Midwest and Great Plains Climate-Drought Outlook
20 October 2016

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Cottonwood Fire
17 Oct 2016
Photo credit: SD Division of Wildland Fire
General Information

* Providing climate services to the Central Region
  * Collaboration Activity Between:
    * State Climatologists
    * NOAA – NCEI
    * USDA Climate Hubs
    * American Association of State Climatologists
    * Midwest and High Plains Regional Climate Centers
    * National Drought Mitigation Center

* Next Regular Climate/Drought Outlook Webinar
  * Nov 17, 2016 (1 PM CDT) Jim Angel, State Climatologist of Illinois

* Access to Future Climate Webinars and Information
  * http://www.drought.gov/drought/content/regional-programs/regional-drought-webinars

* http://mrcc.isws.illinois.edu/webinars.htm
* http://www.hprcc.unl.edu/webinars.php
* Open for questions at the end
Agenda

* Review of last season
* Current conditions
* Outlooks
  * Fall and winter temperature and precipitation
  * La Niña

Cottonwood Fire burn area, SD, 10/20/16. Credit: Gail Schmidt, USGS EROS Data Center/SD School of Mines & Technology
Review/Current Conditions
September Temperature Recap

Statewide Average Temperature Ranks
September 2016
Period: 1895-2016

September Temperature Recap

Statewide Maximum Temperature Ranks
September 2016
Period: 1895–2016

September Temperature Recap

Statewide Minimum Temperature Ranks
September 2016
Period: 1895–2016

September Precipitation Recap

Statewide Precipitation Ranks
September 2016
Period: 1895–2016

Difference from Average Precipitation, Since Oct 1

Departure from Normal Precipitation (in)
10/1/2016 – 10/19/2016

http://www.hprcc.unl.edu/maps.php?map=ACISClimateMaps
July-September Precipitation

Statewide Precipitation Ranks
July–September 2016
Period: 1895–2016

[Map showing precipitation ranks across the United States]

Soil Moisture

Soil Moisture Anomaly in millimeters

http://www.emc.ncep.noaa.gov/mmb/nldas/drought/
7-Day Average Streamflow

Wednesday, October 19, 2016

Milk River flooding

Crested near 30’ at Glasgow on Sunday, Oct 9
Some rainfall totals over 5 inches

Photo: Steve Stanley, via Great Falls Tribune
10/6/16, Alkali Flats, 18 mi south of Malta
Great Lakes water temp

Potential for Lake Effect Snow, if cold air comes across the region.

Source: https://coastwatch.glerl.noaa.gov/statistic/
Agriculture

USDA Crop Progress and Condition: Corn in United States, 2016

Condition Year:
- 2012
- 2013
- 2014
- 2015
- 2016

Good + Excellent (percent):
- 2012
- 2013
- 2014
- 2015
- 2016

Condition Type:
- Excellent
- Good
- Fair
- Poor
- Very Poor

Progress (percent):
- Emerged
- Siliing
- Doughing
- Dented
- Mature
- Harvested

Source: National Agricultural Statistics Service (NASS), Crop Progress Report
Agriculture

Source: National Agricultural Statistics Service (NASS), Crop Progress Report
Other Impacts

- SD/MN/IA/NE region slow for harvest of soybeans and corn due to high humidity, fog and wet fields
- Wet soils leading to compaction issues during harvest due to heavy equipment
- Cattle and sheep in western region in good condition, calves are at good weights and cows have good pregnancy rates
- Sugarbeet and potato harvest and yields impacted by wet conditions late in the season
- Sunflower harvest a little slow
- Winter wheat planting generally complete
- Mosquito populations now reduced with frost occurrence. 2016 was a high West Nile Virus year in SD, estimated 115-120 cases.
Climate Outlooks
Temperature and Precipitation Probabilities for 27 Oct – 2 Nov 2016

Temperature

Precipitation

La Nina conditions most likely outcome for fall 2016, into winter 2016-17.
3 Month Temperature and Precipitation Probabilities
(November-January)
3 Month Temperature and Precipitation Probabilities
(December - February)

Temperature

Precipitation

http://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=1
Drought Outlook through 31 Jan

U.S. Seasonal Drought Outlook
Valid for October 20 - January 31, 2017
Released October 20, 2016

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).

Author:
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NOAA/NWS/NCEP/Climate Prediction Center


Summary – Current Conditions

* Warmer than average temperatures driven primarily by elevated minimum temperatures July through September
* So far, frost and freeze occurring at median date or later across the region
* Rainfall much above average for 4 Midwest & Northern Plains states in September
* July through September ranked top 5 wettest for ND, MN, IA, IL, MI and KY
La Niña – Watch status in effect. Weak event expected

Warmer than average temperatures projected through November

More likely to turn cooler than average in December-January

Increased potential for wetter than average in northern Rockies, Great Lakes
Further Information - Partners

* Today’s and Past Recorded Presentations and:
  * [http://mrcc.isws.illinois.edu/webinars.htm](http://mrcc.isws.illinois.edu/webinars.htm)
  * [http://www.hprcc.unl.edu](http://www.hprcc.unl.edu)

* NOAA’s National Climatic Data Center: [www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)

* NOAA’s Climate Prediction Center: [www.cpc.ncep.noaa.gov](http://www.cpc.ncep.noaa.gov)

* Climate Portal: [www.climate.gov](http://www.climate.gov)


* National Drought Mitigation Center: [http://drought.unl.edu/](http://drought.unl.edu/)

* State climatologists
  * [http://www.stateclimate.org](http://www.stateclimate.org)

* Regional climate centers
  * [http://mrcc.isws.illinois.edu](http://mrcc.isws.illinois.edu)
  * [http://www.hprcc.unl.edu](http://www.hprcc.unl.edu)
Questions:

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