



# November 2018 Climate Summary

Anticrepuscular rays at Bear Creek Greenbelt in Lakewood, CO. Photo courtesy Denver Office of Emergency Mgmt. <http://hprcc.unl.edu>

## Cool Conditions Continue, Fall Harvest Behind

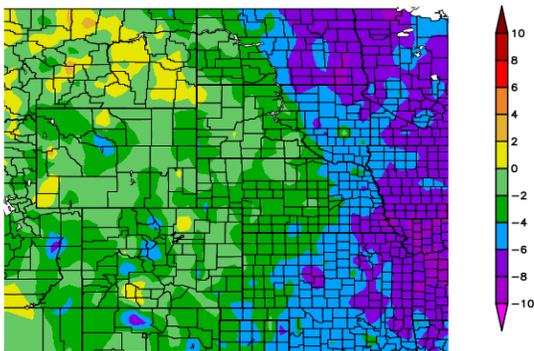
The High Plains region continued to be cool in November, especially throughout eastern portions of the Dakotas, Nebraska, and Kansas. This pattern that has prevailed since October resulted in below-normal temperatures for the fall season in these areas. While October was very wet, November was drier for most of the region, which helped with fall harvest. However, timely precipitation helped improve drought conditions across the region.

The mountain snowpack season started off well in Colorado, which was a relief for many who were concerned about having two consecutive low-snowpack seasons. In fact, several ski resorts opened early this year for the first time in 10 years. Farther north in Wyoming, snowpack got off to a slow start but was catching up by the end of November. After several months of higher-than-average releases from mainstem projects in the Upper Missouri Basin to evacuate stored floodwaters, the U.S. Army Corps of Engineers announced in late November that they would begin reducing releases from Gavins Point Dam. The Corps plans to clear most of the stored runoff in advance of ice-up on northern portions of the river.

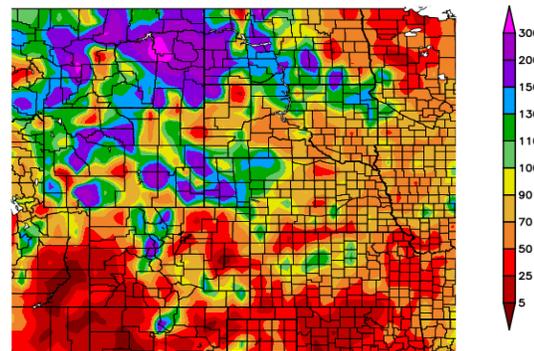
Wet conditions in the fall caused several impacts throughout the region. For instance, fall harvest of many crops was behind. Corn harvest was behind in much of the region, especially the Dakotas. According to the November 25th U.S. Department of Agriculture's Weekly Weather and Crop Bulletin, North Dakota had harvested 80 percent of its corn, which was 13 percentage points behind the 5-year average. Many producers in the Dakotas were waiting for the ground to freeze before moving machinery into the fields. Although producers were able to catch up by the end of the month, the U.S. had its 3rd slowest soybean harvest on record, which goes back to 1995. In Kansas, winter wheat emergence was behind, and some wheat was damaged due to flooding. Another concern resulting from the fall wetness is spring flooding. As we enter the winter season, soils are very wet in many locations, and the moisture will get locked in until spring. Combined with spring snowmelt, the risk for spring flooding will be a concern.

### Temperature and Precipitation Overview

Departure from Normal Temperature (F)  
11/1/2018 - 11/30/2018



Percent of Normal Precipitation (%)  
11/1/2018 - 11/30/2018



Above: Departure from 1981-2010 normal temperature (left) and percent of normal precipitation (right) for November 2018 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 relatively dry for a large portion of the High Plains, with southern and eastern areas of the region receiving less than 70 percent of normal precipitation. However, precipitation was above normal in western North Dakota, the Nebraska Panhandle, and portions of Wyoming. Several snowstorms traversed the region in November, bringing enough snow to break records in Kansas and Nebraska. The following locations broke the top 10 for snowiest November on record: Concordia, KS (2nd snowiest), Topeka, KS (4th snowiest), Lincoln, NE (7th snowiest), and Grand Island, NE (10th snowiest).

