

# 2017-2018 Rabbit 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 rabbit population in Kentucky is indexed in two ways: rabbits seen per 100 miles and rabbits jumped 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 rabbit 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 rabbits 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 rabbit 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 57 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

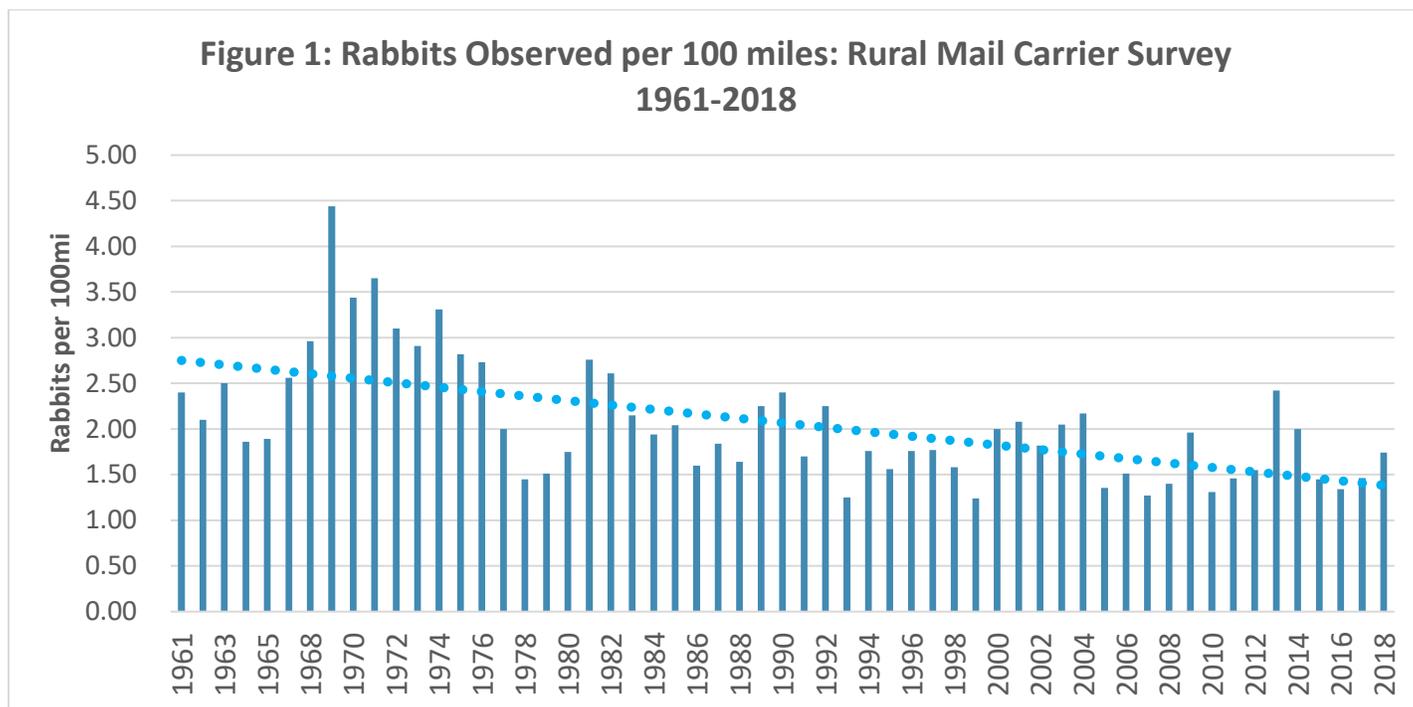
- ❖ Mail Carriers returned **629** survey cards
- ❖ Total miles driven = **222,072**
- ❖ Total rabbits seen = **3,859**
- ❖ Statewide observation rate = **1.74 rabbits/100 miles traveled**

