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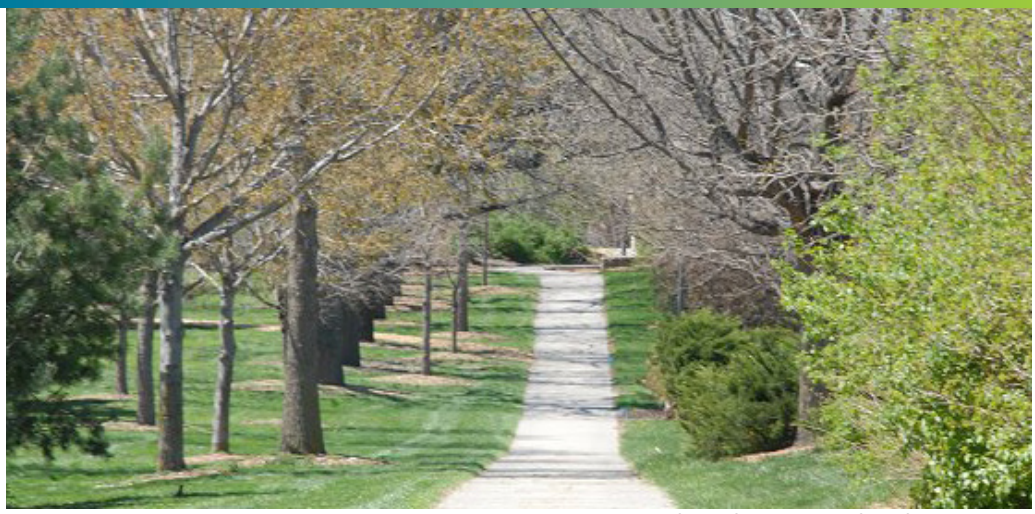


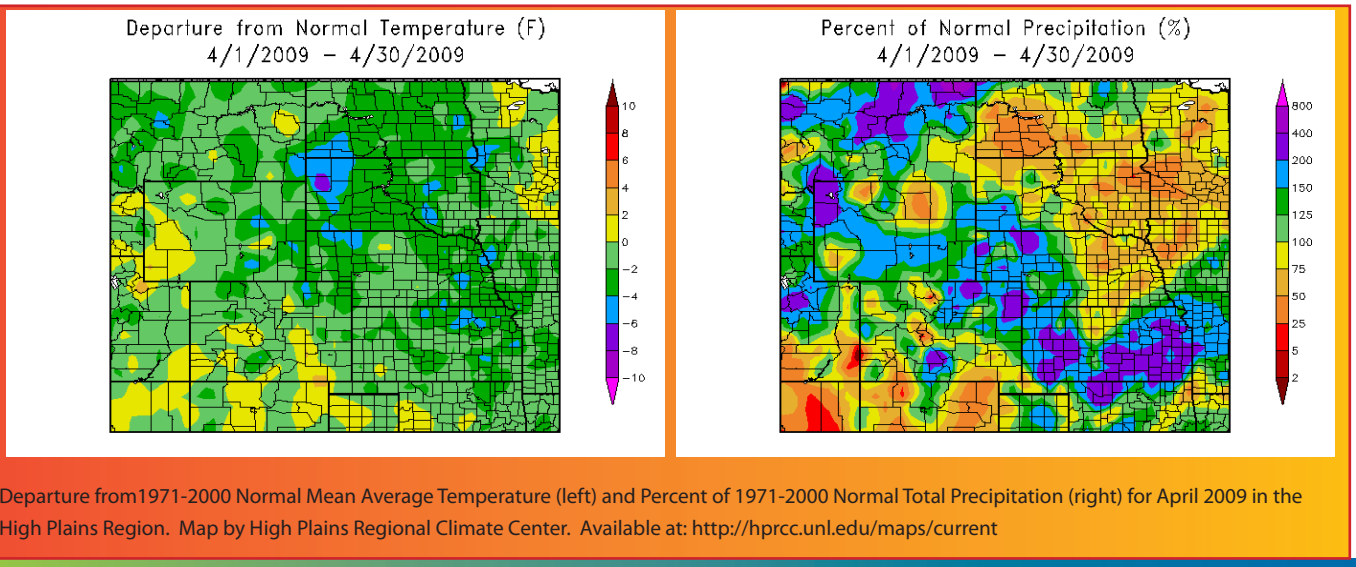
On the path to Spring - Photo by Ken Dewey
http://www.nebraskaweatherphotos.org

April 2009 Climate Summary

Region Breakdown

This April the High Plains Region was cool with common average monthly temperature departures ranging from near normal to 6˚F (3.3˚C) below normal. While the cool average temperatures were not record breaking for the majority of the region, a few locations ranked in the top 10 coolest Aprils on record. For instance, White Lake, SD recorded its 8th coolest April with an average temperature of 42.5˚F (5.8˚C). The record coolest April was recorded in 1950 with an average temperature of 39.2˚F (4.0˚C).

