

2019-2020 Rabbit Report

Kentucky Department of Fish and Wildlife Resources



Contents

Introduction	2
Population Status	3
Rural Mail Carrier Survey.....	3
Hunter Log Survey	4
2019-2020 Rabbit Hunter Cooperator Survey	5
Past Rabbit Hunter Cooperator Surveys	5
2019-20 Hunter Cooperator Results.....	7
Harvest Statistics 2019-20.....	7
Hunter Effort	8
Disease Surveillance.....	9
General Information about the 2020-21 Season.....	10
License and Permit Fees.....	10
Season Dates and Bag Limits.....	10
Continuing this year	10
Outlook for the 2020-2021 Rabbit Season	11
Appendix 1 Region Breakdown.....	11
Contacts	12

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 400 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 60 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).

2020 Survey Statistics

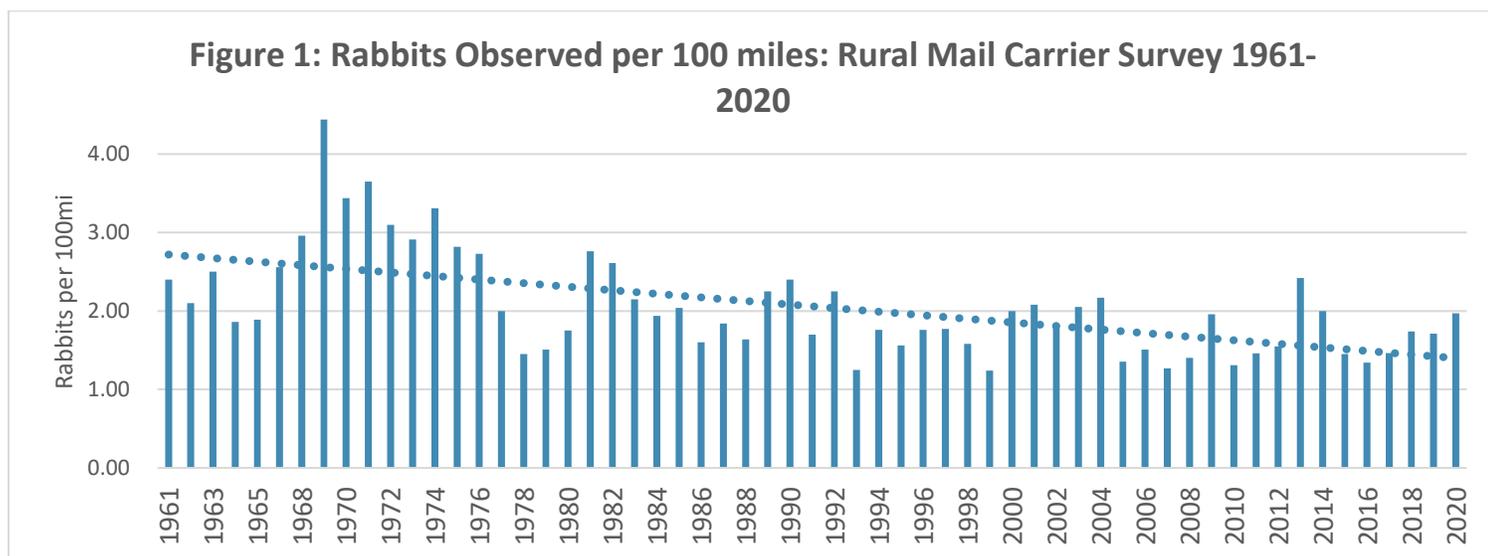
- ❖ Mail Carriers returned **520** survey cards
- ❖ Total miles driven = **185,506**
- ❖ Total rabbits seen = **3,650**
- ❖ Statewide observation rate = **1.91 rabbits/100 miles traveled**

Table 1. Mail Carrier indices and rates of change in Kentucky, 1961-2020.

