Quarterly Climate Impacts and Outlook

Midwest Region

December 2024

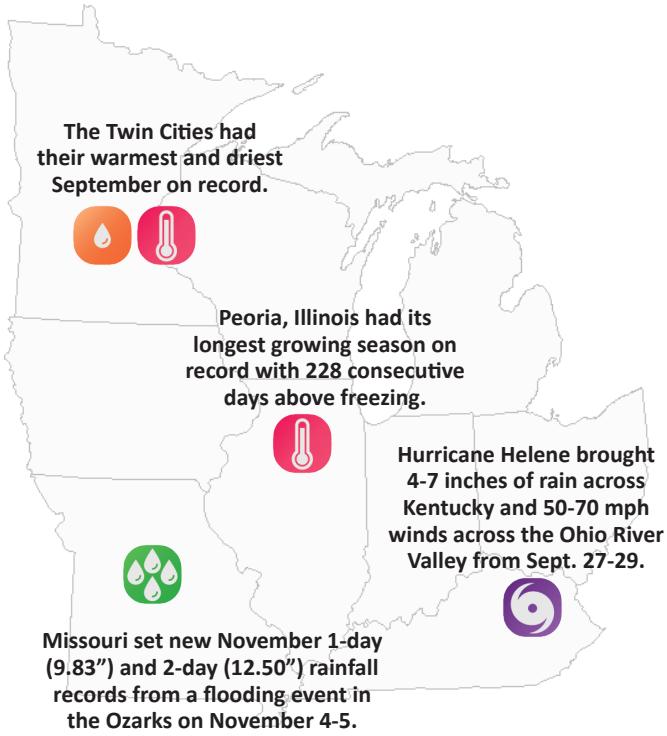
Midwest Significant Events – *September - November 2024*

September was warm and dry across the Upper Midwest, with record to near-record low cloud cover. Kentucky was extremely dry in September until the closing days of the month when the remnants of Hurricane Helene dropped copious amounts of rainfall.

Warm and dry weather continued region wide in October. With 17 days, Springfield, Missouri, had its second-greatest number of October days with temperatures above 80°F. While much of the region had its first 32°F freeze in mid-October, a hard freeze (below 28°F) did not occur in the central and lower Midwest until late November.

Drought peaked across the region in late October. October 30th marked a notable weather shift when a potent storm system traversed the region, bringing high winds and isolated tornadoes to Missouri and surrounding areas. Precipitation was frequent in November, with precipitation totals 150-300 percent of normal in the west.

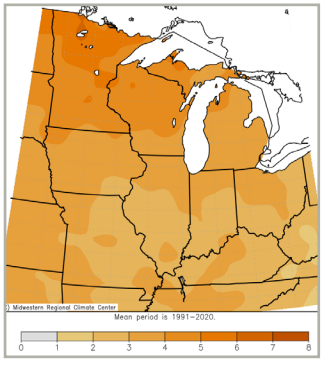
The persistent warmth broke when cold Arctic air settled across the region in late November. Temperatures dropped to the teens and 20s, and a lake-effect snow event ensued.



Regional Climate Overview – *September - November 2024*

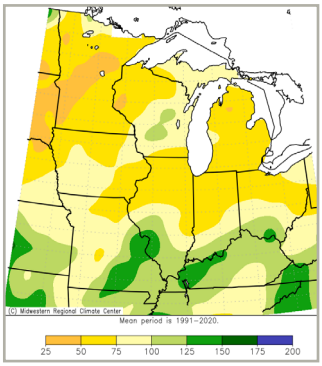
Fall Temperature

Departure from Normal (°F)



Fall Precipitation

% of Normal



The Midwest had its 3rd warmest fall (Sept., Oct., Nov. combined) on record, with average temperatures 2-6°F above normal across the region. Minnesota and Wisconsin had their warmest fall. Monthly temperatures for the region ranked in the top 10 warmest in September (8th), October (9th), and November (7th).

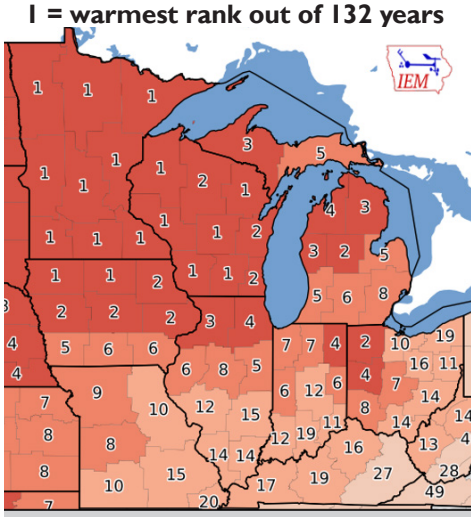
Daytime high temperatures were notably warm, especially across the Upper Midwest, during September and October (bottom right map). In November, the overnight low temperatures were remarkably warm region wide, and the Midwest had its 2nd warmest overnight temperatures on record.

