August 2021 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 83 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 look at the county you intend to hunt.

The 2021 August roadside quail survey shows the statewide quail index down slightly from 2020 dropping from 1.68 to 1.56 which is 70.11% below the 32-year average (Table 1) (Figure 2), and 49.37% below the 10 year average of 3.08. There are several theories as to what has caused this decline, primarily habitat loss and weather. Peak production appears to have occurred early in the nesting season (mid to late June). This early hatch 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, however several broods have been reported anecdotally since these surveys were conducted that report broods of multiple age-class young. The northwest and southwest regions of the state improved from the 2020 survey. All regions of the state are currently below their historic 31 year average (Figure 3-8). The late February winter storm brought the potential for negative impacts, which were most likely more severe in areas of marginal habitat quality. Rainfall throughout the spring and summer has led to a cooler growing season, with a bountiful crop of insects and forbs. Drought conditions are beginning to develop in patches across the state primarily in the northwest region. Below, figures 9 & 10 show the drought and rainfall conditions across the state.

Over the last 180 days some portions of Oklahoma have seen more rainfall than normal, and some portions have seen much less than normal. 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 2020 and 2021 survey results by ecoregion. In ecoregions like the Rolling Red Prairie where we have experienced less rainfall throughout the nesting season we are observing lower numbers.

No scaled quail were observed during the 2021 or 2020 August Roadside Surveys, 2 total scaled quail observed in August 2019. 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.

Anecdotally, I have recieved numerous brood reports over late-August and early-September. Over the 32 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. As with all roadside surveys it is important to note that with such a small sample size, even a tiny change in bird observations can show up as huge shift in a route's data. Stay tuned for the October roadside surveys, which will provide a better indication of what the upcoming quail season could have in store.

