

# August 2022 Quail Roadside Survey

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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 2022 August roadside quail survey shows the statewide quail index down slightly from 2021 dropping from 1.56 to 1.53 quail per route (q/r) which is 70.02% below the 33-year average (Table 1) (Figure 2), and 50.47% below the 10 year average of 3.089. There are several theories as to what has caused this decline but is primarily attributed to habitat loss and weather. Age structure of observed birds shows 50% full grown, 31.5%  $\frac{3}{4}$  grown, 18.5%  $\frac{1}{2}$  grown, and 0  $\frac{1}{4}$  grown birds. This age structure could indicate successful early broods which could be playing a part in a low August survey numbers as older juvenile birds may be less likely to stay in brood groups while traveling. Additionally, ODWC biologists have received several anecdotal reports of broods during the survey period, that were not along the survey routes, of multiple age-class young. The northeast and northcentral regions of the state improved from the 2021 survey. All regions of the state, other than the northcentral region, are currently well below their historic 33-year average (Figures 3-8). Our winter once again saw several cold fronts and storms that brought potential for negative impacts, which were most likely more severe in areas of marginal habitat quality. The spring and summer have seen flash drought across much of the state. Rainfall throughout the spring and summer has been sporadic, coming at times in monsoon type storms rather than our more normal systemic rains. Conditions currently have the entire state in drought as of September 1, with nearly 50% of the state in extreme or exceptional drought (D3-D4). Below, figures 9 & 10 show the drought and rainfall conditions across the state.

Over the last 180 days the majority of the state has seen less than normal rainfall. Dense vegetation along roadsides in some areas of the state could contribute to fewer observations. Given the current drought and rainfall conditions 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 2021 and 2022 survey results by ecoregion.

No scaled quail were observed during the 2022 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 biologists have received several reports of scaled quail broods in the Oklahoma panhandle.

Anecdotally, I have received numerous brood reports in August. Over the 33 years of the Roadside Surveys the August 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 2022 Season Outlook, which will provide a better indication of what the upcoming quail season could have in store.

