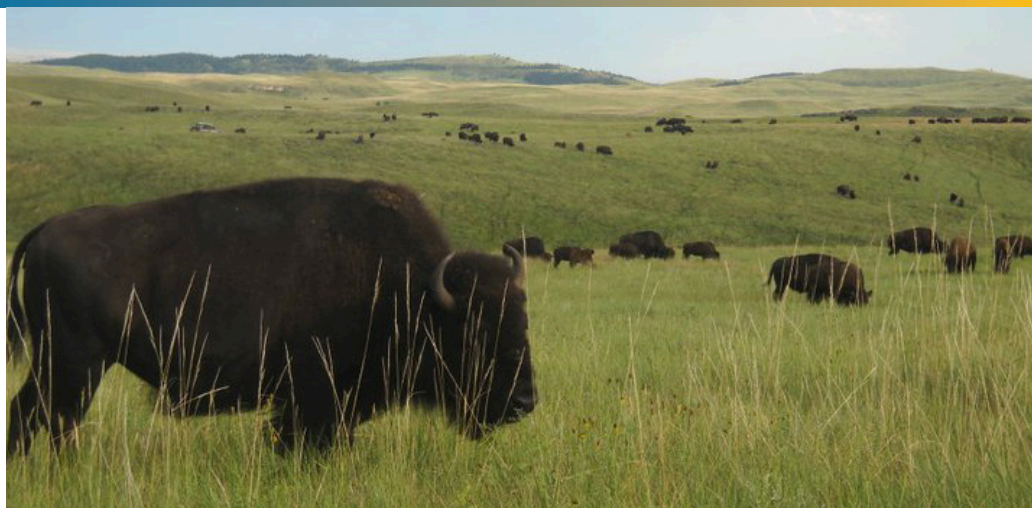
727 Hardin Hall
3310 Holdrege Street
Lincoln, NE 68583-0997
402 472-6706
Fax 402 472-8763
http://hprcc.unl.edu

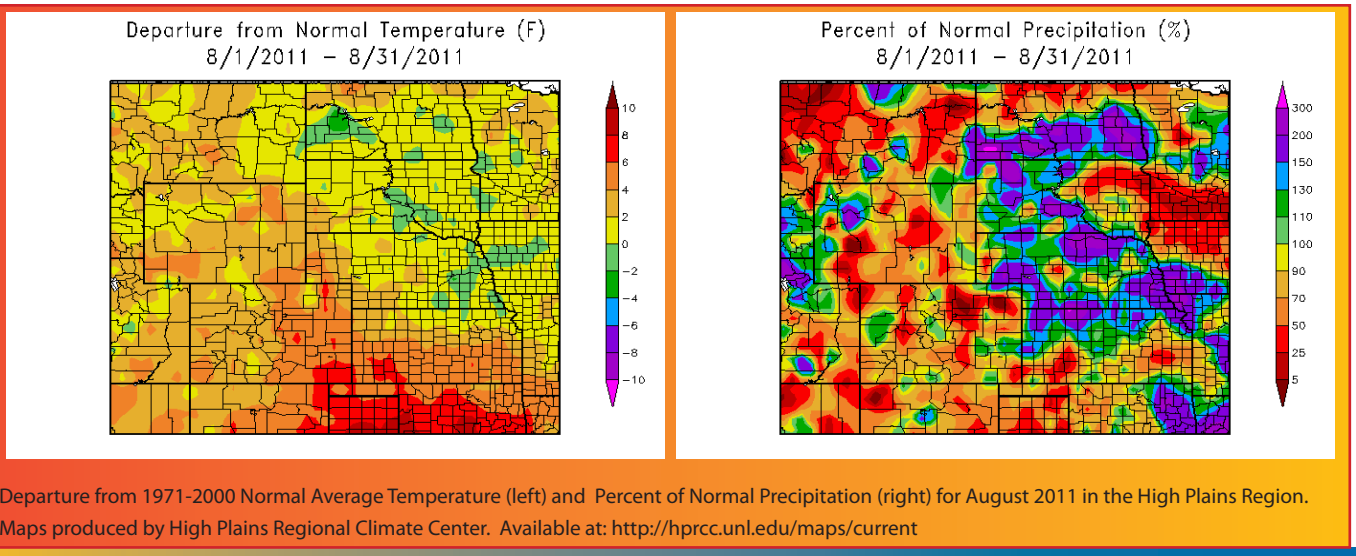


Custer State Park, South Dakota - Photo by Natalie Umphlett
http://www.hprcc.unl.edu