One particularly impactful event occurred on the 24th-25th when a winter storm prompted road closures throughout the region. Blizzard conditions contributed to numerous accidents and low visibility, which caused highway officials to close portions of Interstate 80 in Wyoming and Nebraska, Interstate 70 in Colorado and Kansas, and Interstate 35 in Kansas. Kansas Governor Colyer declared a state of emergency, and even the University of Kansas in Lawrence closed down. The storm produced impressive snow totals for this time of year. For instance, Concordia, Kansas received 7.9 inches (20 cm) of snow on the 25th, which was its 2nd highest 1-day total snowfall on record for November.

With all the snow in November, it might seem odd that severe weather occurred during the month as well. On the 2nd, the National Weather Service forecast office in Denver/Boulder, Colorado issued two severe thunderstorm warnings for damaging winds. These storms did produce some minor damage, as high winds blew down highway signs. While not unprecedented, it is extremely rare for severe weather to occur in Colorado in November.

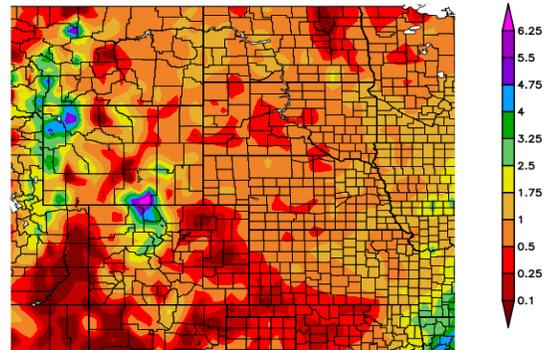
Although November was drier than normal for much of the region, it was a very wet fall for eastern portions of the High Plains. Areas of Kansas, southeastern Nebraska, and southeastern South Dakota had impressive records for fall precipitation. The following locations broke the top 10 of wettest falls: Salina, KS (3rd wettest), Concordia, KS (4th wettest), Dodge City, KS (4th wettest), Sioux Falls, SD (6th wettest), and Lincoln, NE (7th wettest). In fact, some locations have already had or are on pace to have their wettest year on record. As of the end of November, Yankton 2E, SD had already had its wettest year on record.

## Snowpack Update

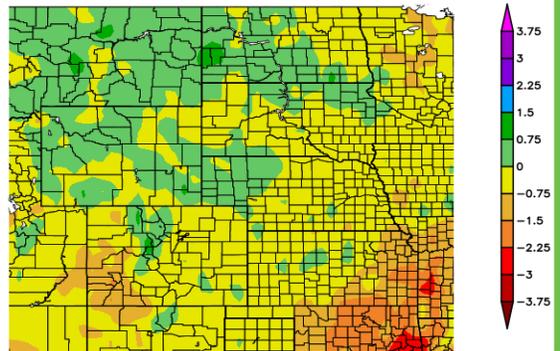
Mountain snowpack got off to a great start in Colorado this year, which has helped improve drought conditions and quell concerns of a repeat of last year's abysmal snowpack. As of the end of November, snowpack was above normal across Colorado except for basins in the southwestern part of the state. In Wyoming basins, snowpack was a mix of above and below normal. As for the Upper Missouri Basin, mountain Snow Water Equivalent (SWE) above Fort Peck Reservoir was 89 percent of average by the end of November, while SWE between Fort Peck and Garrison Reservoirs was 99 percent of average, according to the U.S. Army Corps of Engineers. Much of the Plains experienced an early start to winter, as snow was on the ground across much of North Dakota, eastern South Dakota, southeastern Nebraska, and northeastern Kansas by the end of the month.

