

2017-2018 Quail Report

Kentucky Department of Fish and Wildlife Resources



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Introduction

The Small Game Program is administered under the Wildlife Division of Kentucky Department of Fish and Wildlife Resources (KDFWR). The KDFWR is an agency of the Kentucky Tourism, Arts & Heritage Cabinet. It is overseen by a nine-member commission who are nominated by Kentucky’s sportsmen and sportswomen. Commission members are appointed by the Governor. The department employs about 450 full-time staff, which includes conservation officers, wildlife and fisheries biologists, conservation educators, and information and technology, public relations, customer service and administrative professionals.

KDFWR receives no money from the state’s General Fund. Funding is provided by the sale of hunting and fishing licenses, boating registration fees and federal funds, including grants based on the number of hunting and fishing licenses sold in the state.

The Small Game Program is tasked with managing squirrels (fox and gray), rabbits (swamp, eastern cottontail, and Appalachian cottontail), and northern bobwhite in the state to provide ample hunting

opportunity while balancing the needs of consumptive and non-consumptive user groups. The Small Game Program is led by John J. Morgan, Program Coordinator and supported by Cody M. Rhoden, Small Game Program Biologist. Program staff are based out of the KDFWR Headquarters in Frankfort.

Population Status

The quail population in Kentucky is indexed in two ways: quail seen per 100 miles and coveys flushed per hour afield hunting. These two indices are based on the Rural Mail Carrier Survey and Hunter Cooperator Logs, respectively.

Rural Mail Carrier Survey

The Rural Mail Carrier Survey represents the first survey used to monitor quail populations across the state. Mail carriers recorded rabbit and quail observations as they traveled their rural delivery routes during the last full week of July (6 delivery days). Survey cards provided space for observations of quail for each of the survey days. Observers also recorded the number of days surveyed, the length of the route, and the total miles driven. The mail carrier data are used to forecast the upcoming hunting season, monitor the population, and estimate quail productivity.

The Mail Carrier Survey provides a glimpse of what we can expect for the upcoming hunting season. The survey is the oldest in the program being completed for 58 years. Although no population estimates can be derived from these data, it does provide valuable trend information showing whether the population is up, down, or stable (Table 1).

2018 Survey Statistics

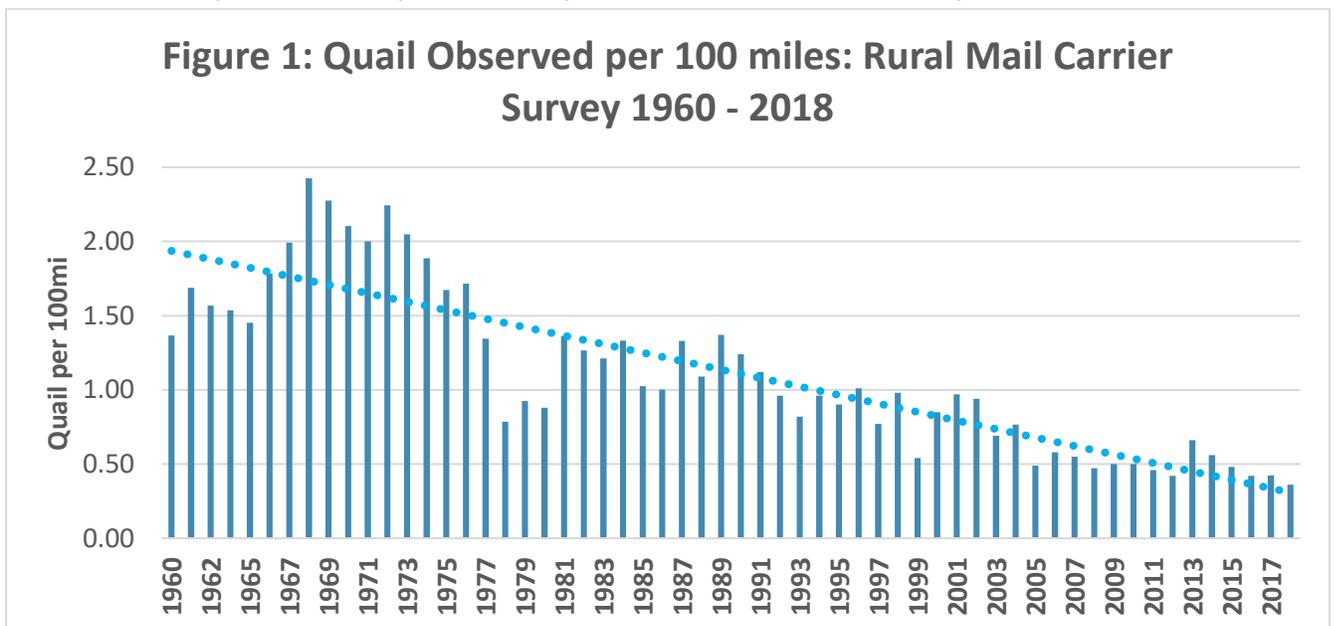
- ❖ Mail Carriers returned **629** survey cards
- ❖ Total miles driven = **222,072**
- ❖ Total quail seen = **801**
- ❖ Statewide observation rate = **0.36 quail/100 miles traveled**