REGION ¹	TOTAL RABBITS/100 MILES			PERCENT CHANGE	
	MEAN (average)			MEAN (average)	
	1961-2020*	2019	2020	1961-2020	2019 to 2020
West	-	0.98	1.37	-	40%
Central	-	1.64	1.64	-	0%
Bluegrass	-	1.56	1.92	-	23%
East	-	2.93	3.18	-	9%
Statewide	2.06	1.71	1.97	-18%	15%

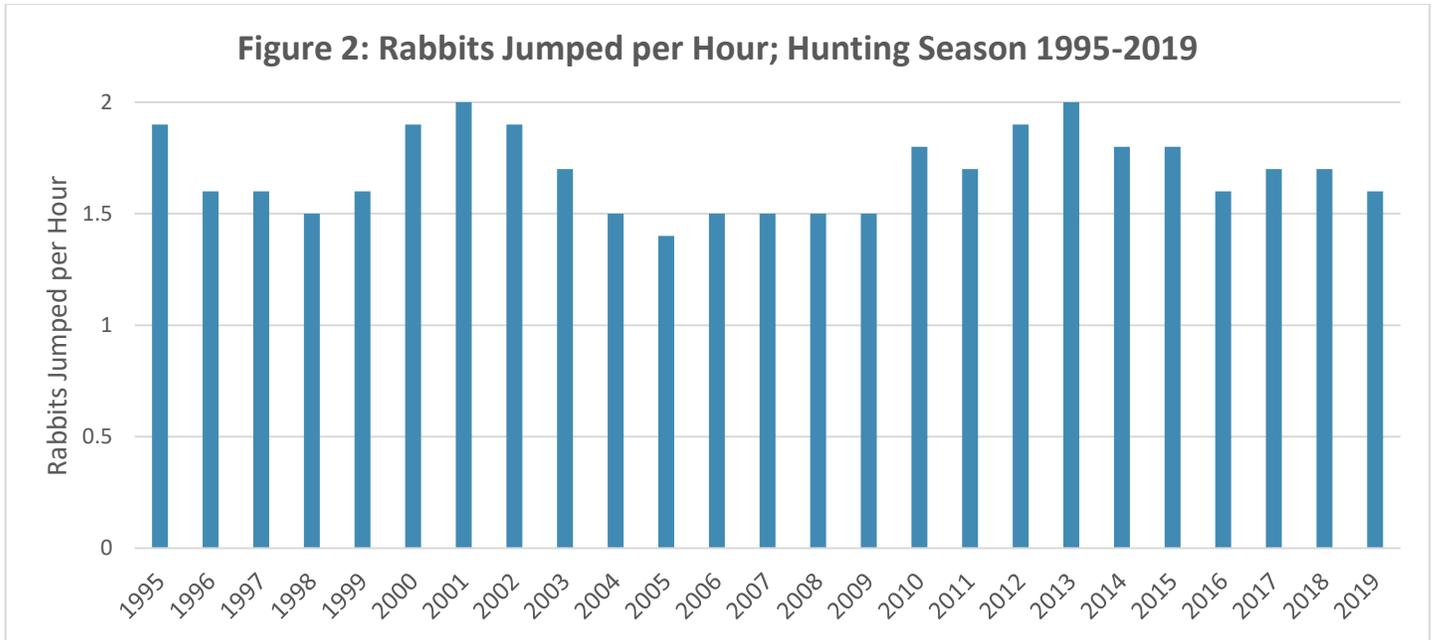
(-) = data was not analyzed by west, central, bluegrass, east until 2011
¹See Appendix 1 on page 11 for Region breakdown

Over the last 60 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. This year (2020) we observe an increase from 2019 (Table 1). The increase observed in the West weather region is a welcome sight at 40%. 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 great number of 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 (2019) was still near the bottom of the trend (Figure 2). We would expect the trend to begin increasing over the next few years out of this slump in the cycle.



2019-2020 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 give 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.

Past Rabbit Hunter Cooperator Surveys

Participation has been decreasing over the last several years, with a 2% increase in the 2019 hunting season (Thank you! 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 2019 season. Warmer colors equal less hunts and cooler colors equal more hunts per county.

