



727 Hardin Hall
 3310 Holdrege Street
 Lincoln, NE 68583-0997
 402 472-6706
 Fax 402 472-8763
<http://hprcc.unl.edu>



Snow Geese at Squaw Creek National Wildlife Refuge - Photo by Ken Dewey
<http://www.nebraskaweatherphotos.org>

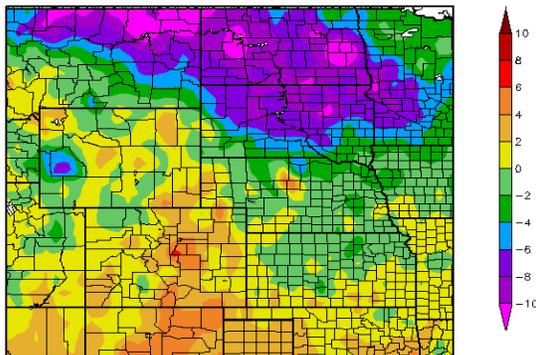
March 2011 Climate Summary

Region Breakdown

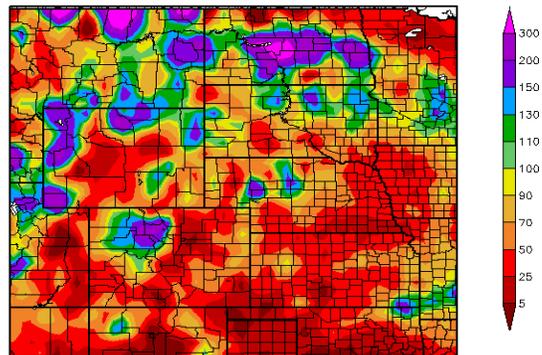
Temperatures were generally warmer than normal in the west and cooler than normal in the east across the High Plains Region this month. Colorado had temperatures which ranged from near-normal up to 6 degrees F (3.3 degrees C) above normal. Colorado Springs, Colorado had its 11th warmest March on record with an average temperature of 43.1 degrees F (6.2 degrees C) which was 5.3 degrees F (2.9 degrees C) above normal (period of record 1894-2011). The warmest March on record in Colorado Springs occurred in 1910 with an average temperature of 47.4 degrees F (8.6 degrees C).

Meanwhile, the Dakotas were very cold when compared to normal this month. Average monthly temperatures across those states ranged from 6-10 degrees F (3.3-5.6 degrees C) below normal and many locations ranked in the top 10 coldest Marches on record. Aberdeen, South Dakota had an average temperature of 21.1 degrees F (-6.1 degrees C) which was 9.6 degrees F (5.3 degrees C) below normal. While not cool enough to break the 1897 record of 15.1 degrees F (-9.4 degrees C), this month's average temperature did rank as the 7th coolest on record (period of record 1893-2011). While the month was cold overall, there was a mid-month warm-up which caused runoff to increase the flows of creeks and rivers in northeast South Dakota and eastern North Dakota. Temperatures cooled off at the end of the month and stopped the snow melt processes. However, due to the late-month cool down and additional precipitation, major flooding is still a concern for April.

