

## 2015-2016 Kentucky Department of Fish and Wildlife Resources White-tailed Deer Report



Photo courtesy of Joe Lacefield, KDFWR Private Lands Biologist



Kentucky Department of Fish and Wildlife Resources  
#1 Sportsman's Lane Frankfort, KY 40601

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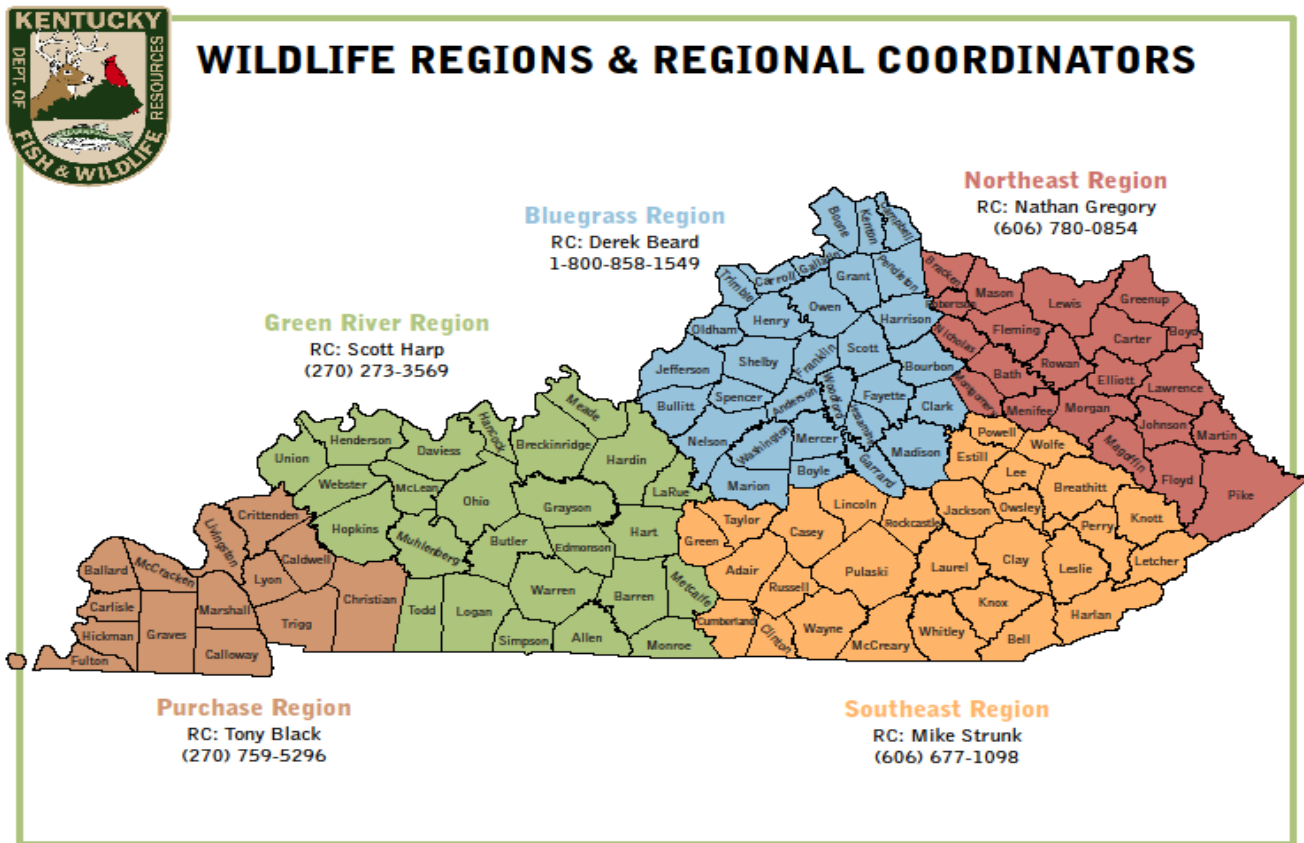
**Introduction**

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 licensees, 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-tail 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 made up of 1 program coordinator, Gabe Jenkins, and two biologists, David Yancy and Kyle Sams. The Deer Program staff is based out of the headquarters office in Frankfort.

The Wildlife Division is broken up into 5 wildlife regions across the state. For reporting purposes all information in this report will be discussed using the 5 regions or at the specific county level.



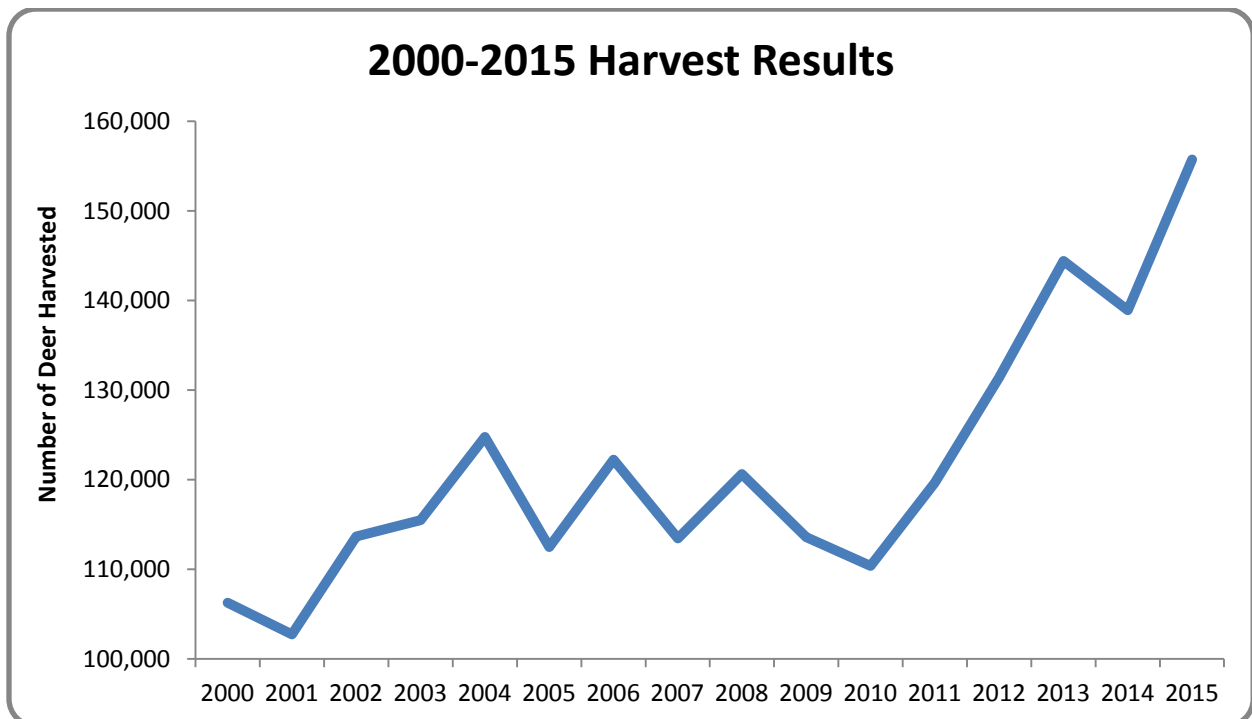
**Population Status**

Over the last decade deer management techniques have varied greatly across the state. Parts of the state such as the Bluegrass and Purchase regions have seen liberalization to the bag limit in an attempt to lower the deer population. Areas in the Southeast and Green River regions have seen a reduction in bag limits to accommodate for declining deer densities. In 2007, the state experienced the most wide spread Epizootic Hemorrhagic Disease (EHD) outbreak on record. All regions of the state were impacted, with some seemingly affected worse than others. Post the 2007 outbreak, deer hunting zones were restricted in some counties to reduce harvest in order to allow the herd to rebound. Current county population estimates in the counties that had their zone changed have rebounded and are at population levels equal to or higher than levels prior to the outbreak. With the implementation of zone restrictions KDFWR has been able to once again liberalize the bag limit in the counties that were impacted by EHD.

