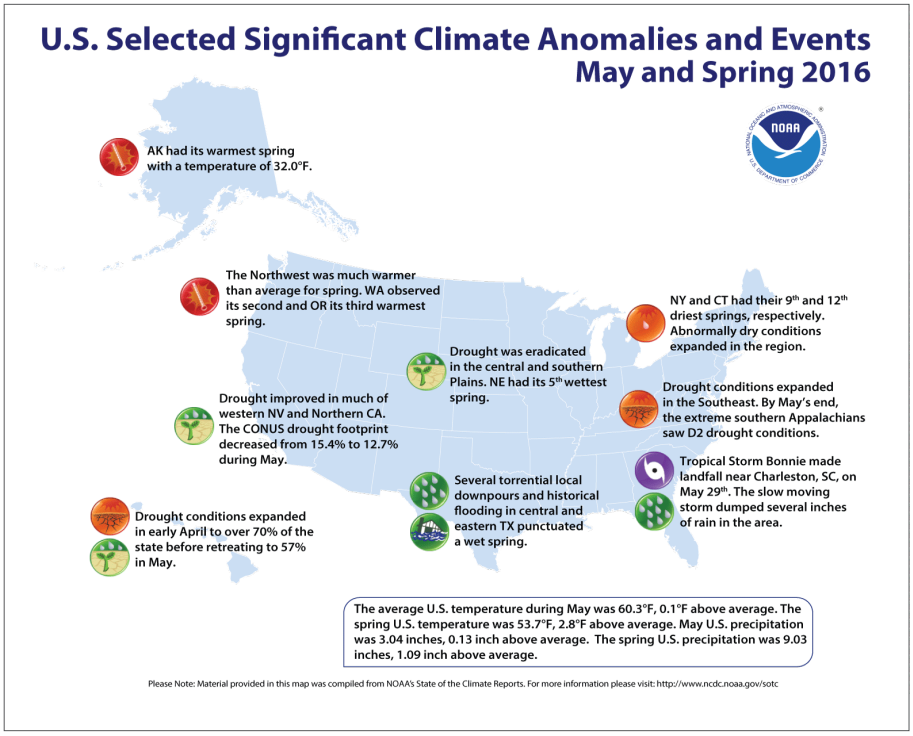
Quarterly Climate Impacts and Outlook

Midwest Region

June 2016

National - *Significant Events for March–May 2016*



Highlights for the Midwest

Heavy snow fell across the upper Midwest on March 23 through the morning of March 25. Snow amounts of 5–10 inches fell from northwest Iowa through northeast Wisconsin, while 2–5 inches fell across northern Lower Michigan. Northern portions of the Minneapolis/St. Paul metro area received little to no accumulation, while southern portions of the metro area received up to 8 inches.

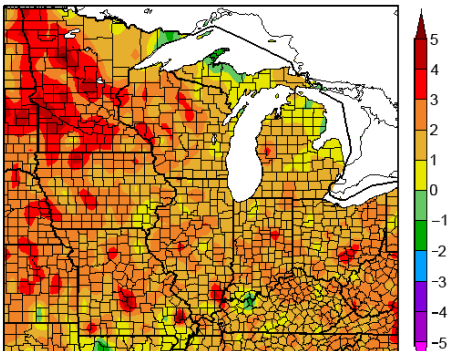
A quick-moving clipper system with strong high pressure to the west led to strong winds across the central Midwest on April 2. Damage from high winds was reported across parts of southern Wisconsin, eastern Iowa, Illinois, Indiana, western Ohio, and northern Kentucky. Wind gusts of 40–50 mph were common with occasional gusts of up to 60 mph. The highest wind gust reported was 71 mph in Henry County, Indiana.

An outbreak of cold weather set many daily record minimum temperatures across the region from April 9 to 13. Many of these records occurred on April 9 and April 10 across Minnesota and Wisconsin, where minimum temperatures were in the teens and single digits

Regional - *Climate Overview for March–May 2016*

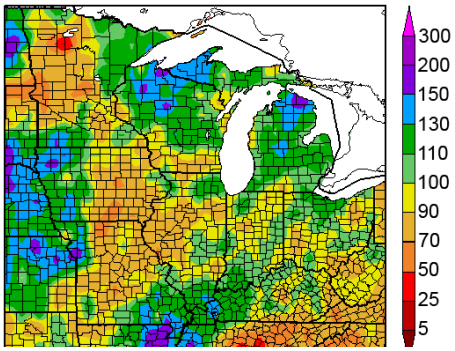
Temperature and Precipitation Anomalies

Departure from Normal Temperature (° F)
3/1/2016–5/31/2016



The spring was on average 2°F to 3°F warmer than normal across most of the region. The largest departures above normal extended through western Minnesota south in Iowa and Missouri. The arrowhead of Minnesota and parts of the western Upper Peninsula of Michigan were the only areas where spring temperatures averaged below normal. March temperature departures dominated the spring pattern. March was warm everywhere with temperatures ranging from 9°F to 10°F above normal in northwestern Minnesota to 5°F to 8°F above normal elsewhere.

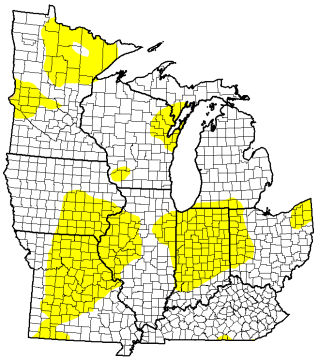
Percent of Normal Precipitation (%)
3/1/2016–5/31/2016



Spring precipitation was characterized by large month-to-month variations in amounts in different parts of the Midwest. In general spring precipitation was normal to above in the eastern half of the region and 50 to 75 percent of normal in the western half of the region. The driest areas extended from west-central Minnesota through the eastern two-thirds of Iowa and across much of Missouri and western Illinois. Wetter areas were lower Michigan, northwestern Wisconsin, the western Upper Peninsula of Michigan, the Ohio Valley, and northwestern Iowa.