Departure from Normal Temperature (F)
 3/1/2011 - 3/31/2011



Percent of Normal Precipitation (%)
 3/1/2011 - 3/31/2011



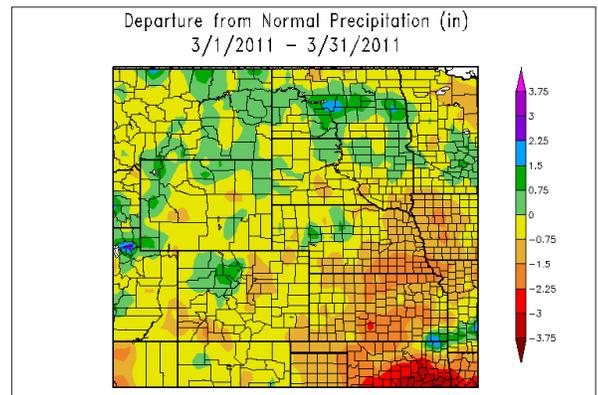
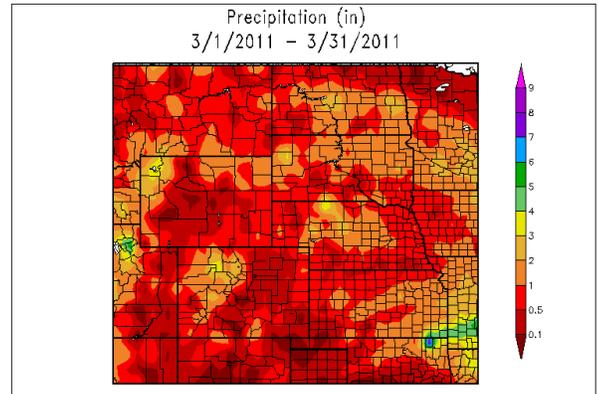
Departure from 1971-2000 Normal Average Temperature (left) and Percent of Normal Precipitation (right) for March 2011 in the High Plains Region. Maps produced by High Plains Regional Climate Center. Available at: <http://hprcc.unl.edu/maps/current>

Precipitation Summary

Overall, March was a dry month across the High Plains Region. Large areas of Colorado, Kansas, Nebraska, and Wyoming received 50 percent or less of normal precipitation. Pockets of southeastern Nebraska, north-central Colorado, west-central Wyoming, and southern Kansas only got 25 percent or less of normal precipitation. In many of these areas, drought conditions either developed or expanded.

However, wetter than normal conditions did occur in western and northern Wyoming, north-central Colorado, central North Dakota, and a few pockets of South Dakota and Nebraska. This month's wet spot was central North Dakota. Another 13.7 inches (35 cm) of snow fell this month which pushed Williston, North Dakota's snowfall total this season (July-June) to 94.6 inches (240 cm). This was enough to break the long-standing seasonal snowfall record of 89.9 inches (228 cm) set back in the 1895-1896 snowfall season (period of record 1894-2011). With snow still possible in April and May, Williston's new record could continue to grow. While not excessively wet this month, South Dakota has been very wet over the past year and many locations already rank in the top 10 snowiest seasons on record (see table below). Sisseton, South Dakota, located in the northeast corner of the state, received 10.9 inches (28 cm) of snowfall this month and while this was not a record breaking amount, the snowfall did push the seasonal total up to 82.0 inches (208 cm). This makes the 2010-2011 snowfall season the second snowiest in Sisseton (period of record 1900-2011). The record was set during the 1993-1994 season with 82.3 inches (209 cm) of snow, which is only 0.3 inches (1 cm) higher than this season's total. Based on past climate, there is a 66% chance that Sisseton will break the current record.

Severe weather was not a prominent issue this March across the High Plains Region. Out of the 5 days when severe weather was reported, the most active day was March 22nd. One tornado, large hail, and high winds were reported in eastern Nebraska, and hail was reported in northern Kansas. A weak EF1 tornado caused minor damage near the town of Craig, Nebraska. That same day thunder-snow was reported in eastern North Dakota and over a foot (30 cm) of snow fell in some locations.



Above: Total precipitation (inches) (top) and Departure from Normal Precipitation (inches) (bottom) for March 2011 in the High Plains Region.

These maps are produced by HPRCC and can be found on the Current Climate Summary Maps page at: <http://hprcc.unl.edu/maps/current>.

2010-2011 Snowfall Totals So Far This Season - Highlights

Seasonal Records			
Snowfall in inches			
Location	Snowfall/Rank	Record	Period of Record
Bismarck, ND	72.0 - 8th snowiest	101.6/1996-1997	1886-2011
Fargo, ND	83.7 - 3rd snowiest	117.0/1996-1997	1885-2011
Williston, ND	94.6 - snowiest	89.9/1895-1896	1894-2011
Aberdeen, SD	73.8 - 7th snowiest	109.8/1936-1937	1893-2011
Huron, SD	65.5 - 6th snowiest	89.6/2000-2001	1892-2011
Sisseton, SD	82.0 - 2nd snowiest	82.3/1993-1994	1900-2011

All Data are Preliminary and Subject to Change.

