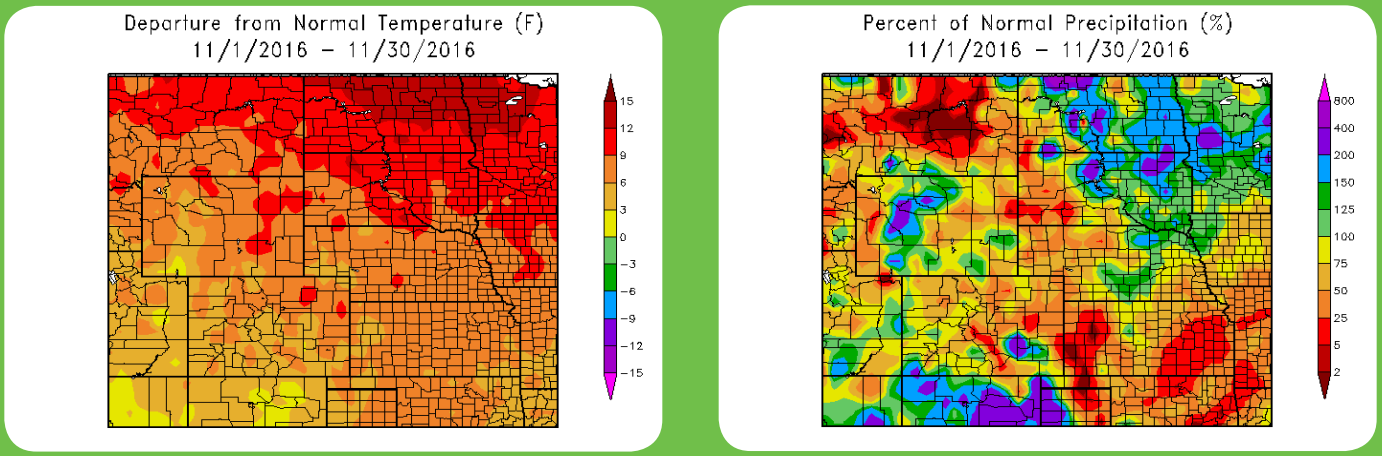
Continued Warmth

Above-normal temperatures continued into November throughout the High Plains. Many top 10 records for warmest November were set, as much of the region was 4.0-8.0 degrees F (2.2-4.4 degrees C) above normal. Departures were especially impressive in the Dakotas. In North Dakota, temperatures in Fargo and Grand Forks were 13.0 degrees F (7.2 degrees C) and 14.7 degrees F (8.2 degrees C) above normal, respectively, and Fargo, Grand Forks, Jamestown, and Minot all had their warmest Novembers on record. The continued warmth during the past few months led to some remarkable fall temperature records as well. The following is a selection of locations that experienced record-breaking warm falls: Colorado Springs, CO, Pueblo, CO, Salina, KS, and Aberdeen, SD (warmest); Bismarck, ND, Sioux Falls, SD, Omaha, NE, Wichita, KS, and Cheyenne, WY (2nd warmest); and Williston, ND and Rapid City, SD (3rd warmest).

The continuation of above-normal temperatures resulted in several impacts around the region. Snowpack got off to a slow start in the Rockies. While some parts of the Rockies, such as the western half of Wyoming, received ample precipitation this fall, the warm temperatures caused precipitation to fall more as rain than snow. The warmth contributed to drought expanding across parts of every state in the High Plains region, especially in Colorado and Kansas. Colorado Springs, Colorado had its driest fall on record, and it was the 3rd driest in Dodge City, Kansas. Many locations experienced late first fall freezes. Although not in our region, it is worth noting that Minneapolis-St. Paul, Minnesota experienced its latest first fall freeze on record on November 18th (period of record 1873-2016). According to Nebraska Extension, several diseases were found in fall-planted wheat throughout the state. Stripe, stem, and leaf rust diseases were widespread in part due to extended above-normal temperatures into late fall. However, the warm temperatures did have some positive impacts. For example, the growing season was extended, allowing people to enjoy their garden plants and vegetables longer than usual, and it also helped accelerate harvest.

Temperature and Precipitation Overview



Above: Departure from 1981-2010 normal temperature (left) and percent of normal precipitation (right) for November 2016 in the High Plains region. Maps produced by the High Plains Regional Climate Center and are available at: http://hprcc.unl.edu/maps/current .