Figure 1. Oklahoma Roadside Survey Regions

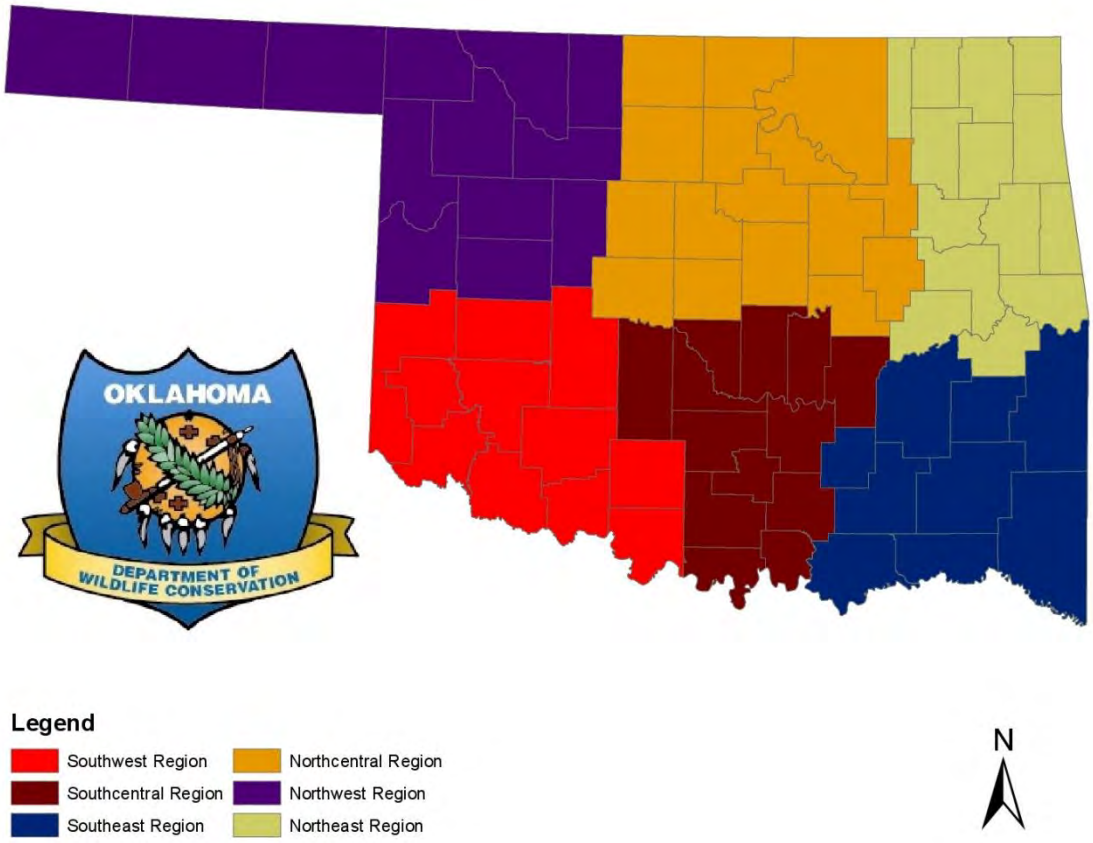

Table 1. Bobwhite quail observations/20-mile route by geographic region in Oklahoma.

	32 Year Average	10 Year Average	2019 Average	2020 Average	2021 Average
Statewide	5.22	3.08	2.88	1.68	1.56
Northwest	7.33	5.33	4.20	1.81	2.88
Northeast	2.82	1.06	1.15	0.64	0.43
Northcentral	3.19	2.55	1.73	3.29	2.06
Southwest	12.51	7.14	4.42	1.0	2.66
Southeast	3.84	1.45	1.55	4.0	0.875*
Southcentral	1.93	0.42	0.23	0.0	0.0

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

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

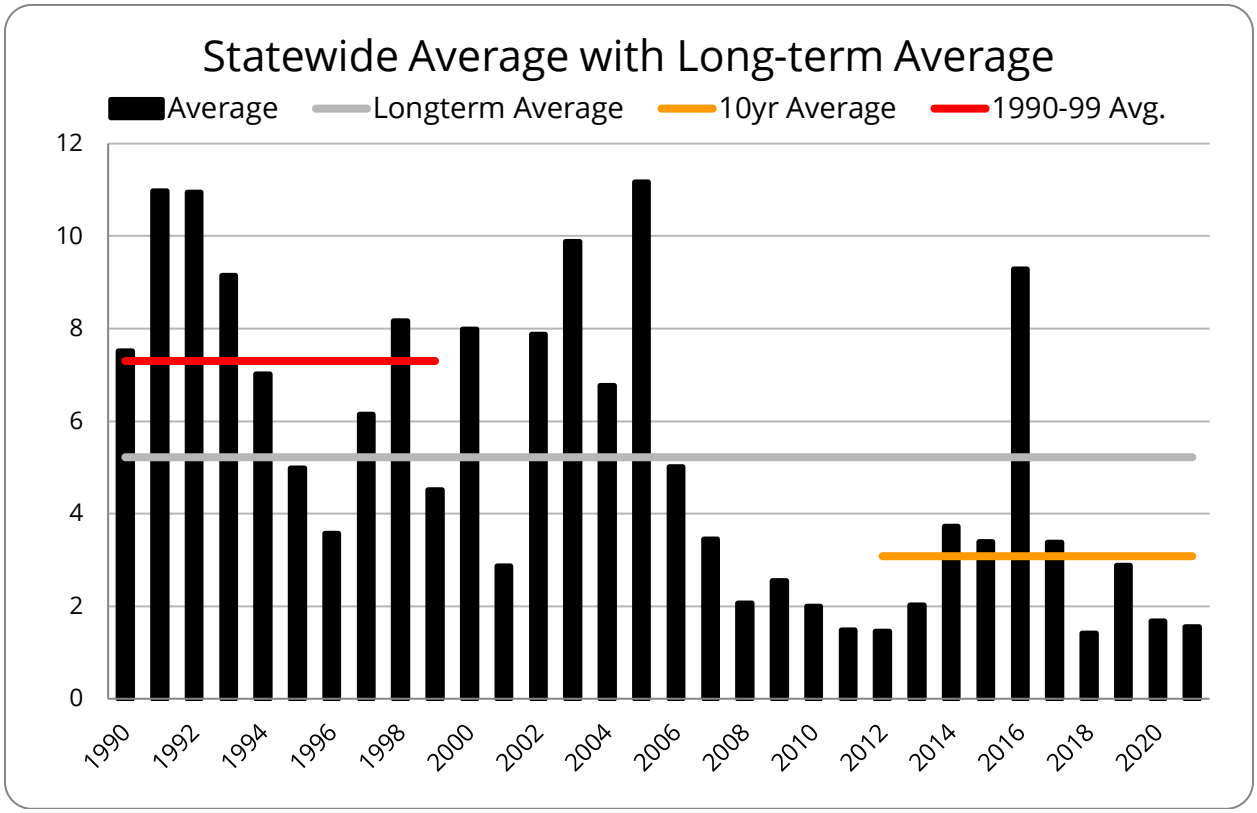

Figure 3. Long-term average of bobwhite observations in northwest Oklahoma.

