

2017-2018 White-tailed Deer Report

Kentucky Department of Fish and Wildlife Resources



Photo Credit: Kyle Sams, Deer Program Biologist



Table of Contents

Page

Introduction..... 2

Deer in Kentucky 2

Population Status 2

2017-18 Harvest Results..... 3

 Total Harvest Summary 3

 Antlered Buck Harvest Results 3

 Female Harvest Results 4

 Weapon Type Harvest Summary..... 5

 Harvest Breakdown by Sex..... 6

 Monthly Harvest Results 6

 Harvest Results by Permit Type 7

Public Land Harvest 8

Quota Hunt Results 8

 Purchase Region Highlights 9

Damage Issues 11

Disease Surveillance 12

 Hemorrhagic Disease (HD) 12

 Chronic Wasting Disease (CWD)..... 13

 Carcass Importation 13

General Information about the 2017-18 Season 14

 Licenses and Permit Fees 14

 Season Dates and Bag Limits..... 14

 2017-18 Deer Hunting Zones 15

Deer Permit Sales 15

Changes for the 2018-19 Deer Season..... 17

Contacts 19

Introduction

The Deer 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 licenses sold in the state.

The Deer Program is tasked with managing the white-tailed deer herd in the state to provide ample hunting opportunity while balancing the needs of consumptive and non-consumptive user groups. The Deer Program is comprised of one program coordinator, Gabe Jenkins, and two biologists, David Yancy and Kyle Sams. Deer Program staff are based out of the KDFWR Headquarters in Frankfort.

Deer in Kentucky

Deer are native to Kentucky and were present since Dr. Thomas Walker first reported in 1750 that the deer are "plentiful". However, due to unregulated harvest, the deer population began to decline rapidly in subsequent years. In 1946, the Division of Game and Fish initiated a three-pronged white-tailed deer project to facilitate the restoration of this important species. Components of this project consisted of refuge establishment, trapping and translocation of live deer, and habitat improvement work. Active restoration efforts concluded in March of 1999. After 52 years of trapping and translocation, 10,096 white-tailed deer had been stocked around the state. Kentucky now has a high quality deer population and ranks in the top five for all time Boone & Crockett buck production.

Population Status

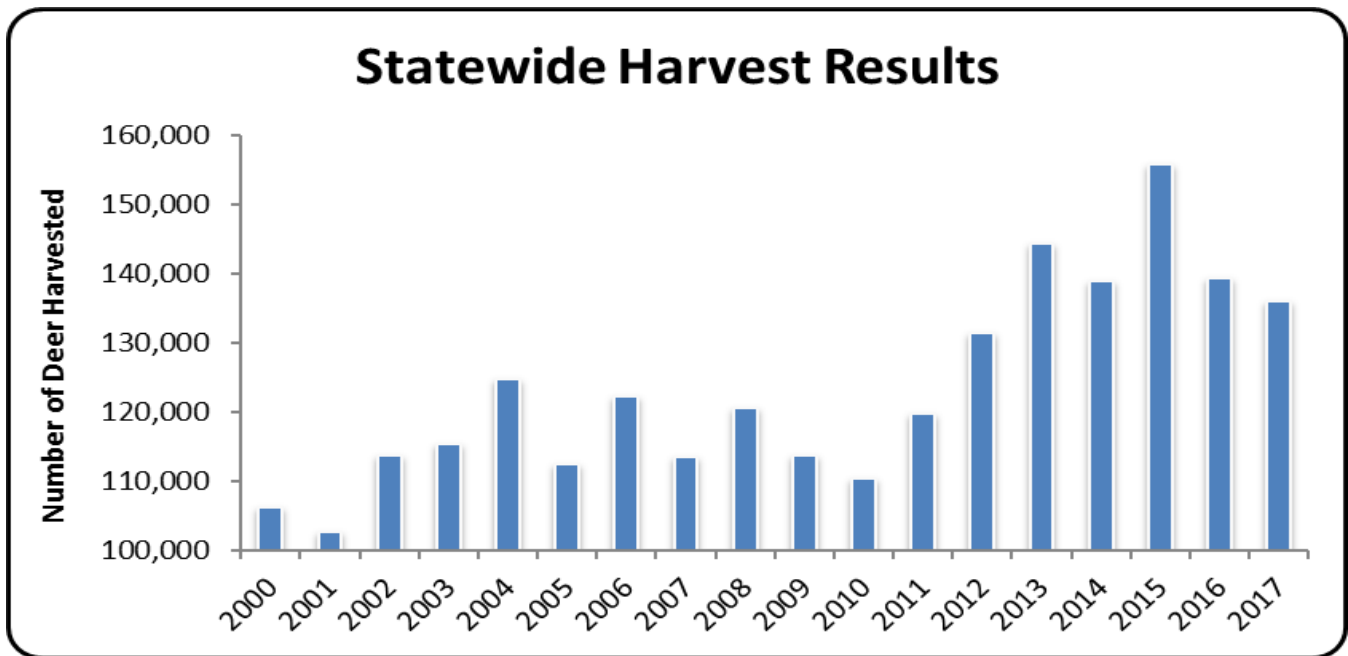
Deer management techniques have varied greatly across the state over the last decade. Since the 2007 Epizootic Hemorrhagic Disease (EHD) outbreak, where many counties were re-zoned to allow for an increase in population growth and to accommodate for declining in deer densities, the population has since rebounded or surpassed population estimates prior to the 2007 outbreak.

In the eastern portion of state, where deer densities are the lowest in the state, the deer population had increased to record high levels. During the late summer/early fall of 2017, the eastern portion of the state was hit with an EHD outbreak.

Overall, the statewide deer population estimate shows a stable to slightly decreasing trend. The 2017 statewide estimate is 855,090 deer at the start of the 2017-18 hunting season, which is a <1% decrease from 2016-17 (858,876). This estimate is generated from harvest and age structure data, which is collected through telecheck and by KDFWR staff.

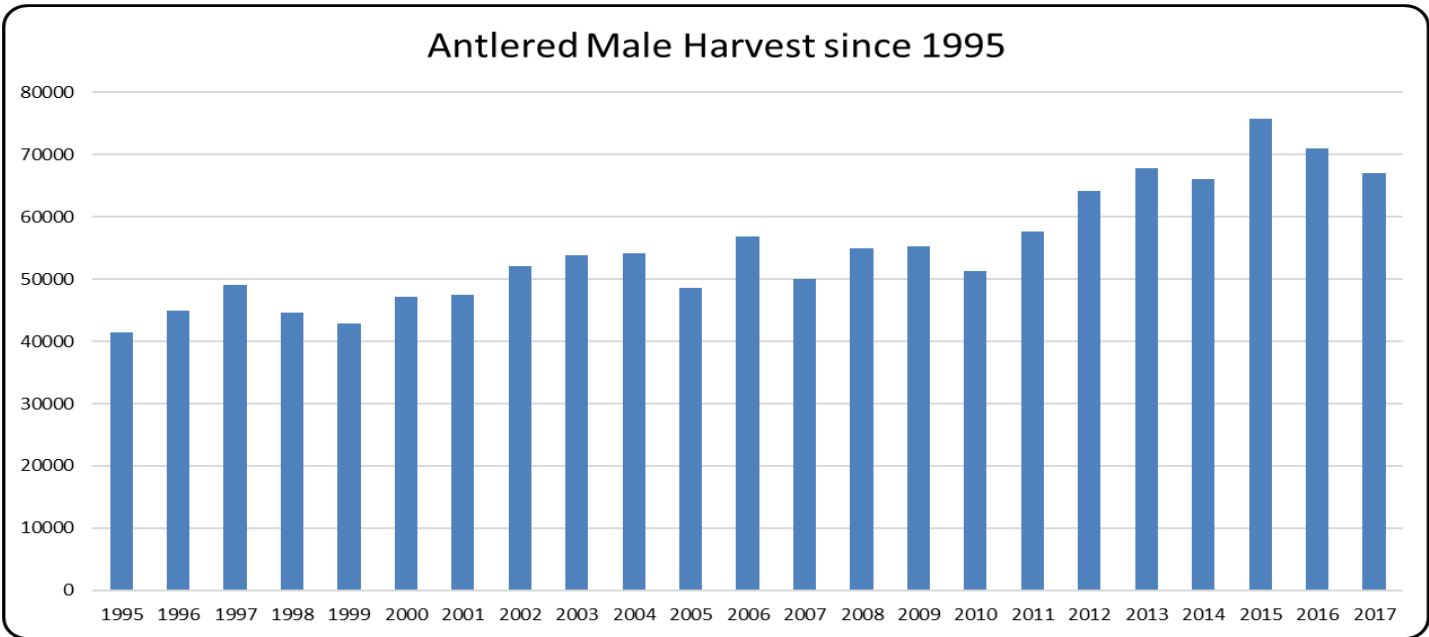
2017-2018 Total Harvest Summary

136,026 deer were harvested during the 2017-18 deer season, which is the fifth highest harvest on record. We observed a 2% decrease from the 2016-17 season (139,429) and a 13% decrease from the 2015-16 record setting season (155,730). In years with higher acorn production, deer tend to travel less in search of food resulting in less deer sightings and lower harvest, which certainly contributed to the slight decrease observed in the 2017-18. However, we also observed an extreme outbreak of EHD in the eastern portion of the state, and data indicates that there were fewer deer on the landscaped and many hunters elected not to hunt in 2017-18 for fear of hurting the stressed population. In addition, there were optimal hunting weather conditions during the major hunting timeframes, which also contributed to the harvest.