Table 1. Mail Carrier indices and rates of change in Kentucky, 1960-2018.

REGION ¹	TOTAL QUAIL/100 MILES			PERCENT CHANGE	
	MEAN (average)			MEAN (average)	
	1960-2018	2017	2018	1960-2018	2017 to 2018
West	2.01	0.49	0.35	-474%	-40%
Central	1.14	0.51	0.44	-175%	-16%
Bluegrass	0.76	0.43	0.40	-90%	-7%
East	0.54	0.23	0.23	-135%	0%
Statewide	1.12	0.42	0.36	-211%	-16%

¹See Appendix 1 on page 11 for Region breakdown

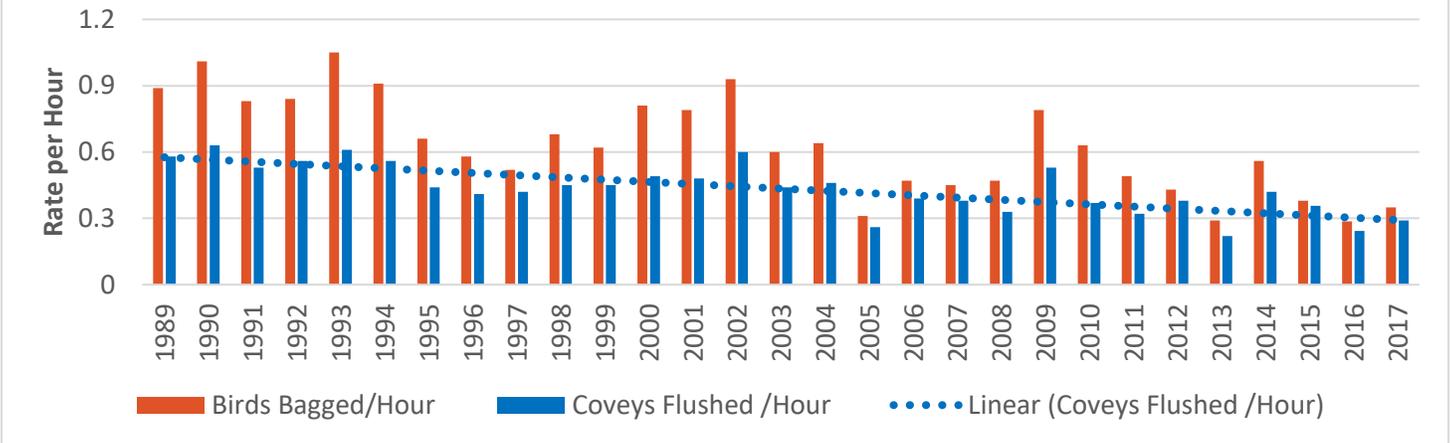
Over the last 58 years of this survey, the decline in the quail population is evident (Figure 1). The severe drop in population levels following the winters of 1977 and 1978 was dramatic and populations have been slow to recover. The overall drop in quail numbers since the late 1960’s can be generally attributed to habitat loss because of land use changes and cleaner agricultural practices. This most recent survey shows a decline from last year’s index value. This is an unwelcome sight, as our quail observed per 100 miles are reported as the lowest they have ever been in the history of the 58-year survey. This decline is surprising, as quail in Kentucky experience a roughly 7-year cycle, we expected the numbers to continue to rise this year relative to 2016. We hope to see an uptick in next year’s Rural Mail Carrier Survey.



Hunter Log Survey

The quail population in Kentucky appears to ebb and flow in roughly 7-year cycles. Last hunting season (2016) was toward the bottom in this cycle, with this most recent hunting season (2017) tracking upward in this trend (Figure 2).

