I. Current Harvest
Hunter harvest of deer during the 2015-16 seasons was estimated to be 95,813, 2.0% more than the 93,940 deer taken in 2014-15 (see table below for breakdown and figure for the distribution). The Kansas Outdoor Automated Licensing System data showed 120,102 people purchased 204,511 permits for the 2015-16 seasons, down 2.5% and 3.3% respectively from values in 2014-15. The number of non-resident deer hunters remained about the same between 2014 and 2015, however, the number of resident deer hunters decreased by 3.2%. Non-residents comprise 23% of the deer hunters in Kansas.

<table>
<thead>
<tr>
<th>Harvest Age Structure*</th>
<th>Antlered Ad Bucks</th>
<th>Male Fawns</th>
<th>Adult Does</th>
<th>Female Fawns</th>
<th>Ad Buck Shed Antler</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>White-tailed Deer</td>
<td>42,434</td>
<td>3,865</td>
<td>42,428</td>
<td>3,923</td>
<td>815</td>
<td>93,465</td>
</tr>
<tr>
<td>Mule Deer</td>
<td>1,928</td>
<td>24</td>
<td>355</td>
<td>14</td>
<td>28</td>
<td>2,348</td>
</tr>
<tr>
<td>By Residents</td>
<td>32,770</td>
<td>3,614</td>
<td>36,176</td>
<td>3,651</td>
<td>643</td>
<td>76,854</td>
</tr>
<tr>
<td>By Non-Residents</td>
<td>11,592</td>
<td>275</td>
<td>6,607</td>
<td>286</td>
<td>200</td>
<td>18,960</td>
</tr>
<tr>
<td>Total</td>
<td>44,362</td>
<td>3,889</td>
<td>42,783</td>
<td>3,937</td>
<td>843</td>
<td>95,813</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Harvest By Equipment*</th>
<th>Compound Bow</th>
<th>Recurve / Long Bow</th>
<th>Crossbow</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archery</td>
<td>25,362</td>
<td>779</td>
<td>6,519</td>
<td>32,660</td>
</tr>
<tr>
<td>In-Line MZ</td>
<td>3,330</td>
<td>448</td>
<td></td>
<td>3,778</td>
</tr>
<tr>
<td>Traditional MZ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firearms</td>
<td>58,787</td>
<td>359</td>
<td>231</td>
<td>59,377</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Harvest By Season*</th>
<th>Youth/Disability</th>
<th>Early MZ</th>
<th>Pre-Rut</th>
<th>Archery</th>
<th>Firearms</th>
<th>Whitetail Antlerless-Only</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,148</td>
<td>3,493</td>
<td>1,823</td>
<td>29,718</td>
<td>45,790</td>
<td>13,842</td>
<td>95,814</td>
</tr>
</tbody>
</table>

- All estimates are rounded to nearest whole number. Sub-totals may not add exactly.
II. Historical Harvest
The trends in the number of deer permits and hunter harvest since 1994 are presented below.
III. Population Estimate/Trends

Population – Deer related vehicle accidents have provided a long term deer population trend indicator in Kansas. In the early 2000s we initiated line transect and distance sampling procedures to assist in the monitoring of population trend (see below). Vehicle accident data for 2015 is preliminary.

Demographics – Since 2005 we have classify about 4,500 deer per year during the spotlight / distance survey. Approximately 33 antlered bucks and 62 fawns have been observed per 100 adult does. Approximately a third of the antlered deer have been estimated to be yearlings, however the portion of yearlings in the populations appears to be declining through the years.
IV. Deer Management Units:
The Kansas Department of Wildlife Parks and Tourism (KDWPT) manages deer at the level of Deer Management Units (DMU). Population trends, harvest and human dimensions aspects to deer management are summarized by these units. Boundaries are established by major state and federal highways easily identified and located by hunters, while the shapes are intended to capture areas of similar physiographic and ecological values. Long term maintenance of unit boundaries is desired for trend analysis.
V. Regulation/legislation  
2015-2016 Season

Only minor season date changes and changes in limited quota permits were made from the 2014-15 regulations. Hunters are limited to one permit per year that allows them to take an antlered deer. Quotas are set on the number of non-resident hunters in a DMU, however, hunters may select the type of equipment /season they wish to hunt (i.e., archery, muzzleloader or firearms).  Hunters are allowed to purchase an additional 5 white-tailed antlerless-only permits, however, the number of permits that may be used in a DMU varies from 0 to 5. Hunters were allowed to take a mule deer on only 18,162 of the either species, either sex permits sold in 2015. Landowners obtained 52% of the either species, either sex deer permits.