August 2011 Climate Summary

Region Breakdown

August 2011 temperatures were generally near normal for the majority of Nebraska and the Dakotas. However, a large area of Colorado and Kansas had temperature departures ranging from 4-8 degrees F (2.2-4.4 degrees C) above normal. By the end of the month, several locations were ranked in the top 5 warmest Augusts on record. With an average temperature of 74.1 degrees F (23.4 degrees C), Colorado Springs, Colorado had its warmest August on record (period of record 1894-2011). The old record of 72.6 degrees F (22.6 degrees C) occurred in 2007. The warmer than normal August temperatures allowed many locations in Colorado and Kansas to break summer (June, July, and August) temperature records as well. Dodge City, Kansas broke multiple records by having its warmest and driest summer on record (period of record 1874-2011). With an average temperature of 83.5 degrees F (28.6 degrees C) Dodge City was able to break the previous record of 83.4 degrees F (28.6 degrees C) set during the Dust Bowl in 1934. Dodge City also had 50 days at or above 100 degrees F (37.8 degrees C) this summer which crushed the old record of 42 days also set in 1934. The ongoing hot and dry conditions across southern Kansas and Colorado have stressed crops and livestock. According to the National Agricultural Statistics Service livestock liquidations took place throughout the month in order to reduce stress on pastures and water supplies.

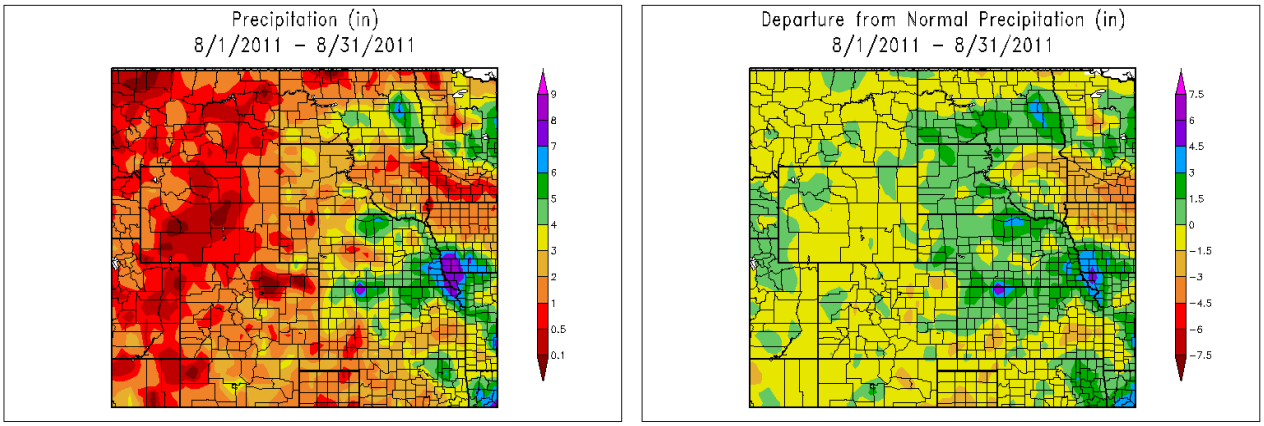


Departure from 1971-2000 Normal Average Temperature (left) and Percent of Normal Precipitation (right) for August 2011 in the High Plains Region.
Maps produced by High Plains Regional Climate Center. Available at: http://hprcc.unl.edu/maps/current

Precipitation Summary

Dryness prevailed across southern Kansas, eastern Colorado, central Wyoming, eastern South Dakota, and northern North Dakota. Extreme (D3) to exceptional (D4) drought conditions persisted across much of southern Colorado and southern Kansas. While some areas of the extreme drought conditions in Colorado were downgraded, relief was not in store for southern Kansas as the area received lower than normal precipitation. Dodge City, Kansas had its 6th driest August on record and only received 0.65 inches (17 mm) of precipitation, which was 24 percent of normal (period of record 1874-2011). The driest August on record occurred in 1894 with 0.15 inches (4 mm) of precipitation. Dodge City also recorded its driest summer on record with 1.58 inches (40 mm) of precipitation. Interestingly, the year-to-date (January 1 – August 31) precipitation of 4.60 inches (117 mm) was also the lowest on record.

