



Drought Information Statement for Southern Indiana and Central Kentucky

Valid October 3, 2024

Issued By: WFO Louisville KY

Contact Information: nws.louisville@noaa.gov

- This product will be updated once a month or more frequently if drought conditions change significantly.
 - Please see all currently available products at <https://drought.gov/drought-information-statements>.
 - Please visit <https://www.weather.gov/lmk/DroughtInformationStatement> for previous statements.
 - Please visit <https://www.drought.gov/drought-status-updates/> for regional drought status updates.
-
- The September 26 Drought Monitor indicated a corridor of Extreme Drought (D3) from New Castle to Harrodsburg, and D1/D2 drought across much of southern Indiana and central Kentucky.

 - Scattered showers and storms September 22-26 and Hurricane Helene's remnants September 27-October 1 erased all drought in the area.

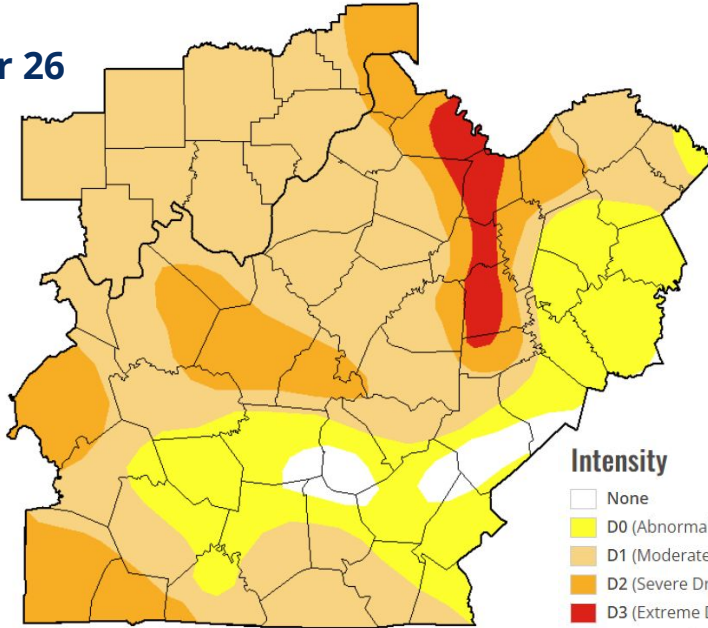




U.S. Drought Monitor

U.S. Drought Monitor

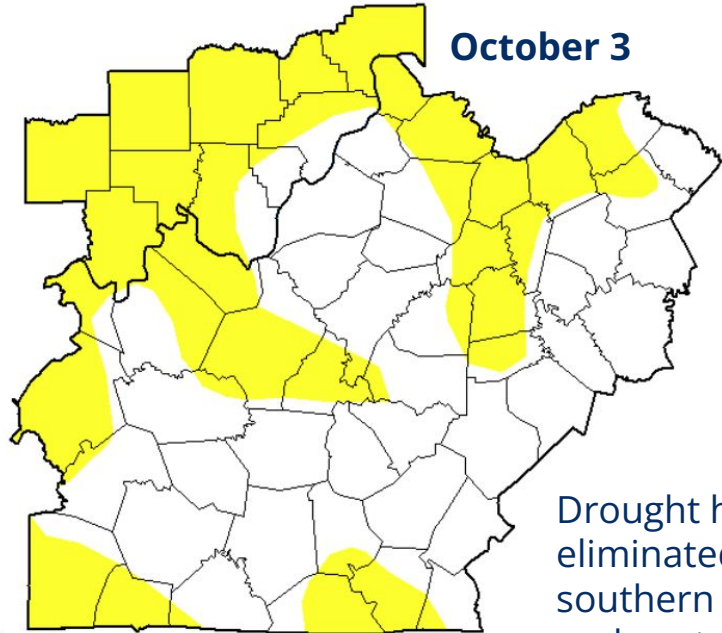
September 26



Intensity

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

October 3



Drought has been eliminated in southern Indiana and central Kentucky.