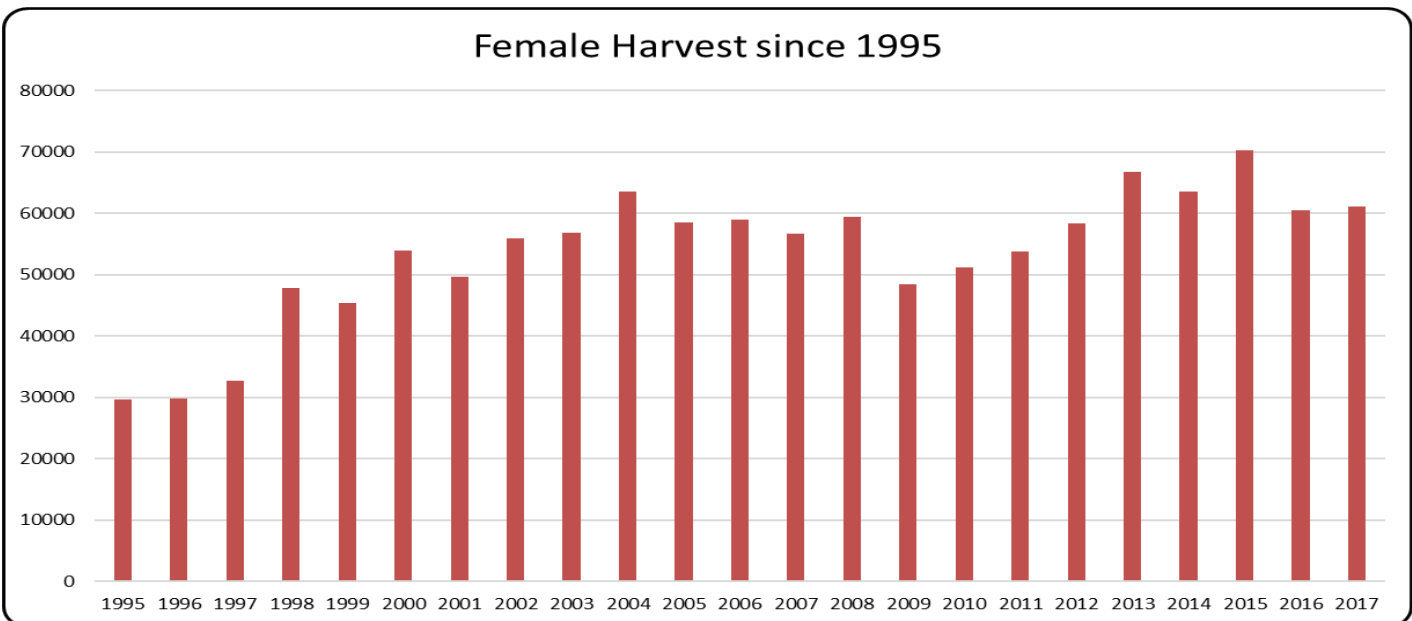
Antlered Buck Harvest

The total antlered buck harvest was 66,994 in the 2017-18 season, which is a 3% decrease from the five-year average but is the fourth highest antlered buck harvest on record. Overall, Christian County (1,595) harvested the most antlered bucks with Hardin County (1,563) coming in second, and Breckinridge County (1,472) coming in third. Wolfe County (84) harvested the fewest antlered bucks during the 2017-18 season.



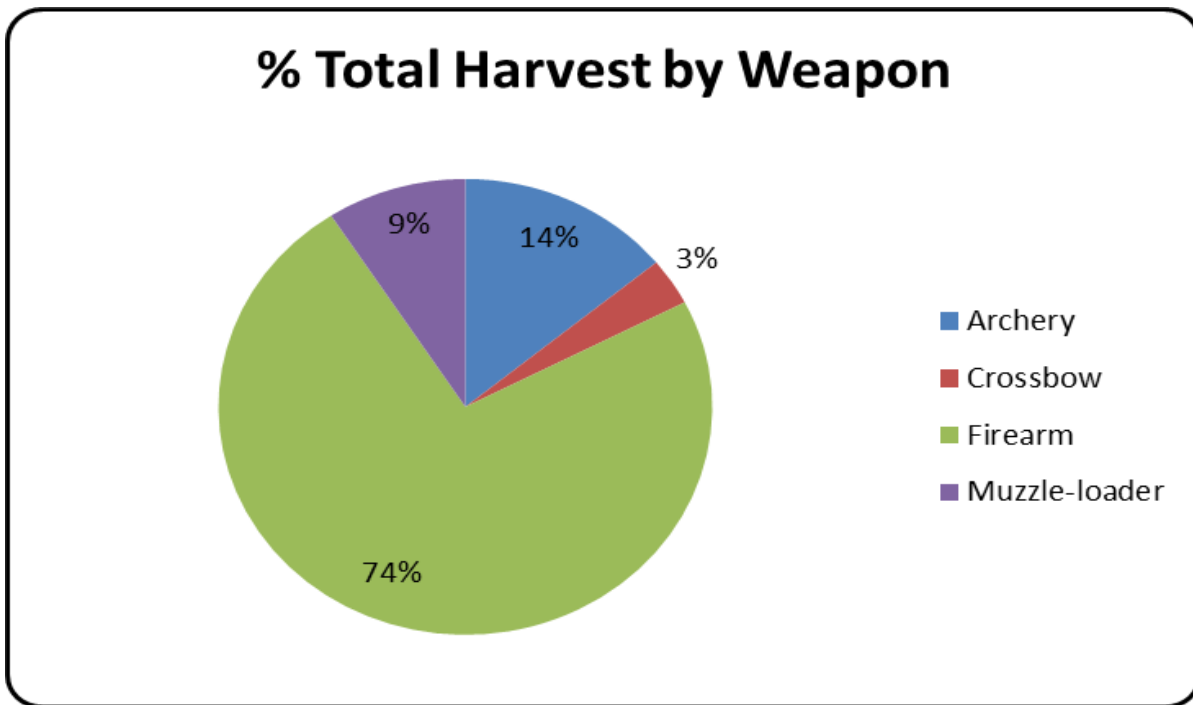
Female Harvest

The total female harvest was 61,111 in the 2017-18 season which is a 4% decrease from the five-year average and a <1% increase from the 2016-17 season (60,540). Overall, Crittenden County (1,817) harvested the most female deer followed by Pendleton County (1,666) and Owen County (1,600). Lee County (21) harvested the fewest female deer during the 2017-18 season.