While drought conditions occurred in the southern-most portions of the Region, a large section stretching from northern Kansas up through central North Dakota experienced many storms and was wetter than normal. Areas that had precipitation totals which were at or above 150 percent of normal included southern North Dakota, central South Dakota, west-central Wyoming, northern Kansas, and pockets of eastern, northern, and southwestern Nebraska. Lincoln, Nebraska had its 7th wettest August on record with 6.89 inches (175 mm) of precipitation which was 206 percent of normal (period of record 1887-2011). This amount was no where near the record 13.89 inches (353 mm) that was set in August 1910; however one daily rainfall record was broken. Early morning thunderstorms on the 30th brought 2.62 inches (67 mm) of rain which broke the old record of 2.23 inches (57 mm) set in 1977.



Above: Total precipitation (inches) (left) and Departure from Normal Precipitation (inches) (right) for August 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.

August 2011 Records - Highlights

Monthly Records
Temperature in degrees F

Warmest	New Record	Old Record/Year	Period of Record
Alamosa, CO	66.0	65.9/1969	1906-2011
Cabin Creek, CO	58.0	57.8/2000	1968-2011
Colorado Springs, CO	74.1	72.6/2007	1894-2011
Tacony 13 SE, CO	77.8	76.9/2007	1955-2011
Trinidad Perry Stokes AP, CO	76.8	75.8/2007	1948-2011
Walsh 1 W, CO	81.4	80.1/1983	1967-2011
Garden City Exp Stn, KS	82.0	81.2/2007	1956-2011
Laramie AP, WY	66.1	65.8/1969	1948-2011

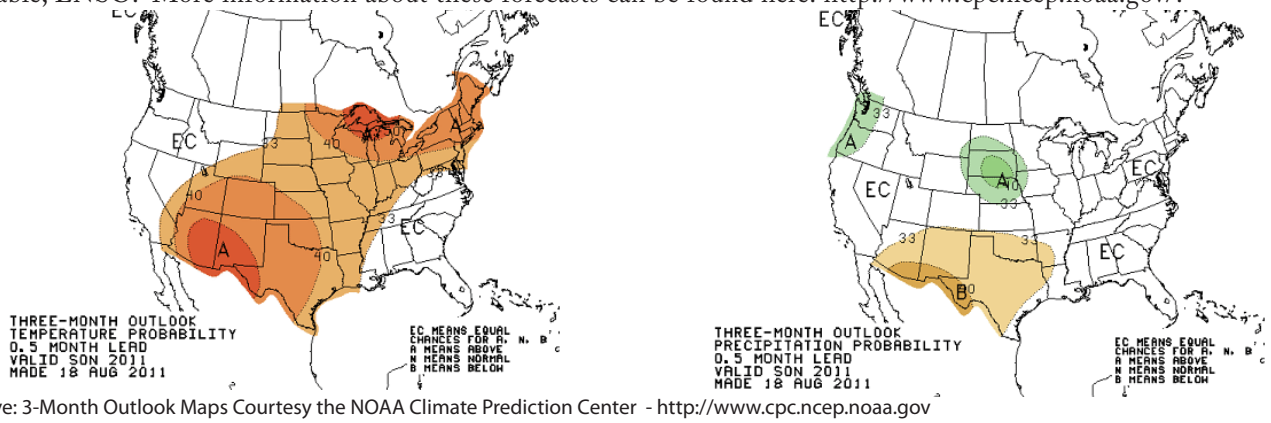
All Data are Preliminary and Subject to Change.
Source: National Weather Service Cooperative Observation Network Data

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.

ACIS
Applied Climate Information System - Regional Climate Centers

Climate Outlook

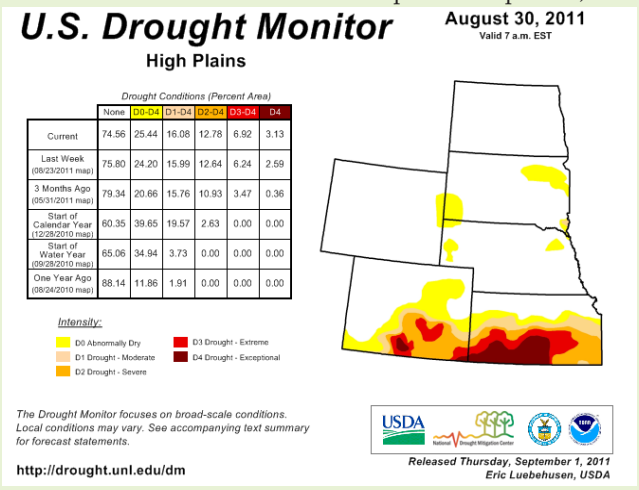
El Niño Southern Oscillation cycle (ENSO)-neutral conditions are present in the equatorial Pacific and are expected to continue into fall. The temperature outlook indicates a higher probability of above normal temperatures for nearly the entire Region, including Colorado, Kansas, Nebraska, and the majority of Wyoming and the Dakotas. Equal chances of above, near, or below normal temperatures are predicted for northwestern Wyoming, western North Dakota, and extreme northwestern South Dakota. The precipitation outlook indicates a higher probability of above normal precipitation for South Dakota, southern North Dakota, the majority of Nebraska, and northeastern Wyoming. Meanwhile, a higher probability of below normal precipitation exists for a small sliver of southern Colorado. 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, ENSO. More information about these forecasts can be found here: http://www.cpc.ncep.noaa.gov/.

