4	4.0	92	5/18	39	5/14+	1.60	0.62	163
Pueblo Memorial Airport	78.3	46.4	62.4	2.7	95	5/19	34	5/14	1.07	-0.42	72

Kansas	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Concordia Municipal Airport	74.7	52.2	63.5	0.5	93	5/31	40	5/14	1.02	-3.18	24
Dodge City Regional Airport	75.2	50.4	62.8	-1.0	95	5/30	39	5/04	1.31	-1.69	44
Goodland Renner Field	72.6	46.9	59.7	1.0	91	5/19	33	5/14	3.12	-0.34	90
Topeka Municipal Airport	76.8	54.5	65.7	1.3	93	5/31+	41	5/17	1.44	-3.42	30
Wichita Mid-Continent Airport	76.5	54.8	65.5	0.6	94	5/31+	46	5/28+	2.94	-1.22	71

Nebraska	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Chadron Municipal Airport	71.3	39.6	55.5	-1.3	97	5/19	26	5/16	1.22	-1.80	40
Grand Island Airport	74.8	49.9	62.4	1.7	91	5/31	38	5/16+	2.05	-2.02	50
Lincoln Municipal Airport	77.1	50.7	63.9	1.9	92	5/31	39	5/14	1.17	-3.06	28
Omaha Eppley International Airport	75.2	51.9	63.5	1.3	89	5/19	41	5/14	1.38	-3.06	31
Norfolk Karl Stefan Airport	74.3	48.2	61.3	1.0	93	5/19	36	5/11	0.38	-3.54	10
North Platte Regional Airport	72.5	44.5	58.5	0.2	93	5/19	31	5/14	2.80	-0.54	84
Valentine Miller Field	72.0	44.1	58.0	0.5	99	5/19	28	5/16	1.50	-1.70	47

North Dakota	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Bismark Municipal Airport	65.8	36.8	51.3	-3.2	80	5/30+	21	5/16	1.89	-0.39	83
Dickinson Municipal Airport	68.3	40.3	54.3	-1.7	85	5/18	24	5/10	2.02	-0.20	91
Fargo International Airport	67.0	40.5	53.8	-3.6	86	5/31	28	5/10	1.62	-0.99	62
Grand Forks International Airport	63.9	37.7	50.8	-6.0	79	5/31+	29	5/10	1.29	-0.92	58
Williston International Airport	67.0	36.7	51.9	2.7	84	5/30	21	5/16	0.68	-1.20	36

All Data are Preliminary and Subject to Change.

Source: National Weather Service Cooperative Observation Network Data

Data are retrieved through the Applied Climate Information System (ACIS).

These data are available for the entire period of record through the CLIMOD system. For more information please see <http://hprcc.unl.edu/services>.

May 2009 Climate Summary

South Dakota	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Aberdeen Regional Airport	70.9	41.3	56.1	-1.8	96	5/19	28	5/10	0.47	-2.22	17
Huron Regional Airport	71.7	44.3	58.0	-0.2	98	5/19	30	5/10	2.16	-0.84	72
Rapid City Regional Airport	58.9	39.3	54.1	-0.9	94	5/19	24	5/16	0.94	-2.02	32
Sioux Falls Joe Foss Field Airport	71.4	45.9	58.6	0.8	95	5/19	35	5/10+	1.43	-1.96	42

Wyoming	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Casper Natrona County International AP	69.1	36.7	52.9	0.8	89	5/19	24	5/13	0.43	-1.95	18
Cheyenne Municipal Airport	64.3	42.2	53.3	2.0	83	5/19+	32	5/10	2.08	-0.40	84
Lander Hunt Field Airport	68.3	42.2	55.2	1.8	87	5/19	28	5/08	0.64	-1.74	27
Laramie Regional Airport	62.9	37.1	50.0	3.0	80	5/19+	26	5/09	1.36	-0.31	81
Rawlins Municipal Airport	64.8	37.8	51.3	0.4	82	5/18	29	5/14+	1.90	0.41	128
Sheridan County Airport	69.5	37.2	53.3	0.9	94	5/19	24	5/02	0.22	-2.19	9

All Data are Preliminary and Subject to Change.

Source: National Weather Service Cooperative Observation Network Data

Data are retrieved through the Applied Climate Information System (ACIS).

