August 2024 Monthly Summary

September 1, 2024
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The month started off with a bang as low pressure over the Midwest sent a cold front through the Ohio Valley. A line of thunderstorms developed ahead of the front and brought heavy downpours and scattered wind damage to the region.

The following couple of weeks were fairly quiet with mostly dry weather and seasonable temperatures. Then on the 17th severe weather revisited the area as a line of storms quickly developed between Louisville and Cincinnati and pushed across the Blue Grass that afternoon and evening, resulting in many reports of strong, gusty winds. The Kentucky Mesonet site in Clark County, three miles NNW of Winchester, recorded a wind gust of 82 mph!

The storm system was followed by an impressive cool-down, with nighttime temperatures dropping into the 50s by the 20th, and some spots even reporting upper 40s from the 21st to the 23rd.

Temperature whiplash then occurred as the mercury soared into the 90s for most locations from the 23rd to the 31st. Some spots even saw triple digits, with Louisville reaching 102° on the 29th and 100° on the 30th.

Barn destroyed near the Russell/Casey County line on the 17th.
Photo courtesy Weather-Ready Nation Ambassador Daniel Wilson.

Averages, Departures, & Records

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Station Values

	Average Temperature	Departure from Normal	Precipitation	Departure from Normal	Snow	Departure from Normal
Bowling Green	78.9°	+0.4°	1.43”	-2.46”	0”	0”
Frankfort	76.1°	±0°	3.79”	+0.64”		
Lexington	76.9°	+1.2°	3.46”	-0.25”	0”	0”
Louisville Ali	80.0°	+1.1°	0.99”	-2.72”	0”	0”
Louisville Bowman	76.4°	-1.2°	1.46”	-2.07”		

Records

- 27th: High of 99° at Louisville
- 28th: Warm low of 77° at Louisville
- 29th: High of 101° at Bowling Green, high of 98° at Lexington, high of 102° at Louisville
- 30th: Warm low of 74° at Bowling Green, high of 98° at Lexington, high of 100° at Louisville
- 31st: Warm low of 75° at Louisville