Precipitation

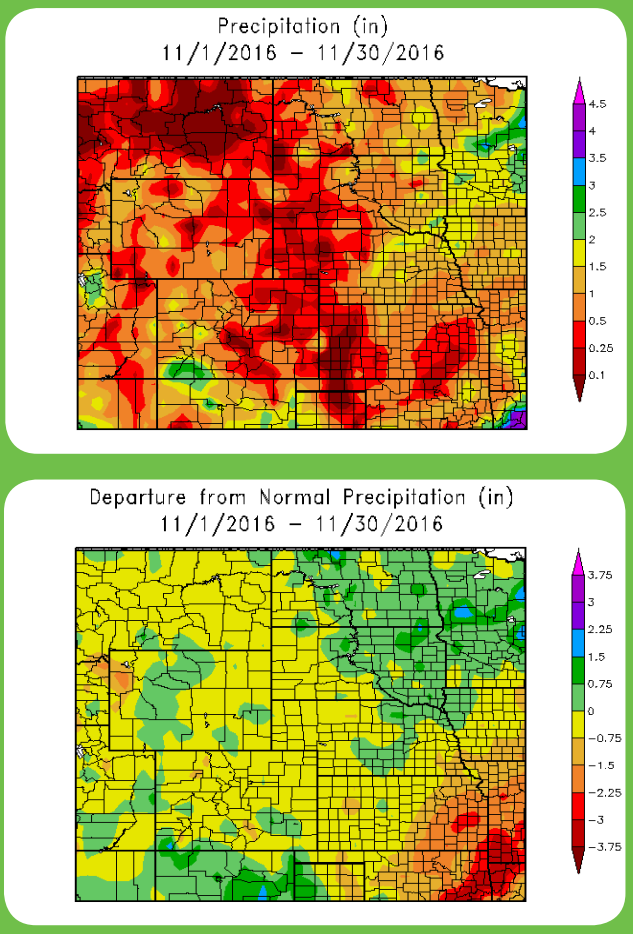
November was mostly dry across the region with a few pockets receiving above-normal precipitation. The wettest areas included the eastern and central Dakotas where precipitation exceeded 150 percent of normal in many areas. It was especially wet in Pierre, South Dakota, which had its 8th wettest November on record. Otherwise, it was quite dry throughout the region, particularly in Kansas and parts of Colorado. A large part of Kansas received only 25 percent of normal precipitation, at best. It was the 10th driest November on record for Akron, Colorado. Pueblo, Colorado finally ended its streak of no measurable precipitation on the 17th. The streak lasted 63 days, which tied 1963 and 1934 for the 4th longest streak on record with no measurable precipitation in Pueblo (period of record 1888-2016).

Two major storm systems impacted the High Plains during November. The first system came through on the 17th and 18th, following record-breaking high temperatures throughout the region. The storm brought large temperature swings, snow, and high winds to portions of Wyoming, Colorado, South Dakota, and Nebraska. Pueblo's streak of no measurable precipitation ended with this storm and, according to the National Weather Service Weather Forecast Office in Pueblo, thunder-graupel occurred at their office!

The second storm system affected the region during the last week of the month. This system developed over the Dakotas and packed quite a punch, as it blanketed the northern Plains with snow and spawned severe weather in the Southeast U.S. As much as two feet of snow fell across western parts of North Dakota, and high winds and snow also caused problems in South Dakota, as Interstate 90 was closed in several locations.

While severe weather is uncommon in the High Plains in November, it is not unheard of. This aforementioned system combined with warm and moist air streaming northward from the Gulf of Mexico to produce tornadoes in south-central Nebraska. Three tornadoes were confirmed on the 27th in that region, which is the first time on record that more than one tornado was ever reported during November in the state. According to the National Weather Service Weather Forecast Office in Hastings, it was the second-latest day of the year that tornadoes have occurred in Nebraska, and it was only the fourth time since 2000 that Nebraska saw a tornado in November.

Regional Precipitation



Above: Total precipitation in inches (top) and departure from normal precipitation in inches (bottom) for November 2016. These maps are produced by HPRCC and can be found on the Current Climate Summary Maps page at: http://hprcc.unl.edu/maps/current.

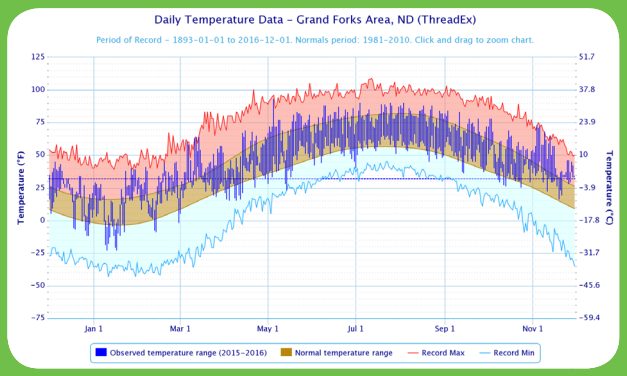
Snowpack Update

Snowpack got off to a slow start in the Rockies this year. As of the end of November, most SNOTEL sites in Wyoming and Colorado were reporting a snow-water equivalent of approximately 50-75 percent of median. According to the U.S. Army Corps of Engineers, mountain snowpack water content was well below the 1981-2010 average going into December in the Missouri River Basin above Fort Peck and from Fort Peck to Garrison. To date, the mountain snowpack water content was at or below the levels of 2001, which is considered the lowest snowpack year during the last 20-year period. Snowpack was below normal in large part due to a warm fall, and precipitation fell mostly as rain instead of snow. Dryness also contributed to the issue, especially in Colorado. Despite the abysmal snowpack, it is early in the season and there is ample time for mountain snowpack recovery.

