

December 2025

## Precipitation

Precipitation in December was below normal across the entire state, with the driest conditions observed in western Kentucky. The first two weeks of the month were marked by multiple cold fronts that produced light rain and snow, primarily across central and eastern Kentucky. Below-normal temperatures limited the amount of moisture available to these systems. The most significant precipitation event occurred on December 18, when up to 2 inches of precipitation fell across central Kentucky, with lighter amounts recorded to the east and west. The remainder of the month was relatively quiet, with only a few weak systems bringing light rainfall to the state.

Overall, areas west of I-65 received less than 50 percent of normal precipitation for the month, while areas east of I-65 received approximately 50 to 75 percent of normal precipitation.

As of the December 30th U.S. Drought Monitor, Abnormally Dry (D0) conditions were depicted across much of western Kentucky and in southeastern Kentucky along the Tennessee and Virginia borders. Preliminary data indicated the state average 2.27 inches of precipitation for the month, 2.16 inches below the climatological norm, and ranked as the 16th driest December on record since 1895.

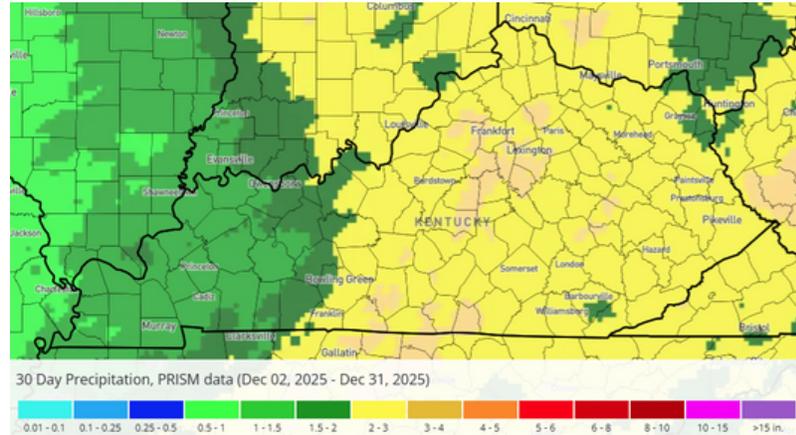
According to the Kentucky Mesonet, Clinton County recorded the highest monthly rainfall at 3.22 inches, while Caldwell County had the lowest at 0.84 inches.

**Table 1. Regional precipitation patterns.**

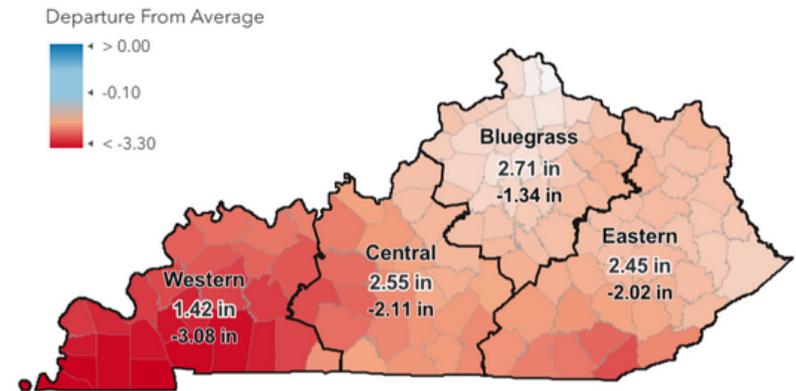
Climate Region	Departure From Normal (inches)					Palmer Drought Severity Index*
	This Month	Past 2 Mos.	Past 3 Mos	Past 6 Mos	Past 12 Mos	
Western	-3.08	-4.53	-2.67	-5.15	10.51	2.57
Central	-2.11	-2.97	-1.51	-3.50	12.83	2.65
Bluegrass	-1.34	-1.66	0.15	-1.14	10.01	2.35
Eastern	-2.02	-2.11	-1.55	-2.49	6.50	1.40

\*4.0 and above (Extremely Moist)  
3.0 to 3.9 (Very Moist Spell)  
2.0 to 2.9 (Unusual Moist Spell)  
-1.9 to 1.9 (Near Normal)