**Table 1. Mail Carrier indices and rates of change in Kentucky, 1961-2018.**

REGION <sup>1</sup>	TOTAL RABBITS/100 MILES			PERCENT CHANGE	
	MEAN (average)			MEAN (average)	
	1961-2018*	2017	2018	1961-2018	2017 to 2018
West	-	0.92	0.74	-	-24.3%
Central	-	1.48	1.70	-	+12.9%
Bluegrass	-	1.41	1.77	-	+20.3%
East	-	2.13	2.90	-	+26.6%
<b>Statewide</b>	<b>2.07</b>	<b>1.46</b>	<b>1.74</b>	<b>-38.0%</b>	<b>+16.1%</b>

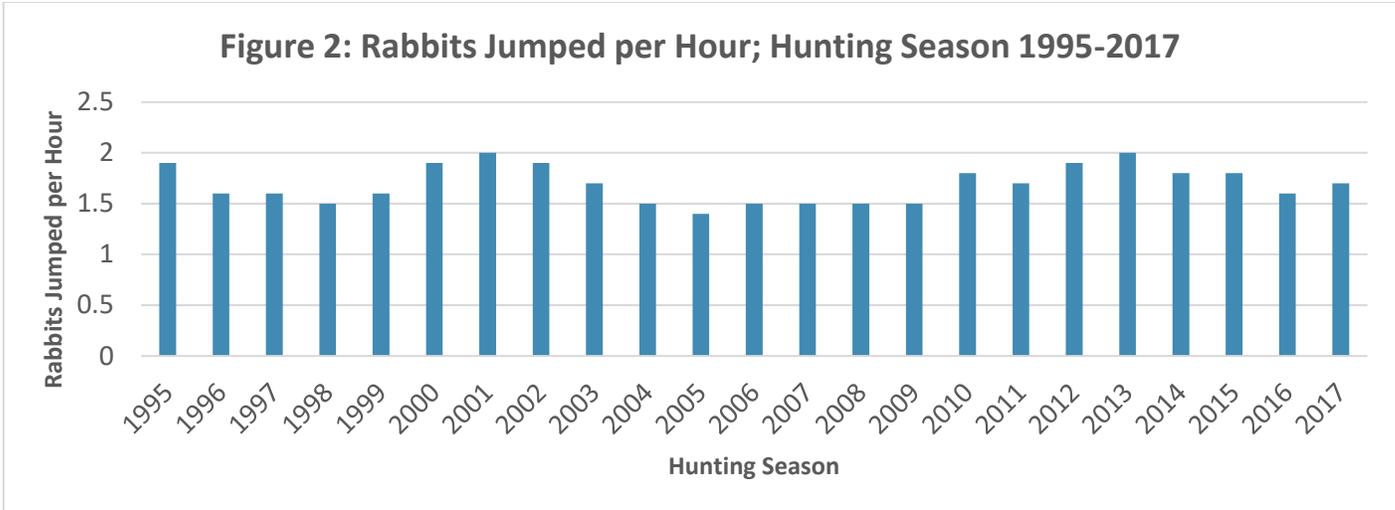
(-) = data was not analyzed by west, central, bluegrass, east until 2011  
<sup>1</sup>See Appendix 1 on page 11 for Region breakdown

Over the last 57 years of this survey, the decline in the rabbit 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 rabbit numbers since the late 1960's can be generally attributed to habitat loss because of land use changes and cleaner agricultural practices. However, recent years have seen a nice increase in the number of rabbits observed. The increases across all but one of the Weather Regions from 2017 to 2018 is a welcome sight. The winter was mild which potentially favored high overwinter survivorship and excellent breeding condition for does. This coupled with the fact that we are in an upswing of the roughly 7-year cycle (Figure 1) resulted in a 16.1% increase in rabbits observed per 100 miles this year compared to last.



### Hunter Log Survey

The rabbit 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).