The overall herd estimate shows a stable to slightly increasing trend. The current statewide estimate is 827,355 deer statewide, post 2015-16 hunting season, which is a 3% increase from 2014-15. The estimate is generated from harvest and age structure data. Age structure data is collected by KDFWR staff and telecheck records are used for harvest data in the model.

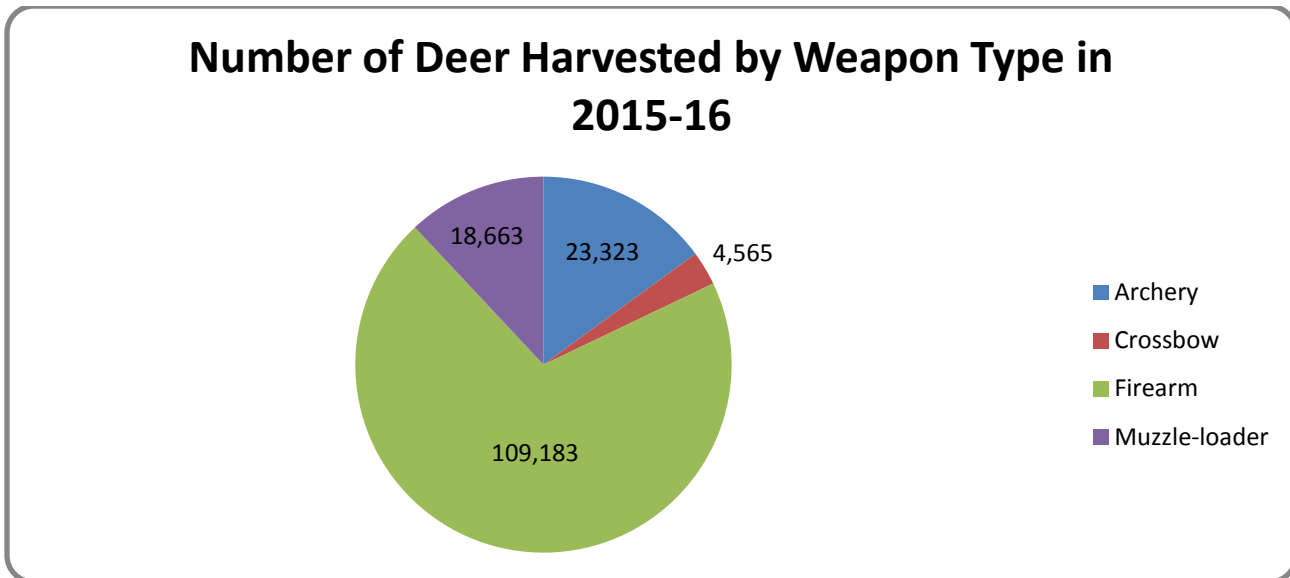
**2015-2016 Harvest Results**

The 2015-16 deer harvest was one for the ages with a harvest of 155,734 deer, beating the previous record (144,409 in 2013-14) by 11,325 deer. It was a 12% increase from the 2014-15 season (138,899) and was an 8% increase from 2013-14 season (144,409). Factors that contributed to the harvest were a mast failure and optimal hunting weather during the major hunting timeframes.



**Weapon Type Harvest Summary**

There were no major changes in the percentage of the 2015-16 harvest by weapon type compared to last season, except for crossbow (4,565) which increased by 54% from the 2014-15 season (2,962). Seventy percent of the overall harvest was taken during the modern firearm season. The 2015-16 harvest overall saw record harvest among all weapon types.



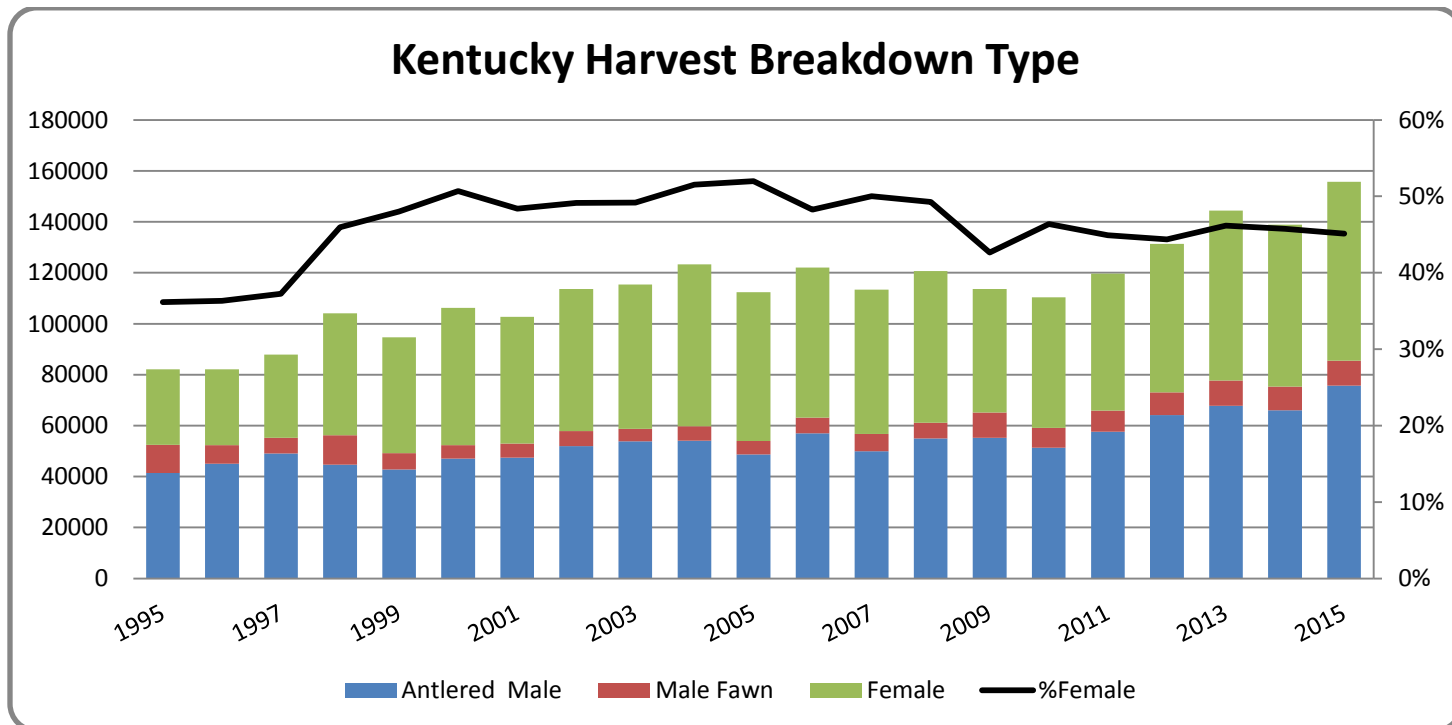
By weapon type, crossbow hunters saw the biggest percentage change, with a 54% increase in the crossbow harvest. The archery harvest saw an increase of 27% in the 2015-16 season (23,323) compared to the 2014-15 season (18,369). The muzzle-loader harvest also saw an increase of 27% in the 2015-16 season (18,663) compared to the 2014-15 season (14,675).

Weapon	Female	Male	Total
Archery	14,132	9,191	23,323
Crossbow	2,825	1,740	4,565
Firearm	41,848	67,335	109,183
Muzzle-loader	11,454	7,209	18,663
<b>Total</b>	<b>70,259</b>	<b>85,475</b>	<b>155,734</b>

Hunters appear to have a limit on the number of deer they are willing or able to harvest. The majority of successful deer hunters (68%) only harvest one deer. Of the total successful hunters in the 2015-16 season (126,710 hunters) the average hunter harvested 1.23 deer. The 1.23 deer harvested per successful hunter was a slight decrease from last season, however this rate usually does not fluctuate between deer zone and the season year.

Even though the average hunter only harvests 1.23 deer, the successful hunters do an excellent job balancing the buck to doe numbers in the harvest. Doe harvest numbers can fluctuate greatly in a county or region due to harvest restrictions by zones. Overall, when compared to the buck harvest, doe harvest has increase over the years.