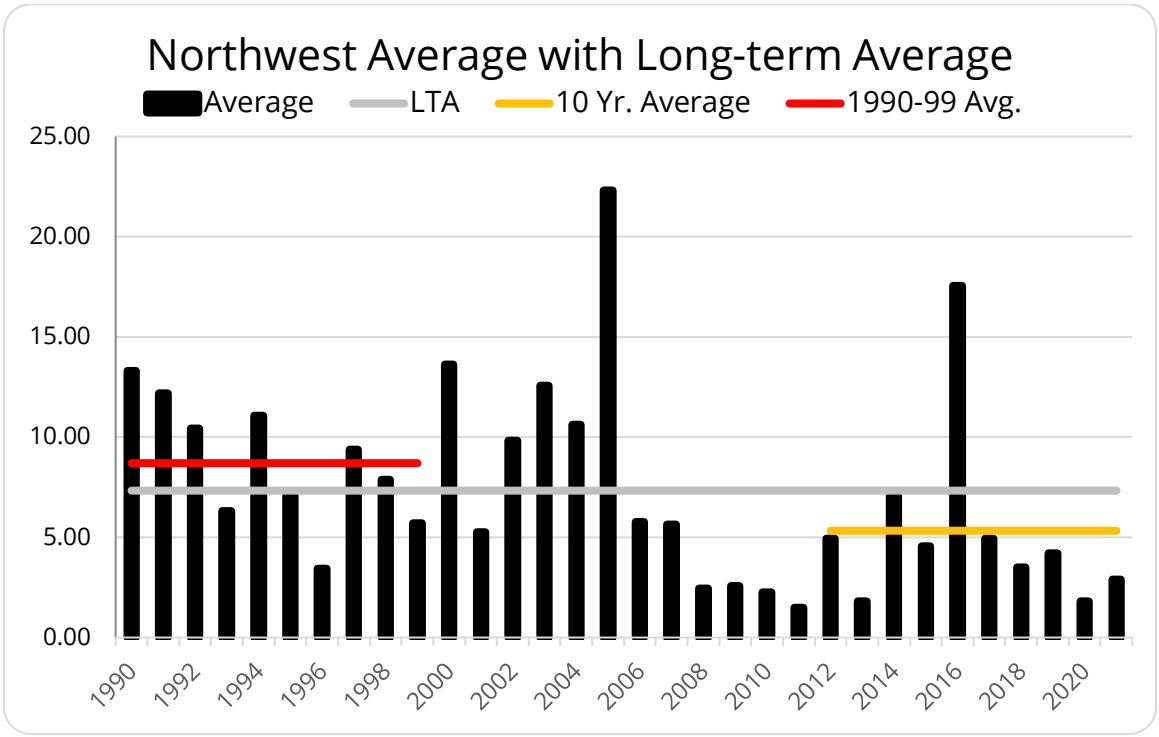

Figure 4. Long-term average of bobwhite observations in northeast Oklahoma.