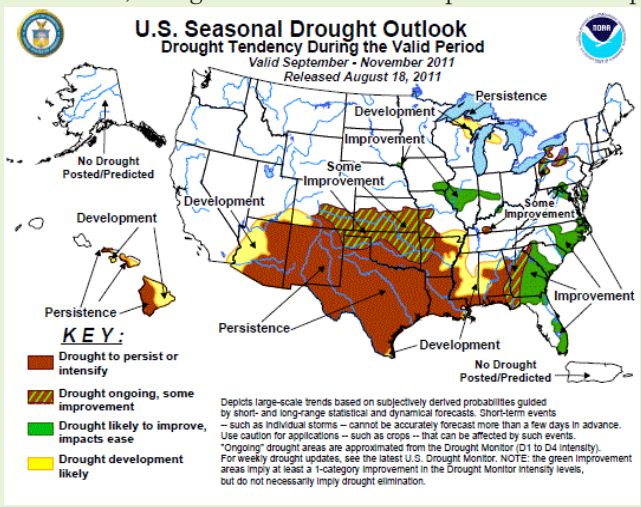


Above: 3-Month Outlook Maps Courtesy the NOAA Climate Prediction Center - http://www.cpc.ncep.noaa.gov
(left) The Three-Month Temperature Probability Outlook, (right) The Three-Month Precipitation Probability Outlook

Drought Watch

Several changes occurred to the U.S. Drought Monitor this month. Crop stress in eastern South Dakota and Nebraska led to an introduction of mainly abnormally dry conditions (D0). However, a small area of moderate drought (D1) developed in far southeastern South Dakota. By mid month, D0 was also present in the Black Hills area of South Dakota, a small portion of eastern Wyoming, and far northwestern Nebraska. Scattered showers across eastern Colorado allowed for a one-category improvement for a good portion of the extreme drought conditions (D3). Meanwhile, D3 and D4 (exceptional drought conditions) expanded in western Kansas as hot and dry conditions persisted. According to the U.S. Seasonal Drought Outlook released August 18th drought conditions in Kansas and eastern Colorado were expected to improve somewhat. The drought conditions in central Colorado were expected to persist, while just to the west, drought conditions were expected to develop.





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://droughtmonitor.unl.edu/
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	85.2	46.9	66.0	4.0	89	08/24+	34	08/08	1.27	0.08	107
Akron Washington County Airport	91.9	61.8	76.8	4.5	100	08/25	55	08/08	0.00	-2.00	0
Colorado Springs Municipal Airport	88.3	59.9	74.1	6.5	95	08/23	55	08/17+	1.49	-1.99	43
Grand Junction Walker Field Airport	94.2	63.9	79.0	4.3	101	08/24	57	08/08	0.91	0.07	108
Pueblo Memorial Airport	94.3	62.7	78.5	5.0	101	08/24	58	08/31+	0.79	-1.48	35

Kansas	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Concordia Municipal Airport	89.0	66.5	77.7	0.7	104	08/01	57	08/25+	5.73	2.49	177
Dodge City Regional Airport	99.3	68.0	83.7	5.5	108	08/23	60	08/13	0.65	-2.08	24
Goodland Renner Field	91.7	62.2	77.0	3.8	102	08/23	57	08/24+	3.38	0.89	136
Topeka Municipal Airport	93.2	68.9	81.0	4.3	112	08/02	59	08/26	4.43	0.62	116
Wichita Mid-Continent Airport	97.7	72.1	84.9	5.1	111	08/02	63	08/26	3.45	0.51	117