Figure 2: Coveys Flushed and Birds Bagged per Hour; Hunting Season 1989 - 2017



Quail Wing Survey

Envelopes were provided to quail hunters prior to the 2016-17 hunting season. Successful quail hunters mailed in one wing from each harvested bird.

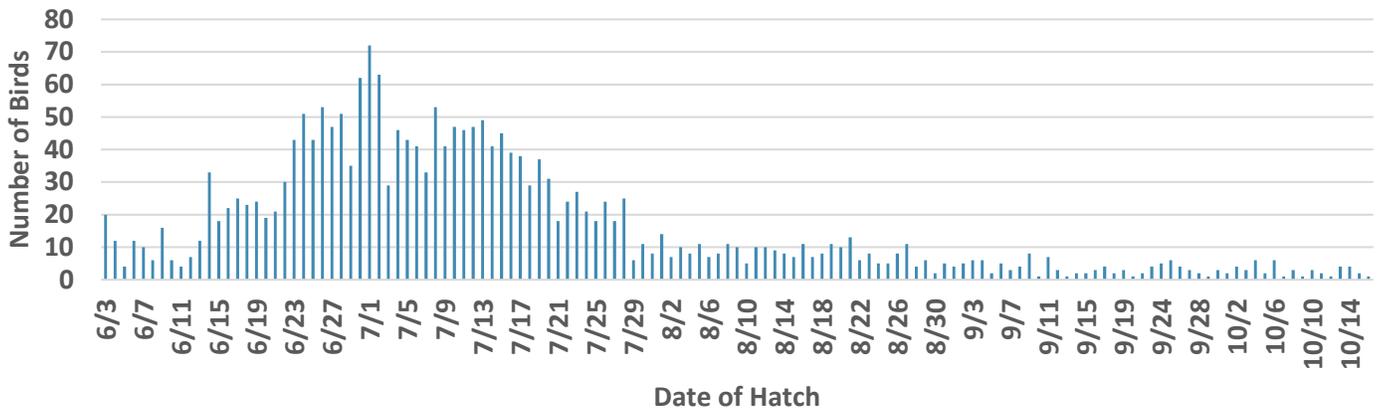
Age of the harvested birds was determined by measuring the length of certain primary feathers (Petrides 1942, Petrides and Nestler 1943, Rosene 1969). Juveniles were backdated from date of harvest to determine the primary hatching dates for the nesting season. Hunters in the field, utilizing instructions on the wing collection envelopes, determined the sex of collected individuals.

2017-18 Wing Data

- ❖ Hunters mailed in **65 wings**
- ❖ Juvenile: **80%** | Adult: **20%**
- ❖ Male: **55%** | Female: **43%**

By compiling the wing data from the past 17 hunting seasons, we can get a good picture of the peak hatch in Kentucky (Figure 3). The peak hatch appears to occur in late June into early/mid July. Quail incubate their eggs for roughly 25 days before chicks begin to hatch. Taking this into account, most birds in Kentucky are nesting in May and early June. Keep this in mind when manipulating grassland habitat on your property next year around this time to limit disturbance when quail are incubating eggs.

