



August 2023 Quail Roadside Survey

By: Tell Judkins, Upland Game Biologist – ODWC

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Transition to El Niño helps boost statewide August roadside quail survey up 45% for 2023; yet remains well below historic averages.

The Oklahoma Department of Wildlife Conservation (ODWC) has conducted annual roadside surveys in August and October since 1990 to provide an index of annual population fluctuations. The number of quail observed are reported to provide an index of quail abundance and indicates reproductive success. Currently, ODWC employees survey 81 routes in 75 of Oklahoma's 77 counties. Oklahoma and Tulsa counties, both comprised of almost exclusively urban landscapes, are excluded from the survey.

The state is divided into either geographic regions (Figure 1) or ecoregions (Figure 11) to compare the index year to year. By looking at both divisions we can get a more precise view of on-the-ground conditions in each county and can get a better glimpse into the county you intend to hunt.

The 2023 August roadside quail survey shows the statewide quail index up 45.8% from 2022 climbing from 1.53 to 2.23 quail per route (q/r) which is 55.6% below the 34-year average (Table 1 & Figure 2), and 28.3% below the 10-year average of 3.11. There are several theories as to what has caused this decline, but it is primarily attributed to habitat loss and weather. Age structure of observed birds shows 65.2% full grown, 10.5% $\frac{3}{4}$ grown, 17.7% $\frac{1}{2}$ grown, and 6.6% $\frac{1}{4}$ grown birds. This age structure indicates successful early broods with females still nesting throughout the season. Last fall the latest known hatch was documented from the wing-box program with a harvested bird hatching out around September 19th in the Northcentral Region. If favorable weather patterns continue into the fall this could lead to even better numbers on the October Survey. Additionally, ODWC biologists have received several reports of broods of varying ages throughout the summer. All regions of the state except the Northcentral region improved from the 2022 survey. All regions, other than the Northeast region, are currently well below their historic 34-year average (Figures 3-8). The past winter was fairly mild for Oklahoma, with only a few major systems that dropped temperatures below average, with the last major cold front arriving in early March. After three consecutive years of La Niña (warmer/dryer) weather patterns this spring saw a transition to El Niño (cooler/wetter conditions) which generally ties to better

quail numbers. One year ago, 100% of Oklahoma was in some level of drought with over 94% being in D2-D4 conditions. We are currently seeing about ~58% of the state in drought with less than 20% in D2-D4 conditions as drought slowly settles back in. Rainfall throughout the growing season has been an example of feast or famine, coming at times in monsoon-like systems dumping several inches at a time and bringing hail along with it. Precipitation in May and June had our conditions looking pretty good; by mid-August 64% of the state was drought-free. Summer heat and a lack of rain over the tail-end of August have allowed drought to steadily take hold once again. Below, figures 9 & 10 show the drought and rainfall conditions across the state.

Over the last 180 days about half of Oklahoma has seen normal rainfall, however the previous 30 days show much of the state well below the normal rainfall percentage with some areas in the southern half only seeing ~1.0% of their normal rainfall. Dense vegetation along roadsides in some areas could contribute to fewer observations. Given the current conditions around the state we can get a better look at bird numbers if we look at surveys on an ecoregion basis. Figure 11 shows the 9 major ecoregions of Oklahoma while Table 2 gives a comparison of 2022 and 2023 survey results by ecoregion.

One scaled quail was observed during the 2023 August survey. There are only a few routes in Oklahoma with the opportunity to observe scaled quail. Therefore, this is not a prediction of scaled quail abundance, strictly an observation. ODWC has received several reports of scaled quail broods in the Oklahoma panhandle this year.

Anecdotally, I have received numerous brood reports in August. Over the past 34 years the August Roadside Surveys have shown us that they are not always the most reliable when it comes to forecasting the season. Stay tuned for the October roadside surveys and 2023 Season Outlook, which will provide a better indication of what the upcoming quail season could have in store.

Oklahoma's quail season is right around the corner opening on November 11th and closing on February 15th, 2024. The bag-limit remains 10 quail daily. For more regulations and other information consult the Oklahoma Hunting and Fishing Guide online at <https://www.wildlifedepartment.com/hunting/regs> or in print wherever hunting and fishing licenses are sold.