### Regional Precipitation

Precipitation (in)  
11/1/2018 – 11/30/2018



Departure from Normal Precipitation (in)  
11/1/2018 – 11/30/2018



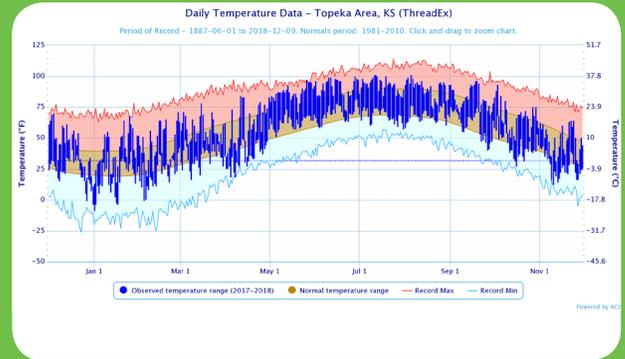
Above: Total precipitation in inches (top) and departure from normal precipitation in inches (bottom) for November 2018. These maps are produced by HPRCC and can be found on the Current Climate Summary Maps page at: <http://hprcc.unl.edu/maps/current>.

## Temperatures

The cool pattern present throughout the High Plains in October continued into November, as below-normal temperatures were prevalent across most of the region. The western and central High Plains experienced monthly temperature departures of 2.0-4.0 degrees F (1.1-2.2 degrees C) below normal, while the eastern High Plains were much colder with departures of 4.0-7.0 degrees F (2.2-3.9 degrees C) below normal. The cool temperatures produced some records in Kansas and Nebraska. The following locations broke the top 10 of coolest Novembers: Topeka, KS (5th coolest), Salina, KS (7th coolest), Lincoln, NE (8th coolest), and Concordia, KS (9th coolest). Statewide, Kansas had its 12th coolest November on record. One impact of the cool temperatures across the region was the early ice-up of smaller lakes in the northern High Plains.

Despite a warm start to the fall season in September, cooler temperatures prevailed in October and November, resulting in much of the region experiencing below normal temperatures on the whole for the fall. With the exception of portions of Colorado and southern Wyoming where fall temperatures were slightly above normal, temperature departures ranged from near normal to 6.0 degrees F (3.3 degrees C) below normal elsewhere. It was particularly cool across the Dakotas during the fall, which resulted in some records. The following locations ranked in the top 10 of coolest falls: Grand Forks, ND (3rd coolest), Aberdeen, SD (5th coolest), Dickinson, ND (7th coolest), and Pierre, SD (10th coolest). Statewide, North Dakota had its 12th coolest fall on record. Maximum temperatures were particularly cool this fall, as North Dakota and South Dakota ranked 9th and 10th for coolest November maximum temperatures on record, respectively.

### Station Spotlight: Topeka, KS

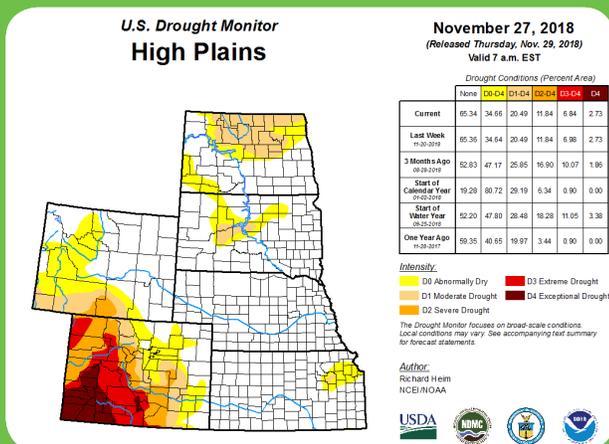


Above: Daily temperatures along with extremes and normals values since December 1, 2017 in Topeka, KS.

## Drought Conditions

Drought conditions continued to improve throughout the High Plains region in November, as beneficial precipitation helped alleviate long-term deficits. Region-wide, the area experiencing drought or abnormal dryness on the U.S. Drought Monitor (D0-D4) decreased from approximately 37 percent to 35 percent.

### 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/>.

Several areas of the eastern High Plains saw drought relief. For instance, the two areas in north-central North Dakota that were in severe drought (D2) improved to moderate drought (D1) due to ongoing cool, wet conditions. Similar conditions led to the removal of abnormally dry conditions (D0) in an area of western North Dakota. The drought in eastern Kansas improved as well, as ample soil moisture and above-normal precipitation prompted the removal of the area in D1 near the Kansas-Missouri border, as well as part of the D0 area in east-central Kansas.