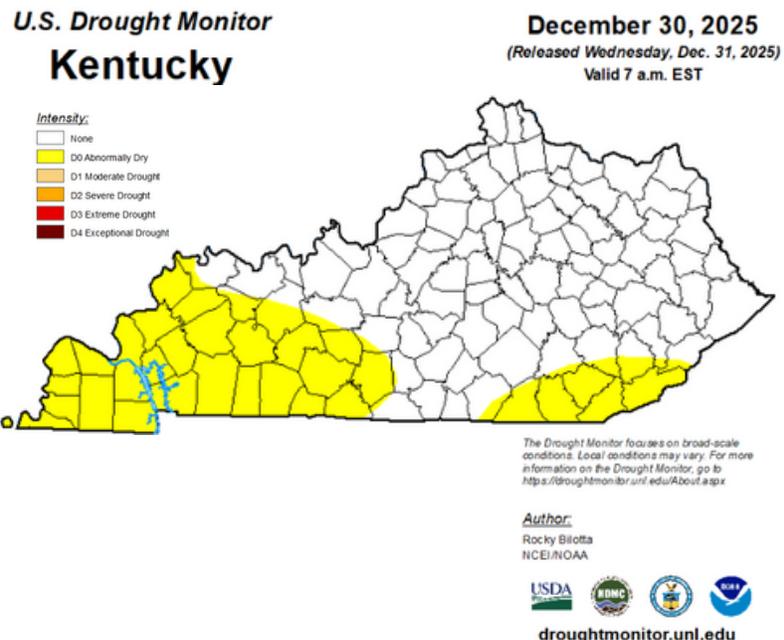
-2.0 to -2.9 (Moderate Drought)  
-3.0 to -3.9 (Severe Drought)  
-4.0 or less (Extreme Drought)



**Figure 1. Monthly precipitation map.**



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



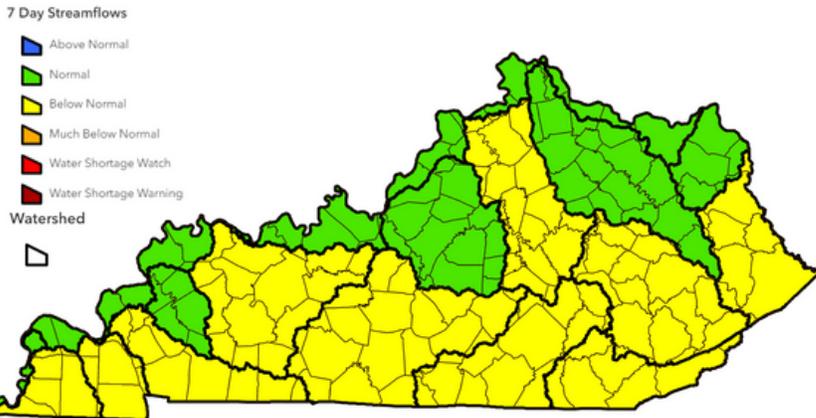
**Figure 3. Current US Drought Monitor Map.**

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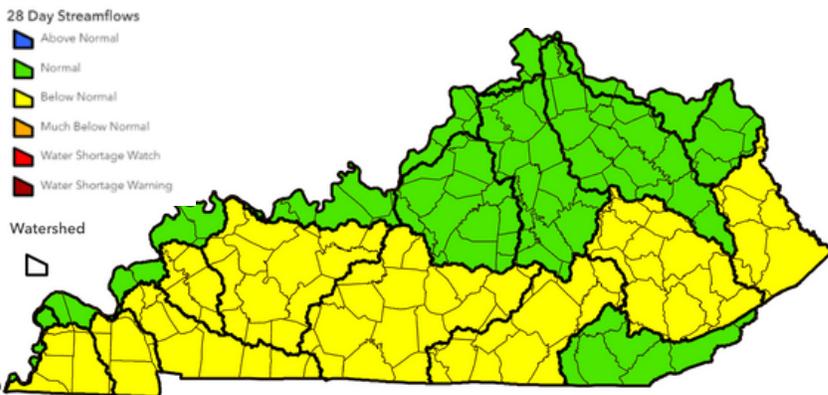
## Streamflow

Streamflow in December started the month at or below normal across the Commonwealth but varied throughout the month, depending upon the location of the watershed. Streamflow in central and much of eastern Kentucky remained near normal for much of the month with a large spike in flow during the precipitation event mid-month. Streamflows in areas that saw less precipitation mid-month, mainly western and southeastern Kentucky, remain below normal for most of the month.