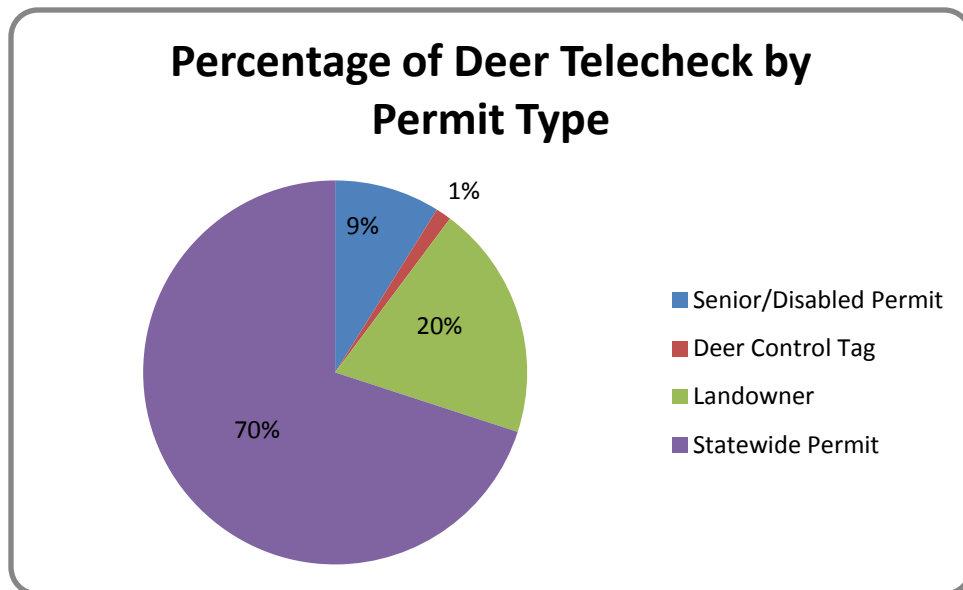
Doe harvest in 1995 was around 36%, and at times is greater than the buck harvest. Currently, and within the past few years, the doe harvest is comparable to the buck harvests.



**Monthly Harvest Rates**

September saw a harvest of 6,649 and is the highest harvest on record for the month of September. October’s harvest was the highest October harvest on record with 20,506. November’s harvest was up slightly from 104,677 in 2014 to 110,769 in 2015 and is the highest November harvest on record. December’s harvest was also a record harvest with 14,509. Cooler conditions in September and optimal weather conditions for the modern gun season in November drove the harvest. January’s conditions were cold and harsh, but the month still had the highest January harvest on record at 3,294.

**2015-16 Harvest Results by Permit Type**



**Boone and Crockett Entries**

A total of 54 record book entries (34 typical and 20 non-typical) were submitted to KDFWR in 2015-16. The 54 entries came from 40 of Kentucky’s 120 counties. All regions of the state were represented with the highest number (4) coming from Hart County. Of the 54 submissions, most were taken during the modern firearms season (35), followed by archery (15), and muzzleloader (4).

Typical Score	Hunter	County	Method
183 5/8	Gary Parsons	Union	Archery
182	Stephen M. Young	Warren	Archery
180 2/8	Mark Lunsford	Woodford	Archery
178 7/8	Jeff Byrd	Hart	Modern Gun
175 5/8	Michael D. Gregory	Henry	Modern Gun
173 5/8	Michael D. Burton	Letcher	Modern Gun
173 3/8	Timothy R. Wakefield	Oldham	Archery
172 6/8	William K. Branscum	Wayne	Muzzleloader
171 6/8	Adam R. Mattingly	Ohio	Muzzleloader
171	Samuel W. Gingerich	Breckinridge	Modern Gun
170 7/8	Allie M. Butler	Breckinridge	Modern Gun

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170 6/8	Ty Parker	Fulton	Archery
170 2/8	Matt Thomayer	Boone	Modern Gun
169 4/8	Andrew D. Haycraft	Grayson	Modern Gun
169 3/8	Derrick Campbell	Webster	Archery
168 2/8	Brian Tims	Nelson	Modern Gun
168	John A. O'Neil	Ohio	Archery
167 7/8	William Peak	Hart	Modern Gun
167	Chris Baldock	Casey	Modern Gun
166 5/8	Charles D. Black	Bath	Modern Gun
165 2/8	Jarrold Cropper	Lewis	Modern Gun
165 2/8	Stephen "Chris" Sivori	Hart	Modern Gun
164 7/8	Gary Tracy	Hart	Modern Gun
163 7/8	Rex Crouch II	Bath	Archery
163 6/8	Aaron H. Pierce	Meade	Archery
163	Claude "Billy" White Jr.	Gallatin	Modern Gun
162 1/8	David Lee Childress	Crittenden	Archery
161 6/8	Cody M. Wallace	Estill	Archery
161 3/8	Patrick Thornton	Simpson	Modern Gun
161 5/8	Bob Savko	Shelby	Muzzleloader
160 5/8	Howard Thacker	Pike	Modern Gun
160 2/8	Christopher D. Feezor	Fulton	Modern Gun
160 2/8	Danny Phillips	Wayne	Modern Gun
160	Amanda W. Denniston	Harrison	Modern Gun
<b>Non-Typical Score</b>	<b>Hunter</b>	<b>County</b>	<b>Method</b>
222 3/8	Randy Fox	Lee	Modern Gun
211 7/8	Brooke Bentz	Christian	Modern Gun
209 3/8	Sara F. Mundy	Webster	Modern Gun
201 1/8	Mark Cornette	Muhlenberg	Modern Gun
198 5/8	Tommy Sears	Clay	Modern Gun
197 6/8	D. Christopher Dickerson	Trimble	Modern Gun
196 2/8	James R. Botkins	Harrison	Modern Gun
195 1/8	Jim Murphy	Wayne	Modern Gun
192 6/8	Joe Nichols	Trigg	Modern Gun
192 5/8	Luke A. Carswell	Mason	Modern Gun
192 4/8	Steven Olt	Green	
192 3/8	Trey Hutchison	Union	Archery
192 2/8	Michael L. Howell	Laurel	Archery
192 1/8	Donald Bartley	Metcalfe	Modern Gun
188	Ben Oakes	Logan	Modern Gun
187 7/8	Jason A. Eagan	Rowan	Archery
187 2/8	Kasey Alexander	Webster	Archery
187 1/8	Tim R. Hatton	Powell	Modern Gun
186 5/8	Alvin Hoover	Todd	Modern Gun
186 2/8	Darrel R. Smith	Ohio	Modern Gun