Meanwhile in the western High Plains, mountain snowpack continued to build, further improving drought conditions. In Colorado, beneficial snowfall led to a reduction in extreme drought (D3) in northern portions of the state, while exceptional drought (D4) was reduced in the Sangre de Cristo Range in southern Colorado. Above-normal snowpack helped drought conditions improve in areas of far western and eastern Wyoming as well. However, D0 was introduced to portions of west-central Wyoming, an area that received less than 50 percent of normal precipitation during the fall season.

## Climate Outlooks

According to the Climate Prediction Center, ENSO-neutral conditions are present in the Pacific. Equatorial sea surface temperatures are above average across most of the Pacific Ocean. There is an 80 percent chance that El Niño will develop and continue through the winter and a 55-60 percent chance it will continue into spring. An El Niño Watch is in effect. If you are looking for more information about ENSO, check out the ENSO blog here: <https://www.climate.gov/news-features/department/enso-blog>. In order to learn more about how El Niño may affect the Missouri River Basin region, please see this El Niño briefing: <https://www.drought.gov/drought/documents/el-nino-impacts-and-outlook-missouri-river-basin-october-2018>.

The National Weather Service long-range flood outlook indicates a greater than 50 percent chance of minor flooding along the Cow Creek above Hutchinson, Kansas through February. Elsewhere in the High Plains, the chance for flooding is low.

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

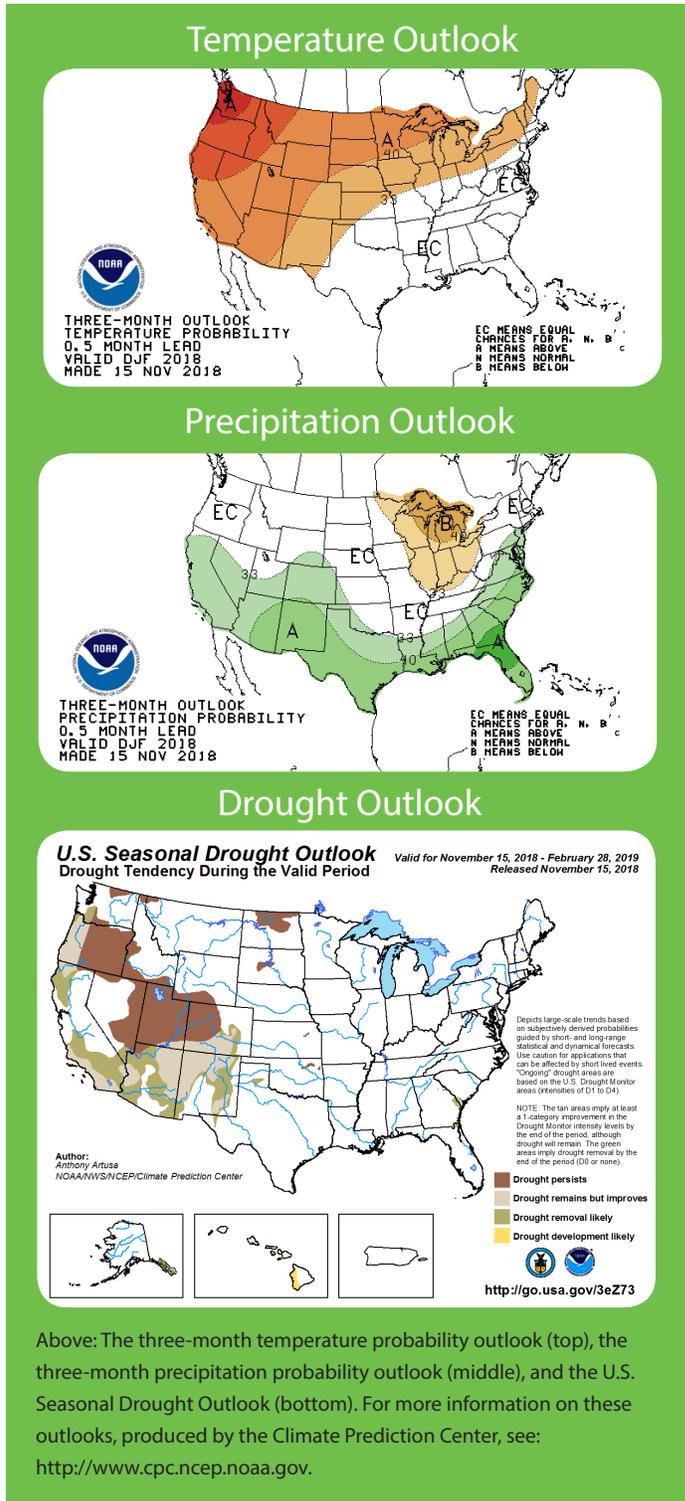
The December-February temperature outlook indicates an increased chance of above-normal temperatures for northern, central, and western portions of the contiguous U.S., including all of the High Plains region except southeastern Kansas. Elsewhere, there are equal chances for above-, below-, and near-normal temperatures 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 southern tier of the contiguous U.S. and the southern Rockies. In the High Plains, this includes most of Colorado, southeastern Wyoming, southwestern Kansas, and a small part of the Nebraska Panhandle. Below-normal precipitation is expected in the Great Lakes and Ohio Valley regions. Elsewhere, there are equal chances for above-, below-, and near-normal precipitation in the contiguous U.S. during the December-February period.