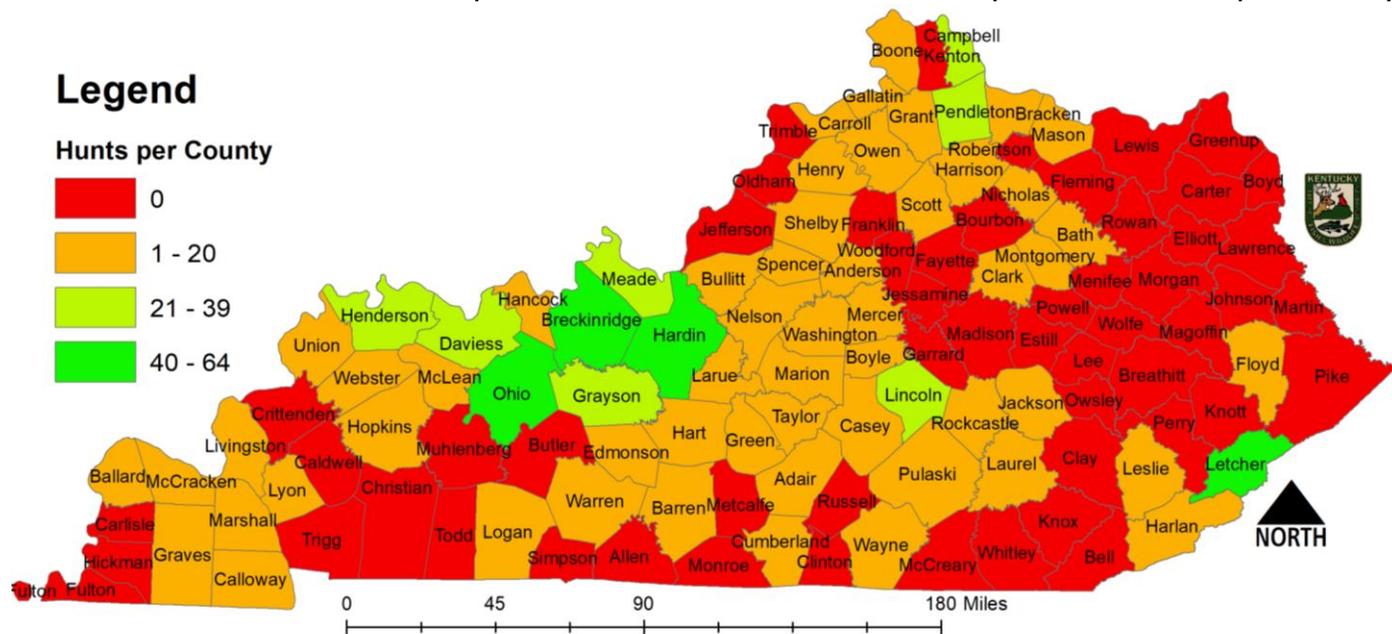


Table 2: Hunting statistics from past hunter cooperator surveys in Kentucky from the 2015 hunting season to present.

Statistics	2015-16	2016-17	2017-18	2018-19	2019-20
Cooperators	87	72	56	50	54
Hunts	1,198	1,100	861	790	793
Counties	89	74	65	65	57
Hunts/Hunter	14	15	15	12	15
Hours Hunted	4,309	3,687	2,869	2,653	2,753
Dogs Used	4,899	4,144	3,579	3,305	3,369
Total Rabbits Jumped	7,579	5,851	4,878	4,397	4,518
Total Rabbits Harvested	3,193	2,317	1,902	1,911	1,868
Total Rabbits Wounded	236	91	74	74	52
Hunting Mortality (%)	45	42	41	45	43

Table 2.1. Breakdown of species harvested in recent hunting seasons. *Note: One Appalachian reported jumped in 2017-18 with one killed. Three Appalachian reported killed in 2018-19. One Appalachian cottontail jumped and one killed in 2019-20.