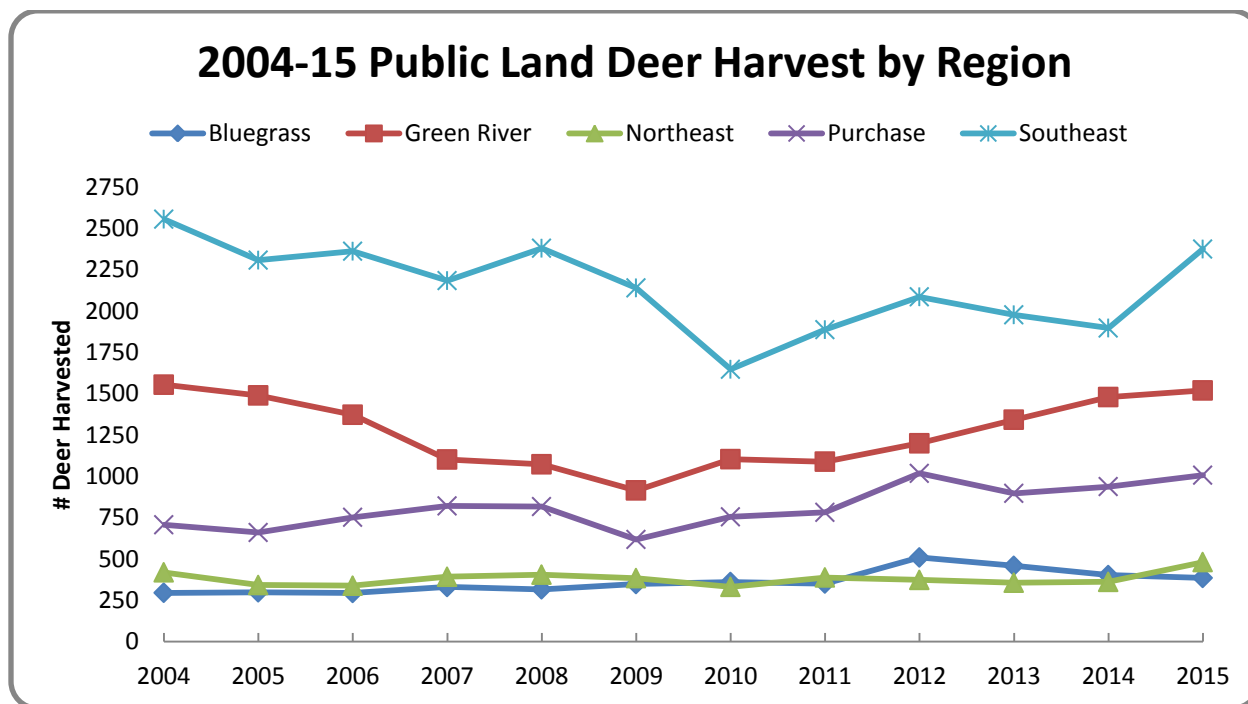


The submission of 54 Boone & Crockett entries for 2015-16 season ranks 5<sup>th</sup> for entries per year in Kentucky. 2011 was the best year to date with 78 entries. In 2011, Kentucky had more record book entries than any other state. Below are the top 10 years for Boone and Crockett entries for the state.

Rank	Entries	Year	Rank	Entries	Year
1	78	2011	6	54	2013
2	57	2010	7	49	2009
3	56	2004	8	47	2007
4	56	2003	9	47	2000
5	54	2015	10	43	2012

**Public Land Harvest**

KDFWR owns, leases, or manages more than 80 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 statewide regulations. The WMA’s are separated by five wildlife regions and are managed by regional staff. The number of WMA’s per region differs from region to region. The number of WMA’s per region are; Purchase Region (16), Green River Region (14), Bluegrass Region (15), Northeast Region (12), Southeast Region (38).



## Quota Hunt Results

There are 29 KDFWR quota hunts in the state along with 3 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 the state. 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](http://fw.ky.gov) or call 1-877-598-2401. 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 isn't 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 with one call. If any one of the group's Social Security numbers is drawn, the others in the group are automatically drawn, too.

For the 29 KDFWR quota hunts held in the 2015-16 season, there were 4,277 spots available in which 8,353 people applied for quota hunts across the state. There are quota hunts for any resident or nonresident hunters, mobility impaired hunters, archery/crossbow hunters, and youth hunters. Some quota hunts are for antlerless deer, some areas have a 15 in minimum spread restriction on bucks and some quota hunts only allow 1 deer to be taken per hunt. Each of the five wildlife regions across the state have deer quotas. For the 2015-16 Report, quota hunts in the Northeast Region will be highlighted.

The Northeast Region has 4 public land areas that have deer quota hunts. The region is unique in that it covers a variety of topography and landscapes. The northern portion of the region has fertile cropland which transitions into the outer bluegrass of old tobacco farms that now graze cattle. The central portion of the region you begin to see the start of mountains characterized as the "Knobs" seen in Rowan, Lewis, portions of Bath County and beyond. The far east and southeastern portions are characterized as the Cumberland Plateau which is the steep rugged mountains more commonly recognized in the Appalachian Mountain Chain. The quota hunts are scattered throughout the region and all provide a great hunting experience with trophy potential.

### **Clay WMA- Jacob Stewart, Wildlife Biologist**

Clay WMA is approximately 7,843 acres located in Nicholas, Fleming and Bath Counties. The quota hunt is held on the first weekend of November with 180 people getting drawn for the hunt. The terrain is, mixed upland forest ranging in age from early-succession to mature hardwoods, with rolling hills and some bottomlands along the Licking River. There are interspersed fields scattered throughout the WMA and subtracts. The counties encompassing Clay WMA are labeled as zone 2 for deer hunting, allowing individuals drawn for the quota hunt to harvest up to 4 deer. Only 1 harvested deer may be a buck and hunters are required to use statewide tags. Clay WMA has an abundance of deer, and this quota hunt allows a hunter to use all 4 tags. Beyond the 2 day quota hunt individuals are limited to 1 deer per day on the WMA.

Data from population surveys and the from the deer herd health check completed in 2009 confirmed that deer numbers needed to be reduced in order to maintain a balanced and healthy deer population. So to try and reduce the deer numbers to insure a healthy deer herd, a doe harvest preference point system is in place. For every female deer a hunter harvests during the quota hunt, hunters receive a preference point which improves the hunter's chances of being drawn for quota hunts in future years.

In 2015 there were 84 deer harvested which was down from 91 deer harvested in 2014; these numbers usually fluctuate annually due to weather conditions during the hunt weekend. 61% (51) of harvested deer were not antlered and 39% (32) were antlered, and of the 32 antlered deer harvested 18 individuals were 2.5 years or older.

Clay WMA Deer Quota Hunt Summary

Total Hunters Drawn	Total Hunters Checked In	Estimated Hunting Hours	Total Deer Observed	Overall Success Rate
180	163	2232	857	51%



**Paintsville WMA- Scott Freidhof, Wildlife Biologist**

Paintsville Lake is a large WMA encompassing 11,300 acres across 2 counties including Johnson and Morgan. Hunters will find a diverse forest dominated by oak and hickory on the drier slopes and ridges, while beech, poplar, and maple grow best on the moist hillsides. There were very few acorns in the forest this past season. As a result, deer were probably not widely distributed throughout the forest but rather clumped around openings where green forage was available. A clumped distribution of deer may have been the cause for fewer deer observed per hour and fewer deer harvested compared to 2014 when acorns were abundant. Weather for 2015 was nearly perfect which aided in the harvest even in the absence of acorn mast.

A herd health check was completed in August of 2015. Samples from 5 deer were collected and sent to the Southeastern Cooperative Wildlife Disease Study lab in Georgia. One result indicated that the deer population on Paintsville was somewhat larger than the habitat could support. Specifically, internal parasite numbers were higher than average.

The 2 day hunt is held the 1<sup>st</sup> full weekend in November. Approximately 300 people are drawn for the hunt with about a 70% show-up rate. This can vary but over the last three years this has been fairly steady. Paintsville WMA currently has a 15” restriction for antlered deer. Hunters harvested 30 deer including 7 antlered bucks with outside spreads greater than 15” in width. As with any hunting season weather can greatly influence harvest, check in rate and deer observation data.

Paintsville Lake WMA Deer Quota Hunt Summary

Year	Hunters	Deer Observed	Deer Seen/Hour	Deer Harvested	Bucks Harvested
2015	207	651	0.24	30	7
2014	217	827	0.32	45	10



**Dewey Lake WMA- Scott Freidhof, Wildlife Biologist**

Dewey Lake is a large WMA encompassing 9,800 acres in Floyd County. Hunters will find a diverse forest dominated by oak and hickory on the drier slopes and ridges, while beech, poplar, and maple grow best on the moist hillsides. There were very few acorns in the forest this season. As a result, deer were probably not widely distributed throughout the forest but rather clumped around openings where green forage was available. The highest number of deer observed by hunters occurred on the strip mine on the east side of the WMA.

A herd health check was completed in August of 2013. Samples from 5 deer were collected and sent to the Southeastern Cooperative Wildlife Disease Study lab in Georgia. Two results indicated that the deer population on Dewey was larger than the habitat could support. Specifically, internal parasite numbers were much higher than average and deer were in poor nutritional condition.