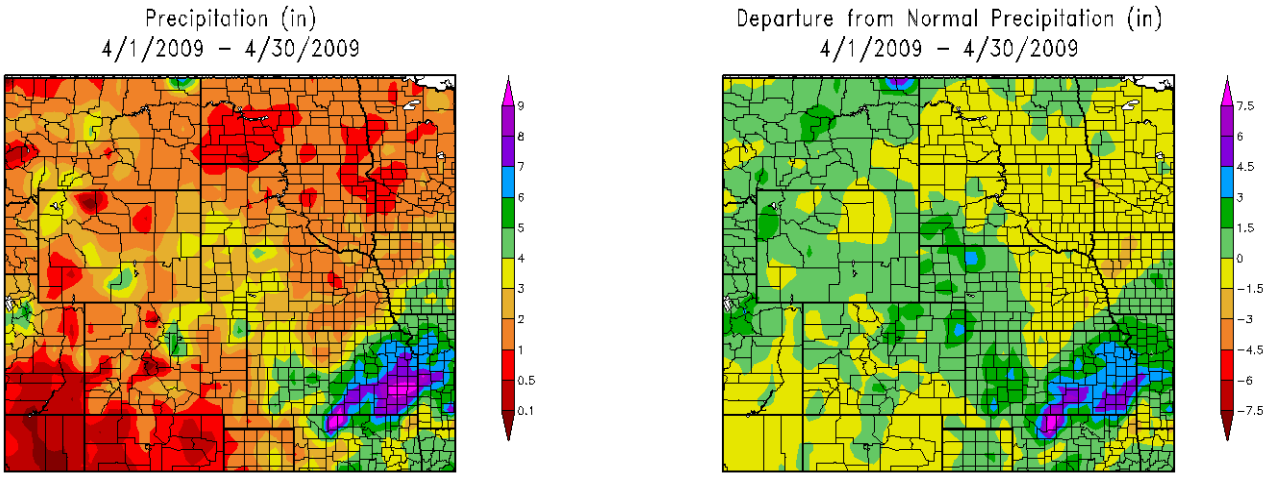
Large portions of North Dakota, eastern South Dakota, and eastern Nebraska were dry this month and received less than 70% of normal precipitation. This continuation of dry conditions in eastern Nebraska and western North Dakota has caused abnormally dry conditions (D0) to develop. In contrast, areas of southeast Kansas received record breaking precipitation this month, the majority of which fell in a 24-hour period at the end of April.



Departure from1971-2000 Normal Mean Average Temperature (left) and Percent of 1971-2000 Normal Total Precipitation (right) for April 2009 in the High Plains Region. Map by High Plains Regional Climate Center. Available at: http://hprcc.unl.edu/maps/current

Precipitation Summary

Southeast Kansas was the wettest area in the region this month, with many locations receiving several inches above normal precipitation. This month's extreme locations were Wichita, KS and Anthony, KS which both broke several precipitation records. Wichita recorded its 2nd wettest April on record with 9.94 inches (252.5 mm). Of this monthly total, 5.10 inches (129.5 mm) fell in one day (April 26), which set a daily record as well. Anthony recorded its wettest April with 9.91 inches (251.7 mm), or 341% of normal. The previous wettest April occurred in 1970 with 7.54 inches (191.5 mm). The wettest day to ever occur in April was on April 27, 2009, when Anthony received 6.55 inches (166.4 mm) of rain. This smashed the old record of 2.20 inches (55.9 mm) which was recorded in 1938. In addition, this 24-hour precipitation total went down as the 3rd greatest 24-hour precipitation total on record for this location (period of record 1896-present)!

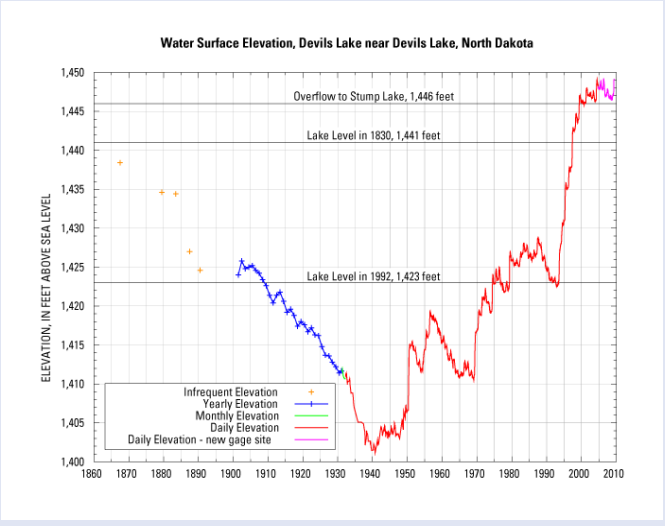


Above: Total precipitation (in inches) (left) and Departure from Normal Precipitation (in inches) (right) for April 2009 in the High Plains Region. These maps are produced by HPRCC and can be found on the Current Climate Summary Map page at: http://hprcc.unl.edu/maps/current.

Devils Lake Reaches Record Levels

Devils Lake in North Dakota reached record levels this month. Since fall of last year, Devils Lake has been rising due to heavy precipitation in the area. The lake continued to rise through the winter and the rise is now accelerating due to the spring snow melt. The previous record level of 1449.2 ft asl was surpassed on April 30, 2009 and is forecasted to rise to a level between 1451 ft asl and 1452 ft asl sometime in the late spring or early summer of this year. At a level of 1446 ft asl, Devils Lake spills into nearby Stump Lake causing the two lakes to become a single body of water. According to the North Dakota State Water Commission, the flooding, which began in the 1990's and has continued to the present has destroyed hundreds of homes and businesses and has inundated thousands of acres of productive farmland.

