



2023 Quail Season Update

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October 30, 2023

El Niño brings favorable weather patterns and a 38% boost to Oklahoma's October Roadside surveys; yet numbers remain well below historic averages.

Over thirty years ago the ODWC began conducting roadside surveys to monitor quail numbers throughout the state. There are 83 twenty-mile routes surveyed in August and October in all counties except Oklahoma and Tulsa counties which are excluded due to urbanization. With low observation numbers these roadside surveys can have a wide degree of variability, but the consistency of the survey methodology over time allows us to interpret the information on a historical scale. August surveys give biologists an idea of breeding success, while October surveys reveal a glimpse of recruitment for the fall hunting season. Typically, August survey numbers are a less reliable hunting season predictor than October's due to the fact that some chicks will not survive through the summer. Long term and year-to-year trends are important for sportsmen and biologists alike. The last decade has seen survey numbers cycle starting at the lowest recorded on these surveys in 2012 and slowly rising to a peak in 2016 that quickly fell back to previous lows. The data are analyzed in two ways: by region (Figure 1/Table 1) and by ecoregion (Figure 2/Table 2). Looking at the data by both groupings can help us better understand the fluctuations in quail numbers. This year we are seeing the statewide average up by about 38% over 2022.

The August surveys showed all regions except the northcentral region up over 2022's surveys. October's surveys showed all regions up except for the southwest and northcentral regions, the southeast region showed no change over 2022. (Table 1). Figures 4-10 below show the average survey results for each region for 1990-2023. In these figures I have added a rolling 10-year average to help visualize the changes and relationship to the 10-year average over longer periods.

When we break the statewide numbers down by ecoregion, we are able to see what areas are producing better or worse year-to-year (Table 2 & Figure 3). On an ecoregion basis, the Southern High Plain had the largest increase. By analyzing the data this way, we can also see that there are primarily four ecoregions driving this year's statewide average: Ouachita Mountains, Cherokee Prairie, Rolling Red Plain, and the Southern High Plain.

The past year has generally been a great improvement over the previous couple of years. November of 2022 had over 97% of the state in D2-D4 drought conditions (Figure 13). Last year's drought conditions and overall La Niña weather pattern gave way to a moist spring fueled by El Niño conditions. Spring brought some reprieve for most of the

state from drought, but some of those storms systems brought large swaths of hail that can make nesting success limited locally. Now in mid-October, pockets of extreme drought persist in the northcentral and southern regions of the state. Without additional rains, drought conditions will worsen for much of the state. (Figures 11-13). Drought settled back in quickly with the summer heat; areas of the southwest saw up to 59 days over 100°F. Intermittent rains throughout the growing season allowed for much of the state to see decent crops of forbs and insects. Currently, we see about 33.9% of the state in Severe (D2) Drought or worse (Figure 13).

Anecdotal reports of broods seem to show that quail nesting season started in early June, with a majority of observations coming in mid-July. Brood reports have however continued throughout the nesting season. Age structure of observed bobwhite in the October surveys show 87.76% full grown and 12.24% $\frac{3}{4}$ grown birds. This structure tends to relate with a strong early hatch. Anecdotal observations of multi-age broods also reveal evidence of repeated nest attempts with varied success across the state.

No scaled quail were observed during the 2023 surveys. 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 in 2023.

This year ODWC is once again collecting wings from public lands to better evaluate our quail population. If you harvest a bird from a Wildlife Management Area with a wing box, please take the time to place one wing into a provided envelope from each harvested quail (whichever is least damaged as long as only one wing per bird), fill out the envelope, and then place it in the box. The management areas that will have boxes are Beaver River, Canton, Cooper, Cross Timbers, Ellis County, Kaw, Packsaddle, Pushmataha, Sand Hills, and Sandy Sanders. Your participation in this data collection effort provides vital information about nesting success and timing and helps improve the management of these game birds.

In summary, hunters taking to the field will likely find areas of good quail numbers where habitat and weather conditions were most favorable. Hunting will not be what it was at the last observed peak in production in 2016, but we expect hunters to find birds throughout the state. Quail season opens November 11th, 2023 and runs until February 15th, 2024. Hunters are allowed 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.

Ultimately, remember the outdoors are always open!
 Work some ground, trust your dog, and make a memory!
 Enjoying the Oklahoma Outdoors!

Figure 1. Regional Map of Oklahoma.

