North Central U.S. Climate Summary and Outlook Webinar
January 19, 2017

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General Information

- Regional climate services for the North Central U.S., including the Great Plains and Midwest, are provided through collaboration among federal, regional, and state partners:
  - National Oceanic and Atmospheric Administration
  - U.S. Department of Agriculture
  - National Drought Mitigation Center
  - High Plains Regional Climate Center
  - Midwestern Regional Climate Center
  - American Association of State Climatologists

- Next webinar
  - February 16th - Brian Fuchs (National Drought Mitigation Center - Climatologist)

- Archive of past webinars
  - [http://mrcc.isws.illinois.edu/multimedia/webinars.jsp](http://mrcc.isws.illinois.edu/multimedia/webinars.jsp)
  - [http://www.hprcc.unl.edu/webinars.php](http://www.hprcc.unl.edu/webinars.php)
Agenda

1. Current climate conditions in a historical context
2. Current and prospective climate impacts
3. Climate outlooks
4. Discussion
December

It’s been normal to colder throughout the region...

... and very wet, normal or dry depending on your location.

https://www.ncdc.noaa.gov/temp-and-precip/
Oct-Nov-Dec

It’s been warm throughout the region...

... and wet, dry, or about normal, depending on where you are

[Maps showing temperature and precipitation ranks for Oct-Nov-Dec 2016]

https://www.ncdc.noaa.gov/temp-and-precip/
MONTH: Over the past 30 days it has been much cooler across much of the plains with warmer temperatures in CO and across the Midwest.

3 MONTH: From 2 to 6 °F above normal for much of the region since October with a pocket of cooler temperatures in the northwestern High Plains.

YEAR: From 1 to 6 °F above normal for the region in 2016. Second warmest year on record for the Continental U.S.
• **MONTH:** Above normal across the high plains region (except central MT) and Upper Midwest. Slightly below normal in portions of the lower Midwest (MO and IL), over the past 30 days

• **3 MONTH:** Normal to above normal in upper Midwest and Plains and sharply below normal in portions of the lower Midwest and Plains over the past 90 days

• **YEAR:** Generally normal to wetter than normal, including some areas of record wetness in portions of Iowa, Minnesota and Montana. Parts of Colorado, Missouri and Indiana were drier than normal
Precipitation & Temperature Impacts

• Trains are having difficulties navigating sections of track in ND & SD due to extensive snowpack and blowing snow.

• Due to above average snowpack in the Dakotas, areas are being watched for potential flooding; dependent upon future snow and rain and melt timing in the spring.

• Slight ponding in agricultural areas in Iowa and IL from recent snowmelt on frozen soils.

• Minor ice jams in Montana, Wyoming and Iowa, but no real impact.

• Freezing rain across NE, MO, KS, IA, and MN was a bit unusual but not a major impact.
Modeled Soil Moisture
National Land Data Assimilation System
Missouri River Basin – Mountain Snowpack Water Content

January 17, 2017

The Missouri River Basin mountain snowpack normally peaks near April 15. On January 17, 2017 the mountain Snow Water Equivalent (SWE) in the “Total above Fort Peck” reach was 7.2”, 80% of average. The mountain SWE in the “Total Fort Peck to Garrison” reach was 8.7”, 113% of average. Normally by January 15, about 54% of the peak mountain SWE has occurred in both reaches.

*Generally considered the high and low year of the last 20-year period, respectively. Provisional data. Subject to revision.
Streamflow Conditions
Great Lakes – Water Temperature and Ice Cover

GREAT LAKES SURFACE ENVIRONMENTAL ANALYSIS (GLSEA)

Analysis Date: JD 017 01/17/2017
Percent Pixels with Data within +/-10 Days: 91.0%
Date of last ice analysis: 1/17/2017
NOAA CoastWatch

Great Lakes Total Ice Cover: 12.3%

Median Ice Concentration
- <10%
- 10–39%
- 40–59%
- 60–79%
- 80–99%
- 100%

Great Lakes Environmental Research Laboratory
National Ice Center

www.glerl.noaa.gov//data/ice/#currentConditions
Drought conditions have contracted with the increase in December and early January precipitation.
7-day Quantitative Precipitation Forecast

http://www.wpc.ncep.noaa.gov/qpf/day1-7.shtml
ENSO Probabilistic Forecast

- Weak La Niña continues
- Expected to transition to ENSO neutral by February

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/
TYPICAL LA NIÑA WINTERS

Image Credit: Fiona Martin, NOAA Climate.gov
Monthly Outlook for February
NWS Climate Prediction Center

Temperature

Precipitation

http://www.cpc.ncep.noaa.gov/products/predictions/long_range/lead14/
Seasonal Outlook for Mar-April-May
NWS Climate Prediction Center

Temperature

Precipitation

Seasonal Outlook for May-Jun-July
NWS Climate Prediction Center

Temperature Precipitation

Summary

• For the past month it’s been cooler to the west and slightly warmer to the east.

• Precipitation has been much above normal across much of region except for south eastern states near the Mississippi.

• Snow pack is moving towards normal conditions in the high plains region following a slow start to the season.

• Drought conditions have contracted slightly with the increase in late December and early January precipitation.

• La Niña conditions are likely to diminish into February, though climatic conditions may still reflect a La Niña influence.
Additional Information

• Today’s and Past Recorded Presentations and
  http://mrcc.isws.illinois.edu/multimedia/webinars.jsp
  http://www.hprcc.unl.edu/webinars.php

• NOAA’s National Centers for Environmental Information:
  https://www.ncei.noaa.gov/

• Monthly climate reports (U.S. & Global): www.ncdc.noaa.gov/sotc/

• NOAA’s Climate Prediction Center: www.cpc.ncep.noaa.gov

• Climate Portal: www.climate.gov

• U.S. Drought Portal: www.drought.gov

• National Drought Mitigation Center: http://drought.unl.edu/

• American Association of State Climatologists
  http://www.stateclimate.org

• Regional Climate Centers serving the Central Region
  Midwestern RCC http://mrcc.isws.illinois.edu
  High Plains RCC http://www.hprcc.unl.edu
Questions?

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Thank you for your participation!