The National Weather Service, through its Advanced Hydrologic Prediction Service, provides a forecast for lake levels on a daily basis. For more information about Devils Lake and for up to date forecasts, please see: http://www.crh.noaa.gov/ncrfc/.



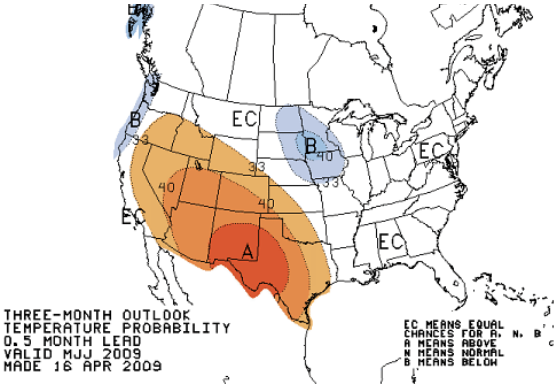
Above: Water Surface Elevation for Devils Lake, ND from 1867 to present, courtesy of the United States Geologic Survey.

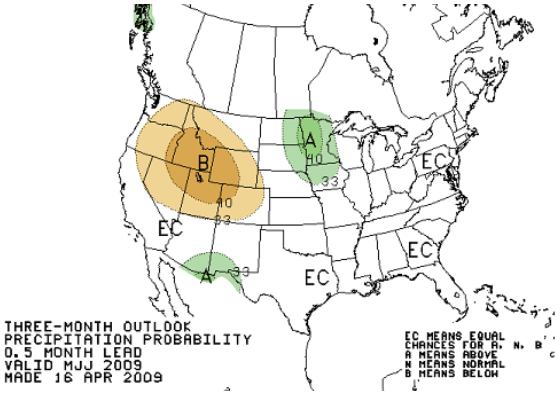
The High Plains Regional Climate Center is one of the NOAA Regional Climate Centers, and is involved in the Applied Climate Information System (ACIS) development and management effort. Data found throughout this publication were derived using products built on the ACIS framework.

ACIS
Applied Climate Information System - NOAA Regional Climate Centers

Climate Outlook

This month a transition from La Niña to ENSO-neutral conditions began and this transition is expected to continue. Above normal temperatures are predicted for Colorado, the western half of Kansas, the majority of Wyoming and a small part of western Nebraska. Below normal temperatures are predicted for the eastern half of the Dakotas and eastern Nebraska. Additionally, below normal precipitation is predicted for Wyoming, most of Colorado, and a small portion of the panhandle of Nebraska. Meanwhile, above normal precipitation is predicted for the eastern half of the Dakotas and extreme northeastern Nebraska. Elsewhere in the region, equal chances of above, near, or below normal temperature and precipitation are predicted. More information about these forecasts can be found here: http://www.cpc.ncep.noaa.gov/.

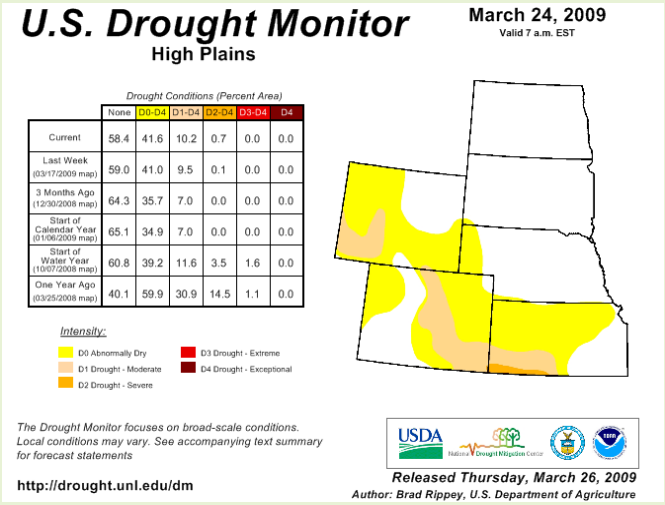


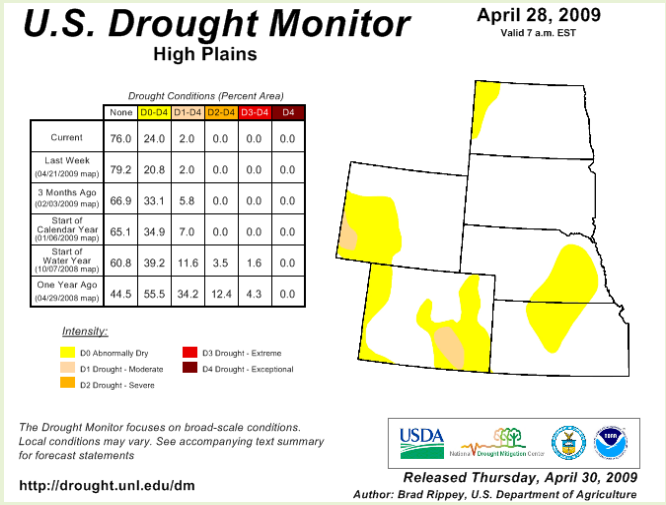


Above: 3-Month Outlook Maps Courtesy the NOAA Climate Prediction Center - http://www.cpc.ncep.noaa.gov
(left) The Three-Month Temperature Probability Outlook showing a higher probability of above normal temperatures for Colorado, Wyoming, and Kansas and below normal temperatures for the eastern half of the Dakotas and eastern Nebraska.
(right) The Three-Month Precipitation Probability Outlook showing a higher probability of below normal precipitation for Wyoming, most of Colorado, and a small portion of the panhandle of Nebraska and above normal precipitation for the eastern Dakotas and extreme northeastern Nebraska.