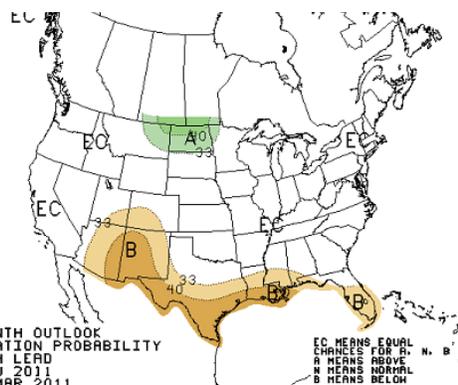
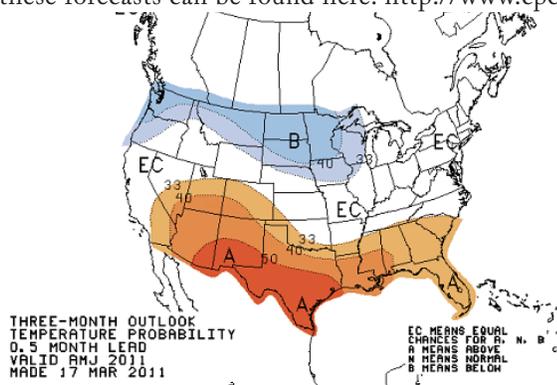
Source: National Weather Service Cooperative Observation Network Data

The High Plains Regional Climate Center is one of the 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

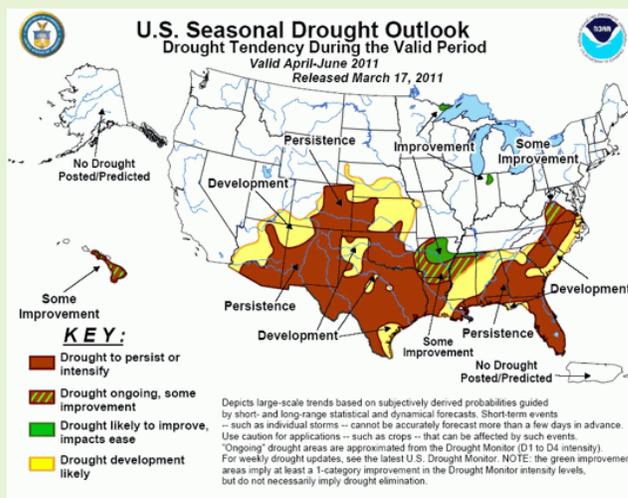
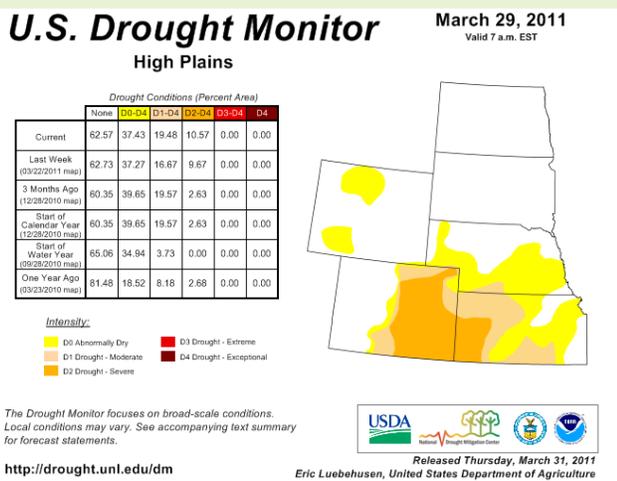
La Niña conditions were present across the equatorial Pacific this month, but continued to weaken. The temperature outlook indicates a higher probability of above normal temperatures for most of Colorado and the southwest corner of Kansas. North Dakota, South Dakota, northeastern Nebraska and northeastern Wyoming have a higher probability of below normal temperatures. Equal chances of above, near, or below normal temperatures are predicted elsewhere in the Region. The precipitation outlook indicates a higher probability of above normal precipitation for North Dakota and a very small portion of northern South Dakota. Meanwhile, southwestern Colorado has a higher probability of below normal precipitation. Equal chances of above, near, or below normal precipitation are predicted elsewhere in the Region. The seasonal outlooks combine the effects of long-term trends, soil moisture, and when applicable, the El Niño Southern Oscillation cycle (ENSO). 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