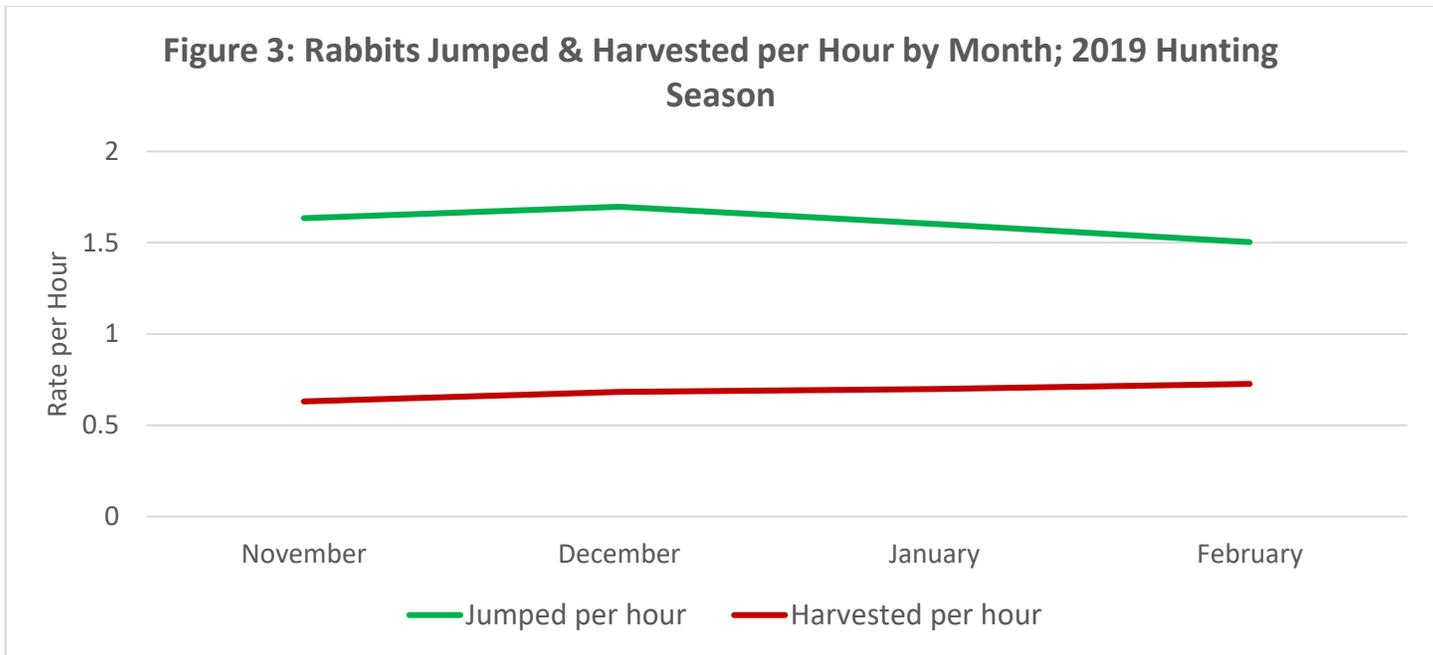
<i>Statistics</i>	E. Cottontail			Swamp		
	Jumped	Killed	Wounded	Jumped	Killed	Wounded
2015-16	7545	3183	236	34	10	0
2016-17	5806	2299	90	45	18	1
2017-18*	4765	1870	71	112	31	3
2018-19*	4201	1754	74	196	83	0
2019-20*	4488	1855	50	29	12	2

2019-20 Hunter Cooperator Results

Logs were received from 54 rabbit hunters this last hunting season (an 8% increase from last year; Thank you!). Hunters averaged 15 hunting trips throughout the season. Ninety-eight percent of rabbit hunters used dogs in their pursuit. Data were provided from 793 hunts, from 57 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 2019-20