Weapon Type Harvest Summary

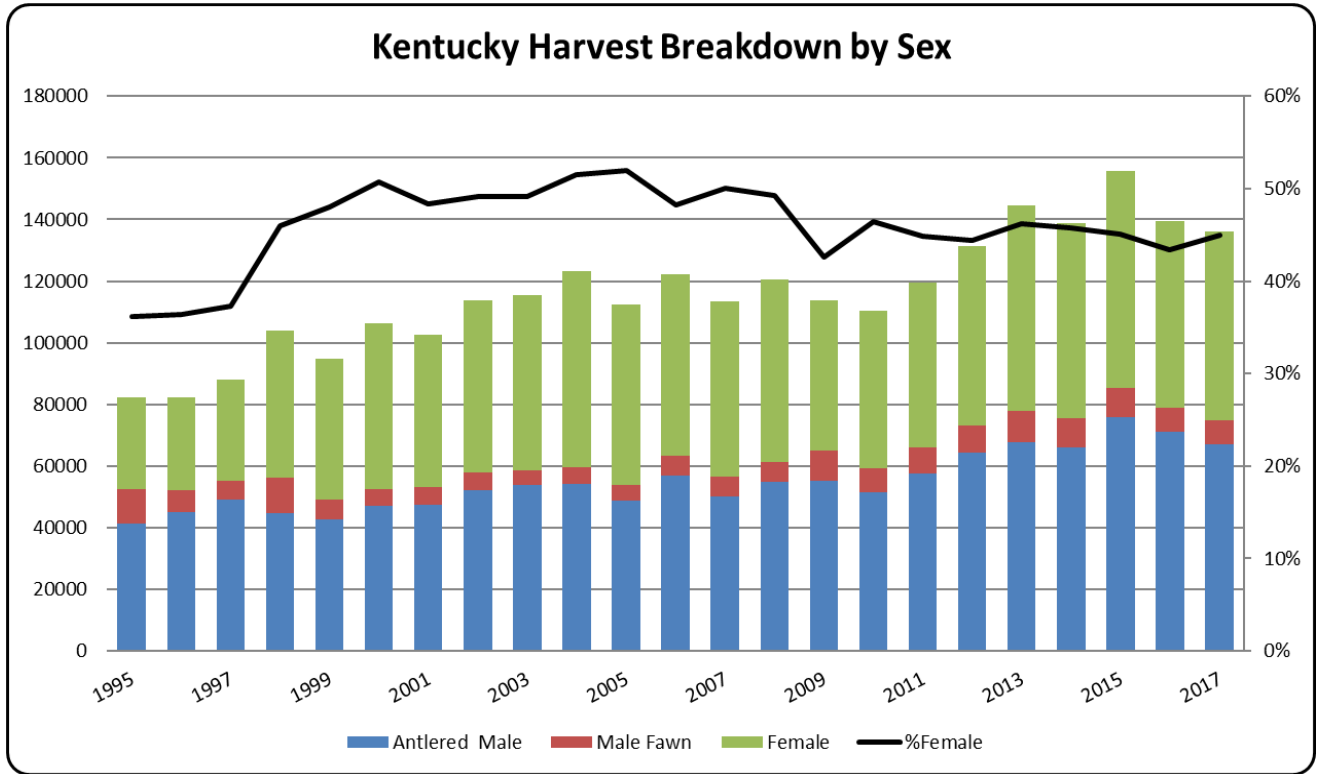
There were no significant changes in the percentage of the 2017-18 harvest by weapon type compared to last season, with the exception of the crossbow harvest (4,547), which increased by 14%. The crossbow harvest increase was most likely a result from the increase in popularity of crossbow hunting. We observed a 2.2% decrease from the archery harvest in 2016-17 (19,567) to 2017-18 season (19,128). The muzzleloader harvest increased by 6.8% during the 2017-18 season (12,449). Seventy-five percent of the overall harvest occurred during the 2017-18 modern firearm season (99,871) which is a 4.2% decrease from the 2016-17 season (104,213).



Weapon	Female	Male Fawn	Male	Total
Archery	11,093	968	7,080	19,141
Crossbow	2,768	342	1,441	4,551
Firearm	39,829	5,695	54,347	99,871
Muzzle-loader	7,419	909	4,121	12,449
Total	61,109	7,914	66,989	136,012

Despite a statewide bag limit of unlimited antlerless deer in zone 1 and up to four antlerless deer in zones 2-4, there appears to be a limit on the number of deer that hunters are willing to, or able to harvest, as 71.8% of all hunters only harvest one deer. Of the 99,861 total successful hunters in the 2017-18 season, the average hunter harvested 1.36 deer, which was a slight increase from last season. However, this rate usually does not fluctuate statewide between years and has remained stable over time.

Doe harvest numbers can fluctuate greatly in a county or region due to harvest restrictions by zones. Even though the average hunter only harvests 1.36 deer, the successful hunters harvested approximately the same percentage of bucks and does. When compared to previous hunting seasons, the percentage of does in the harvest has fluctuated minimally over the last 15 years.

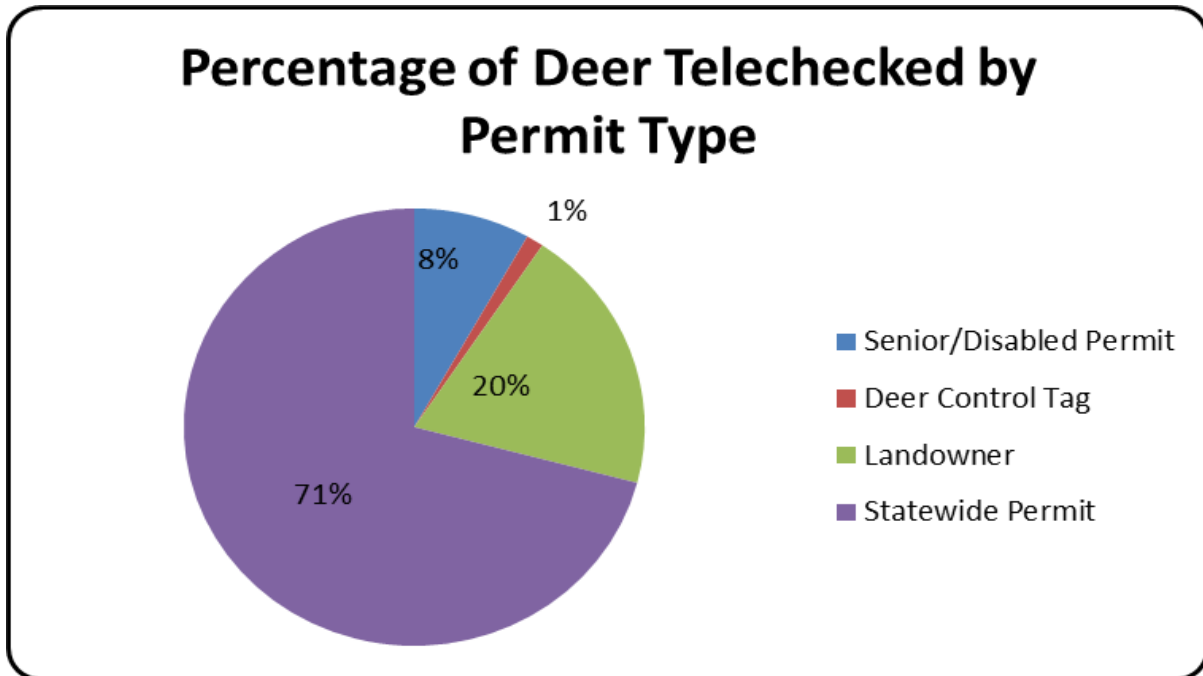


Monthly Harvest Rates

The 6,115 deer harvested in September is the second highest harvest on record for that month. October’s harvest of 13,207 deer was the third lowest October harvest on record since 1999. Hunters harvested 102,506 deer during November, most of which occurred during the statewide modern firearms season. This ranks as the fifth highest November harvest on record. December’s harvest was the fifth highest record harvest with 12,214. Cooler conditions in September and optimal weather conditions for the modern gun season in November drove the harvest. January’s harvest was 23% below the five-year average at 1,974, mostly due to very cold weather conditions, which reduce human activity afield.