Source: NWS Louisville Climate

Temperature Maps

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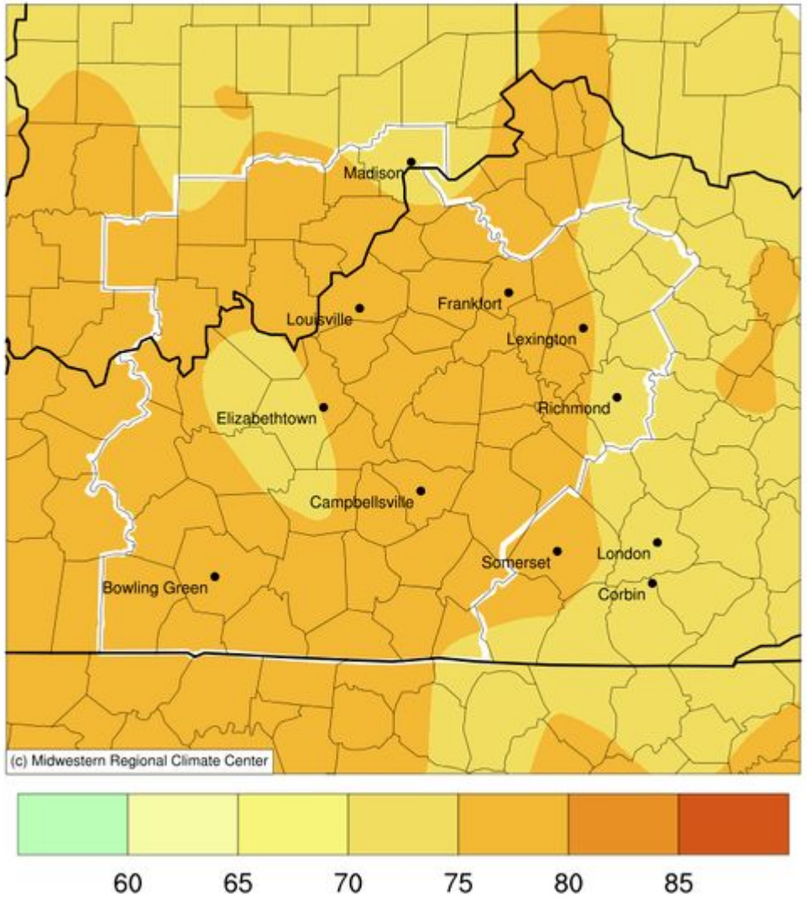
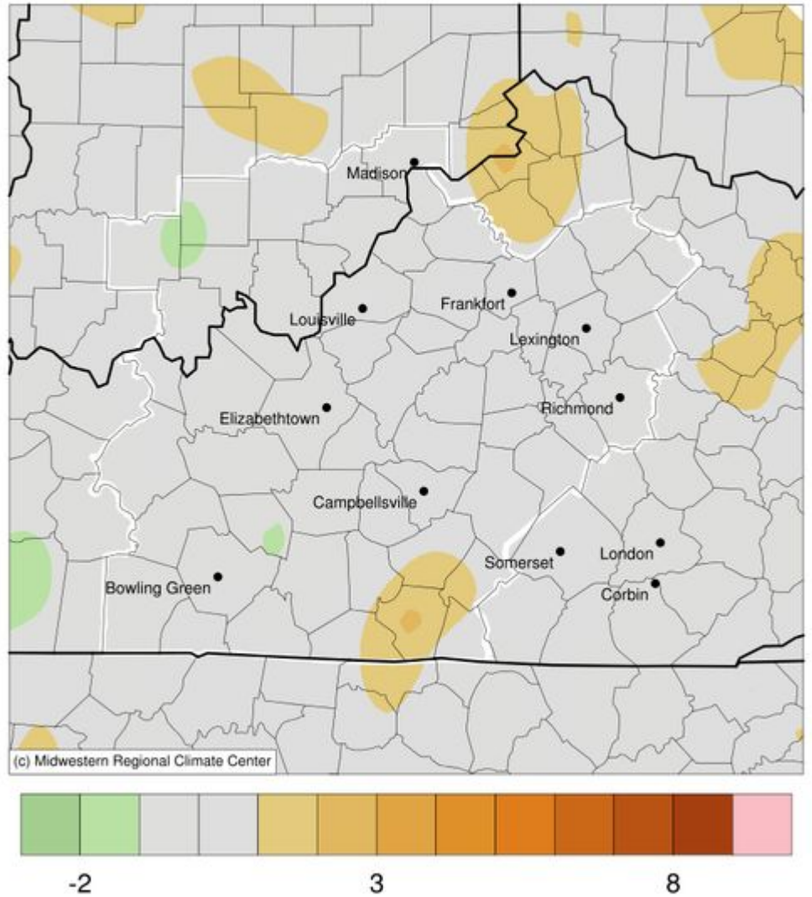
Average Temperature (°F)