The 2 day hunt is held the 1<sup>st</sup> weekend in December. Approximately 150 people are drawn for the hunt with about a 70% show-up rate. This can vary but over the last three years this has been fairly steady. Hunting conditions in 2015 were much more favorable than 2014 where storms, rain and wind restricted deer movement and hunter efforts. Dewey Lake WMA currently has a 15" restriction for antlered deer and only one deer may be harvested which can be buck or doe. Hunters harvested 20 deer total including 3 antlered bucks with antler spreads greater than 15" in width. As with any hunting season weather can greatly influence harvest, check in rate and deer observation data.

Dewey Lake WMA Deer Quota Hunt Summary

Year	Hunters	Deer Observed	Deer Seen/Hour	Deer Harvested	Bucks Harvested
2015	106	849	0.71	20	3
2014	105	339	0.32	8	2



**Fishtrap WMA- Scott Freidhof, Wildlife Biologist**

The 2015 deer quota hunt at Fishtrap Lake WMA occurred during the third weekend in November. Of the 200 hunters drawn for the hunt, 156 checked in to hunt with about a 77% show-up rate. Hunters harvested a record 57 deer total including 28 antlered bucks. There are no antler restrictions at Fishtrap WMA.

Fishtrap Lake is a large WMA encompassing 13,000 acres in Pike County. Hunters will find steep, forested hillsides dominated by oak and hickory on the drier slopes and ridges, while beech, poplar, and maple grow best on the moist hillsides. There were very few acorns in the forest this season, however there seemed to be a fair crop of beechnuts at Fishtrap.

Fishtrap Lake WMA Deer Quota Hunt Summary

Year	Hunters	Deer Observed	Deer Seen/Hour	Deer Harvested	Bucks Harvested
2015	156	518	0.33	57	28
2014	154	488	0.30	32	12

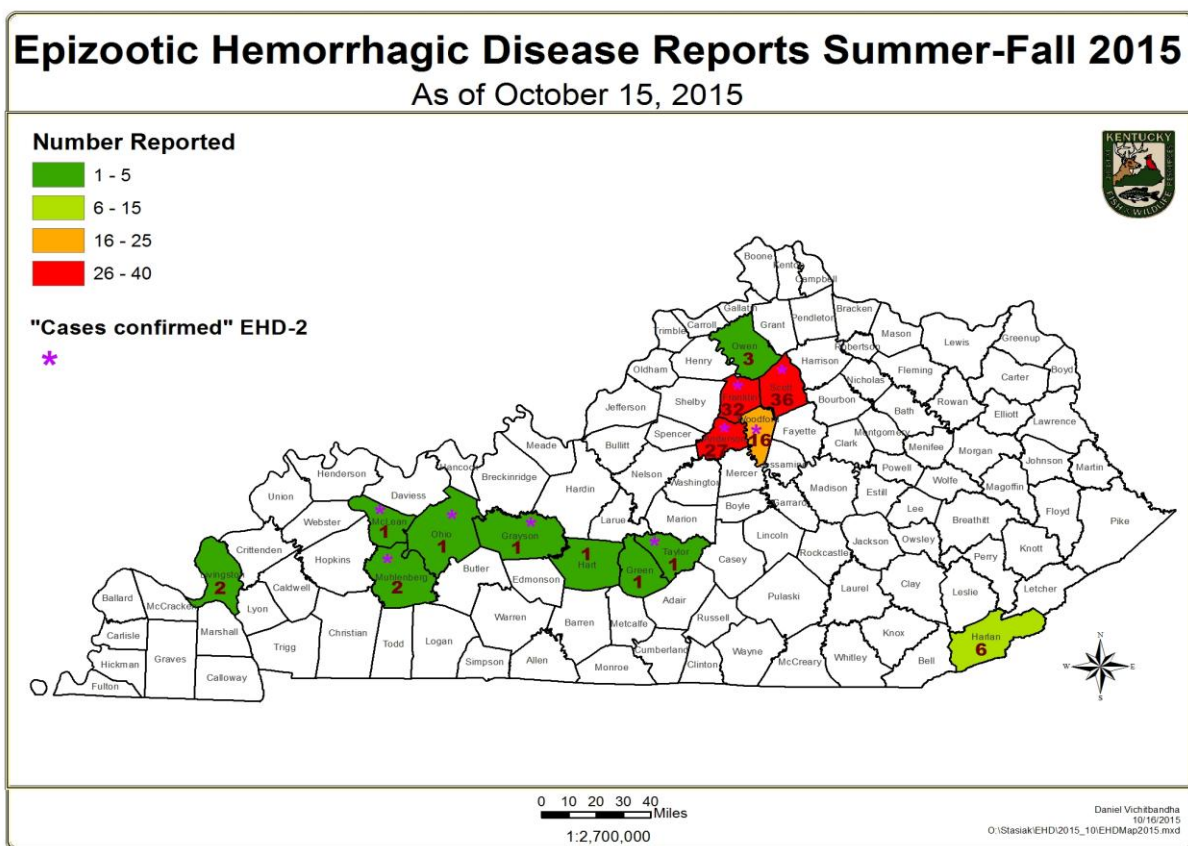
**Disease Surveillance**

**Hemorrhagic Disease (HD)**

Hemorrhagic disease (HD), a vector-borne disease of white-tailed deer is caused by two related orbiviruses, epizootic hemorrhagic disease virus (EHDV) and bluetongue virus (BTV). Hemorrhagic disease 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. These insects are active in the late summer and early fall. HD outbreaks are often associated with drought. Once there has been a hard freeze the midges die off for the winter, 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. The 2007 outbreak of HD in wild deer was the most widespread outbreak reported in the past 30 years. Over 4,000 suspected cases were reported in Kentucky. When possible, KDFWR will test animals that have died of apparent EHD.

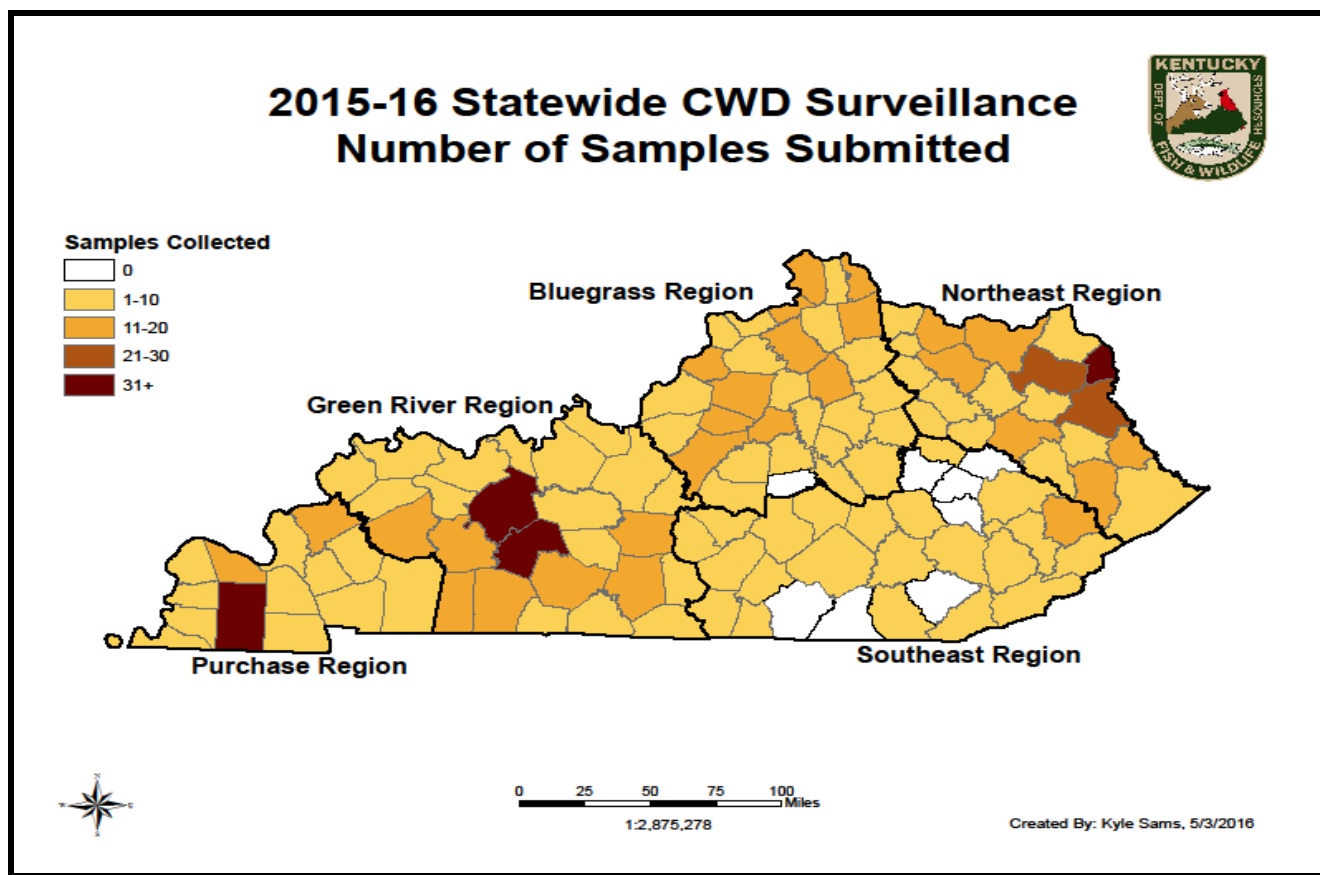
One Hundred Thirty deer were clinically diagnosed as EHDV positive in 2015.