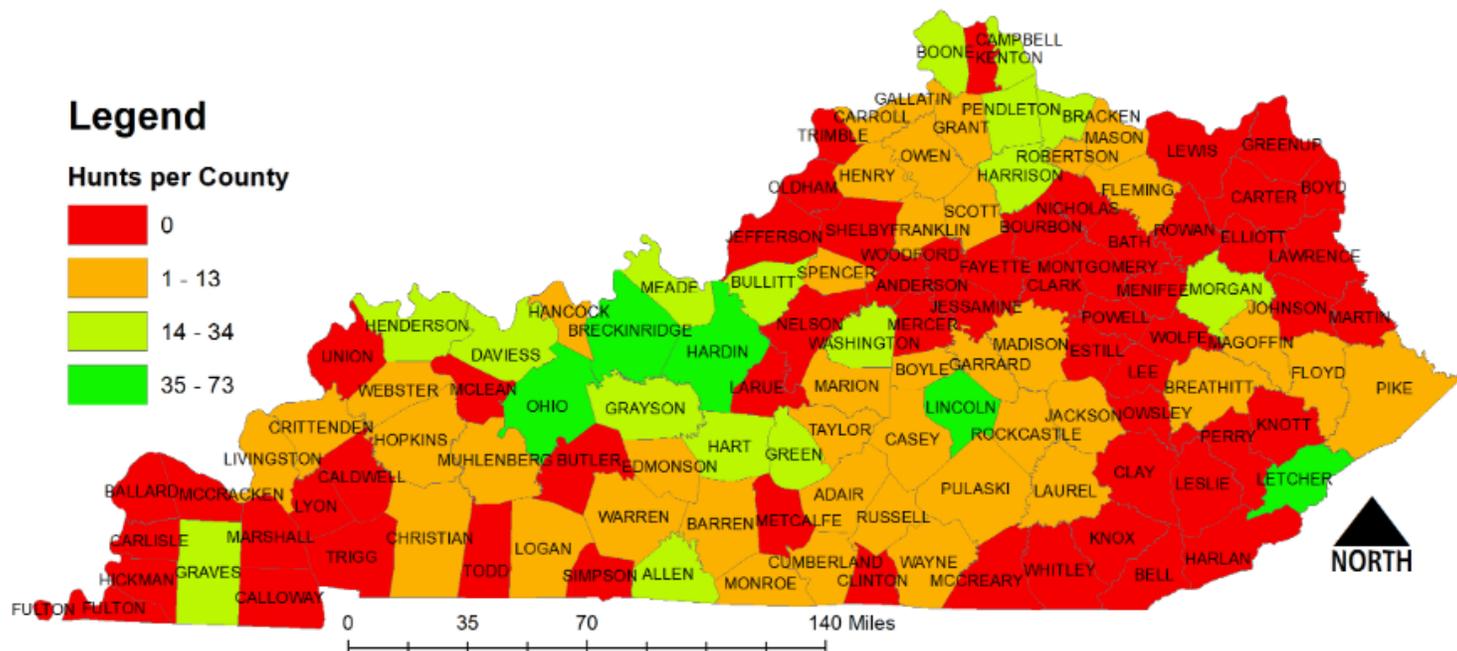
## 2017-2018 Rabbit Hunter Cooperator Survey

The rabbit survey was developed in 1995 as a voluntary initiative. Hunters are asked to record data including date of hunt, county hunted, hours hunted, number of hunters, number of dogs, and number of eastern cottontail, swamp, and Appalachian cottontail (seen, killed, and wounded), 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 rabbit 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](mailto:cody.rhoden@ky.gov).

## Past Rabbit Hunter Cooperator Surveys

Participation has been decreasing over the last several years, with a sharp decline in the 2017 hunting season (Table 2). Please take a look at the below map (Figure 3), 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 rabbit hunters to do the same. Why not take someone new hunting this year? The future of hunting depends on it!

