Quarterly Climate Impacts and Outlook

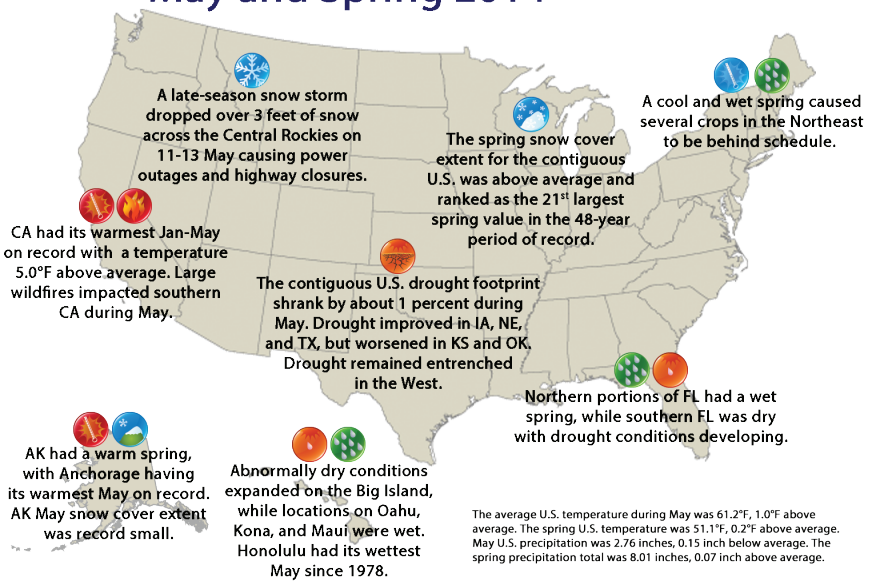
Midwest Region

June 2014

National - *Significant Events for March 2014–May 2014*

Significant Events for May and Spring 2014

NOAA's National Climatic Data Center



The average U.S. temperature during May was 61.2°F, 1.0°F above average. The spring U.S. temperature was 51.1°F, 0.2°F above average. May U.S. precipitation was 2.76 inches, 0.15 inch below average. The spring precipitation total was 8.01 inches, 0.07 inch above average.

Highlights for the Midwest

During the first week of March the southern two-thirds of the Midwest received two to seven times their normal weekly snowfall while northern areas were below normal. In addition, all nine states had stations that fell below 0°F during the week with the coldest minimums in the -20s in Iowa, -30s in Michigan and Wisconsin, and the -40s in Minnesota.

The cooler than normal spring delayed the start of severe weather across the region. The first severe weather reported was on March 27. There were 7 days in April with severe weather somewhere in the Midwest, ramping up to 18 days in May.

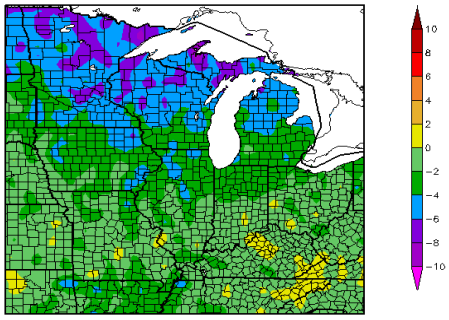
Measurable snow fell in northern Illinois on May 16. DeKalb received 0.5 inch, the latest observed measurable snowfall on record. This broke the record of May 11, 1966, when 2.5 inches of snow fell.

On May 21 severe storms produced hail of 2.50 inch and greater in Illinois, Indiana, and Ohio. The largest hail fell in central Illinois (Douglas County), where a 20-minute hailstorm with hailstones up to 4 inches in diameter damaged hundreds of cars and roofs, siding, and windows on homes and businesses.