Fall precipitation (Sept., Oct., Nov. combined) was wetter than normal in the south and drier than normal in the north, but conditions were quite variable across the season. September was dry with a decisive north-south gradient driven by large rainfall totals in the south from Hurricane Helene. Iowa and Minnesota had their driest September. October was dry everywhere, and the Midwest had its 9th driest October. Indiana and Kentucky had their 2nd driest October. November was wet region wide, and the Midwest had its 9th wettest November.

High Temperature Rank

September - October

1 = warmest rank out of 132 years



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Regional Impacts – *September - November 2024*

Agriculture

Generally, crops quickly matured, and harvest was accelerated due to warm, dry conditions. Much of the region had high row crop yields. Soybeans were very dry in much of the region, which caused issues with shattering. In Wisconsin, soybeans were also small at harvest. Fire risk was elevated in October, with numerous combine and field fires occurring. The dry weather was ideal for Illinois pumpkins.

Pastures and livestock in Ohio were hit hard by drought. First cuttings of hay had very low yields, and there were no subsequent cuttings. Water hauling was necessary for livestock.

People walk to Tower Rock due to low river levels (Credit: KSDK News)

Blooming Plants

Mild temperatures allowed plants across the Midwest to re-bloom and actively grow from late October to late November. In Ohio, magnolias, dogwoods, and other flowering trees re-bloomed in November as rain brought drought relief and temperatures were elevated.

Streamflow

Drought conditions in September and October resulted in low streamflows on rivers throughout the Upper Mississippi Basin. The Illinois and Vermillion Rivers approached record-low flows in October. Navigation on the Illinois River halted in mid-October after several vessels were grounded. Tower Rock on the Mississippi River between Missouri and Illinois was accessible by foot for the 3rd straight year.

High winds from Hurricane Helene knocked down corn in Ohio (Credit: Aaron Wilson)

Unpleasant Odors

Warm, dry early fall weather across Illinois created a stink (literally). In Chicago, foul smells radiated from the city's combined sewer system. Across central Illinois, pungent odors emitting from the soil prevented outdoor recess in Bloomington.

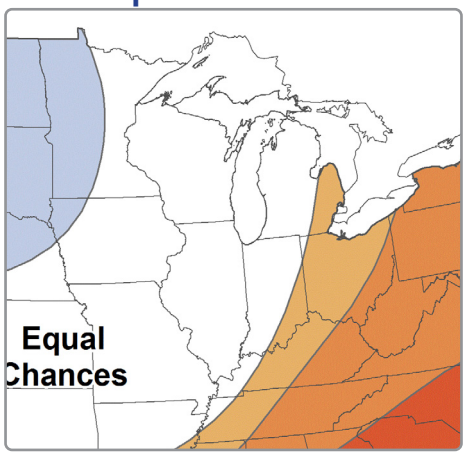
Regional Outlook – *January - March 2025*

NOAA forecasters are predicting slightly increased chances of above-normal temperatures across the eastern Midwest and equal chances of above-, below-, or near-normal temperatures in central Midwest. The far northwest edge of the region has a slightly increased chance of below-normal temperatures.

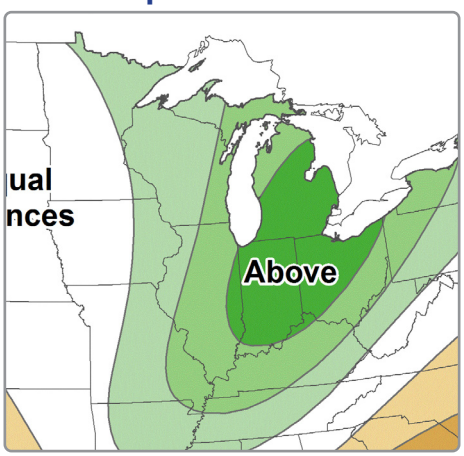
The precipitation outlook favors above-normal precipitation for most of the Midwest, with the strongest chances in the east. Equal chances of above-, below-, or near-normal precipitation are predicted for the far western portion of the Midwest.

ENSO-neutral conditions were present in the equatorial Pacific Ocean in December, with weak La Niña conditions likely to develop by January. Previous weak La Niña events were associated with above-normal snowfall across the Upper Midwest.

Temperature Outlook



Precipitation Outlook



Midwest Partners

- Midwestern Regional Climate Center
- American Association of State Climatologists
- National Integrated Drought Information System
- USDA Midwest Climate Hub
- National Drought Mitigation Center
- NWS Climate Prediction Center
- NWS Central Region Headquarters
- North Central River Forecast Center
- Ohio River Forecast Center
- National Centers for Enviro. Info

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