**Chronic Wasting Disease (CWD)**

CWD is a fatal, neurological disease in white-tailed deer, mule deer, elk and moose. It causes a characteristic spongy degeneration of the brains of infected animals resulting in emaciation, abnormal behavior, loss of bodily functions, and 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 23 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 4 part monitoring program to test 1) a random sampling of hunter-harvested deer, 2) target or suspect animals (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 25,500 hunter-harvested and roadkill deer samples have been tested. In 2015-16, 1048 hunter-harvested, targeted, and roadkill samples were submitted for CWD testing. All samples have tested negative for CWD.



**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 2015-16 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	\$25
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 14-29	Nov 14-29	Nov 14-23	Nov 14-23
Archery		Sept 5- Jan 18	Sept 5- Jan 18	Sept 5- Jan 18	Sept 5- Jan 18
Early Crossbow		Oct 1-18	Oct 1-18	Oct 1-18	Oct 1-18
Late Crossbow		Nov 14-Dec 31	Nov 14-Dec 31	Nov 14-Dec 31	Nov 14-Dec 31
Early Muzzleloader		Oct 17-18	Oct 17-18	Oct 17-18	Oct 17-18
Late Muzzleloader		Dec 12-20	Dec 12-20	Dec 12-20	Dec 12-20
Youth-Only Firearms	Oct 10-11				
Free Youth Weekend	Dec 26-27				
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