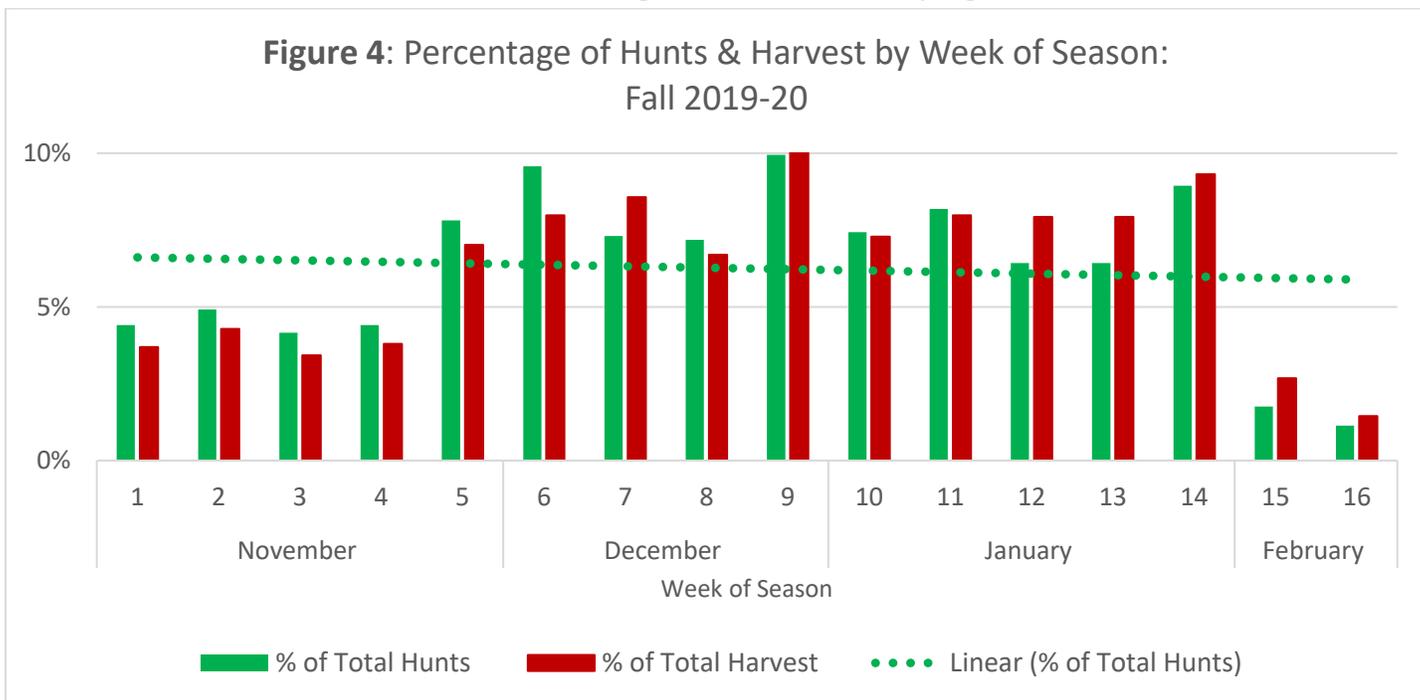
Hunters jumped an average of 5.70 rabbits per **hunt** and harvested 2.36 rabbits per **hunt**. Hunters jumped an average of 1.64 rabbits per **hour** hunted and harvested 0.68 rabbits per **hour** hunted. The number of rabbits **jumped** per hour stayed consistent all season with a slight downward trend as the season progressed (Figure 3). The number of rabbits **harvested** per hour was also consistent throughout the hunting season, with a slight upturn later in the season (Figure 3). Hunters harvested 42% of rabbits jumped and wounded 1% (Table 2). Assuming wounded rabbits did not survive, the hunting mortality rate was 43% of rabbits jumped in 2019-20.



Hunter Effort

Hunting effort peaked in late December (Figure 4). The majority (37%) of all hunts took place in the month of January. February saw very few hunts relative to the earlier months of the season.

The hunter effort index reveals two peaks, one in late December and one in late January. The hunting effort (green trend line; Figure 4) decreases as the season progresses. This is interesting, as in past hunting season the effort and harvest shows an increasing trend as the season progresses.