### Drought

The November 15th U.S. Seasonal Drought Outlook indicates that drought is expected to persist across parts of the West and the Plains. In the High Plains, this includes areas of drought in the Dakotas, Colorado, and Wyoming, as well as a small area in eastern Kansas. Drought may improve or be removed in the West and the Southeast, including areas of southern and eastern Colorado. Drought development is not anticipated in the contiguous U.S. through February.



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	48.6*	23.3*	35.9*	-1.7	63	11/22	9	11/18	0.11*	-0.47	19
Alamosa San Luis Airport	46.5	9.9	28.2	-1.3	54	11/06	-2	11/13	0.16	-0.26	38
Colorado Springs Municipal Airport	50.3	24.4	37.4	-0.7	63	11/16+	11	11/13+	0.30	-0.10	75
Denver International Airport	50.6	25.0	37.8	-0.5	65	11/02	10	11/12	0.35	-0.26	57
Grand Junction Walker Field Airport	48.5	23.9	36.2	-2.8	58	11/02	17	11/27+	0.19	-0.54	26
Pueblo Memorial Airport	54.5	23.1	38.8	-0.5	69	11/28	11	11/26	0.33	-0.14	70

Kansas	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Concordia Municipal Airport	46.8	26.5	36.6	-5.0	63	11/23+	10	11/13	1.75	0.64	158
Dodge City Regional Airport	52.2	26.5	39.3	-3.8	68	11/15	6	11/13	0.51	-0.25	67
Goodland Renner Field	51.1	23.5	37.3	-1.7	67	11/22	10	11/18+	0.64	-0.07	90
Topeka Municipal Airport	48.1	26.5	37.3	-6.5	64	11/24+	12	11/10	1.23	-0.62	66
Wichita Mid-Continent Airport	51.7	29.7	40.7	-4.7	70	11/24	12	11/13	0.81	-0.62	57

Nebraska	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Chadron Municipal Airport	46.2	20.1	33.2	-0.8	67	11/14	-1	11/09	0.59	-0.03	95
Grand Island Airport	45.9	24.2	35.0	-3.1	65	11/15	5	11/18	1.69	0.52	144
Lincoln Municipal Airport	44.9	22.3	33.6	-5.3	63	11/15	6	11/18	1.19	-0.24	83
Norfolk Karl Stefan Airfield	42.2	20.7	31.4	-5.0	63	11/22+	3	11/10	1.24	-0.13	91
North Platte Regional Airport	48.4	19.9	34.2	-1.4	66	11/21+	6	11/18	0.90	0.26	141
Omaha Eppley Airport	42.7	24.8	33.7	-5.2	62	11/01	9	11/27	1.04	-0.60	63
Valentine Miller Field	47.6	22.5	35.1	0.7	74	11/22	8	11/09	0.77	0.12	118