Drought Watch

Over the past month showers and thunderstorms helped erase the D2, D1, and much of the D0 conditions in Kansas. However, areas across north central Kansas and eastern Nebraska missed out and D0 conditions have spread. Drought conditions have improved across Wyoming and parts of Colorado, however, abnormally dry conditions (D0) have reemerged in western North Dakota. According to the U.S. Seasonal Drought Outlook released April 16, drought conditions are forecasted to persist in Wyoming, but improve in Colorado through July 2009.





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	58.1	24.1	41.1	0.3	74	4/30	7	4/05	1.12	0.58	207
Akron Washington County Airport	57.2	33.2	45.2	-1.9	81	4/23	15	4/06	1.88	0.30	119
Colorado Springs Municipal Airport	58.5	32.6	45.5	0.2	75	4/24+	14	4/02	1.52	-0.10	94
Grand Junction Walker Field Airport	63.8	37.4	50.6	-0.3	81	4/30+	24	4/02	1.31	0.45	152
Pueblo Memorial Airport	66.5	33.6	50.1	0.2	84	4/23	15	4/06	1.54	0.29	123

Kansas	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Concordia Municipal Airport	64.4	39.3	51.8	-1.0	87	4/24	17	4/07	3.83	1.38	156
Dodge City Regional Airport	67.1	39.8	53.5	-0.4	88	4/24	19	4/07	4.59	2.34	204
Goodland Renner Field	60.7	35.0	47.9	-0.9	85	4/23	19	4/06	2.60	1.09	172
Topeka Municipal Airport	65.2	43.3	54.3	-0.2	85	4/24	26	4/07	7.09	3.95	226
Wichita Mid-Continent Airport	67.4	42.7	55.0	-0.3	86	4/22	21	4/07	9.94	7.37	387

Nebraska	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Chadron Municipal Airport	54.6	31.5	43.0	-2.9	86	4/23	12	4/06	2.49	0.60	132
Grand Island Airport	61.9	36.4	49.1	-0.8	89	4/23	14	4/07	2.56	-0.05	98
Lincoln Municipal Airport	63.1	37.1	50.1	-1.1	90	4/24	18	4/01	1.52	-1.38	52
Omaha Eppley International Airport	61.3	38.9	50.0	-1.4	89	4/24	20	4/07	2.21	-0.73	75
Norfolk Karl Stefan Airport	59.1	36.0	47.5	-1.6	91	4/23	18	4/07	1.46	-1.13	56
North Platte Regional Airport	59.6	33.7	46.7	-1.4	87	4/23	13	4/07	2.84	0.87	144
Valentine Miller Field	56.0	32.8	44.4	-1.7	89	4/23	6	4/07	2.49	0.52	126

North Dakota	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Bismark Municipal Airport	51.8	30.6	41.2	-2.1	80	4/23	6	4/02	0.69	-0.77	47
Dickinson Municipal Airport	47.8	27.3	37.6	-5.2	79	4/22	3	4/01	0.74	-1.02	42
Fargo International Airport	50.4	33.5	41.9	-1.6	82	4/23	14	4/03	0.81	-0.56	59
Grand Forks International Airport	48.5	31.6	40.1	-2.2	68	4/23	21	4/07	1.24	0.01	101
Williston International Airport	52.9	29.8	41.4	-1.1	80	4/22	15	4/01	1.04	-0.01	99

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.

April 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	53.5	32.1	42.8	-2.6	90	4/23	15	4/02	1.76	-0.07	96
Huron Regional Airport	55.4	33.2	44.3	-1.8	91	4/23	15	4/02	1.10	-1.19	48
Rapid City Regional Airport	50.5	29.4	39.9	-4.8	85	4/23	6	4/06	3.65	1.79	196
Sioux Falls Joe Foss Field Airport	56.8	33.8	45.3	-0.4	91	4/23	18	4/07	1.95	-0.70	74

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	52.1	27.8	39.9	-2.8	77	4/23	14	4/05	2.05	0.53	135
Cheyenne Municipal Airport	51.6	29.5	40.6	-1.0	76	4/23	12	4/05	2.24	0.69	145
Lander Hunt Field Airport	52.2	31.1	41.6	-2.2	74	4/23+	16	4/05	3.61	1.54	174
Laramie Regional Airport	48.3	23.3	35.8	-1.4	70	4/23	-4	4/06	1.30	0.24	123
Rawlins Municipal Airport	--	--	--	--	--	--	--	--	2.25	1.19	212
Sheridan County Airport	53.6	29.4	41.5	-2.4	80	4/22	7	4/06	1.32	-0.45	75

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.