Figure 1. Oklahoma Roadside Survey Regions

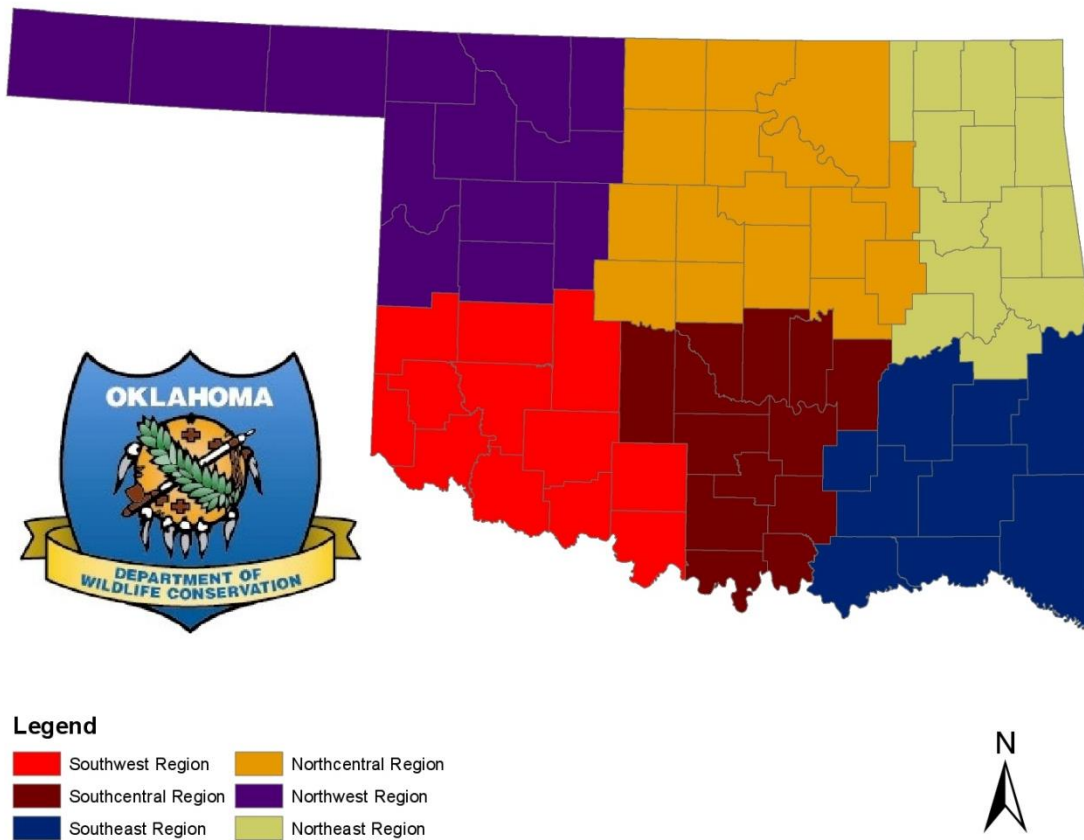


Table 1. Bobwhite quail observations/20-mile route by geographic region in Oklahoma.

Region	32 Year Average	10 Year Average	2020 Average	2021 Average	2022 Average
Statewide	5.22	3.08	1.68	1.56	1.53
Northwest	7.33	5.33	1.81	2.88	2.31
Northeast	2.82	1.06	0.64	0.43	0.79
Northcentral	3.19	2.55	3.29	2.06	3.6
Southwest	12.51	7.14	1.0	2.66	1.58
Southeast	3.84	1.45	4.0	0.875*	0.27
Southcentral	1.93	0.42	0.0	0.08	0.0

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

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

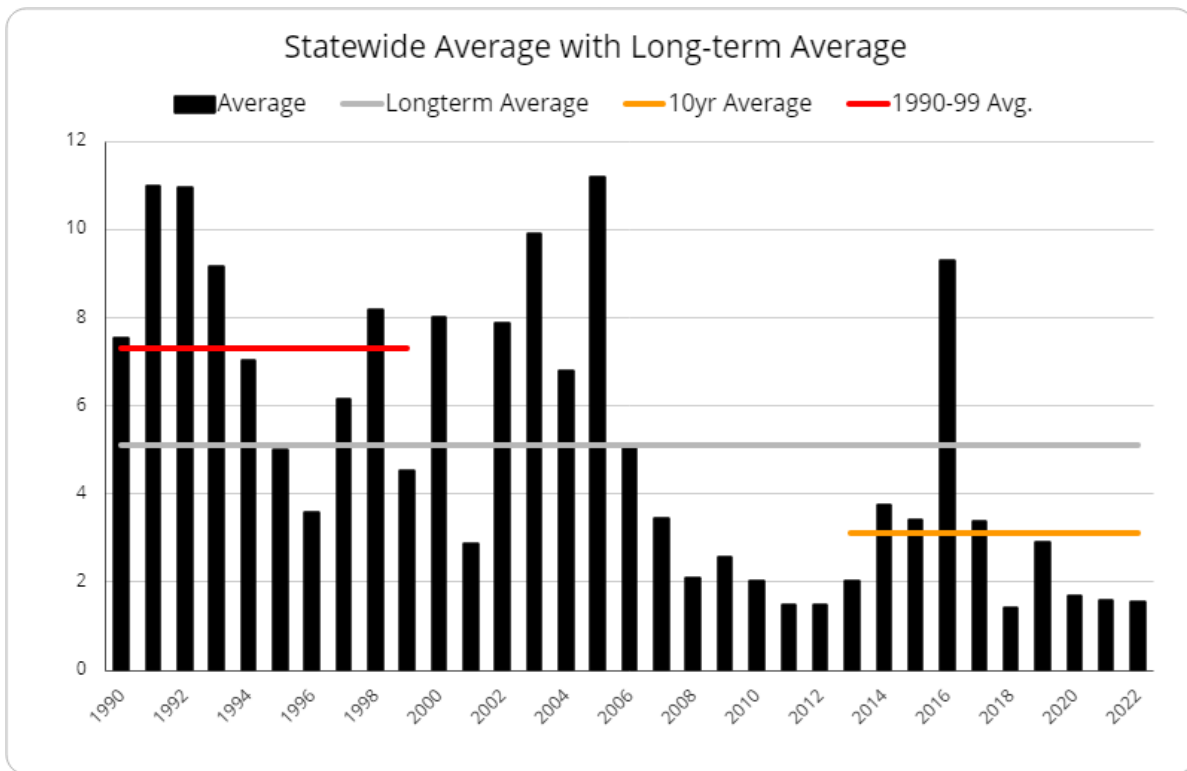


Figure 3. Long-term average of bobwhite observations in northwest Oklahoma.