Temperatures

November brought impressive warmth to the High Plains and continued the trend of above-normal temperatures experienced by the region throughout the fall. Departures of 4.0-8.0 degrees F (2.2-4.4 degrees C) above normal were widespread. However, it was even warmer across much of the Dakotas, where temperature departures exceeded 10.0 degrees F (5.6 degrees C) in several locations. For instance, the average temperature for November was a remarkable 14.7 degrees F (8.2 degrees C) above normal in Grand Forks, North Dakota. In fact, the average temperature was above normal every day of November in Grand Forks. The high temperature on the 4th, 5th, and 6th reached above 70.0 degrees F (21.1 degrees C), and these three days ranked in the top 10 for highest November temperature on record in Grand Forks (period of record 1893-2016). Other parts of the region experienced an especially warm day on the 16th, as quite a few daily records for highest maximum temperature were set. For example, it reached 80.0 degrees F (26.7 degrees C) in several locations, and Lincoln, Nebraska and Denver, Colorado had their latest 80.0 degrees F (26.7 degrees C) day on record. Also on the 16th, some places in Colorado set or tied a record for warmest November day, including Boulder, Colorado Springs, and Denver.

Station Spotlight: Grand Forks, ND



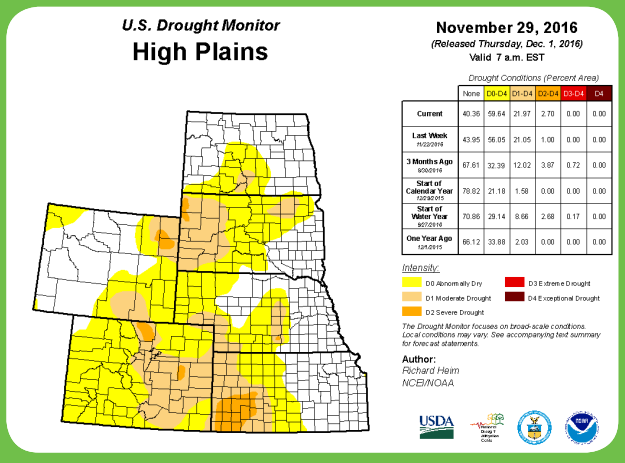
Above: Daily temperatures along with extremes and normals values since December 1, 2015 in Grand Forks, ND.

Given the warm fall, it was not surprising that some locations experienced late freezes. By the end of October, southern and eastern Kansas had yet to reach the freezing mark. These locations did get their first fall freeze in November, although it occurred a few weeks later than the median date. In particular, the Manhattan, Kansas COOP station did not record a freeze this year until November 12th, which was its latest first fall freeze on record (period of record 1893-2016).

Drought Conditions

The continuation of dry conditions into November resulted in wide expansion of drought throughout parts of the High Plains region. Since late October, the area in drought (D1-D4) expanded from about 9 percent to 22 percent, and the area experiencing drought or abnormal dryness (D0-D4) increased from approximately 38 percent to 60 percent. Degradations in drought conditions occurred in all six states in the High Plains region.

U.S. Drought Monitor



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). For current Drought Monitor information, please see: http://droughtmonitor.unl.edu/.

The continuation of dry conditions into November resulted in wide expansion of drought throughout parts of the High Plains region. Since late October, the area in drought (D1-D4) expanded from about 9 percent to 22 percent, and the area experiencing drought or abnormal dryness (D0-D4) increased from approximately 38 percent to 60 percent. Degradations in drought conditions occurred in all six states in the High Plains region.

Colorado and Kansas saw the biggest expansion of drought during the past month. Nearly all (98 percent) of Colorado was experiencing at least abnormal dryness (D0), and 35 percent of the state was in moderate drought (D1) or severe drought (D2), most of which was occurring in the eastern half of the state. Meanwhile, the western half of Kansas has been particularly dry, and nearly 11 percent of the state was contending with D2 conditions. Eastern Colorado and western Kansas had a very dry fall, with much of the area receiving no more than 50 percent of normal precipitation.

Several impacts have been reported as a result of drought conditions. Soil moisture was depleted across a large part of the region, especially in Colorado, Wyoming, Kansas, and Nebraska. Snowpack got off to a slow start in the Rockies. In Wyoming, the dryness increased the risk for rangeland fires, and winter wheat was challenged for growth. Diseases were already emerging in the winter wheat crop in western Kansas. Moisture is badly needed before the ground freezes to ensure adequate soil moisture in the spring for crop growth.

