

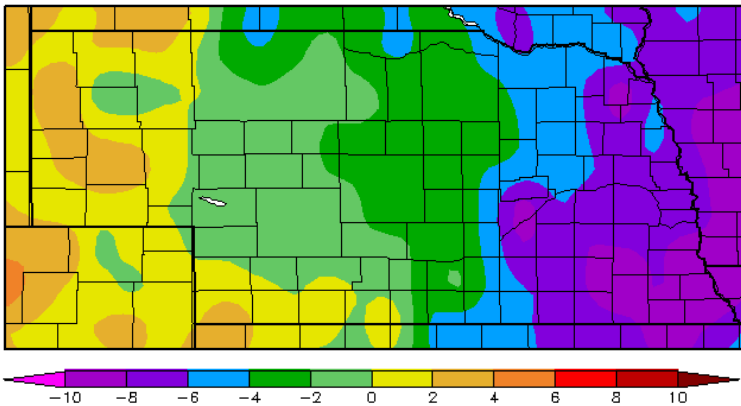
# Nebraska Ag Climate Update

March 6, 2015

## State Summary

February was a highly variable month, as an east to west temperature gradient dominated the monthly temperatures. Average monthly temperatures in portions of the Panhandle were 2 to 4 °F above normal, while areas in eastern Nebraska were 8 to 10 °F below normal (Figure 1). Average daily high temperatures ranged from 46 °F in Scottsbluff to 31 °F in Wayne (Table 1). This pattern is not uncommon for this time of the year and is the same pattern that has been in place for the last couple months.

**Departure From Normal Temperature (°F)  
February 2015**



**Departure From Normal Precipitation (in.)  
February 2015**

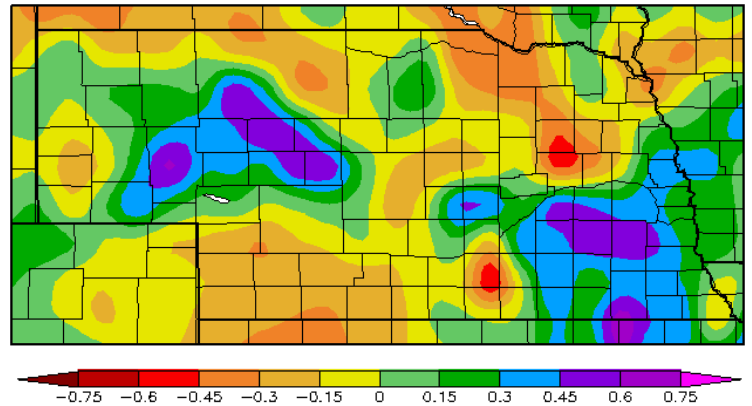


Figure 1. Departure from normal temperature (left) and precipitation (right) for February 2015 in Nebraska. Map from the High Plains Regional Climate Center—[hprcc.unl.edu](http://hprcc.unl.edu)

Normal February daily high temperatures range from near 45 °F in the southwest to near 35 °F in the northeast. As we move into March and April, this pattern shifts to a north-south temperature gradient, as opposed to an east-west gradient.

Soil temperatures, measured at a depth of 4 inches, are following a similar east-west pattern. Temperatures are slightly below normal across the state with Beatrice, Ord and York around 7 °F below normal and Gordon and Scottsbluff around 3 °F below normal. Typical temperatures this time of year range from the low 30s in the north and west to mid 30s in the south and east.

The total precipitation amounts for February were dominated by the rain/snow event on February 1. This event started as rain in some portions of Nebraska, and quickly turned to snow. It blanketed the state with 1 to 12 inches of snow, with highest amounts in southeast Nebraska. This snow cover had a direct impact on daily temperatures through February and kept some areas much cooler than areas where the snow melted. Satellite images help us visualize the extent of snow cover for Nebraska and the entire U.S. On