Helping Lincoln Go Green

Ken Hubbard
Director - High Plains Regional Climate Center
Professor - School of Natural Resources

High Plains Regional Climate Center Assesses the Potential for "Green" Energy Source

NeighborWorks, a non-profit, community-based housing organization of Lincoln, NE is assessing the potential for a helix-type wind power generator at 23rd and 'P'. Wind energy is a renewable resources that can replace carbon based fuels in the High Plains. The NOAA High Plains Regional Climate Center (HPRCC) located in the School of Natural Resources is cooperating with NeighborWorks to install a wind monitoring system atop a 3 story building at 2338 'Q'. Glen Roebke (pictured right), with Todd Schimelfinig, and David Schoenmaker (a volunteer for NeighborWorks) recently installed wind sensors. The data set will be used to assess the potential for wind power generation at the site using the wind magnitudes at 2338 'Q'. The data will be collected for a few months and then comparisons can be made to other automated weather stations located in and around Lincoln that are monitored as part of the Automated Weather Data Network managed by Ken Hubbard in the School of Natural Resources. These data are available for other years and can help establish whether the wind data collected in 2009 represents a period of high, medium, or low wind compared to other years. The planned helix wind power generator will set atop a new 3 story building in the area.

For more information about the High Plains Regional Climate Center: http://www.hprcc.unl.edu.
For more information about the School of Natural Resources at UNL: http://www.snr.unl.edu.
For more information on the University of Nebraska - Lincoln: http://www.unl.edu.

University of Nebraska Lincoln

State Spotlight - North Dakota, cont.

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

Precipitation:

Most of the first few days of April were dry across the State with some snow in the central and northeast regions. The middle of the month saw more rain showers across the State. The last few days of April had heavier rains that turned to flurries with the larger snow accumulations in the western and central regions. Monthly precipitation totals ranged from 0.5 inches to 1.9 inches. The southwest corner and the far southeast corner had less than an inch of total monthly precipitation with the remaining areas receiving greater than an inch. The southwest region of the State had monthly percent of normal precipitation of 50% and less. The southeast region had 50 to 90 percent of normal monthly precipitation. The northwest and northeast monthly precipitation percent of normal ranged from 100% to 200% (Figure 1, High Plains Regional Climate Center).

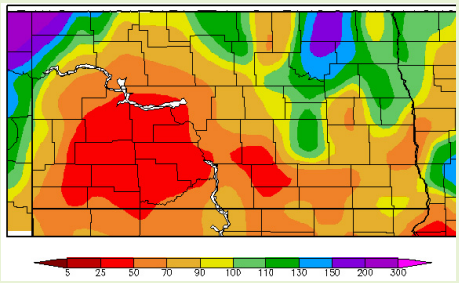


Figure 1. Precipitation Percent of Normal in April 2009 for North Dakota (HPRCC)

Temperature:

The average April air temperature was below normal across the State. There were a few days of above normal average air temperatures during the middle of the month. However, most of the daily average air temperatures were below normal. Many of the days that had above normal temperatures were quickly followed by precipitation events. For example, on April 23rd, the average air temperatures at Fargo dropped from 81°F to 68°F in one hour and temperatures continued to fall as a low pressure system moved in and brought cooler temperatures and rain showers to the area. The monthly average air temperatures ranged from 36°F to 42°F. The north central, central, and southwest regions had monthly air temperatures ranging from 36 to 39°F. The eastern and northwest regions had average monthly air temperatures from 40 to 42°F. The monthly departure from normal air temperatures ranged from 0 to -4°F. The northwest region had between 0 and -2°F departure from normal air temperatures with the remaining areas of the State having April departures of -2 to -4°F (Figure 2, High Plains Regional Climate Center).

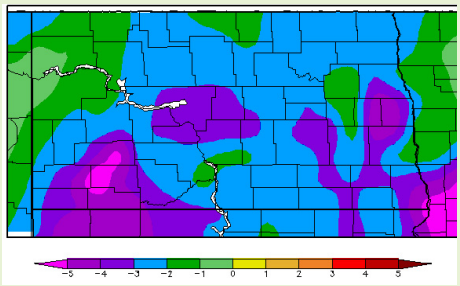


Figure 2. Temperature Departure from Normal in April 2009 for North Dakota (HPRCC)

Drought:

Abnormally dry conditions set in western North Dakota in mid April. By the third week of April more than 10% of the state was under abnormally dry conditions. Divide, Burke Williams, Mountrail, McKenzie, Billings and Golden Valley counties were so dry, the National Weather Service put out Fire Danger statements during the second and third week covering most of the Bismarck County Warning Areas. Recent rainfall will alleviate some of the dryness in the upcoming weeks.

Flood:

By the end of the month of April, no location on the Red River was reporting Major Flood. The stage at Fargo, Oslo, Drayton and Pembina improved to a Moderate Flood Stage. Grand Forks and Halstad are at Minor Flood Stage, while Wahpeton was improved to a "Near Flood Stage".

Sheyenne River at Valley City, Lisbon and West Fargo experienced major flooding. By the end of the month, flood at Valley City and Lisbon were downgraded to "Moderate Flood" while the River at West Fargo location is still flowing just a foot above the Major Flood category. The NCRFC is forecasting a gradual decrease in river levels during the upcoming week.

James River at Kensal location is flowing at Major Flood category while it is currently downgraded to Moderate category at Jamestown and Ludden locations. LaMoure gauge is showing only minor flooding. At all locations the stage has been steady.