Climate Outlooks

According to the Climate Prediction Center, La Niña conditions are now present in the Pacific. Equatorial sea surface temperatures are below average in the central and east-central Pacific Ocean. As a result, a La Niña Advisory has been issued. La Niña is slightly favored to persist during winter 2016-17. If you are looking for more information about La Niña and its impacts, check out the ENSO blog here: https://www.climate.gov/news-features/department/8443/all. Or, take a look at this special update on La Niña in the Missouri River Basin states, which is available here: http://hprcc.unl.edu/pdf/LaNina-MOBasin-2016-Final.pdf.

The seasonal temperature and precipitation outlooks below combine the effects of long-term trends, soil moisture, and when applicable, the El Niño Southern Oscillation cycle (ENSO). To learn more about these outlooks, please see: http://www.cpc.ncep.noaa.gov.

Temperature

The December-February temperature outlook indicates an increased chance of above-normal temperatures for the southern half of the U.S., as well as much of the Interior West and New England. This includes southwestern Wyoming, most of Colorado, and southwestern Kansas in the High Plains region. Below-normal temperatures are favored across the northern Plains, including North Dakota, most of South Dakota, and the northeastern tip of Wyoming. Elsewhere, there is an equal chance for above-, below-, or near-normal temperatures in the contiguous U.S. during the December-February period.

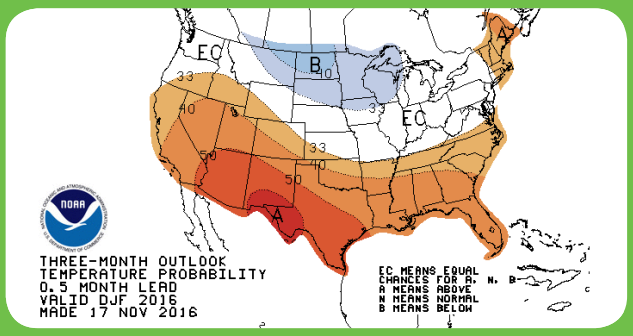
Precipitation

The precipitation outlook for the next three months calls for a higher probability of above-normal precipitation across the northern Rockies, the Great Lakes, and the Ohio Valley. In the High Plains region, this includes northwestern South Dakota and most of Wyoming and North Dakota. Below-normal precipitation is favored across southern parts of the U.S., including southern Colorado and southwestern Kansas. The remainder of the contiguous U.S. has equal chances for above-, below-, or near-normal precipitation.

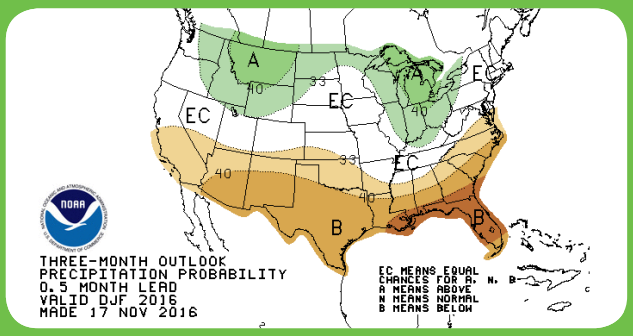
Drought

The November 17th U.S. Seasonal Drought Outlook shows that drought is expected to persist across portions of the Southwest, the Plains, the Southeast, and the Northeast. In the High Plains region, this includes a large area in drought in eastern Colorado and western Kansas, the Black Hills region of South Dakota extending west into northeastern Wyoming, and small pockets in northeastern South Dakota and central Nebraska. Drought may improve or be removed in portions of the West, the Northeast, and parts of Kentucky. Drought development is likely in areas of the Southwest, the southern Plains, and the East, including further development across southern Kansas and southeastern Colorado in the High Plains region.

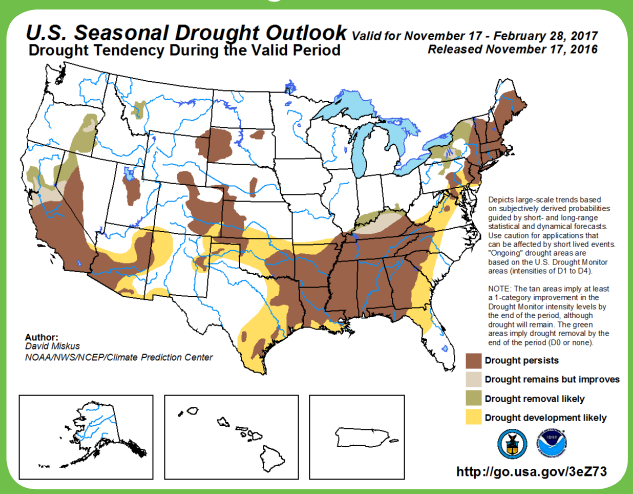
Temperature Outlook



Precipitation Outlook



Drought Outlook



Above: The three-month temperature probability outlook (top), the three-month precipitation probability outlook (middle), and the U.S. Seasonal Drought Outlook (bottom). For more information on these outlooks, produced by the Climate Prediction Center, see: http://www.cpc.ncep.noaa.gov.