Figure 1. Oklahoma Roadside Survey Regions

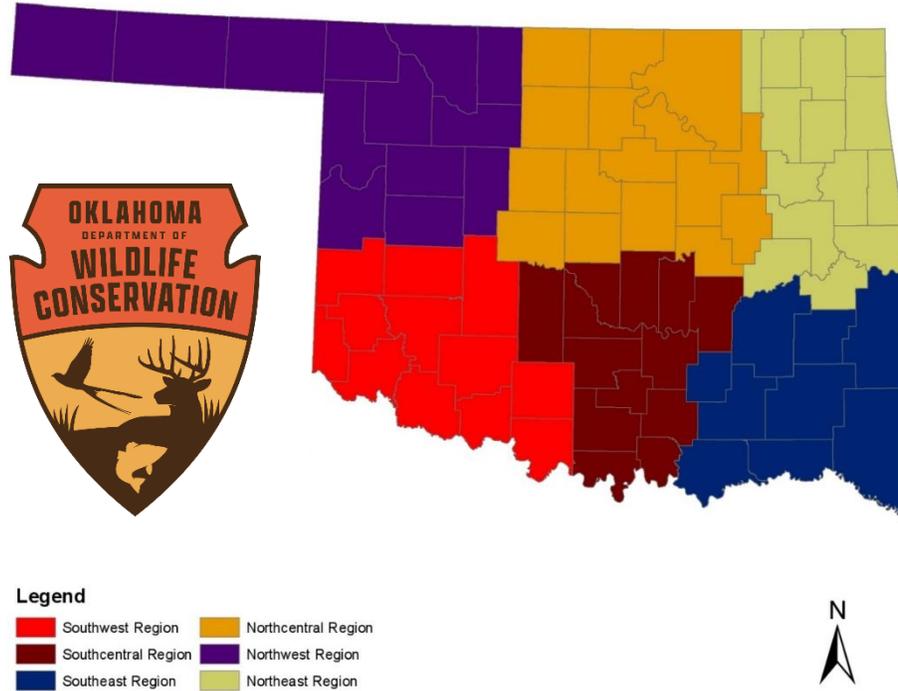


Table 1. Bobwhite quail observations/20-mile route by geographic region in Oklahoma.

Region	34-year Average	10-year Average	2021 Average	2022 Average	2023 Average
Statewide	5.02	3.11	1.56	1.53	2.23
Northwest	7.11	5.37	2.88	2.31	4.88
Northeast	2.78	1.34	0.43	0.79	3.50
Northcentral	3.14	2.97	2.06	3.60	1.07
Southwest	11.90	6.72	2.66	1.58	2.66
Southeast	3.64	1.40	0.875*	0.27	0.45
Southcentral	1.82	0.16	0.08	0.0	0.08

