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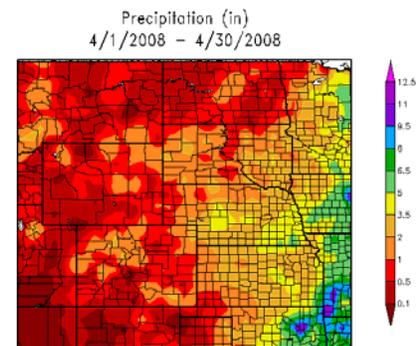
Convection returns to the region-Photo by Ken Hubbard

# April 2008 Climate Summary

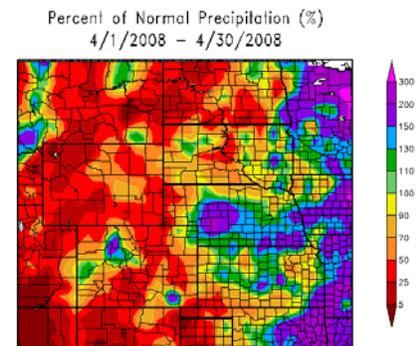
## Region Breakdown

Dryness was present over the western two thirds of the High Plains region for the month of April 2008. Areas in the eastern third of the region improved significantly with respect to March. Snow fell in the western Dakotas and in Western Nebraska and in the mountainous states of Wyoming and Colorado while much of the east and southeast portion of the region received mostly rainfall. Several stations in the western part of the region received a tenth of one inch of precipitation or less while stations in southeast Kansas received 5 to 8 inches of precipitation. The percent of normal map shows that a few parts of the region were above 100 percent and some areas approached 200% of the normal precipitation for the 30 year period 1971-2000.

Weather patterns consisted of a series of high and low pressure systems, each moving through the region in a manner of a few days. The intermittent cold fronts moving generally down from the north and the warm fronts moving mostly up from the south caused temperatures to fluctuate considerably during the month. The cold warm air fluctuation is not uncommon for the spring transition months but, the frequency of changes was fairly high.



Generated 5/1/2008 at HPRCC using provisional data. NOAA Regional Climate Centers



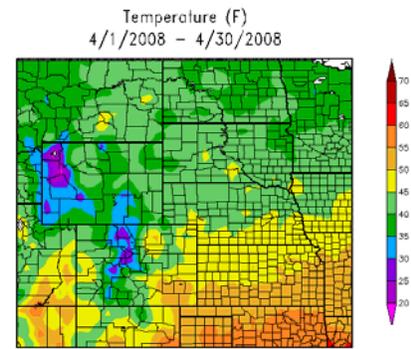
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**Regional Breakdown (Cont.)** The average temperature patterns warmed over the region and the pattern is typical for this time of year with the coldest temperatures to the north and the warmest temperatures to the south. The exception is in the mountains where the average temperatures were the lowest owing to the decrease in temperature with elevation.

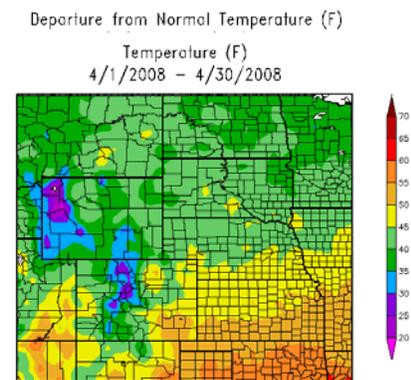
The temperature average for April was below the April mean temperature for the normal period 1971-200 over much of the region with a range from 0 to nearly 8 degrees below average for the month. A few stations in Colorado and Kansas experienced temperatures from 0 to 2 degrees above the monthly normal.

A weekly average soil temperature of 50 or higher is recommended before planting of corn. Soil temperatures have been slow to warm this spring. Average weekly soil temperatures at the 4 inch depth have reached 50 to 60 degrees over most of Nebraska, Kansas, Eastern Colorado and Eastern Wyoming.

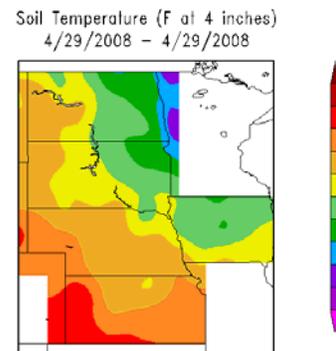
The heating degree days (HDD) were below normal in some areas in the western part of the region but were up to 200 HDD above the normal accumulated values for most of the rest of the region. Thus energy required to heat homes and businesses was higher than usual for most of the region in the month of April