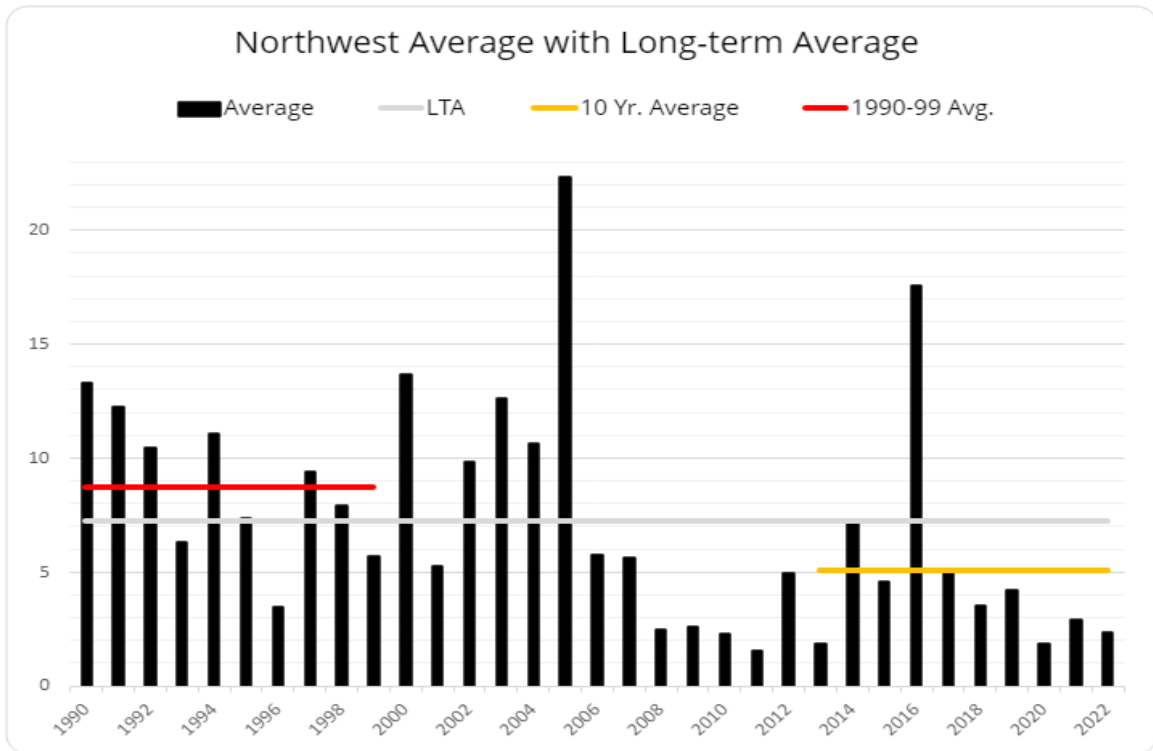


Figure 4. Long-term average of bobwhite observations in northeast Oklahoma.