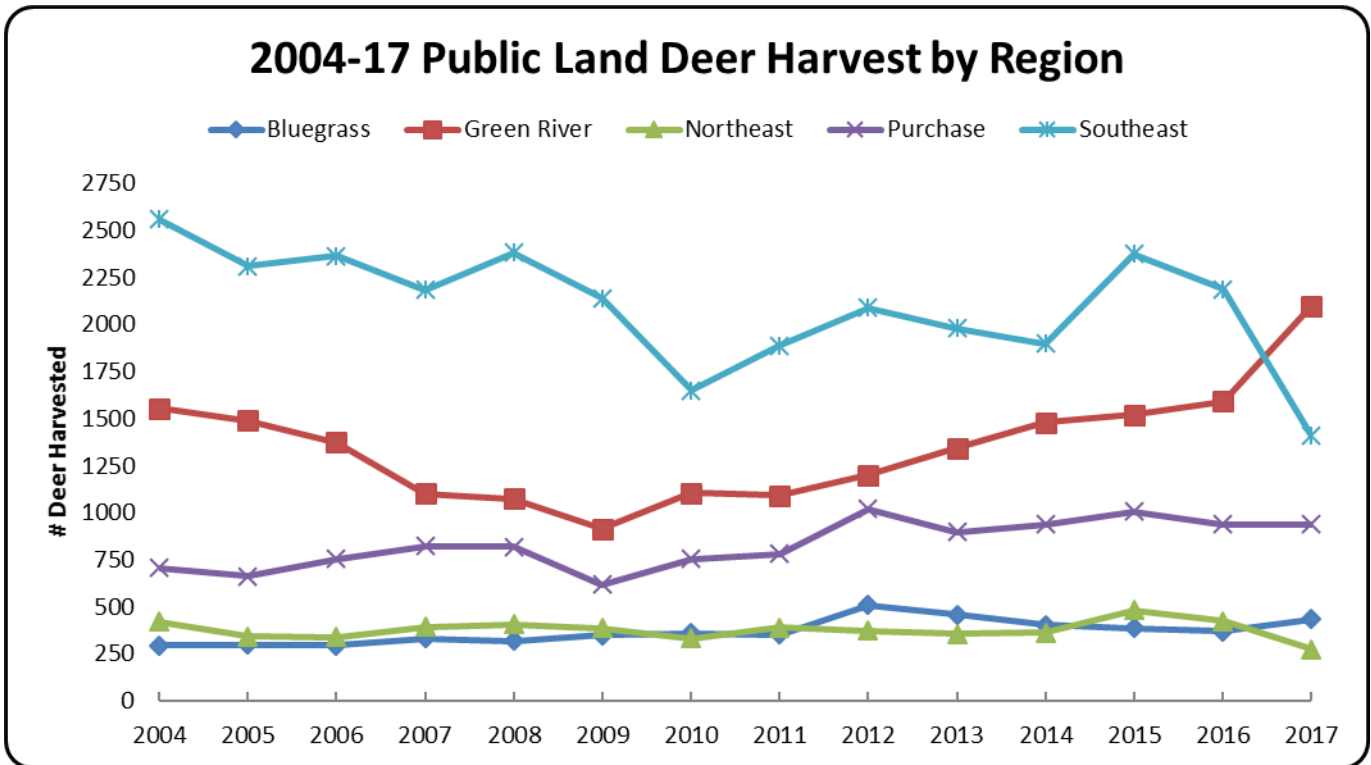
2017-18 Harvest Results by Permit Type

The percentage of deer telechecked by permit type has remained stable over the years. However, with the increasing number of senior/disabled licenses sold, we would expect to see the senior/disabled harvest increase and the statewide permit harvest to decrease over time. Landowners are not required to purchase a hunting license or deer permit if they are hunting deer on their own property but are still required to telecheck any deer harvested. Deer control tags are used in correlation with deer causing damage and have remained stable over the past four years.



Public Land Harvest

KDFWR owns, leases, or manages more than 124 Wildlife Management Area’s (WMA) across the state for public use. On some areas, users must purchase a user permit. The rest are open to hunting through quota hunts or under statewide regulations. The WMA’s are separated between five wildlife regions and are managed by regional staff.



Quota Hunt Results

KDFWR offers 30 quota hunts on Kentucky WMA’s along with three quota hunts on military installations (Ft. Knox, Bluegrass Army Depot, and Ft. Campbell). Any resident or nonresident hunter may apply for a deer quota hunt in Kentucky, but only the persons successfully drawn for quota hunts may hunt. The application period for KDFWR deer quota hunts is the month of September. Applicants can apply online at fw.ky.gov. Applicants will be given the option to pick a first and second hunt choice, but may be drawn to participate in only one quota hunt. The non-refundable fee is \$3 per hunter to apply. Each hunter who applies correctly, but is not selected, will receive a preference point that increases the odds of being drawn the next year. Unselected hunters who do not apply the following year will lose all previously credited preference points. Applicants are selected based on individual preference points. Up to five people can apply together. If any one of the group’s Social Security numbers is drawn, the others in the group are automatically drawn, too.

For the 30 KDFWR quota hunts held in the 2017-18 season, 7,607 people applied for 4,427 spots across the state. There are quota hunts for general hunters (i.e., residents or non-residents with statewide license), mobility impaired hunters, archery/crossbow hunters, and youth hunters. Each of the five wildlife regions across the state have deer quotas.

For the 2017-18 report, quota hunts in the Purchase Region will be highlighted.

Purchase Region Highlights

Ballard WMA – Josh Hager, Wildlife Biologist

Ballard WMA (BWMA), is an 8,014 acre WMA nestled along the Ohio River in Ballard County. BWMA offers a firearms quota hunt held on the first weekend of November. Approximately 6,114 acres was open for the 2017 BWMA quota hunt. Typical terrain and habitats include mature bottomland hardwood, agricultural lands, and warm season grass fields. 103 people were drawn for the 2017 quota hunts, but only 79 hunters (77%) actually hunted. Seventeen deer were harvested during the 2017 quota hunt, which is down from the 56 deer harvested the previous year. However, there was an abundance of hard mast on the WMAs which often results in a lower harvest. Quota hunters observed/reported 743 deer during the November quota hunts: 156 antlered deer, and 587 antlerless deer. Percentage of bucks in the harvest was higher than does, with 10 males taken (59%) and 7 female deer taken (41%). The following table includes data from the November quota hunt.

Total Legal Harvest

Adult Bucks:	10	Adult Does:	5
Buck Fawns:	0	Doe Fawns:	2
Total Bucks:	10	Total Does:	7

Total Deer:	17
Buck Ratio:	59%
Fawn Ratio:	12%
Antlerless Ratio:	41%

Known illegal kills or lost cripples during hunt:	2
Total deer permits issued:	103
Total hunters actually hunting:	79
Total Hunter Show Up Ratio:	77%
Total Hunter Success Ratio:	22%

Total Hunting hrs:	1,030
Total Deer Seen:	743
Deer Seen/Hour:	0.72

West Kentucky WMA - Tim Kreher, Wildlife Biologist

West Kentucky WMA (WKWMA) consists of approximately 6,500 acres, located in western McCracken County. Two firearm deer hunts are held on the WKWMA - the first is a quota hunt, held on Saturday through Tuesday during the week preceding Thanksgiving, while the second is a first-come, first-serve hunt held Saturday through Monday of the Martin Luther King, Jr., holiday weekend in January. Dates of these hunts were November 18-21, 2017, and January 13-15, 2018, respectively. About 4,400 acres are open for firearm deer hunting on WKWMA, due to the need to provide “buffer zones” around the neighboring U.S. Dept. of Energy Paducah Gaseous Diffusion Plant and Tennessee Valley Authority Shawnee Steam Plant. Additionally, shotguns and muzzleloaders are the only weapon types allowed during the WKWMA firearm deer hunt due to safety concerns.

An additional Youth-Mentor Quota hunt was allowed for the first time in 2017, on 400 acres of what had been the outer fringes of the “buffer zone” of the Gaseous Diffusion Plant. Ten youth hunters were drawn for this hunt, which was held concurrently with the November Quota Hunt.

Hunters may begin checking-in on the Friday preceding the hunts for all three of the WKWMA deer hunts. The “regular” November Quota Hunt has a quota of 160 drawn hunters, while the January “first-come, first-serve” Open Hunt has a cap of the first 140 hunters to sign in.

Hunt	Available Slots	Hunters Checking In	"Show-up" Rate
Quota Hunt 11/18-21	160	89	55%
Youth/Mentor Hunt 11/18-21	10 Youths	5 Youths	50%
Open Gun Hunt 1/13-15	140	77	55%

Upon checking in, hunters are each provided with a card as proof of check-in, which also allows them to provide hunt data and written comments upon checking out at the end of their hunt.

Total Legal Harvest

Adult Bucks:	16
Buck Fawns:	<u>3</u>
Total Bucks:	19

Adult Does:	3
Doe Fawns:	<u>0</u>
Total Does:	3

Total Deer:	22
Buck Ratio:	73%
Fawn Ratio:	14%
Antlerless Ratio:	27%

Known illegal kills or lost cripples during hunt:	2
Total hunters actually hunting:	89
Total Hunter Show Up Ratio:	55%
Total Hunter Success Ratio:	25%

Total Hunting Hrs:	1787
Total Deer Seen:	449
Deer Seen/Hour:	0.25



Damage Issues

An overpopulation of deer can have a negative impact on the environment and humans alike. Overabundant deer populations may result in agricultural and landscape damage, be detrimental to forest health and regeneration, pose safety risks due to deer-vehicle collisions, and serve as vectors for the transmission of tick-borne illnesses. State, local and private groups all have a stake in helping to manage the state's deer population. The primary tool for deer management in Kentucky is hunting, but hunting within the season framework alone may not be enough to curtail the issues that some stakeholders experience. Deer populations have the ability to outgrow what their habitat can reasonably sustain, or surpass what is known as the environmental carrying capacity. However, a much less understood issue in modern deer management is social carrying capacity, which is essentially the number or density of deer that is socially acceptable. KDFWR staff can offer their assistance once this threshold has been reached (see Contacts map on page 19). The local Biologist or Conservation Officer will schedule an on-site visit to document the damage and provide technical guidance on potential solutions. Technical guidance can be offered in many ways; however, the best damage mitigation strategy is a dedicated, long-term hunting regiment. In addition to hunting, assistance from KDFWR may come in the form of Deer Control Tags, Destruction Permits, and the use of KRS 150.170.