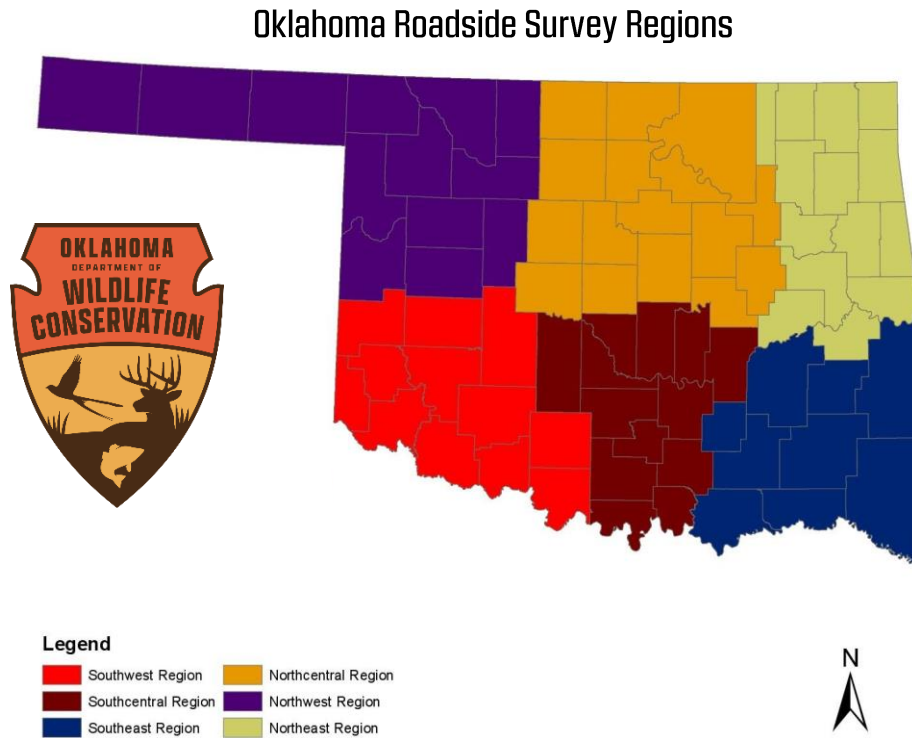


Table 1. Regional Breakdown of Surveys

Region	August			October		
	2022	2023		2022	2023	
Northwest	2.3	4.875	↑	3.5	6.125	↑
Northeast	0.8	3.5	↑	0.3	0.929	↑
Southwest	1.6	2.66	↑	1.5	1.166	↓
Southeast	0.3	0.45	↑	0.9	0.91	-
Northcentral	3.6	1.06	↓	1.2	0.73	↓
Southcentral	0	0.076	↑	0	0.08	↑
Statewide	1.5	2.23457	↑	1.3	1.815	↑

Figure 2. Ecoregion Map of Oklahoma.