Figure 3: Hatch Dates Quail Harvested in November; Hunting Seasons 2000 - 2017



2017-2018 Quail Hunter Cooperator Survey

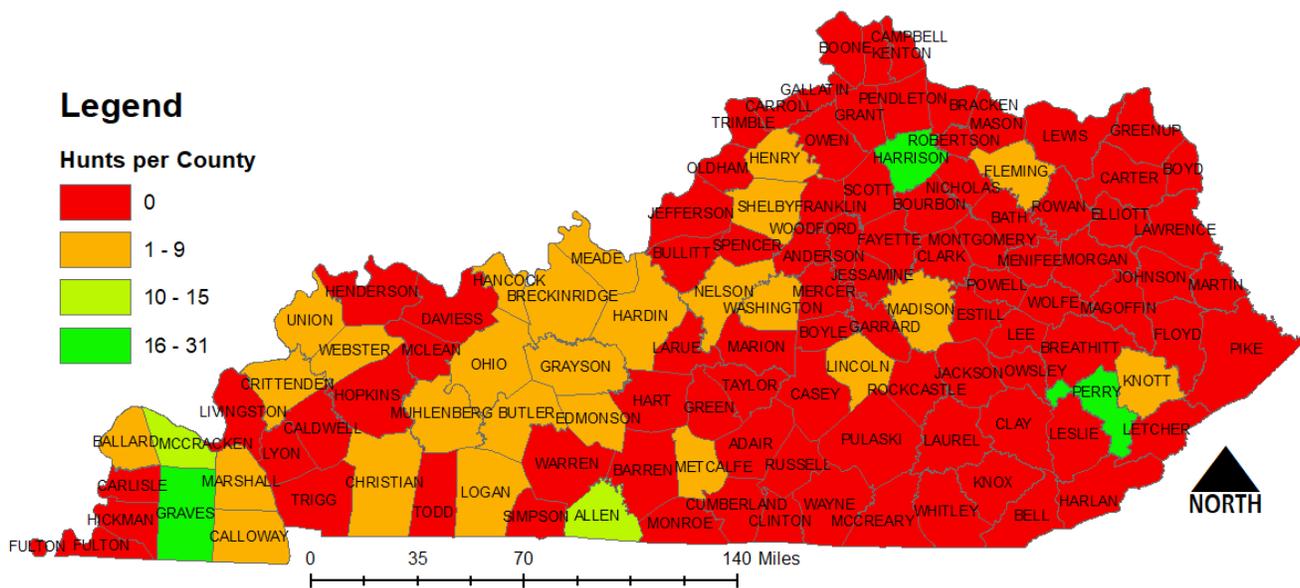
The quail survey was developed in 1989 as a voluntary initiative. Hunters are asked to record data including date of hunt, county hunted, hours hunted, number of hunters, number of dogs, number of coveys flushed, number of birds harvested, among others on a diary-type hunting log. Logs are available on the internet: <http://fw.ky.gov/Hunt/Pages/Game-Species.aspx> or by calling 1-800-858-1549. Hunters simply keep the log up-to-date as the hunting season progresses, and mail it to the KDFWR Headquarters when they are finished hunting for the season. Data collected from the survey gives the KDFWR information that can be used to monitor quail population trends in Kentucky and better serve the hunters of the state. Each year participating hunter cooperators are mailed a new hunting log, the results of the survey, and a small gift. Hunters who wish to receive a copy of their log from the previous year may call 502-892-4521 or e-mail cody.rhoden@ky.gov.

Past Quail Hunter Cooperator Surveys

Participation has been decreasing over the last several years, with a sharp decline in the 2017 hunting season (Figure 4). Please take a look at the below map (Figure 5), if you hunt in any of the red counties please consider filling out a hunting log this year (even if you do not harvest any game). Once again, do not forget to mail in your log and encourage other quail hunters to do the same. Why not take someone new hunting this year? The future of hunting depends on it!



Figure 5: Hunter cooperator logs reporting hunts from each county in Kentucky in the 2017 season. Warmer colors equal less hunts and cooler colors equal more hunts per county.