Week	None	D0-D4	D1-D4	D2-D4	D3-D4
2024-10-01	56.57	43.43	0.00	0.00	0.00
2024-09-24	3.28	96.72	75.38	21.97	2.96

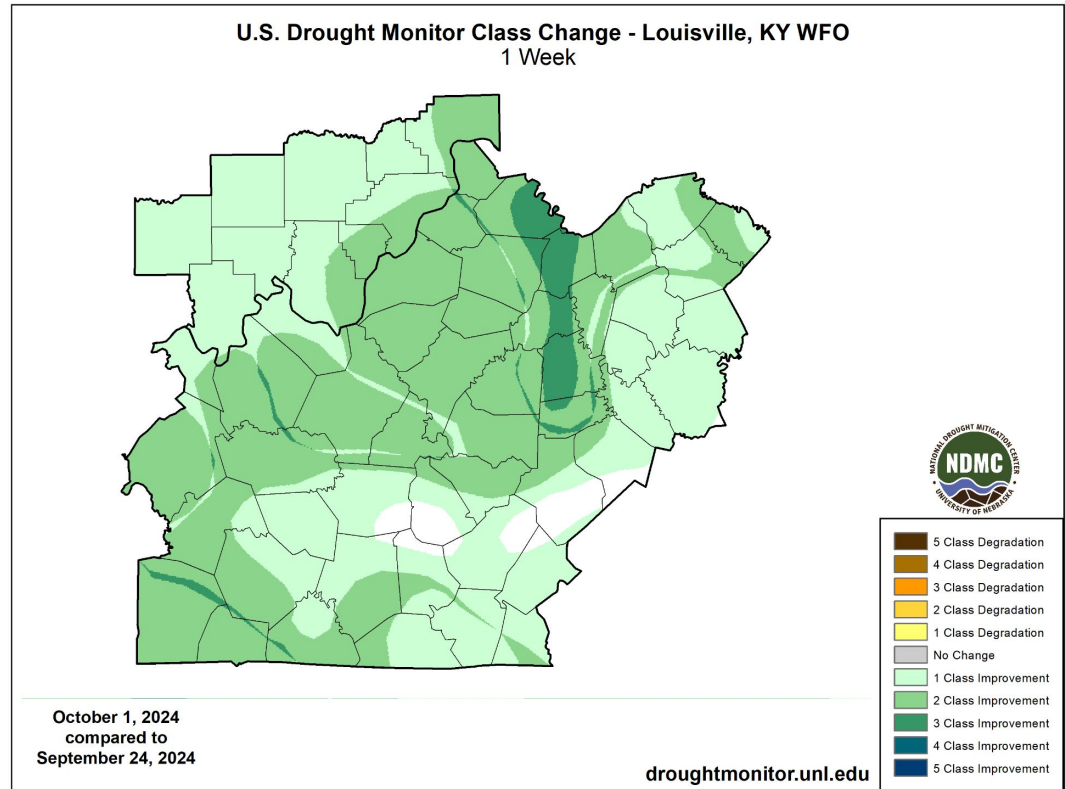




Recent Change in Drought Intensity

Link to the latest [class change maps](#) for the U.S.

Dramatic improvement in the drought was seen between the last week of September and the first week of October. Areas from Henry County south to Boyle County saw an *extremely* rare 3-class improvement.



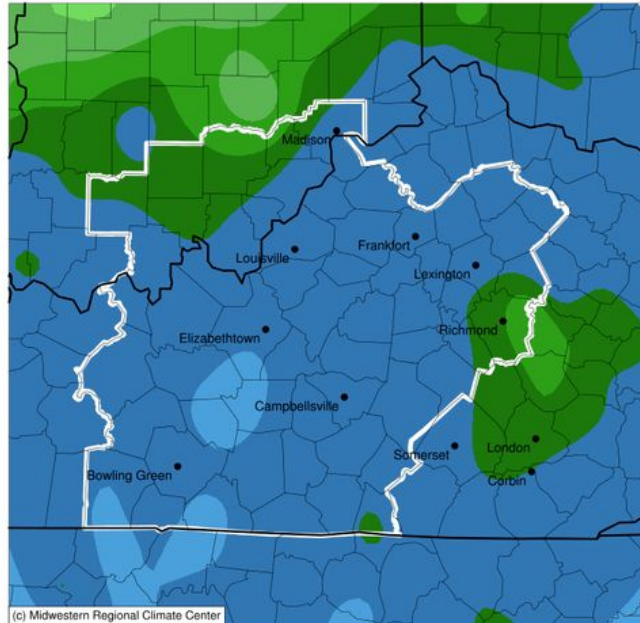


30-Day Precipitation

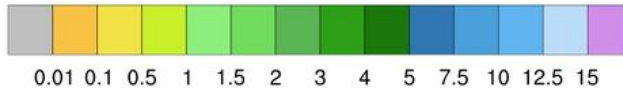
Precipitation totals and departures from normal

- After generally dry weather for the first 3 weeks of September, widespread rains during the final week of the month, culminating in heavy tropical rain from former Hurricane Helene, caused a surplus in 30-day precipitation amounts for most of the region.
- Several [CoCoRaHS](#) observers reported more than 8" of rain during this period, including a total of 8.97" in northern Casey County.