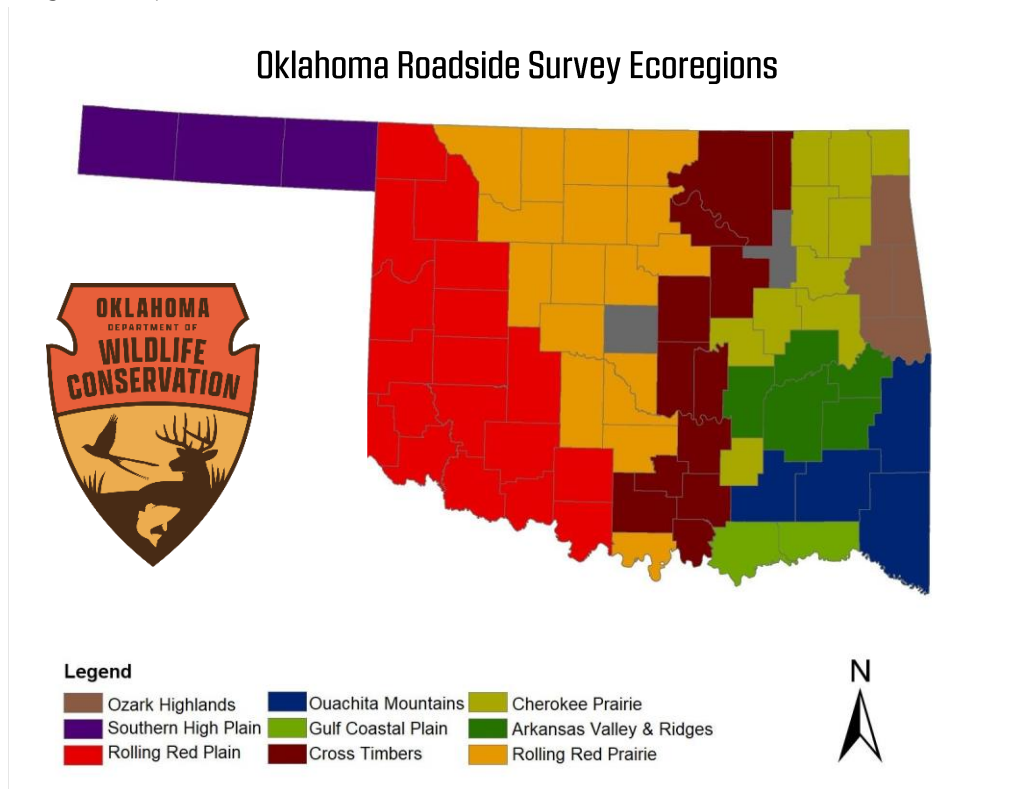


Table 2: Ecoregional Breakdown of Surveys

Ecoregion	August			October		
	2022	2023		2022	2023	
Arkansas Valley & Ridges	0.5	0	↓	1.66	0.00	↓
Cherokee Prairie	1.4	3.7	↑	0.20	1.50	↑
Cross Timbers	0.69	1.15	↑	0.23	0.54	↑
Ozark Highlands	0	0	-	0.50	0.00	↓
Gulf Coastal Plain	0	0	-	0	0	-
Ouachita Mountains	0.2	1	↑	0	1.60	↑
Rolling Red Prairie	2.56	1.71	↓	0.88	0.41	↓
Rolling Red Plain	2.66	4	↑	3.20	3.85	↑
Southern High Plain	0	3.75	↑	2.50	8.25	↑
Statewide	1.53	2.23	↑	1.31	1.81	↑