Deer Control Tags Used in 2017			
Region	DCT's Issued	DCT's Used	% Used
BG	962	375	28%
GR	1347	656	43%
NE	631	153	16%
PR	571	211	23%
SE	802	273	21%
Total	4313	1668	26%

Destruction Permit Use from 2017		
Region	Destruction Permits Issued	Destruction Permits Used
BG	395	70
GR	37	17
NE	19	0
PR	80	36
SE	5	0
Total	536	123

Deer Reported to Law Enforcement Killed Under KRS 150.170 during 2017			
Region	Total Kill	Antlered	Antlerless
BG	0	0	0
GR	0	0	0
PR	0	0	0
NE	0	0	0
SE	0	0	0
Total	0	0	0

Disease Surveillance

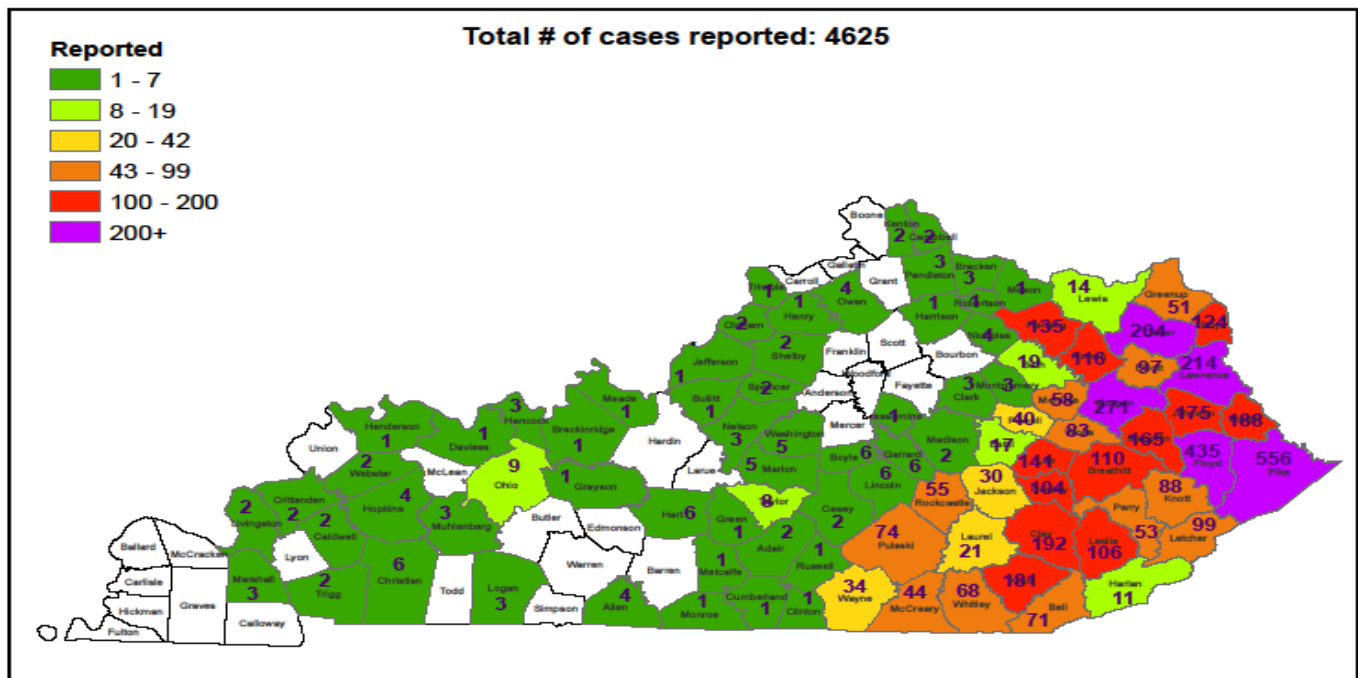
Hemorrhagic Disease (HD)

Hemorrhagic disease (HD), which is a vector-borne disease of white-tailed deer, is caused by two related orbiviruses: epizootic hemorrhagic disease virus (EHDV) and bluetongue virus (BTV). HD viruses are considered the most important viral agents affecting deer populations in the United States. The virus is transmitted from animal to animal through the bite of an infected midge which are active in the late summer and early fall. Severe outbreaks are often associated with drought conditions because drought creates an increased amount of breeding habitat for the midges. The midges die off for the year after a hard freeze, eliminating new cases of HD.

HD is reported in deer from at least a few counties nearly every year in Kentucky, although outbreaks can be considerably large and widespread. In 2017, a large HD outbreak occurred in the eastern portion of Kentucky. Over 4,500 suspected cases were reported in eastern Kentucky using an online, available to the public, self-reporting system. Once the outbreak began in late July the reporting system was quickly utilized by KDFWR staff and the public to report sick or dead deer. Data collected from the reports were provided to the public on a weekly basis in the form of a map to show diseases progress.

When possible KDFWR will test animals that have died of apparent EHD. In 2017, deer tested were clinically diagnosed as EDHV-2 positive.

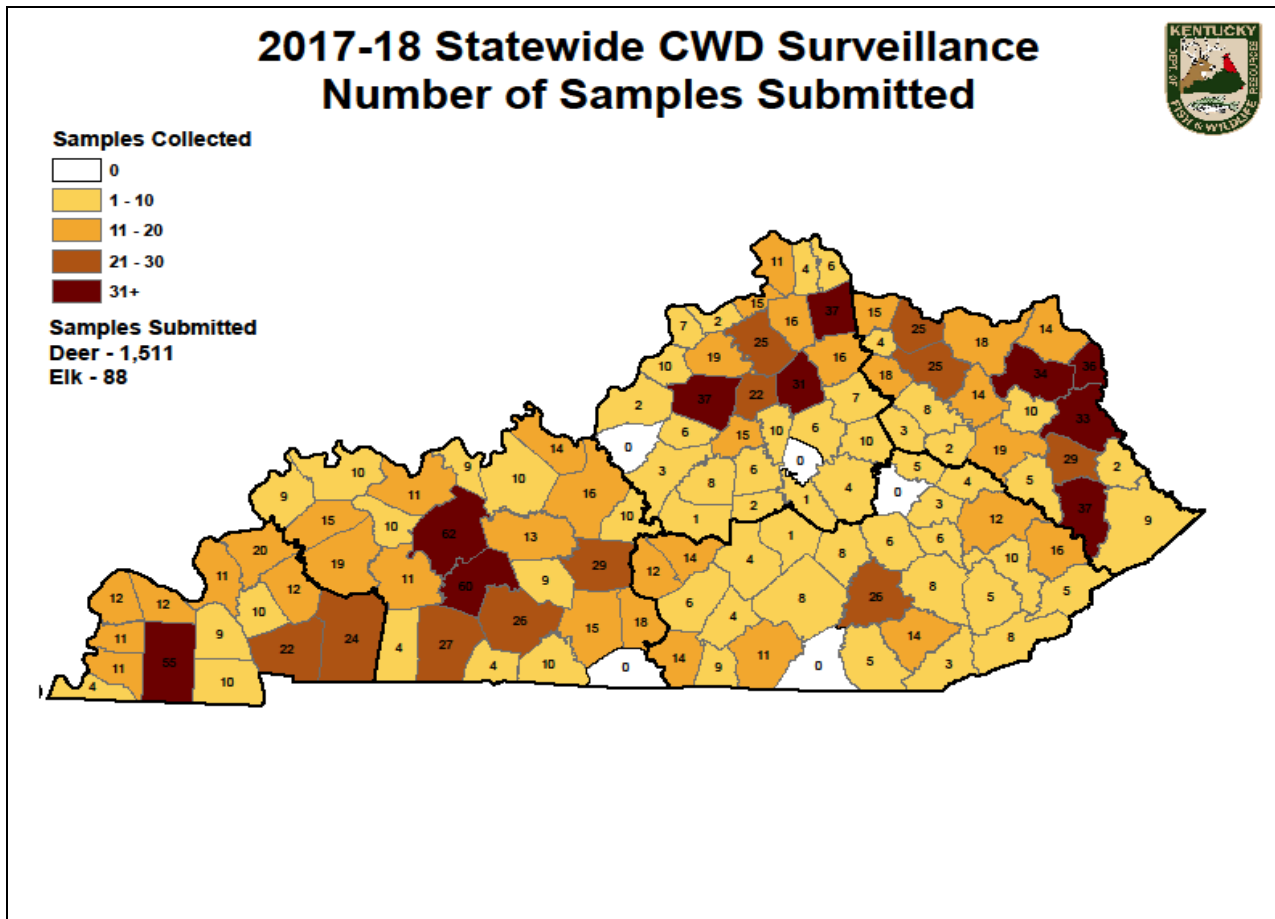
Epizootic Hemorrhagic Disease Reports 2017



Chronic Wasting Disease (CWD)

CWD is a fatal, neurological disease in white-tailed deer, mule deer, elk, moose, and caribou. It causes a characteristic spongy degeneration of the brains of infected animals resulting in emaciation, abnormal behavior, loss of bodily functions, and ultimately death. CWD is categorized as a transmissible spongiform encephalopathy (TSE), a group that includes “mad cow” disease in cattle, Creutzfeldt-Jakob disease in humans, and scrapie in sheep and goats. CWD has been detected in 24 states and 2 Canadian provinces. Five states that border Kentucky have CWD present (West Virginia, Virginia, Missouri, Ohio, and Illinois). CWD has not been detected in Kentucky.

