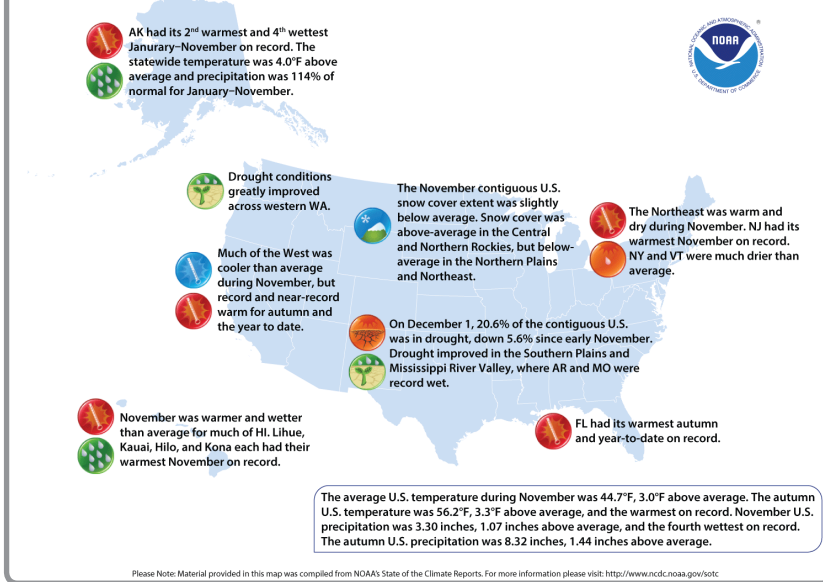


National - Significant Events for September–November 2015

U.S. Selected Significant Climate Anomalies and Events November and Autumn 2015



Highlights for the Midwest

September 2015 was the third warmest September on record for the Midwest, with Minnesota, Wisconsin, and Michigan experiencing the warmest September on record.

A mid-October heat wave brought record-breaking temperatures to Minnesota and Wisconsin. Highs were in the low to mid 90s in Minnesota.

November 2015 temperatures for the Midwest also preliminarily ranked as the fifth warmest, with all nine states in the region ranking among the top ten warmest Novembers on record.

The Midwest experienced its second warmest fall season on record (1895–2015), according to preliminary data. Eight of the nine states in the region had one of their top five warmest fall seasons.

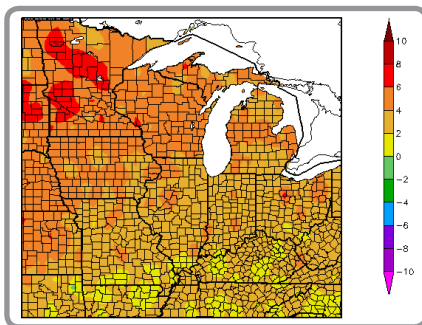
It was the wettest November on record in Missouri, with statewide average precipitation of 8.05 inches (preliminary data).

A pre-Thanksgiving storm dropped from 4 to 18 inches of snow in a band from Iowa through northern Illinois and Indiana through lower Michigan. Chicago and Rockford, Illinois, experienced their second largest November snow storm on record.

Regional - Climate Overview for September–November 2015

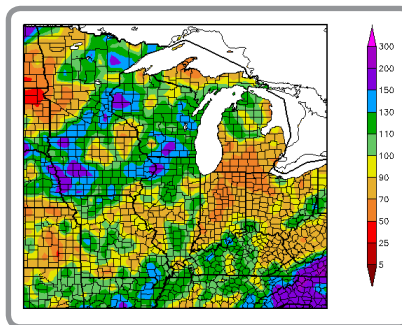
Temperature and Precipitation Anomalies

Departure from Normal Temperature (°F)
9/1/2015–11/30/2015



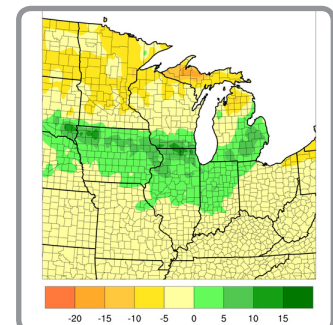
Average temperatures for the fall season were warm across the region. Temperatures ranged from as much as 6°F to 8°F above normal in Minnesota to near normal along the southern periphery of the region. Based on preliminary data this is the second warmest fall on record since 1895. September temperatures were from 2°F to 6°F above normal across the region. October temperatures were generally near normal, except in western Minnesota where they were 3°F to 4°F above normal. November temperatures ranged from 2°F above normal along the Ohio River to 6°F to 8°F above normal across Minnesota.

Percent of Normal Precipitation (%)
9/1/2015–11/30/2015



Autumn precipitation was a mixed bag across this Midwest. September was generally much drier than normal, but some isolated areas had greater than normal rainfall. October was the driest month of the three, with rainfall ranging from less than 25 percent of normal in Missouri and Illinois to 75–100 percent of normal in the upper Midwest and in the Ohio Valley. November precipitation made up much of the deficit in the western two-thirds of the region, with precipitation exceeding 200 percent of normal. Much of Indiana, Ohio, lower Michigan, and the Michigan U.P. remained dry at the end of November.