**Table 1. Temperature and precipitation overview for February 2015 for nine Nebraska locations.**

Station	Temperature				Precipitation (in)	
	Avg Max	Maximum	Avg Min	Minimum	Total Precip	Snowfall
SCOTTSBLUFF	45.9	70	19.4	6	0.59	8.2
AINSWORTH	40.3	69	13.9	-8	0.52	5.5
OGALLALA	42.2	68	17.3	-1	0.68	5.8
MC COOK	45.5	80	15.2	-4	0.50	5.2
GREELEY	35.1	65	9.2	-12	0.36	5.8
HASTINGS	37.1	63	11.5	-10	0.34	5.4
WAYNE	31.0	58	3.6	-15	1.01	5.3
ASHLAND	31.9	52	9.1	-9	1.45	12.0
AUBURN	33.4	55	7.4	-20	1.17	4.8

Data from NOAA Applied Climate Information System - <http://drought.rcc-acis.org/>

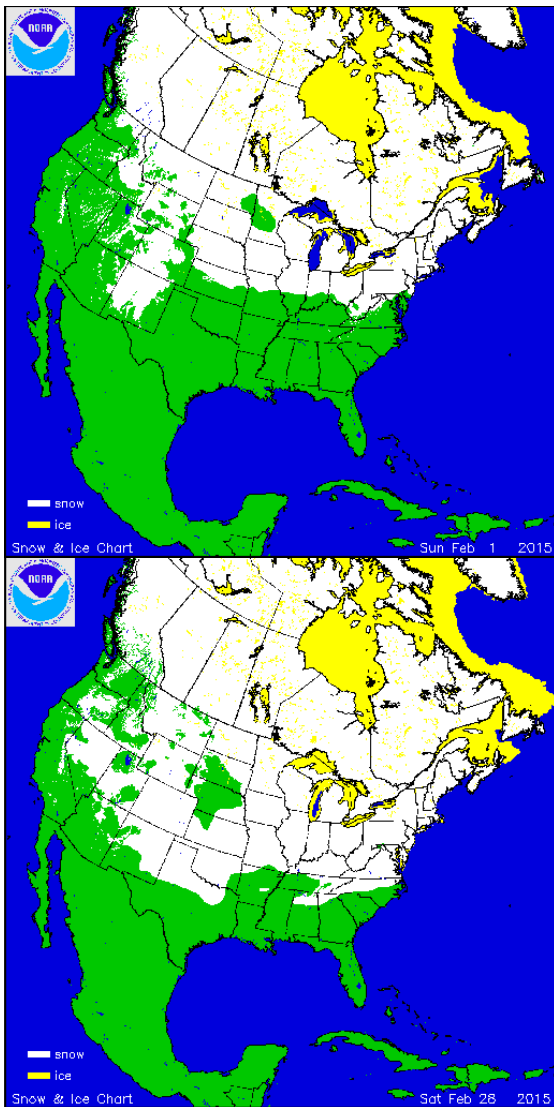


Figure 2. U.S. snow cover on February 1, 2015 (top) and February 28, 2015 (bottom). Map from NOAA National Climate Data Center—[www.ncdc.noaa.gov/](http://www.ncdc.noaa.gov/)

### Looking Ahead

The upgrade to “El Niño Advisory” is the latest news in the weather forecasting world. On Thursday, NOAA issued an El Niño Advisory as the sea surface temperatures finally aligned with tropical conditions to meet the advisory criteria. This doesn't look like it will have a big impact on the long range forecasts for the U.S. because the typical El Niño impact this time of the year is weak. However, the trends for Nebraska during an El Niño do show cooler than normal temperatures for April and May.

The short-term forecast for next week looks awesome, if you are a warm-weather-loving person like me. Temperatures will be in

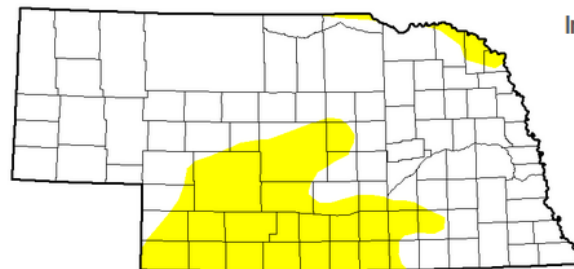
February 1, most of the state was covered in snow and by February 28, most of the snow had melted (Figure 2); however, areas to our south in Kansas, Oklahoma, and Texas picked up significant snowfall.