Drought Status

6/14/2016



At the end of May, the U.S. Drought Monitor was depicting pockets of abnormal dryness in the Midwest, mostly along and west of the Mississippi River. The areas of abnormal dryness expanded during the first two weeks of June. While portions of the Midwest received rainfall during this time, it was not widespread. Precipitation was notably lacking in Missouri, southeastern Iowa, and western Illinois. At mid-June about one-third of the Midwest was designated in Abnormally Dry Conditions.

Contact: Doug Kluck (doug.kluck@noaa.gov)

Regional Impacts *for March–May 2016*

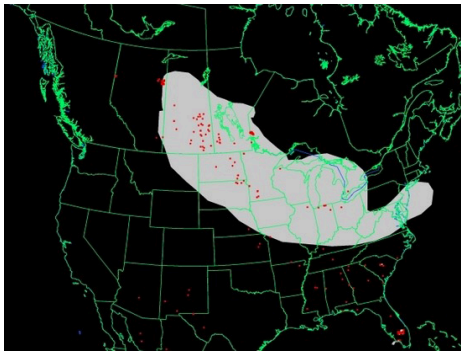
Agriculture

Damage to fruit buds from the hard freeze the second week of April was varied. In Michigan, there was some damage to apricots, peaches, and sweet cherries, mostly in the southern part of the state where development was ahead of normal. Temperatures in the upper teens damaged apples, blueberries, and even some landscapes, mainly in central and western Iowa.

Spring weather was generally favorable for planting throughout the Midwest. As of June 5, corn and soybean planting was either complete or ahead of the five-year average in all states but Kentucky. Wet weather in Kentucky during May significantly delayed soybean planting, which was only 43 percent complete as of June 5, compared to the five-year average of 55 percent.

Wildfires

Very warm and dry weather in early May brought extreme fire danger to the northern two-thirds of Minnesota. Numerous wildfires were reported across northern Minnesota that week. Smoke from these fires and the fires in Alberta, Canada, caused hazy conditions and prompted the Minnesota Air Pollution Control Agency to issue an air pollution warning for May 6–7 for much of the state. Smoke from the Alberta wildfires was visible in the skies across much of the Midwest.

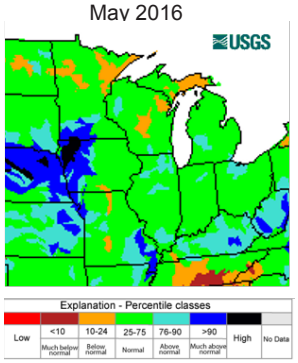


This map shows the extent of the smoke from wildfires during the afternoon of May 8, 2016. Red dots indicate active wildfires. Credit: NOAA

Streamflow

Streamflows across the Midwest at the end of May were near normal in most areas. The exceptions were in southwestern Minnesota and western Iowa, where streamflows were much-above normal. Streamsflows were also above normal in southeastern Missouri and much of Kentucky. The biggest change during the spring occurred across northern Minnesota, Wisconsin, and the Michigan Upper Peninsula. At the end of March streamflows were much above normal in these areas, but by the end of May, they declined to normal or below normal.

May 2016

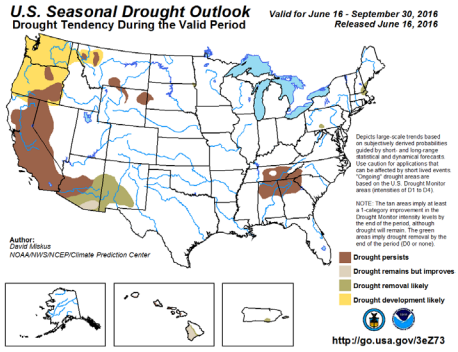


Regional Outlook - *for Summer 2016*

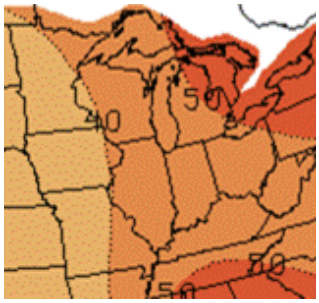
Outlook for the Growing Season

The latest outlooks from NOAA's Climate Prediction Center for the summer growing season indicate that there is a higher than normal probability of warmer than normal temperatures across the Midwest. This should benefit late-planted crops and accelerate the accumulation of growing degree days across the region. However, extended periods of hot weather with little timely precipitation could quickly stress crops.

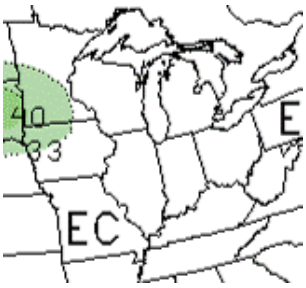
The precipitation outlook indicates equal chances for above, normal, or below normal precipitation through September for most of the region. Southwestern Minnesota and northwestern Iowa show a higher probability for above normal rainfall. During the growing season both the timing and amount of precipitation is important, something that cannot be determined from this outlook.



The U.S Drought Outlook for June 16 through the end of September indicates no tendency for drought to develop across the Midwest region.



Temperature outlook for July through September 2016



Precipitation outlook for July through September 2016

Midwest Region Partners

Climate Science Program, Iowa State University
climate.engineering.iastate.edu

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