Despite the below normal flows, there are no concerns. Average flows this time of year are significantly higher than they are in summer and fall. So, while flows are below normal, there is no shortage of water in the Commonwealth's streams and rivers. If the below normal flows were to continue through spring, then there could be issues for the up coming summer, but that is not a concern at this time.



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

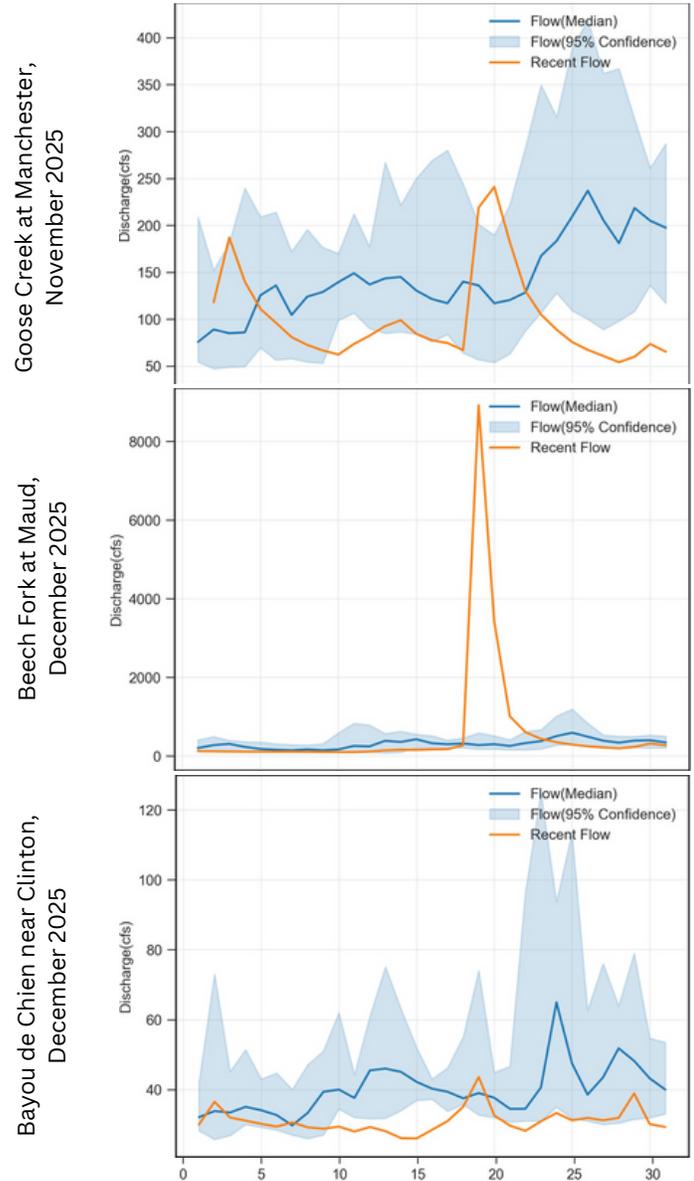


**Figure 6.** Average streamflow by watershed over the past 28-days (December 4-31).

**Table 2.** Mean Stream Discharge select stream gages.

River and Location	Drainage Area (mi <sup>2</sup> )	7 Day		28 Day	
		Average Flow (cfs)	% of Normal*	Average Flow (cfs)	% of Normal*
Levisa Fork at Pikeville	2,144	456	36	802	63
Little Sandy River near Grayson	400	200	33	289	56
North Fork Licking River near Mt. Olive	226	139	84	279	77.0
North Fork Kentucky River at Jackson	1,101	404	29	514	39
Kentucky River at Lock 10	2,950	1,939	32	2,654	44
Cumberland River at Cumberland Falls	1,977	1,239	28	1,529	34
Beaver Creek near Monticello	43	7.7	10	15.0	20
Beech Fork at Bardstown	669	499	58	960	64
Barren River at Bowling Green	1,849	2,087	56	1,425	40
Green River at Calhoun	7,566	8,174	47	5,903	39
Tradewater River at Olney	255	40	5.9	36	6.4
Clarks River at Almo	134	40	13	42	12
Bayou De Chien near Clinton	69	32	18	31	17
Ohio River at Greenup Dam	62,000	80,150	81	54,393	54
Ohio River at Cannelton Dam	97,000	108,175	68	89,513	59
Mississippi River @ Thebes, IL	713,200	89,713	50	87,331	47

\* Base Period 1980-2023



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

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## Reservoir Storage

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

We are in the time of year when reservoirs typically recharge, as inflow increases and outpaces withdrawals and evaporation. The drier conditions in December has likely limited this recharge. However, the recharge stage should continue until late spring and into summer, leaving plenty of time for reservoirs to return to normal pool.