*some surveys were unable to be run due to COVID-19 impacts

Figure 2. Long-term average of bobwhite observations in Oklahoma

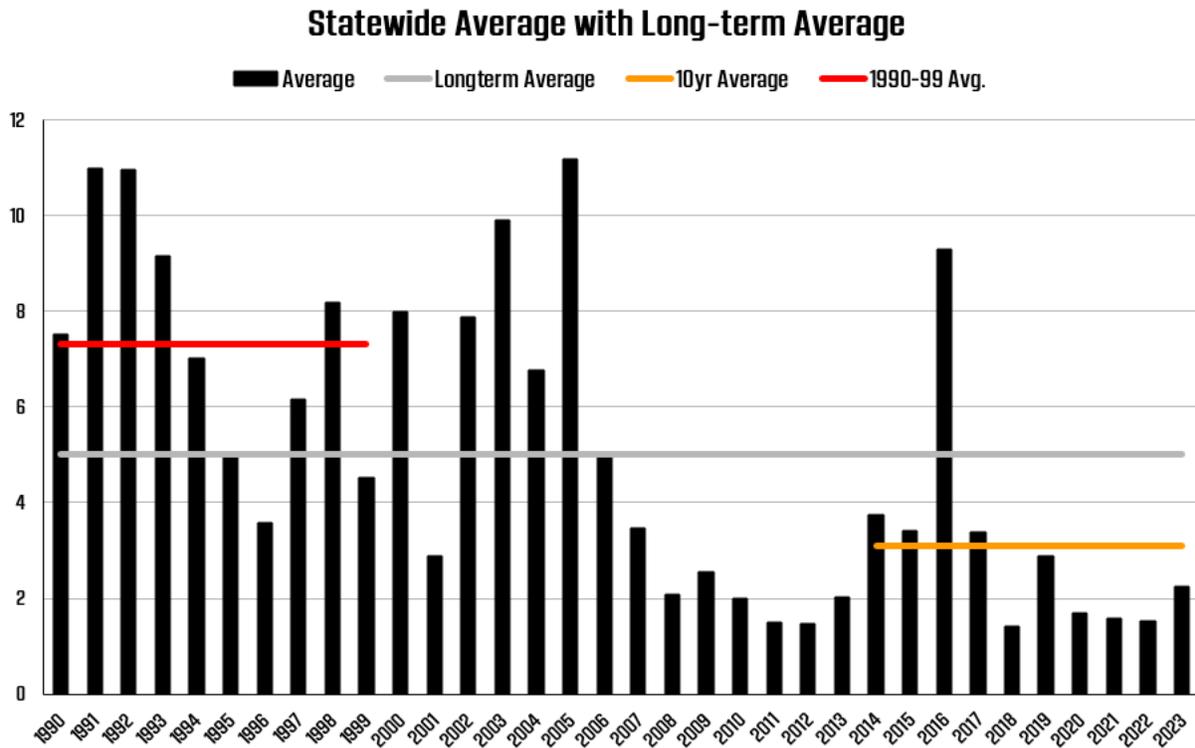


Figure 3. Long-term average of bobwhite observations in northwest Oklahoma.

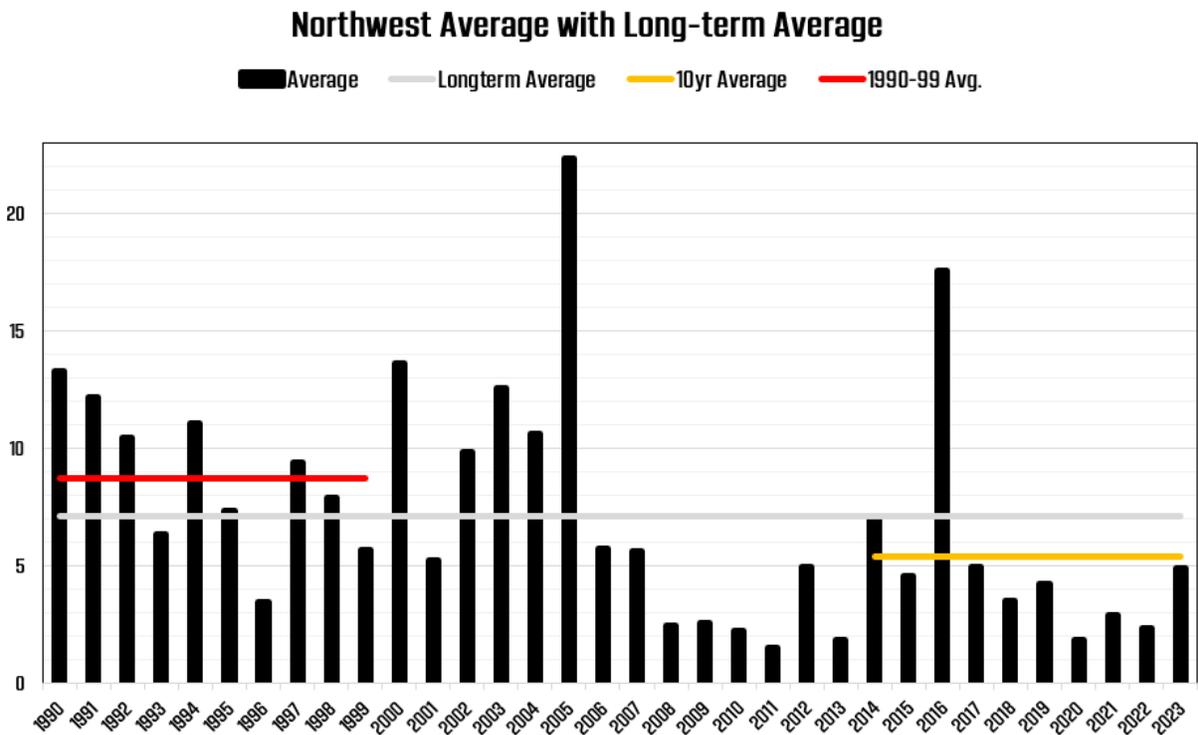


Figure 4. Long-term average of bobwhite observations in northeast Oklahoma.