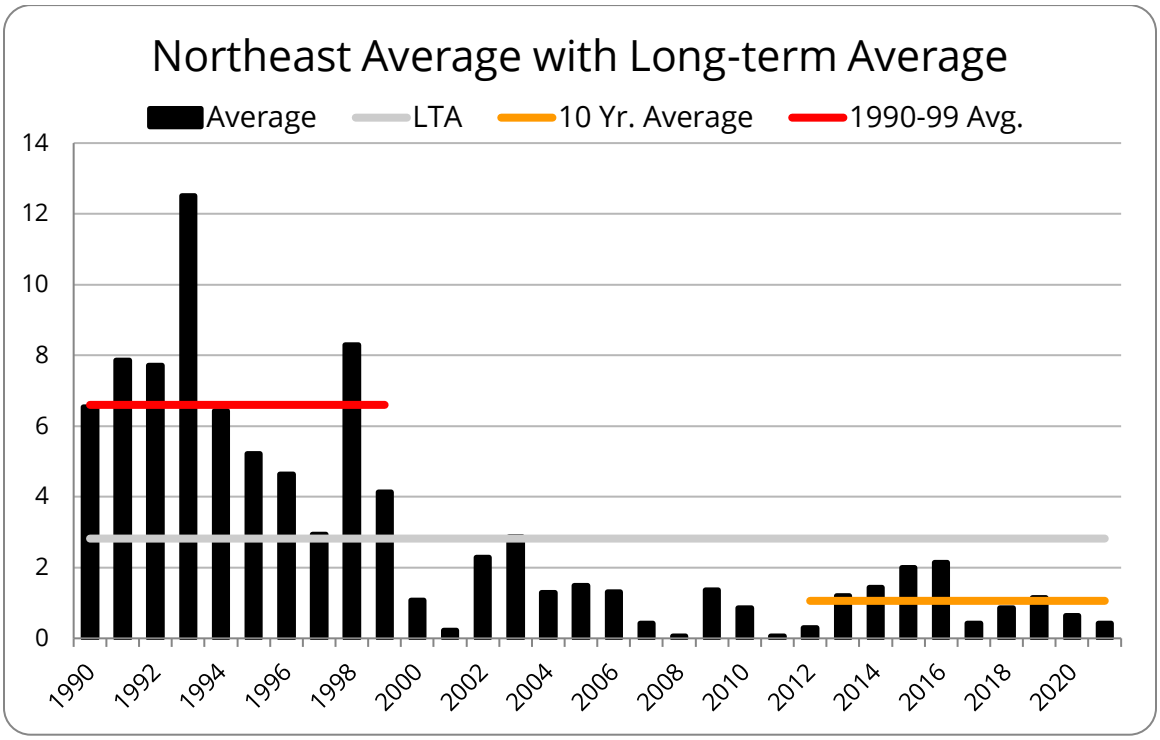

Figure 5. Long-term average of bobwhite observations in northcentral Oklahoma.

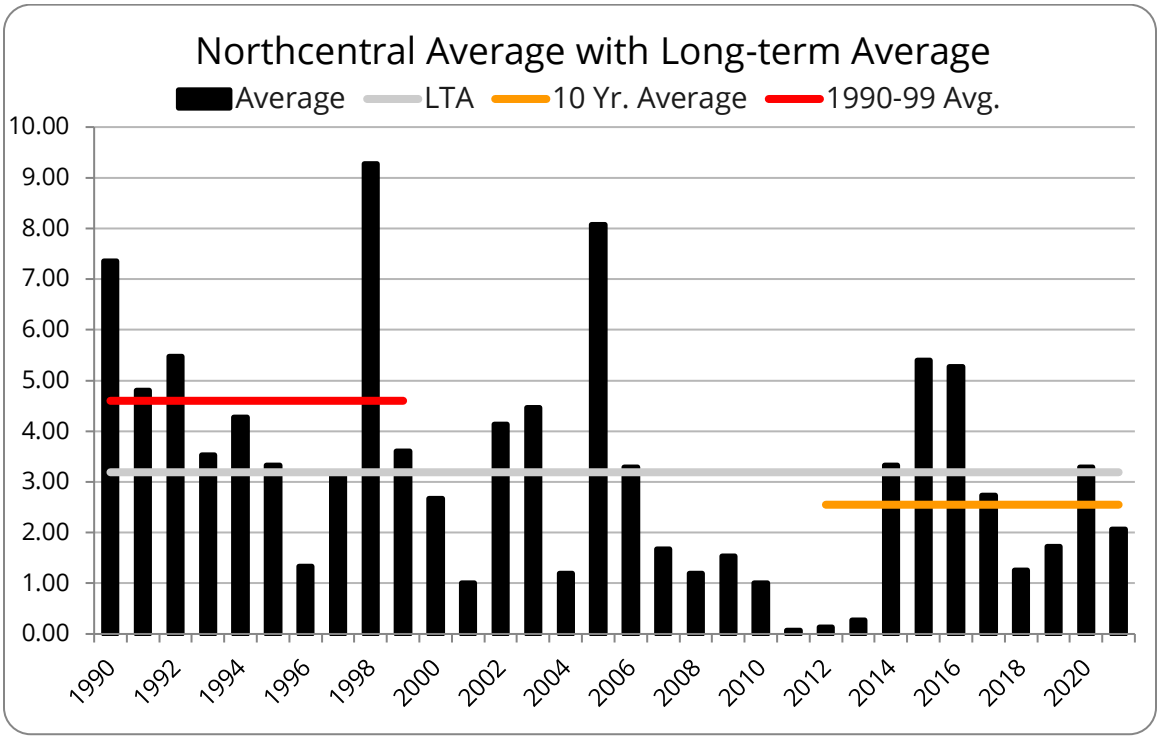

Figure 6. Long-term average of bobwhite observations in southwest Oklahoma.