There are no concerns with reservoir water supplies and none are expected to develop at this time.

## 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.

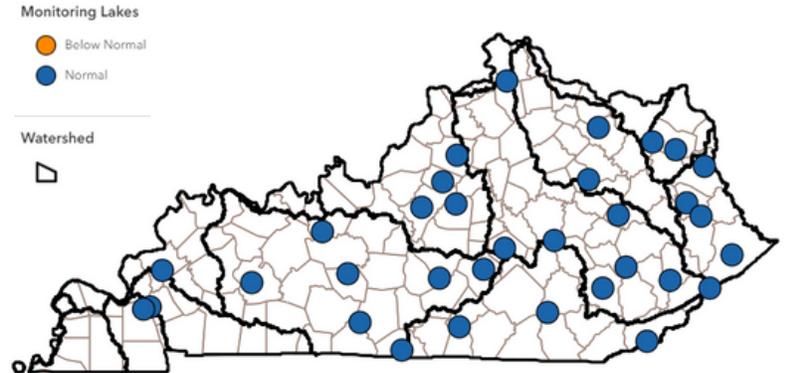
Inner Bluegrass: Flow at Royal Springs (Scott Co.) was around the reference median for the first half of December. Peak flow occurred on Dec. 19th in response to rainfall with flow above 80 cubic feet per second. With Fall ending, groundwater levels are expected to have stabilized. For the year, flow at Royal Springs has been above normal.

Jackson Purchase: Jackson Purchase: Water levels in the Viola Well (Graves Co.) began December above the reference median but fell to roughly equal by the end of the month. Water levels within December 2025 were within the confidence interval for the reference period. Groundwater levels are expected to remain stable or begin to recover towards seasonal highs over the winter.

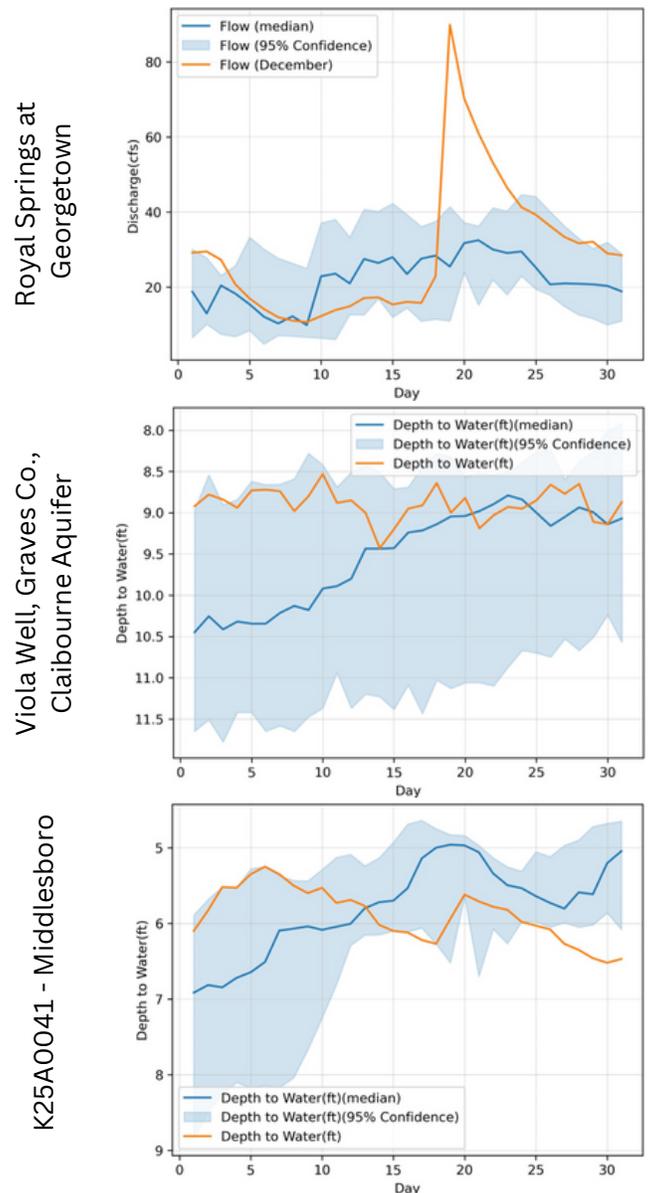
Middlesboro: Water levels within the Middlesboro well (Bell Co.) began above the reference period median but fell across the last half of the month. Water levels are expected to stabilize with variation occurring after or between rainfall events. For the year, water levels have generally been higher than the reference period.

