

CLIMATE UPDATE

August temps below normal for Nebraska

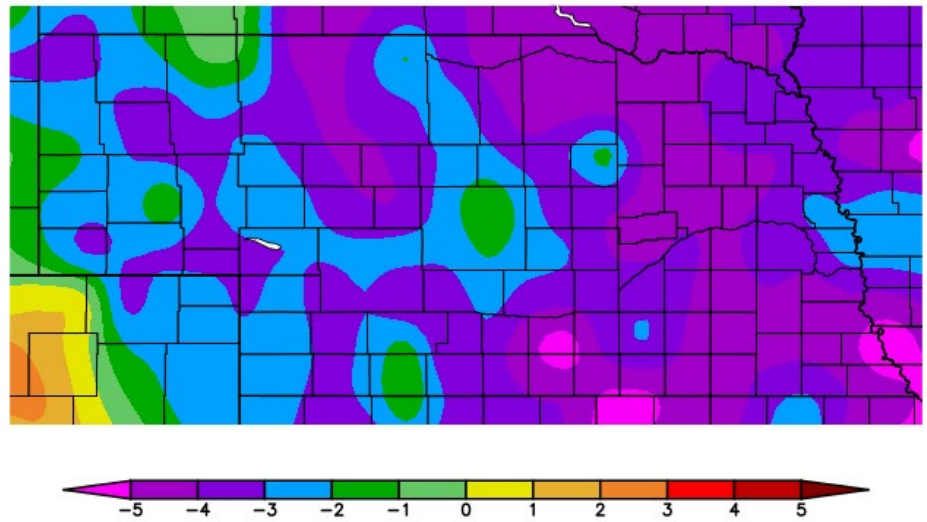
Nebraska's experienced a cool end to the summer months with August temperatures as much as five degrees below normal. The coolest weather overall was in the east, while temperatures were only slightly cooler than normal in the west. Nebraska Mesonet observations recorded a high for 99°F at McCook on the afternoon of Aug. 19. There were no triple digit temperatures reported by National Weather Service observing stations. Hot weather seemed to be missing from eastern portions of the state as the mercury never even reached 90°F at Norfolk, Lincoln, Grand Island and elsewhere. The last time this occurred in Lincoln, it was 1915, and a lack of 90-degree temperatures has not happened in recorded history in either Norfolk or Grand Island.

The average monthly temperature statewide was 69.1°F, which was 3.4°F below the most recent 30-year climate normal period (1981 - 2010). This ranks as 10th coolest August since 1895.

Precipitation

Much of the state received above-normal monthly precipitation. The strongest positive departures were seen in central and northeast portions of Nebraska with monthly totals 3 inches above normal, or about 7 inches or greater for August. Localized convective precipitation affected these and other areas of the state. Some of the highest daily rainfall amounts for National Weather Service and NERain networks were 5 inches or more. Most of these totals occurred around mid-month (Aug. 12 to 13, and Aug. 15 to 16). The Nebraska Mesonet weather network reported a 4.29-inch daily rain event Aug. 15 at Wausa 2SW. This station reported a monthly total of 10.49 inches of rain. There were a few 12+ inches for the month reported in north-central Nebraska. Along with the heavy rainfall, a handful of storm reports were recorded in

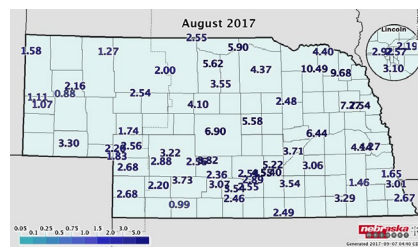
DEPARTURE FROM NORMAL TEMPERATURE (F)



HIGH PLAINS REGIONAL CLIMATE CENTER

All maps generated using March provisional data.

LIQUID PRECIPITATION TOTALS (IN)



NEBRASKA STATE CLIMATE OFFICE

August. Aug. 7, 15 and 19 each reported tornadic activity in either southwest or central Nebraska.

Portions of the northern and southern Panhandle, southwest, and a large swath in the southeast were all drier than normal for August. These areas missed out on convective rain events moving across the state. The statewide average rainfall was 3.91 inches, which was 1.18 more than normal for August. This ranks as 12th wettest on record.

