Quarterly Climate Impacts and Outlook

Midwest Region

June 2021

Midwest – *Significant Events for March–May 2021*

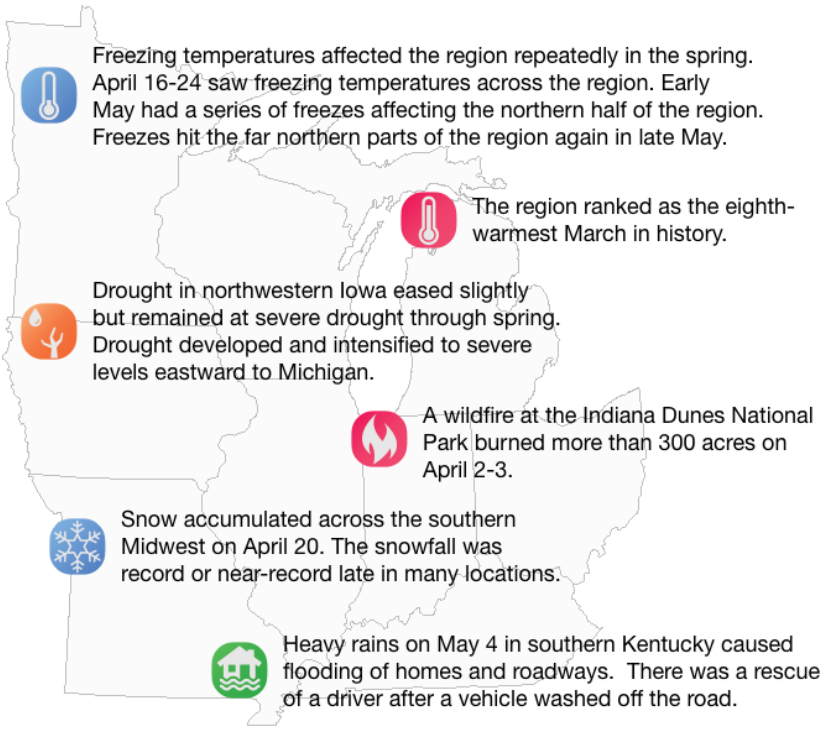
Last spring freezes in the Midwest were two to three weeks later than normal. Last hard freezes of 28°F were three to four weeks later than normal.

Around April 20th, both freezing temperatures and accumulating snow in the southern half of the region were record or near-record late. Poplar Bluff, Missouri, had its fourth-latest subfreezing temperature since 1897, and the latest since 1944. Paducah, Kentucky (1937–2021), and Evansville, Indiana (1948–2021) had their latest accumulating snowfall.

In the upper Midwest, freezing temperatures returned in the last week of May.

Chicago had just 3.75" of rain in spring. This ranked as the third-driest since 1871 and the driest spring since 1934.

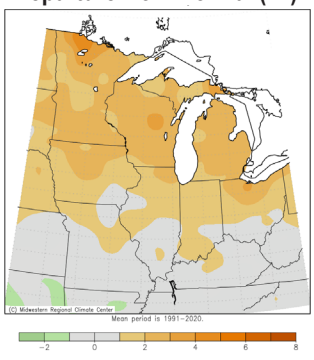
The peak season for severe weather in the Midwest has historically been in the spring, but 2021 was remarkably quiet on that front.



Regional – *Climate Overview for March–May 2021*

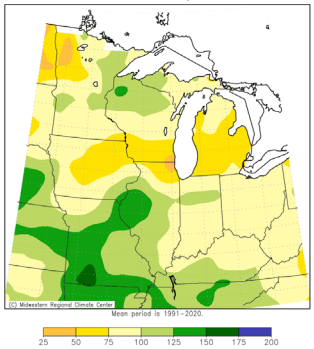
Spring Temperature

Departure from Normal (°F)



Spring Precipitation

% of Normal



Spring temperatures were near normal in the southern third of the Midwest and slightly above normal farther north. Temperatures were as much as 3°-4°F above normal in northern Minnesota. Much of the warmth was due to a very warm March across the region. The regionwide March temperature was 5.7°F above normal, ranking as the eighth-warmest March since 1895. In April and May, temperatures fell well below normal at times. May averaged 1.4°F below normal. There were several freezes and a snow event in late April and early May.

