2020 Quail Season Outlook

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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. 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 data 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 lower in 2010 and slowly rising to a peak in 2016 that quickly fell back to previous lows. In 2020 we are seeing the statewide average down slightly. The data are analyzed in two ways: by Region (Figure 1) and by Ecoregion (Figure 2). Looking at the data by both groupings can help to understand the causes of change in quail numbers. 2019 showed some improvement for the statewide quail average, but for 2020 it appears to have dropped again with the statewide average quail per route (qpr) decreasing 38.27%.

Regionally, the northeast area had the largest increase from 0.64 to 2.75 qpr. The southcentral and northcentral regions also showed an increase over 2019 counts (Table 1). In August only two regions of the state were up over 2019's survey numbers. However, in October three of the six regions are up going into the season. Figures 4-10 below show the average survey results for 1990-2020.

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 Arkansas Valleys and Ridges, Cherokee Prairie, and Ozark Highlands had the largest increases. By analyzing the data this way we can also see that there are primarily three ecoregions driving the statewide average: Southern High Plain, Rolling Red Plain, and the Gulf Coast Plain.

In 2019 we battled near record rainfall for much of Oklahoma, and 2020 brought its own issues. While the southeastern region of the state has seen more normal amounts of rainfall, the same can not be said for the western half (Figures 11 & 12). Cimarron, Beaver, Beckham, Greer, Harmon, Jackson, & Roger Mills Counties have only received about half their average rainfall. A majority of the state hadn't seen more than 0.1" of precipitation for over 40 days until the winter-storm hit the last week of October. As the nesting season wore on, much of the state began to find itself in drought, which can have a negative impact on brood survival (Figure 12). According to data from the 'Game Brood Survey App' created by Oklahoma State and ODWC, it appears quail nesting season started in early May and even with the drought issues carried on throughout the nesting season. Patchy rainfall, across the northwest brought on a variable forb and insect crop.

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 off of the 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, Kaw, Packsaddle, Pushmataha, 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 pockets of fair to good populations of quail where reproduction was not as severely impacted by weather and habitat remains good. 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. Ultimately, remember the outdoors are #AlwaysOpen! Work some ground, trust your dog, and make a memory!
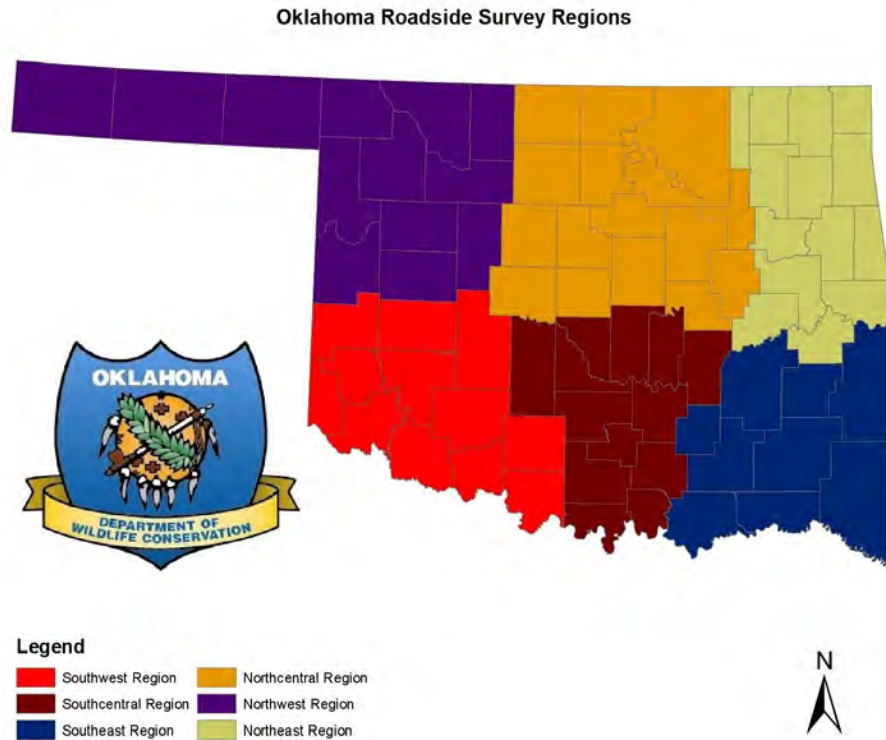
Figure 1. Regional Map of Oklahoma.