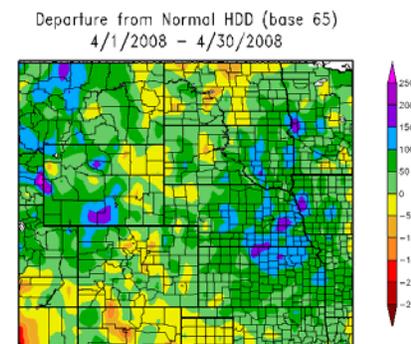
Generated 5/1/2008 at HPRDC using provisional data. NOAA Regional Climate Centers



Generated 5/1/2008 at HPRDC using provisional data. NOAA Regional Climate Centers



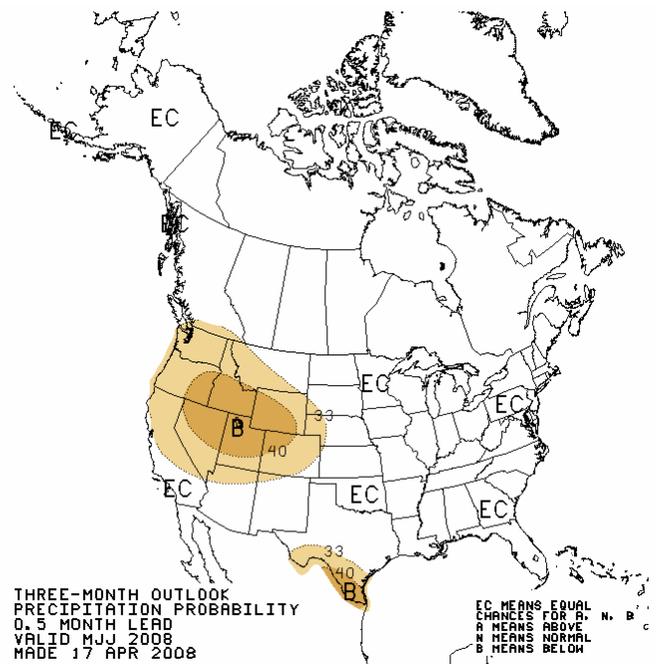
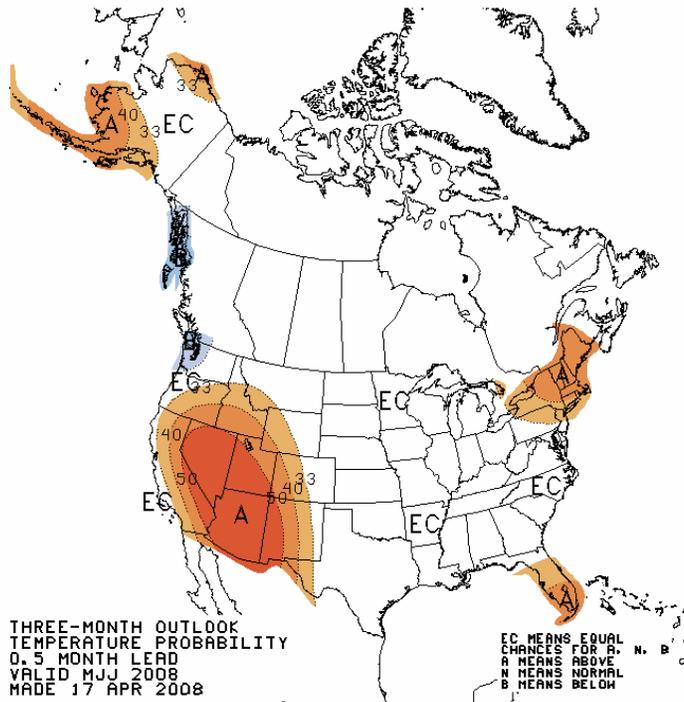
High Plains Regional Climate Center  
Generated 4/30/2008 using AWGN data.



Generated 5/1/2008 at HPRDC using provisional data. NOAA Regional Climate Centers

### Climate Outlook

Forecasts generally indicate a weather La Nina conditions for May-April-June 2008, followed by significant uncertainty thereafter. The temperature outlook for May-June-July is for above normal temperatures in western Wyoming and Colorado with chances of above reaching up to 50% skill level relative to a 33% by chance alone.



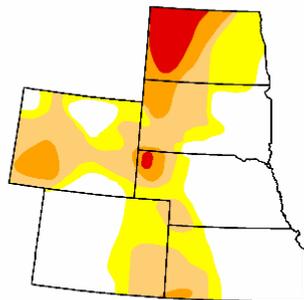
### Drought Watch

Drought conditions vary from D0 to D3 in the region where the extreme drought (D3) is in the western part of North Dakota and Nebraska. The seasonal outlook through July is calling for some improvement in these areas.