**Figure 3:** Hunter cooperators 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.



**Table 2:** Hunting statistics from past hunter cooperator surveys in Kentucky from the 2013 hunting season to present.

<b>Statistics</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>
Cooperators	100	98	87	72	<b>56</b>
Hunts	1,406	1,413	1,198	1,100	<b>861</b>
Counties	97	93	89	74	<b>65</b>
Hunts/Hunter	14	14	14	15	<b>15</b>
Hours Hunted	4,939.6	4,983.0	4,309.0	3,687.0	<b>2,869.0</b>
Dogs Used	5,552	5,518	4,899	4,144	<b>3,579</b>
Total Rabbits Jumped	9,726	9,173	7,579	5,851	<b>4,878</b>
Total Rabbits Harvested	3,851	3,797	3,193	2,317	<b>1,902</b>
Total Rabbits Wounded	268	297	236	91	<b>74</b>
Hunting Mortality (%)	42	45	45	42	<b>41</b>

**Table 2.1. Breakdown of species harvested in recent hunting seasons.** \*Note: Three Appalachian reported jumped in 2013-2014 with three killed and one reported jumped in 2014-2015. One Appalachian reported in 2017-18 with one killed.

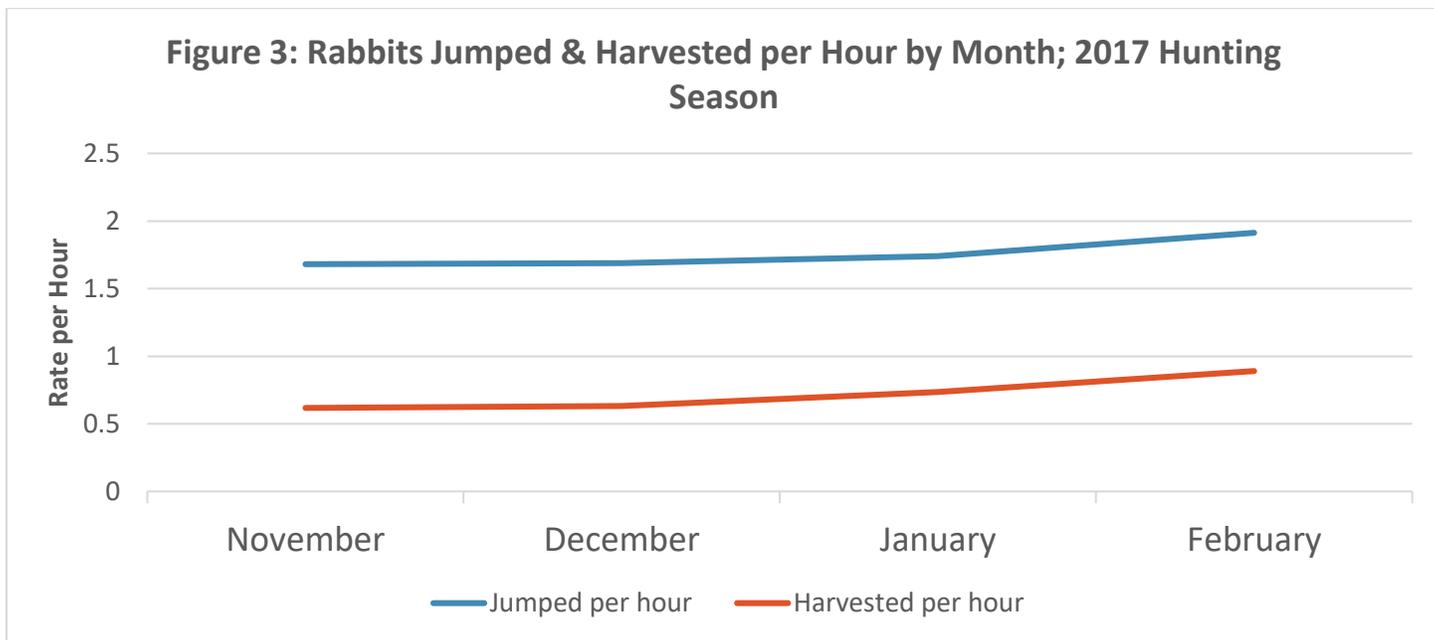
<i>Statistics</i>	<b>E. Cottontail</b>			<b>Swamp</b>		
	<b>Jumped</b>	<b>Killed</b>	<b>Wounded</b>	<b>Jumped</b>	<b>Killed</b>	<b>Wounded</b>
<b>2013-14*</b>	9626	3823	260	97	25	3
<b>2014-15*</b>	9012	3744	295	160	53	2
<b>2015-16</b>	7545	3183	236	34	10	0
<b>2016-17</b>	5806	2299	90	45	18	1
<b>2017-18*</b>	<b>4765</b>	<b>1870</b>	<b>71</b>	<b>112</b>	<b>31</b>	<b>3</b>