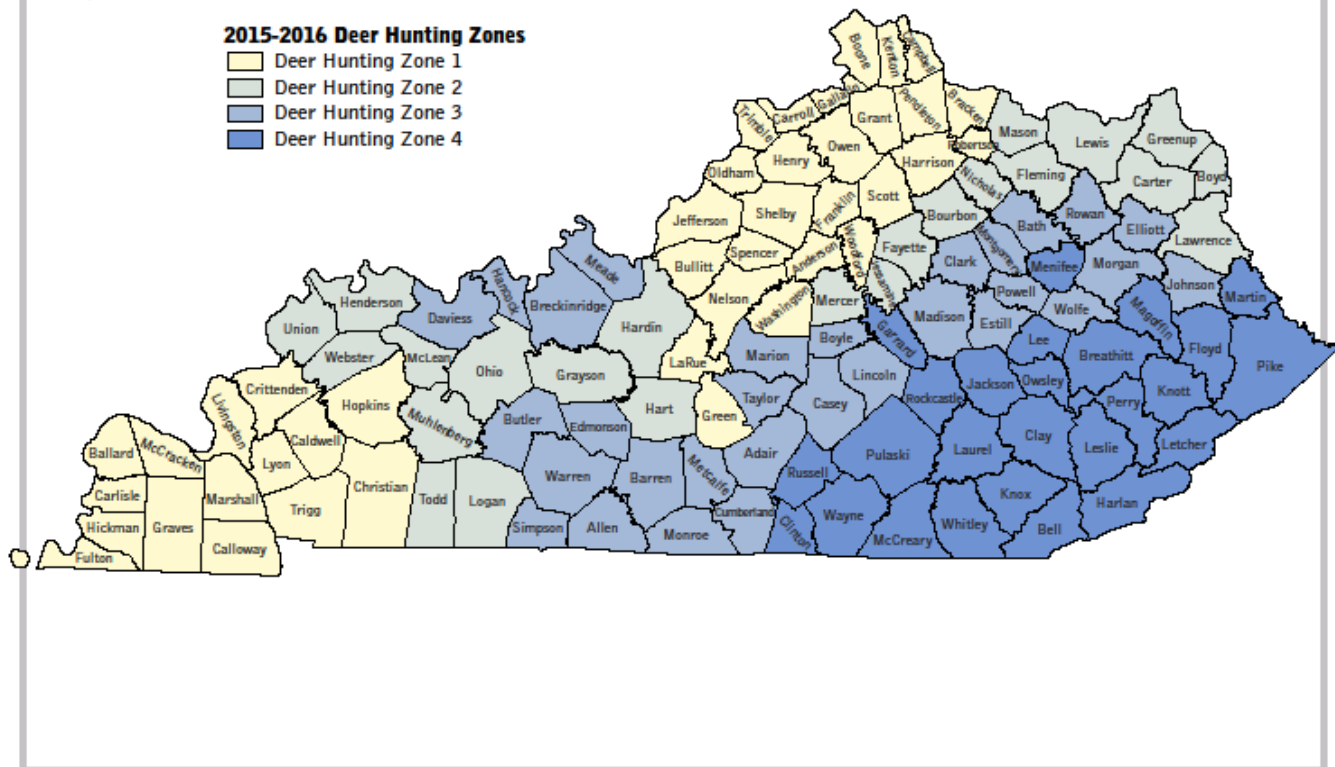




## DEER HUNTING ZONES FOR 2015-16

### 2015-2016 Deer Hunting Zones

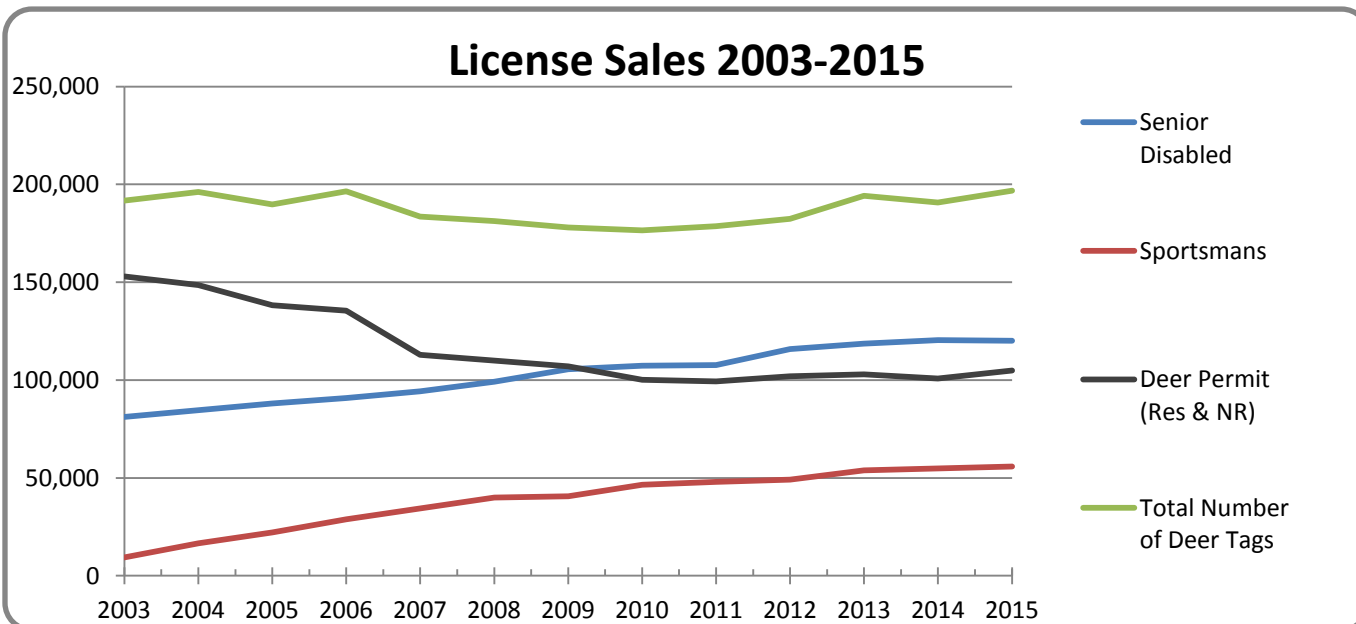
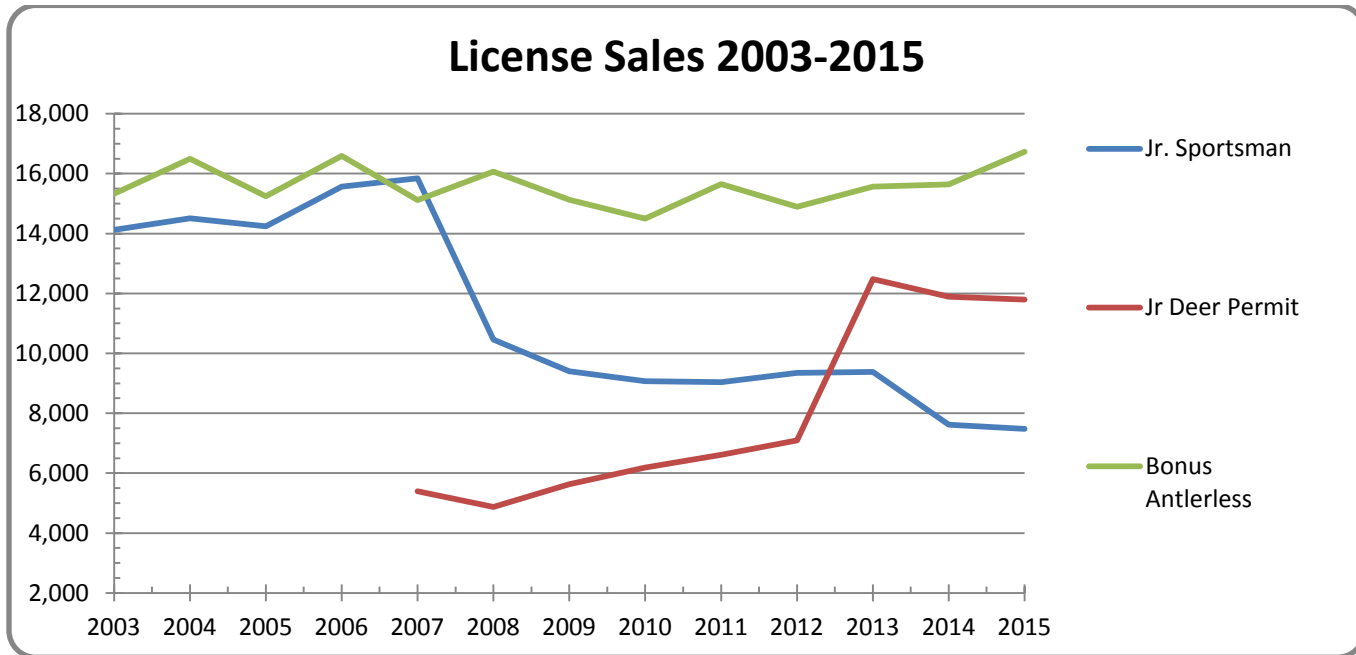
- Deer Hunting Zone 1
- Deer Hunting Zone 2
- Deer Hunting Zone 3
- Deer Hunting Zone 4



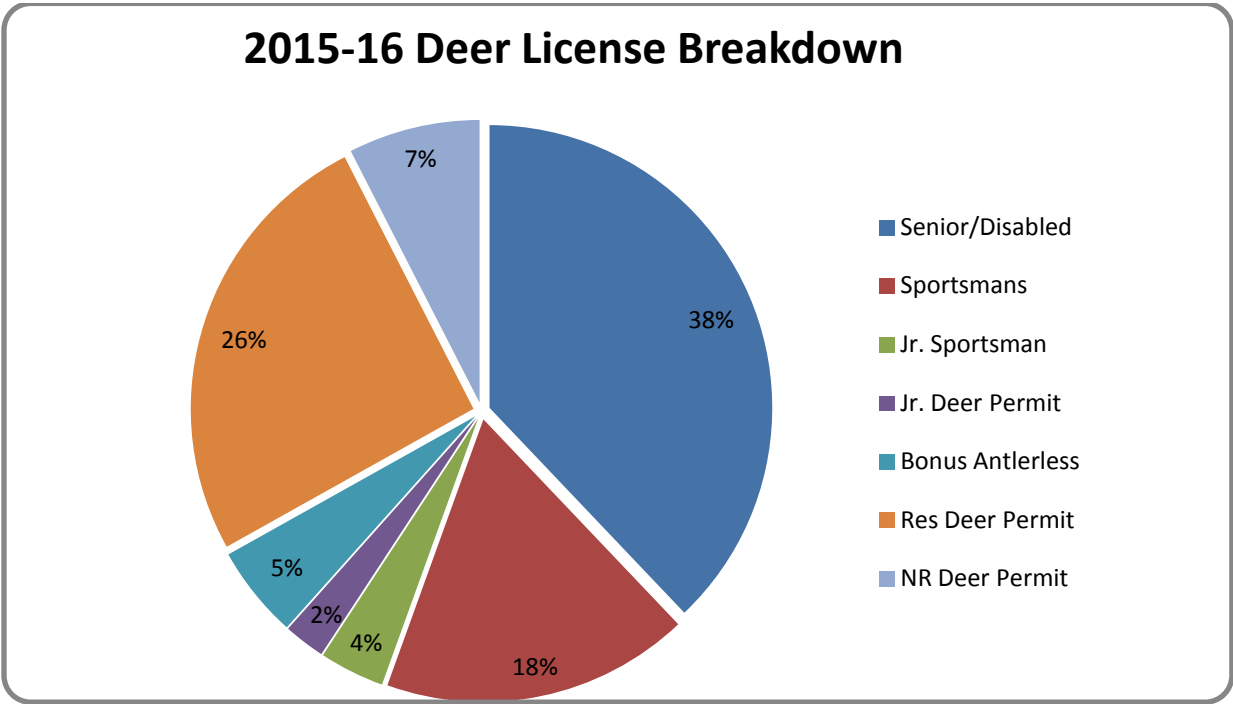
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### License Sales

In recent years the number of deer permits sold has declined slightly. 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 slight increase in license sales compared to the 2014-15 season (190,695). Deer license sales increased by 3% from the 2014-15 season to the 2015-16 season (196,707).



Upon further examining license sales, the majority of deer permits are purchased by Senior/Disabled (38%, followed closely by Resident Deer Hunters (26%) and Sportsman License (18%) buyers. Over the last few years there was 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 to slightly increasing. 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).



**Current Research**

**Population Dynamics of Adult Female White-tailed Deer in Southeast Kentucky**

Joe McDermott, John Cox Ph.D., University of Kentucky,  
Gabe Jenkins, Will Bowling, John Hast, Kyle Sams - KDFWR

The white-tailed deer (*Odocoileus virginianus*) is a highly regarded game species throughout North America. Early in the 20<sup>th</sup> century, the deer population in the state of Kentucky was believed to number at 2600 individuals. After almost 90 years, 50 of which contained active restoration efforts, the deer herd now exceeds 750,000 individuals statewide. Although most of the state contains healthy numbers of deer, many counties in southeastern Kentucky are thought to have stable, low density populations.