After the storm on February 1, the rest of February remained relatively dry. A large portion of the state is below normal for precipitation since October 1st, except for portions of southeast and northwest Nebraska. Areas from McCook to Norfolk have a 2 - 2.5 inch deficit over the last five months, which is a concern heading into the spring. If this pattern continues, you can expect to see changes in the Drought Monitor, especially in portions of central, south central and southwest Nebraska (Figure 3). The U.S. Seasonal Drought Outlook shows the drought tendency for the next three months (Figure 4). Drought areas are expected to increase in Minnesota, eastern North and South Dakota, and the Pacific Northwest and decrease in portions of the Central Plains.

### U.S. Drought Monitor

March 3, 2015  
(Released Thursday March 5, 2015)  
Valid 7 a.m. EST

#### Nebraska



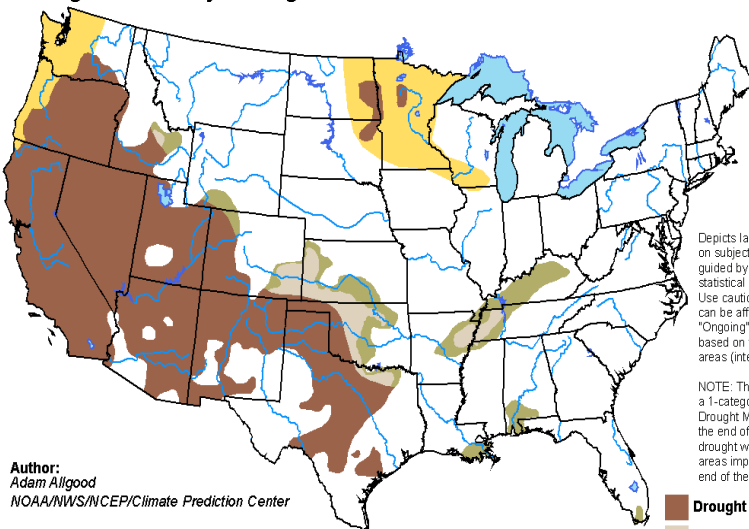
#### Intensity:

- D0 - Abnormally Dry
- D1 - Moderate Drought
- D2 - Severe Drought
- D3 - Extreme Drought
- D4 - Exceptional Drought

Figure 3. U.S. Drought Monitor on March 3, 2015 for Nebraska. Map from the National Drought Mitigation Center—<http://droughtmonitor.unl.edu/>

### U.S. Seasonal Drought Outlook

Valid for February 19 - May 31, 2015  
Released February 19, 2015

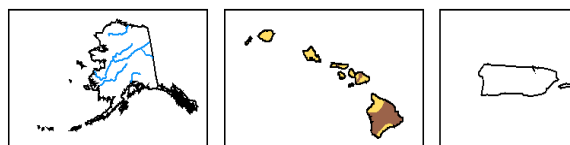


Author:  
Adam Allgood  
NOAA/NWS/NCEP/Climate Prediction Center

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

- Drought persists/intensifies
- Drought remains but improves
- Drought removal likely
- Drought development likely



<http://go.usa.gov/hHTe>

Figure 4. U.S. Seasonal Drought Outlook released on February 19, 2015 and valid for February 19 - May 31, 2015. Map from the Climate Prediction Center—[www.cpc.noaa.gov/products](http://www.cpc.noaa.gov/products)

the 50s and 60s through next week, with some locations in southwest Nebraska possibly reaching the 70s. However, by next weekend, models are showing a cool down. For right now, this doesn't look to be a drastic change and should not hang around long. The forecast for March 13th - 19th from the Climate Prediction Center (CPC) has increased odds for above normal temperatures for most of the continental U.S and equal chances for above or below normal precipitation for most of Nebraska. Even though most of us don't like snow, if the dry conditions do persist over the next few weeks, we may be in a significant precipitation deficit heading into planting season.

The longer term forecast from the CPC for March has nearly the entire U.S. east of the Rockies with increased odds for below normal temperatures. The conditions over the last week have definitely been below normal, but the two-week forecast does not seem to follow this trend. We will see what the last week or two of March has in store for us, but I think the one-month outlook that was released last week may be a little too cool.