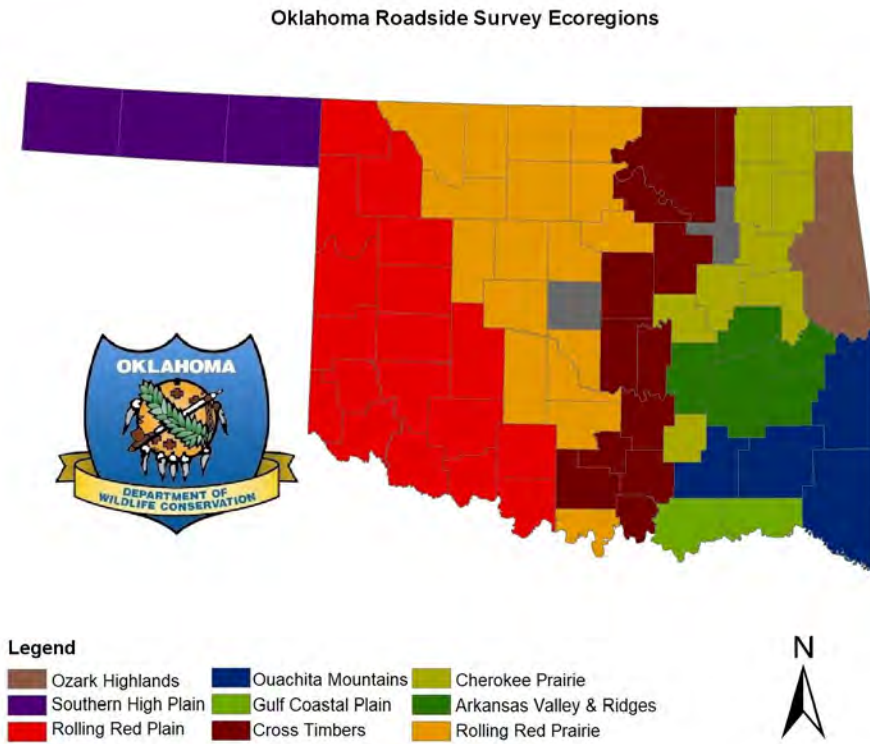Figure 2. Ecoregion Map of Oklahoma.

Oklahoma Roadside Survey Ecoregions

Legend
- Ozark Highlands
- Southern High Plain
- Rolling Red Plain
- Ouachita Mountains
- Gulf Coastal Plain
- Cross Timbers
- Cherokee Prairie
- Arkansas Valley & Ridges
- Rolling Red Prairie

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Table 1. Regional Breakdown of Surveys

	August				October		
Region	2019	2020	% Change		2019	2020	% Change
Northwest	4.2	1.81	↓ 56.9%		3.06	2.875	↓ 6.05%
Northeast	1.15	0.64	↓ 44.35%		0.64	0.93	↑ 45.31%
Southwest	2.69	1.0	↓ 62.83%		2.58	0.0	↓ 100%
Southeast	1.55	4.0	↑ 158%		0.92	0.091	↓ 90.11%
Northcentral	1.73	3.29	↑ 90.17%		0.6	0.87	↑ 45.0%
Southcentral	0.23	0.0	↓ 100%		0.0	0.62	↑ 100%
Statewide	**2.88**	**1.68**	**↓ 41.67%**		**1.62**	**1.0**	**↓ 38.27%**

Table 2: Ecoregional Breakdown of Surveys

Ecoregion		August			October		
		2019	2020	% Change	2019	2020	% Change
Arkansas Valley & Ridges	AVR	0.4	2.2	↑ 450%	0.00	1.33	↑ 100%
Cherokee Prairie	CP	1.1	1.22	↑ 10.91	0.00	0.90	↑ 100%
Cross Timbers	CT	2	0.75	↓ 62.5%	0.69	0.00	↓ 100%
Ozark Highlands	OH	0.66	1.25	↑ 89.39%	0.00	3.25	↑ 100%
Gulf Coastal Plain	GCP	0	0	-	0.00	0.00	-
Ouachita Mountains	OM	3	5.25	↑ 75%	1.83	0.20	↓ 89.07%
Rolling Red Prairie	RRPR	5.37	2.813	↓ 47.62%	2.15	1.13	↓ 47.44%
Rolling Red Plain	RRPL	0.35	0.7	↑ 100%	2.18	0.50	↓ 77.06%
Southern High Plain	SHP	3.25	3	↓ 7.69%	6.50	5.50	↓ 15.38%
Statewide		**2.88**	**1.68**	**↓ 41.67%**	**1.62**	**1.00**	**↓ 38.27%**