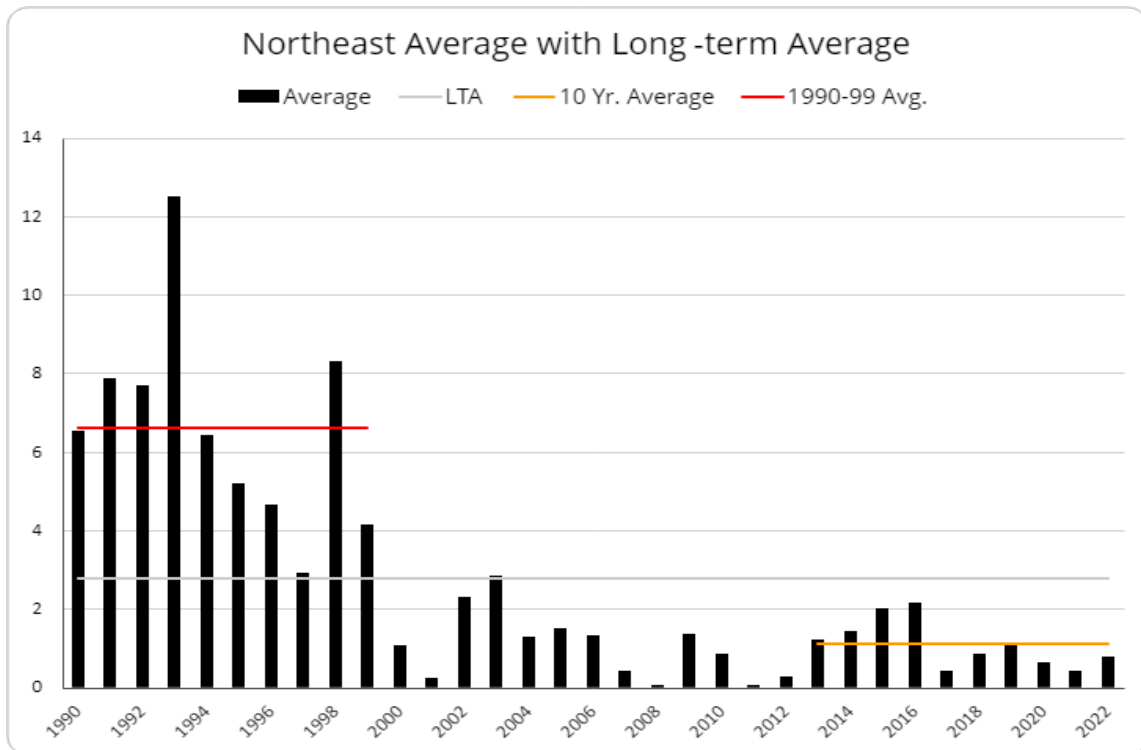


Figure 5. Long-term average of bobwhite observations in northcentral Oklahoma.

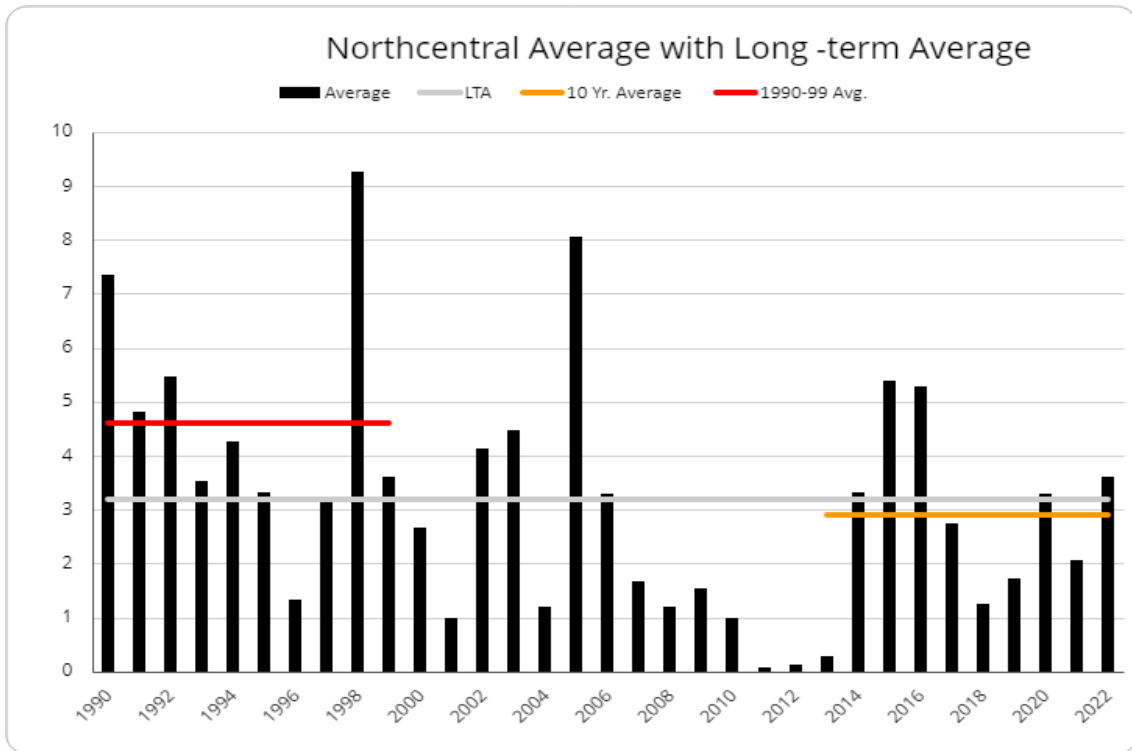


Figure 6. Long-term average of bobwhite observations in southwest Oklahoma.