Souris River at Towner and Bantry locations are at Moderate Flood stage while the stage at Willow City on Willow Creek peaked at 11.14' (Flood Stage). River stages at all locations are falling at a steady rate.

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).

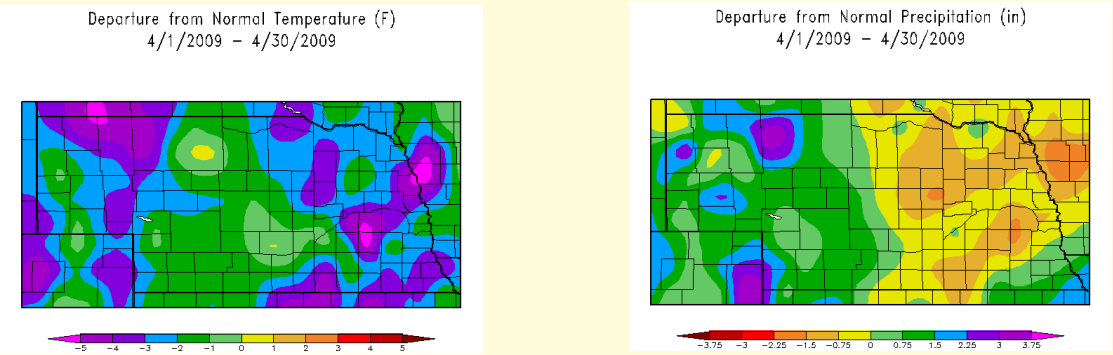
State Spotlight - Nebraska

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

Overview

April 2009 brought below normal average temperatures to the entire state, with departures of 2 to 6 F across the western and eastern 1/3 of the state. Although average temperatures were below normal across central sections of the state, departures were generally less than 2 F below normal. Above normal April precipitation was confined to the western ½ of Nebraska and was the result of several strong storm systems accompanied by heavy rainfall and significant accumulations of snow. Eastern Nebraska missed out on much of this moisture as it was deflected east, west, and north of the region.

The first four months of the year have brought below normal moisture to much of eastern Nebraska. Thankfully, generous fall moisture resulted in above normal soil moisture recharge (top 5 feet) as producers approached the 2009 cropping season. Short surface moisture (top one foot) were the main impact of the recent dry trend, but one or two moderate precipitation events would quickly eradicate dry surface conditions. Generous moisture across western Nebraska temporarily eliminated drought concerns and improved soil moisture reserves. Much of this region missed out on the fall precipitation events and this moisture will improve the wheat crops prospect and provide producers with ample moisture for spring sown crops.



Above: Departure from1971-2000 Normal Mean Average Temperature (left) and Departure from 1971-2000 Normal Total Precipitation (right) for April 2009 for Nebraska (HPRCC).

Temperature

April, like March, generally sees rapid swings in temperature due to frequent frontal passages as the northern jets mean position advances from the central High Plains at the beginning of the month to the northern High Plains by the end of April. April 2009 was an exception to this rule as prolonged periods of above or below normal temperatures prevailed.

The first 14 days of April saw normal to below normal temperatures. The greatest daily departures occurred during the April 5-6 period, when departures averaged 10-15 F below normal. During the April 15-24 period, above normal temperatures were observed with the greatest departures occurring on April 24 when temperatures averaged 15-20 F above normal. Below normal temperatures returned during the April 25-28 period, with the greatest departures reported on April 27 when temperatures averaged 8-12 F below normal. Above normal temperatures were recorded on April 29 and 30 with departures generally averaging 5 F above normal.

Of the 148 temperature sites having at least 90% of the their data available for analysis, only one station reported above normal temperatures. Average temperature approached 5 F below normal across northern sections of the Sandhills, Panhandle, and north-eastern Nebraska. These are the same areas that received heavy snowfall during the April 4-5 blizzard event and residual snow cover in some locations persisted for up to a week. Low temperatures in the single digits and low teens were common for several days after the blizzards passage.

The highest temperature reported during April was 91 F at Auburn, Culbertson, Friend, Nebraska City, and Norfolk on either the 23rd or 24th. The coldest temperature reported was 3 F on the 6th at Agate 3 E. The difference between the highest and lowest recorded temperature was 88 F. At least 15 locations recorded at least one night of single digit readings, while only 16 locations failed to reach 19 F at least once during the month of April.

State Spotlight - Nebraska, cont.

Precipitation

There were 15 days during April where measurable moisture was recorded within the state of Nebraska. A significant storm brought accumulating snowfall to parts of northern Nebraska during the April 4-5 time frame. Over two inches of moisture was recorded across the western 1/3 of the state as pieces of energy lifted northeastward of an upper air trough situated over the Great Basin during the April 16-19 time frame. The following list details the dates of precipitation, general areal coverage, and amounts recorded:

4/1 Northeast Nebraska: 0.10 to 0.50 inches

4/4 Northern Panhandle, western 1/3 of Sandhills: 0.50 to 1.00 inches

4/5 All but south central and southeast: 0.25 to 0.75 inches, isolated totals over one inch