There were some significant changes to the U.S. Drought Monitor over the past month. Due to minimal precipitation over the past two months, the severe drought conditions (D2) in south-central Colorado and west-central Kansas have expanded to include most of eastern Colorado and much of southwestern Kansas. Meanwhile, the moderate drought conditions (D1) in western Kansas expanded north into south-central Nebraska due to low soil moisture levels. Abnormally dry conditions (D0) have also expanded further east in Nebraska as well. Other locations had a reduction or elimination of drought conditions. By the end of the month west-central Wyoming and the western part of the Nebraska panhandle were drought free and the D1 and D0 conditions in eastern Kansas had been trimmed. According to the U.S. Seasonal Drought Outlook released March 17th drought conditions across Colorado and Kansas were expected to persist.



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 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	56.6	46.5	36.6	3.9	69	03/31	0	03/05	0.02	-0.44	4
Akron Washington County Airport	54.3	27.9	41.1	2.1	77	03/21	13	03/07	0.24	-0.80	23
Colorado Springs Municipal Airport	57.2	29.0	43.1	5.3	75	03/16	20	03/09+	0.54	-0.52	51
Grand Junction Walker Field Airport	57.9	32.0	45.0	1.6	74	03/16	21	03/01	0.53	-0.47	53
Pueblo Memorial Airport	62.3	27.7	45.0	3.2	78	03/21+	19	03/01	0.65	-0.32	67

Kansas	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Concordia Municipal Airport	53.8	31.5	42.7	0.2	83	03/20	14	03/05	0.80	-1.55	34
Dodge City Regional Airport	56.9	31.2	44.0	-0.3	83	03/20	17	03/05	0.73	-1.11	40
Goodland Renner Field	54.5	25.3	39.9	0.1	84	03/21	10	03/09	0.81	-0.39	68
Topeka Municipal Airport	55.4	34.5	44.9	0.7	83	03/20	21	03/05	1.81	-0.75	71
Wichita Mid-Continent Airport	59.2	36.7	48.0	2.0	85	03/22	21	03/05	0.97	-1.74	36

Nebraska	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Chadron Municipal Airport	50.0	23.6	36.8	0.6	75	03/16	-6	03/09	0.55	-0.36	60
Grand Island Airport	48.6	27.5	38.1	-0.2	73	03/16	9	03/05+	1.02	-1.02	50
Lincoln Municipal Airport	50.5	28.3	39.4	0.0	81	03/22	12	03/05+	0.66	-1.55	30
Omaha Eppley Airfield	49.8	28.7	39.3	0.0	78	03/22	11	03/02	0.71	-1.42	33
Norfolk Karl Stefan Airport	46.5	25.9	36.2	-0.8	73	03/16	7	03/05+	0.84	-1.13	43
North Platte Regional Airport	49.9	24.6	37.3	-0.7	73	03/16	3	03/09	0.90	-0.34	73
Valentine Miller Field	44.3	23.1	33.7	-1.6	77	03/16	-1	03/09	1.42	0.31	128

North Dakota	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Bismark Municipal Airport	29.4	12.9	21.2	-8.5	49	03/16	-9	03/09	1.56	0.71	184
Fargo International Airport	29.1	11.9	20.5	-6.7	42	03/20+	-7	03/02+	1.84	0.67	157
Grand Forks International Airport	27.6	11.2	19.4	-6.3	44	03/15	-13	03/08	0.76	-0.13	85
Theodore Roosevelt Airport	29.3	14.0	21.7	-8.7	46	03/20	-8	03/07+	0.61	-0.08	88
Williston International Airport	28.5	10.7	19.6	-9.1	45	03/10	-22	03/07	0.98	0.24	132

All Data are Preliminary and Subject to Change. + indicates multiple dates, latest date listed.

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>.