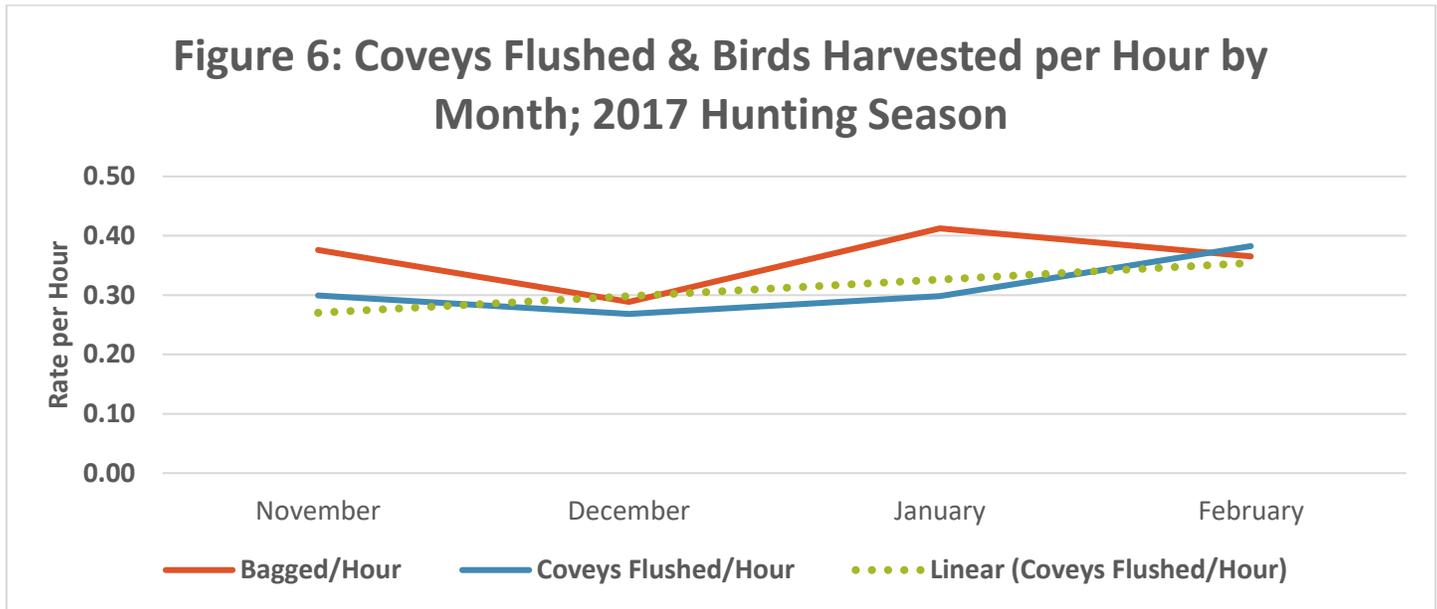


2017-18 Hunter Cooperator Results

Logs were received from 18 quail hunters this last hunting season (a 28% decrease from last year; Figure 4). Hunters averaged 11 hunting trips throughout the season and spent an average of 3 ¼ hours afield each hunt. Data were provided from 194 hunts, from 31 counties, with good distribution across the Commonwealth (Figure 5). Hunters flushed an average of 0.94 coveys per **hunt** and an average of 0.29 coveys per **hour**.

Harvest Statistics 2017-18

Hunters flushed an average of 0.94 coveys per **hunt** and harvested 1.12 quail per **hunt**. Hunters flushed an average of 0.29 coveys per **hour** hunted and harvested 0.35 quail per **hour** hunted. The number of coveys **flushed** per hour peaked in February (Figure 6). The number of quail **harvested** per hour peaked in January (Figure 6).