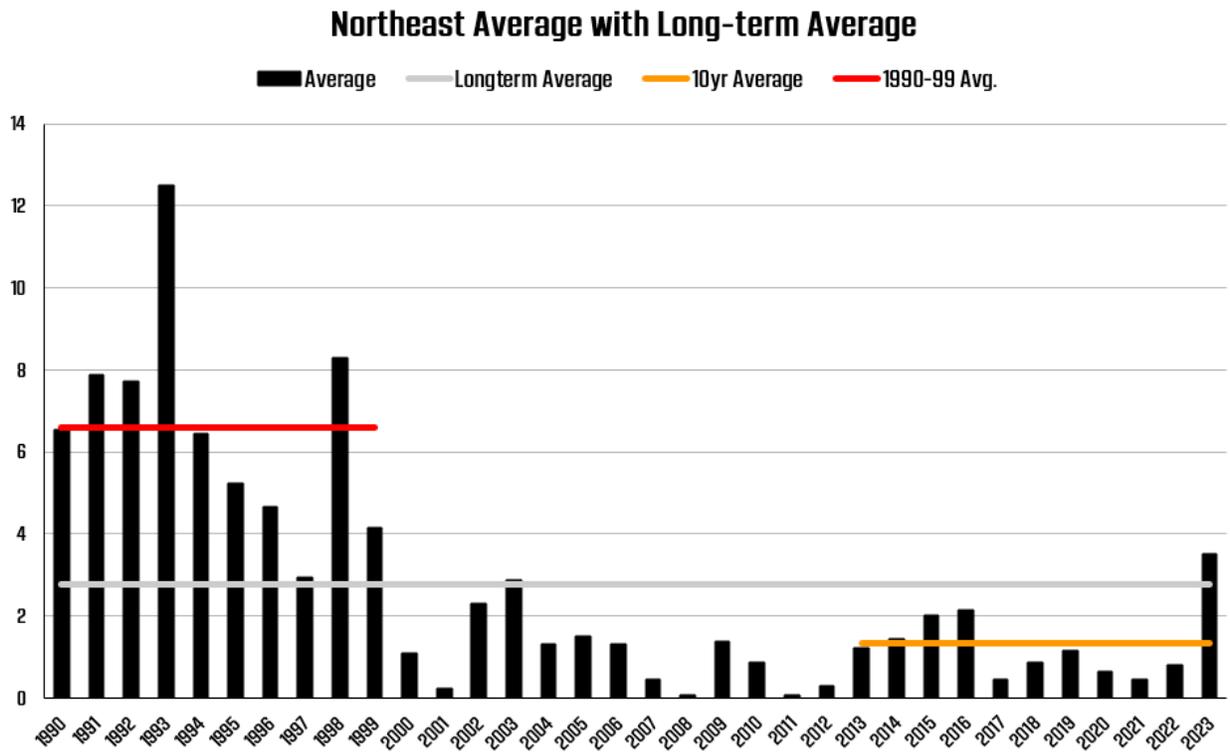


Figure 5. Long-term average of bobwhite observations in northcentral Oklahoma.