Research will focus on adult does in Clay County, KY, in efforts to identify survival, cause-specific mortality, fecundity, and natality of this important reproductive demographic group in an area of relatively low deer density. Does will be captured and immobilized using clover traps, drop-nets, and rocket nets, then fitted with a very high frequency



(VHF) radio-transmitter collar. Pregnancy and number of fetuses will be determined using an ultrasound, and a vaginal implant transmitter (VIT) will be inserted in pregnant does to facilitate location of birth-site locations and fawns for a different study. Adult does will be monitored twice weekly for mortality for 18-24 months.

Thus far 77 adult female deer have been captured. These data should inform state wildlife managers about regional deer population dynamics that can be helpful for refinement of population models and overall management of this important game species.

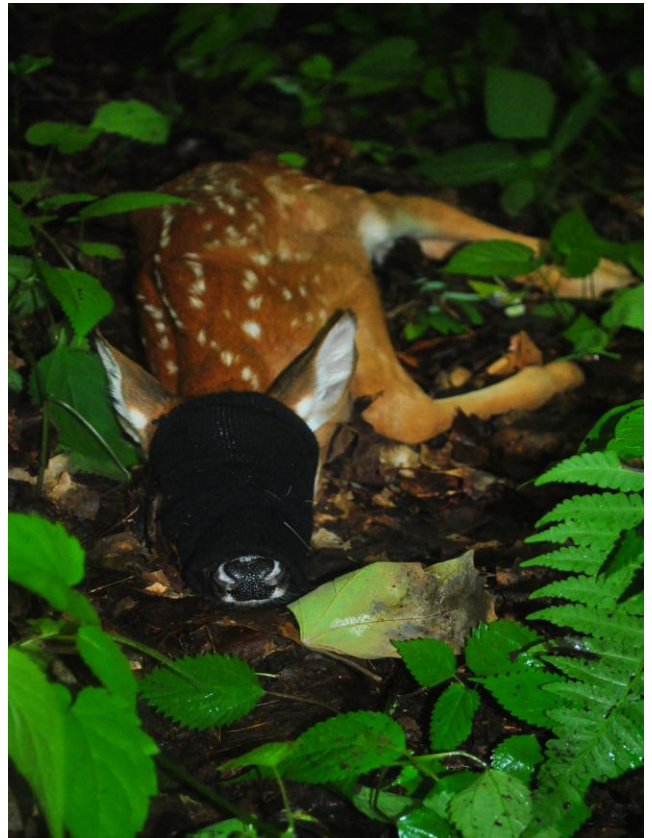
### **Survival, Cause-Specific Mortality, and Recruitment of White-tailed Deer Neonates in Southeastern Kentucky**

Joe McDermott, Dr. John Cox - University of Kentucky  
Gabe Jenkins, Will Bowling, John Hast, Kyle Sams – KDFWR

An extensive trapping and relocation project that ended in 1999 revealed that white-tailed deer populations in southeastern Kentucky were in decline while populations in the rest of the state were stable or increasing. Because the factors influencing this decline in southeastern Kentucky are unknown, the goal of this research project is to determine the recruitment rate, or the rate at which juveniles survive to adulthood and consequently become part of the breeding population, of deer populations through estimates of survival and cause-specific mortality of fawns. Understanding cause-specific mortality and survival of fawns is important when preparing deer population models that inform management decisions.

Data collection will continue into the 2015 fawning season by capturing and collaring fawns during the months of May and June in Clay County. Fawns will be captured using vaginal implant transmitters (VITs) inserted into known females that were captured during a complimentary mortality survey occurring in the same region. Fawns will also be found by utilizing thermal imaging cameras at night to detect the heat signature of these deer. Once captured, fawns will be fitted with an expandable neonate collar that will allow us to monitor the animals until death or until the collar releases at around nine months. Data generated from these fawns will allow us to understand what factors are influencing fawn mortality, as well as how many fawns are surviving into the fall hunting season.

35 fawn collars were deployed during the 2014 fawning season: 20 from VITs and 15 from a combination of ground and thermal searches. At the end of the 2015 fawning season, 31 fawn collars were deployed: 21 from VITs and 10 from a combination of ground and thermal searches. Upon completion, the results of this project will support future decisions made by biologists regarding deer management in southeastern Kentucky populations.





**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.

To contact your local wildlife biologist for assistance with wildlife management on your property see the map below.

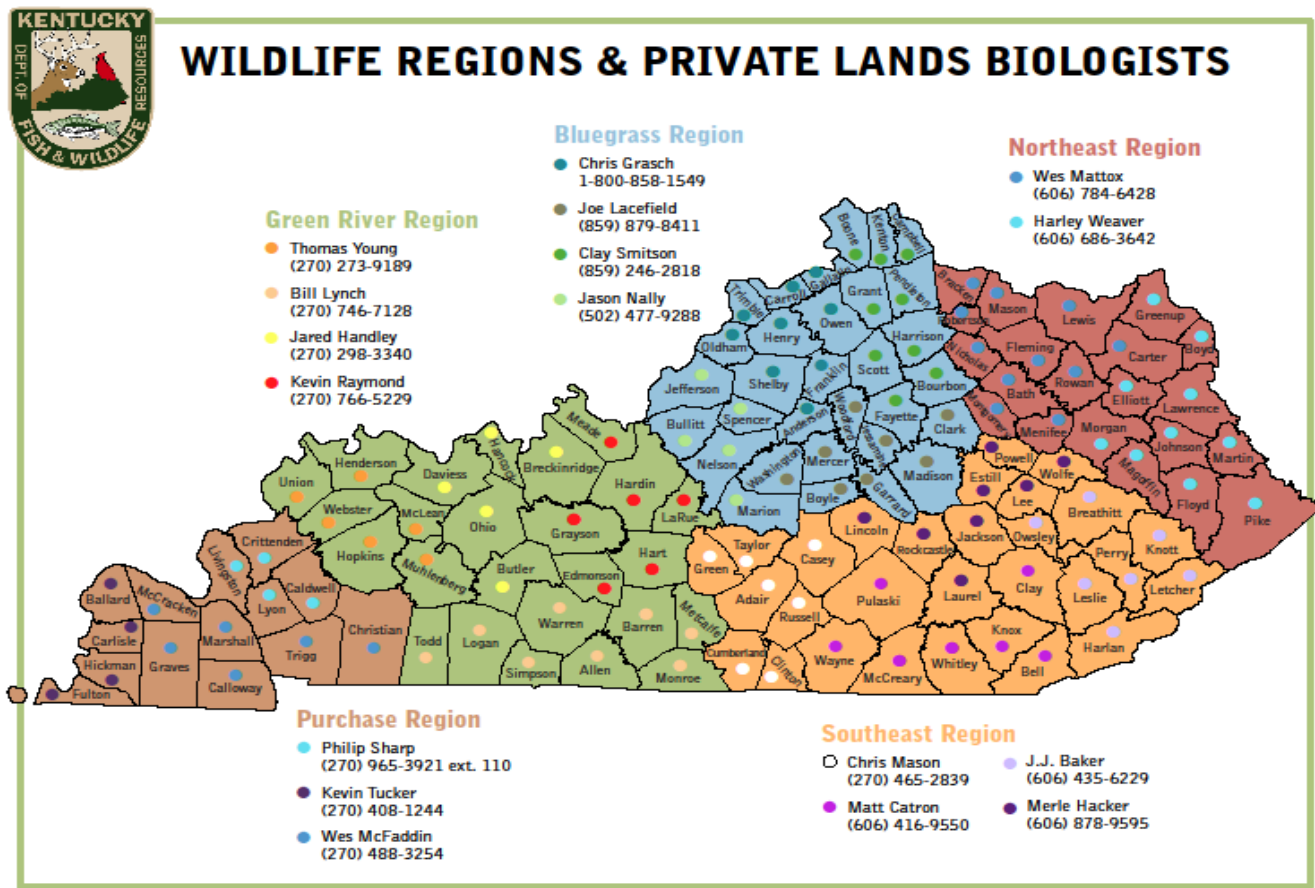




Photo courtesy of Joe Lacefield, KDFWR Private Lands Biologist



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