## 2017-18 Hunter Cooperator Results

Logs were received from 56 rabbit hunters this last hunting season (a 29% decrease from last year). Hunters averaged 15 hunting trips throughout the season. Ninety-nine percent of rabbit hunters used dogs in their pursuit. Data were provided from 861 hunts, from 65 counties, with good distribution across the Commonwealth (Figure 1). Hunters jumped an average of 6 rabbits per **hunt** and an average of 2 rabbits per **hour**.

### *Harvest Statistics 2017-18*

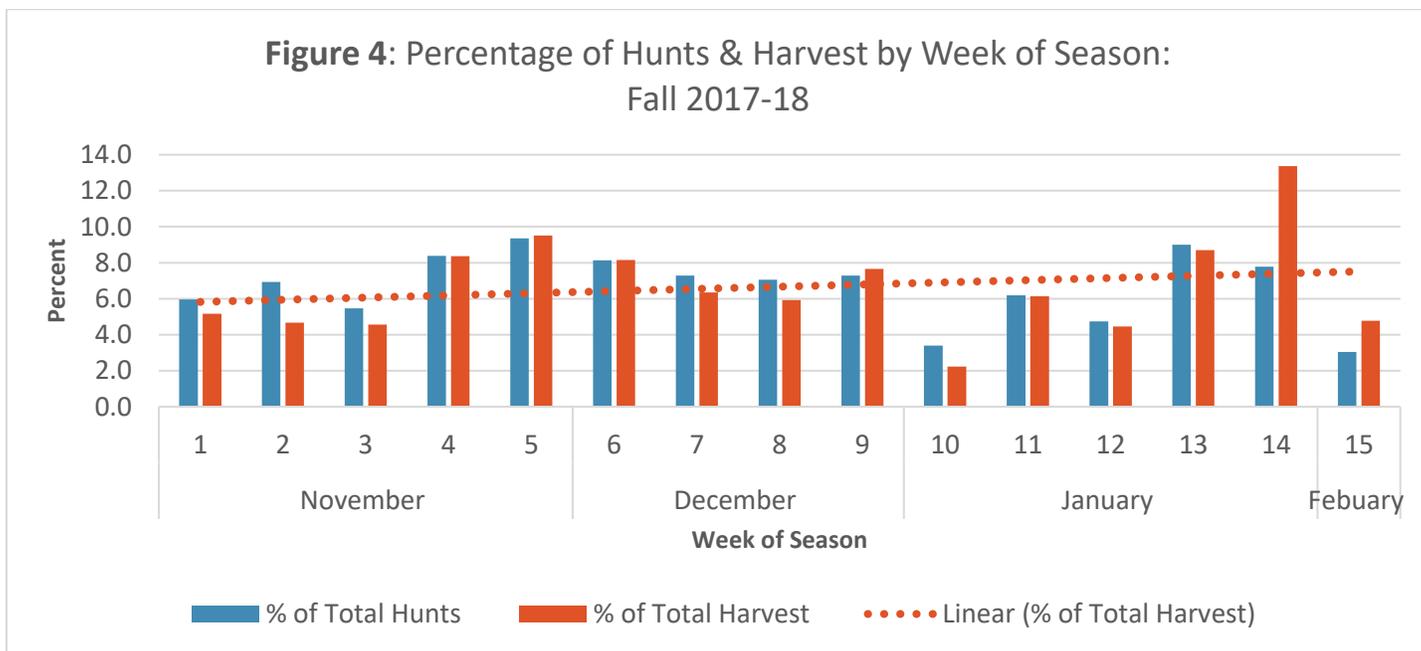
Hunters jumped an average of 5.67 rabbits per **hunt** and harvested 2.21 rabbits per **hunt**. Hunters jumped an average of 1.70 rabbits per **hour** hunted and harvested 0.66 rabbits per **hour** hunted. The number of rabbits **jumped** per hour peaked in February (Figure 3). The number of rabbits **harvested** per hour also peaked in February (Figure 3). Hunters harvested 39% of rabbits jumped and wounded 2% (Table 2). Assuming wounded rabbits did not survive, the hunting mortality rate was 41% of rabbits jumped in 2017-18.