Nebraska	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Chadron Municipal Airport	92.7	59.3	76.0	3.0	105	08/25	51	08/24	0.00	-1.67	0
Grand Island Airport	86.0	63.5	74.7	1.1	101	08/23	54	08/14	2.30	-0.78	75
Lincoln Municipal Airport	86.2	64.9	75.5	0.2	104	08/01	55	08/25	6.89	3.54	206
Omaha Eppley Airfield	84.9	68.0	76.4	1.9	99	08/01	62	08/29+	5.84	2.63	182
Norfolk Karl Stefan Airport	85.5	62.8	74.1	1.4	99	08/01	52	08/25	2.23	-0.57	80
North Platte Regional Airport	87.5	61.9	74.7	2.1	102	08/01	56	08/27	1.99	-0.16	93
Valentine Miller Field	87.1	60.7	73.9	1.8	102	08/01	53	08/03	3.12	0.92	142

North Dakota	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Bismark Municipal Airport	81.7	56.7	69.2	0.2	95	08/23	48	08/17	4.02	1.87	187
Fargo International Airport	82.0	59.3	70.6	1.6	90	08/23	50	08/27	4.26	1.74	169
Grand Forks International Airport	81.6	57.6	69.6	1.8	92	08/23	48	08/27	3.23	0.51	119
Theodore Roosevelt Airport	82.8	53.9	68.4	-0.3	95	08/25+	44	08/21	2.08	0.57	138
Williston International Airport	84.6	55.8	70.2	1.9	97	08/22	44	08/21	1.65	0.17	111

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.

August 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	82.9	58.7	70.8	0.3	97	08/01	47	08/17	0.87	-1.55	36
Huron Regional Airport	83.1	60.4	71.7	0.2	100	08/01	52	08/17+	2.35	0.28	114
Pierre Regional Airport	86.6	60.1	73.4	-0.7	102	08/01	52	08/17+	1.93	0.07	104
Rapid City Regional Airport	88.1	58.1	73.1	2.0	101	08/25	50	08/13	1.75	0.14	109
Sioux Falls Joe Foss Field Airport	81.7	60.4	71.0	0.2	98	08/01	50	08/25	1.40	-1.61	47

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	90.2	53.2	71.7	3.1	96	08/27+	45	08/09	0.23	-0.50	32
Cheyenne Municipal Airport	85.8	55.8	70.8	4.9	94	08/25	49	08/20+	1.56	-0.26	86
Lander Hunt Field Airport	89.4	56.0	72.7	3.3	96	08/24	49	08/12	0.13	-0.44	23
Laramie Regional Airport	83.7	48.5	66.1	4.4	90	08/25	40	08/13	0.65	-0.58	53
Rawlins Municipal Airport	86.9	49.7	68.3	1.8	91	08/24+	42	08/12+	0.54	-0.27	67
Sheridan County Airport	89.5	52.8	71.2	3.0	98	08/24+	46	08/17+	0.70	-0.10	88

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.

Severe Weather Summary

August was another stormy month across the High Plains Region as severe weather was reported somewhere in the Region nearly everyday. Here is an overview of selected events:

- August 9: Large hail and high winds reported across Wyoming, Colorado, Nebraska, and Kansas; the largest hail fell in north central Kansas in Zurich, where 4.25 inch (softball size) hail was reported; according to the North Platte NWS Office, hail was up to a foot deep in locations of Arthur, NE and plows were called in to clear the roads near Lake McConaughy
- August 11: Several tornadoes reported in north central Nebraska; numerous trees were damaged or uprooted and a few power poles were broken; high winds up to 80 mph (129 km/hr) were reported in South Dakota; the high winds damaged buildings, blew over grain bins, downed trees and power lines, and even blew trucks off the road
- August 12: Large hail and high winds reported in central Kansas; 60-80 mph (97-129 km/hr) winds damaged trees, snapped power poles, and caused minor structural damage
- August 18: Damaging winds and large hail reported across eastern Nebraska; large hail damaged aircraft at Omaha's Eppley Airfield and caused numerous delays and cancellations; according to the *Omaha World Herald*, one pilot was hit by the large hail and taken to the hospital in serious condition; a 92 mph (148 km/hr) wind gust was also measured at the airport

August 2011 - Storm Reports

August 2010 Totals in Parentheses

State	Tornado	Hail	Wind
Colorado	0 (6)	25 (11)	12 (21)
Kansas	0 (0)	80 (24)	250 (133)
Nebraska	17 (0)	141 (33)	81 (76)
North Dakota	1 (14)	41 (36)	48 (31)
South Dakota	2 (2)	115 (17)	94 (106)
Wyoming	1 (3)	21 (12)	19 (19)
Total	21 (25)	423 (133)	504 (386)

Homer, NE Hail - Photo courtesy Sioux Falls NWS Office

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.