Figure 3: Quail/Route by ecoregion from 2016-2023

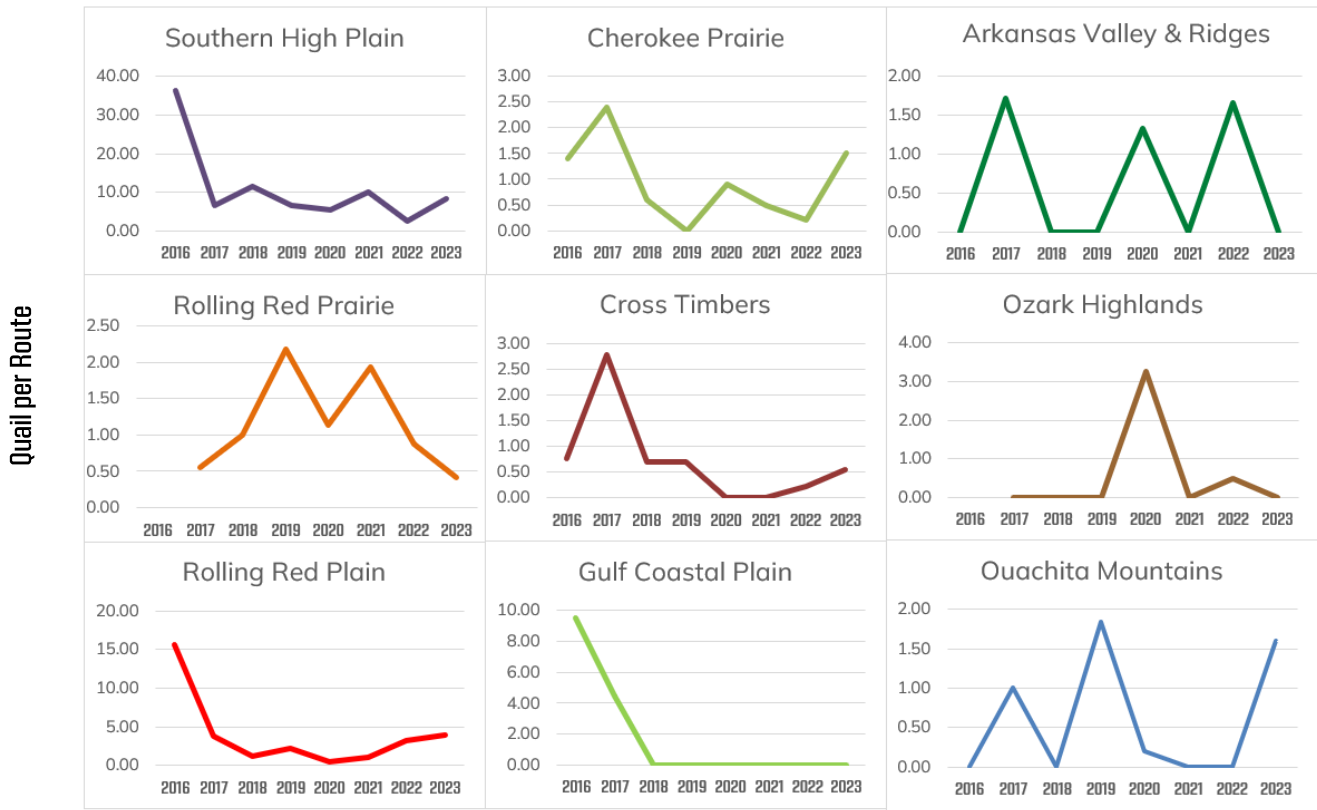


Figure 4: Statewide Long Term Averages

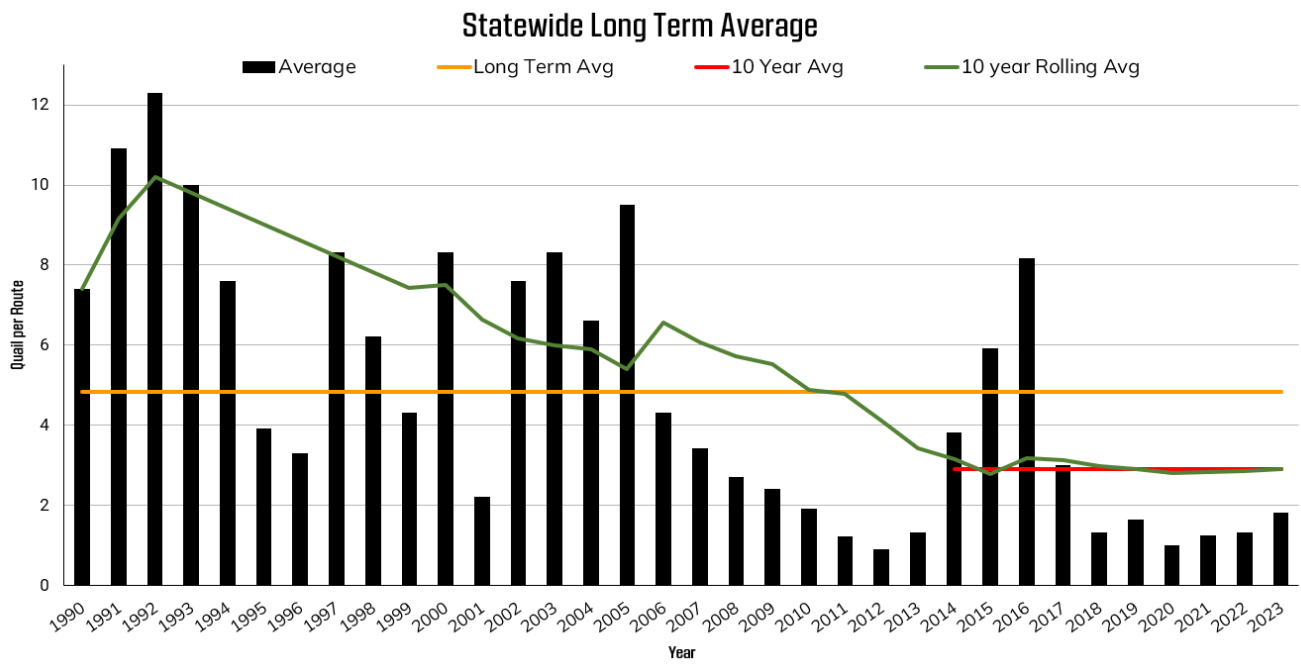