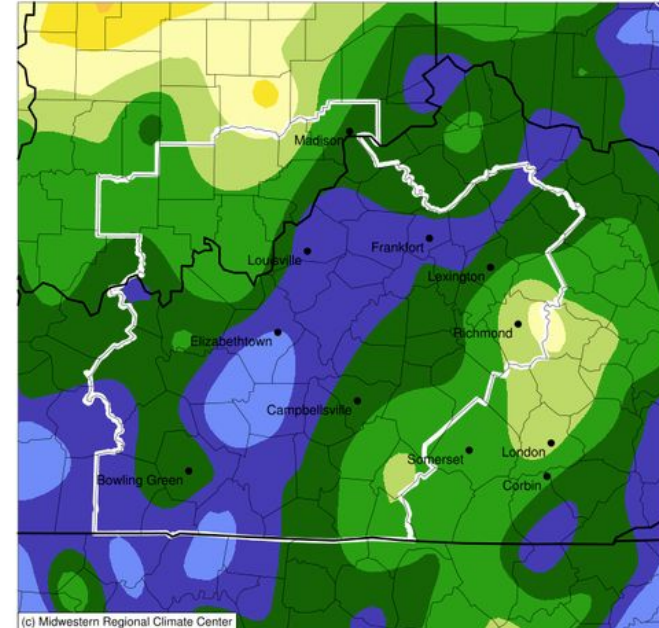
Accumulated Precipitation (in)
September 02, 2024 to October 01, 2024



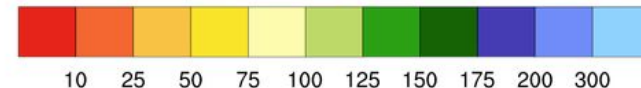
(c) Midwestern Regional Climate Center



Accumulated Precipitation (in): Percent of 1991-2020 Normals
September 02, 2024 to October 01, 2024