**Hunter Effort**

Hunting effort peaked in late November/early December and again in late January (Figure 4). The majority (35%) of all hunts took place in the month of December.

The hunter effort index reveals two peaks, however hunting pressure remained relatively stable across the hunting season with a slight upward trend as the season progressed (trend line; Figure 4). This may be because cover is continually decreasing as the season progresses, resulting in more successful hunting into the winter.



## Disease Surveillance

The KDFWR handles disease outbreaks for wildlife across the Commonwealth. There are currently no widespread disease issues for rabbits in the state. Disease is a natural component of all healthy ecosystems. One disease issue that could threaten rabbits in Kentucky is tularemia, or rabbit fever.

Tularemia is caused by the bacterium *Francisella tularensis* and was first discovered in the United States in Tulare County, California (hence the name **tularemia**). Rabbits are especially susceptible to tularemia, however many other animals can carry the disease such as squirrels, ticks, and deer flies. Humans are also susceptible to this disease. Tularemia can cause rapid, large die offs of rabbits in a small area. Rabbits that are sick with tularemia may lose their fear of humans or dogs and act strangely.

Kentucky hunters can come into contact with tularemia through direct contact with an infected rabbit, tick and deer fly bites, or less commonly, inhalation of contaminated aerosols or dust. The symptoms of tularemia are similar to the flu, and can be fatal if left untreated. The best way to reduce your risk of contracting this disease is to use insect repellent, wear long pants and sleeves while afield, wear gloves while cleaning/skinning game, and cooking game meat thoroughly before eating.

KDFWR personnel responded to a rabbit testing positive for tularemia in Butler County in spring of 2018. The Department tested several other animals in the immediate area and is continuing to monitor the site for years to come to track the occurrence of this disease. Most of the rabbits in the immediate area died very quickly and impacts to the surrounding rabbit population appear to be minimal. KDFWR and the Department of Health will continue to alert the public of such outbreaks.

The Kentucky Department of Fish and Wildlife Resources encourages hunters who encounter wildlife acting strangely or that look sick to contact Cody M. Rhoden, [cody.rhoden@ky.gov](mailto: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
Annual Trapping License	\$20	\$130
Annual Youth Trapping	\$5	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	4
	Western Zone	November 12 – February 10	
Trapping Season	Eastern Zone	November 12 – January 31	4
	Western Zone	November 12 – February 10	

***New this year:*** Three WMAs will require rabbit hunters to check in/out using a Kiosks and vehicle HangTag system. Please see below or check the Hunting Guide for more information.

WMA	Tract	Season Dates	Required Check In/Out
Peabody	Sinclair	November 12 – February 10	Yes
	Ken	November 12 – February 10	
Clay	All Tracts	November 1 – December 31	Yes
Rockcastle River	All Tracts	November 1 – December 31	Yes