North Dakota	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	% Norm
Bismarck Municipal Airport	33.3	17.6	25.5	-3.7	58	11/14	-11	11/17	1.11	0.40	156
Fargo International Airport	29.2	15.6	22.4	-6.4	50	11/04	-3	11/19	0.61	-0.39	61
Grand Forks International Airport	26.5	12.4	19.5	-6.6	47	11/04	-3	11/17	0.58	-0.37	61
Theodore Roosevelt Airport	35.6	18.1	26.9	-2.6	56	11/14	-8	11/09+	0.87	0.33	161
Williston International Airport	34.5	19.2	26.8	-0.3	51	11/14	-8	11/09	0.94	0.29	145

All data are preliminary and subject to change. + indicates multiple dates, latest date listed. \* indicates some missing data for the period. 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 2018 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	33.6	15.9	24.8	-4.5	56	11/14	-6	11/17	0.90	0.17	123
Huron Regional Airport	37.4	18.7	28.0	-4.6	59	11/14	0	11/27	0.65	-0.22	75
Pierre Regional Airport	39.1	22.5	30.8	-2.9	61	11/14	7	11/09	0.52	-0.24	68
Rapid City Regional Airport	45.2	20.0	32.6	-1.9	68	11/14	5	11/18	0.44	-0.09	83
Sioux Falls Joe Foss Field Airport	38.6	21.0	29.8	-2.8	62	11/22	6	11/27	1.03	-0.33	76

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	42.5	22.8	32.6	-0.6	63	11/02	4	11/17	0.94	0.18	124
Cheyenne Municipal Airport	44.7	23.2	34.0	-1.3	62	11/21	2	11/18	0.94	0.35	159
Lander Hunt Field Airport	40.3	17.9	29.1	-2.1	62	11/02	1	11/18	0.88	0.02	102
Laramie Regional Airport	38.1	16.0	27.1	-2.2	54	11/02	1	11/12	0.33	-0.21	61
Rawlins Municipal Airport	38.6	20.0	29.3	-0.8	53	11/02	-1	11/18	0.44	-0.11	80
Sheridan County Airport	44.6	21.4	33.0	0.3	68	11/14	0	11/18	0.83	0.12	117

## November 2018 Highlights

### Monthly Rankings

Snowfall in inches, Temperature in degrees F

<b>Coolest</b>	<b>Temperature / Ranking</b>	<b>Record / Year</b>	<b>Period of Record</b>
Topeka, KS	37.3 / 5th coolest	35.4 / 1976	1887-2018
Salina, KS	38.3 / 7th coolest	35.9 / 1985	1948-2018
Lincoln, NE	33.6 / 8th coolest	29.0 / 1985	1887-2018
Concordia, KS	36.6 / 9th coolest	32.8 / 1985	1885-2018
<b>Snowiest</b>	<b>Snowfall / Ranking</b>	<b>Record / Year</b>	<b>Period of Record</b>
Concordia, KS	10.5 / 2nd snowiest	10.9 / 1898	1893-2018
Topeka, KS	8.0 / 4th snowiest	9.8 / 1888	1887-2018
Lincoln, NE	7.2 / 7th snowiest	12.6 / 1957	1948-2018
Grand Island, NE	7.9 / 10th snowiest	17.1 / 1983	1895-2018

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# North Dakota Climate Summary

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For more information: [www.ndsu.edu/ndsco](http://www.ndsu.edu/ndsco) or [www.ndawn.ndsu.nodak.edu](http://www.ndawn.ndsu.nodak.edu)