To detect CWD should it arrive in Kentucky, KDFWR adopted a CWD monitoring plan in 2002. That plan is a four-part monitoring program to test: 1) a random sampling of hunter-harvested deer, 2) target or suspect animals (i.e., animals that appear ill), 3) a random sample of roadkill deer, and 4) all captive deer mortalities. In 2006, KDFWR adopted a contingency plan to deal with CWD if it was ever found in Kentucky. Since 2002, approximately 28,500 deer samples have been tested. 1,511 deer were submitted for CWD testing in 2017-2018, and all samples have tested negative for the disease.



Carcass Importation Law

Intact deer carcasses from all CWD-positive states, including Illinois, Missouri, Ohio, West Virginia, and Virginia may not be brought into Kentucky. Allowed parts from CWD-positive states and provinces include quarters or other portions of meat with no part of the spinal column or head attached, boned-out meat,

antlers, antlers attached to a clean skull plate, a clean skull, clean teeth, hides, and finished taxidermy products.

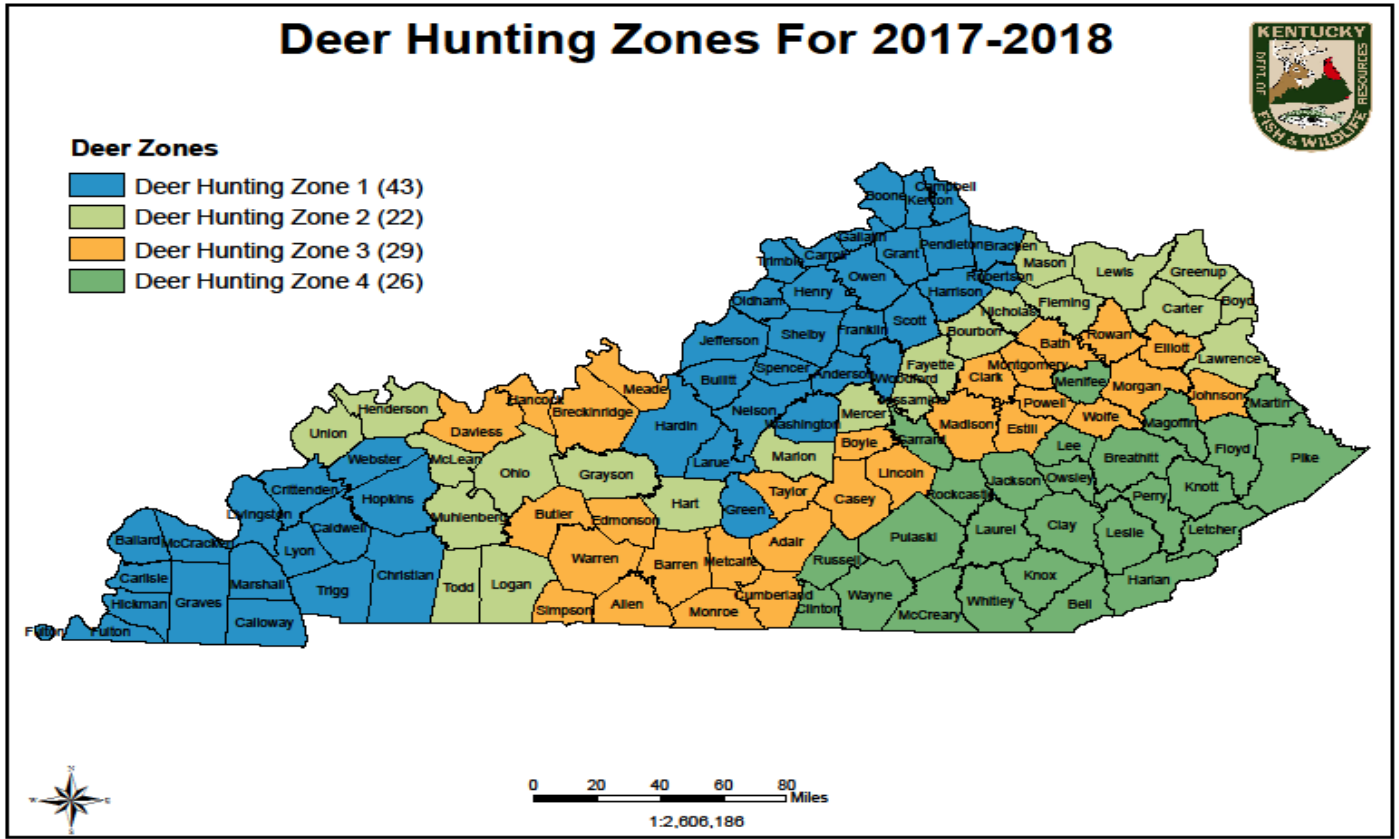
General Information about the 2017-18 Season

License and Permit Fees

License	Resident	Nonresident
Annual Hunting License	\$20	\$140
Senior/Disabled License	\$5	N/A
Sportsman's License	\$95	N/A
Youth Sportsman's License	\$30	N/A
Statewide Deer Permit	\$35	\$120
Bonus Antlerless Permit	\$15	\$15
Youth Deer Permit	\$10	\$15