Station Summaries: By the Numbers

Colorado	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Akron Washington County Airport	58.4	31.6	45.0	7.4	81	11/16	17	11/18	0.09	-0.49	16
Alamosa San Luis Airport	52.9	13.9	33.4	3.9	67	11/16	-5	11/30	0.44	0.02	105
Colorado Springs Municipal Airport	59.2	30.3	44.7	6.6	78	11/16	10	11/30	0.07	-0.33	18
Denver International Airport	59.9	30.4	45.1	6.8	80	11/16	10	11/30	0.52	-0.09	85
Grand Junction Walker Field Airport	57.1	32.5	44.8	5.8	69	11/16	18	11/30	0.81	0.08	111
Pueblo Memorial Airport	63.8	28.0	45.9	6.6	82	11/16	14	11/30+	0.78	0.31	166

Kansas	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Concordia Municipal Airport	60.4	36.8	48.6	7.0	80	11/16	20	11/19	0.57	-0.54	51
Dodge City Regional Airport	64.3	35.3	49.8	6.7	87	11/16	14	11/19	0.37	-0.39	49
Goodland Renner Field	61.4	29.7	45.5	6.5	82	11/16	13	11/19	0.21	-0.50	30
Topeka Municipal Airport	63.7	38.7	51.2	7.4	80	11/16+	25	11/20	0.19	-1.66	10
Wichita Mid-Continent Airport	65.9	40.1	53.0	7.6	84	11/16	24	11/30+	0.26	-1.17	18

Nebraska	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Chadron Municipal Airport	59.6	25.5	42.6	8.6	78	11/04	7	11/19	0.37	-0.25	60
Grand Island Airport	57.3	32.7	45.0	6.9	79	11/04	20	11/19	1.37	0.20	117
Lincoln Municipal Airport	59.5	33.6	46.6	7.7	80	11/16	21	11/20	0.65	-0.78	45
Norfolk Karl Stefan Airfield	55.8	31.5	43.7	7.3	76	11/16+	19	11/19	1.34	-0.03	98
North Platte Regional Airport	58.9	26.4	42.7	7.1	77	11/10	6	11/19	0.79	0.15	123
Omaha Eppley Airport	58.3	36.2	47.3	8.4	76	11/03	23	11/20+	0.77	-0.87	47
Valentine Miller Field	57.0	27.3	42.1	7.7	77	11/04	3	11/19	0.29	-0.36	45

North Dakota	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Bismark Municipal Airport	52.7	26.5	39.6	10.4	76	11/05	5	11/19	1.42	0.71	200
Fargo International Airport	50.1	33.4	41.8	13.0	73	11/06	19	11/19	1.80	0.80	180
Grand Forks International Airport	50.0	31.7	40.8	14.7	73	11/04	16	11/19	1.34	0.39	141
Theodore Roosevelt Airport	51.0	26.4	38.7	9.2	73	11/09	9	11/19	0.39	-0.15	72
Williston International Airport	50.0	26.6	38.3	11.2	70	11/04	9	11/19	0.24	-0.41	37

All data are preliminary and subject to change. + indicates multiple dates, latest date listed.
Data are retrieved through the Applied Climate Information System (ACIS) and are available online through the CLIMOD system.
For more information please contact us: http://www.hprcc.unl.edu/contact.php.

November 2016 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	51.9	29.1	40.5	11.2	76	11/05	13	11/19	1.71	0.98	234
Huron Regional Airport	53.2	29.8	41.5	8.9	77	11/05	12	11/19	1.24	0.37	143
Pierre Regional Airport	54.4	30.6	42.5	8.8	80	11/05	15	11/19	1.54	0.78	203
Rapid City Regional Airport	57.2	27.3	42.3	7.8	77	11/05+	10	11/19	0.23	-0.30	43
Sioux Falls Joe Foss Field Airport	53.1	31.5	42.3	9.7	74	11/04	12	11/20	1.81	0.45	133

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	55.0	26.6	40.8	7.6	70	11/15	10	11/18	0.38	-0.38	50
Cheyenne Municipal Airport	55.3	28.8	42.1	6.8	75	11/16	13	11/19	0.38	-0.21	64
Lander Hunt Field Airport	49.0	24.6	36.8	5.6	70	11/15	7	11/19	1.49	0.63	173
Laramie Regional Airport	50.2	21.5	35.8	6.5	66	11/16	1	11/18	0.66	0.12	122
Rawlins Municipal Airport	49.6	23.4	36.5	6.4	64	11/15	9	11/30	0.50	-0.05	91
Sheridan County Airport	53.8	25.7	39.7	7.0	74	11/03	5	11/19	1.28	0.57	180

