Warm start, cool end to July, dryness continues

For the first half of July across Nebraska, the warmer-than-normal trend from June continued. Temperatures remained above average with some significant warmth, and 95- to 100-degree days were common. The statewide high for July was 102°F, observed at a handful of locations—Red Cloud, Broadwater, Chadron and Valentine. This was followed, however, by a cool down for the latter portion of the month when temperatures fell below normal. Aside from a few pockets across the state, the monthly average temperatures for July were generally slightly cooler than normal by about a degree. The statewide average temperature for July was 73.4°F, which is less than a degree below the 1981 to 2010 normal.

Agriculture
Given the warmer-than-normal conditions in May, June and the first half of July, and despite the cold and wet spring, crop progress is generally on track or ahead of schedule for this time of year. Corn is still running well ahead of normal for maturity. Growing degree day accumulations from May 1 are 150 units to 300 units ahead of normal by six to 12 growing days with early plated corn entering dent condition south of I-80. One significant impact to some crop fields in south-central Nebraska was a hail storm that occurred June 30. Large swaths of corn and soybean fields near Loomis and Holdrege were decimated. In all for July, there were 95 hail reports around the state, 69 reports of high wind events and tornadic activity on July 28 about 3 miles west and southwest of Kimball.

Precipitation
Rainfall amounts varied across the state, as is typical for convective summer-time precipitation events. Monthly totals were highest for central and northeast Nebraska Mesonet extremes
The following extremes were cataloged this July by Nebraska’s statewide weather network:
- **Highest air temperature**: 99°F on July 11 at Scottsbluff 6NW
- **Lowest air temperature**: 44°F on July 1 at Harrison 4NW
- **Highest 4-inch bare soil temperature**: 101°F on July 12 at Emmet 2E
- **Lowest 4-inch bare soil temperature**: 56°F on July 30 at Harrison 4NW
- **Highest 5-second wind gust**: 58 mph on July 4 at Long Pine 20S
- **Highest precipitation**: 3.17 inches on July 1 at York 2W

Source: *The Nebraska Mesonet* at Nebraska State Climate Office, University of Nebraska-Lincoln
Nebraska with some areas receiving more than 7 inches. A few daily rainfall totals were in the 4-inch range in the central part of the state. For the state as a whole, precipitation totaled 4.43 inches, which is a bit more than an inch above normal.

**Drought**

While much of the state received above-normal amounts for July, extreme southcentral and southeast Nebraska continues to miss out on timely rains. Accumulated precipitation totals going back to Oct. 1 show portions of Nuckolls, Thayer, Fillmore and Richardson counties are running a 6-inch precipitation deficit, which is less than 70 percent of normal for this time period. Soil moisture reports by extension educators is most severe across the southern two-thirds of Webster and Nuckolls counties. Expansion of the dryness was being noted along the southern tier counties from Thayer eastward to western Richardson county. Elsewhere, dryness concerns have been minimal. With continued dryness in far southcentral and southeast Nebraska, the U.S. Drought Monitor has expanded D0 into a seven-county area centered on Nuckolls county.

**Outlook**

The short-term outlook from the Climate Prediction Center for the next one to two weeks indicate an increased chance for above-normal temperatures. Last month, the Climate Prediction Center has issued an El Nino watch, meaning that conditions are favorable for an El Nino to develop this fall. The seasonal (August to October) outlooks are calling for higher probabilities of warmer-than-normal weather statewide. In terms of precipitation, the far southeast corner of the state is in the higher probability for below-normal rainfall category. If the warmth and dryness does verify, this will worsen the precipitation deficits this area already is experiencing.

— Martha Shulski, state climatologist and NSCO director

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**U.S. DROUGHT MONITOR MAP**

**NEBRASKA**

**90-DAY OUTLOOK**

**TEMPERATURE (LEFT) & PRECIPITATION**