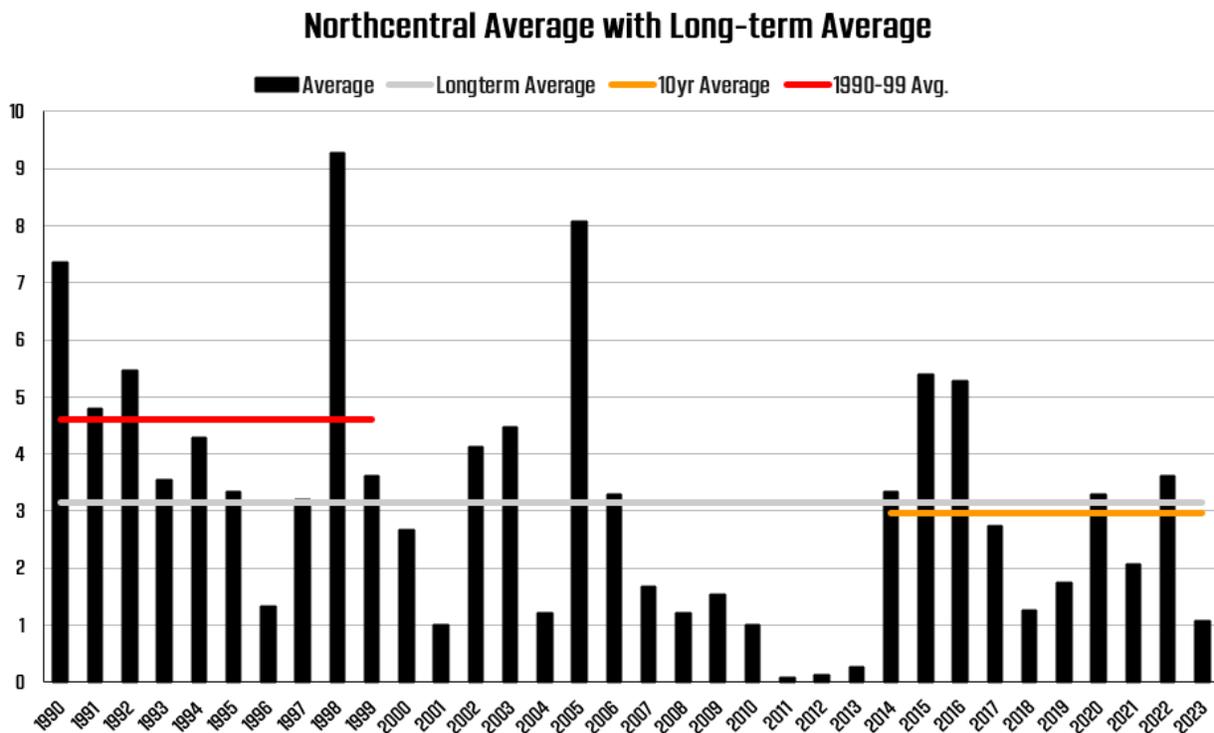


Figure 6. Long-term average of bobwhite observations in southwest Oklahoma.

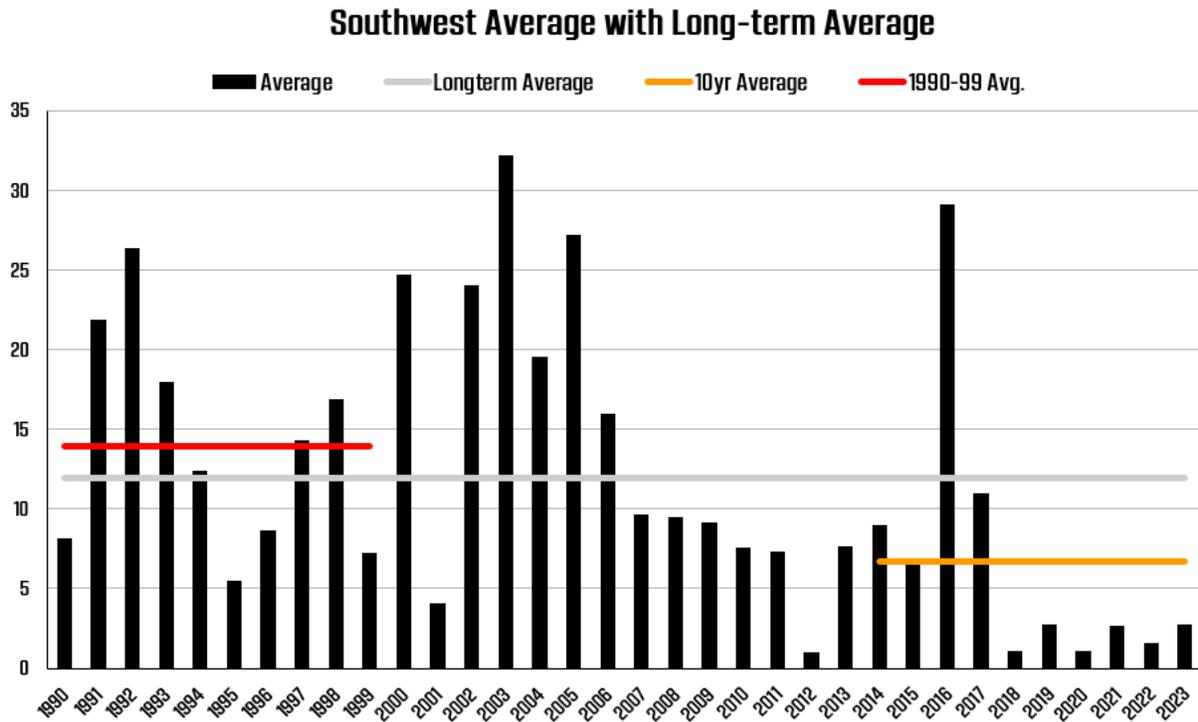


Figure 7. Long-term average of bobwhite observations in southeast Oklahoma.