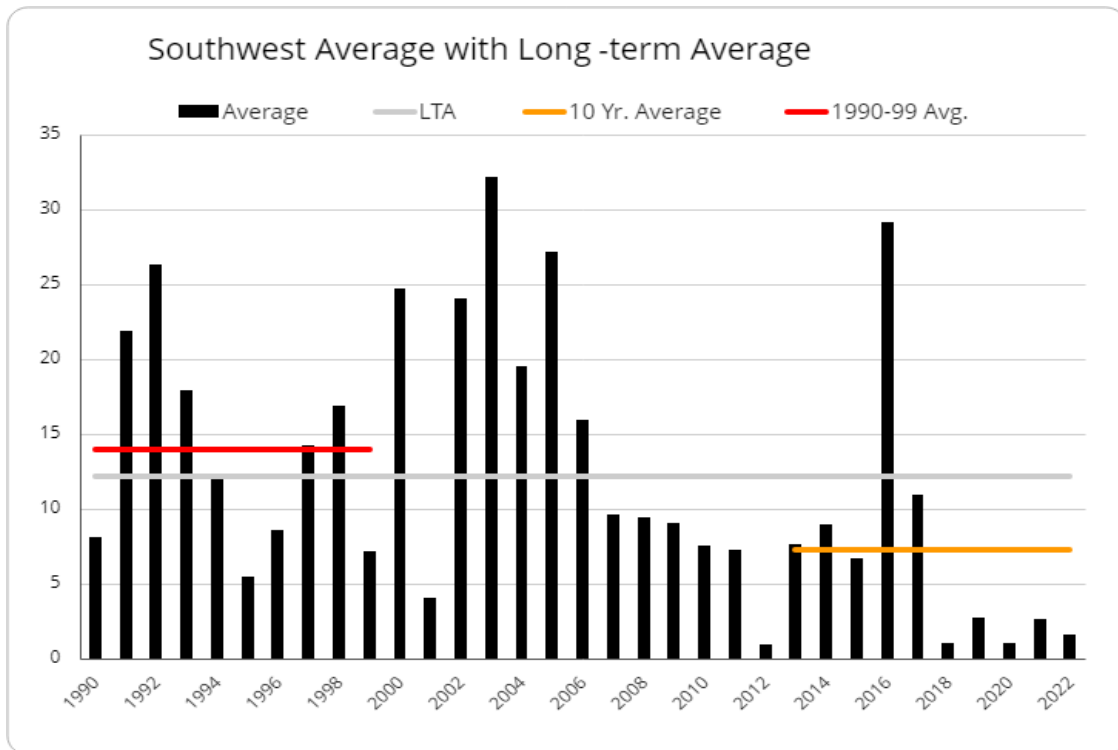


Figure 7. Long-term average of bobwhite observations in southeast Oklahoma.