Figure 5: Northwest Long Term Averages

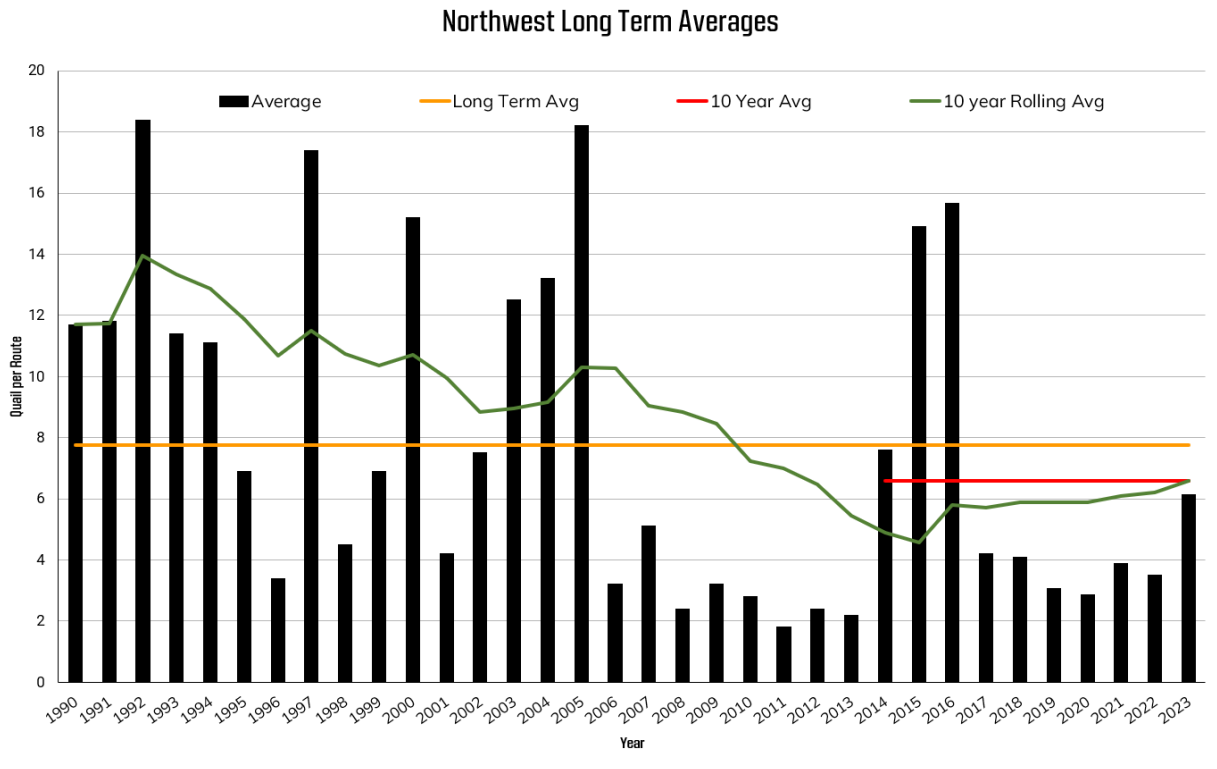


Figure 6: Southwest Long Term Average

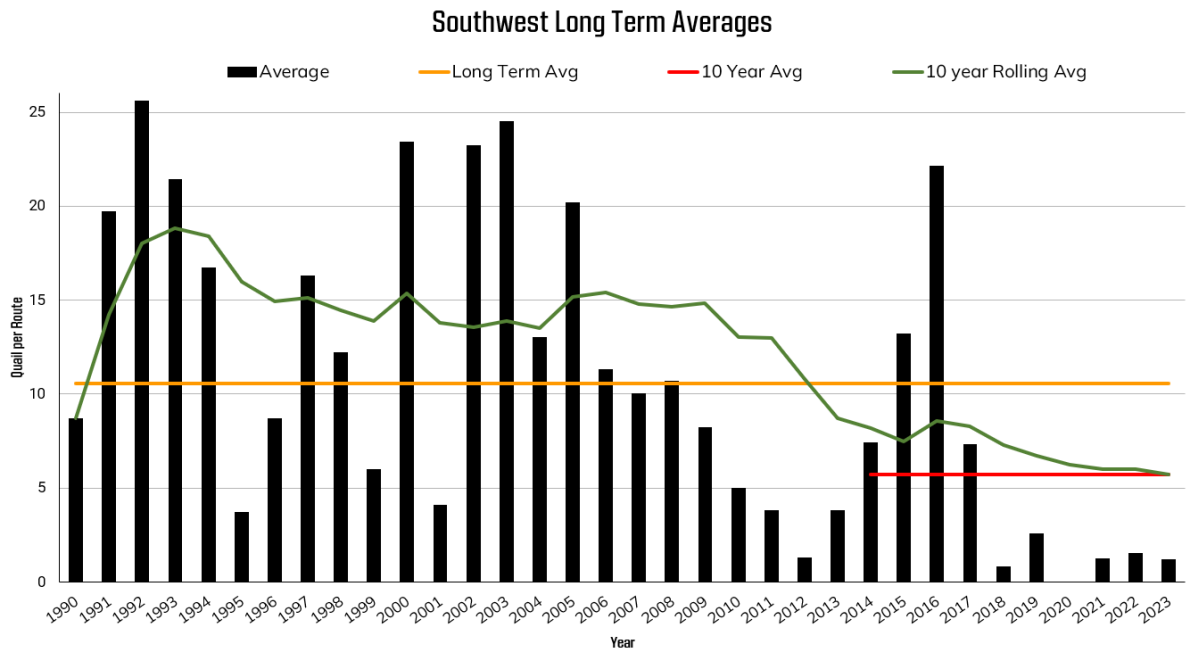


Figure 7: Northcentral Long Term Average