For the three-month outlook (Figure 4), Nebraska is once again in the area for equal chances of above and below normal temperatures and precipitation. The only strong signals for this outlook are for cool temperatures in Texas, warm temperatures in the west, and above normal precipitation for the southwest and central Rockies. It will be interesting to see what impact the El Niño will have on our spring and summer weather patterns. As mentioned earlier, there is a slight increase in cooler temperatures during an El Niño in the spring for Nebraska, and the cool trend does extend into the summer.

In review, nice weather will dominate the state for the next week. A slight cool down next weekend may happen, but

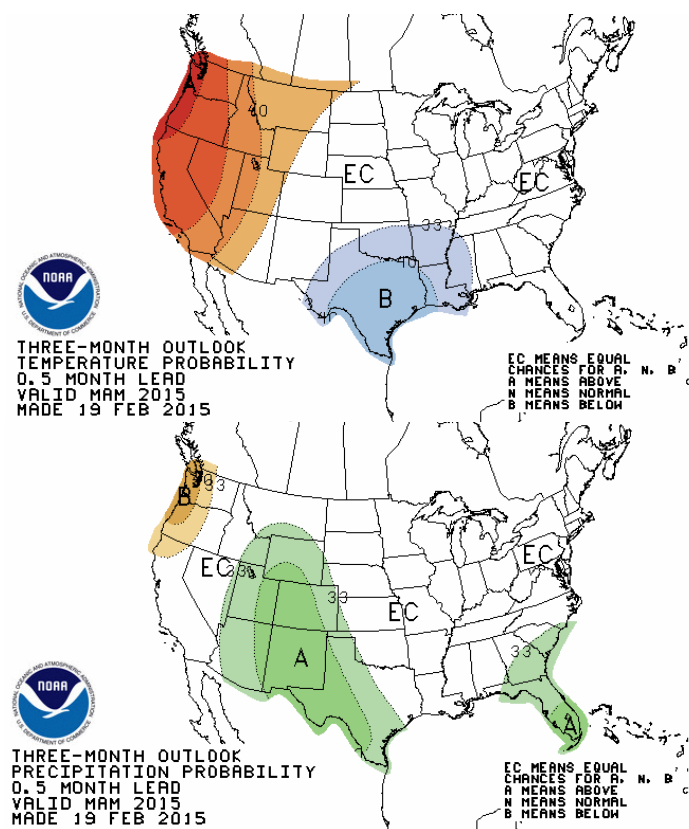


Figure 5. Three-month temperature (top) and precipitation (bottom) outlooks from the Climate Prediction Center release on February 19. Source: Climate Prediction Center—[www.cpc.ncep.noaa.gov](http://www.cpc.ncep.noaa.gov)

is expected to be short lived. Temperatures should warm back up and allow for lots of yard work and you may even see some of those trees and flowers start to break dormancy. If you are hosting Easter and want the kids to play outside, the climatology of April 5 (Table 2) may encourage you a little bit. Average temperatures are in the mid to upper 40s across the state with average daytime highs in the mid 50s to lower 60s.

The longer term forecasts aren't giving us any clues for what types of conditions we may be dealing with during planting season. If the recent trend continues, we may be planting in dry soils, with near to below normal temperatures, but we all know that can change in a blink of an eye.

**Tyler Williams**  
 Nebraska Extension Educator—Lancaster County  
[lancaster.unl.edu](http://lancaster.unl.edu)  
<http://agclimatenebraska.weebly.com/>  
[twilliams2@unl.edu](mailto:twilliams2@unl.edu)

Table 2. Average temperature for April 5th (Easter Sunday) for nine Nebraska locations.

Station	Average Daily Temperature		
	High	Low	Average
SCOTTSBLUFF	57.9	30.1	44.0
AINSWORTH	57.0	32.3	44.7
OGALLALA	59.0	30.2	44.6
MC COOK	61.0	30.4	45.7
GREELEY	57.9	29.4	43.6
HASTINGS	59.6	34.9	47.3
WAYNE	56.5	30.7	43.6
ASHLAND	60.6	33.7	47.2
AUBURN	62.4	37.3	49.8

Data from NOAA Applied Climate Information System - <http://drought.rcc-acis.org/>