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Severe Weather Summary

Overview

- May 7 - Several high wind (65 knot +) and large hail (2" diameter +) reports across southern Kansas
- May 12 - Tornado damage reported in Nebraska and South Dakota; hail and wind reports in Kansas, Nebraska, South Dakota, and North Dakota
- May 13 - 7 tornado reports and numerous wind and hail reports across southeastern Kansas
- May 15 - Several high wind (65 knot +) and large hail (2" diameter +) reports across central and eastern Kansas
- May 24 - 3 tornadoes reported in central Colorado

May 2009 - Storm Reports			
1950-2008 Average in Parentheses			
State	Tornado	Hail	Wind
Colorado	5 (9)	5 (25)	1 (7)
Kansas	9 (24)	133 (123)	54 (38)
Nebraska	5 (13)	42 (50)	7 (19)
North Dakota	0 (2)	32 (9)	9 (4)
South Dakota	1 (6)	4 (23)	4 (8)
Wyoming	0 (2)	9 (5)	1 (2)
Total	20 (56)	225 (235)	76 (78)



Severe storms building in southeast Nebraska - Photo by Ken Dewey
<http://www.nebraskaweatherphotos.org>

Storm report totals are preliminary and are provided by the NOAA Storm Prediction Center located in Norman, OK. For more information on storm reports and the Storm Prediction Center, please see: <http://www.spc.noaa.gov>.

1950-2008 storm report averages are based on data retrieved from the National Climatic Data Center's Storm Events page. For more information on storm events and the National Climatic Data Center, please see: <http://www.ncdc.noaa.gov>.

State Spotlight - North Dakota



F. Adnan Akyüz - State Climatologist, Barb Mullins
 North Dakota State Climate Office, North Dakota State University

Precipitation:

The wide spread rain events for May happened from the 11th through the 13th and the 24th through the 25th. The rain event two day totals for the 24th and 25th was heaviest in the northeast corner with amounts of over 2 inches. The North Dakota Agricultural Weather Network (NDAWN) total May rainfall ranged from 3.71 inches at Cavalier to 0.19 inches at Bowbells. The smallest monthly totals of a quarter inch and less were in the northwest corner. The highest monthly totals of greater than 3 inches recorded by NDAWN were in Mercer, Mclean Pierce, Benson, and Pembina counties. The majority of the State had below normal precipitation. The areas of above normal precipitation ranged from 100% to 160% and included the west central, north central, and northeastern corner (Figure 1. North Dakota State Climate Office).

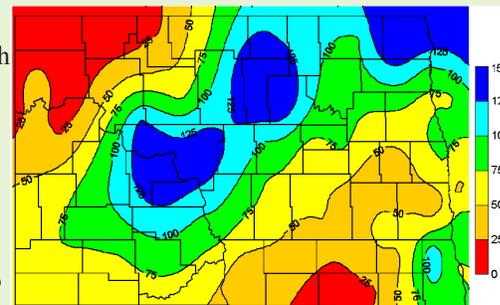


Figure 1. Precipitation Percent of Normal in May 2009 for North Dakota (North Dakota State Climate Office)

Temperature:

May departure from normal monthly air temperatures were below normal across the State. The departures ranged from -7°F in the upper northeast to near zero in the lower southwest (Figure 2, North Dakota State Climate Office). The average monthly air temperatures ranged from 47°F in the northeast to 56°F in the southeast. Most daily average air temperatures during the first half of May were well below 60°F. The second half of May had slightly warmer temperatures with daily temperatures in the upper 50's and some just above 60°F. The southeast corner of the State had two days with average daily air temperatures over 70°F.

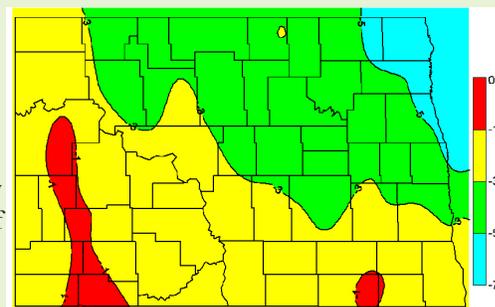


Figure 2. Temperature Departure from Normal in May 2009 for North Dakota (North Dakota State Climate Office)

Drought Monitor:

The US Drought Monitor depicted all parts of the state drought-free by the end of the month. There were some areas where abnormally dry conditions persisted at the beginning of the month especially in the northwestern North Dakota from Divide to Golden Valley counties. By May 5, dryness migrated southward to Bowman County. Dry weather allowed for producers to make good progress planting. According to USDA National Ag Statistical Services, Spring wheat was 29 percent emerged, over two weeks behind the average, but improved from the previous week. Durum wheat was 69 percent seeded compared with 77 percent average. Barley was 66 percent planted compared with 93 percent average. Oat plantings were 77 percent complete, compared with 94 percent average. All small grains planted were at least 25 percent emerged; however, at this time last year all small grains planted were over 50 percent emerged. Rains returned and eliminated the dryness by May 12.

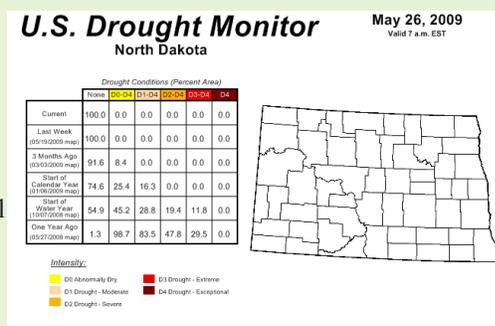


Figure 3. Drought Monitor for North Dakota

Drought Outlook:

Dryness intensified in the northwestern parts of the state. County extension agents in Burke, Williams and McKenzie counties reported signs of moisture stress and poor growth. Therefore areas of D0 (“abnormally dry” in the US Drought Monitor scale) will return to the northwestern North Dakota during the upcoming weeks in June. Soil moisture elsewhere is adequate. Above normal precipitation is in the forecast especially in the eastern parts of the state. Therefore, drought should be no concern in the eastern half of the state during June.

For more information about the North Dakota State Climate Office: <http://www.ndsu.edu/ndsco>
 For more information on the North Dakota Agricultural Network: <http://www.ndawn.ndsu.nodak.edu>
 The North Dakota Agricultural Network is a part of the Automated Weather Data Network (AWDN).

State Spotlight - Nebraska



Al Dutcher - State Climatologist
Nebraska State Climate Office, University of Nebraska - Lincoln

Overview

Drier than normal conditions were once again the rule across most of Nebraska during May 2009. The only area of the state experiencing above normal moisture was the southwestern climate district where percent of normal data indicates the southern half of the district recorded 100 – 150% of normal moisture. Exceptionally dry conditions blanketed the eastern third of Nebraska with percent of normal moisture ranging from 10 – 60% of normal.

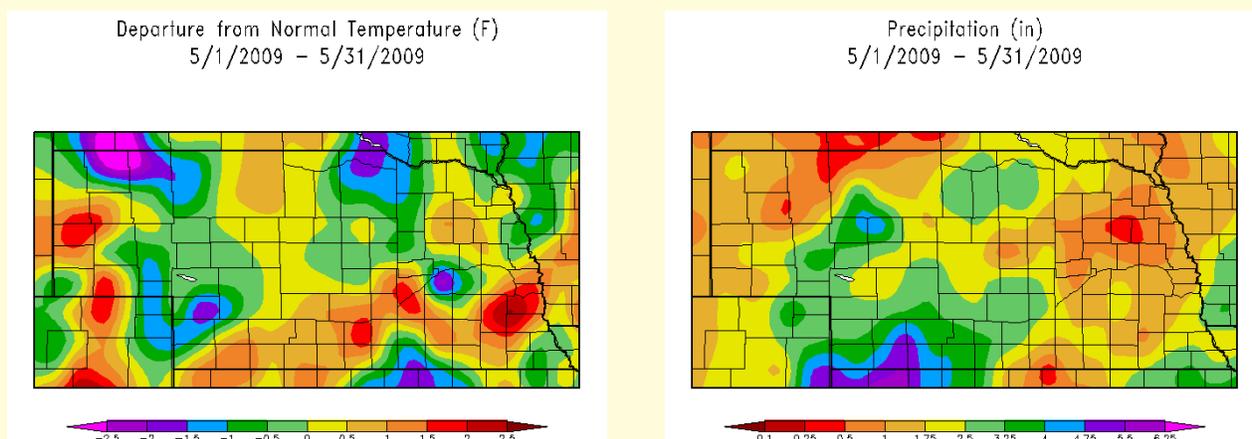
May 2009 was the fifth consecutive month of below normal moisture across the eastern 1/3 of the state. Accumulated year-to-date deficits approached 7 inches across portions of the east central district, with the remaining areas locked in a deficit range of four to six inches.