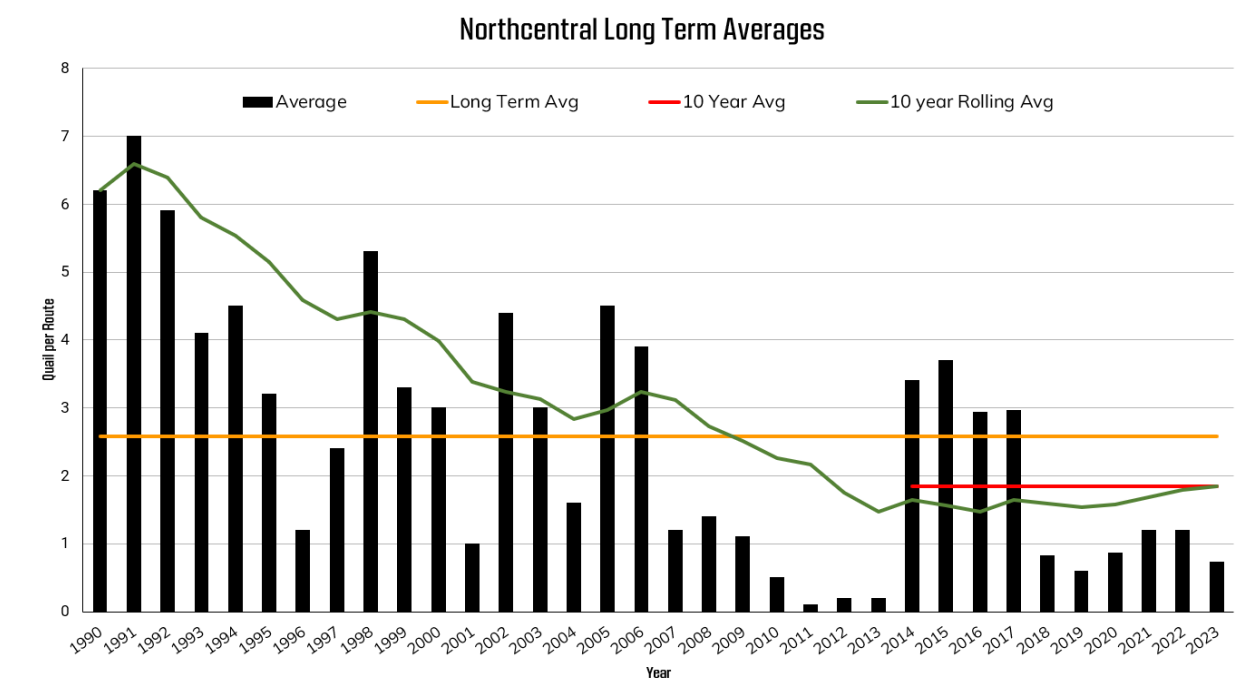


Figure 8: Southcentral Long Term Average

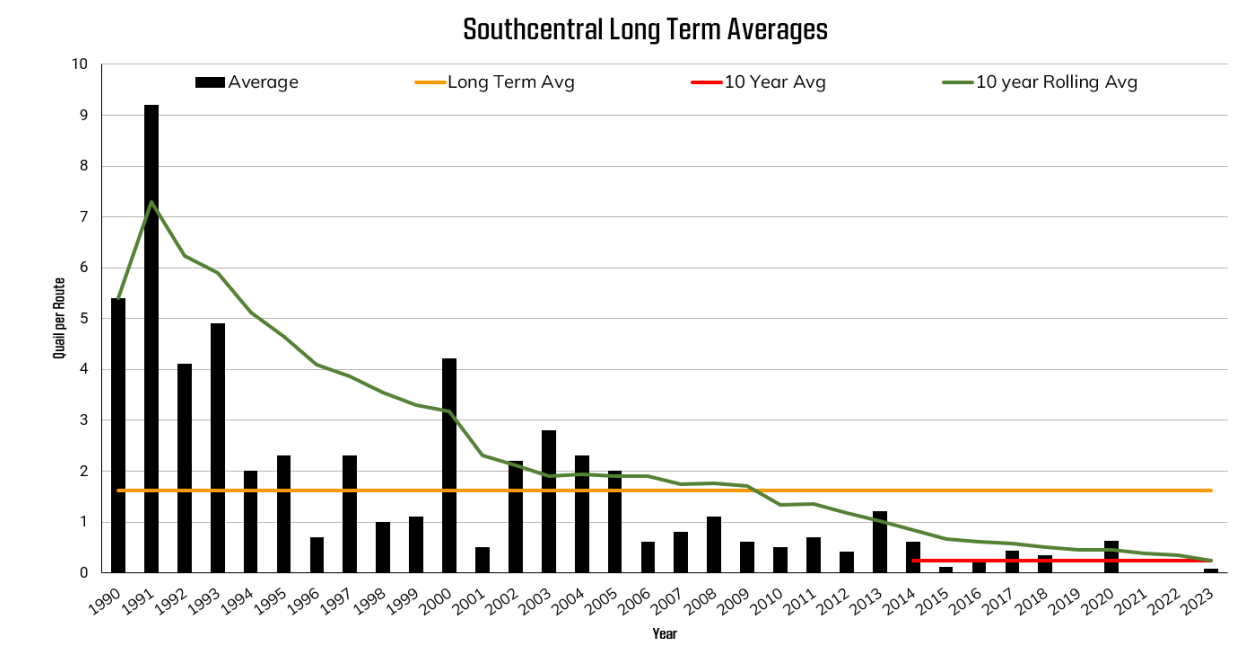


Figure 9: Northeast Long Term Average