4/10 I-80 corridor (40 miles north/south): 0.25 to 0.50 inches

4/12 Extreme southeast and northeast: less than 0.10 inches

4/13 South of I-80: 0.10 to 0.50 inches

4/16 Northern Panhandle, southwest Nebraska: 0.10 to 0.50 inches

4/17 Western 1/3 of Nebraska: 0.50 to 1.00 inches, isolated 1.00 to 2.00 inch totals

4/18 All but eastern Sandhills and northeast Nebraska: 0.10 to 1.50 inches

4/19 Panhandle, Sandhills, northeast, and isolated areas of south central and southeast Nebraska: 0.25 to 1.00 inches

4/25 Southeast corner: 0.10 to 0.25 inches

4/26 Northern Panhandle, western sections of southwest Nebraska, central, east central, and southeast: 0.10 to 0.25 inches, isolated 0.25 to 1.00 inches

4/27 Southeast and eastern east central Nebraska:0.10 to 1.00 inches, isolated areas approaching 3.00 inches

4/28 Southeast Nebraska: less than 0.10 inches

4/29 South central through northeast Nebraska: 0.25 to 1.00 inches

4/30 I-80 corridor from WY to Seward, southern Sandhills, northeast Nebraska: 0.10 to 0.50 inches, isolated totals near 1.50 inches

The April 4-5 precipitation (blizzard) event resulted in significant accumulations of snowfall north and west of a line from McCook to West Point. Within this region, snowfall totals in excess of six inches were observed across the northern Panhandle, northern Sandhills, along with pockets of northeast and east central Nebraska. Unofficial reports indicate that 26 inches of snow were recorded at Harrison 4 NW, with 16 inches in Merriman. Butte recorded 12 inches, while Arthur and Tekamah received 10 inches. In the warm sector of the storm, a tornado touched down near Fairfield on April 4 and represented the only confirmed touchdown in Nebraska during the month of April.

Of the 166 observation sites in Nebraska having at least 80% of their March data available for analysis, 90 locations failed to receive at least normal moisture. Most locations receiving above normal moisture were confined to western ½ of Nebraska. A few isolated locations in extreme southeastern Nebraska received above normal moisture, with the vast majority of the rainfall occurring during severe thunderstorms of April 27.

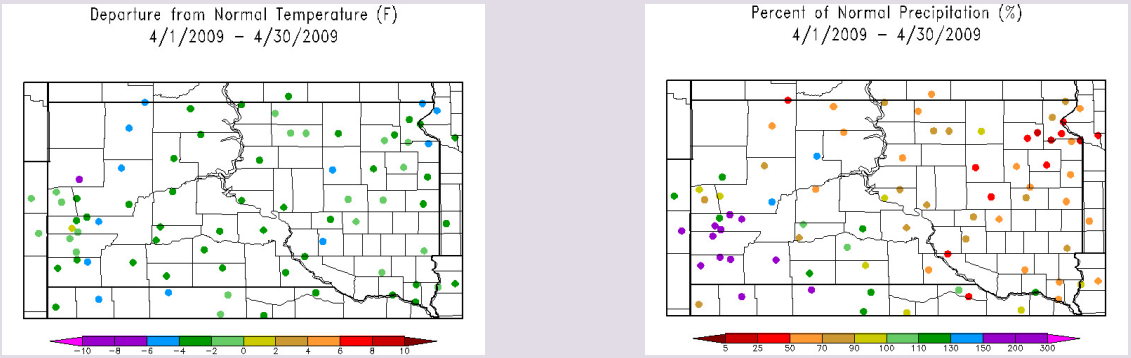
Rulo 2 W recorded the greatest April monthly precipitation total of 5.26 inches and the largest 24-hour total of 2.97 inches. The largest monthly snowfall from stations having at least 50% of their data available for analysis was 32.0 inches and the largest 24-hour total of 26.0 were both recorded at Harrison 4 NW.

State Spotlight - South Dakota

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

The state of South Dakota saw typical spring weather in April, including two major winter storms, some hail, flooding and some dry conditions. Total precipitation ranged from less than 0.5" in the northeast to over 4 inches in the southwest. These totals in northeastern South Dakota were as little as 25% of average precipitation to as much as 200% of average in the southwest. Generally areas east of a line from Gregory County to the northwest corner were drier than average. Areas west were wetter. Drought is not an issue. With the precipitation in the southwest there is no area in South Dakota experiencing drought. Excessive wetness has been a continuing issue. This wetness is part of a continual trend from last fall leaving many of the soils in the state very wet.

Average temperatures ranged from 38 F in the northwest to 47 F in the southeast. These temperatures were below average for everyone. The state was 2 - 6 F below average for the month. This slowed soil warm-up and growing degree day accumulation for agriculture interests. Daily temperatures had some wide extremes from setting record low temperatures early in the month to record high temperatures on the 23rd.

