Quarterly Climate Impacts and Outlook

Midwest Region

September 2024

Midwest Significant Events – *June - August 2024*

An active June and July brought extreme rainfall and damaging winds to the central and upper Midwest, while the eastern edge of the region missed out on precipitation.

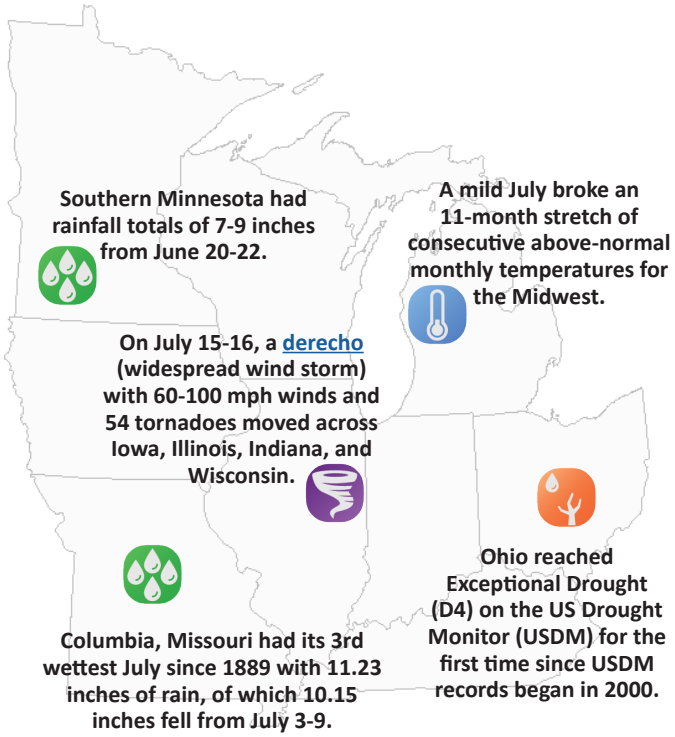
Multiple rounds of heavy rainfall moved across Minnesota, northern Iowa, and Wisconsin from June 16-23, dumping 6-12 inches of flooding rain.

On July 9-10, the remnants of Hurricane Beryl traversed the Midwest, bringing 2-9 inches of rain and 35-45 mph winds along a line from southern Missouri to eastern Michigan.

With 32 confirmed tornadoes on July 15, the Chicagoland area had its largest single-day tornado outbreak on record.

August worsened stretches of dry weather, particularly across the lower Midwest. Extreme drought blanketed southern Ohio by late summer. The Zanesville area in southeast Ohio had its 2nd driest summer in 120 years.

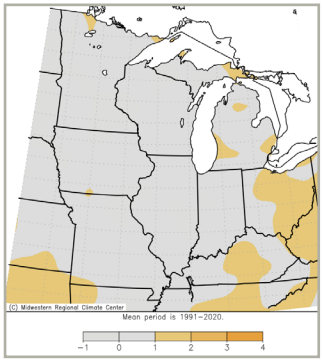
Extreme heat was lacking throughout the summer, with just a few notable hot and humid days in mid June and late August.



Regional Climate Overview – *June - August 2024*

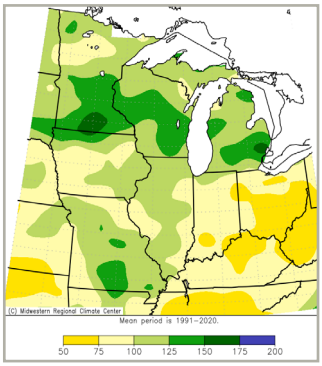
Summer Temperature

Departure from Normal (°F)



Summer Precipitation

% of Normal



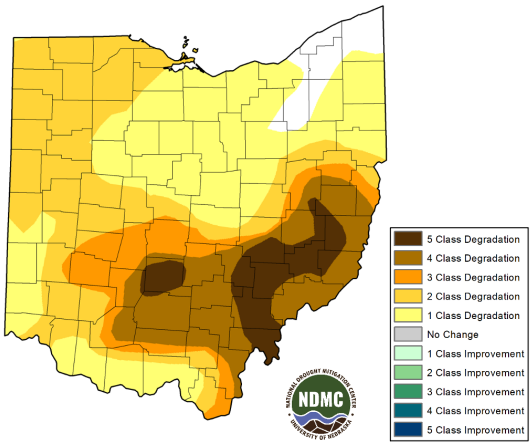
Summer temperatures (June, July, and August combined) were near normal for the majority of the region, except in Ohio and central Kentucky where temperatures were 1-2°F above normal. Looking month-to-month, regionally, June was 1.4°F above normal. July ended up cooler than normal, breaking an 11-month stretch of consecutive above-normal monthly temperatures for the Midwest. August was close to normal for most of the region.

