

July 2025

Precipitation

Precipitation during July was generally above normal across northern and eastern Kentucky, while portions of south-central Kentucky experienced below-normal rainfall. Much of the monthly precipitation came from scattered thunderstorms, leading to highly variable totals across the state.

The month began on a dry note, but conditions shifted during the second week as isolated to scattered storms developed on a near-daily basis. These storms occasionally produced localized flash flooding. Drier conditions returned during the final week of the month.

As of the July 29th update from the U.S. Drought Monitor (USDM), Kentucky was completely free of drought and abnormally dry conditions. A small area of Abnormally Dry (D0) was introduced on July 8th, mainly in Carroll and Trimble counties, but was removed the following week.

Preliminary data shows the state averaged 4.96 inches of precipitation in July -0.56 inches above the climatological norm- ranking as the 45th wettest July on record since 1895. For the year to date, Kentucky has received an average of 44.54 inches, 14.77 inches above normal and marks the wettest January through June period on record.

According to data from the Kentucky Mesonet, Morgan County recorded the highest rainfall total at 11.55 inches, while Fulton County recorded the lowest at 1.36 inches.

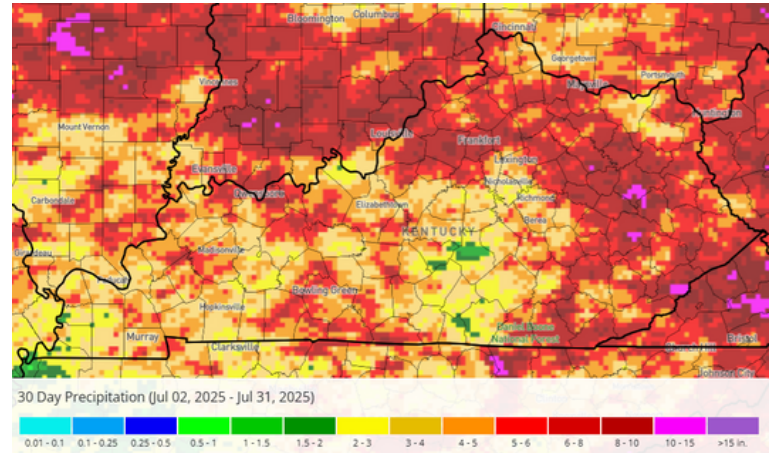


Figure 1. Monthly precipitation map.

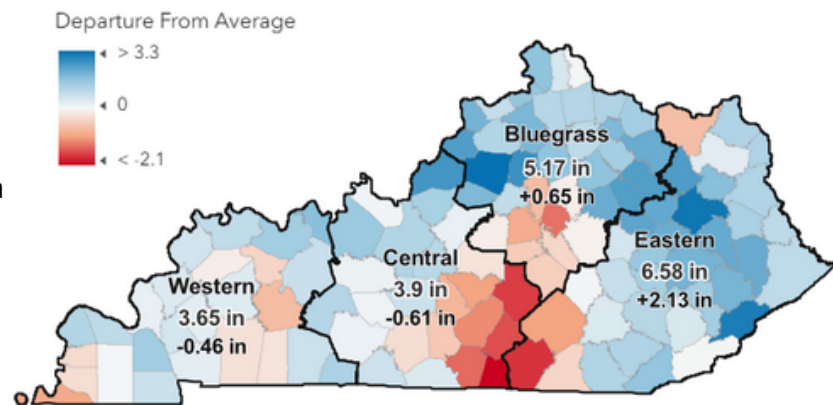


Figure 2. Departure from normal precipitation by county and climate division.

Table 1. Regional precipitation patterns

Climate Region	Departure From Normal (inches)					Palmer Drought Severity Index*
	This Month	Past 2 Mos.	Past 3 Mos	Past 6 Mos	Past 12 Mos	
Western	-0.46	2.87	4.38	15.33	19.96	5.07
Central	-0.61	1.78	4.72	17.45	18.02	4.61
Bluegrass	0.65	1.32	3.46	13.50	14.36	3.23
Eastern	2.13	2.67	4.98	11.53	12.15	2.60

*4.0 and above (Extremely Moist) -2.0 to -2.9 (Moderate Drought)
 3.0 to 3.9 (Very Moist Spell) -3.0 to -3.9 (Severe Drought)
 2.0 to 2.9 (Unusual Moist Spell) -4.0 or less (Extreme Drought)
 -1.9 to 1.9 (Near Normal)

U.S. Drought Monitor Kentucky

July 29, 2025
(Released Thursday, Jul. 31, 2025)
Valid 8 a.m. EDT



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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droughtmonitor.unl.edu

Figure 3. Current US Drought Monitor Map.