The Lincoln Airport had received 3.89 inches of moisture since January 1, making it the second driest January-May period in the 44 years of available data. The Norfolk Airport received 4.54 inches in the same period, ranking it 12th out of the last 100 years. The Omaha Eppley Airport recorded 5.63 inches, ranking it 5th out of the last 74 years.

Even though monthly precipitation totals were below normal at most locations during May, there were 19 days that precipitation was recorded somewhere within the state boundaries. Unfortunately, most precipitation events were light (<0.50 inches) and not well distributed across a broad area.

This weak precipitation pattern proved beneficial to agricultural producers sowing the 2009 corn and soybean crop. Corn planting was virtually completed by mid-May, with the majority of soybeans planted by month's end. Wet conditions last October and December built generous soil moisture reserves for this year's crop, providing ample moisture for excellent stand emergence.

Early season stress on newly emerged crops has been minimal due to May average temperatures being within plus or minus 1 F of normal, coupled with only a couple of days with high temperatures exceeding 85 F. However, the lack of normal moisture during May means that this year's crops are using up stored soil moisture quicker than would normally be expected and increases the probability of drought conditions developing during the summer months.



Above: Departure from 1971-2000 Normal Mean Average Temperature (left) and Total Precipitation (in inches) (right) for May 2009 for Nebraska (HPRCC).

State Spotlight - Nebraska, cont.

Al Dutcher - State Climatologist

Nebraska State Climate Office, University of Nebraska - Lincoln

Precipitation

There were 173 official observation stations that had at least 80% of their precipitation data available for analysis and only 18 of these locations reported above normal moisture for the month. Of these 18 locations, only 3 were outside of the southwestern climate district. The greatest preliminary monthly precipitation total reported for May was 7.71 inches at Culbertson, while the greatest 24-hour precipitation total occurred at Haigler with 3.55 inches on the 26th.

Precipitation was reported somewhere within the state on 19 of the 31 days in May. The most significant moisture event using official observation networks occurred on May 26th across the southwest climate district. Twenty-four hour totals in excess of 1.50 inches were common, with at least 8 locations reporting totals greater than 2 inches. The heaviest rainfall was confined to Chase, Hitchcock, and Frontier counties.

Because spatial density between official observation locations can be in excess of 25 miles, many isolated thunderstorms were not adequately captured by these networks. The NeRAIN project consists of nearly 1000 volunteers to fill in these data void areas. NeRAIN data does not constitute an official network, but does help capture the finer detail of individual storm events.

Using the NeRAIN data, there were several locations that reported 24-hour precipitation totals exceeding 1.50 inches. These occurred on May 1 (south central), May 13th (east central), May 16th (southeast), May 21st (north central), May 23rd (north central), May 24th (southwest, south central, east central), May 25th (central, south central, southeast), May 26th (southwest, west central), and May 27th (southwest, south central, southeast).

On a side note, only one confirmed tornado touchdown was reported by the National Weather Service during the month of May. The EF0 tornado touched down 17 miles south-southwest of Mullen on May 12th. In a typical year, approximately 2/3 of the reported tornado touchdowns occur during the May-June period. The lack of tornado activity was significant and the North Platte NWS reports that May had the fewest severe weather alerts since 1992.

Temperature

Average temperatures during the month of May were close to normal with the vast majority of 153 reporting stations falling within plus or minus 1 F from normal. As a general guideline, much of the northern third of the state was below normal, the central third normal, and the southern third slightly above normal. The warmest period during the month occurred during the May 18-20 time frame, while the coolest period occurred during the May 14-16 time frame.

Only 20 locations failed to reach 90 F, while only 13 failed to drop below 40 F. Hard freeze conditions (< 28 F) were reported at 12 locations in the Panhandle and western Sandhills (north central Nebraska) on May 14th. Light to moderate frost (29 F – 32 F) was reported across much of the Panhandle, north central and northeast Nebraska on several occasions during the May 11-16 time frame.

The highest temperature recorded during May was 99 F at Valentine Miller Field on the 19th and Kilgore 1 NE on the 20th. Conversely, the lowest temperature recorded during the month was 25 F at Chadron 3 SW on the 16th. The spread between the highest and lowest temperature recorded during the month of May was 74 F.