Figure 3: Quail/Route by Ecoregion from 2016-2020

Quail/Route by Ecoregion 2016-2020
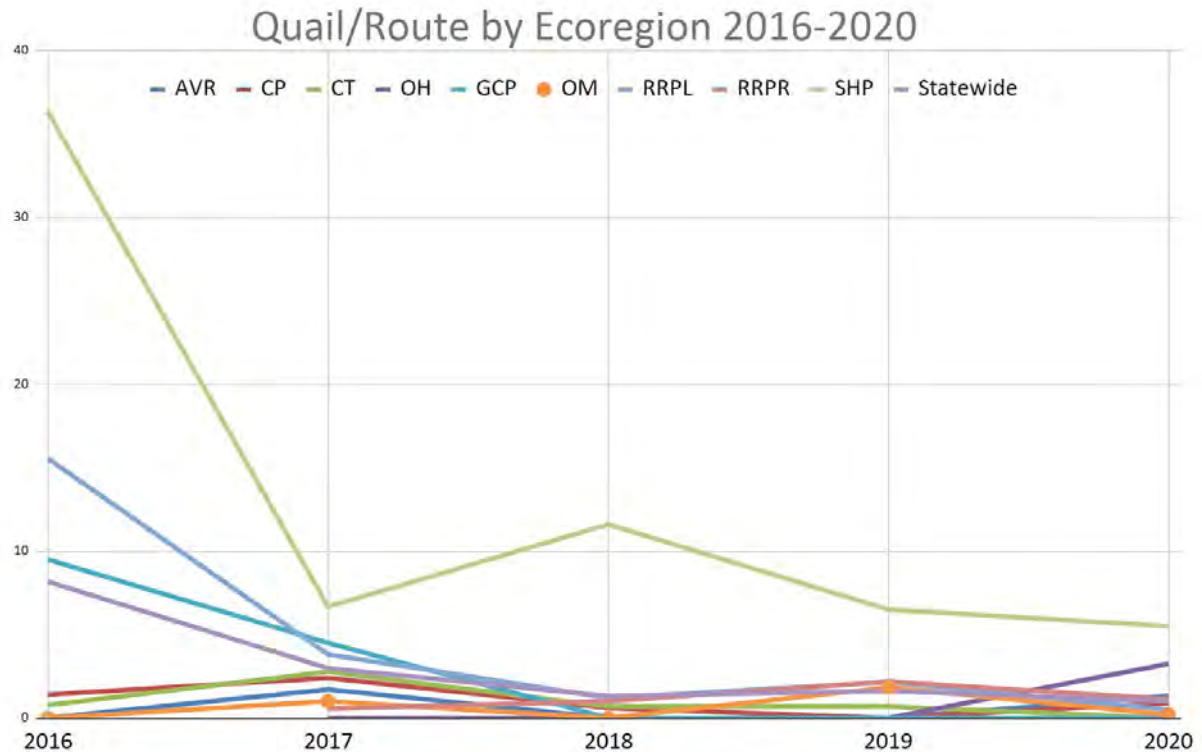
Figure 4: Statewide Long Term Averages

Statewide Long Term Averages
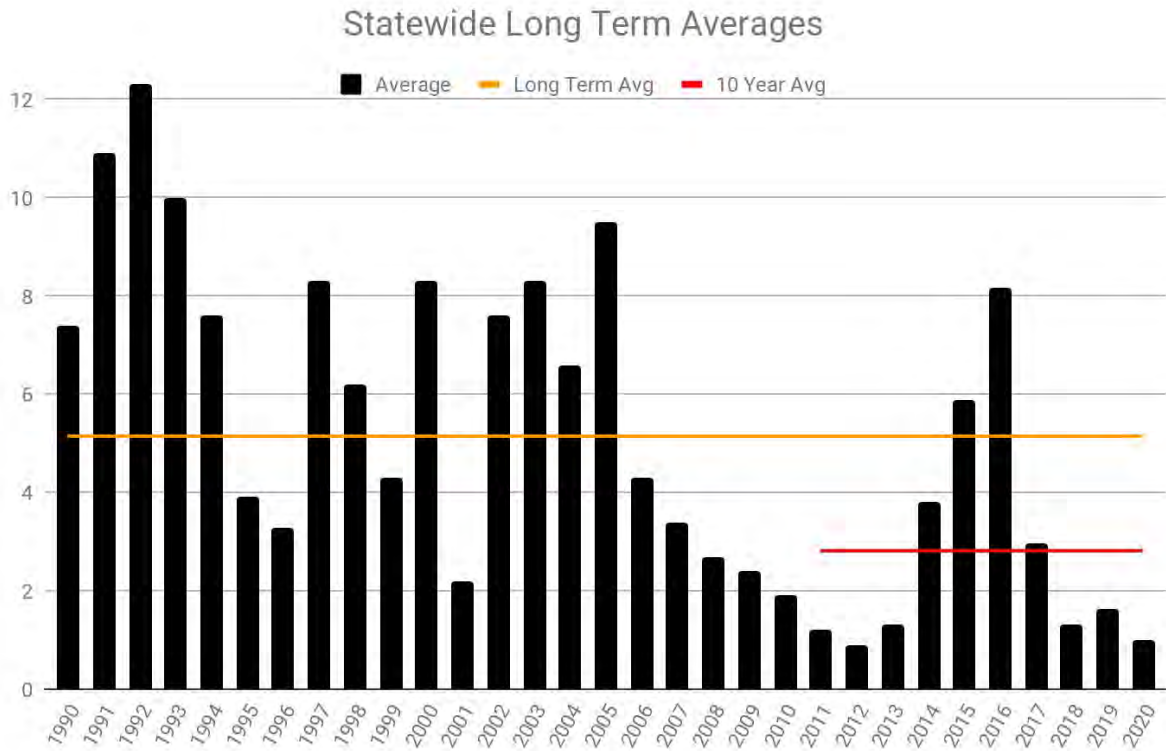
Figure 5: Northwest Long Term Averages