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Streamflow

Streamflows in July started the month above normal across the state. Flows then generally decreased throughout the month as temperatures increased and precipitation patterns became more scattered in nature, as we typically see this time of year. Peaks in flow occurred in locations receiving heavy rain from storms. Overall, baseflows across most watersheds remain at or above normal for this time of year.

Flow in the Ohio River remains normal.

There are currently no concerns regarding streamflow in the state.

7 Day Streamflows

- Above Normal
- Normal
- Below Normal
- Much Below Normal
- Water Shortage Watch
- Water Shortage Warning
- Watershed

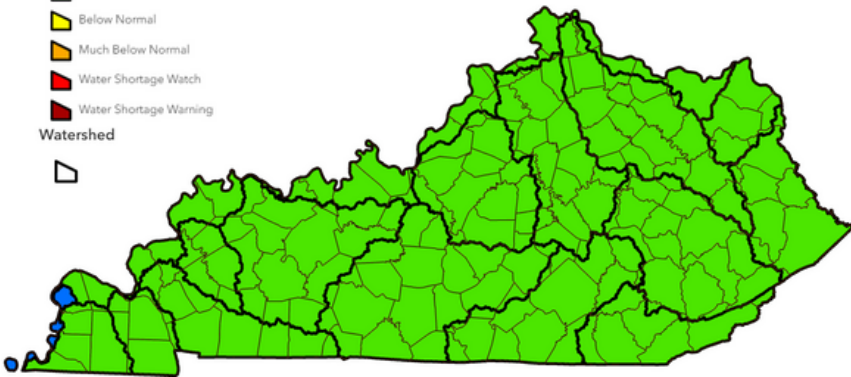


Figure 5. Average streamflow by watershed over the past 7-days (July 25-31).

28 Day Streamflows

- Above Normal
- Normal
- Below Normal
- Much Below Normal
- Water Shortage Watch
- Water Shortage Warning
- Watershed

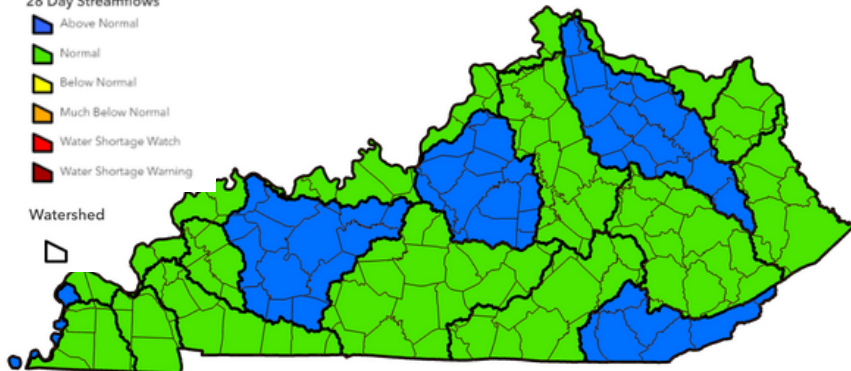


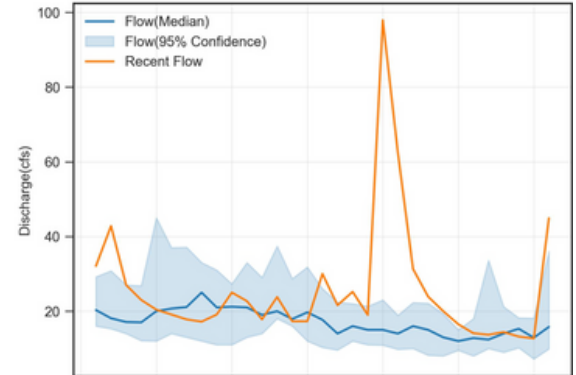
Figure 6. Average streamflow by watershed over the past 28-days (July 4-31).

Table 2. Mean Stream Discharge select stream gages.