August 01, 2024 to August 31, 2024



Average Temperature (°F): Departure from 1991-2020 Normals

August 01, 2024 to August 31, 2024



Source: MRCC

Precipitation Maps

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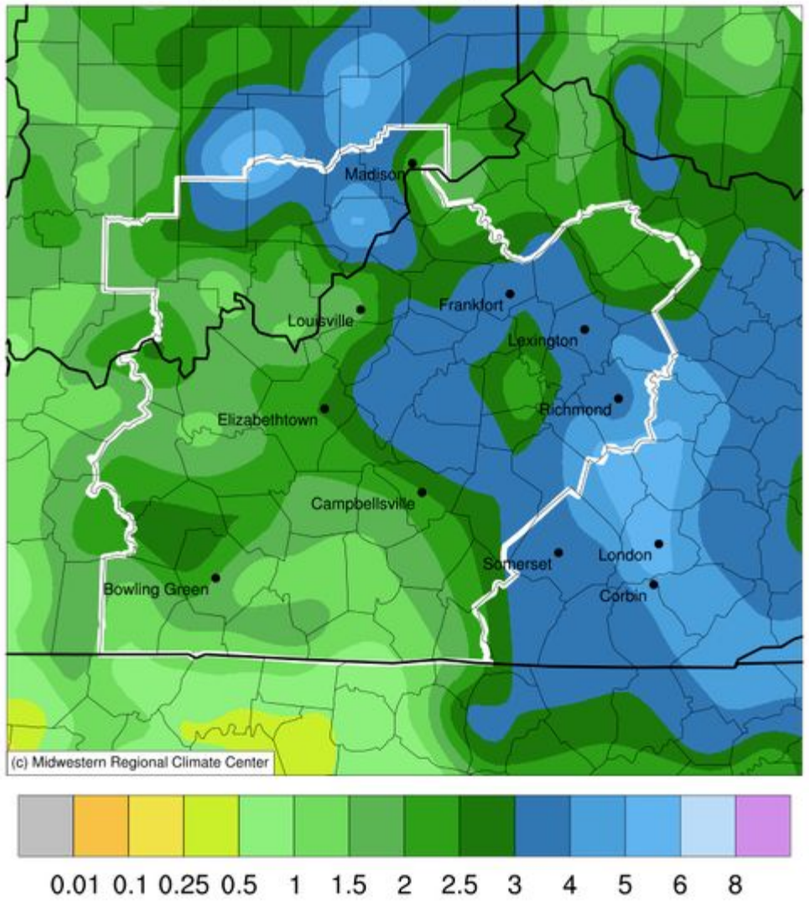
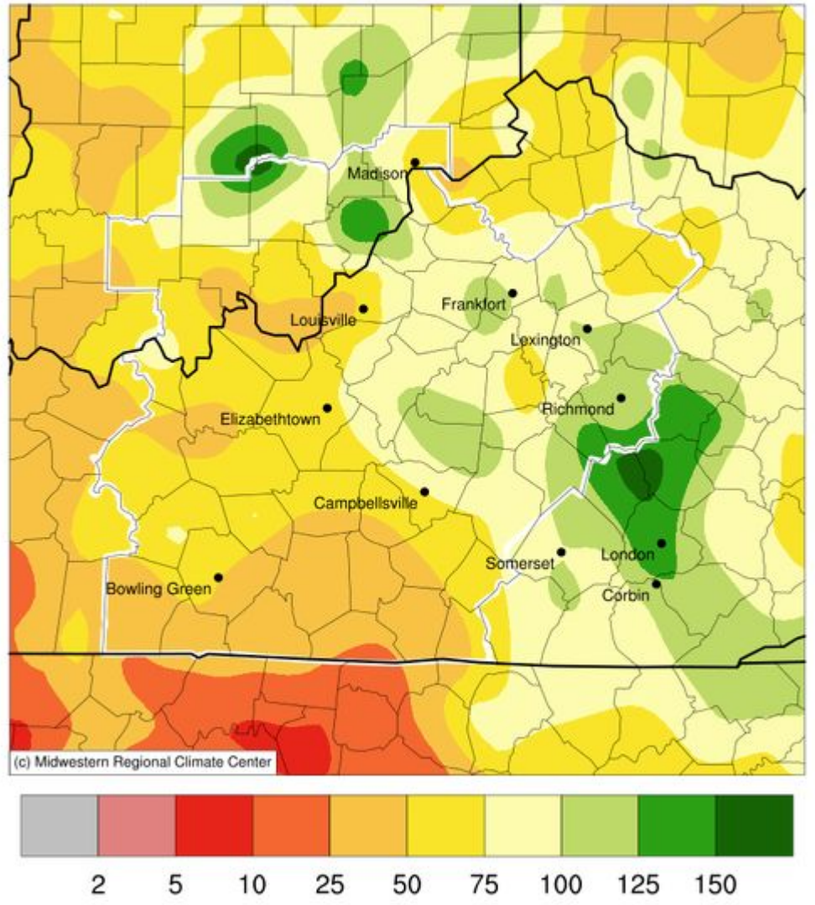
Accumulated Precipitation (in)