(c) Midwestern Regional Climate Center



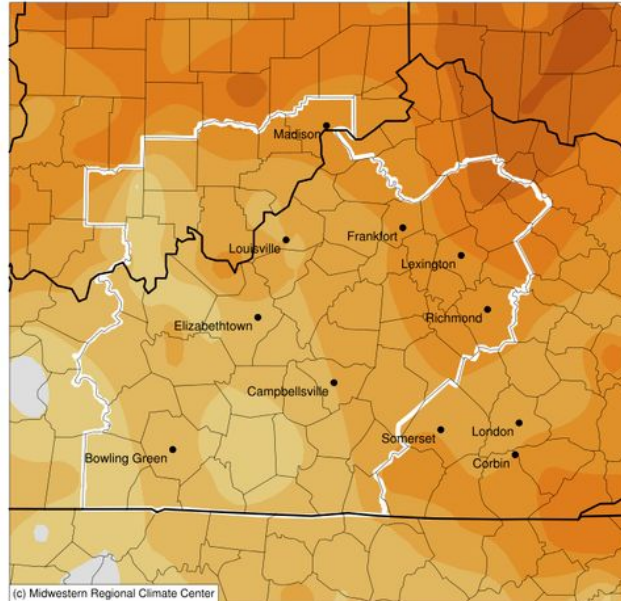


Temperature

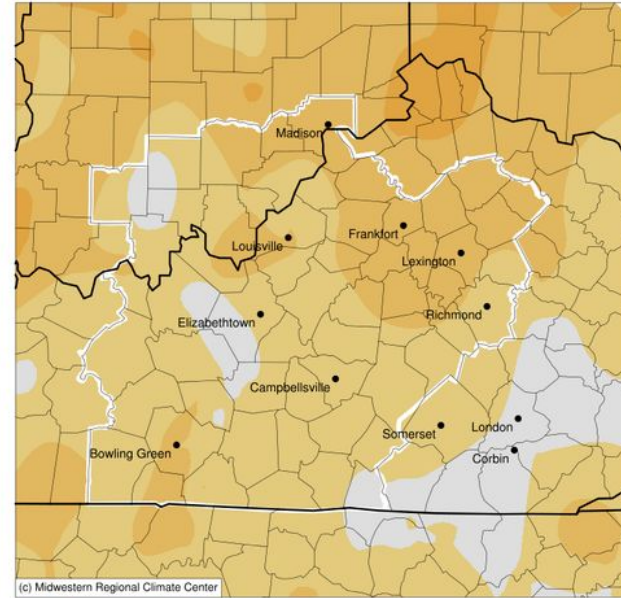
Midwest Regional Climate Center

- Though a chilly air mass brought lows in the 40s to the region September 7-10, including record lows at Frankfort and Lexington, overall the past 30 days have averaged above normal. A large contributor to this was a heat wave September 19-22 when daily highs were frequently in the lower 90s.

Average Temperature (°F): Departure from 1991-2020 Normals
September 25, 2024 to October 01, 2024



Average Temperature (°F): Departure from 1991-2020 Normals
September 02, 2024 to October 01, 2024





Summary of Impacts

Links: See/submit [Condition Monitoring Observer Reports \(CMOR\)](#) and view the [Drought Impacts Reporter](#)

Hydrologic Impacts

- Streamflows have been replenished. *USGS*

Agricultural Impacts

- By the third week of September, creeks and ponds were drying up and the ground was fracturing. Grain yields were a concern. Many farmers were supplementing livestock feed with hay and were hauling water to their animals. On the plus side, the dry weather allowed for corn, soybean, and melon harvesting to proceed. Heavy rain late in the month brought drought relief, though strong winds associated with Helene laid down crops and may have resulted in crop damage. *NASS*

Fire Hazard Impacts

- All burn bans that were in effect have been lifted. *ky.gov, in.gov*

Other Impacts

- None at this time.

Mitigation Actions

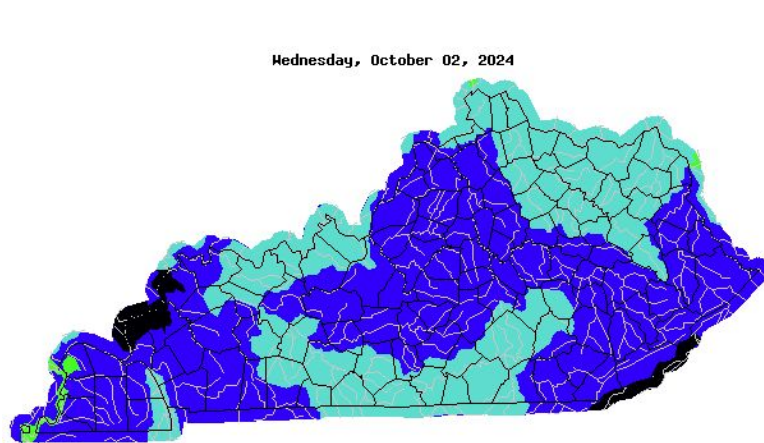
- None at this time.





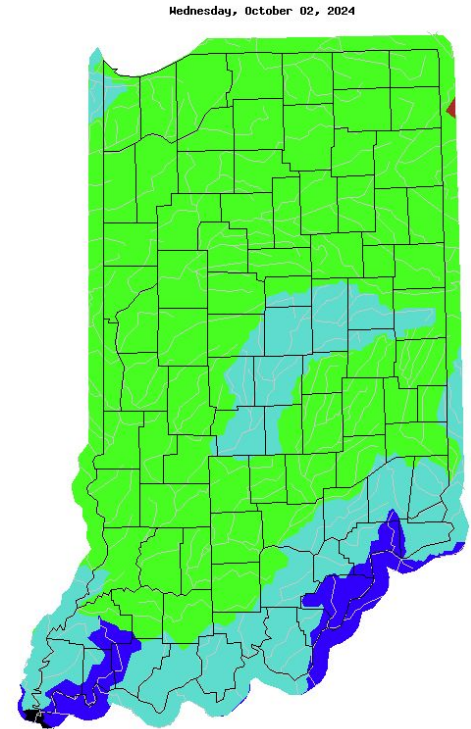
Hydrologic Conditions and Impacts

- After very low flows in early and mid September, streams came roaring back to life as rain returned to the region late in the month.
- Though Hurricane Helene's remnants brought 3-5" of rain, there was no river flooding thanks to the antecedent dry conditions.