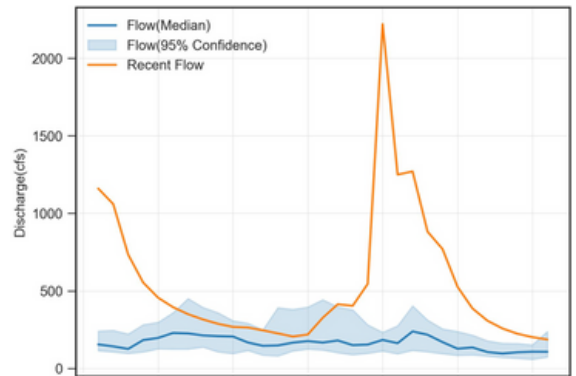
River and Location	Drainage Area (mi ²)	7 Day		28 Day	
		Average Flow (cfs)	% of Normal*	Average Flow (cfs)	% of Normal*
Levisa Fork at Pikeville	2144	933	119	1219	158
Little Sandy River near Grayson	400	158	61	170	68
North Fork Licking River nr Mt Olivet	226	79	48	156	96
Kentucky River at Lock 14	2657	1377	67	1551	78
Kentucky River at Lock 2	6180	3065	66	3096	69
Cumberland River at Cumberland Falls	1977	1162	59	1438	77
Beaver Creek near Monticello	43	5.5	18	7.2	26
Beech Fork at Bardstown	669	118	18	214	35
Barren River at Bowling Green	1849	3693	186	3901	202
Green River at Calhoun	7566	8384	119	10164	151
Tradewater River at Olney	255	46	25	73	41
Clarks River at Almo	134	29	22	86	72
Bayou De Chien near Clinton	69	25	32	49	66
Ohio River at Greenup Dam	62000	40825	76	48010	92
Ohio River at Cannelton Dam	97000	66367	85	73877	97
Mississippi River @ Thebes, IL	713200	337500	181	305724	154

* Base Period 1980-2023

Johns Creek near Meta,
July 2025



Rolling Fork near Boston,
July 2025



Pond River near Apex,
July 2025

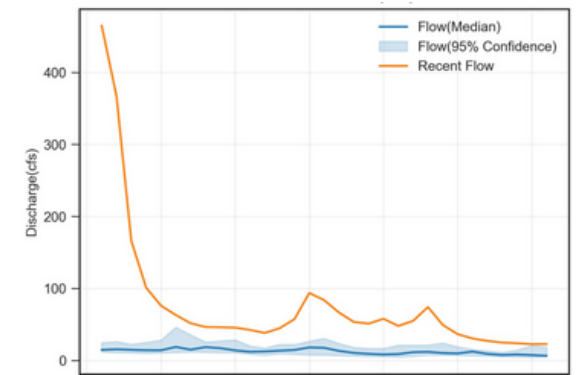


Figure 7. Streamflows compared to median flows for the month.

July 2025

Reservoir Storage

Reservoir storage for water supply lakes remain normal to above normal for the entire state.

Most water supply lakes are currently in the draw down stage, as withdrawals and evaporation outpace inflow, resulting in reservoirs that are below normal pool. This is normal for this time of year. There are no concerns with reservoir water supplies and currently, none are expected to develop.

Groundwater

General Statement: Kentucky is a geologically, and hydrogeologically, diverse state. Groundwater data is limited in availability and where available may only be applicable to the immediate area given regional geologic variability. Local conditions may not be accurately reflected by the reference locations selected and local rainfall and surface water conditions may provide additional or more representative information. Current data is compared to a 30-year reference period (1980 – 2010) or the longest available period of continuous data.

Inner Bluegrass: Flow at Royal Springs (Scott Co.) returned towards the median and within the confidence interval for the reference period. The recession from well above median values was briefly halted by renewed rainfall but continued to recede by the last week of July. Through August, and likely into September, groundwater levels will likely decline in response to continued high evapotranspiration.

Jackson Purchase: Water levels in the Viola Well (Graves Co.) were well above median values for the month of July but fell close to 1.5 feet along a similar trend to the reference. Groundwater levels are expected to trend lower as summer continues seeking an equilibrium between recharge from rainfall and the influence of evapotranspiration and locally, pumping for irrigation.

Middlesboro: Water levels within the Middlesboro well (Bell Co.) were above or at the median of the reference period across almost all of July. Across the month, the observed water levels were similar to the trend in median water level. Groundwater levels are expected to fall to seasonal levels as summer continues and evapotranspiration remains high.

Additional data can be found at:
<https://www.uky.edu/KGS/water/water-groundwater-monitoring.php>

Figure 8. Locations of reference reservoirs across the state. Status of reservoir levels indicated by color.