August 01, 2024 to August 31, 2024



Accumulated Precipitation (in): Percent of 1991-2020 Normals

August 01, 2024 to August 31, 2024



Source: MRCC

Preliminary Severe Weather Reports

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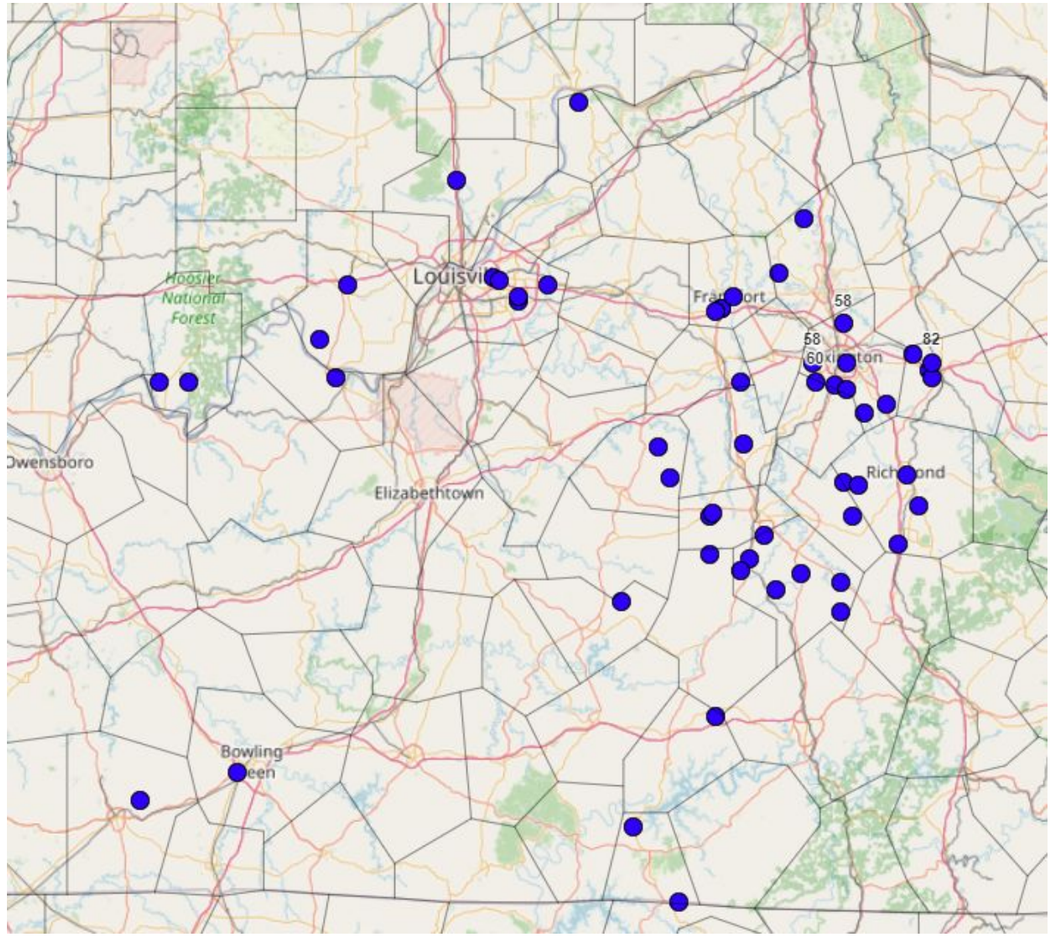
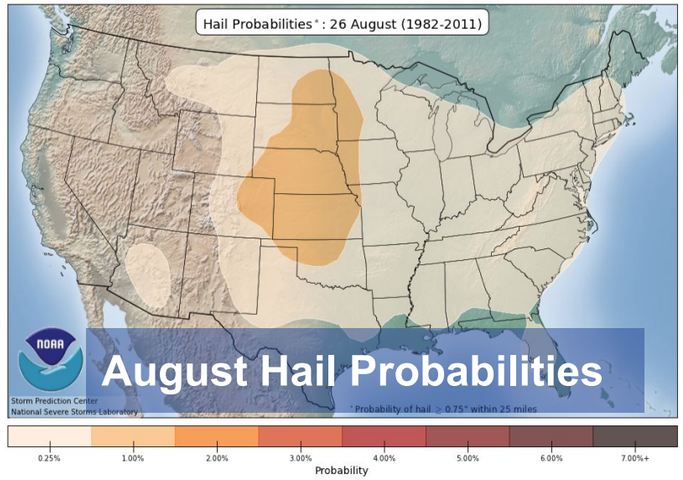
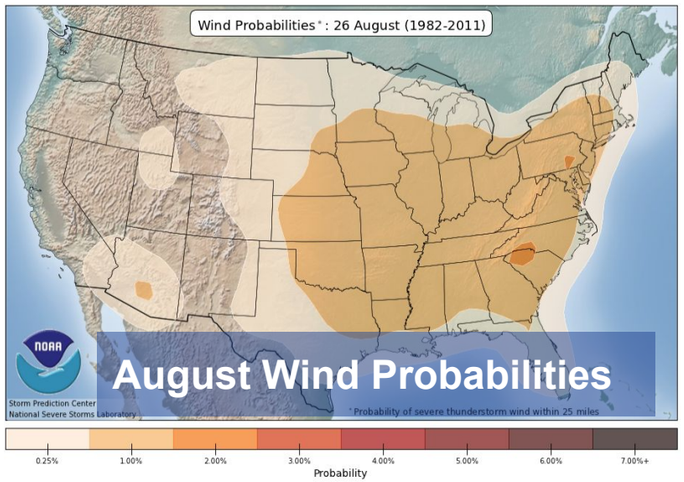
August 1-31, 2024