November Snowfall—Departure from Normal
11/1/2015–11/30/2015



An early winter storm brought near record snowfall to portions of the Midwest in November. However, mild weather following the storm quickly melted the snow cover and by Thanksgiving much of the snow had disappeared from the landscape. November snowfall was 5–10 inches above normal from northwest Iowa into southern lower Michigan. In contrast, very little snow has fallen across the upper Midwest with some of the largest departures in the Michigan U.P. This has implications for winter recreation activities across that region should the snow drought continue.

Regional Impacts for September–November 2015

Agriculture

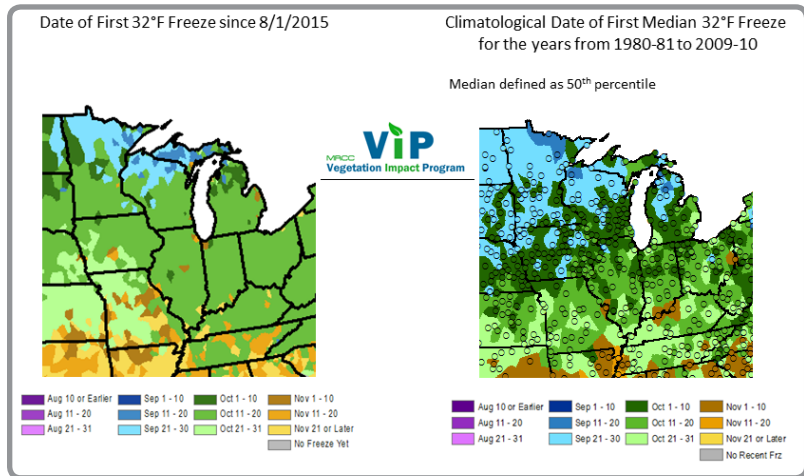
Dry weather across the region in September and October allowed harvest activities to continue with few interruptions. Corn and soybean harvest in most areas was complete by early November, ahead of the 5-year average.

The dry weather in the fall also led to an increased frequency of field fires in parts of the Midwest.

The first fall freeze occurred one to two weeks later than normal, on average.

Transportation

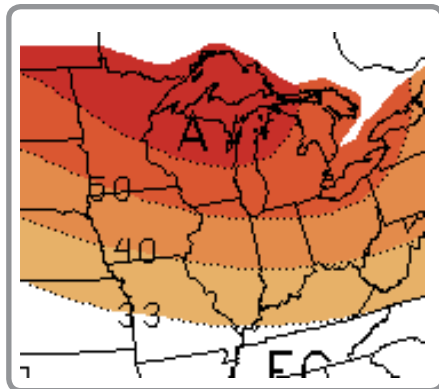
High winds during a November 12–13 storm caused significant transportation issues in areas around the northern Midwest. The Chicago Skyway Bridge was closed in both directions for just over 12 hours due to high winds. Hundreds of flights were delayed at Chicago O’Hare International Airport and Detroit Metropolitan Airport. The high winds caused extensive power outages in Illinois, Indiana, Michigan, Wisconsin, and Ohio.



A field fire burns in eastern Iowa in early October.
Photo credit: Ray Wolf

Regional Outlook - for December–February 2016

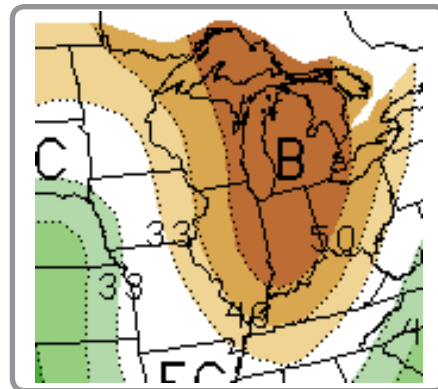
Warm and Dry



Temperature outlook (left) and precipitation outlook (right) for January through March issued on December 17 by the Climate Prediction Center.

A higher than average probability for warmer and drier than normal is expected to persist January through March across the upper Midwest, especially from the Great Lakes to the Ohio Valley. This does not rule out cold weather and snow, but the frequency of cold weather and the amount of snow will likely be well below normal, especially across the upper Midwest.

With the Great Lakes likely to remain mostly ice-free during the winter, significant lake-effect snows are a possibility with any intrusions of Arctic air during the season in



the lake-effect regions of Michigan, Wisconsin, Indiana, and Ohio.

An El Niño is in progress over the equatorial Pacific and likely peaked in early December. It is expected to decline through spring, reaching ENSO neutral conditions by late spring or summer. An El Niño of this strength typically means above-normal temperatures for much of the Midwest during the winter with the greatest impact in the northern portions of the region. The central Midwest tends to be drier than average in an El Niño winter.

Midwest Region Partners

- High Plains Regional Climate Center www.hprcc.unl.edu
- Midwestern Regional Climate Center mrcc.isws.illinois.edu
- Missouri Basin River Forecast Center www.crh.noaa.gov/mbRFC
- National Centers for Environmental Information www.ncei.noaa.gov
- National Drought Mitigation Center drought.unl.edu
- National Integrated Drought Information System www.drought.gov
- National Weather Service Central Region www.crh.noaa.gov/crh
- North Central River Forecast Center www.crh.noaa.gov/ncrfc
- NWS Climate Prediction Center www.cpc.ncep.noaa.gov
- South Dakota State University and SDSU Extension www.igrow.org
- State Climatologists www.stateclimate.org
- WaterSMART Clearinghouse, U.S. Dept. of Interior www.doi.gov/watersmart/html/index.php
- Western Governors' Association westgov.org