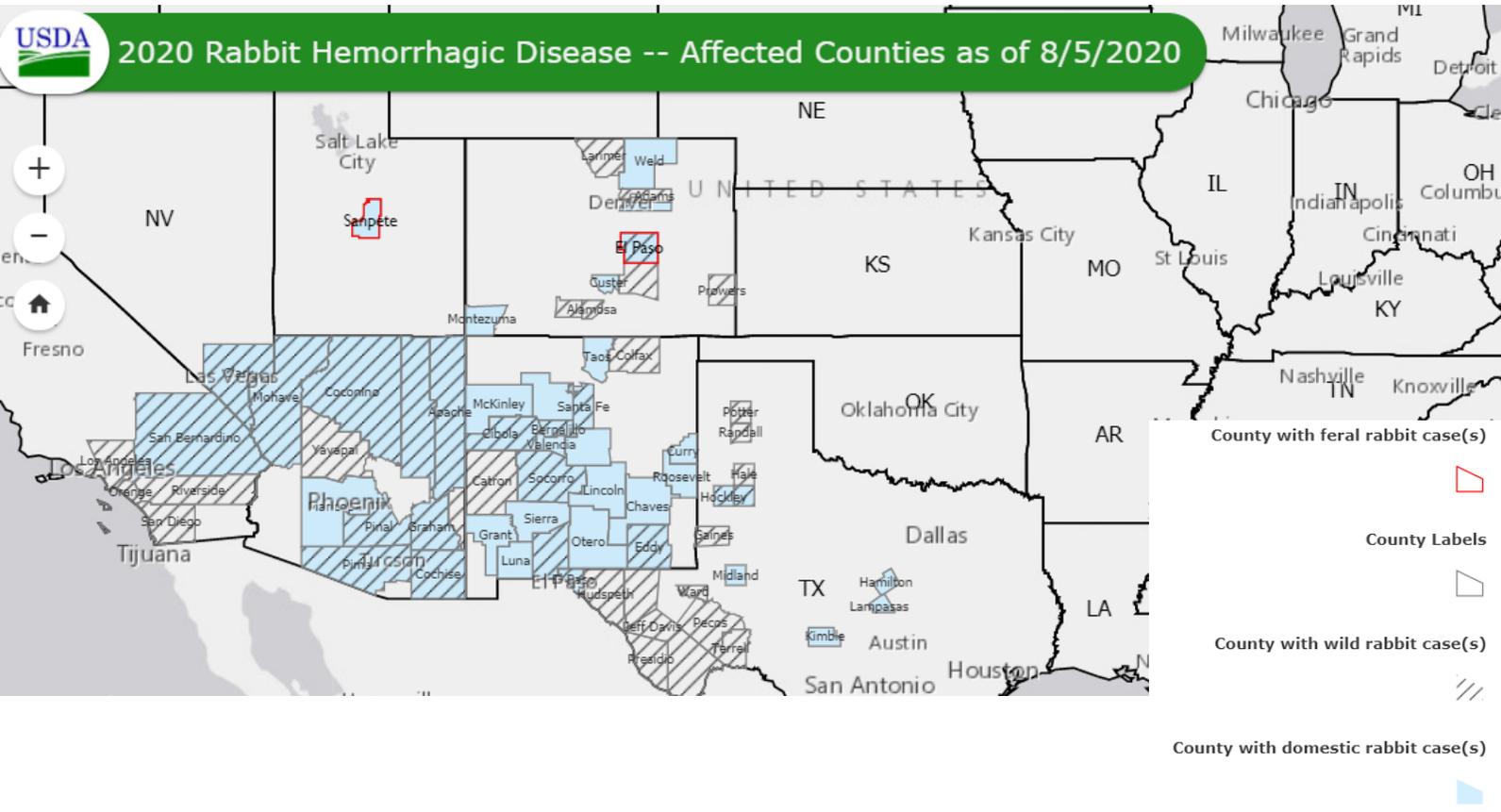
Disease Surveillance

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. Generally speaking, disease is not considered an important driver of rabbit population fluctuations. An emerging disease threat that could potentially affect rabbits in Kentucky is the highly contagious and fatal rabbit hemorrhagic disease, known as RHDV2.

RHDV2 is caused by a virus in the same family as Norovirus (which is the causative agent for half of all food poisoning sickness in the United States), however humans **cannot** contract RHDV2 and it is fatal in rabbit populations. RHDV2 likely originated in Europe and has been a known disease agent in domestic rabbits for many years. Until 2020, RHDV2 was not known to infect or cause illness in native rabbits in North America. Since earlier this year however, it has been documented in several southwestern states and appears to be moving east (image below). RHDV2 is transmitted by direct contact with infected rabbits, both live and dead animals. RHDV2 is also a swift killer, often times little to no symptoms are observed before sudden death. On some occasions, dead rabbits may have a bloody nose.

KDFWR has responded to this outbreak with the passage of an emergency regulation limiting the movement of rabbits and their parts into the state.

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; 502-892-4521.