State Spotlight - South Dakota

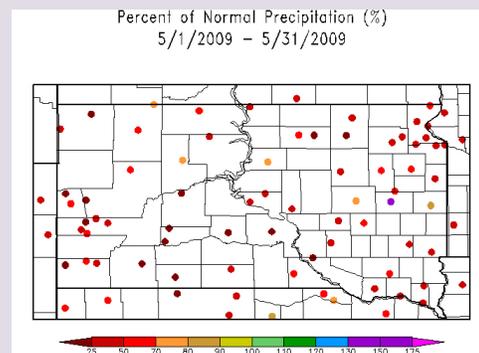
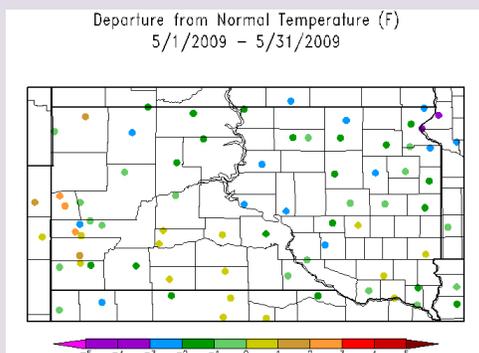
Dennis Todey - State Climatologist
Joanne Puetz Anderson and Chirag Shukla
South Dakota State Climate Office, South Dakota State University



Overview

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 driest 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 May were in the 50s and lower 60s. 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.



Above: Departure from 1971-2000 Normal Mean Average Temperature (left) and Percent of 1971-2000 Normal Total Precipitation (right) for May 2009 for South Dakota (HPRCC).

Severe weather

Overall there was little severe weather activity 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.

For more information about the South Dakota State Climate Office: <http://climate.sdstate.edu>

The SDSU's AWDN is a part of the High Plains Automated Weather Data Network (AWDN). Data are available through SDSU or the High Plains Regional Climate Center.



State Spotlight - South Dakota, cont.



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 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 the wettest in the past 7-8 years.

Freezes did occur in several locations of the state as late as 16 May. 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.

Monthly Records - Highlights		
Precipitation in inches		
Station	Precipitation	Rank
Interior 3NE	0.52	Driest
Edgemont	0.63	Driest
Oglala 1S	0.74	Driest
Philip AP	0.38	Driest
Milesville 5NE	0.59	Driest
Cottonwood	0.31	2nd driest
Ft. Meade	0.81	2nd driest
Oral	0.90	2nd driest
Rapid City AP	0.94	2nd driest
Pactola Dam	0.40	2nd driest
Spearfish	0.80	2nd driest
Ludlow 3SE	0.38	2nd driest
Martin	0.61	3rd driest
Porcupine 11N	0.56	3rd driest
Columbia 8N	0.84	3rd driest
Hill City	1.28	4th driest
Ipswich	0.42	4th driest
Blunt	0.85	4th driest
Redfield	0.79	4th driest
Waubay NWR	0.98	4th driest

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About the High Plains Regional Climate Center

The High Plains Regional Climate Center (HPRCC) operates out of the University of Nebraska - Lincoln (UNL) in Lincoln, Nebraska. As one of 6 regional climate centers operated under the National Oceanic and Atmospheric Administration (NOAA), HPRCC works closely with other organizations such as the National Climatic Data Center (NCDC), Local and Regional National Weather Service (NWS) Offices, and other climate services organizations such as the National Drought Mitigation Center (also located at UNL) to provide climate data services and specialized climate products.

For More Information Online

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

High Plains Regional Climate Services: <http://hprcc.unl.edu/services>

CLIMOD: <http://climod.unl.edu>

NOAA Regional Climate Centers and ACIS: <http://www.rcc-acis.org>

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

National Climatic Data Center: <http://ncdc.noaa.gov>

University of Nebraska - Lincoln: <http://www.unl.edu>

National Drought Mitigation Center: <http://drought.unl.edu>

Climate Prediction Center: <http://www.cpc.noaa.gov>

NOAA Storm Prediction Center: <http://www.spc.noaa.gov>



Photo of the Nebraska Sandhills by Bill Sorensen - Senior Programmer - HPRCC

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