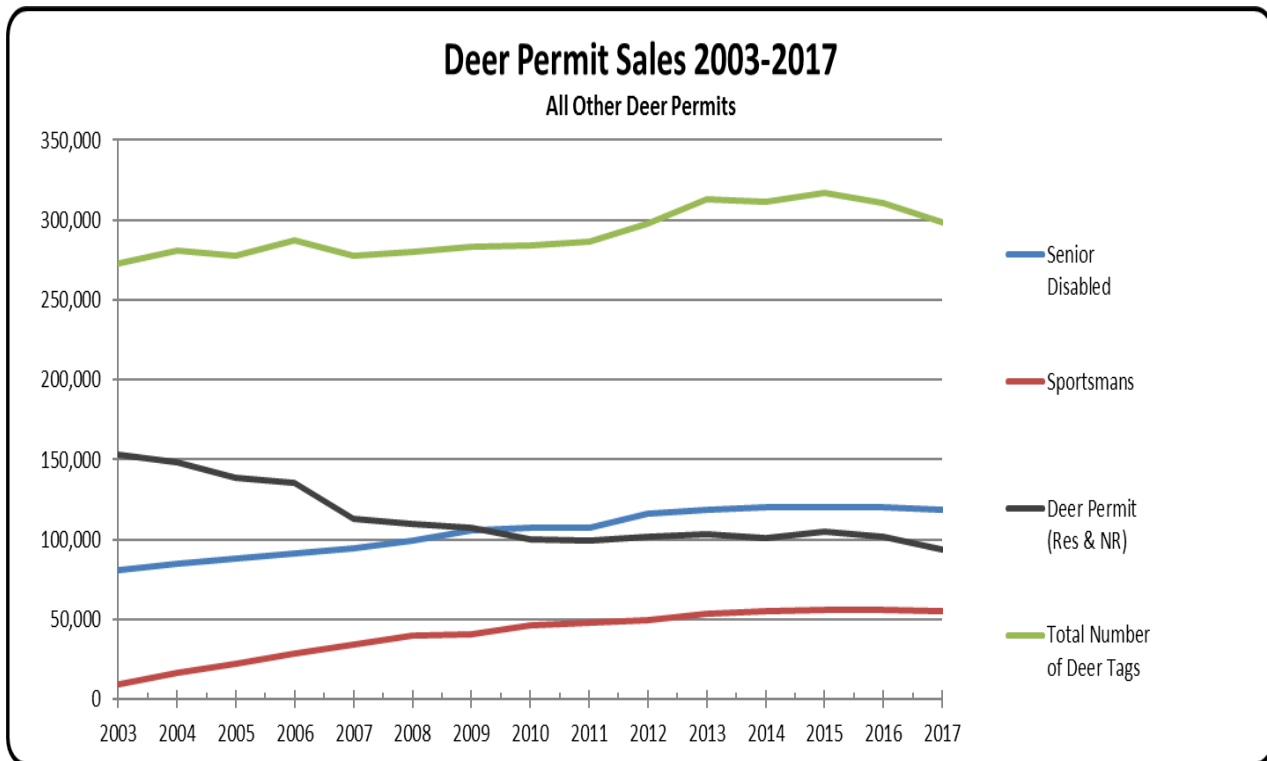
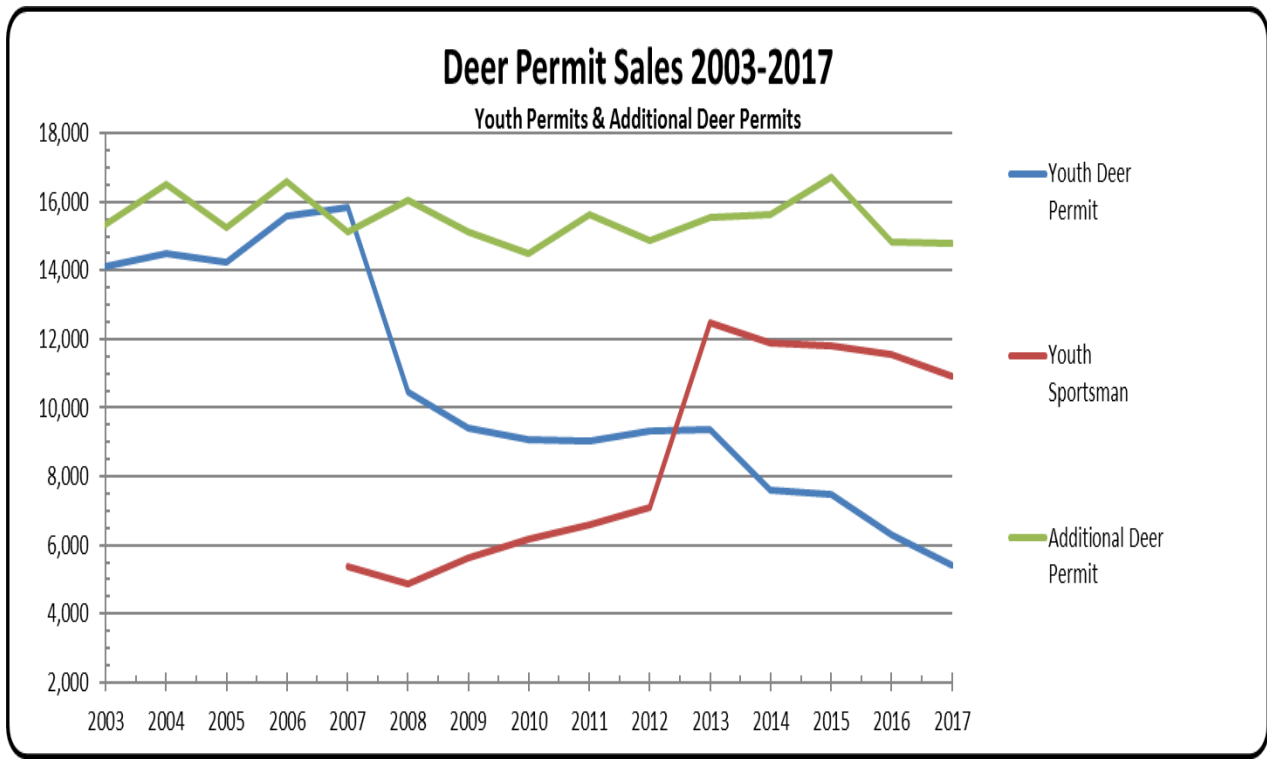
Season Dates and Bag Limits

	Statewide	Zone 1	Zone 2	Zone 3	Zone 4
Modern Firearm		Nov 11-26	Nov 11-26	Nov 11-20	Nov 11-20
Archery		Sept - Jan 15	Sept - Jan 15	Sept - Jan 15	Sept - Jan 15
Early Crossbow		Oct 1-22	Oct 1-22	Oct 1-22	Oct 1-22
Late Crossbow		Nov 11-Dec 31	Nov 11-Dec 31	Nov 11-Dec 31	Nov 11-Dec 31
Early Muzzleloader		Oct 21-22	Oct 21-22	Oct 21-22	Oct 21-22
Late Muzzleloader		Dec 9-17	Dec 9-17	Dec 9-17	Dec 9-17
Youth-Only Firearm	Oct 14-15				
Free Youth Weekend	Dec 30-31				
Antlered Bag Limit	1				
Antlerless Bag Limit	Based upon zone	Unlimited	Up to 4	Up to 4, only 2 deer with a firearm	Up to 4. Only 2 deer with a firearm, antlerless deer can only be killed with a firearm during the last 3 days of the late muzzleloader



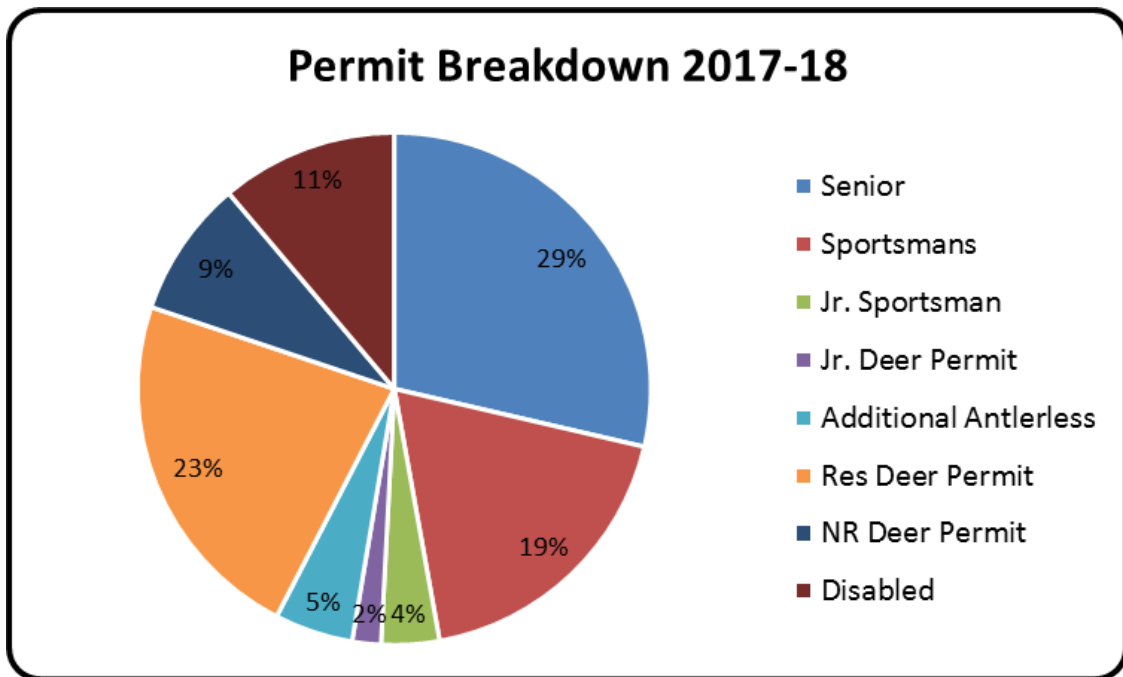
Deer Permit Sales

In recent years, the number of deer permits sold has remained stable. However, in the 2017-18 season (93,287) there was a decrease in deer permits sold compared to the 2016-17 season (101,590). When including the license bundles (Sportsman’s, Jr. Sportsman’s, Jr. Deer Permit, Resident and Non-Resident Deer Permit, and Bonus Antlerless Permit) in the total deer permit numbers, there was a decrease in license sales in the 2017-18 season (298,534) compared to the 2016-17 season (310,546). This decrease is likely a result from the EHD outbreak in eastern Kentucky where many hunters elected not to hunt and therefore did not purchase a deer permit in 2017.



Upon further examination of license sales, the majority of deer permits are purchased by senior hunters (29%), followed closely by resident deer hunters (23%), and Sportsman License (19%) buyers. Over the last few years, there has been a steady increase in the number of senior licenses sold and a slow decrease in resident deer permit sales. The overall number of deer hunters is stable. However, the number of senior

licenses is increasing, indicating that a majority of Kentucky deer hunters are reaching the age of 65 (i.e., the age at which you can purchase as Senior License).