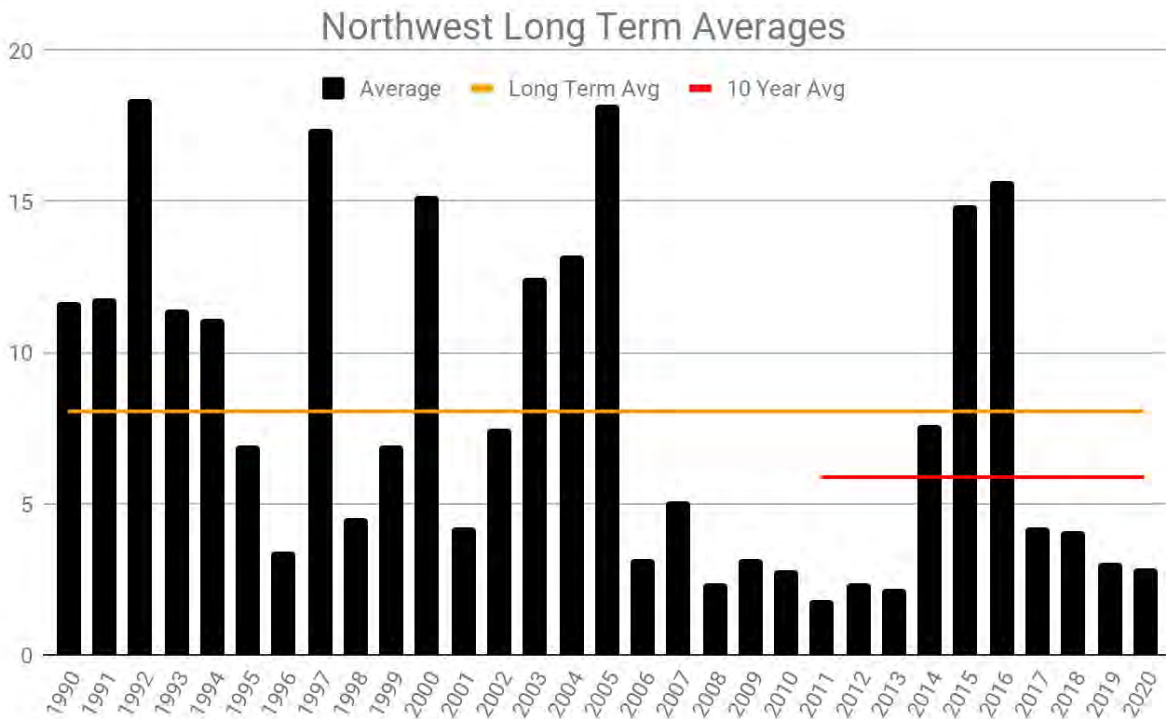Northwest Long Term Averages

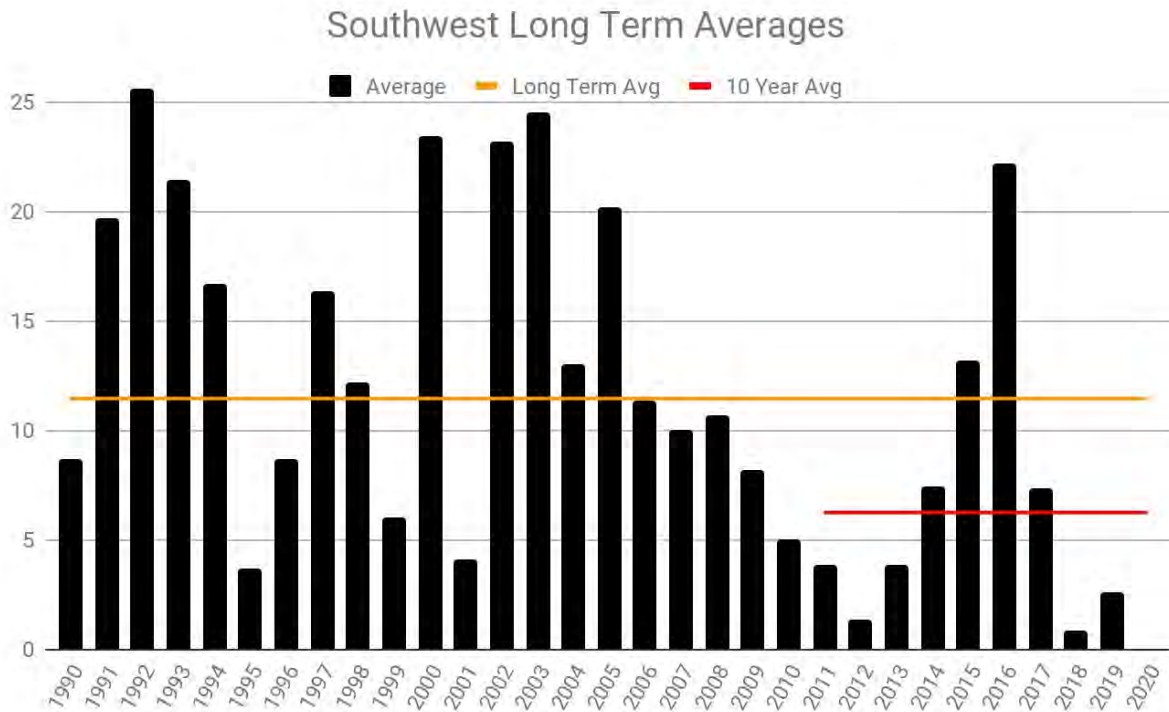Figure 