**Outlook for the 2018-2019 Rabbit Season**

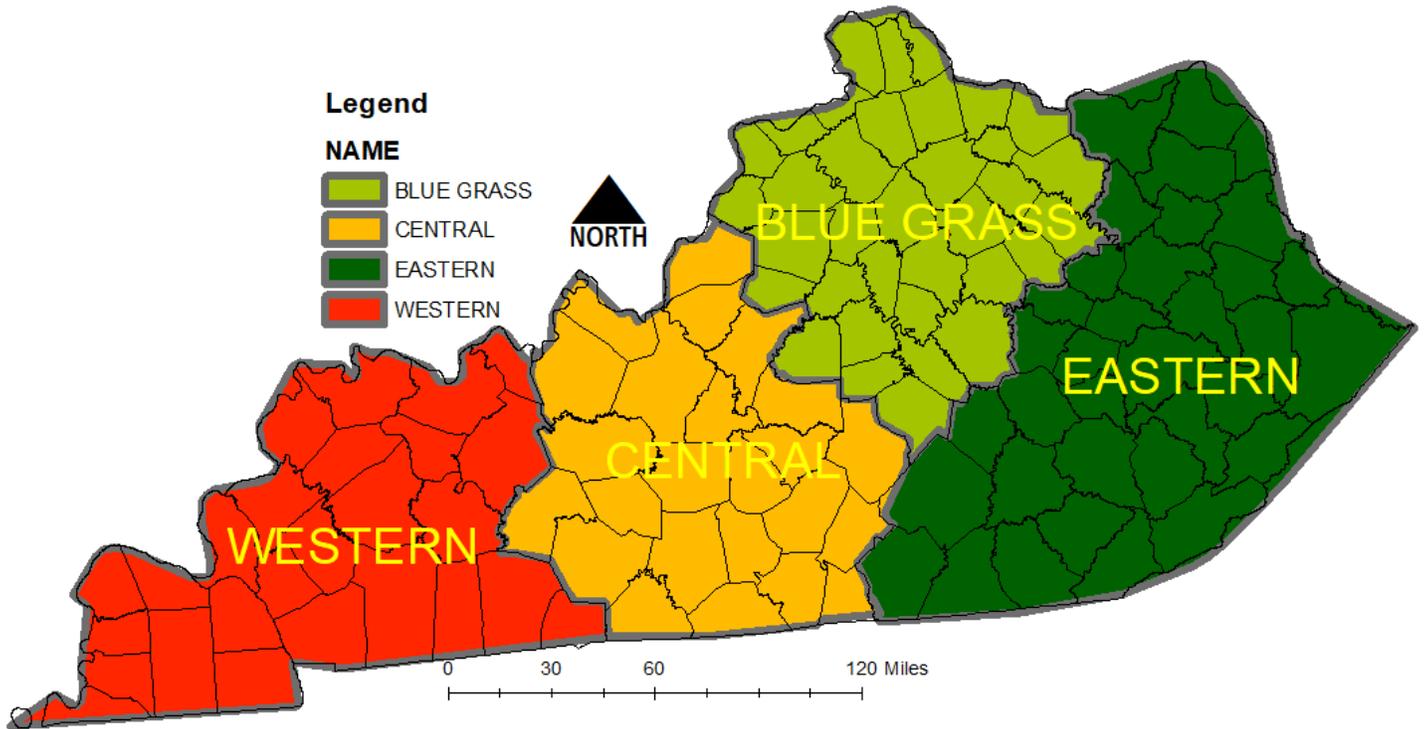
The Mail Carrier Survey and the Rabbit Hunter Log Survey appear to be tracking each other well. Therefore, we can make predictions based on the Mail Carrier Survey results. This year, the East Region of the state once again led all regions in the number of rabbits observed, followed by the Bluegrass Region.

Overall, the 2017-18 rabbit season was good. Over the last 20 years, the population has remained fairly stable with bumps up and down. Last year, harvest rates and jump rates are slightly up when compared to the previous season. The Mail Carrier Survey shows a 16% increase in the number of observed rabbits statewide between 2017 and 2018. This increase could lead to higher jump and harvest rates for rabbits in Kentucky for the 2018-2019 season. Hunters in the Commonwealth should expect a slightly better year for rabbit hunting in the upcoming season and potentially the next few seasons as our population cycle begins its uptick.

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 rabbit season and thanks again for your support! And don't forget to take someone new to hunting out with you this year.