November 2016 Highlights

Monthly Rankings

Temperature in degrees F / Precipitation in inches

Warmest / Coolest	**Temperature / Ranking**	**Record / Year**	**Period of Record**
Fargo, ND	41.8 / WARMEST	39.7 / 2001	1881-2016
Grand Forks, ND	40.8 / WARMEST	36.5 / 2001	1894-2016
Bismarck, ND	39.6 / 2nd warmest	40.1 / 1917	1874-2016
Aberdeen, SD	40.5 / 2nd warmest	40.7 / 1923	1896-2016
Sioux Falls, SD	42.3 / 2nd warmest	43.5 / 2001	1893-2016
Omaha, NE	47.3 / 2nd warmest	49.4 / 2001	1871-2016
Chadron, NE	42.6 / 2nd warmest	44.1 / 1949	1941-2016
Topeka, KS	51.2 / WARMEST	tie / 1999	1887-2016
Wichita, KS	53.0 / 2nd warmest	53.3 / 1999	1888-2016
Cheyenne, WY	42.1 / 3rd warmest	45.2 / 1949	1872-2016
Grand Junction, CO	44.8 / 3rd warmest (tie, 1899)	48.3 / 1965	1893-2016
Wettest / Driest	**Precipitation / Ranking**	**Record / Year**	**Period of Record**
Pierre, SD	1.54 / 8th wettest	2.68 / 1922	1893-2016
Akron, CO	0.09 / 10th driest	Trace / 2006+	1937-2016

All data are preliminary and subject to change. + indicates multiple dates, latest date listed. - indicates insufficient data.
Data are retrieved through the Applied Climate Information System (ACIS) and are available online through the CLIMOD system.
For more information please contact us: http://www.hprcc.unl.edu/contact.php.

North Dakota Monthly Climate Summary

Adnan Akyuz - State Climatologist
North Dakota State Climate Office, North Dakota State University
For more information: www.ndsu.edu/ndsco or www.ndawn.ndsu.nodak.edu

Precipitation:

Based on the National Centers for Environmental Information (NCEI), statewide total November precipitation was 0.98", 0.49" greater than the last year, 0.3" greater than the 1981-2010 average, making it the 24th wettest November in the 122-year period of record. It was the wettest November since 2005. Above-average precipitation was observed in most areas of the state except for the extreme northeast and southwestern parts of the state (Figure 1). The greatest monthly accumulation was 3.85" recorded in Tolley, Renville County. The least amount of monthly precipitation accumulation was 0.19" recorded in Bowman, Bowman County. However, the greatest monthly snow accumulation was 21" recorded in Hazen, Mercer County. The greatest 24-hr precipitation was 2.05" that was recorded in Tolley, Renville County on November 30. The highest 24-hr snowfall of 11.2" was recorded in Stanley, Mountrail County on November 30. Based on historical records, statewide November precipitation showed no long-term trend since 1895. The highest and the lowest November precipitation for the state ranged from 2.33" in 2000 to 0.03" in 1939.

Temperature:

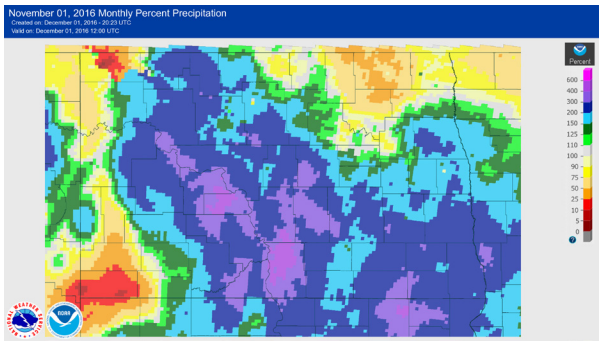
The official state average November temperature was 39.2°F, 6.6° warmer than the last year, a staggering 11.8° warmer than the 1981-2010 average, making it the warmest November in the 122-year period of record. Above-average temperatures were observed all across the state with the greatest departure from normal values in the northeastern parts of the state (Fig. 2). The state's highest and lowest daily temperatures ranged from 77° on November 10 at New Salem Coop Station in Morton County, to 5° on November 19 in Bismark, Burleigh County. Based on historical records, the state average November temperature showed an increasing trend of 0.28°F per decade since 1895. The highest and the lowest monthly state November average temperatures ranged from 39.2° in 2016 (this year) to 6.1° in 1896.