Regional - *Climate Overview for March 2014–May 2014*

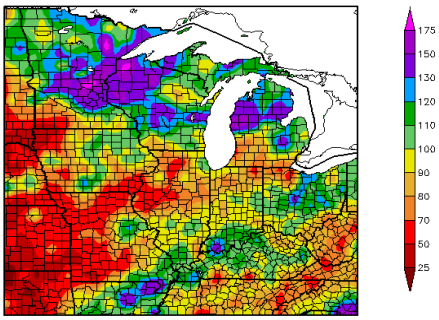
Temperature and Precipitation Anomalies

Departure from Normal Temperature (°F)
3/1/2014–5/31/2014



The cold weather of the winter continued into the spring across the Midwest. Average temperatures were 4°F–8°F below normal across most of Minnesota, the northern two-thirds of Wisconsin, the Upper Peninsula of Michigan, and the northern half of lower Michigan. Temperatures were 2°F–4°F below normal in Iowa, northern Illinois, southern lower Michigan, and northern Indiana. Near normal temperatures occurred in the Ohio Valley. March was very cold with departures from -2°F in the southern Midwest to -14°F in the far northern Midwest. In contrast, May temperatures were near normal regionwide.

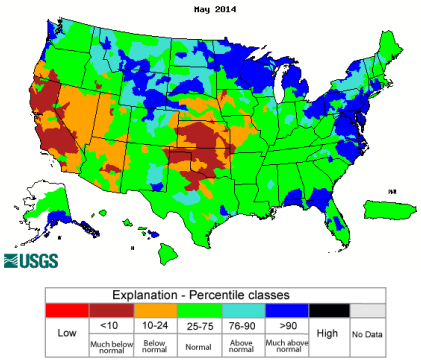
Percent of Normal Precipitation (%)
3/1/2014–5/31/2014



The spring was wet across the northern half of Minnesota eastward across the northern half of lower Michigan. Precipitation was also above normal from southeastern Missouri through the Ohio Valley into central Ohio. Below-normal precipitation occurred from southwestern Minnesota southward through western Missouri, then across north-central Missouri into west-central Illinois. At the end of May, these areas were classified as Abnormally Dry to Moderate Drought on the U.S. Drought Monitor.

Streamflow

May Average Streamflow



Despite a deep snow cover over much of the upper Midwest during the early spring, major seasonal flooding was not a problem on the major rivers. Cooler-than-normal weather along with cold nights made for an ideal melt season, allowing runoff to gradually enter the river systems. The exception was in western Michigan, where spring rainfall, record winter snow, and ice-choked rivers resulted in significant flooding on the Grand River and the Muskegon River. At the end of May, streamflows were near to above normal across most of the region.

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

Regional Impacts *for March 2014–May 2014*

Agriculture

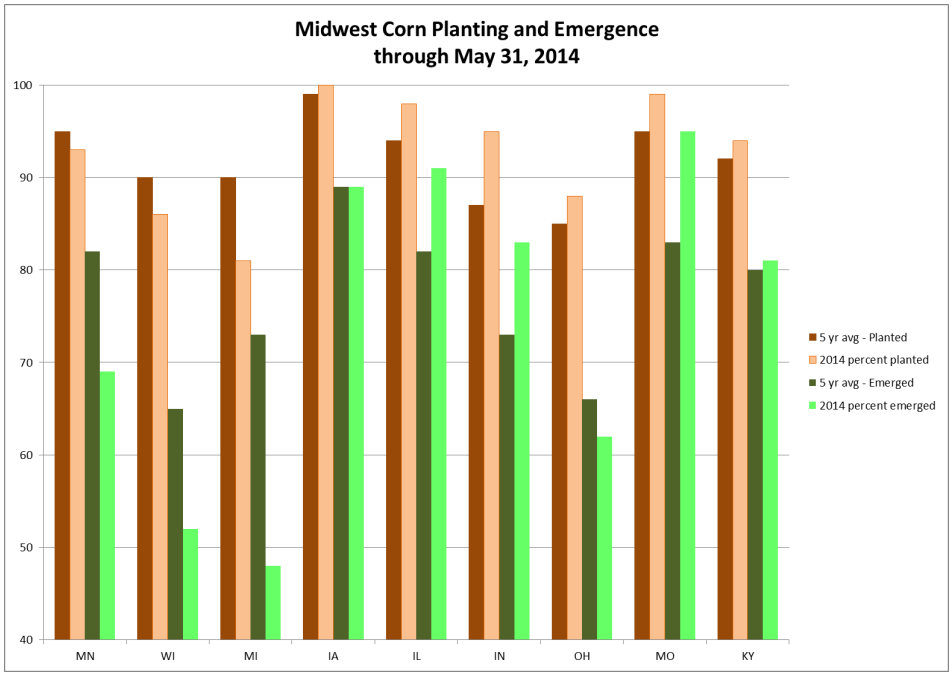
The cool, wet spring, particularly in the northern Midwest and Ohio Valley, delayed planting and emergence of corn. By the end of May, planting was nearly complete in the central Midwest but slightly behind the five-year average in Minnesota, Wisconsin, and Michigan. The area of most concern is Michigan, where flooding added to delays.