State Spotlight - North Dakota

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

Precipitation:

Percent of normal precipitation ranged from approximately 25% to 300% (Figure 1. High Plains Regional Climate Center). Below normal precipitation fell in the northern half with above normal precipitation falling in the southern region. The High Plains Regional Climate Center (HPRCC) August rainfall totals ranged from approximately 0.50 inches to 6.00 inches. Scattered showers fell throughout the month. Multiple hail and high wind events were reported by the Storm Prediction Center (SPC) on the 5th, 12th, 15th, 22nd, 27th, and the 31st. The SPC reported one tornado on the 12th in Stutsman County. Favorable weather in August assisted harvest progress.

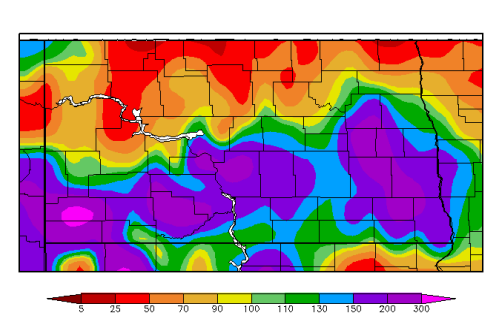


Figure 1. Percent of Normal Precipitation in August 2011 for North Dakota (High Plains Regional Climate Center)

Temperature:

NDAWN August average air temperatures ranged from 66 °F to 71 °F. NDAWN departure from normal temperatures ranged from -1 °F to 4 °F (Figure 2. North Dakota State Climate Office). Most areas had above normal daily average temperatures from the 1st through the 5th. From the 6th through the 21st most days had average air temperatures below normal with some near normal. The 22nd and 23rd had a spike in air temperature with above normal average temperatures across the state. The remainder of the month had most places with above normal average air temperatures. By the end of August, corn Growing Degree Days (GDD) ranged from 1960 in the SE to 1660 in the NW of North Dakota, based on May 24th planting. Generally, corn is 300 GDD less than the required GDD to reach maturity. Under normal conditions, the additional 300 GDD can be attained on October 12th in the NW and on October 1st in the SE of North Dakota.

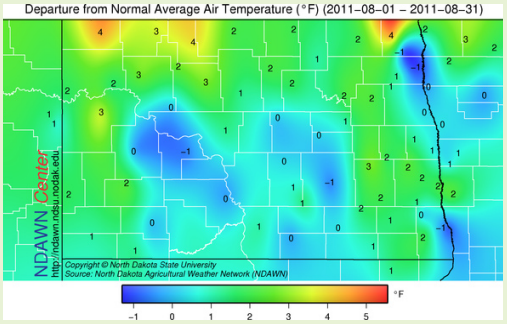


Figure 2. Temperature Departure from Normal in August 2011 for North Dakota (North Dakota State Climate Office)

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 - South Dakota

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

Summary

The month of August saw temperatures remain around normal while areas of the state began to dry out. Although the lack of precipitation was a relief to many people as flood waters began to recede, it did also result in drought conditions returning to the state. Severe storms worked their way across the state several times during the month causing property damage in a number of areas. However, most crops and livestock escaped significant damage due to the weather conditions as producers across the state began to look towards the fall and harvest time.

Temperature

Temperatures across the state for the month of August saw average temperatures ranging from the upper-60s in the northeast to the mid-70s in the south. The highest average temperature for the month was 77.1°F at Interior 3NE. Ardmore 2N, Edgemont, Pickstown, and Oelrichs saw the next highest average temperatures which were near 75°F at all four sites. Pactola Dam experienced the lowest average temperature at 63.6°F. During the month of August, temperatures remained near normal across the state. A total of 32 sites reported a departure from normal temperature equal to or less than 1°F. The greatest departure from normal temperature was +6.2°F in Hill City.

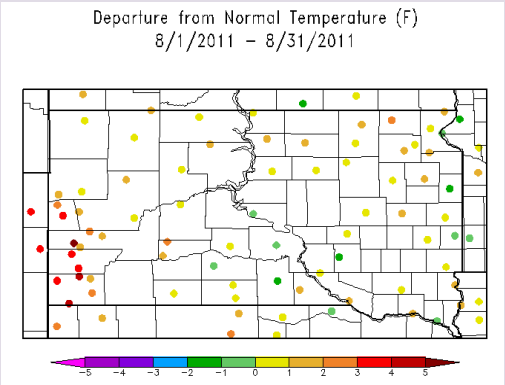


Figure 1. Departure from Normal Temperature in August 2011 for South Dakota (High Plains Regional Climate Center)