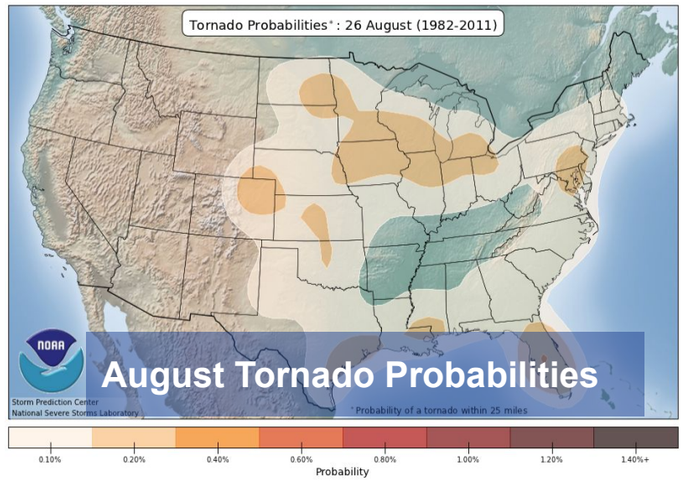
Source: [NWS Severe Verification Helper]



As shown on the map to the left, all reports of severe weather received by NWS Louisville in August were for strong or damaging wind gusts. The maps below and to the right show climatological probabilities of severe hail (hailstones at least an inch in diameter), severe wind gusts (at least 58 mph), and tornadoes in late August. Note how the probabilities for wind are higher than those for tornadoes and severe hail.







U.S. Drought Monitor Maps & Class Change

September 1, 2024
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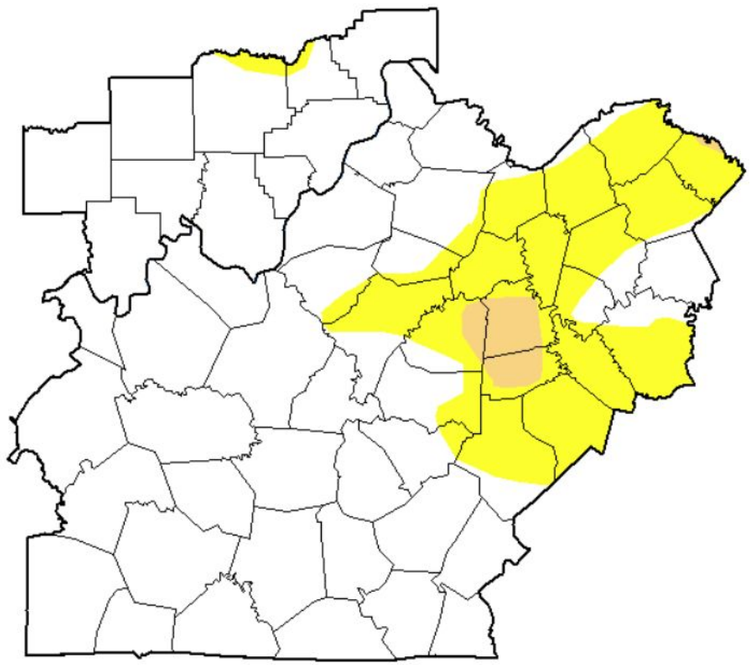
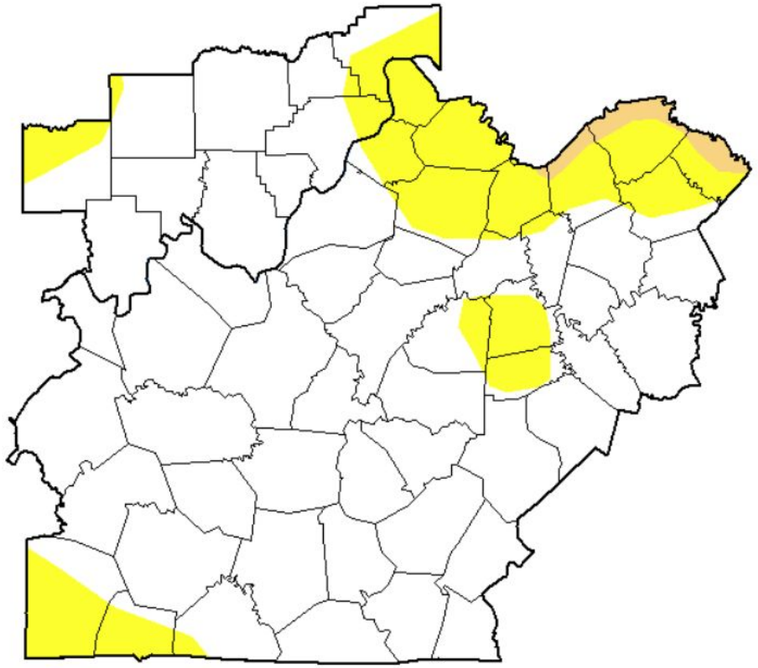