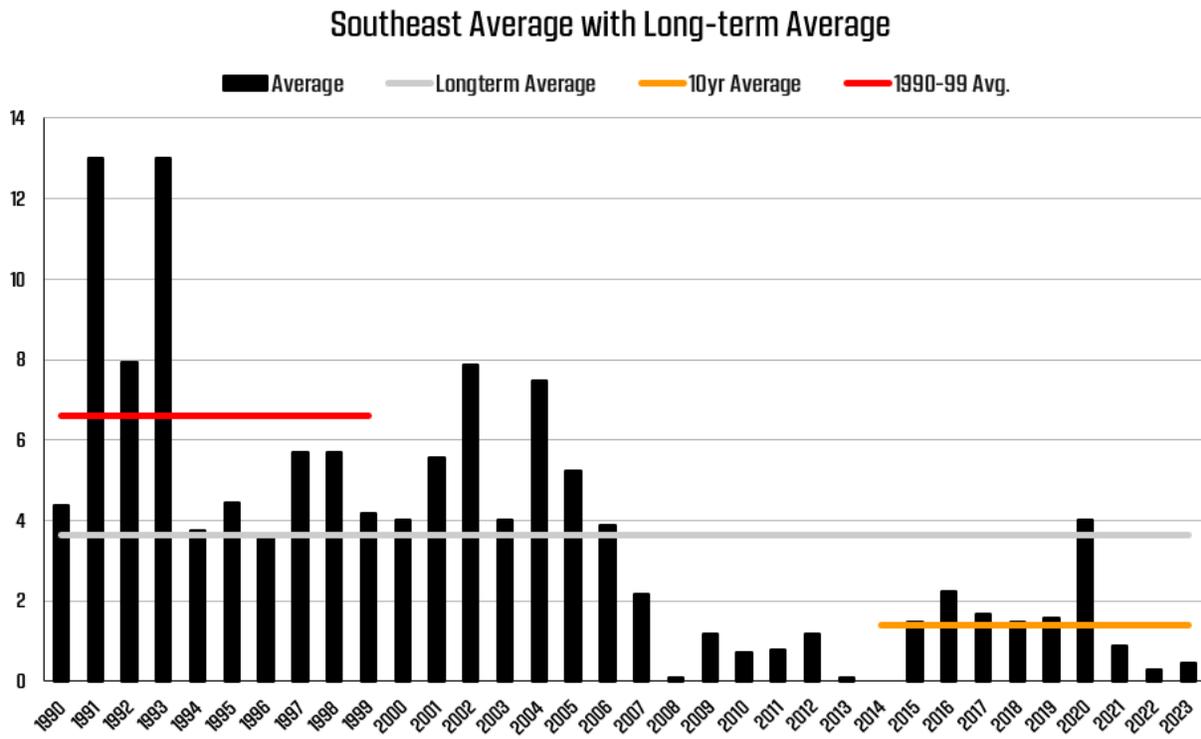


Figure 8. Long-term average of bobwhite observations in southcentral Oklahoma.