#### U.S. Drought Monitor High Plains

April 29, 2008  
Valid 7 a.m. EST

	Drought Conditions (Percent Area)						
	None	D0-D1	D1-D2	D2-D3	D3-D4	D4	
Current	44.5	55.5	34.2	12.4	4.3	0.0	
Last Week (04/22/2008 map)	44.1	55.9	33.4	12.0	4.3	0.0	
3 Months Ago (02/05/2008 map)	40.1	59.9	29.5	14.6	0.6	0.0	
Start of Calendar Year (01/01/2008 map)	46.8	53.2	29.4	11.8	0.3	0.0	
Start of Water Year (10/01/2007 map)	55.8	44.2	23.3	10.8	1.0	0.0	
One Year Ago (05/01/2007 map)	52.3	47.7	32.6	14.0	2.7	0.0	



**Intensity:**  
 Yellow: D0 Abnormally Dry  
 Orange: D1 Drought - Moderate  
 Red-Orange: D2 Drought - Severe  
 Red: D3 Drought - Extreme  
 Dark Red: D4 Drought - Exceptional

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

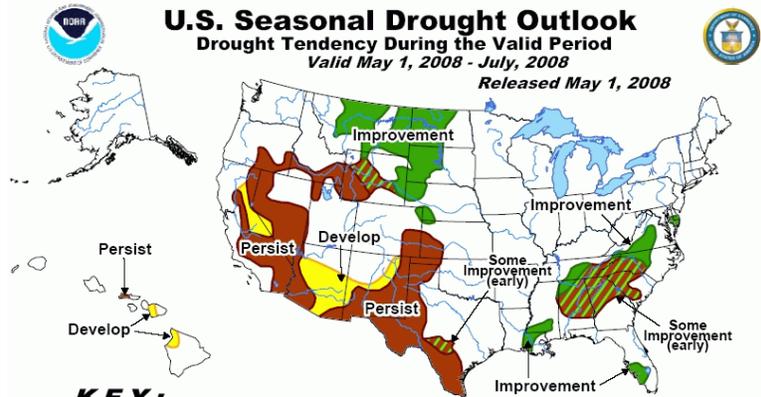
<http://drought.unl.edu/dm>



Released Thursday, May 1, 2008  
 Author: R. Heim/L. Love-Brotak, NOAA/NESDIS/NCDC

#### U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period Valid May 1, 2008 - July, 2008

Released May 1, 2008



**KEY:**

- Drought to persist or intensify
- Drought ongoing, some improvement
- Drought likely to improve, impacts ease
- Drought development likely

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

# State Summaries<sup>1</sup>

## Colorado

Station	Temperature (F)				Extremes			Low	Date	%	Precipitation Totals (inches)		
	Max	Min	Mean	Dep	High	Date	Avail				Obs	Depart	% Norm
AKRON WASHINGTON CO AP	61.2	31.4	46.3	-0.8	85	30-Apr	+	11	4/1	100	0.54	-1.04	34
ALAMOSA SAN LUIS AP	59.8	22	40.9	0.1	72	29-Apr		7	4/12	100	0.18	-0.36	33
COLORADO SPRINGS MUNI AP	60.3	29.9	45.1	-0.2	79	15-Apr		21	4/2	100	0.39	-1.23	24
GRAND JUNCTION WALKER FLD	63	33.9	48.5	-2.4	81	29-Apr		22	4/1	100	0.86	0	100
PUEBLO MEM AP	67.3	28.9	48.1	-1.8	87	15-Apr		20	4/2	100	0.96	-0.29	77

## Kansas

Station	Temperature (F)				Extremes			Low	Date	%	Precipitation Totals (inches)		
	Max	Min	Mean	Dep	High	Date	Avail				Obs	Depart	Pct Norm
CONCORDIA MUNI AP	60.4	37.4	48.9	-3.9	82	20-Apr		26	4/14	100	3.01	0.56	123
DODGE CITY RGNL AP	65.1	37.9	51.5	-2.4	93	30-Apr		24	4/1	100	1.79	-0.46	80
GOODLAND RENNER FLD	63	32.7	47.9	-0.9	88	30-Apr	+	23	4/1	100	1.11	-0.4	74
TOPEKA MUNI AP	62.7	41.1	51.9	-2.6	80	30-Apr	+	27	4/14	100	2.95	-0.19	94
WICHITA MID-CONTINENT AP	65.5	42.2	53.9	-1.4	81	30-Apr	+	27	4/14	100	1.82	-0.75	71