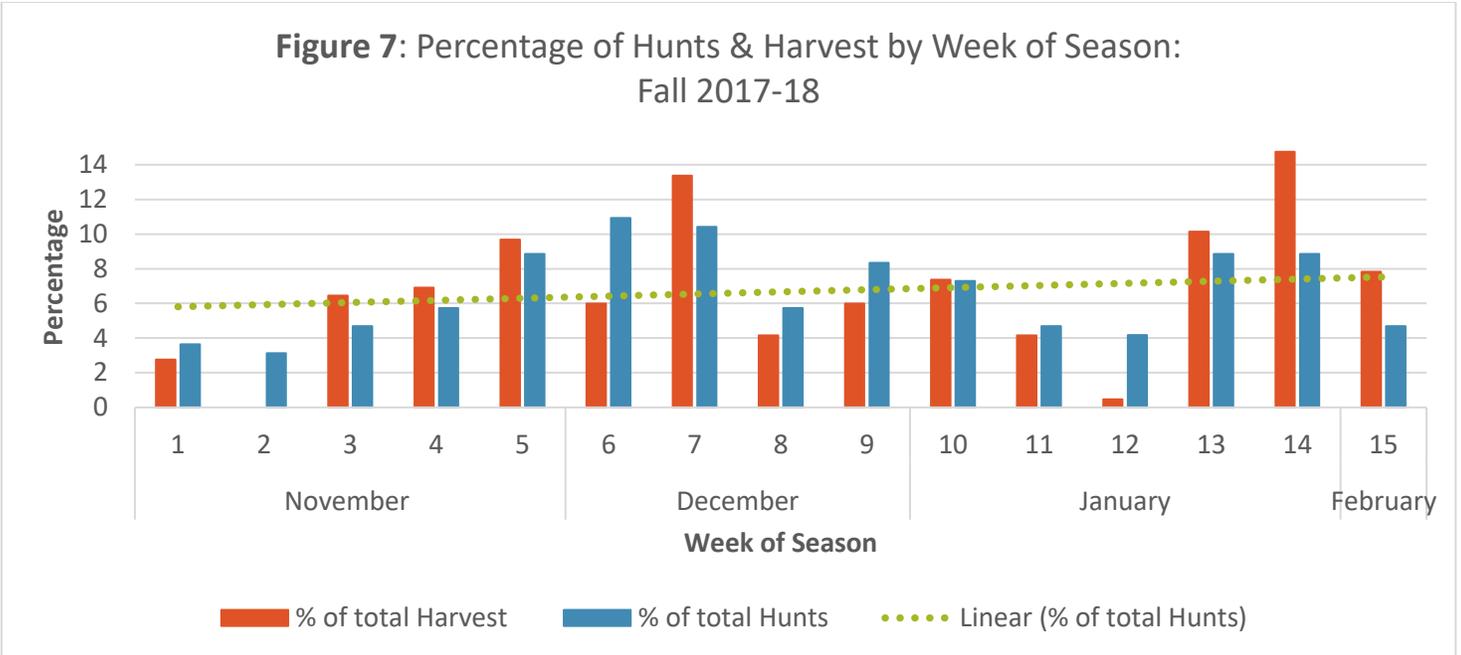


Hunter Effort

Hunting effort peaked in mid December and again in late January (Figure 7). The majority (40%) of all hunts took place in the month of December.

The hunter effort index reveals two peaks, however hunting pressure showed a slight upward trend as the season progressed (trend line; Figure 7). This may be because cover is continually decreasing as the season progresses, resulting in more successful hunting into the winter.

Figure 7: Percentage of Hunts & Harvest by Week of Season:
Fall 2017-18



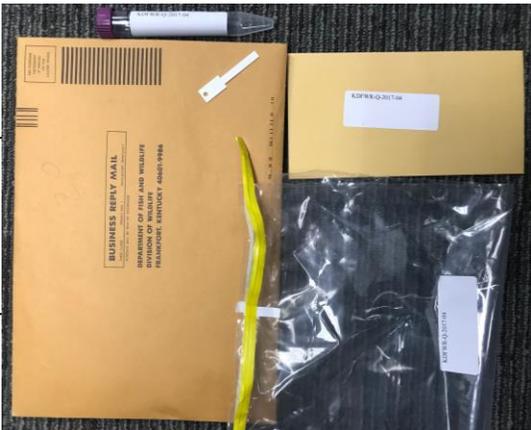
Disease Surveillance

The KDFWR handles disease outbreaks for wildlife across the Commonwealth. There are currently no widespread disease issues for quail in the state. Disease is a natural component of all healthy ecosystems. One disease issue that could threaten quail in Kentucky is the West Nile Virus.

The West Nile Virus (WNV) was first discovered in Kentucky in 2001. It is known in many bird species and humans are susceptible to the disease. Grouse, for example, can contract WNV and in Pennsylvania potentially contributed to a decrease in statewide populations of that gamebird. Quail can contract WNV, however the population level repercussions of this disease in Kentucky are not well known.

KDFWR has been testing for WNV in quail for the last two hunting seasons. Hunters were asked to send in blood samples to KDFWR and personnel at Peabody WMA and Clay WMA took samples from hunter harvested quail. The results from these tests are pending and will be made available as soon as they are completed.

Blood Sampling Kit used for West Nile Virus testing for quail in Kentucky



The Kentucky Department of Fish and Wildlife Resources encourages hunters who encounter wildlife acting strangely or that look sick to Cody M. Rhoden, cody.rhoden@ky.gov; 502-892-4521.

General Information about the 2018-19 Season

License and Permit Fees

License	Resident	Nonresident
Annual Hunting License	\$27	\$140
Senior/Disabled License	\$12	N/A
Sportsman's License	\$95	N/A
Youth Sportsman's License	\$30	N/A

Season Dates and Bag Limits

Season		Statewide Season Dates 2018-2019	Statewide Bag Limit
Fall Season	Eastern Zone	November 1-9 and November 12 – January 31	8
	Western Zone	November 12 – February 10	

New this year: Three WMAs will be open for quail hunting with a restricted season and/or bag. Please see below or check the Hunting Guide for more information.