6: Southwest Long Term Average

Figure 7: Northcentral Long Term Average

Figure 8: Southcentral Long Term Average
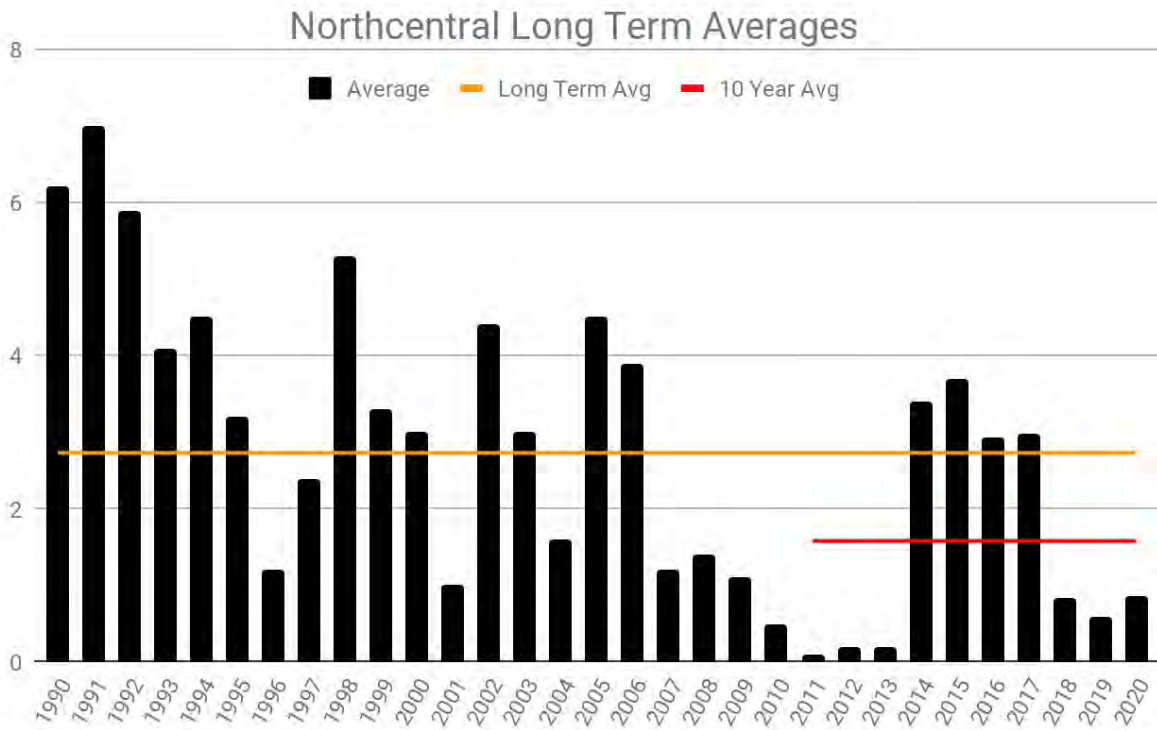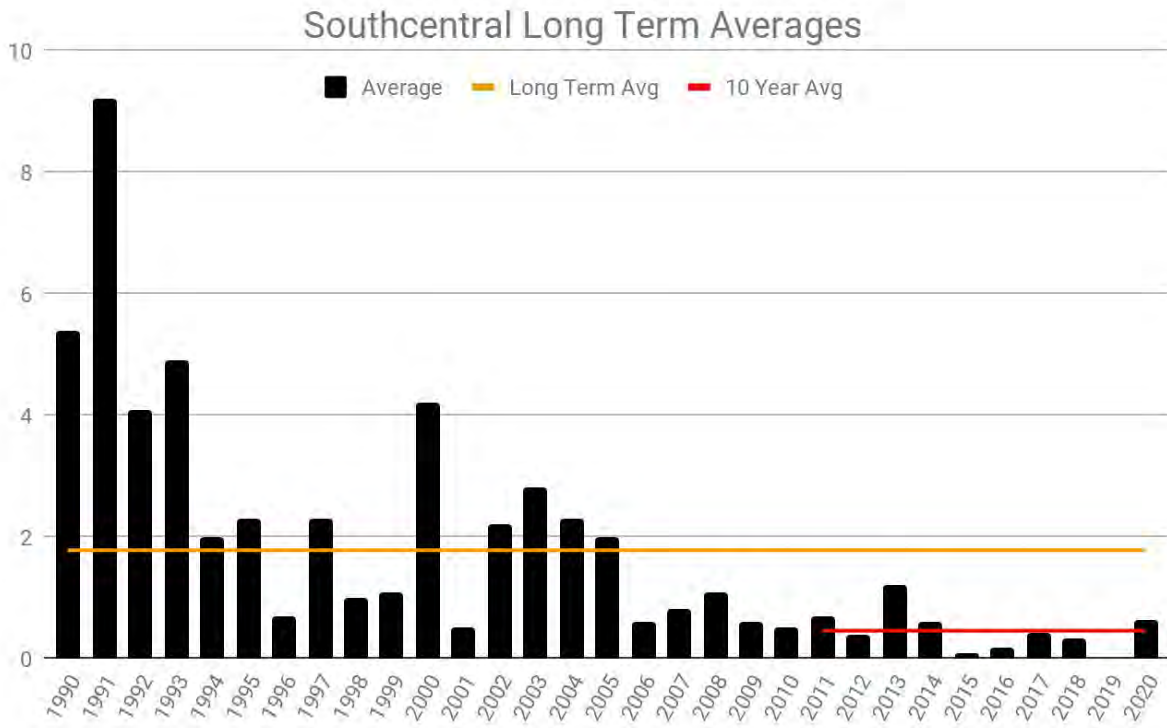