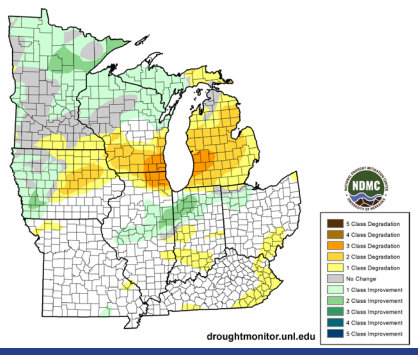
Precipitation in the spring varied from 150% of normal in southwestern Missouri to less than 50% of normal in northwestern Minnesota and along the shore of Lake Michigan near the Wisconsin-Illinois border. Precipitation was above-normal in the southwestern parts of the region and also in some northern areas. Much of the remainder of the region was below normal especially in a swath that extended from central Iowa to Lower Michigan.

Drought intensity in the Midwest saw a mix of areas that lessened and areas that worsened over the spring. Areas with improvements were in the north, in western Iowa, and from central Illinois to northwest Indiana. Deterioration was noted in northeastern Iowa, southern Wisconsin, northeastern Illinois, and much of Lower Michigan. At the end of spring, severe drought was located in northwestern Iowa, southeastern Wisconsin, northeastern Illinois, and southwestern Michigan.

Midwest Drought

13-week change

June 1 vs. March 2



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Regional Impacts – *March–May 2021*

Agriculture

The unusual temperatures of the spring, with warmth early and cooler-than-normal temperatures later, affected the region unevenly. There were both positive and negative impacts in many locations.

The long spring period led to extended blooming periods for many flowers and blooming trees. The early warmth and dry conditions also allowed for field work and planting to both start and wrap up early in many Midwest locations.

Snow on the ground in Shelby County, Kentucky, on April 21.
Credit: Kentucky Mesonet via Stuart Foster.

Apple tree in blossom on May 10 near St. Paul, Minnesota.
Credit: Pete Boulay.

However, waves of colder conditions later in the spring, along with dryness, led to delayed and uneven crop development. Multiple freeze events in the Midwest also caused damage to emerged annual and perennial crops. Snow accumulated in late April across much of the southern half of the region. There were also pollination issues as bee activity was hindered by the cool weather well into spring.

Drought

Drought eased in the Upper Midwest during spring, but severe drought extended from Iowa to Michigan.

Irrigation began in some areas of Michigan and northern Indiana in May. Wildfire risk and water suppy concerns were mounting in the Upper Midwest. Urban landscaping and trees in and near Chicago were stressed due to the lack of soil moisture and required supplemental watering to survive the dry spell.

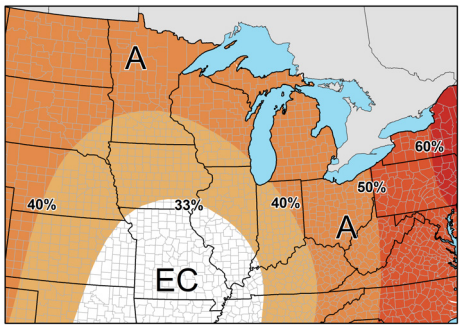
Regional Outlook – *July–September 2021*

The outlook for July–September temperatures shows equal chance of above-, below-, and near-normal temperatures in the southwestern part of the Midwest, including most of Missouri and southwestern Illinois. Increased chances for above-normal temperatures strengthen when moving to the north and east.

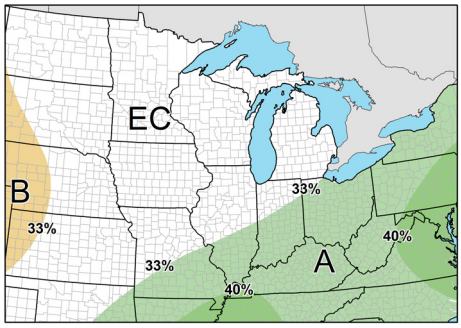
The outlook for July–September precipitation shows increased chances for above-normal precipitation in the southeastern part of the region, south of a line from southwestern Missouri to northwestern Ohio. The rest of the Midwest shows equal chances of above-, below-, or near-normal precipitation.

The dry conditions in the northern half of the region, along with the outlook for equal chances of precipitation, make the area susceptible to continuing and possibly worsening drought conditions this summer. Wildfire and water supply concerns that were already mounting could get much worse without substantial rains. Crops will be dependant on timely rains with limited soil moisture for the crops to tap into.

Temperature Temperature



Precipitation



A = Above normal N = Normal
B = Below normal EC = Equal chances

Midwest Region Partners

- Midwestern Regional Climate Center
- American Association of State Climatologists
- National Oceanic and Atmospheric Administration
- NWS Climate Prediction Center
- National Centers for Environmental Information
- National Weather Service Central Region
- North Central River Forecast Center
- Ohio River Forecast Center
- National Drought Mitigation Center
- National Integrated Drought Information System
- USDA Midwest Climate Hub

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