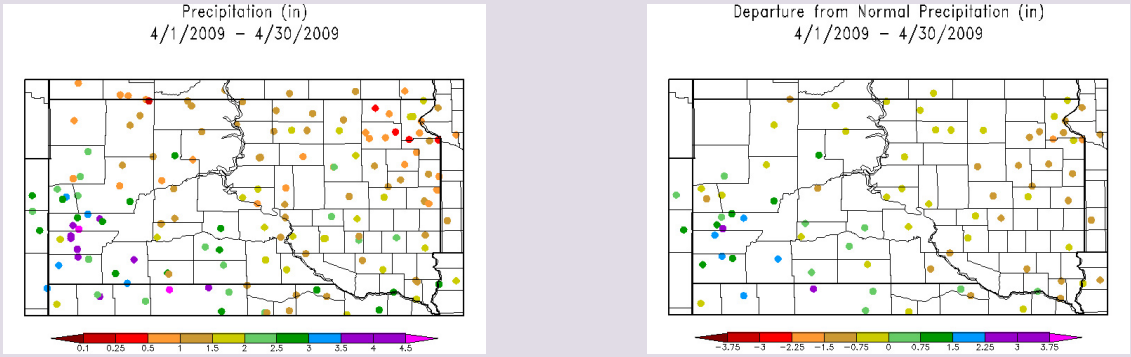


Above: Departure from1971-2000 Normal Mean Average Temperature (left) and Percent of 1971-2000 Normal Total Precipitation (right) for April 2009 for South Dakota (HPRCC).

Winter weather

Several major winter storms moved through South Dakota during April. The first system moved through the state April 3 -5 bringing snow. The greatest amount reported was 20" in south central South Dakota at Mission. Ten to 20 inches were reported in the western and south central portions of the state with single digits totals to just a few inches in the southeast.

Snow was reported on April 25th and 26th. The western quarter of the state reported 6" to 12". A second area around Jerauld County reported 4" at Jerauld with the surrounding counties receiving 2" or less.



Above: Total Precipitation (in inches) (left) and Departure from Normal Precipitation (in inches) (right) for April 2009 for South Dakota (HPRCC).

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 is available through SDSU or the High Plains Regional Climate Center.

State Spotlight - South Dakota, cont.

Severe Spring Weather

The state also saw some spring severe weather. During the evening of April 29, hail was reported southwest of Aberdeen at Mission Ridge and moved northeastward through Mina, the Aberdeen area, Bath, Groton, Eden and North Pickerel Lake.

Impact

Despite the generally dry conditions over much of the state, cool temperatures and wet conditions slowed planting progress for small grains over most of the state. Corn planting made rapid progress over the latter few days of the month. Many cattle were lost because of the late spring winter storms. Total numbers are still pending. But the numbers will be in the thousands.

For the first time in nearly eight years, the state had no depiction on the US Drought Monitor map. The last of the D0 in the far southwest corner of the state was removed with the April 21, 2009 map. The last time the state had no DM depiction was in July 2001.

Flooding continued along the James River primarily because of emergency releases of water from reservoirs in North Dakota that were flowing over emergency spillways. Releases from these rivers are likely to keep the James at flood level well into the summer.

Flooding was also reported along many streams in the northwest part of the state during the melt-off of snow in the middle of the month. On April 11 – 12th flooding was reported in Perkins and Meade Counties. Flash flooding was reported on the 14th in Harding county and flooding again in Perkins County. The USGS gauge at Camp Crook set an all time record flood level on the 17th. Some livestock were lost to flooding. Most of the losses were road damages to culverts and loss of road surfaces.

The wet period has filled nearly all reservoirs in the state including Bureau of Reclamation reservoirs and Army Corps of Engineers reservoirs on the Missouri River. The only reservoir not at or above main pool was Angostura just south of the Black Hills.

Seasonal Records
Precipitation in inches

Snowfall	**New Record**	**Old Record**
East Rapid City	90.2 (2008-2009 winter)	80.3 (196901970 winter)

Monthly Records
Precipitation in inches

Wet	**Precipitation**	**Rank**
Porcupine 11N	3.58	5th wettest
Mt. Rushmore	5.34	2nd wettest
Wind Cave	4.11	2nd wettest
Dry	Precipitation	Rank
Big Stone City 2NW	0.37	2nd driest
Summitt 1W	0.38	2nd driest
Waubay	0.36	4th driest

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State Spotlight - South Dakota, cont.

Daily Records Precipitation in inches/Temperature in degrees F		
Water Equivalent	**New Record**	**Old Record**
Sisseton	1.17/1st	0.86/2007
Rapid City	1.04/5th	0.58/1997
East Rapid City	1.15/5th	0.94/1955
Rapid City airport	0.68/10th	0.42/1950
Sisseton	1.30/30th	1.26/1994
Snowfall		
Aberdeen	10.2/1st	3.0/1932
Watertown	5.1/1st	3.0/2008
Sisseton	12.2/1st	8.0/1947
Rapid City Airport	12.4/5th	4.5/1986
East Rapid City	13.9/5th	5.6/1957
Mitchell	9.8/4th	6.0/1957
East Rapid City	5.4/26th	5.0/1971
Low Temperature		
Rapid City airport	8/1st	10/2008
Rapid City airport	6/6th	tied/2007
High Temperature		
Aberdeen	90/23rd	87/1994
Mobridge	89/23rd	87/1990
Pierre	88/23rd	87/1990
Sioux City	92/23rd	87/1939
Huron	91/23rd	89/1990
Sioux Falls	91/23rd	87/1939
Yankton	90/23rd	88/1990
Brookings	88/23rd	86/1962
Rapid City Airport	85/23rd	83/1962
Huron	91/23rd	89/1990
Mitchell	92/23rd	tied/1939
Academy	95/23rd	92/1990
Menno	92/23rd	tied/1939

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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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