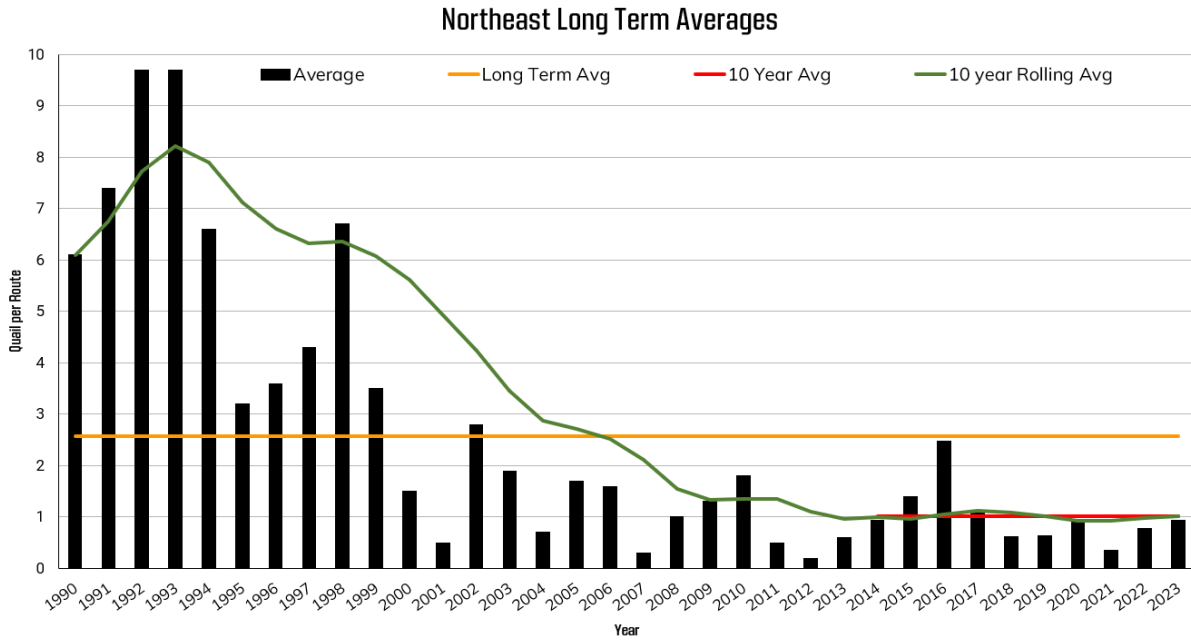


Figure 10: Southeast Long Term Average

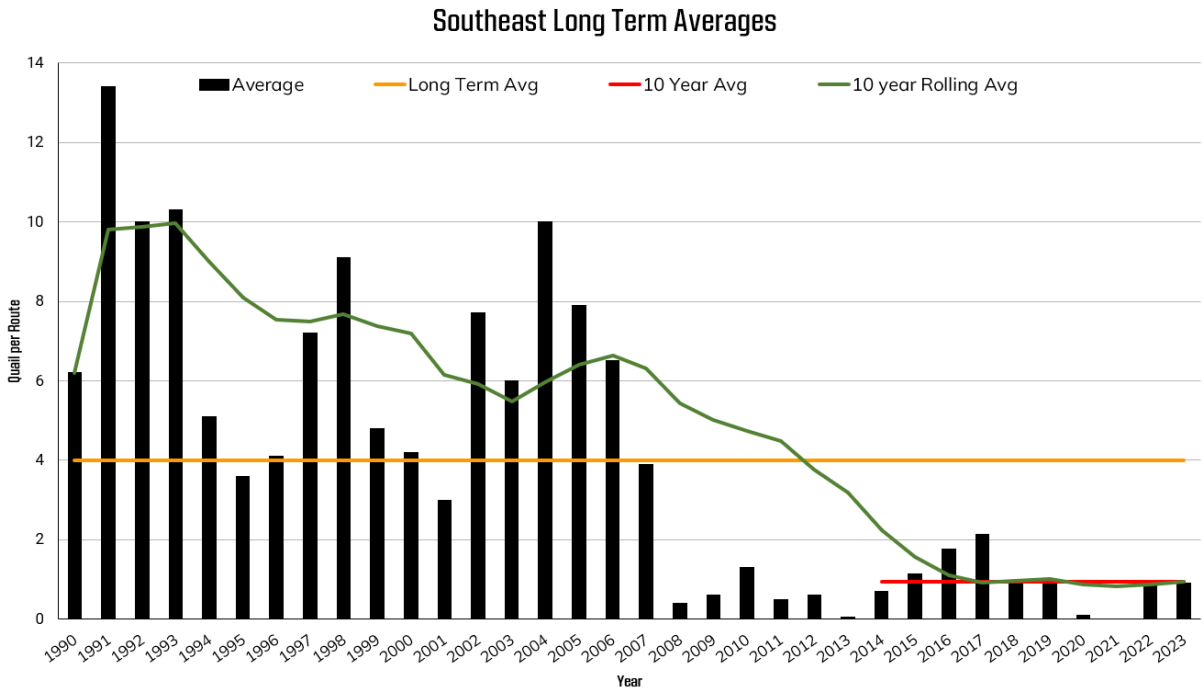


Figure 11: Rainfall totals for the last 365 days in Oklahoma (Source: Mesonet.org)