A Michigan Farm Bureau study showed that cherry, blueberry, and peach trees along with grape crops and some apple orchards were damaged by the severe winter weather.

Environment and Infrastructure

Many lakes in northeast Minnesota retained ice cover into the third week of May. Minnesota lake ice-out dates were 10 days to 2 weeks later than the historical median. Nonetheless, lake ice-out dates were roughly one week earlier than in 2013.

The prolonged and severe cold in the northern Midwest this winter is expected to produce substantial mortality of emerald ash borer larvae.

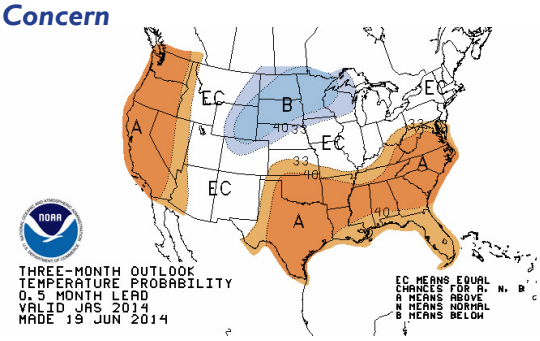


Source: USDA National Agricultural Statistics Service (NASS)

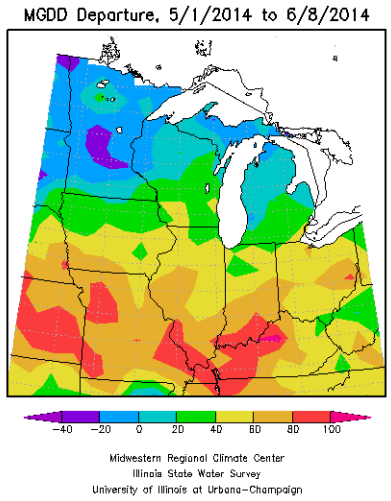
Regional Outlook - *for Summer 2014*

Prospects for Cool Weather a Concern

The three-month outlook for July through September from NOAA's Climate Prediction Center indicates a higher probability for below-normal temperatures across the northern Midwest. Planting delays due to cold, wet soils and resulting late emergence of corn have producers concerned about accumulating enough growing degree days to bring the crop to maturity in the fall before the first freeze. Below normal Modified Growing Degree Day (MGDD) departures since May 1 are greatest across Minnesota and northern Wisconsin. MGDD departures are near to slightly above normal from northern Iowa eastward to southern lower Michigan.



Drought is not expected to be a concern for most of the Midwest this summer. Current dry conditions from southwestern Minnesota southward to southwestern Missouri, and east into central Illinois are generally expected to improve through the end of August. The exception is in the southwestern corner of Missouri, where drought is expected to persist or intensify.



Modified Growing Degree Day (86/50) departure since May 1.

Central 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
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