Southcentral Long Term Averages

Figure 9: Northeast Long Term Average

Northeast Long Term Averages
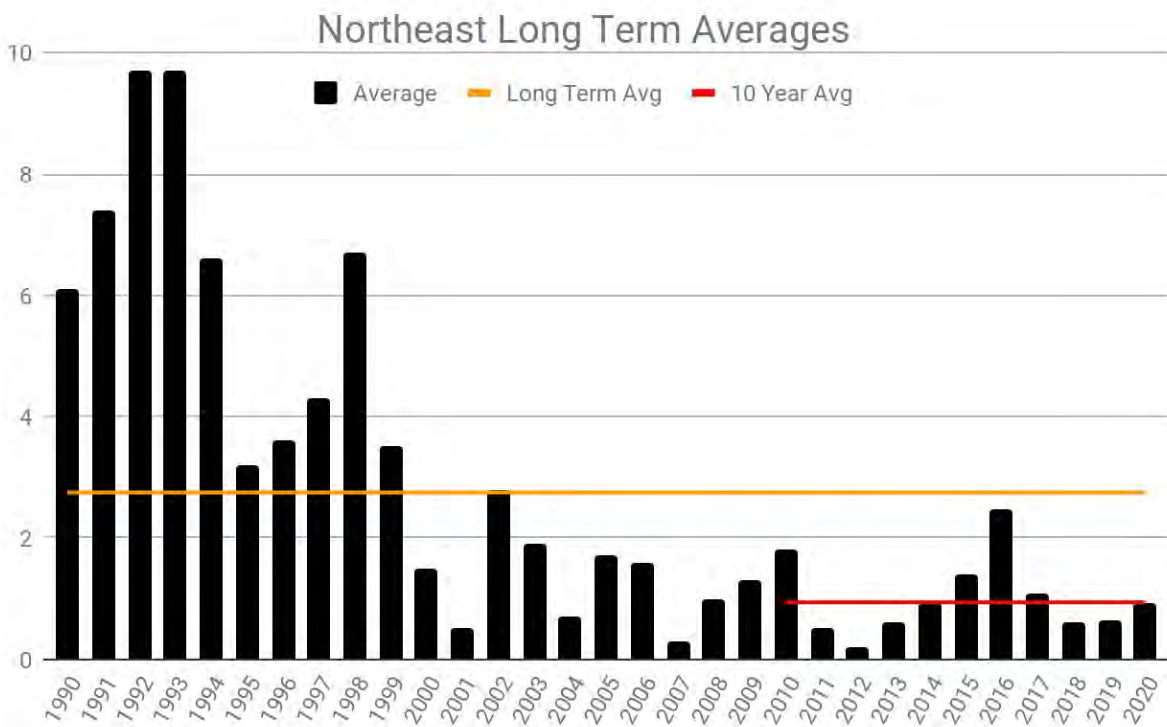
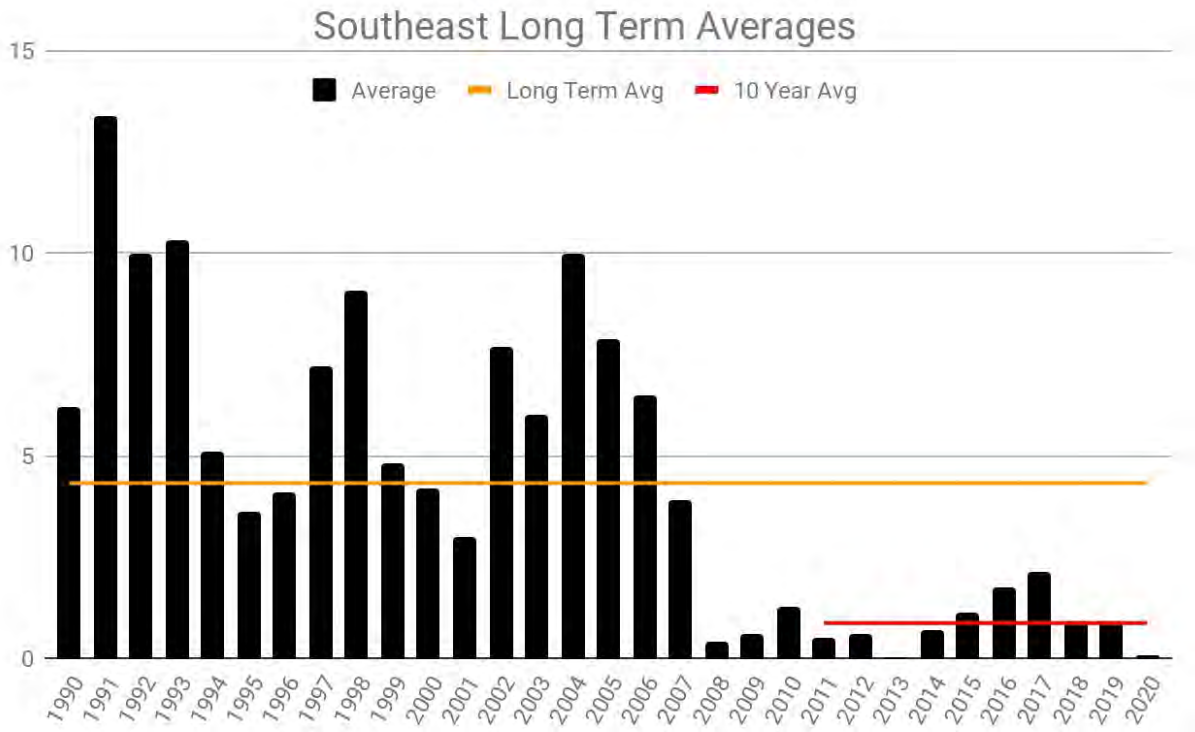Figure 10: Southeast Long Term Average

