Quarterly Climate Impacts and Outlook

Midwest Region

March 2020

Midwest – *Significant Events for December 2019–February 2020*

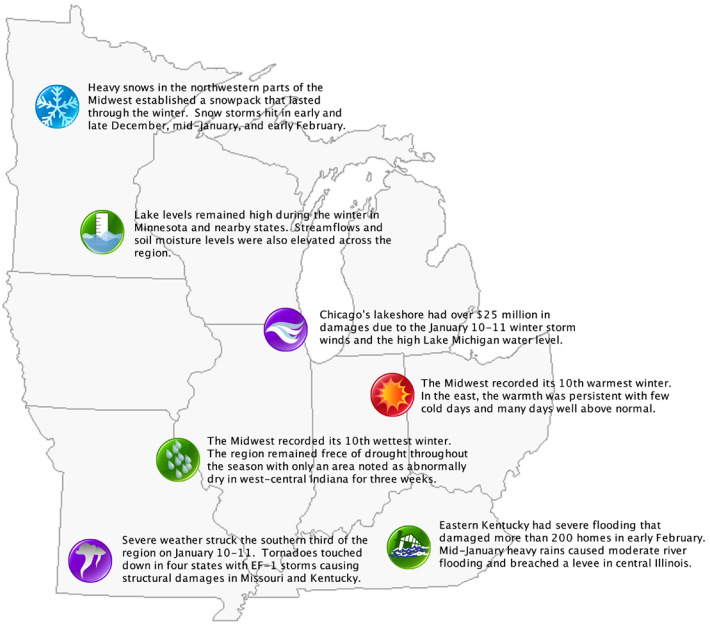
Several significant events impacted the Midwest over the winter. Weather impacted travel at the end of the Thanksgiving holiday weekend with heavy snows in northern Minnesota, northern Wisconsin, and Upper Michigan. The system also brought heavy rains in Kentucky.

Additional storms in Minnesota and nearby states in late December, mid-January, and early February fortified a deep snow cover that lasted throughout the winter.

Flooding hit central Illinois in January as the Kaskaskia River breached a levee and closed many highways and roads near Vandalia.

Flooding in eastern Kentucky in early February damaged more than 200 homes. Floodgates in Harlan County, Kentucky, were shut and many were trapped at home as the waters rose.

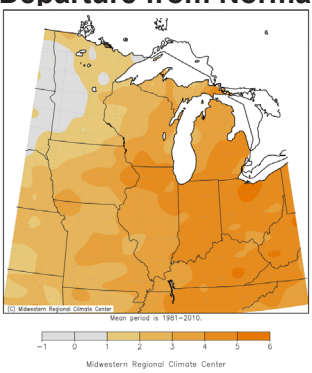
Lakes in the upper Midwest remained at elevated levels. Streamflows and soil moisture remained high as well.



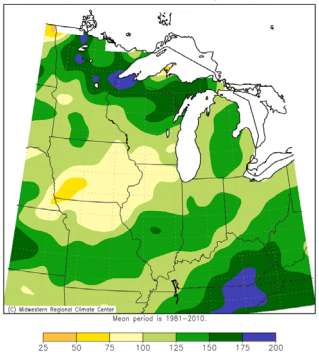
Warm conditions were persistent, especially in the eastern Midwest. Toledo, Ohio, had just 21 of 91 days below normal vs. 26 days that were more than 10°F above normal. The longest string of below-normal days was just four days while the longest stretch of above-normal days lasted 27 days.

Regional – *Climate Overview for December 2019–February 2020*

Winter Temperature Departure from Normal



Winter Precipitation % of Normal



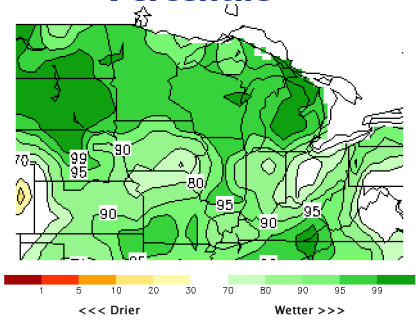
Winter temperatures averaged near normal in the northwest and above normal across the rest of the region for the season as a whole. Both December and January had above-normal temperatures across the region while February saw a range of temperatures mostly within a couple degrees of normal. The winter ranked as the 10th warmest in the 125-year record for the Midwest.