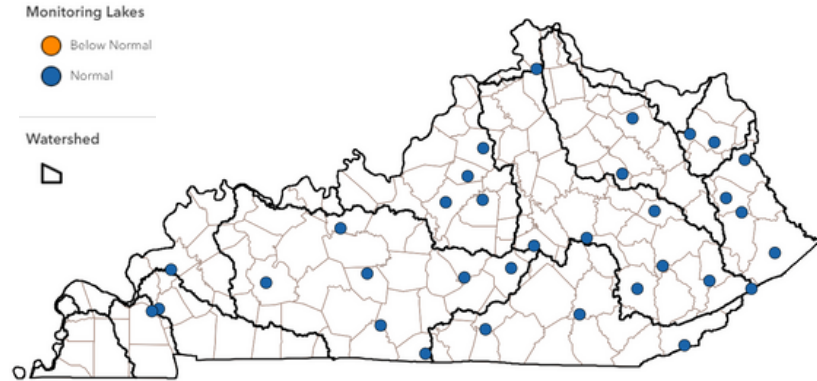
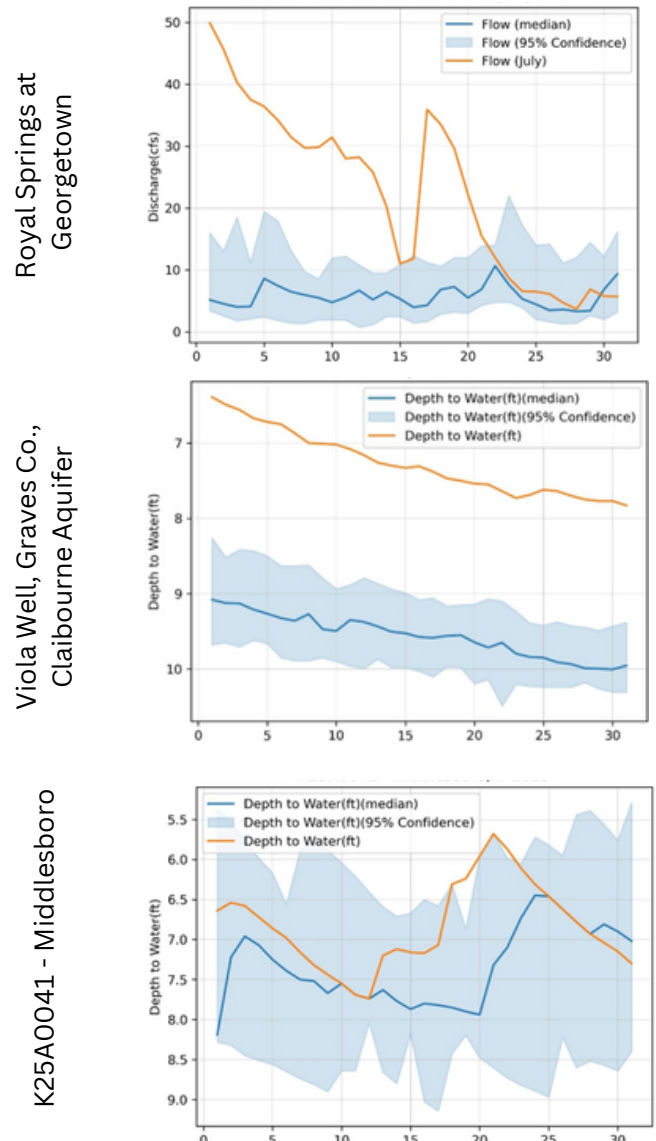


Figure 9. Groundwater observations compared to normal for the month.



July 2025

Forecast

The Climate Prediction Center (CPC) is currently predicting increased chances for above normal precipitation for the majority of Kentucky during August and for the three-month period of August through October. The darker green indicates a higher amount of confidence in above normal precipitation. The short-term forecasts are predicting a continuation of the scattered storms for the beginning of August. Much of this will be in the form of "hit-or-miss" convective thunderstorms so precipitation will not be evenly distributed.

The current U.S. Monthly Drought Outlook shows no drought is expected to develop in Kentucky during the month of August.

Note: these forecasts do not provide the quantity above or below normal, just the probability it will occur.