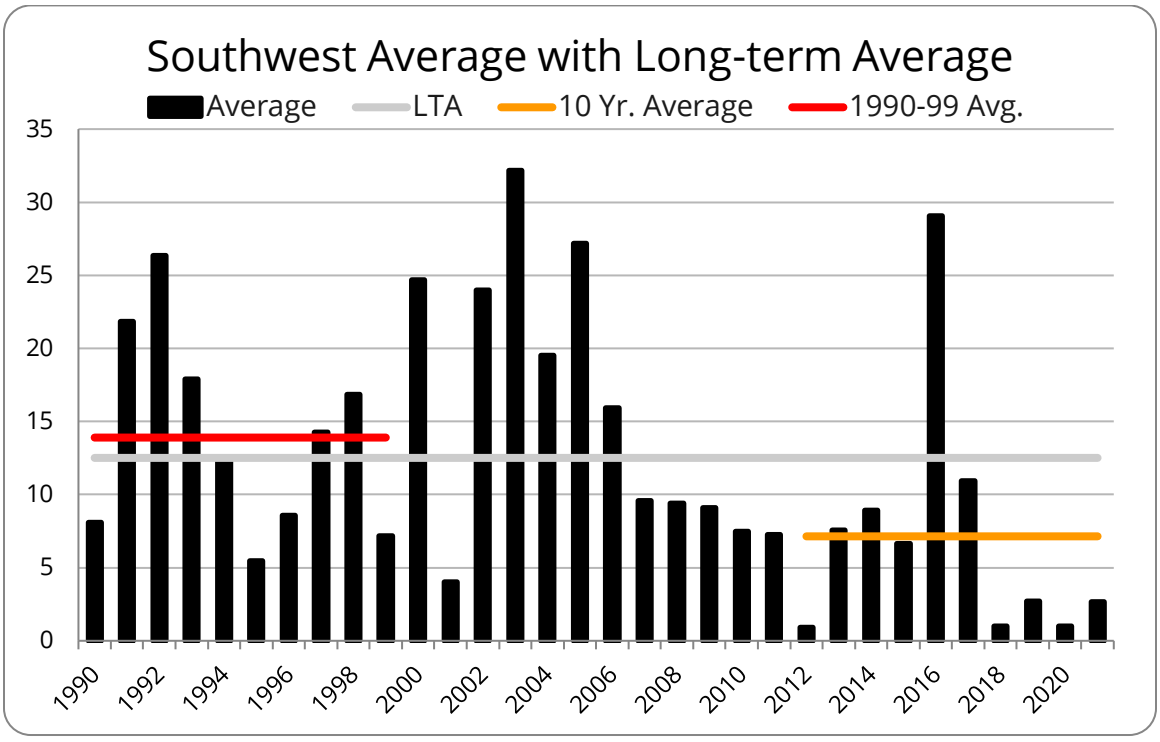

Figure 7. Long-term average of b bobwhite observations in southeast Oklahoma.