Precipitation was above normal for most of the Midwest and much above normal in the extreme northern areas and also the extreme southeastern areas. An area that covered much of Iowa, northern Missouri, northwestern Illinois, and the southwestern corner of Wisconsin had below-normal precipitation for the season. In the extreme north and extreme southeast, precipitation was 150 to 200 percent of normal for the season. The winter season ranked as the 10th wettest in the 125-year record for the region. Despite the overall wet pattern for the winter, December was fairly dry in Iowa, Missouri, and Illinois, and February was very dry in the northwestern half of the region.

Snowfall was well below normal in the south-eastern third of the region and also downwind of the southern half of Lake Michigan.

Due to extremely wet soil moisture conditions from 2019, streamflows continued to be well above normal across the region. In addition to wet soils, snowmelt kept river and lake levels high.

February Soil Moisture Percentile



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Regional Impacts – *December 2019–February 2020*

Transportation

Some roads and rail tracks along the Mississippi River and also the Missouri River have not yet been repaired from flooding damage in 2019. Winter flooding in the southern Midwest on the Missouri, Mississippi, Wabash, and Ohio rivers also impacted travel. Roads, including Route 51, near Kaskaskia, Illinois, were closed in mid-January due to levee breach.

Route 51 flooding in central Illinois due to levee breach. Credit Trent Ford.

Agriculture

The fall wetness, late maturity, and early snows in the upper Midwest have led to many cornfields in Wisconsin and Minnesota with the 2019 crop still standing in the fields. The upcoming spring harvest of these fields will need to be completed and thus will push back field work and planting for 2020.

Fields across the region remain saturated or near saturated. Even normal precipitation could lead to delays accessing fields, and heavy rains could severely affect spring field work and planting. Ponds and lakes remain very high. Streamflows are also above normal, leaving little capacity in the system to absorb additional water.

Winter wheat in the eastern Midwest emerged early raising the concern for damage due to possible freezing conditions in the spring.

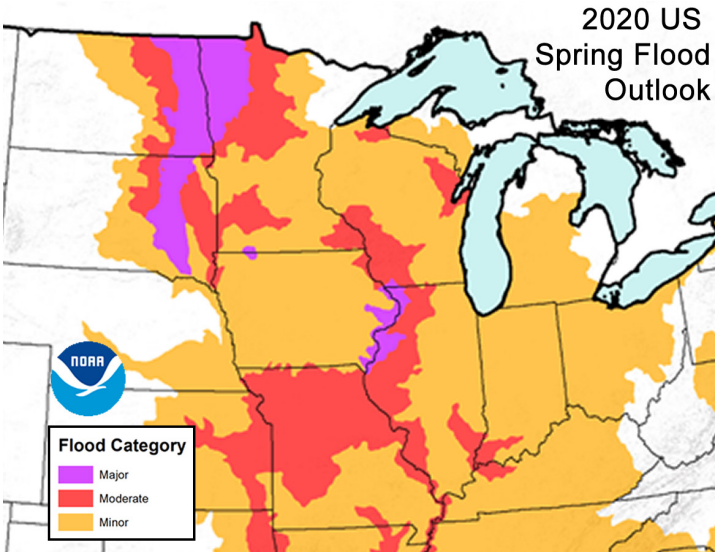
Standing corn near La Crosse, Wisconsin, in late winter. Farmers in Minnesota and Wisconsin with standing corn will need time for harvest in addition to planting this spring. Credit Jeff Boyne.

Rapid winter temperature swings in Iowa are thought to be responsible for bud damage on apple trees noted in early 2020.

Warm conditions in March could increase the risk of damages if there were to be seasonal or later freezes into April.

Regional Outlook – *April–June 2020*

The outlook for temperatures from April through June calls for an enhanced probability of warmer than normal conditions for the Midwest. Probabilities are highest for Ohio as well as eastern Michigan and Kentucky. The precipitation outlook for the same months shows above normal risk for the Midwest. The area covering most of Illinois, Indiana, Ohio, and Kentucky has the highest probabilities for above normal precipitation. After a very wet 2019 the region still has above normal moisture in the water system (soils, lakes, reservoirs, rivers), thus, an enhanced flood risk.



The NOAA spring flood outlook for March through May shows a greater than 50% chance of moderate flooding on several major rivers in the region. A 50% chance of major flooding exists on the Red River of the North, the James River in eastern South Dakota, and the Mississippi River along the Iowa-Illinois border.

Midwest Region Partners

- Midwestern Regional Climate Center
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- National Centers for Environmental Information
- National Weather Service Central Region
- North Central River Forecast Center
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