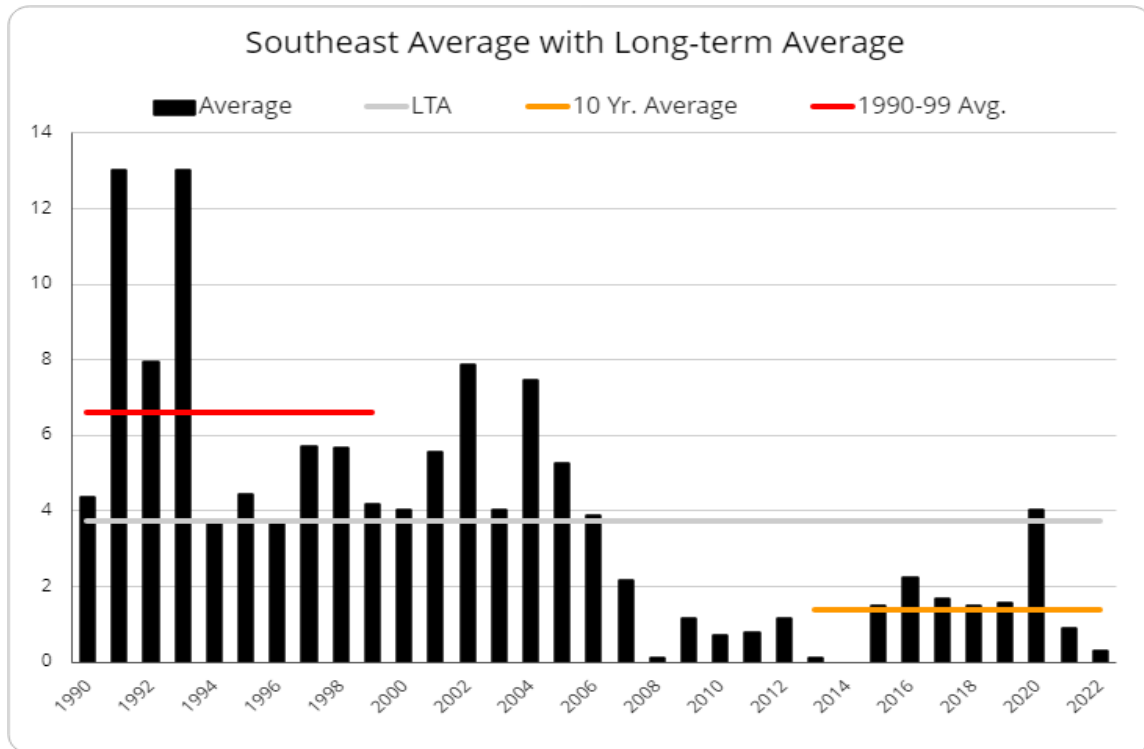


Figure 8. Long-term average of bobwhite observations in southcentral Oklahoma.

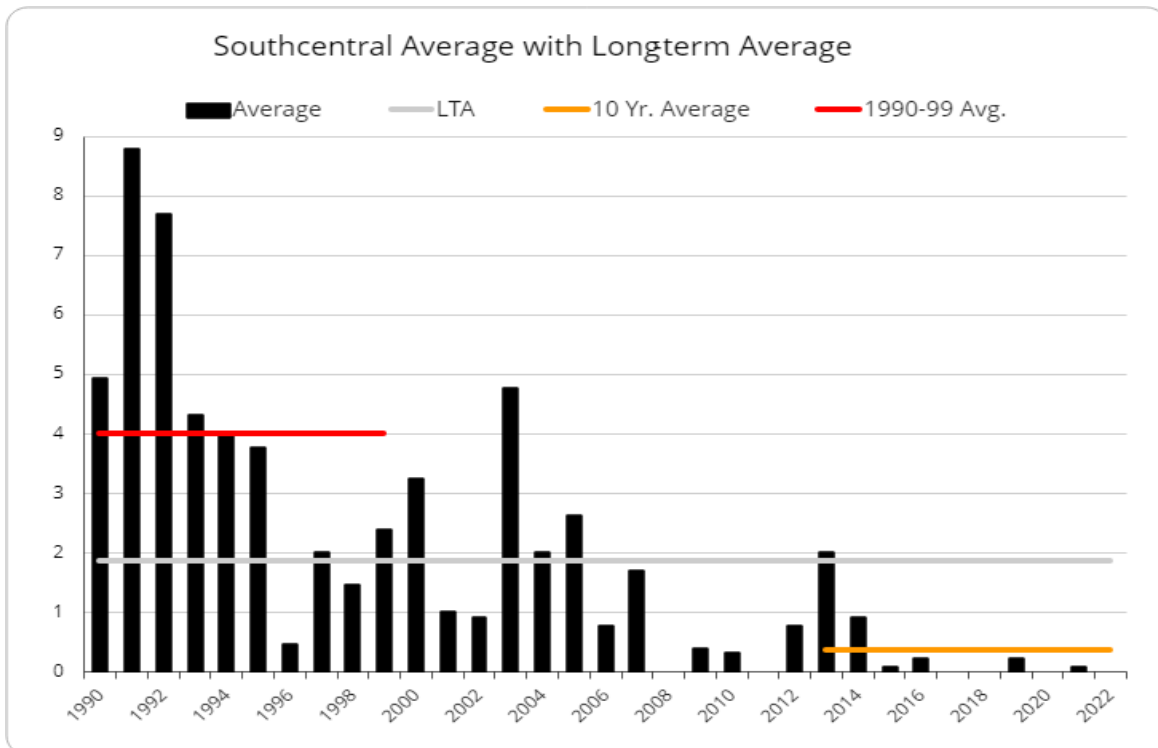


Figure 9. Drought Comparison from June 7<sup>th</sup>, 2021, to September 1<sup>st</sup>, 2022 (Source: droughtmonitor.unl.edu/)