Explanation - Percentile classes

Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		



USGS 7-day average streamflow Hydrologic Unit Code (HUC) maps



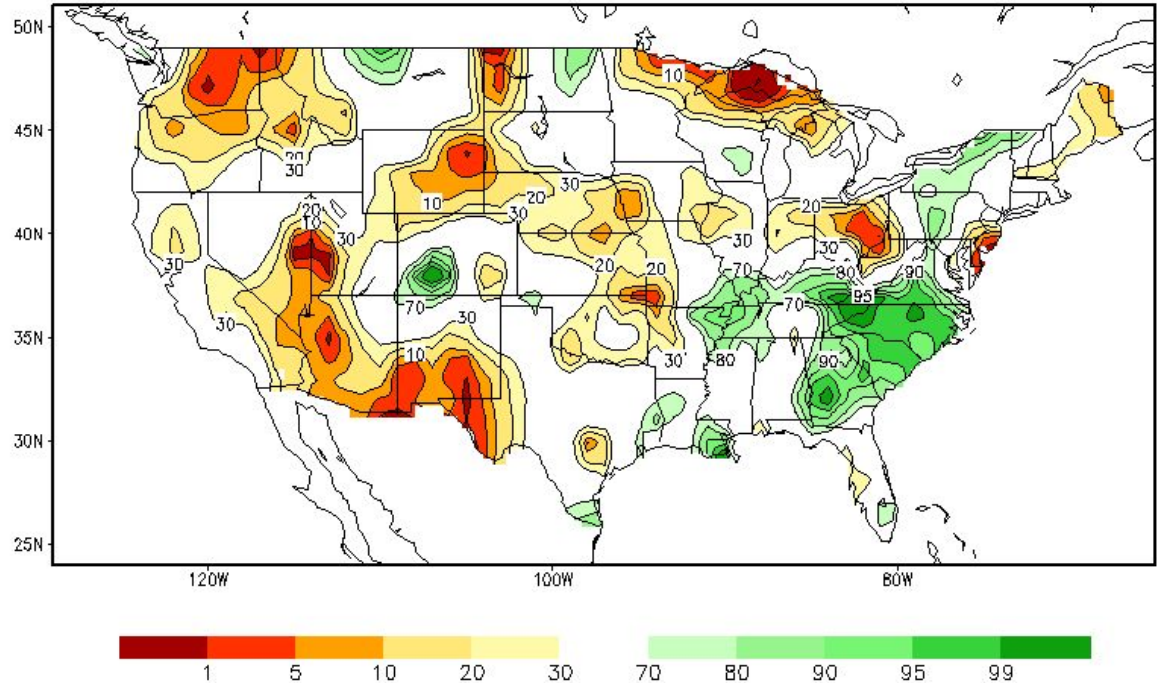


Agricultural Impacts

<https://www.cpc.ncep.noaa.gov/soilmst/img/curr.w.rank.daily.gif>

- The rains of late September provided a surplus of soil moisture.
- At the Hart County Mesonet site, for example, 20" soil moisture water fraction by volume jumped ten percentage points on September 27 alone as Hurricane Helene's rain drenched the region. As of October 3 that increased soil moisture level has largely been maintained.
- At the Franklin County Mesonet site, in the heart of the previous week's D3 extreme drought, 2" soil moisture soared from 15% to 40% on the 27th.