General Information about the 2020-21 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 2019-2020	Statewide Bag Limit
Fall Season	Eastern Zone	November 1-13 and November 16 – January 31	4
	Western Zone	November 16 – February 10	
Trapping Season	Eastern Zone	November 16 – January 31	4
	Western Zone	November 16 – February 10	

Continuing this year: Three WMAs will require rabbit hunters to check in/out using a Kiosk 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 16 – February 10	Yes
	Ken	November 16 – February 10	
Clay	All Tracts	November 1 – December 31 (Closed Nov. 7 & 8)	Yes
Rockcastle River	All Tracts	November 1 – December 31	Yes

Outlook for the 2020-2021 Rabbit Season

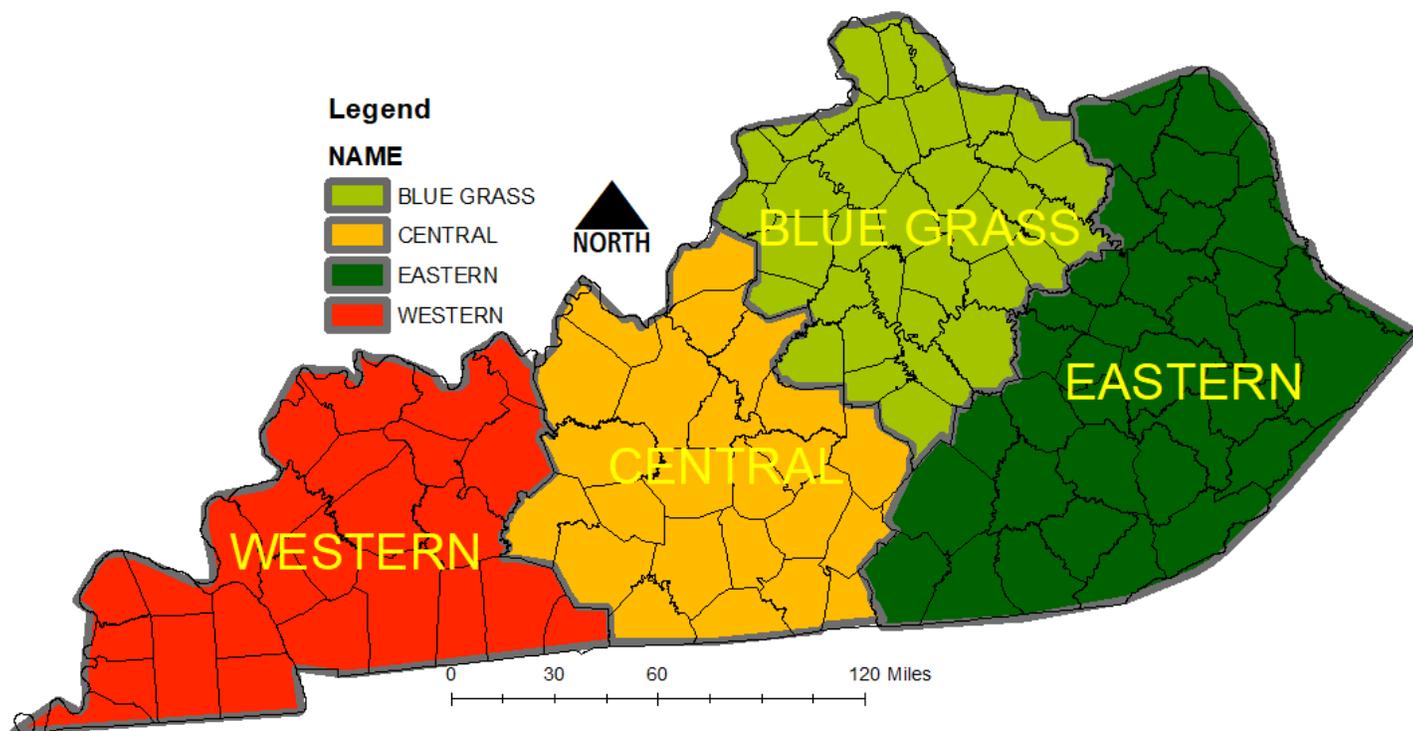
The Mail Carrier Survey and the Rabbit Hunter Log Survey appear to be tracking each other well. Therefore, we can make predictions based on the Mail Carrier Survey results. This year, the East Region of the state once again led all regions in the number of rabbits observed, followed by the Bluegrass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

Overall, the 2018-19 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 even when compared to the previous season. The Mail Carrier Survey shows an uptick in the number of observed rabbits statewide between 2019 and 2020. This result should lead to better jump and harvest rates for rabbits in Kentucky for the 2020-2021 season. Hunters in the Commonwealth should expect a great year for rabbit hunting in the upcoming season and potentially the next few seasons as our population cycle continues 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, 2021. 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.