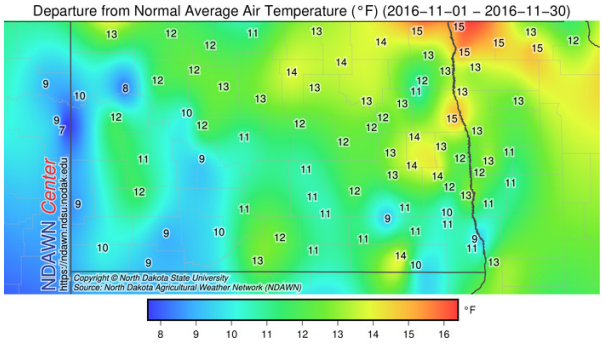
Drought and other notable impacts:

Based on the Drought Monitor (DM) the drought conditions intensified in central ND, especially along the Missouri River corridor south of Bismarck. By the end of the month, less than 3% of the state was under moderate drought and nearly 25% of the state was designated as "Abnormally Dry" based on the DM for November 29, 2016. Counties in the moderate drought areas on November 29: Burleigh, Emmons, Sioux, and Morton.

Storm Reports: NDAWN's highest peak gust in November was 45 mph recorded at the Leonard weather station on November 18, 2016. Wyndmere, Prosper, Wahpeton, and Lisbon also reported similar wind speeds on the same day when near-blizzard conditions swept through the southeastern part of the state. At the end of the month, a very powerful winter storm on November 29 and 30 brought significant amounts of snow in the central North Dakota. Stanley, Lansford and Watford City broke all-time daily November snowfall total records. Bismarck received a sum of 19" of snow in November which marked the 6th snowiest November on record since 1886.

Temperature and Precipitation Overview





Above: Percent of normal precipitation (left, figure 1) and departure from normal average temperature (right, figure 2) for November 2016 in North Dakota. Figure 1 produced by NOAA, Figure 2 produced by NDAWN.

November 2016 Climate Summary

Kansas Climate Summary

Mary Knapp - Service Climatologist
Kansas Weather Data Library, Kansas State University
For more information: www.ksre.ksu.edu/wdl

KANSAS STATE UNIVERSITY

Another warm month

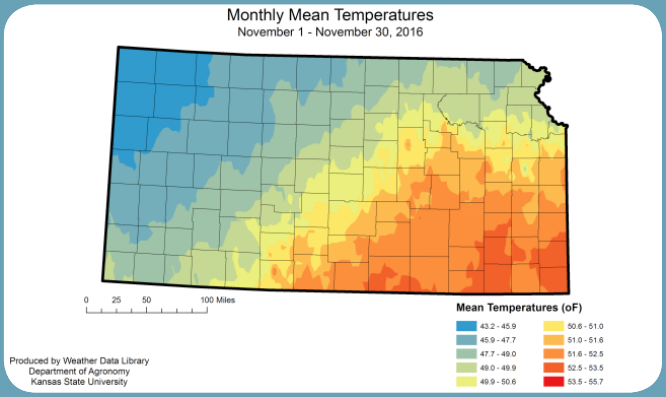
Temperatures continued the warmer than normal pattern. The state-wide average temperature was 49.4 oF, or 7.3 degrees warmer than normal. This was the 2nd warmest since 1896. The Southwest Division was closest to normal for the month. Their average was 48.9 oF, or 6.5 degrees warmer than normal. The division with the greatest departure was the Northeast Division where the average temperature was 49.7 oF or 8.0 degrees warmer than normal. There were 170 new daily record high temperatures set in the month, of those 13 set new record highs for November. Ashland, in Clark County, had the highest reading for the month, with 93 oF reported on the first of the month. Despite the record warmth, there were two new record low minimum temperatures set. There were 74 new record warm minimum temperatures set, of which 6 were records for the month. The coldest temperature recorded for the month was 8 oF at Oakley 19 SSW, Logan County, on the 20th.

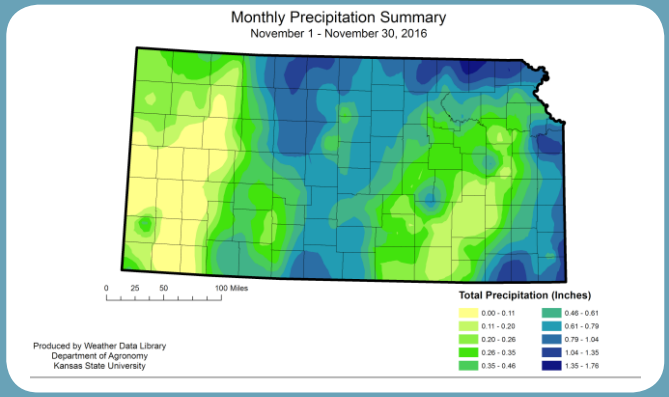
State-wide average rainfall for November continued the trend of the dry fall and was well below normal. The state-wide average was 0.42 inches or 32 percent of normal. The West Central and East Central divisions vied for lowest percent of normal: the West Central division had 0.10 inches or 12 percent of normal; the East Central division had 0.30 inches or 13 percent of normal. The North Central Division came closest to normal with an average of 0.73 inches or 59 percent of normal. This November ranks as the 30th driest in the 122 years of record. The wettest November on record occurred in 1909, when the statewide average total was 4.68 inches. The driest November occurred in 1989 when the state-wide average was zero inches. Despite the dry pattern there were 26 new record daily rainfall totals. The greatest 24 hour total recorded at a CoCoRaHS station was 1.58 inches at Seneca 0.5 N, Nemaha County, on the 23rd. The greatest 24 hour report for a National Weather Service station was .43 inches at Olathe Johnson Co Exec Ap, Johnson County, on the 2nd. The greatest monthly totals: 2.25 inches at Fostoria 7 NW, Pottawatomie County (NWS) and 1.61 inches at Seneca 9.0 N, Nemaha County (CoCoRaHS).