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.



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## 2025 Year End Review

The past year was a year of extremes for Kentucky, with two historic flooding events in February and April, but also a Moderate to Severe dry period that peaked in September. The Commonwealth finished 2025 with the 10th wettest year on record with 57.43" of precipitation, 9.67 inches above normal. This is despite having the driest August and 16th driest December on record. Two months, February and April, were top ten wettest.

The February flood event was the result of 2 to 6 inches of precipitation on February 15th, resulting in widespread flash flooding and river flooding. The April flood event was the result of waves of rain that brought upwards of 10 inches of precipitation over western and central Kentucky from April 2nd to the 6th. This resulted in record high crests along the Green River and the second-highest crest all-time of the Kentucky River in Frankfort. Despite all this rain, Kentucky had yet another fall drought across western and central Kentucky after recording the driest August on record, followed by a September where little to no rain fell before the last week of the month. At its peak, 68% of the Commonwealth was officially classified as being in drought by the U.S. Drought Monitor.

According to the Kentucky Mesonet, Hart County recorded the highest yearly rainfall at 69.44 inches, while Lawrence County had the lowest at 45.15 inches.

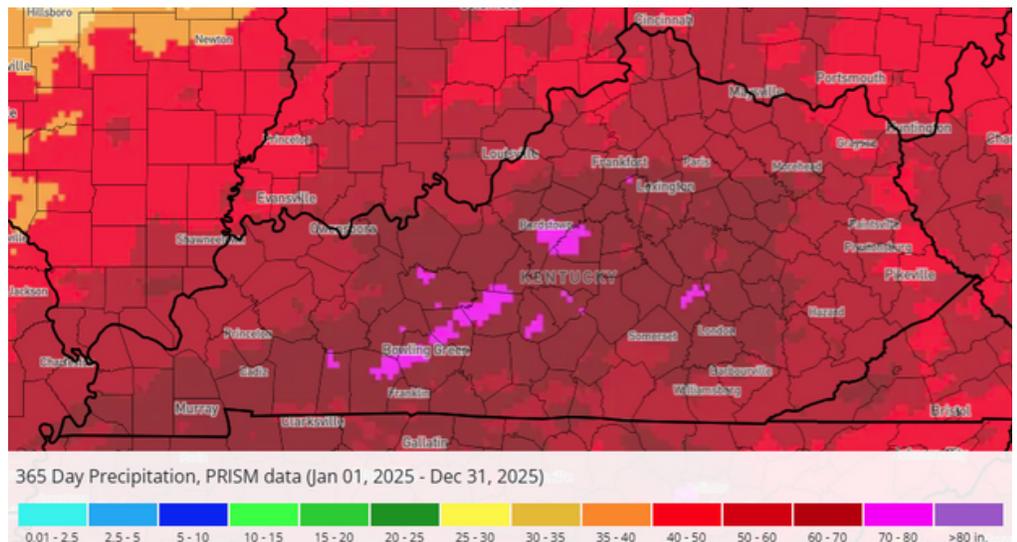
Rank	Year	Precipitation
1	2011	64.35"
2	2018	63.74"
3	1950	62.63"
4	1979	62.58"
5	2019	61.31"
6	1935	58.38"
7	2015	58.30"
8	2020	58.11"
9	1989	57.74"
10	2025	57.43"
11	1972	57.08"

**Figure 10.** The wettest years, on record, for Kentucky. Records go back to 1895

	Precipitation	Ranking
January	3.97"	63
February	7.55"	7
March	4.30"	76
April	8.95"	2
May	6.89"	11
June	5.86"	15
July	4.70"	54
August	1.33"	131
September	4.11"	27
October	4.80"	15
November	2.70"	87
December	2.27"	116

**Figure 11.** Precipitation totals for each month, along with ranking, 1 being the wettest and 131 the driest on record.