Precipitation

During the month of August, total precipitation varied greatly across the state. Yankton recorded the most precipitation, receiving 5.1 inches during the month while Beresford had the lowest reported precipitation only receiving 0.2 inches. Areas in northeastern South Dakota saw the greatest negative departure from normal precipitation during the month of August. Webster, Big Stone City 2NW, Clear Lake, and Summit 1W all saw negative departures from normal precipitation greater than 2.00 inches. Some areas of the state saw a drastic change in the amount of precipitation received. For example, Summit 1W recorded its eighth wettest July on record with 5.46 inches of precipitation. In the month of August however, Summit 1W only recorded 0.78 inches. The same change could be seen at the Aberdeen Airport site which only recorded 0.87 inches of precipitation in August compared to 6.63 inches in July, which was the fourth wettest on record.

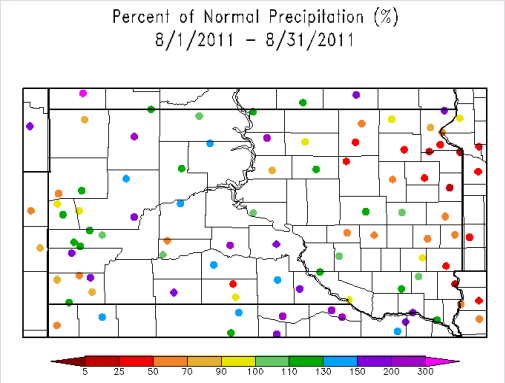


Figure 2. Percent of Normal Precipitation in August 2011 for South Dakota (High Plains Regional Climate Center)

With the lack of precipitation in some areas, South Dakota saw the reappearance of areas of drought conditions. In northeastern South Dakota, an area of abnormally dry (D0) conditions was present in area roughly bordered by US Hwy 12 and 212. In extreme southeastern South Dakota, the counties of Clay and Union were experiencing D0 conditions while a small area straddling the border between Lincoln and Union counties saw moderate drought conditions (D1). Finally D0 conditions returned to the counties of Fall River, Custer, and western Pennington in southwestern South Dakota.

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

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

Agricultural Impacts

Cooler temperatures in August did ease some of the stress on conditions in the state. Some existing issues did continue. Dry conditions in the far southeast produced D0 and some D1 conditions on the US Drought Monitor. The particular impact was stunted growth on corn and soybeans with expected yield loss. An area from Faulkton to around Brookings also began to show dry issues with extension-reported crop stress. The worst area here was in Hamlin County. Both areas reported differing crop issues. In both areas sandy soils showed stress earlier. The particularly sandy areas had crops that were completely brown already. The other major difference in fields was planting date. Early planted crops seemed to have done better, likely pollinating early enough to beat the main heat period in July. Late planted crops showed more stress and reduced ear sizes in several places. In some of the wet areas west of the Missouri River ranchers reported difficulty getting hay cut and collected because of wet conditions. During a farm show (Dakotafest) some farmers in Gregory County and west of Yankton had reported excellent crop conditions for the year.

Flooding Impacts

Although the month of August brought drier conditions to much of the state, there were still flooding issues. Near Britton, a spillway at the White Lake Dam was damaged early in the month. In order to repair the damage to the dam, South Dakota Game, Fish, and Parks officials were pumping water out of the lake in order to lower the water level on the lake. Game, Fish, and Parks officials had other problems at Fisher Grove State Park near Redfield. The park continued to be affected by flooding allowing the state park to only be open one week this summer. One major highway, SD Hwy 21 located south of Hayti, was reopened in the middle of the month while another, US Hwy 12 near Roscoe, remained closed. Areas along the Missouri River received some good news as the Federal Emergency Management Agency approved individual aid for Charles Mix, Hughes, Stanley, and Union counties.

Fire Weather

Areas south of the Black Hills and just east of Rapid City have seen several small fires along with a couple that took several days to contain. These fires were a combination of climatic effects. Wet early season conditions promoted good plant growth. Dry conditions throughout July and August produced larger amounts of dry grass, which easily burned. This is a common occurrence, but drier than average conditions around certain areas of the Black Hills exacerbated the issue.

Severe Weather - Selected Events

August 11th Severe Storms: In the community of Chamberlain, there were multiple reports of downed trees, power outages, and small hail. Power outages were also reported in Lincoln, Turner, Hutchinson, and McCook counties. Along I-90, semi-trucks were blown over near Draper. The city of Wessington also had power knocked out. Sheds and trailers were overturned in the Murdo and Lyman areas.