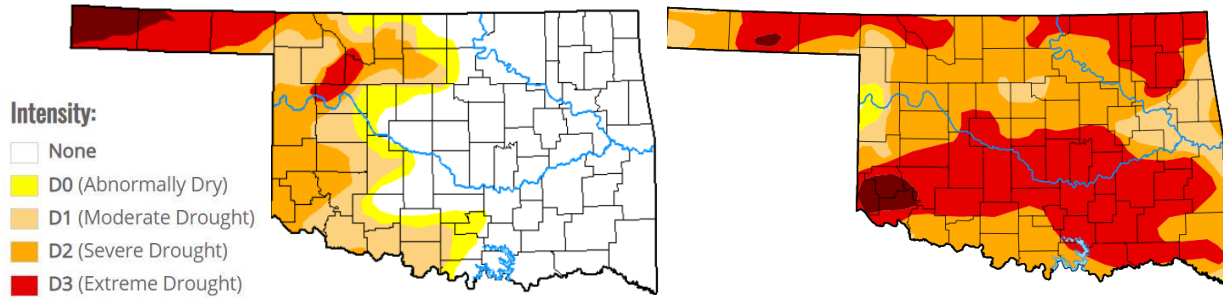


Figure 10. Departure from normal rainfall in inches: March 6 - September 1, 2022 (Source: mesonet.org)