August extremes

Nebraska's statewide weather network operated by the University of Nebraska-Lincoln, the Nebraska Mesonet, cataloged the following extremes in August:

- Highest air temperature:** 99°F on Aug. 19 at McCook 4NE
- Lowest air temperature:** 41°F on Aug. 4 at Dunning 6NW
- Largest 24-hour temperature change:** 29°F on Aug. 15 to 16 at McCook 4NE, from 94°F to 65°F
- Highest 4-inch bare soil temperature:** 94°F on Aug. 1 at Kearney 5E
- Lowest 4-inch bare soil temperature:** 48°F on Aug. 15 at Angola 13N
- Highest 1-day precipitation:** 4.29 inches on Aug. 15 at Wausa 2SW
- Highest 5-second wind gust:** 53 mph Aug. 20 at Plymouth 4E

Drought

With the above-normal rainfall and lack of excessive heat for portions of the state, dryness and drought conditions saw an overall improvement, according to the U.S. Drought Monitor. At the start of August, the worst conditions were in northcentral and northeast Nebraska with D2 (severe drought) covering 6 percent of the state. This D2 area was eliminated by month's end and improved to at least a D1. A removal of D1 occurred in some east-central counties and a one-category improvement was made for a large swath of the state. By the start of September, 12 percent of the state was in D1, 45 percent in D0, and 42 percent in the clear. The areas to watch in terms of dryness currently include the far southeast, southwest, southern Panhandle and northcentral to northeast.

Outlook

The short-term outlook for September, according to the Climate Prediction Center, has Nebraska right on a dividing line of cooler-than-normal temperatures for the eastern U.S. and warmer-than-normal temperatures in the west. A large swath of the state is in a category of equal chances of above, near, or below normal. For precipitation, there is an increased chance statewide for drier-than-normal conditions. Over the next month, dryness and drought conditions could expand if this outlook verifies.

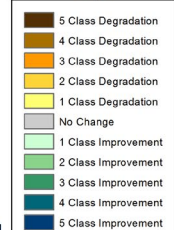
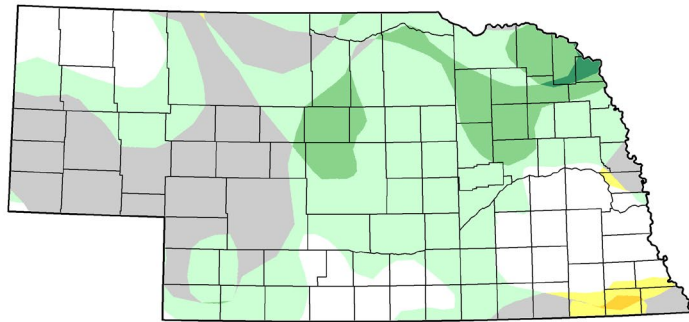
READ MORE

Al Dutcher shares his forecast for freeze risk on crops. [Click here.](#)

Although behind, GDD deficits are not significant enough to raise hard freeze risk for corn above 25 percent chance if emergence occurred prior to May 15. However, for corn emerged between May 15 and 31, the probability ranges from 33 percent to 90 percent. The highest risk would be for the Panhandle and northeast Nebraska. If

U.S. DROUGHT MONITOR CLASS CHANGE FOR NEBRASKA

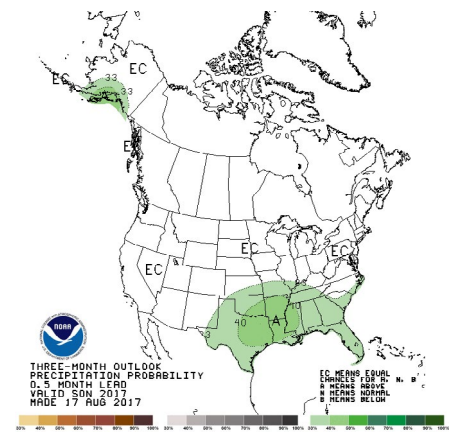
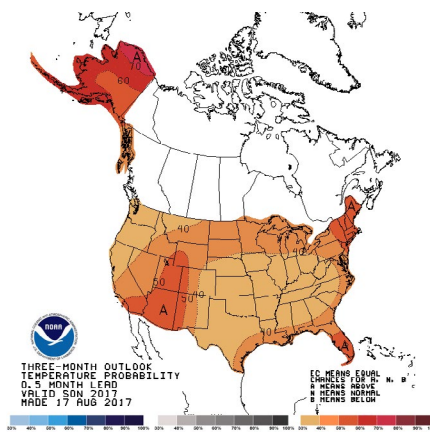
1 MONTH



September 5, 2017
compared to
August 8, 2017

<http://droughtmonitor.unl.edu>

90-DAY OUTLOOK TEMPERATURE (LEFT) & PRECIPITATION



producers account for planning delays and reduced their maturity class by five days, the risk of a hard freeze decreases by 5 percent for late emerging crops. Soybeans are photoperiod dependent and not likely to experience freeze damage before maturity. Cool conditions during August may have a benefit for podfill, especially areas receiving normal or above-normal moisture. Pasture green up was strong the second half of August. Due to cool and wet conditions, third cutting was delayed. Some concerns have been raised about stocking to soon on drought recovered grass because of low

feed supplies due to drought and hail damage. This is particularly relevant around the Broken Bow area where hail at mid-month devastated row crops and reduced grass to stubble.

For the upcoming season — September, October, November — the outlook places the U.S. with increased odds for a warmer-than-normal fall. Precipitation conditions are uncertain with Nebraska in the equal chances category. Only the southern and southeastern U.S. and southern Alaska are in a category of increased chance for wetness.



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