Nebraska Climate Update
WAOC Report

Allen Dutcher
Nebraska State Climatologist
402-472-5206
adutcher1@unl.edu
Winter Temperature Trend

Departure from Normal Temperature (F)
12/1/2013 – 2/28/2014

Generated 3/11/2014 at HPRCC using provisional data.
Regional Climate Centers
Winter Precipitation Trend

Percent of Normal Precipitation (%)
12/1/2013 - 2/28/2014

Generated 3/11/2014 at HPRCC using provisional data.
Winter Precipitation Departures

Departure from Normal Precipitation (in)
12/1/2013 - 2/28/2014

Generated 3/11/2014 at HPRCC using provisional data.
Winter Facts

- Eastern Nebraska 2-6 F below normal
- Eastern Nebraska 4-8 F colder than 2013
- Western Nebraska 1-3 F below normal
- Western Nebraska 2-5 F colder than 2013
- 20+ days of minimum temperatures 0 F or lower
- Above average snowfall across Panhandle
- Below average snowfall eastern ¾ of Nebraska
March Precipitation Trend

Percent of Normal Precipitation (%)

Generated 3/27/2014 at HPRCC using provisional data.
March Precipitation Trend

Departure from Normal Precipitation (in)

Generated 3/27/2014 at HPRCC using provisional data.
Soil Recharge Period Trend

Percent of Normal Precipitation (%)
10/1/2013 - 3/26/2014

Generated 3/27/2014 at HPRCC using provisional data.
Soil Recharge Period Precipitation

Precipitation (in)
10/1/2013 - 3/26/2014

Generated 3/27/2014 at HPRCC using provisional data.
Soil Moisture Recharge Period Trend

Departure from Normal Precipitation (in)
10/1/2013 – 3/26/2014

Generated 3/27/2014 at HPRCC using provisional data.
Soil Moisture Recharge Period Facts

- Very dry winter and March period has led to elimination of moisture surplus from October/November precipitation events.
- 6-7 inches of moisture across eastern Nebraska, isolated locations have received 8+ inches.
- Surplus of 1-4 inches across Panhandle.
- Deficits of 2-4 inches for eastern Sandhills, Southeast, South Central, and Southwest.
- Extremely dry soil surfaces, dust storms, high fire danger, no deep profile moisture (below 3 feet).
One Day Soil Temperature Average

Soil Temperature (°F at 4 inches)

High Plains Regional Climate Center
Generated 3/27/2014 using AWDN data.
Soil Temperature Impacts

- Potential wheat/alfalfa winterkill issues

- Minimum 4 inch soil temperatures <20 F (northern Panhandle, Sandhills, Northeast, Southwest, South Central, Central)

- Pockets of soil temperatures <15 F (northern Panhandle, northern Sandhills, Northeast, eastern ½ Southwest)

- Isolated pockets of soil temperatures <10 F (McCook, Gordon, Ainsworth, extreme Northeast)

- Very slow dormancy break
Current Snow Depth

Snow Depth
2014-c3-28 06 UTC

Map showing current snow depth across the United States with a color scale indicating depth in inches and elevation in thousands of feet.
Great Lakes Ice Cover

NOAA Great Lakes Coastal Forecasting System

Observed
NIC Great Lakes Ice Cover
03/27/2014 18:00 GMT
(DOY 086)
Date of last ice analysis: 03/27/14
Total Ice Area = 73.7%

Great Lakes Environmental Research Laboratory
National Weather Service

Last Updated: Fri Mar 28 00:32:01 2014 GMT
PDO/AMO Relationships

25% = normal drought frequency
Three Month Outlook
Precipitation

THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID AMJ 2014
MADE 20 MAR 2014

EC MEANS EQUAL CHANCES FOR A. N. B.
A MEANS ABOVE N
B MEANS BELOW N
Three Month Temperature Outlook

Three-Month Outlook Temperature Probability
0.5 Month Lead
Valid AMJ 2014
Made 20 Mar 2014

EC means equal chances for A, N, B
cA means above
n means normal
d means below
April Temperature Outlook

One-Month Outlook
Temperature Probability
0.5 Month Lead
Valid Apr 2014
Made 20 Mar 2014

EC means equal chances for A, B, C.
A means above normal.
B means below normal.
Short Term Influences

- Canadian Snowpack, Great Lakes ice cover
- Deep frost still remains across upper Midwest
- Polar Vortex appears to be weakening
- Warmer conditions developing?
- Central and northern Rockies Snowpack
- No El Nino formation now, increased odds late summer
- Eastern Pacific above normal, Atlantic neutral