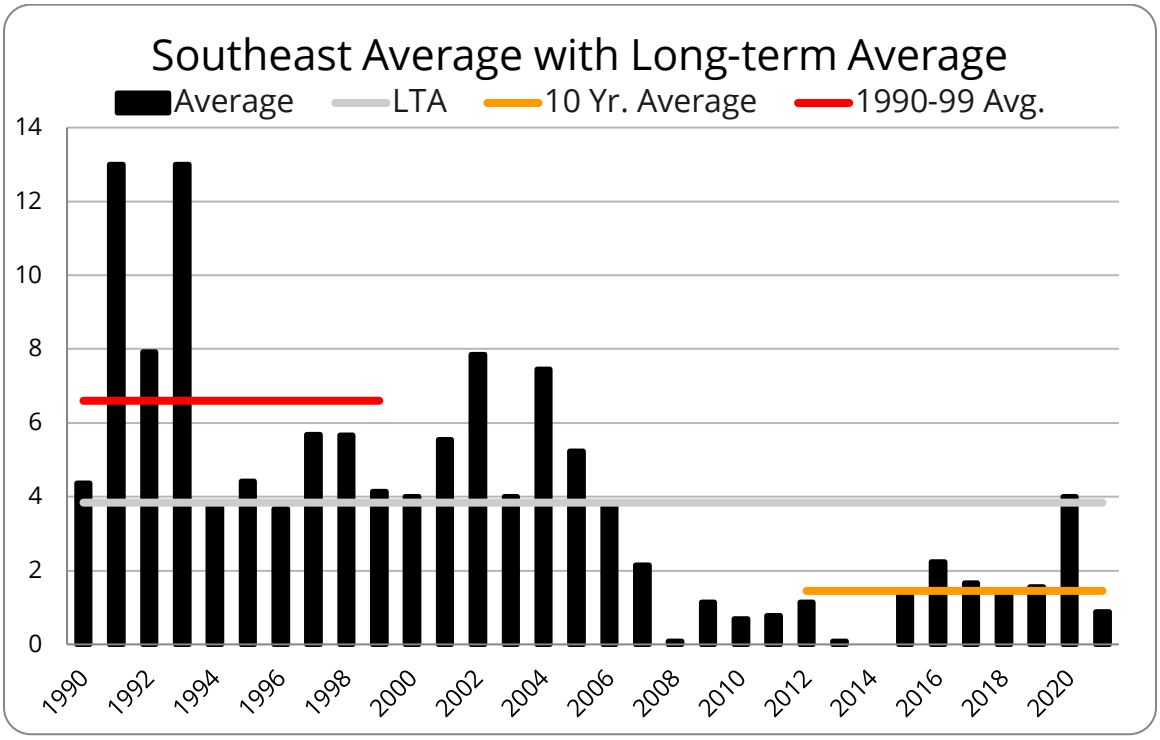

Figure 8. Long-term average of bobwhite observations in southcentral Oklahoma.