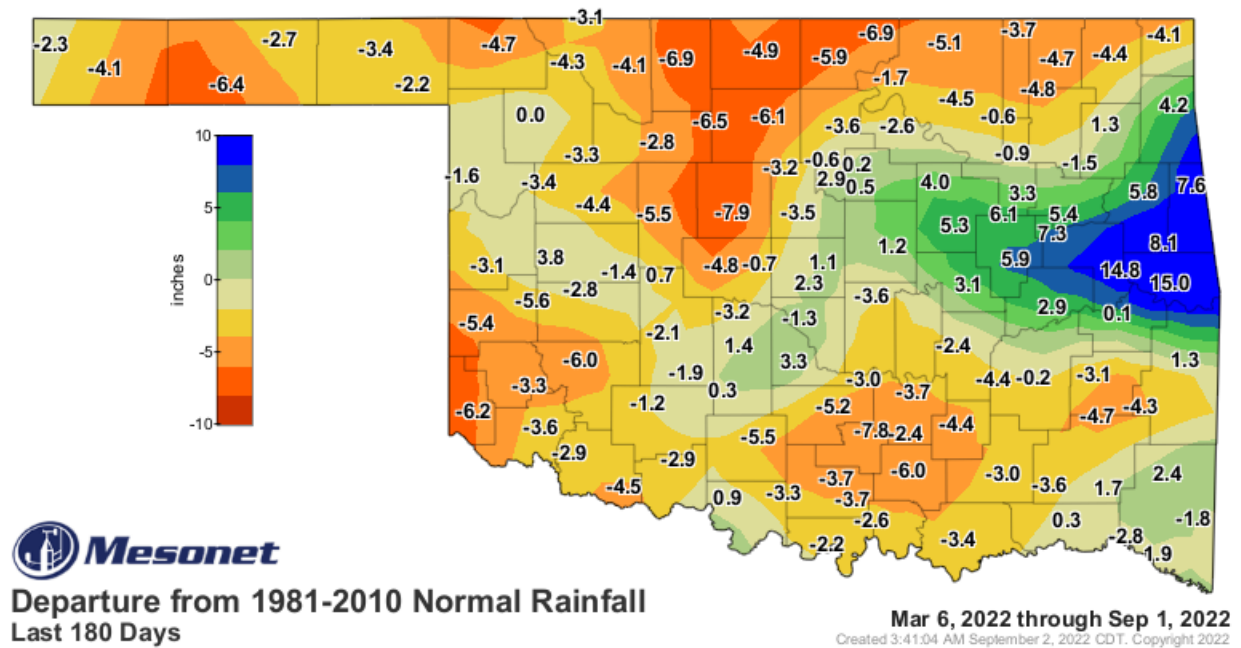


Figure 11. Ecoregions of Oklahoma

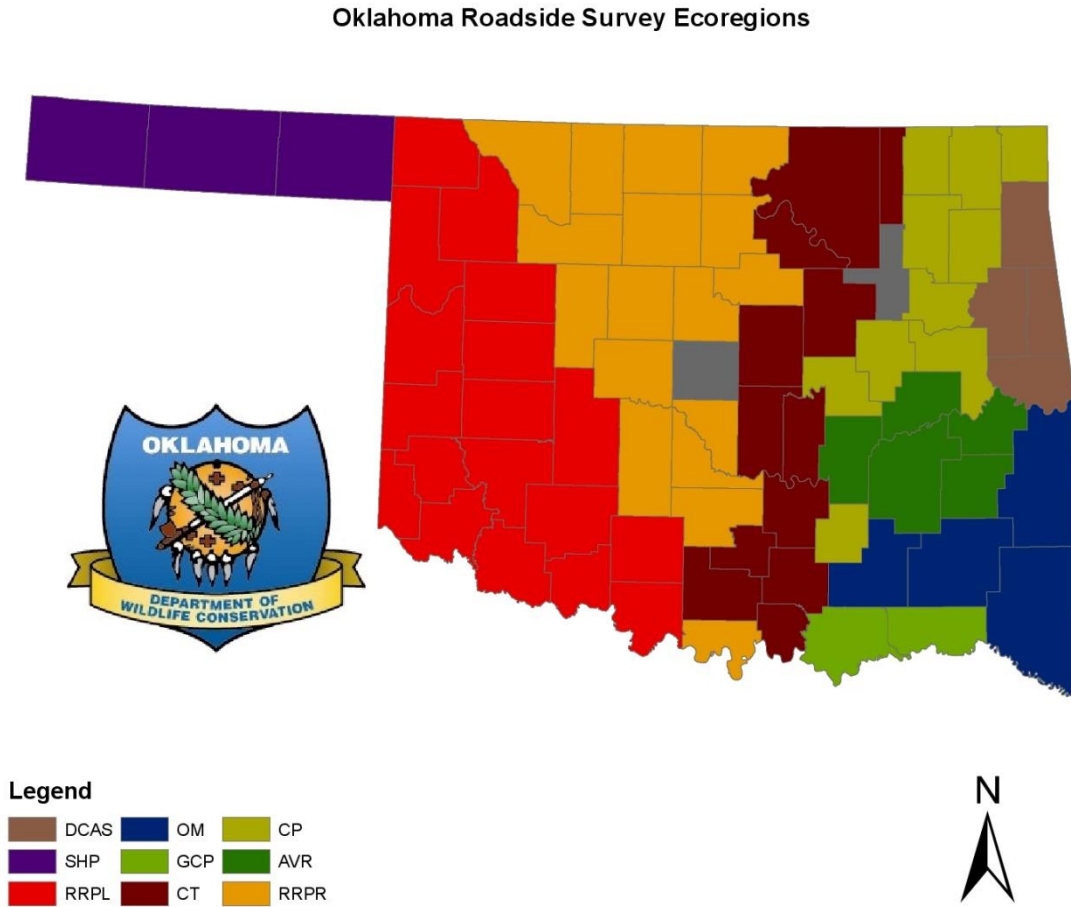


Table 2. Bobwhite quail numbers/20 mile route in the 9 geographic ecoregions of Oklahoma

Ecoregion		2021	2022	% Change
Arkansas Valley & Ridges	AVR	1.17**	0.5	↓ 57.3%
Cherokee Prairie	CP	0.3	1.4	↑ 366%
Cross Timbers	CT	0.15	0.69	↑ 360%
Ozark Highlands	DCAS	1.25	0.0	↓ 100%
Gulf Coastal Plain	GCP	*	0.0	-
Ouachita Mountains	OM	0.0*	0.2	↑ 100%
Rolling Red Prairie	RRPR	1.71	2.56	↑ 49.7%
Rolling Red Plain	RRPL	3.05	2.66	↓ 12.8%
Southern High Plain	SHP	3.75	0.0	↓ 100%

\*Some surveys were unable to be run in 2021 due to COVID-19 impacts