Figure 11: Rainfall for the last 365 Days in Oklahoma (Source: Mesonet.org)
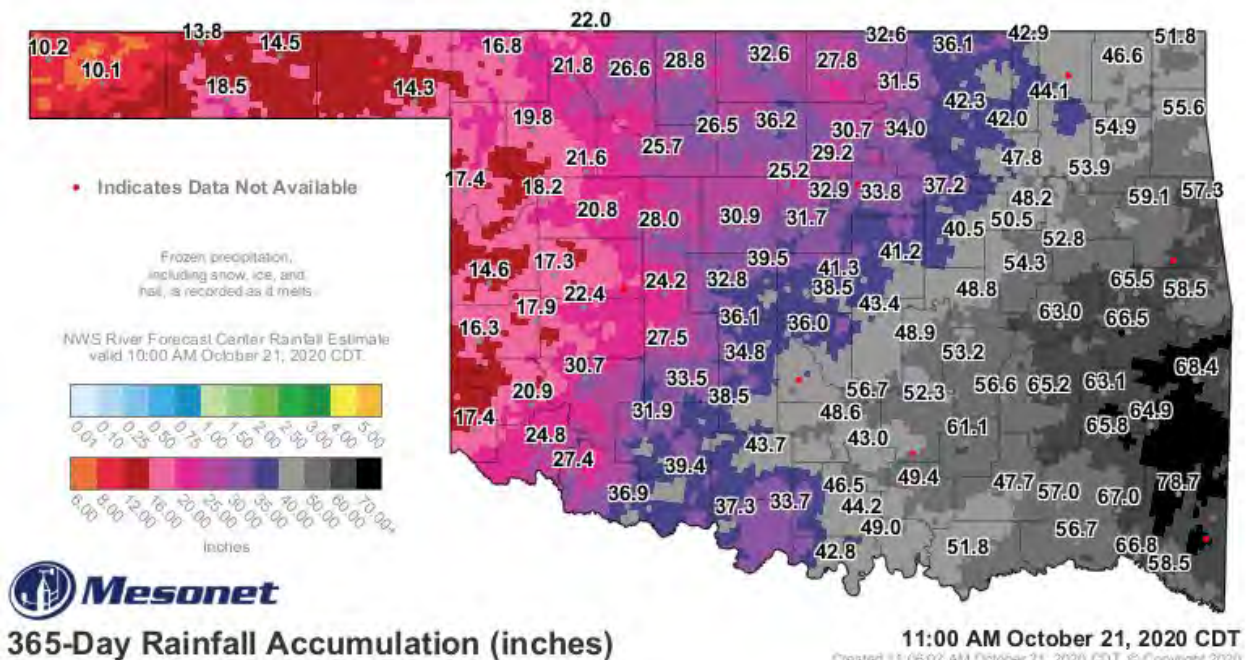
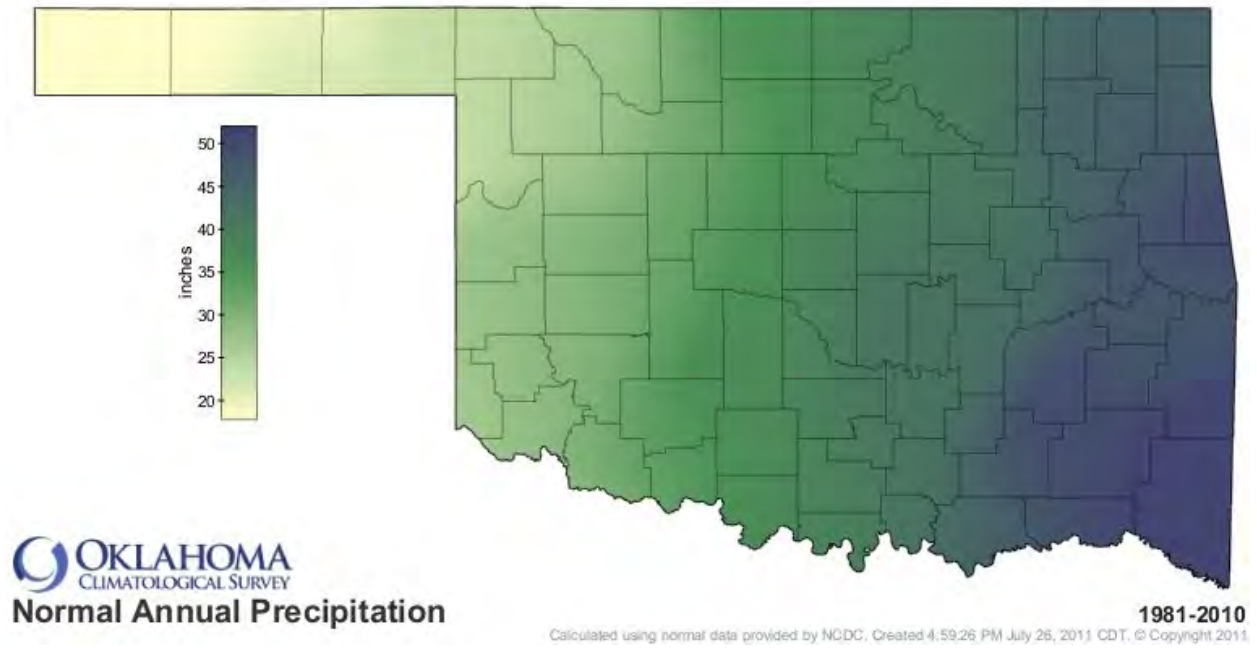Figure 12: Average Annual Rainfall (Source: climate.ok.gov)

Figure 13: Comparison of Drought Conditions from March 3 to October 13, 2020 (Source: Droughtmonitor.unl.edu)