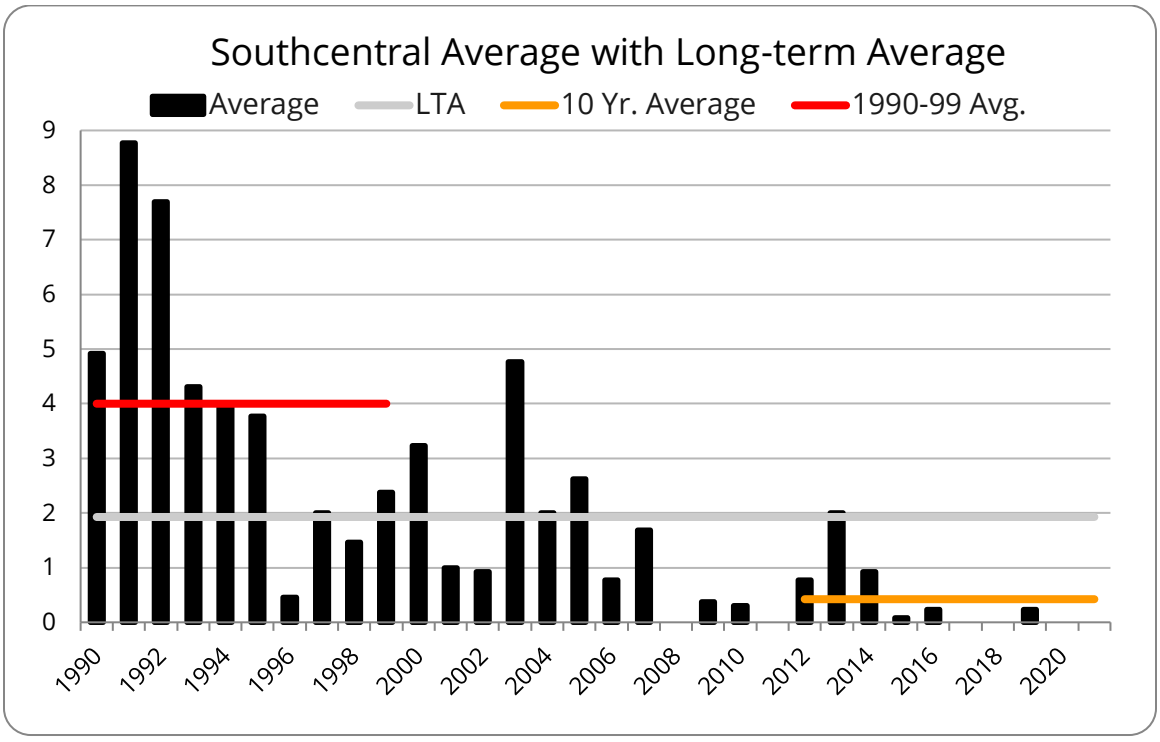

Figure 9. Drought Comparison from June 8th, 2021 to September 7th, 2021 (Source: droughtmonitor.unl.edu/)

Figure 10. Departure from normal rainfall in inches - March 13–September 8, 2021 (Source: mesonet.org)