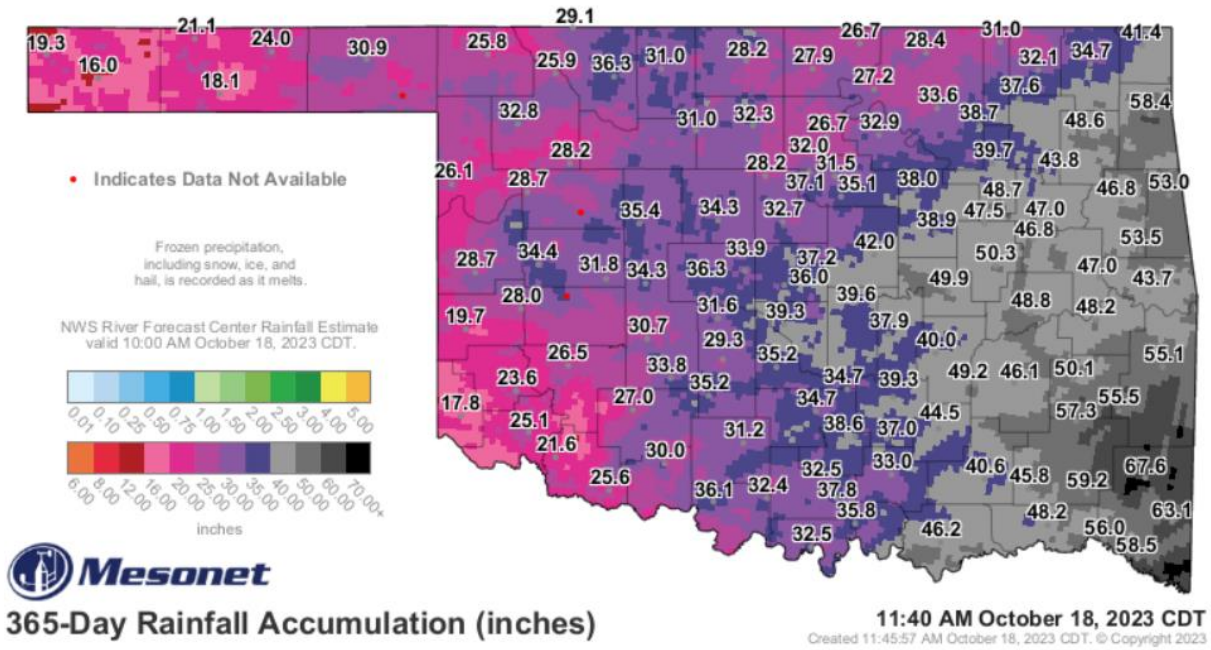


Figure 12: Average Annual Rainfall (Source: climate.ok.gov)

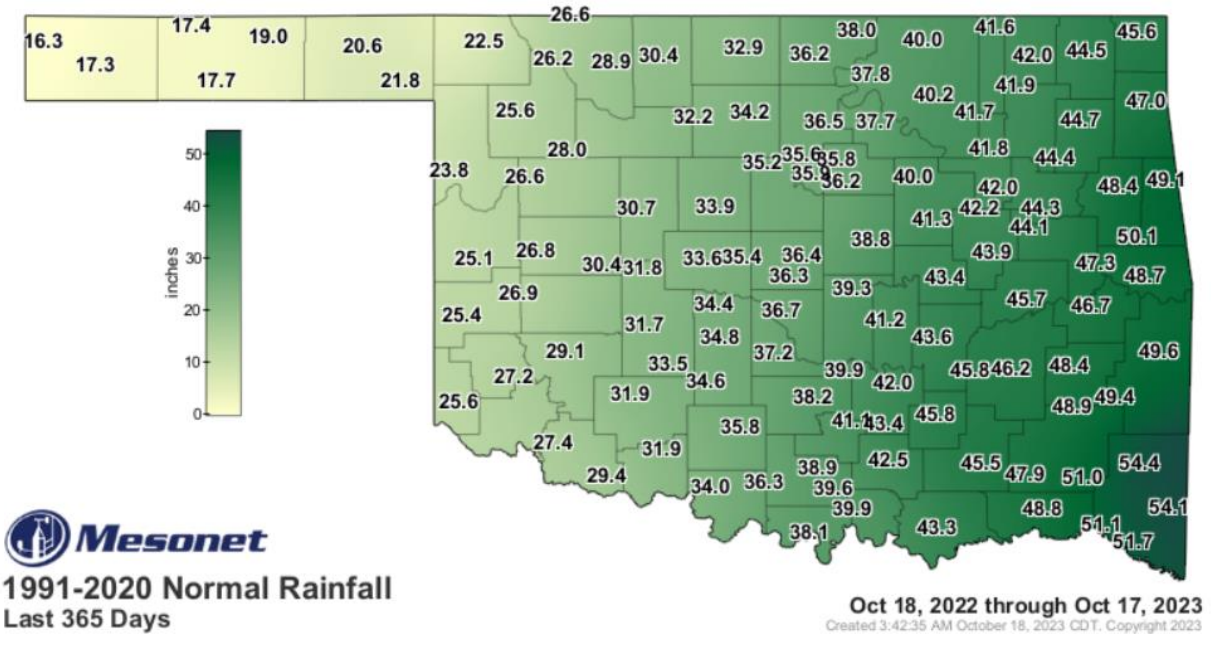


Figure 13: Comparison of Drought Conditions for 2022 (Source: Droughtmonitor.unl.edu)