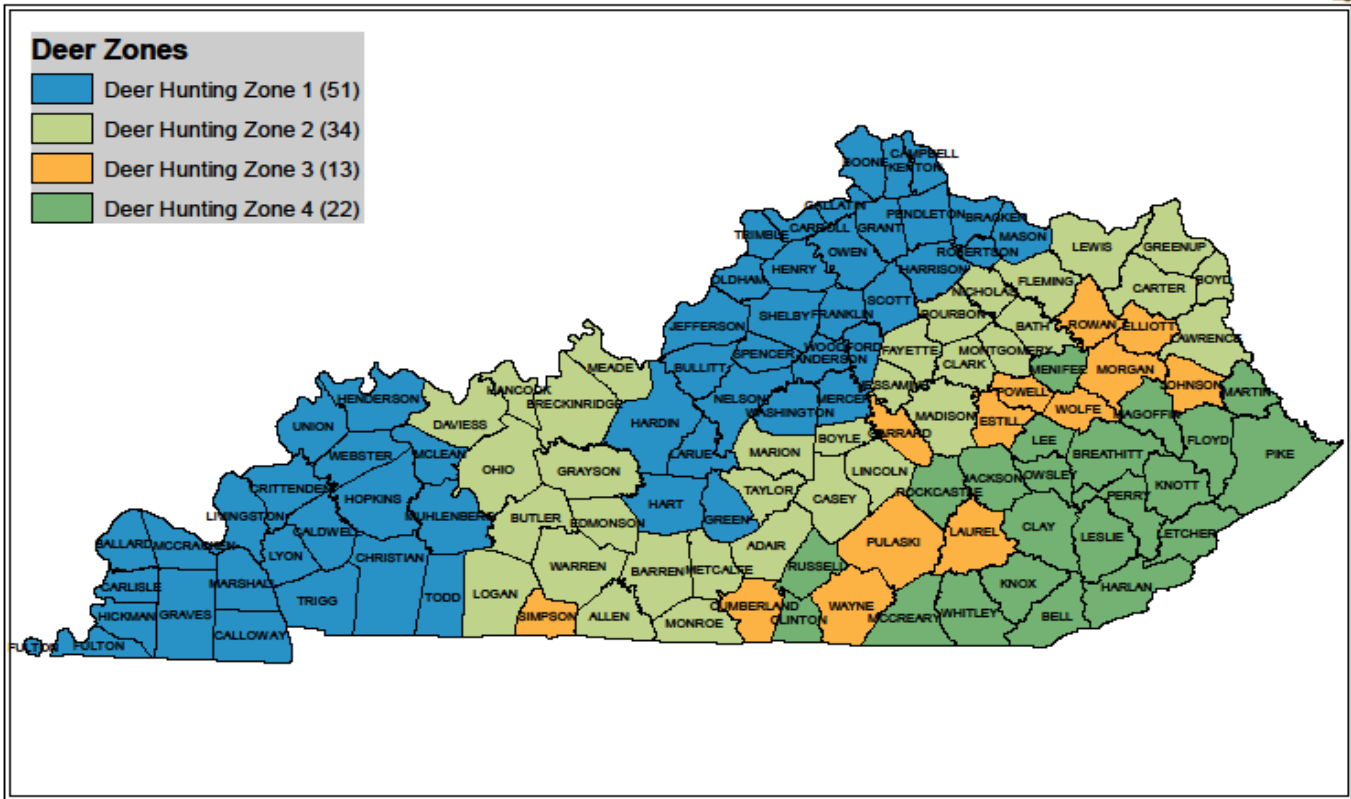


Changes for the 2018-2019 Deer Season

- Statewide deer permit will be modified from two deer to four deer (only 1 antlered).
 - Zone 1 – unlimited antlerless, one antlered
 - Zone 2 – 4 deer total; either 4 antlerless or 3 antlerless and one antlered
 - All deer can be harvested via archery, crossbow, muzzleloader, or modern gun
 - Zone 3 – 4 deer total; either 4 antlerless or 3 antlerless and one antlered
 - Only one antlerless and one antlered deer shall be harvested with a modern gun.
 - Zone 4 – 2 deer total; only one antlerless and one antlered deer shall be harvest
 - The one antlerless deer can only be harvested during the youth gun hunts, archery, crossbow, or during the last 3 days of muzzleloader season.
- Youth Deer Permit will be modified from 1 deer to four deer (only 1 antlered)
 - It would follow the changes listed above for deer permit.
- Additional deer permit will be changed from 2 deer to 15 deer, the cost will remain the same at \$15, will be called Deer Management Permit.
- Modern Gun Season will be 16 days for all zones
 - Additional of six days for zones 3 and 4
 - Antlerless only modern gun season during the last weekend of September in zone 1 counties only.
 - Antlered deer can still be harvested using archery equipment.
- Special Deer Hunt Program will be a 1-2 day hunt with a modern gun on private lands sponsored by the KDFWR’s Recruitment, Retention, and Reactivation (R3) branch.
- Prohibit the construction and or deployment of a device that is designed to entangle or trap the antlers of a deer.

- County Zone Changes
 - To Zone 1
 - Union, Henderson, McLean, Muhlenberg, Todd, Mercer, Mason, Hart
 - To Zone 2
 - Warren, Allen, Monroe, Barren, Metcalf, Adair, Edmonson, Butler, Breckenridge, Meade, Hancock, Daviess, Taylor, Casey, Lincoln, Boyle, Madison, Clark, Montgomery, Bath
 - To Zone 3
 - Garrard, Pulaski, Wayne, Laurel
 - Zone 4
 - No change

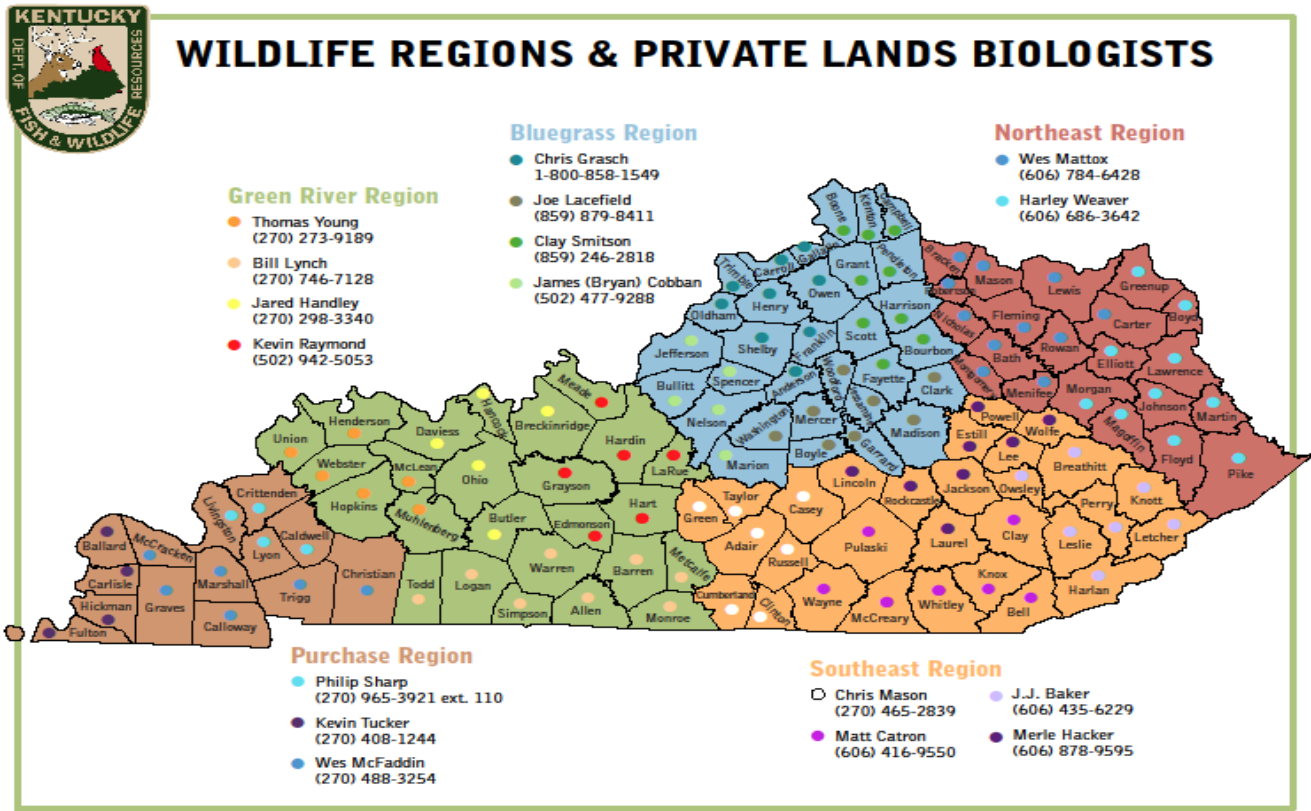
Proposed Deer Zones 2018-19



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.