## Precipitation:

Based on the National Centers for Environmental Information (NCEI), the statewide average November precipitation was 0.75 inch, which was 0.71 inch less than last month but 0.44 inch more than in November 2017, and 1.46 inches more than the 1981-2010 average, making it the 34th wettest November in the 124-year period of record. It was the wettest November since 2016. The numbers less than 100 in Figure 1 below are shaded in yellow and red to depict the region with below-average rainfall. In contrast, the numbers that are greater than 100 in the same figure are shaded in green and blue to depict the region with above-average rainfall in November. The greatest monthly precipitation accumulation was 1.7 inches, recorded in Medora, Billings County. The greatest 24-hour precipitation was 0.66 inch, recorded 8 miles north of Watauga in Grant County, on Nov. 16. The greatest monthly snowfall accumulation was 18 inches, recorded in Fullerton, Dickey County. The greatest 24-hour snowfall was 11 inches, also recorded in Fullerton, on Nov. 6. Based on historical records, statewide November precipitation showed a slight negative long-term trend of 0.02 inch per century since 1895. The highest and lowest November precipitation for the state ranged from 2.33 inches in 2000 to 0.03 inch in 1939.

## Temperature:

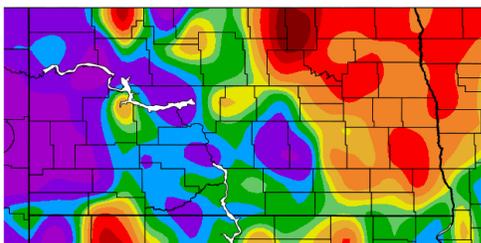
The official state average November temperature was 22.7 F, 16.4 F cooler than last month and 3.7 F cooler than in November 2017. The average November temperature was 4.6 F cooler than the 1981-2010 average, making it the 30th coolest November in the 124-year period of record. It was the coolest November since 2014. The negative numbers in Figure 2 are shaded in green and blue to depict the region with much below-average temperature in November. The state's highest and lowest daily temperatures ranged from 81 F on Nov. 1 in Kildeer, Dunn County, to minus 16 F on Nov. 27, in Lake Metigoshe State Park, Bottineau County. Based on the historical records, the state average November temperature showed a positive long-term trend of 0.25 F per decade since 1895. The highest and lowest monthly state November average temperatures ranged from 39.2 F in 1999 to 6.1 F in 1896.

## Drought and other notable impacts:

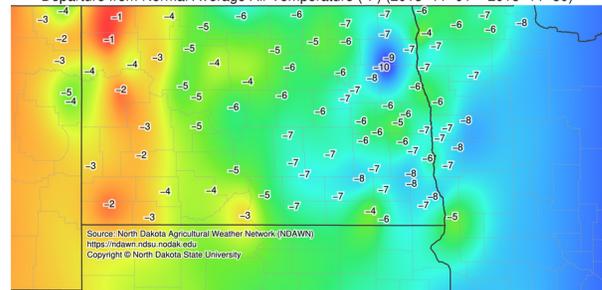
In general, overall drought conditions improved throughout the month. By the end of November, D1 (moderate drought) or worse covered nearly 17 percent of the state, a 10 percent decrease in coverage, compared with the previous month. NDAWN's highest 10-meter peak gust in November was 42 mph, recorded at the Bowman weather station in Bowman County on Nov. 6, 2018. Across the observation network of weather stations with at least 30 years of history, a total of one daily high and 26 daily low-temperature-related records were set or tied. A total of 19 highest daily precipitation-related records were set or tied.

## Temperature and Precipitation Overview

Percent of Normal Precipitation (%)  
11/1/2018 - 11/30/2018



Departure from Normal Average Air Temperature (°F) (2018-11-01 - 2018-11-30)



Above: Percent of normal precipitation (left, figure 1) and departure from normal average temperature (right, figure 2) for November 2018 in North Dakota. Figure 1 produced by the Applied Climate Information System, figure 2 produced by NDAWN.

# Kansas Climate Summary

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For more information: [www.ksre.ksu.edu/wdl](http://www.ksre.ksu.edu/wdl)