March 2011 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	29.5	12.7	21.1	-9.6	45	03/31+	-14	03/02	1.19	-0.15	89
Huron Regional Airport	34.6	18.0	26.3	-6.3	58	03/16	-12	03/05	1.40	-0.27	84
Pierre Regional Airport	35.6	18.6	27.1	-7.6	66	03/16	-9	03/02	0.81	-0.38	68
Rapid City Regional Airport	42.4	20.3	31.3	-3.6	71	03/16	-8	03/02	0.92	-0.11	89
Sioux Falls Joe Foss Field Airport	39.0	20.7	29.8	-2.8	64	03/16	-2	03/02	0.74	-1.07	41

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	49.2	24.9	37.1	2.1	68	03/31	12	03/07	0.42	-0.48	47
Cheyenne Municipal Airport	49.1	26.8	38.0	3.8	68	03/16	10	03/07	0.88	-0.17	84
Lander Hunt Field Airport	49.2	25.0	37.1	1.6	69	03/31	15	03/01	0.27	-0.97	22
Laramie Regional Airport	44.7	23.3	34.0	4.0	63	03/21	11	03/26	0.42	-0.37	53
Rawlins Municipal Airport	43.3	24.7	34.0	0.2	58	03/21	14	03/18	0.25	-0.40	38
Sheridan County Airport	47.4	22.7	35.0	-0.2	62	03/19	-1	03/07	1.73	0.73	173

All Data are Preliminary and Subject to Change. + indicates multiple dates, latest date listed.

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>.

State Spotlight - North Dakota

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



Precipitation:

Precipitation ranged from approximately 5% to 300% of normal precipitation. Above normal precipitation covered most of the state and fell in large portions of the central and east central regions. (Figure 1. High Plains Regional Climate Center). Precipitation totals ranged primarily from 0.15 to 2.7 inches. Persistent cold weather slowed the snow melt and delayed spring flooding into April. According to the USDA, National Agricultural Statistics Service, North Dakota Field Office the statewide average snow depth was 12.2 inches on March 27th (15.6 inches on February 28, 2011) compared to 0.6 inches at this time last year. As of March 31st, Fargo recorded its 3rd snowiest winter (since 1885), Grand Forks was 8th (since 1893), Bismarck was 8th (since 1886), Dickinson was 9th (since 1893), Minot was 4th (since 1905) and Williston was 1st (since 1956). There were two major storm events. On the 11th, snow totals ranged from approximately a Trace to 6 inches with wind gusts of over 40 mph with some areas measuring greater than 60 mph. The 22-23 storm system produced heavy, wet snow of 5 to 20 inches in the west central, central, south central, eastern, and southeastern locations.

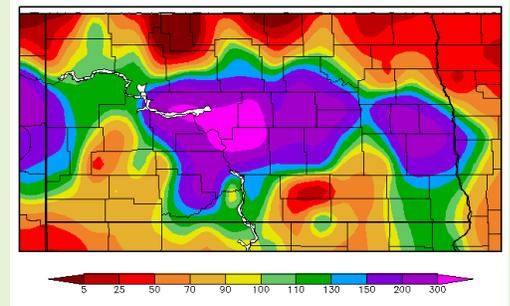


Figure 1. Percent of Normal Precipitation in March 2011 for North Dakota (High Plains Regional Climate Center)

Temperature:

The North Dakota Agricultural Weather Network (NDAWN) March average air temperatures ranged from 16 °F to 23 °F. NDAWN departure from normal temperatures ranged from -3 °F to -10 °F (Figure 2. North Dakota State Climate Office). The past 4 months had below normal average monthly air temperatures with a 12/1/10 - 3/31/10 departure from normal average temperature range of -2 to -7. The first 9 days of March were cold with average daily temperatures from 10 °F to nearly 30 °F below normal. There were a few days from the 14th through the 22nd where average daily temperatures hovered more near normal or even slightly above. The remainder of the month had varying temperatures across the state of near normal to 20 °F below normal.