Summer precipitation (June, July, and August combined) for the Midwest was slightly above normal overall, with precipitation 125-175 percent of normal across the northwest decreasing to 50-75 percent of normal across the southeast. Michigan and Wisconsin had their 5th and 6th wettest summers, respectively. Ohio had its 7th driest summer, with 11 Ohio counties having their 2nd driest summer on record. Remarkably, the entire state of Ohio started summer with no drought or abnormal dryness. By summer's end (see right), most of the state was in drought.

June and July precipitation was above normal for the region as a whole. Minnesota and Wisconsin had the 4th and 6th wettest June on record, respectively. Illinois had the 7th wettest July on record. August precipitation for the Midwest was slightly below normal.

Ohio Drought

Change from June 3 to Sept 3



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Regional Impacts – *June - August 2024*

June Flood Damage

Significant flood damage was reported across Minnesota, northern Iowa, and Wisconsin as 6-12 inches of rain fell from June 16-23. Floodwaters on the Blue Earth River caused a partial collapse of the Rapidan Dam in Minnesota. About 80 percent of Spencer, Iowa sustained water damage, with some businesses remaining closed all summer, after the Little Sioux River hit a record flood stage on June 22. Interstate-29 in western Iowa was closed. Across the tri-state area, agricultural fields were under water, roads and culverts were damaged, homes and businesses were destroyed, and water evacuations were numerous.

Floodwaters on the Big Sioux River collapsed a railroad bridge in mid June. (Credit: M. Widhalm)

Severe Weather

A derecho (severe wind storm) and tornadoes swept across the central Midwest July 15-16, resulting in widespread power outages, downed trees, and damaged structures. Downed power lines shut down Interstate-55 in the west Chicago suburbs for two days. Heavy rainfall led to flash flooding around and east of the St. Louis area resulting in fatalities, road closures, water rescues, and a dam failure.

Agriculture

Conditions were mostly favorable for Midwestern row crop producers due to ample wetness and moderate temperatures. Early rains slowed planting and crop development in northern Iowa and Minnesota. However, agriculture in Ohio had significant negative impacts due to drought, including reduced pasture quality and productivity, low wells, early cow/calf weaning, and increased fire risk. Corn and soybeans were in poor condition across southern and southeastern Ohio. Non-irrigated apple trees had decreased fruit redness and increased sweetness.

Storms in central Minnesota dropped hail up to 5.7-inches in diameter on July 31. (Credit: M. Benson)

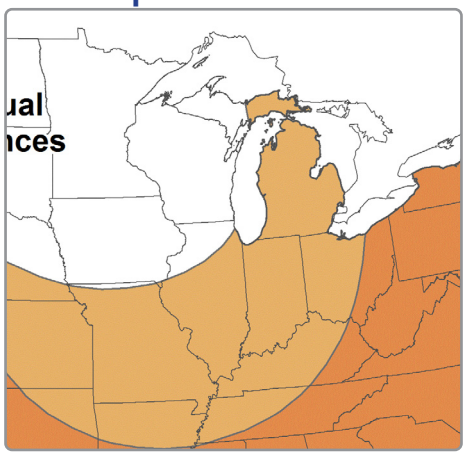
Regional Outlook – *October - December 2024*

NOAA forecasters are predicting slightly increased chances of above-normal temperatures across the eastern and southern Midwest and equal chances of above-, below-, or near-normal temperatures in the northwest. The precipitation outlook shows slightly increased chances of above-normal precipitation across the Great Lakes and equal chances of above-, below-, or near-normal precipitation across the western and southern Midwest.

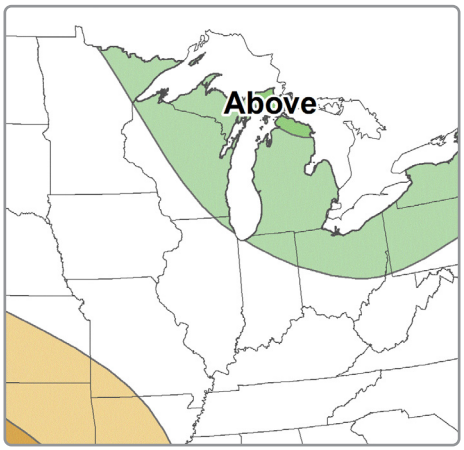
ENSO-neutral conditions are now present in the equatorial Pacific Ocean, with La Niña conditions likely to develop by November.

Forecasters are monitoring low river flows in the Ohio River and Mississippi River. Low flows are expected to persist into fall. Low flows are a concern for the river navigation industry since inadequate flows can result in reduced barge traffic, weight restrictions, and rerouting. Channel dredging is underway in the St. Louis area.

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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