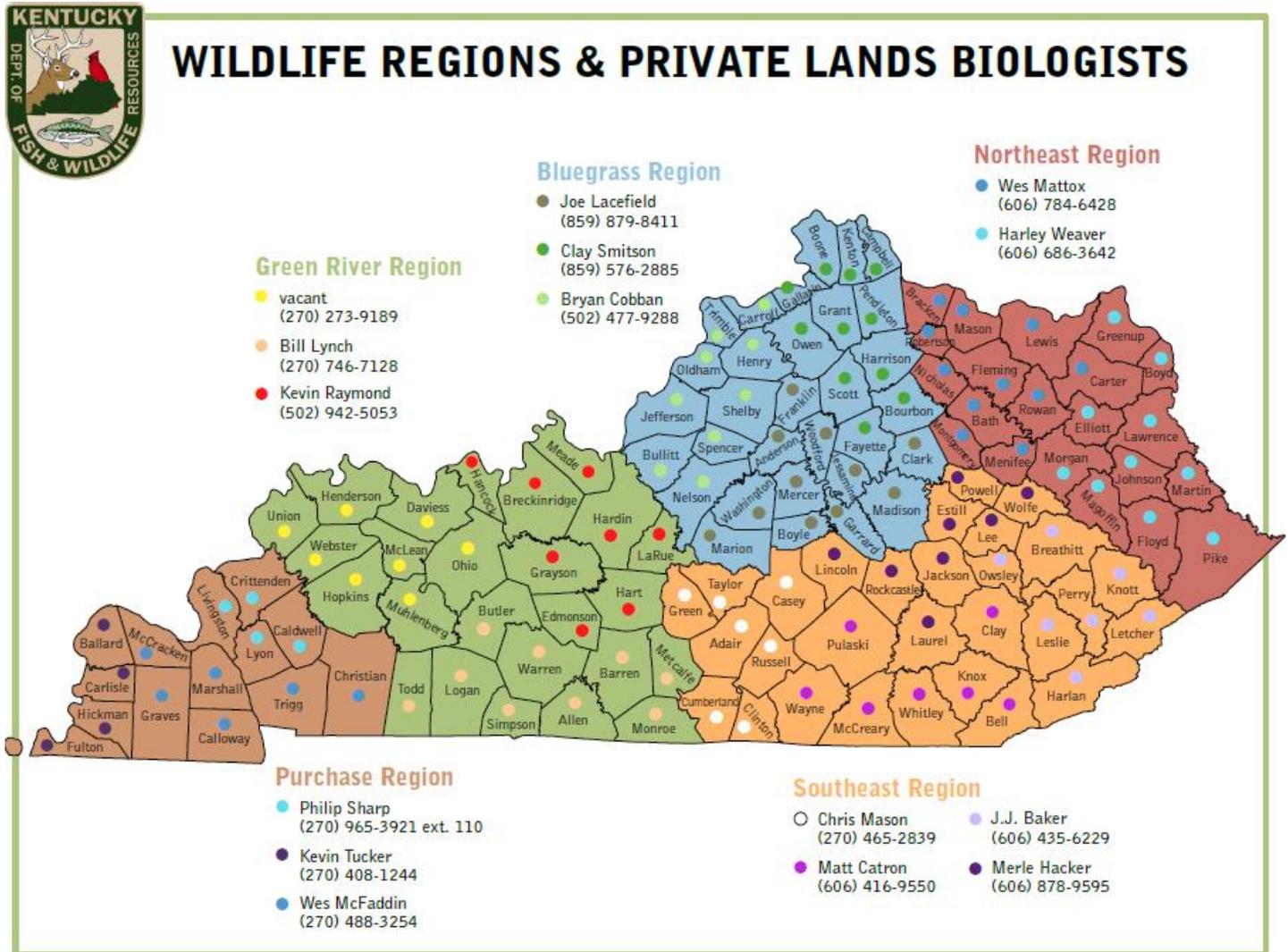
Appendix 1 Region Breakdown



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.