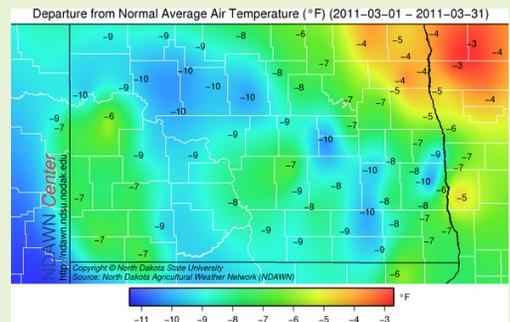


Figure 2. Temperature Departure from Normal in March 2011 for North Dakota (North Dakota State Climate Office)

State Spotlight - South Dakota

Dennis Today - State Climatologist, Nathan Skadsen
 South Dakota State Climate Office, South Dakota State University



Synopsis

The month of March gave South Dakota a glimpse of the much anticipated warm-up that accompanies the beginning of spring. This warm-up allowed for much of the state's snow cover to be removed by mid-March, which in turn allowed temperatures to reach between the 50s and 70s in areas of the state. With the warm temperatures and the major snowmelt, flooding became an issue in many communities as lakes, rivers, and streams all began to leave their banks. The flooding was slowed a bit with late month temperatures being below average but a number of significant precipitation events towards the end of the month in the east and northeast make continued flooding seem likely.

Temperature

Average temperatures across the state remained below normal for the entire state except the Black Hills. Average temperatures ranged from 20° F in the northeast to 36° F in the extreme southwest and northern Black Hills. The temperatures in northern and central South Dakota were 6° to 10° F below normal while temperatures in the southeast and southwest were just below or near normal. The highest daily temperatures reached the 70s F in the middle of the month. Many locations still saw double digit below 0 F numbers as cold continued to plague the state.

Precipitation and Drought

The majority of the state saw 0.5 to 1.5 inches of precipitation during the month of March. This precipitation came both in the form of snowfall and rain, as some areas of the state saw thunderstorms for the first time this year. Lake Sharpe Project saw the least amount of precipitation only receiving 0.20 inches. The greatest precipitation amount was at Hoover which received 2.89 inches of precipitation. No snow was recorded at the Philip airport, however they did receive 0.36 inches of precipitation. Summit 1W saw 18.6 inches of new snowfall during the month of March which was the most in the state.

While extreme north central and northeastern South Dakota saw areas of above average precipitation, the majority of the state experienced below or near normal precipitation during the month of March. Areas in the northeast and north central part of the state saw precipitation that was near normal to 0.9 inches above normal, resulting in some areas seeing 150-175% of normal precipitation. The northern and southern foothills of the Black Hills also saw above average precipitation.

All of South Dakota remained drought free in the month of March. Only a small area of D0 touched the SD-NE border in southwestern South Dakota.

Agricultural Impacts

Much colder than average temperatures in March limited much field work over large parts of the state due to cold-wet soils and snow cover. Soil temperatures have started to recover in non-snow-covered areas. But even there the warming was slow. Wet conditions also plagued livestock producers. The SD Ag Statistics Service noted reports of problems with finding dry conditions for calving. Despite this, overall livestock conditions were mainly good.

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.

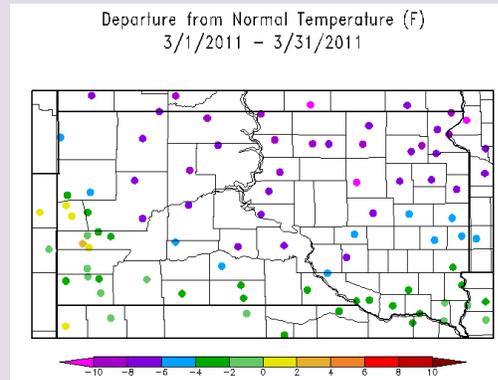


Figure 1. Departure from Normal Temperature in March 2011 for South Dakota (High Plains Regional Climate Center)

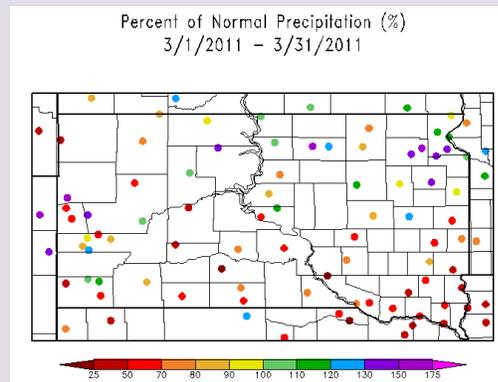


Figure 2. Percent of Normal Precipitation in March 2011 for South Dakota (High Plains Regional Climate Center)