## Cold and Dry

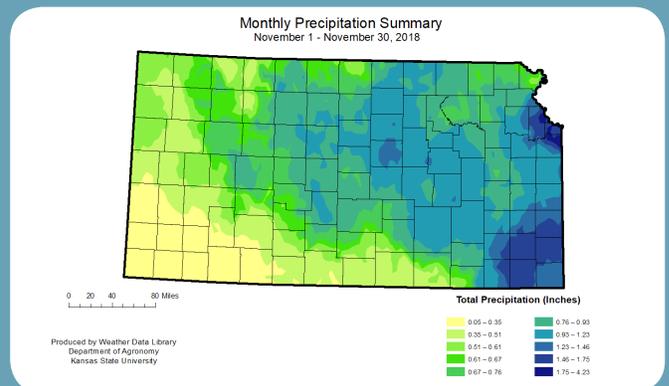
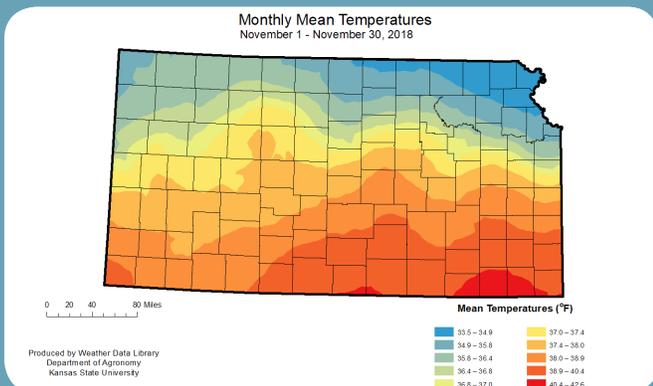
November was drier than normal across most of the state, providing a welcome relief to the very wet conditions in October. State-wide average precipitation was 1.26 inches, 89 percent of normal. The Southwest Division was the driest with an average of 0.35 inches. That is a deficit of 0.31 inches, 53 percent of normal. The North Central Division was the wettest with an average of 1.99 inches, 180 percent of normal. There were 8 new daily record rainfall totals, none of which set new records for any day in November. The highest 24-hour rainfall total for a National Weather Service Cooperative station was 2.00 inches at Leavenworth 3SW, Leavenworth County, on the 26th. The greatest 24-hour rainfall total for a Community Collaborative Rain, Hail and Snow network station 1.28 inches at Courtland 0.1 SSE, Republic County, on the 27th. The greatest monthly precipitation totals for November: 4.23 inches at Leavenworth 3SW, Leavenworth County (NWS) and 2.05 inches at Erie, Neosho County (CoCoRaHS). Not all precipitation was in the form of rainfall. A total of 240 stations reported snowfall in November, with monthly totals ranging from trace amounts in southern Kansas to 17.3 inches at the CoCoRaHS station of Morrowville 4.8 SSW, Washington County.

Despite some warm periods to the month, November temperatures were cooler than normal. State-wide average temperature for the month was 37.5 oF, which is 5.0 degrees cooler than normal. All divisions were cooler than normal. The Northeast Division had the largest departure, with an average of 35.1 oF, or 7.1 degrees cooler than normal. The West Central Division came closest to normal with an average of 37.6 oF or 2.7 degrees cooler than normal. The variability showed in the range of temperatures. The warmest maximum temperature was 82 oF at Yates Center, Woodson County, on the 13th. The coldest minimum temperature at a NWS station was 1 oF, recorded at Greensburg, Kiowa County, also on the 13th. There were no record daily high maximum temperatures in the month, and 90 record daily low maximum temperatures. On the minimum temperature side, there was one record high minimum compared to 59 record low minimums.

Severe storm reports were limited to extreme southeastern KS in November. There was one hail report and six reports of wind damage. Severe winter weather was the main feature for the month, with blizzard-conditions across most of the central and northern areas of the state on the 25th and 26th. Sadly, there was one fatality when a stranded motorist attempted to walk to safety and died from exposure.

Despite the lower than normal precipitation, cooler than normal temperatures resulted in little change to the drought conditions. The area of the state that was drought free moved to 93 percent at the end of the month. Moderate drought and abnormally dry conditions linger in the eastern parts of the state. The December outlook has increased chances for above normal precipitation across most of the state. However, given the low normal precipitation at this time of the year, continued improvement is likely to be slow. The temperature outlook is for warmer than normal temperatures across all but the western edges of the state.

## Temperature and Precipitation Overview



Above: November 2018 departure from normal 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>.



## 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](http://www.hprcc.unl.edu/webinars.php)

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