Calculated Soil Moisture Ranking Percentile
OCT 02, 2024

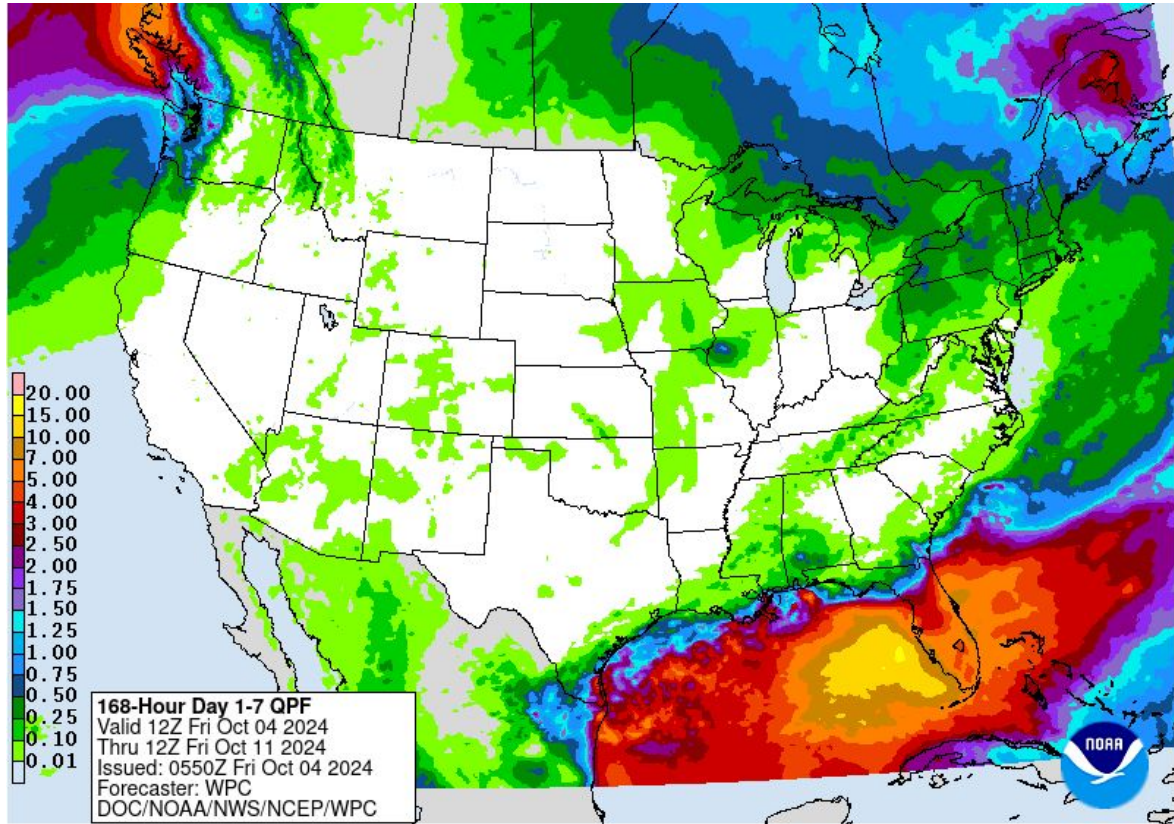




Seven Day Precipitation Forecast

WPC

- Since Helene dissipated, dry weather has returned to the region. Little to no rain is expected in southern Indiana and central Kentucky at least through October 10.





Long-Range Outlooks

The latest monthly and seasonal outlooks can be found on the [CPC homepage](#)

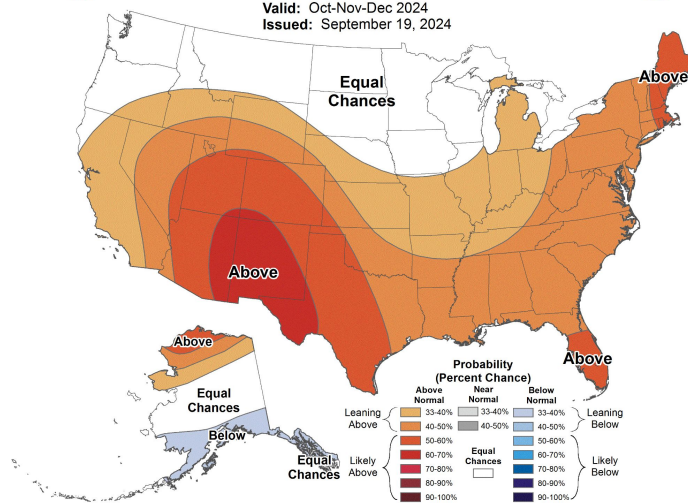
- There is no clear signal for precipitation being above, near, or below normal for the October - December time period.
- A La Niña Watch is in effect, with La Niña conditions expected to develop during the October-November period. Historically, La Niña tends to favor wetter than normal conditions in the fall, though it's not a strong correlation.
- [CPC](#) will update the La Niña Watch on October 10.
- Odds are slightly favoring an overall warmer than normal October-December period.