WMA	Tract	Season Dates	Required Check In/Out	Bag Limit
Peabody	Sinclair	Thursday & Sunday November 12 – February 10	Yes	4
	Ken	Wednesday & Saturday November 12 – February 10		
Clay	All Tracts	Tuesday & Saturday November 1 – December 31	Yes	4
Rockcastle River	All Tracts	Tuesday & Saturday November 1 – December 31	Yes	4

Outlook for the 2018-2019 Quail Season

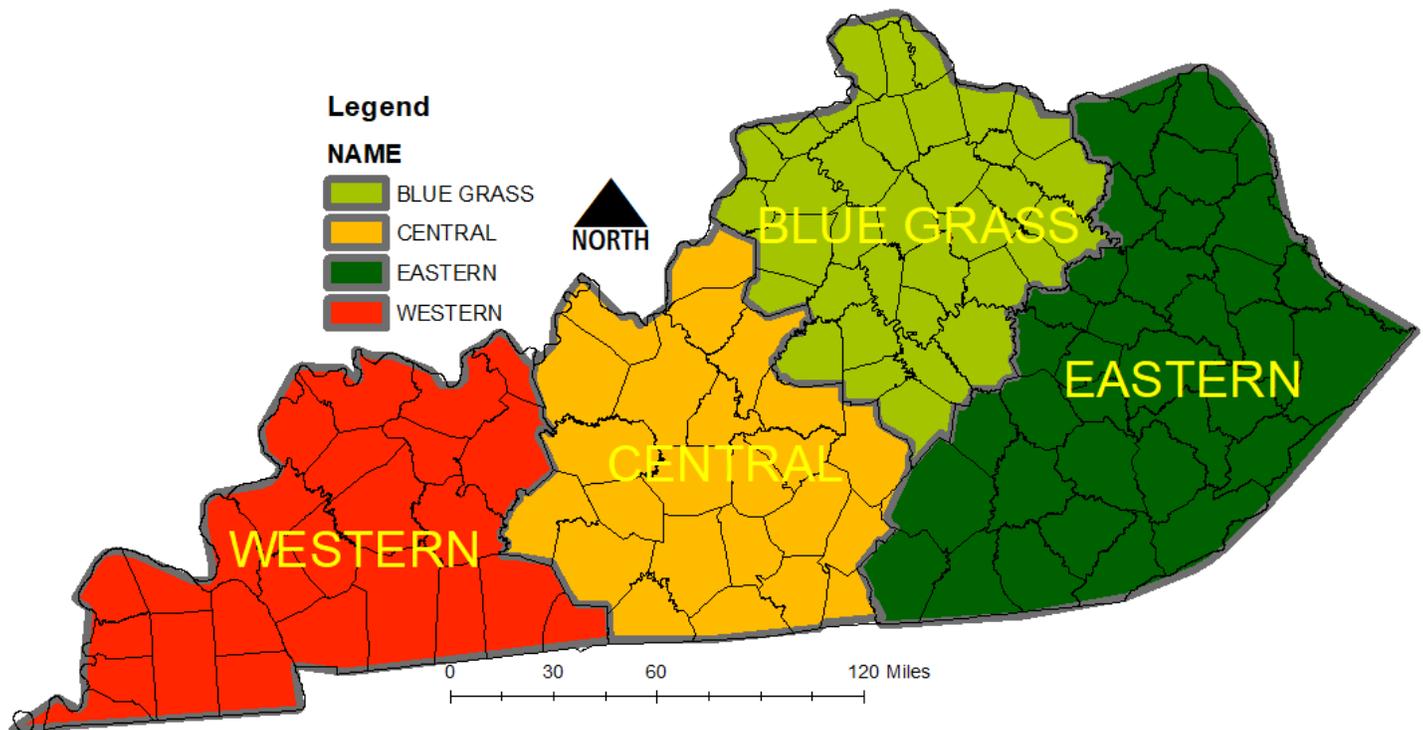
The Mail Carrier Survey and the Quail Hunter Log Survey appear to be a little mis-matched this year. The Hunter Logs reported a slight uptick in the coveys flushed per hour compared to last year, whereas the Rural Mail Carrier Survey reported another downward trend. This is puzzling, however this has happened in prior years and it appears that both will end up capturing similar oscillations in the population moving forward.

Whether the Rural Mail Carrier survey or the Hunter Log index is more correct, hunters should expect an uptick in the population over the next few years. Last winter was mild overall and I have heard good reports on some of our WMAs concerning young birds. Hopefully the 2018-19 season will be a good one, so make sure to get out and beat the bushes for bobwhite!

Don't forget to turn in your Hunter Cooperator log at the completion of this year's hunt. Logs should be returned no later than March 31, 2019. In return, we will send you a report and a small gift as a token of our appreciation.

Encourage all of your friends to log their hunts as well. Have a safe and enjoyable quail season and thanks again for your support! And don't forget to take someone new to hunting out with you this year.