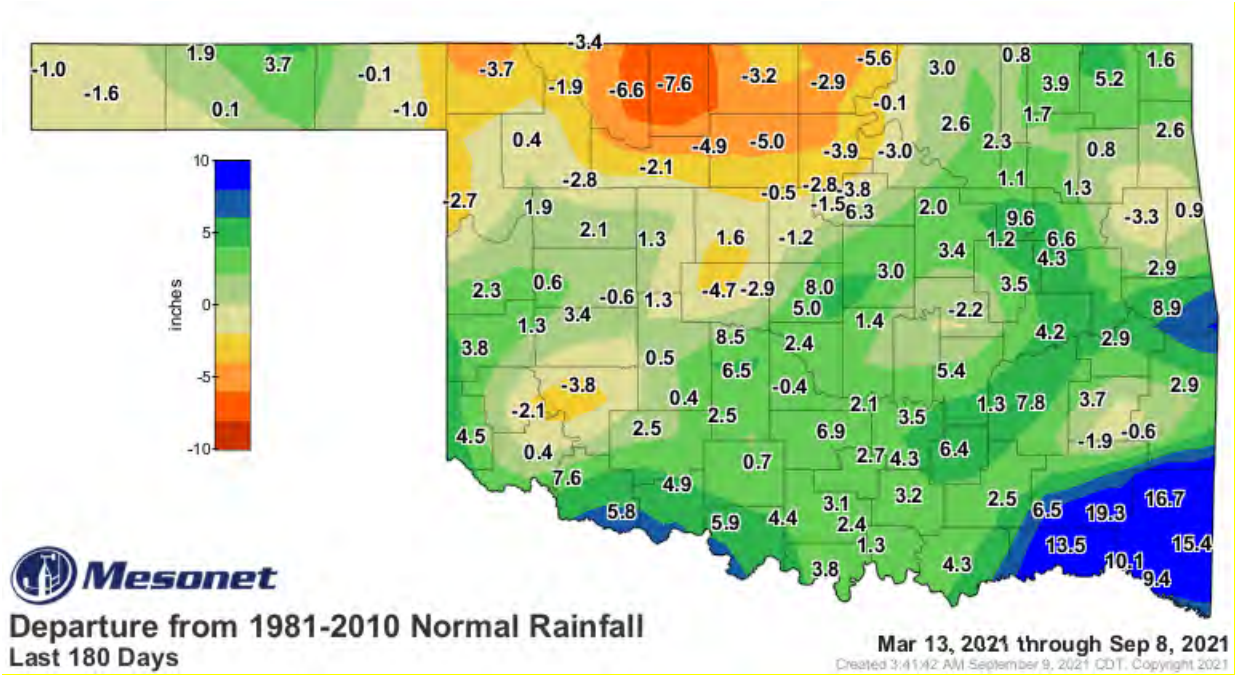

Figure 11. Ecoregions of Oklahoma

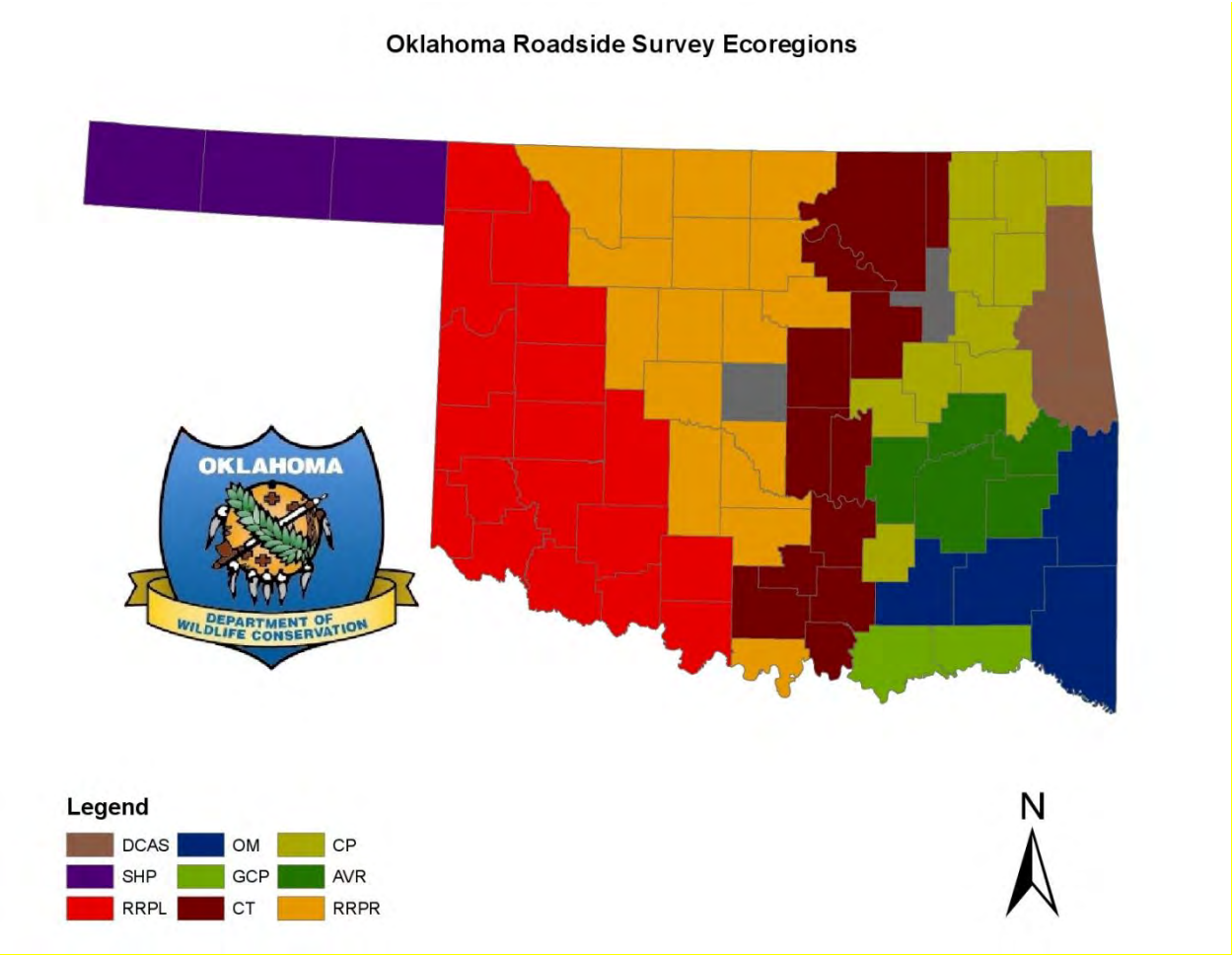

Table 2. Bobwhite quail numbers/20 mile route in the 9 geographic ecoregions of Oklahoma

Ecoregion		**2020**	**2021**	**% Change**
Arkansas Valley & Ridges	AVR	2.2	1.17**	↓ 46.8%
Cherokee Prairie	CP	1.22	0.3	↓ 75.4%
Cross Timbers	CT	0.75	0.15	↓ 80.0%
Ozark Highlands	DCAS	1.25	1.25	00.00%
Gulf Coastal Plain	GCP	0	*	*
Ouachita Mountains	OM	5.25	0.0*	↓ 100.0%*
Rolling Red Prairie	RRPR	2.813	1.71	↓ 39.21%
Rolling Red Plain	RRPL	0.7	3.05	↑ 335.7%
Southern High Plain	SHP	3	3.75	↑ 25.0%

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