## North Dakota

Station	Temperature (F)				Extremes			Low	Date	%	Precipitation Totals (inches)		
	Max	Min	Mean	Dep	High	Date	Avail				Obs	Depart	Pct Norm
BISMARCK MUNI AP	57	26.6	41.8	-1.5	85	15-Apr		9	4/7	100	0.73	-0.73	50
DICKINSON MUNI AP	55.6	26.1	40.9	-1.9	80	14-Apr		13	4/7+	100	0.19	-1.57	11
FARGO HECTOR INTL AP	52.1	29.8	41	-2.5	68	15-Apr		20	4/27	100	2.2	0.83	161
GRAND FORKS INTL AP	52.3	27.6	40	-2.3	70	15-Apr		19	4/28	100	0.53	-0.7	43
WILLISTON SLOULIN INTL AP	56.4	26.5	41.5	-1	82	14-Apr		12	4/6	100	0.27	-0.78	26

## Nebraska

Station	Temperature (F)				Extremes			Low	Date	%	Precipitation Totals (inches)		
	Max	Min	Mean	Dep	High	Date	Avail				Obs	Depart	Pct Norm
CHADRON MUNI AP	59.5	28.9	44.2	-1.7	88	15-Apr		7	4/1	100	0.98	-0.91	52
GRAND ISLAND AP	58.6	35.4	47	-2.9	79	20-Apr	+	25	4/14+	100	3.42	0.81	131
LINCOLN MUNI AP	59	35.6	47.3	-3.9	80	20-Apr		21	4/14	100	3.8	0.9	131

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OMAHA EPPLEY AIRFIELD	58.4	36.5	47.5	-3.9	79	23-Apr 23-	23	4/14	100	4.01	1.07	136
NORFOLK KARL STEFAN AP	57.4	33.6	45.5	-3.6	78	Apr 15-	22	4/14	100	1.98	-0.61	76
NORTH PLATTE RGNL AP	59.3	30.6	45	-3.1	84	Apr 15-	18	4/1	100	3.67	1.7	186
VALENTINE MILLER FLD	58.6	29.6	44.1	-2	84	Apr	14	4/7	100	1.39	-0.58	71

## South Dakota

Station	Temperature (F)				Extremes		Low	Date	%	Precipitation Totals (inches)		
	Max	Min	Mean	Dep	High	Date				Avail	Obs	Depart
ABERDEEN RGNL AP	55.7	28	41.9	-3.5	76	15-Apr 23-	14	4/7	100	0.81	-1.02	44
HURON RGNL AP	56.7	29.8	43.2	-2.9	78	Apr 15-	18	4/13+	100	2.05	-0.24	90
RAPID CITY RGNL AP	55.9	27.7	41.8	-2.9	85	Apr 23-	10	4/1	100	1.38	-0.48	74
SIOUX FALLS FOSS FLD	55.4	31.2	43.3	-2.4	78	Apr	19	4/14	100	2.68	0.03	101

## Wyoming

Station	Averages				Extremes		Low	Date	%	Precipitation Totals (inches)		
	Max	Min	Mean	Dep	High	Date				Avail	Obs	Depart
CASPER NATRONA CO AP	55.7	23.6	39.6	-3.1	77	29-Apr 15-	10	4/1	100	1.27	-0.25	84
CHEYENNE MUNI AP	54.2	26.9	40.5	-1.1	76	Apr 29-	12	4/1	100	0.51	-1.04	33
LANDER HUNT FLD AP	55.8	26.1	40.9	-3	75	Apr 30-	11	4/1	100	0.9	-1.17	43
LARAMIE RGNL AP	48.8	21.1	35	-2.2	68	Apr +	3	4/1	100	0.38	-0.68	36
RAWLINS MUNI AP	49.4	23.2	36.3	-5.3	71	Apr 29-	4	4/1	100	0.42	-0.64	40
SHERIDAN CO AP	55.3	24.4	39.9	-4	80	Apr +	1	4/1	100	1.12	-0.65	63

<sup>1</sup> All Data are Preliminary and Subject to Change

Source: National Weather Service Cooperative Observation Program Network

Data is retrieved through the Applied Climate Information System (ACIS)

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

## About the NOAA High Plains Regional Climate Center

The NOAA High Plains Regional Climate Center (HPRCC) is headquartered at the University of Nebraska – Lincoln (UNL) in Lincoln, Nebraska. As one of 6 NOAA 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 and the American Association of Station Climatologist members to provide climate data services and information for decision/policy decisions.

### 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://ww.rcc-acis.org>

North Dakota State Climate Office: <http://www.ndsu.edu/ndsco>

North Dakota Agricultural Network: <http://www.ndawn.ndsu.nodak.edu>

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

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

School of Natural Resources – University of Nebraska – Lincoln: <http://snr.unl.edu>

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>

National Agricultural Statistics Service (USDA): <http://www.nass.usda.gov>

Weather Photos: <http://www.nebraskaweatherphotos.org>



### Contact Information

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