August 6, 2024



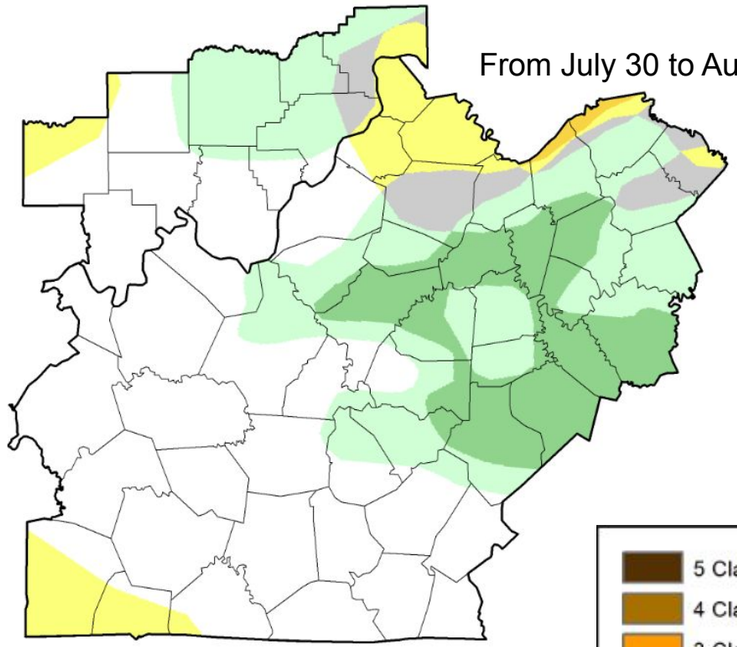
August 27, 2024

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

U.S. Drought Monitor Class Change - Louisville, KY WFO
4 Week

From July 30 to August 27



- 5 Class Degradation
- 4 Class Degradation
- 3 Class Degradation
- 2 Class Degradation
- 1 Class Degradation
- No Change
- 1 Class Improvement
- 2 Class Improvement
- 3 Class Improvement
- 4 Class Improvement
- 5 Class Improvement

Source: USDM

National Oceanic and Atmospheric Administration
U.S. Department of Commerce

National Weather Service
Louisville, KY

Monthly Streamflow Anomalies for the Ohio Valley

September 1, 2024
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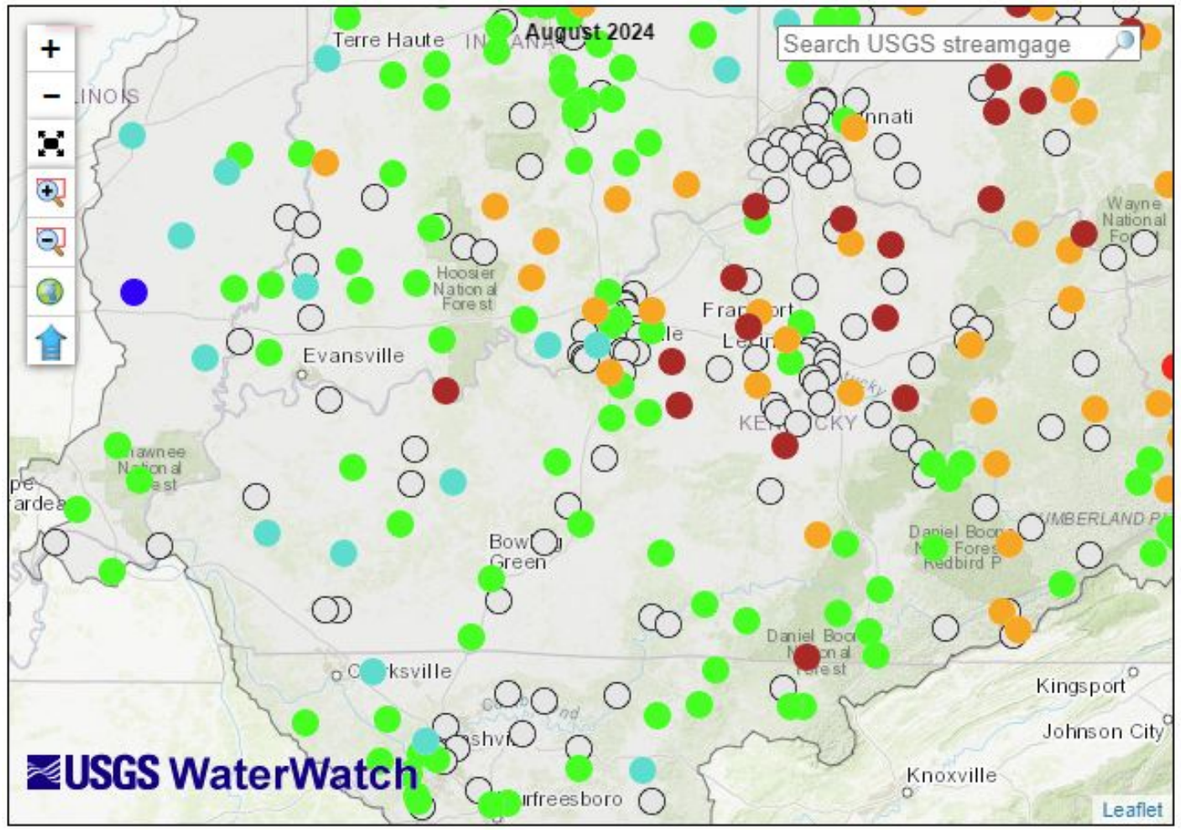
August 2024