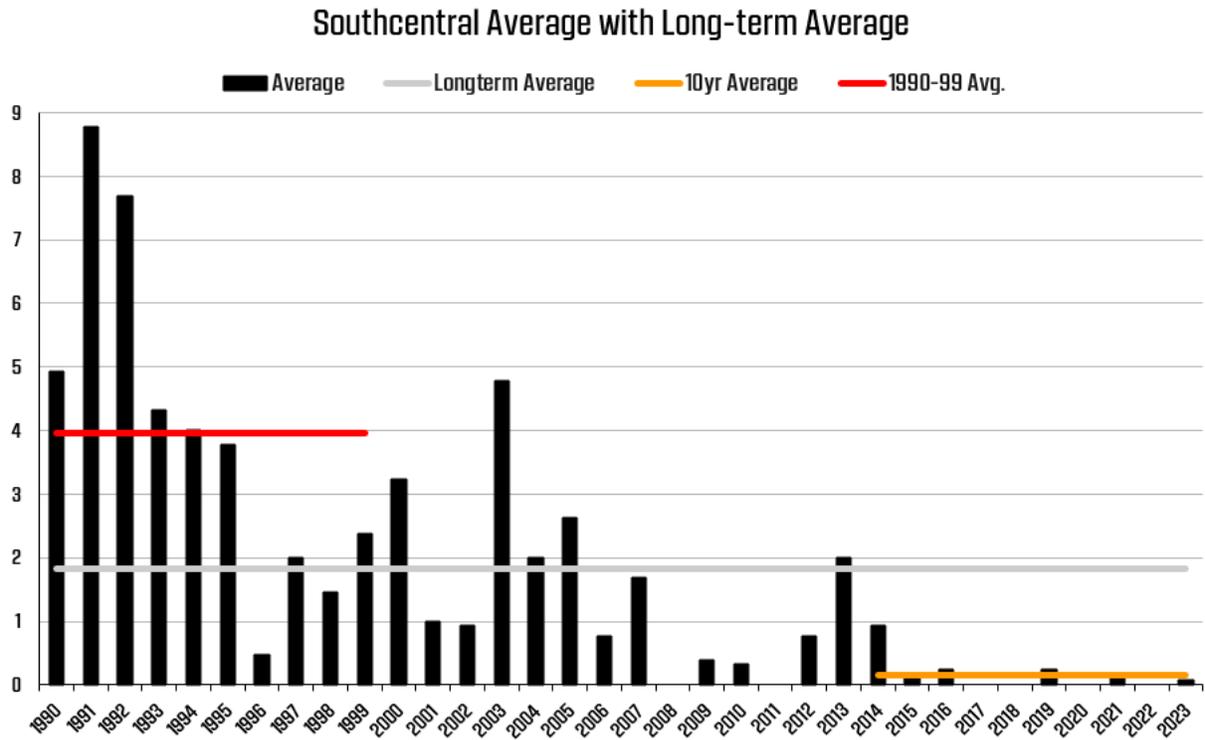


Figure 9. Drought Comparison from April 18th, 2023, to August 31st, 2023 (Source: droughtmonitor.unl.edu/)

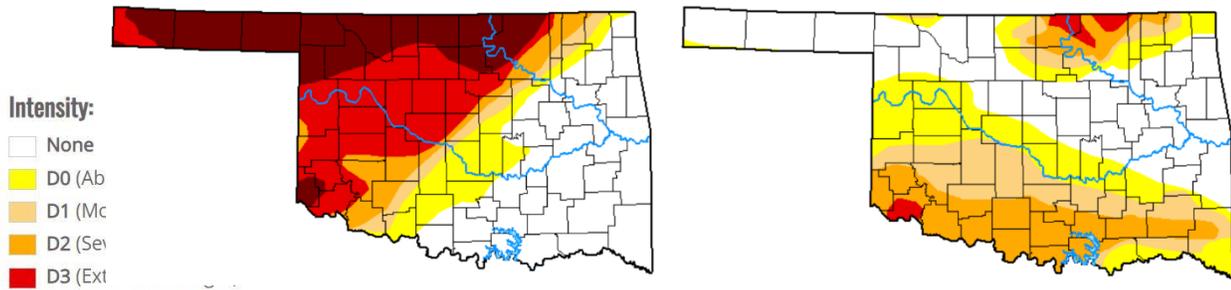


Figure 10. Departure from normal rainfall in inches: March 4 - August 30, 2023 (Source: mesonet.org)