August 15th Flash Flood: Northern Roberts County, located in northeastern South Dakota, saw local precipitation accumulations of 5 or more inches during the morning hours of August 15th. One member of the public reported that over 8 inches of rainfall had fallen. This heavy precipitation resulted in flash flooding. Many roads, including Hwy 127, went under water. The community of New Effington saw the most damage as the excessive water in the area threatened the town and the school. Members from local communities were called upon to help sandbag as some residents were forced from their homes.

August 17-18 Severe Storms: Much of South Dakota experienced wide spread damaging hail as the result of severe storms on August 17th and 18th. Near Belvidere on the 17th, many cars on I-90 reported damage from hail that was 2.75 inches in diameter. Farther south in Mellette County, hail stones punched holes in the roof of a building. In Todd County, several funnel clouds were reported. On the 18th, severe storms brought damage to areas in southeastern South Dakota. Hail between 1 and 1.75 inches were reported in Charles Mix, Bon Homme, and Yankton counties. The ASOS located at the Yankton airport recorded a 76 mile per hour wind gust and damage to large trees and crops were reported in Charles Mix and Yankton 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 - Wyoming

Tony Bergantino - Assistant State Climatologist
Wyoming State Climate Office, University of Wyoming

Streamflow

Streamflow remains at or well above normal for this time of the year at all stations within the state and several locations are significantly above normal. Of the sites in the National Weather Service's Advanced Hydrologic Prediction Service, only the North Platte River near Henry was still in the Action Stage at the end of August.

Precipitation

The dryness that intensified in July continued into August in the central portions of the state. There was some improvement at a few stations in Fremont and Sublette counties.

The northern portion of the state that was drier last month also saw some improvement, most notably in the northwest. Even so, there were a greater number of stations that were still below the Normal for August. These were primarily in Bighorn, Sheridan, Johnson, Washakie, and Hot Springs counties.

The southern portion of the state, however, saw a substantial drop in its precipitation as a percentage of Normal compared to July. Some stations last month were in the range of 150% to 200% of Normal in places last month whereas in August almost all stations were below 90% of normal with some lower than 50%

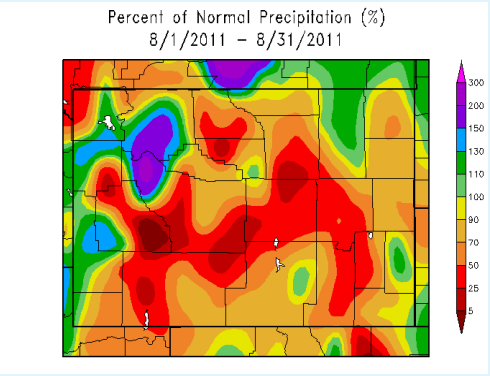


Figure 1. Map showing August 2011 precipitation as a percentage of historical averages (vs. 1971-2000 normal period) for Wyoming. Courtesy HPRCC.

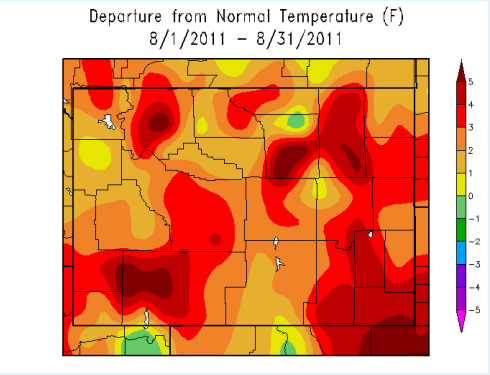


Figure 2. Map showing mean August 2011 temperatures from historical averages (vs. 1971-2000 normal period) for Wyoming. Courtesy HPRCC.

Temperature

Temperatures across the state for August were at least one degree above Normal for almost all stations with several being more than three degrees above. There were very few exceptions such as Buffalo but, even there, the departure from normal was only one degree to the negative side. With a few exceptions in the Bighorn Basin, the departure from Normal for August was equal to or more than that for July.

The category of D0 was introduced by the US Drought Monitor into the eastern part of Weston and the northeastern part of Niobrara counties in August. Heading into September 2011 the focus will continue to be on the dryness that is occurring in sections in the state such as Sublette County.

This report was prepared by the Wyoming State Climate Office, which is a division of the Wyoming Water Resources Data System at the University of Wyoming. More information can be found at: http://www.wrds.uwyo.edu and http://www.wrds.uwyo.edy/sco/climate_office.html. Special thanks to the National Weather Service's Riverton and Cheyenne Offices and the NRCS Casper Office for supplying much of the data used in this report.

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