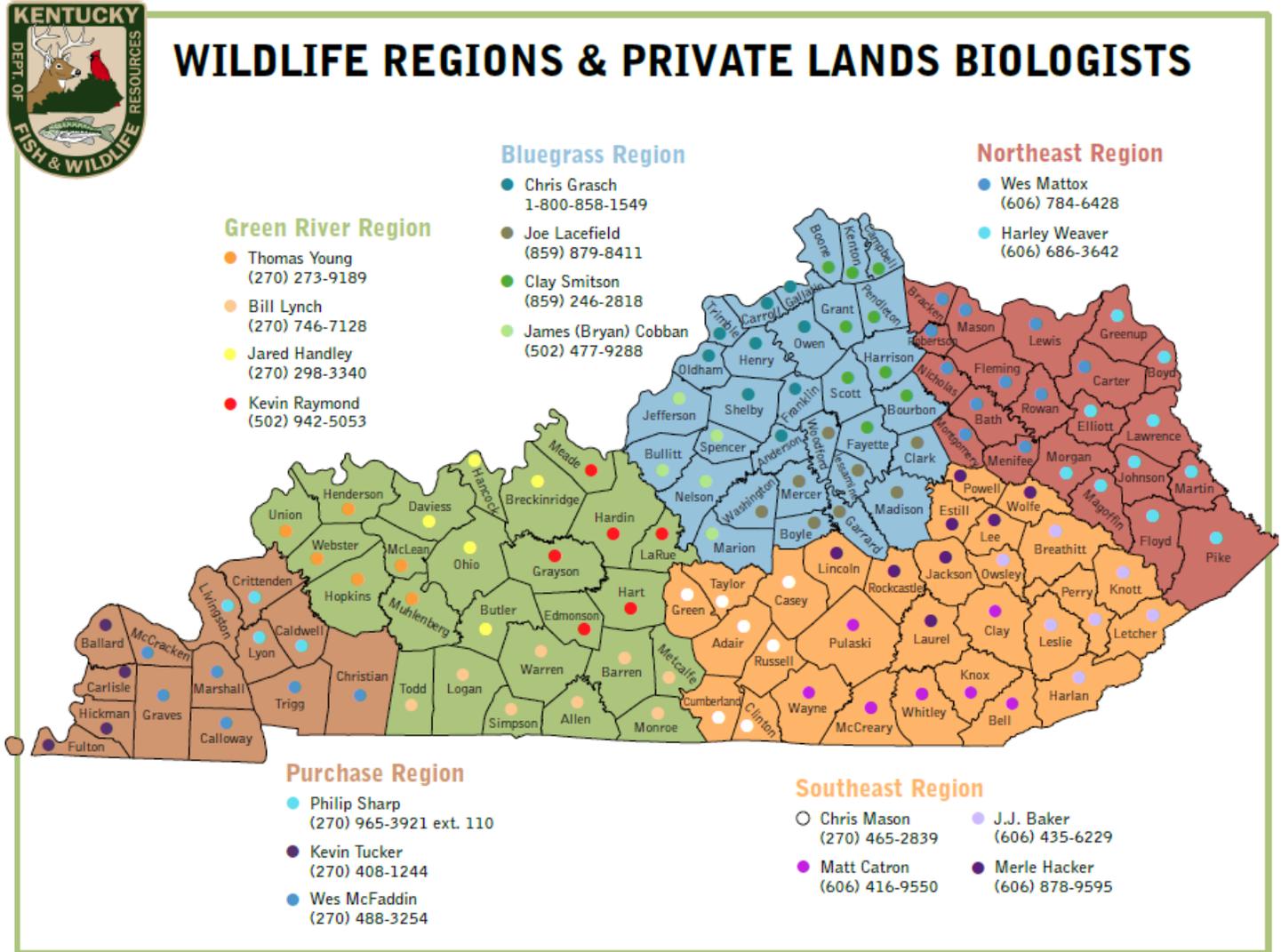
Appendix 1 Region Breakdown



Contacts

Approximately 95% of Kentucky is privately owned. To successfully manage our wildlife resources, the KDFWR works cooperatively with Kentucky’s private landowners. One of the essential ingredients in conserving Kentucky’s wildlife resources is habitat improvement. Wildlife biologists are available to work with interested individuals or groups on properties that they own or have management rights on.

Refer to the map below to contact your local wildlife biologist for assistance with wildlife management on your property.



The Department of Fish and Wildlife Resources is funded through the sale of hunting and fishing licenses. It receives no general fund tax dollars.