Map of monthly average streamflow compared to historical streamflow for the month of the year



Source: USGS

Though rain occurred on several days during the month in the Blue Grass, those rains came in the form of spotty showers and storms. Some storms did drop very heavy rain, but very quickly and over small geographical areas. As a result, overall average streamflows for the month were below normal for much of the area from southern Indiana to eastern Kentucky.

Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

CPC Monthly Outlook - September 2024

September 1, 2024
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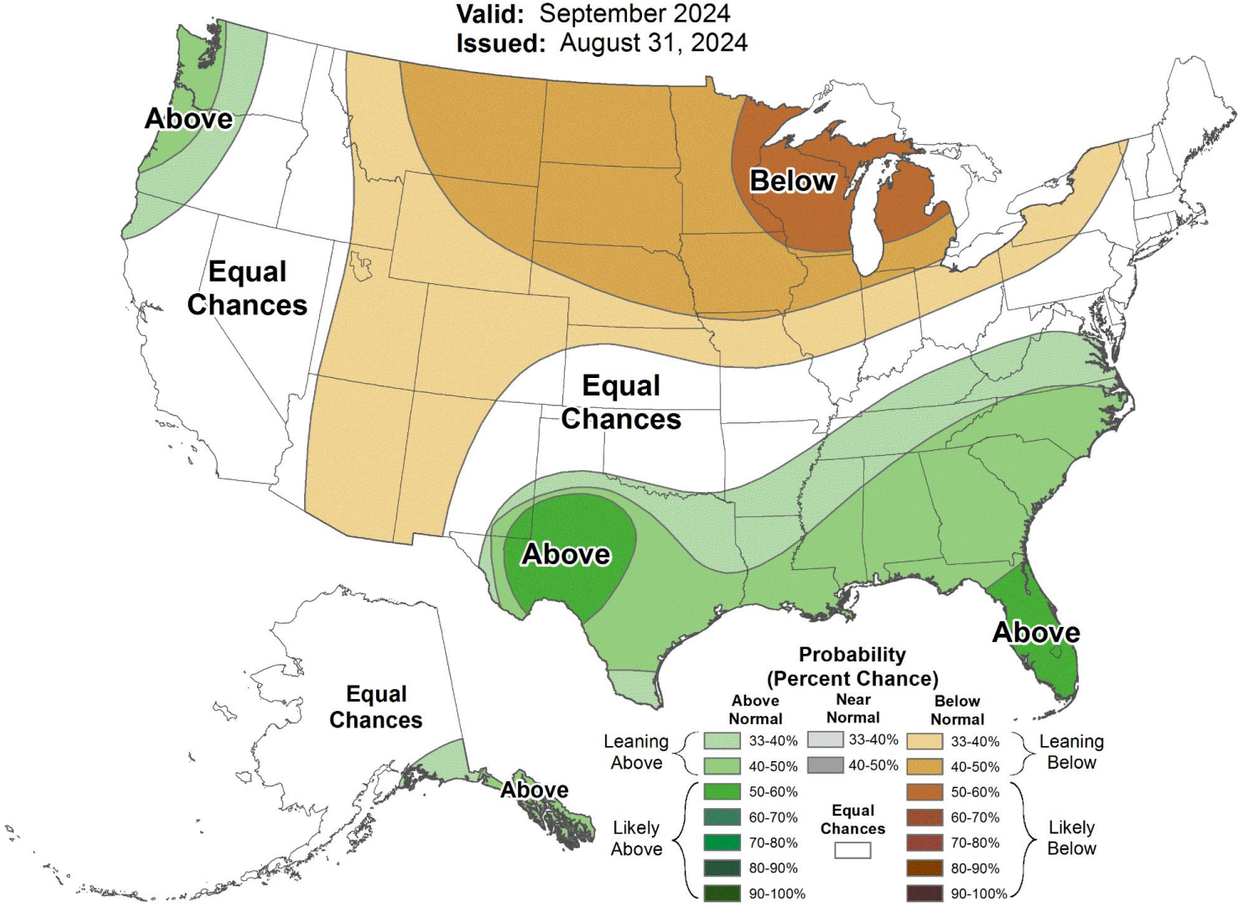
The first half of the month is expected to be cooler than normal, with a warm-up for the second half of the month.