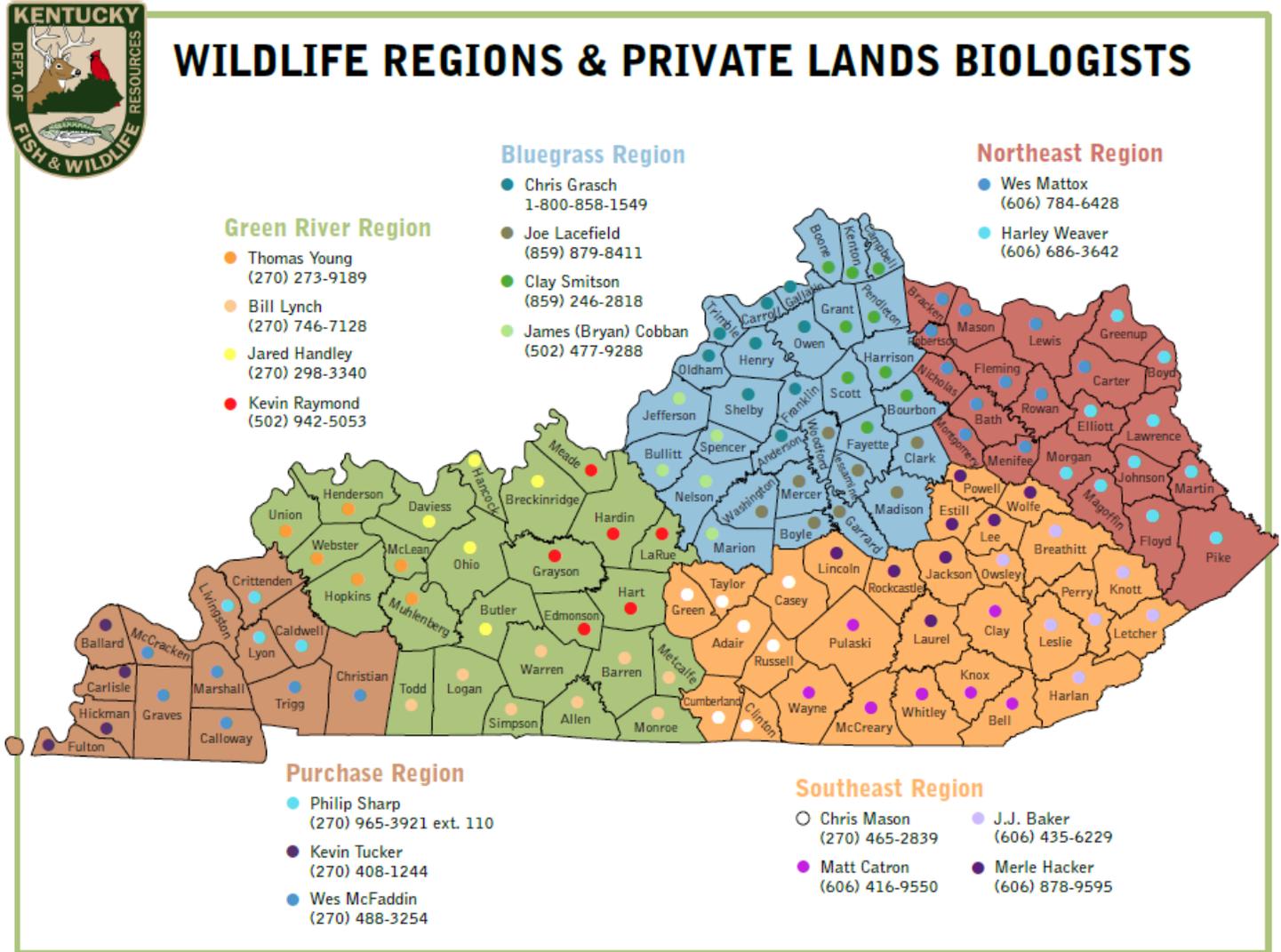
## Appendix 1 Region Breakdown



## 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.