Severe weather wasn't as much of a factor as last month, although there was one tornado reported in Riley County, just north of the Manhattan airport. Fortunately there were no deaths or injuries reported with the storm. There were no hail reports and only 4 damaging wind reports in the month.

Above normal temperatures coupled with below normal precipitation resulted in expansion of moderate drought in western KS, with an area of severe drought in Southwestern KS. As we move into the drier part of the year, even above normal precipitation is not likely to result in significant improvement. By the same token, the rate of deterioration is likely to slow.

Temperature and Precipitation Overview





Above: November 2016 monthly mean temperatures (left) and total precipitation (right) in Kansas. Maps produced by Weather Data Library, Department of Agronomy, Kansas State University.

About the High Plains Regional Climate Center

The High Plains Regional Climate Center (HPRCC) is one of six NOAA Regional Climate Centers (RCCs) that has been providing timely climate data and information to the public for cost effective decision-making since 1987. The HPRCC primarily serves the six-state region of Colorado, Kansas, Nebraska, North Dakota, South Dakota, and Wyoming, but has also served people from all across the country and even throughout the world. HPRCC operates under a three-tiered structure of climate services and works closely with other organizations on the local, regional, and national levels. HPRCC staff engage with a wide range of stakeholders including K-20 education, the public, media, private industry, research, and state/tribal/federal entities, among others.

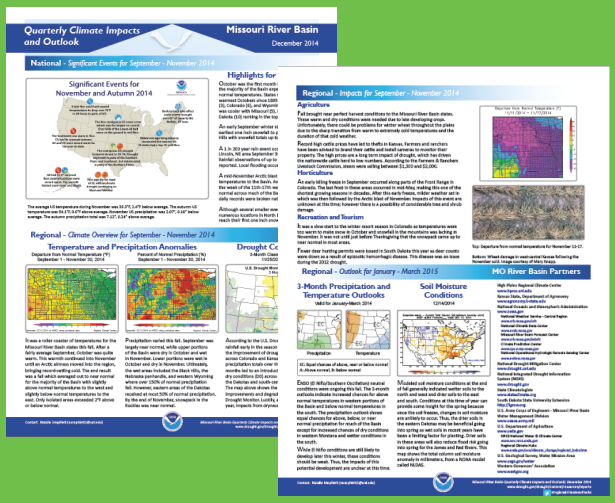
Much of the data and products found throughout this publication were built on the Applied Climate Information System (ACIS) framework. ACIS was designed to manage the complex flow of information from climate data collectors to the end users of climate data information. The main purpose of ACIS is to alleviate the burden of climate information management for people who use climate information to make management decisions.

HPRCC is involved in the ongoing development and management of ACIS. In the spring of 2014, the RCCs released a new website for ACIS. This new and improved website not only contains descriptions of ACIS and the sources of data found within, but also features real-world examples of how RCCs and external groups are using ACIS for their particular climate data needs. In addition to these examples, there is extensive documentation and tutorials on how ACIS can be used and accessed by external clients using Web Services. For more information see: http://rcc-acis.org.

ACIS Applied Climate Information System

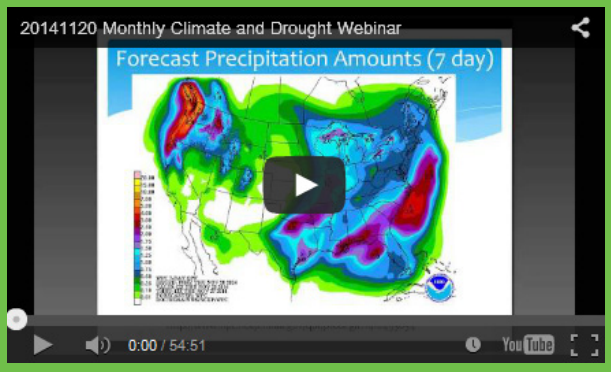
Additional Summary Information for the High Plains

Missouri River Basin Quarterly Climate Impacts and Outlook



For more information:
https://www.drought.gov/drought/dews/missouri-river-basin/reports-assessments-and-outlooks

Midwest and Great Plains Monthly Climate and Drought Webinar



To sign up for future webinars:
https://www.drought.gov/drought/calendar/webinars

For an archive:
www.hprcc.unl.edu/webinars.php

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