State Spotlight - South Dakota

Dennis Today - State Climatologist, Nathan Skadsen
South Dakota State Climate Office, South Dakota State University



Severe Weather

March 11th Blizzard - During the evening of Friday, March 11th an unexpected blizzard caught many people living on the Coteau Hills in Day, Marshall, and Roberts counties by surprise. The Aberdeen National Weather Service issued a blizzard warning for those counties, along with Campbell, McPherson, Brown, Walworth, Edmunds, Potter, and Faulk counties at 5:24pm for winds speeds between 30 and 40mph along with light snowfall. Many motorists who were traveling home from work were caught in the whiteout conditions in the rural areas and had to spend the night at local businesses and neighbors. The Webster Reporter and Farmer, a Day County newspaper, reported that the Day County dispatch received a total of 84 calls for assistance. Local law enforcement and volunteers spent much of the night rescuing motorists stranded on local highways. Two gas stations located along US Hwy. 12, HR One Stop and The Hot Spot, saw 70 and 30 people respectively spend the night in their stores. On a county road north of Pickerel Lake, at least four people spent the night in their vehicles until locals were able to reach them the next morning. Fortunately, no serious injuries or accidents were reported.

March 21st – 23rd Severe Weather - During the period from Monday, March 21st to Wednesday, the 23rd much of eastern South Dakota experienced a wide variety of severe weather. In south central South Dakota, the counties of Jerauld, Beadle, Sanborn, and Kingsbury all saw severe thunderstorm warnings be issued late Monday night and early Tuesday morning. There were many reports of hail ranging from 0.25 to 1.5 inches. As the southeast saw thunderstorms, the northeast part of the state saw themselves under a winter storm warning. Brown, Edmunds, Marshall, Day, Clark, Codington, Grant, Spink, Hamlin, and Deuel counties all saw winter weather conditions during the 22nd and 23rd. New snowfall from the storm increased the snow-pack in the Coteau Hills region and replenished the snowpack in the rest of the region.

Statewide Flooding

The month of March saw many areas of the state experience flooding. Overall, the National Weather Service offices located in Rapid City, Aberdeen, and Sioux Falls issued 17 flood warnings and advisories. At the end of the month, a total of 23 gauges were near or above flood stage in South Dakota. The flooding was a result of the snowmelt that was seen during the first half of the month and ice jams that were found on many rivers and creeks that began flowing again. Some additional precipitation added difficulties in a few additional areas.

Some of the hardest hit areas for flooding were found in the southeast and south-central part of the state. Beadle County, which includes the city of Huron, declared a flood disaster on March 23rd due to flooding along the James River. As the levels of the James and Big Sioux rivers rose, travel became an issue as highways in Hamlin, Davison, Moody, and Hanson Counties were closed due to water running over them. The community of Renner saw their homes and businesses threatened by the Big Sioux River for the second time in less than a year.

The rest of the state was not without flooding problems. In the northeast, the communities of Langford and Redfield saw flooding collapse basements and surround homes. In western South Dakota, the Cheyenne River was forced out of its banks by an ice jam and affected some ranches. Ice jams on the White River near Murdo caused water to flood Highway 83 and surrounding homes. Finally, residents near the Moreau River saw a new stream-flow record of 32.600 cubic feet per second set at the stream gauge near Whitehorse.

As the month ended, much of the attention for possible flooding turned from the rivers and creeks to the still ice covered lakes in northeastern South Dakota. Residents along Blue Dog Lake, Lake Kampeska, and Lake Poinsett were all busy preparing for flooding that could follow after the remainder of the ice and snow melts and the wind pushing ice-chunks into houses.

The primary damage from flooding so far seems to have been from flooding and inundating of roadways leading to washouts, removed gravel and other issues. Many township, county and state federal highways had water over them along the Big Sioux and James Rivers and in Brookings, Beadle, Kingsbury, Miner, Lake, Hamlin and other counties. No travel advisories were enacted in several of these counties because of inundated and damaged roads.