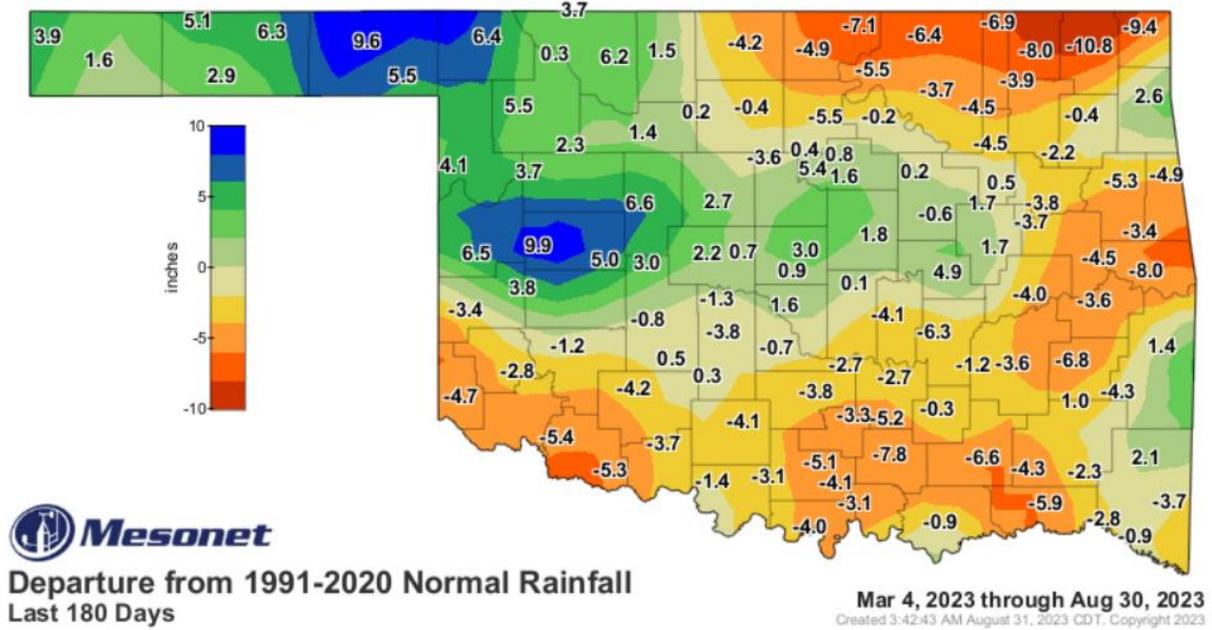


Figure 11. Ecoregions of Oklahoma

Oklahoma Roadside Survey Ecoregions

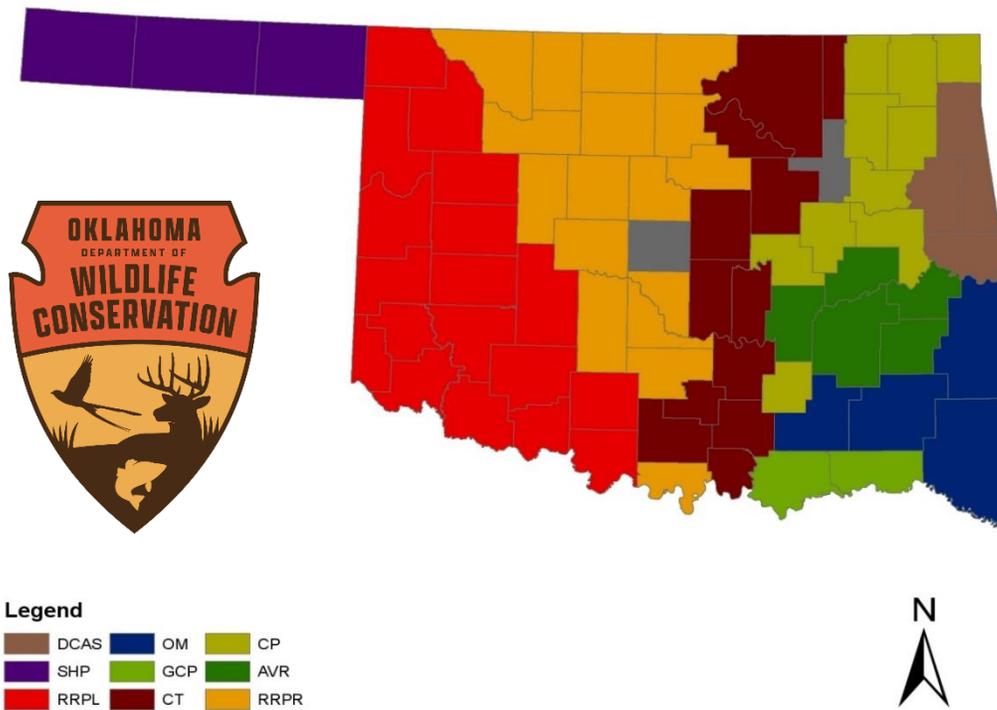


Table 2. Bobwhite quail numbers/20-mile route in the 9 geographic ecoregions of Oklahoma

Ecoregion	Code	2022	2023	Change
Arkansas Valley & Ridges	AVR	0.5	0.0	↓
Cherokee Prairie	CP	1.4	3.7	↑
Cross Timbers	CT	0.69	1.15	↑
Ozark Highlands	DCAS	0.0	0.0	-
Gulf Coastal Plain	GCP	0.0	0.0	-
Ouachita Mountains	OM	0.2	1.0	↑
Rolling Red Prairie	RRPR	2.56	1.71	↓
Rolling Red Plain	RRPL	2.66	4.0	↑
Southern High Plain	SHP	0.0	3.75	↑