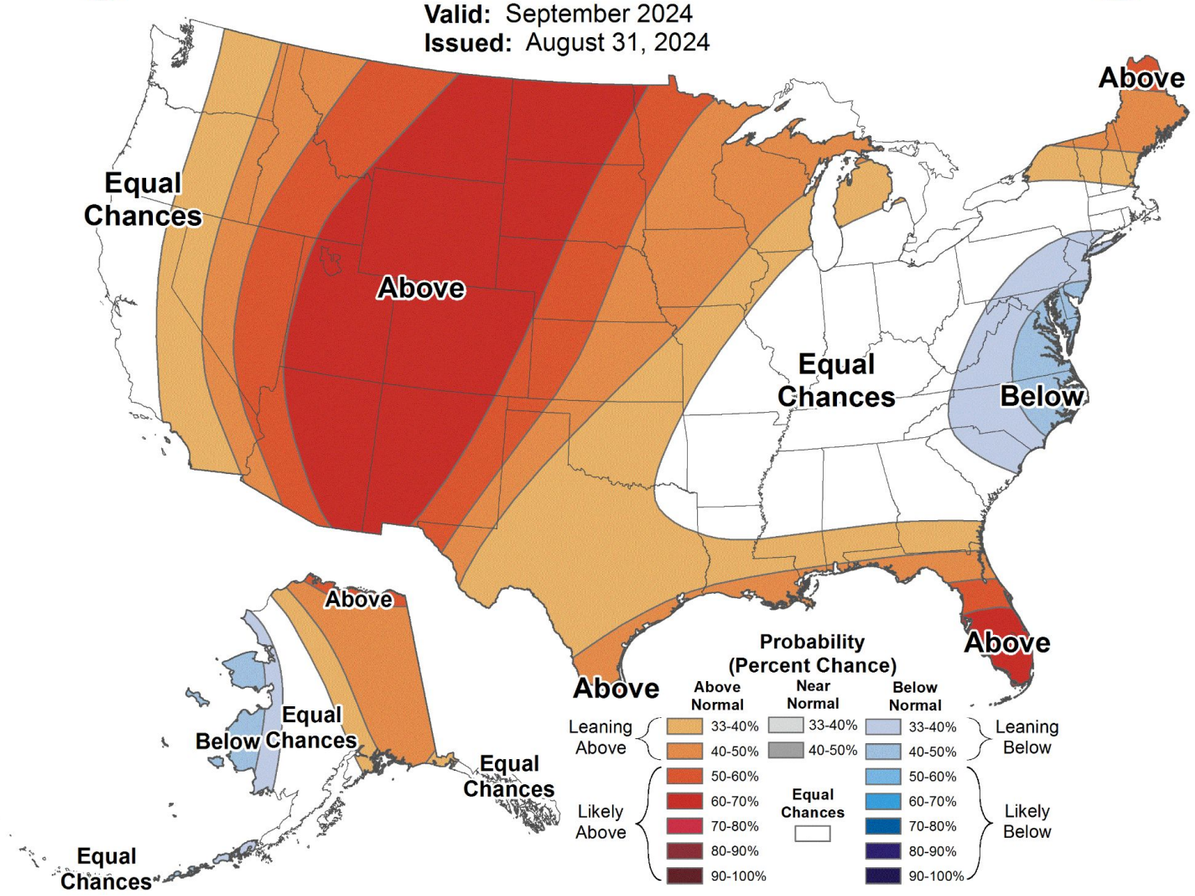
Monthly Precipitation Outlook

Valid: September 2024
Issued: August 31, 2024



Monthly Temperature Outlook

Valid: September 2024
Issued: August 31, 2024



Source: [Climate Prediction Center, NOAA]