Seasonal Temperature Outlook



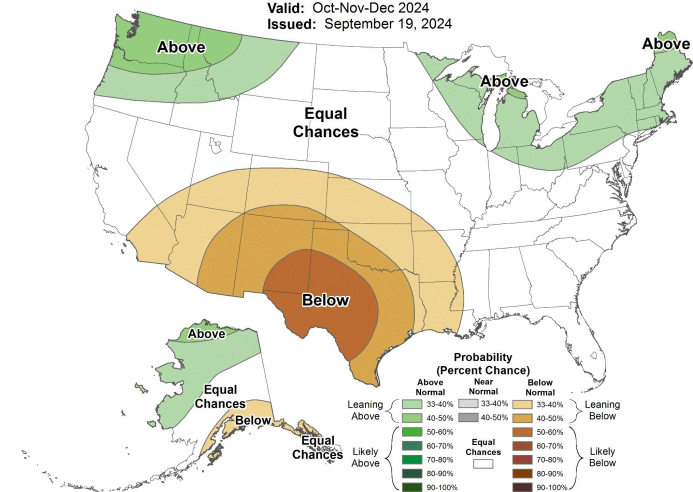
Valid: Oct-Nov-Dec 2024
Issued: September 19, 2024



Seasonal Precipitation Outlook



Valid: Oct-Nov-Dec 2024
Issued: September 19, 2024





Drought Outlook

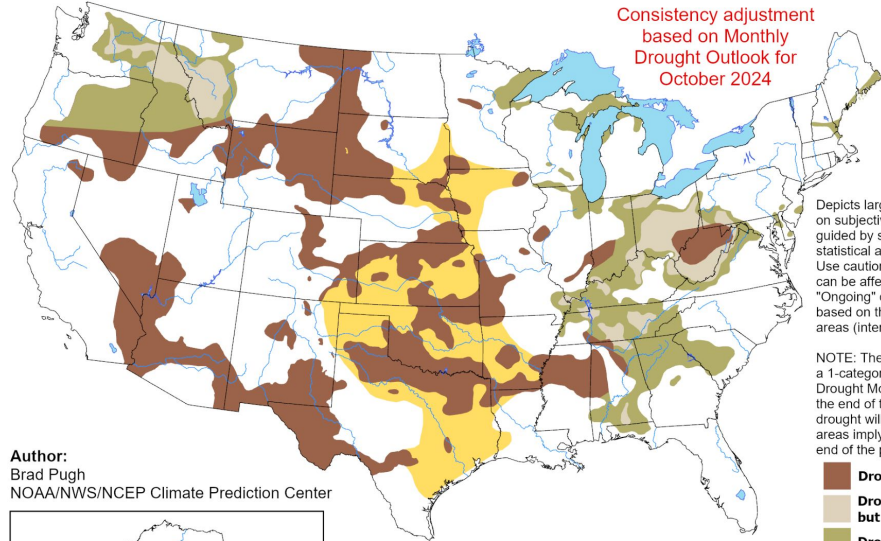
The latest monthly and seasonal outlooks can be found on the [CPC homepage](#)

- Given the recent rains, and La Niña's tendency to support slightly increased odds of above normal rainfall, the chances of widespread significant drought redevelopment appear low at this time.
- The next Seasonal Drought Outlook will be issued on October 17.

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

Valid for October 1 - December 31, 2024
Released September 30, 2024

Consistency adjustment
based on Monthly
Drought Outlook for
October 2024

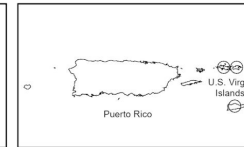
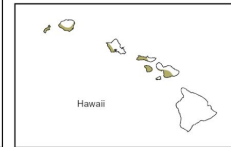
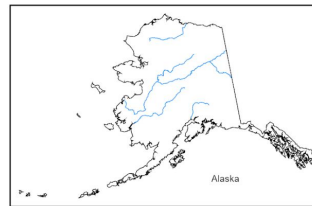


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

- Drought persists
- Drought remains, but improves
- Drought removal likely
- Drought development likely
- No drought

Author:
Brad Pugh
NOAA/NWS/NCEP Climate Prediction Center



<https://go.usa.gov/3eZ73>

Links to the latest:

- [Climate Prediction Center Monthly Drought Outlook](#)
- [Climate Prediction Center Seasonal Drought Outlook](#)



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

National Weather Service
WFO Louisville, KY