U.S. Monthly Drought Outlook Drought Tendency During the Valid Period

Valid for August 2025
Released July 31, 2025

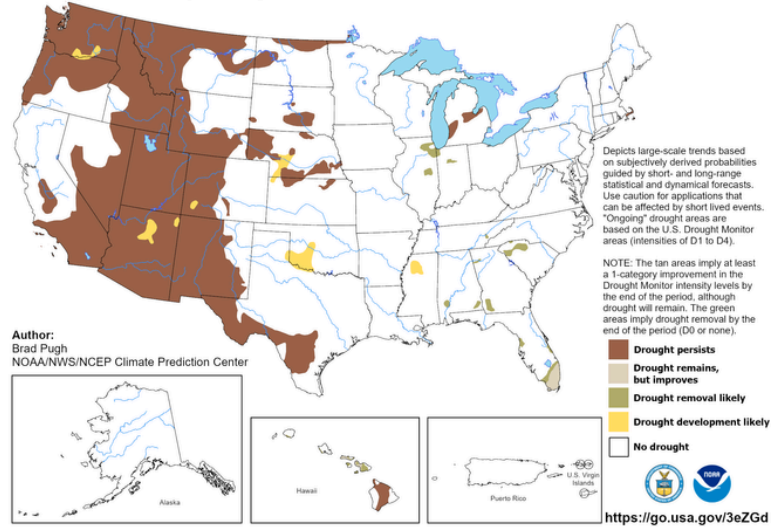


Figure 10. Monthly drought outlook.

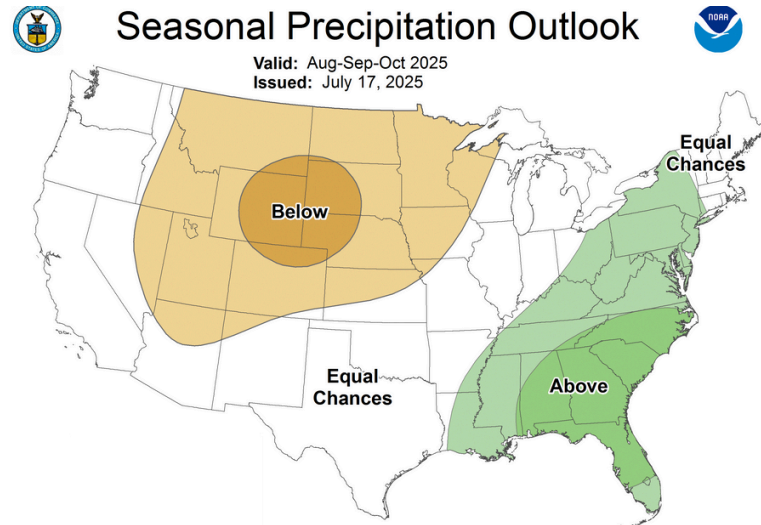
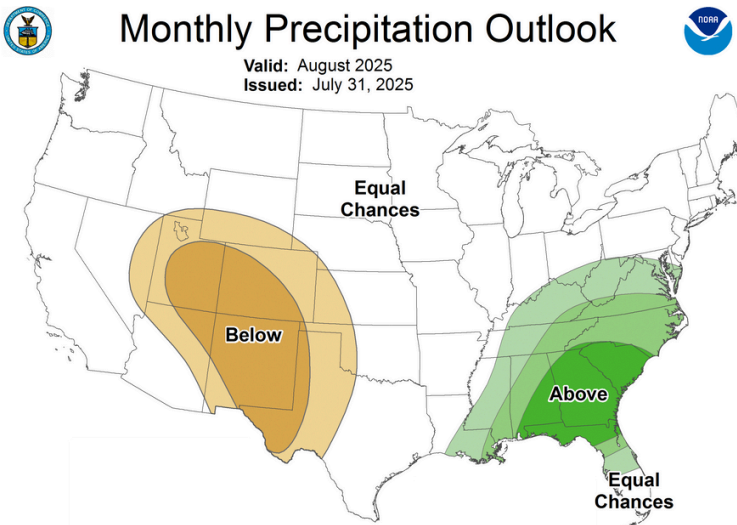


Figure 11. Monthly and seasonal precipitation outlooks.

Contact Us

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Report Drought Conditions



Acknowledgments

Precipitation Data:

U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Centers for Environmental Information; Kentucky Mesonet; Midwest Regional Climate Center; Southern Regional Climate Center.

Streamflow Data:

U.S. Geological Survey, Water Resources Division.

Reservoir Data:

U.S. Army Corps of Engineers, Huntington, Louisville, and Nashville Districts; Kentucky Division of Water, Water Supply Section.

Forecast Data:

U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Climate Prediction Center.