**Figure 12.** Map showing precipitation amounts for 2025.



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## Forecast

The Climate Prediction Center (CPC) is currently predicting equal chances for above or below normal precipitation for Kentucky during January. The seasonal forecast (January through March) is for above normal chances for above normal precipitation for all of Kentucky, with higher confidence along the Ohio River from Cincinnati to Paducah.

La Nina continues in the Pacific Ocean and is expected to continue into early this year. La Nina typically brings increased chances for above normal precipitation to the Great lakes and Ohio River Valley, including Kentucky.

The current U.S. Monthly Drought Outlook shows drought conditions are not expected to develop in Kentucky during January.

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 January 2026  
Released December 31, 2025

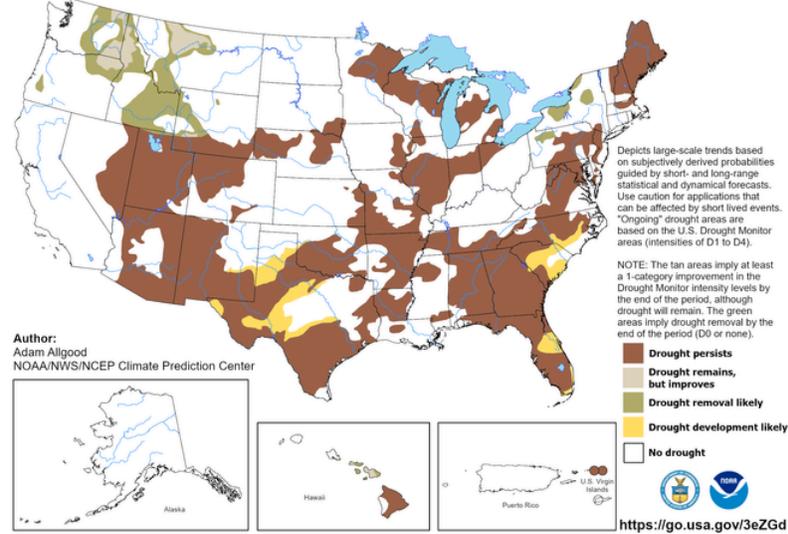
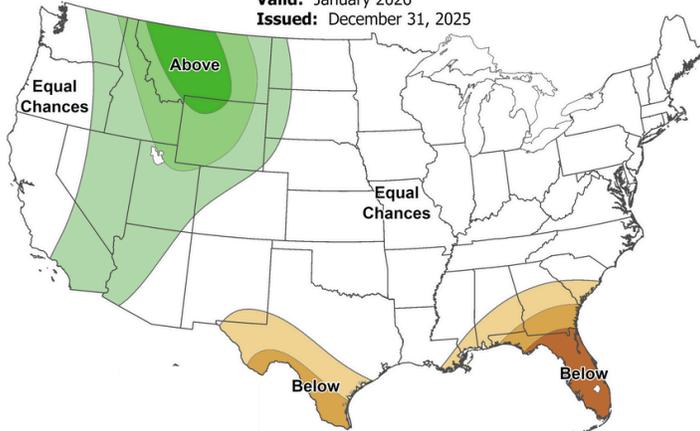


Figure 13. Monthly drought outlook.

### Monthly Precipitation Outlook

Valid: January 2026  
Issued: December 31, 2025



### Seasonal Precipitation Outlook

Valid: Jan-Feb-Mar 2026  
Issued: December 18, 2025

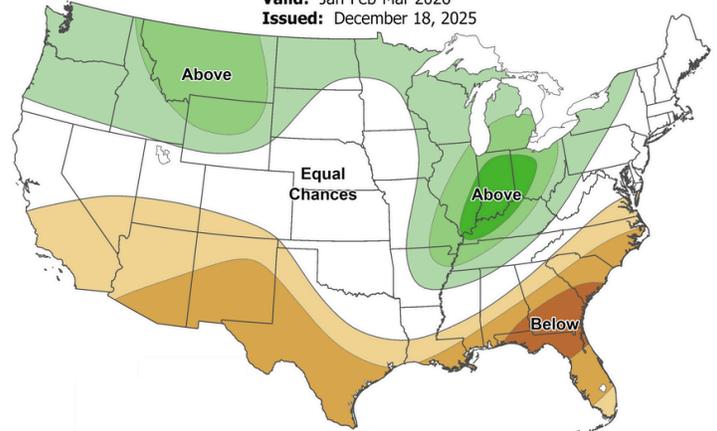


Figure 14. Monthly and seasonal precipitation outlooks.

## 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.