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 - Wyoming

Steve Gray - State Climatologist
Wyoming State Climate Office, University of Wyoming



March 2011 brought continued snowfall to the high mountains of Wyoming. Valley and basin precipitation was highly variable, and temperatures were generally near- to slightly-above historical averages. Given ample snowpack and reservoir storage, hydrologic (i.e., water supply) drought impacts were almost absent from the state. The development of drought impacts in lower-elevation rangelands and other non-irrigated areas remains a possibility depending on spring rains and snowfall.

Generally speaking, conditions in central Wyoming were dry for the month, while far western and northern portions of the state were noticeably wet. For example, multiple locations in Fremont County (west-central Wyoming) received < 25 % of historical average precipitation (vs. 1971-2000). The city of Riverton was particularly dry, with a total of 0.09” of precipitation. In contrast, several stations in neighboring Teton County reported > 150 % of monthly average precipitation. The town of Bondurant in far northwestern Sublette County received almost 200 % of its historical average, while stations just 20-30 miles to the south reported 50 % of average. Located in north-central Wyoming, Sheridan received almost 175 % of historical average precipitation for the month, and several locations in the far northeast corner of the state (e.g., Sundance) reported > 150 %. Sharp contrasts between high- and low-elevation sites were also seen in many areas. In southeastern Wyoming, high elevation (9,000-10,500’) NRCS-SNOTEL observing stations in the Medicine Bow Mountains reported roughly 150-200 % of historical average precipitation. On the other hand, located just below the Medicine Bows at 7,200’, Laramie came in at 53 % of average.

When combined with 1) near-average to above-average high country precipitation in previous months and 2) near average temperatures, March snowfall contributed to strong snowpack numbers for the month. As measured on March 31, statewide average snow water equivalent (SWE) topped 115% (vs. 1971-200). Values for this same date last year averaged around 80 %. At the level of individual river basins, the Wind River drainage was the driest in the state with 102 % of average SWE. The Upper North Platte and Bear River drainages tied for the state’s wettest with 139 % of average.

According to the U.S. Drought Monitor, Wyoming remained nearly drought free through the month of March 2011 (see <http://www.drought.unl.edu/dm/monitor.html>). Low country dryness warrants continued monitoring throughout much of the state. However, near- to above-average values for snowpack, streamflow and reservoir storage may lead to the removal of lingering pockets of “abnormally dry” conditions in the western portion of the state.

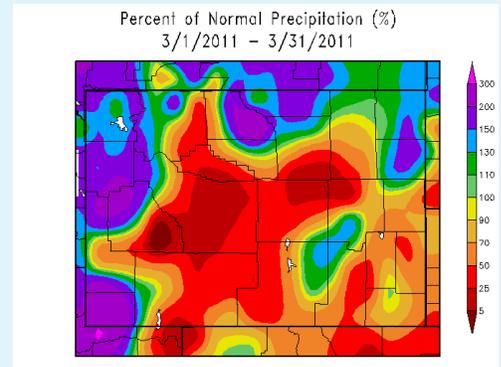


Figure 1. Map showing March 2011 precipitation as a percentage of historical averages (vs. 1971-2000 normal period) for Wyoming. Courtesy HPRCC.

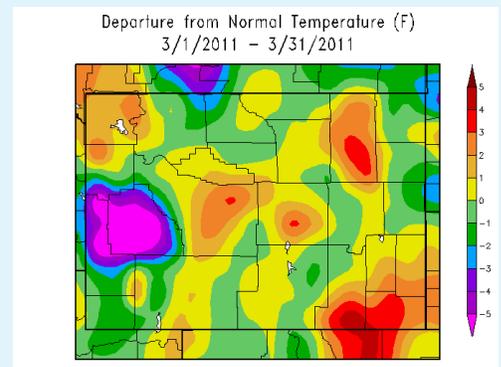


Figure 2. Map showing mean March 2011 temperatures from historical averages (vs. 1971-2000 normal period) for Wyoming. Courtesy HPRCC.

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 throughout the nation, 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>

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

Author Information

For questions, comments, or suggestions, please contact:

Natalie Umphlett - Regional Climatologist - High Plains Regional Climate Center

(402) 472-6764 - numphlett2@unl.edu

712 Hardin Hall

3310 Holdrege Street

Lincoln, NE 68583-0997