VI. Urban/Special Hunts

Special permits have been issued to municipalities (including parks in suburban areas and airports) to allow culling in areas where local deer abundance created safety or public intolerance of the deer and traditional hunting by citizens had been prohibited by local ordinances. KDWPT continues to create and expand special hunts to encourage the harvest of deer or to provide special access for youth, veterans and individuals with disabilities. Special hunts are used in some areas to create low hunter densities to emphasize quality experiences. They are also used in areas where additional antlerless deer need to be taken. In 2016 there will be 209 special hunts for deer. That included 49 hunts for youth, 31 hunts with mentors, 2 hunts for people with disabilities and 127 hunts that will be open to anybody. The hunts allowed 403 people to participate for a total of 13,797 hunter days on 154,679 acres that would not traditionally be opened to deer hunters.
VII. Deer Management Assistance/Crop Damage
KDWPT District Wildlife Biologists, Public Land Manager and Natural Resource Officers have been authorized since 1999 to issue Deer Control Permits (DCP) to landowners suffering from damage caused by deer. DCP allow landowners and up to two resident agents to kill deer outside the dates of traditional hunting seasons. They allow the use of techniques typically not allowed where fair chase is a goal. The issuing employee reviews each site and confirms damage caused by deer. They specify conditions and times when the permit may be used.

VIII. Diseases
Following two years with unusually high number of reported cases of EHD (2011 and 2012) we initiated a program to encourage the public to assist KDWPT field employees in detecting sick or recently dead deer. The system allows people to report sightings of sick or dead deer at our website. This was done to promote the collection of samples for viral isolation testing. Viral isolation was conducted at SCWDS on 12 deer with EHDV-2 being identified in six of the submitted deer in 2015. Positive deer were detected in the following counties; Labette (1), Greenwood (2) Miami (1) and Osage (2).

Monitoring deer populations for chronic wasting disease was funded through Pittman/Robertson Act (W39 R022 Subproject 8115). The level of funding is less than from 2003-2011 under USDA grants. Sampling rotates to a different region each year. In 2015 we focused on the northwest and north central portion of the state. In addition to the hunter harvested deer we collected samples from selected vehicle killed deer, and all elk killed in the state. The sampling protocol included testing of all suspect deer. We also collected information on deer from hunters who paid for private testing.
KDWPT collected samples from 739 cervids during 2015. CWD was detected in 57 deer (50 white-tailed deer and 7 mule deer). This is a dramatic increase since the last time a sample of hunter killed deer from this part of the state was tested. Since 1996 KDWPT has tested 25,630 deer and elk with 131 testing positive for the CWD prions.

IX. Research
No research projects emphasizing deer management were conducted in 2015.

Deer Hunter Surveys
Deer hunter harvest surveys are conducted annually to determine harvest, success rates, activity days and participation during various seasons (see figure below). SurveyMonkey® is used to consolidate hunter responses. Hunters are contacted by email and given a hot link to open the survey, or by letter and directed to a website, or they are mailed a paper survey and return envelope. Response rates vary by contact method but answers to questions are similar among contact methods.

This survey is used to determine deer hunter use and hunter harvest on public hunting areas and the Walk-In-Hunting-Areas. Public lands make up 1.9% of the state. They are used by 12.2% of the deer hunters, who harvest nearly 5,294 deer or 5.5% of the statewide harvest. The harvest density of deer on public managed lands is 3.4 deer per square mile while the corresponding density on private land is 1.1, and the density on private property open in the WIHA program is 2.0.

X. Hot Topics
 Permit and License Fee Increase
Hunting licenses increased from $18 to $25 for residents and from $70 to $95 for non-residents. The general resident either-sex deer permit increased from $30 to $40, while the non-resident permit that include both an either-sex deer and white-tailed antlerless permit increased from $315 to $415.
Crossbows continue to increase in popularity in Kansas. We estimated that crossbows were used to harvest 6,519 deer in 2015-16. The portion of the harvest during the archery season that is taken with crossbows has increased from approximately 2% when that equipment was allowed for just people with disabilities to 20% when it is allowed for any person. The total harvest during the archery season has increased from 20,291 in 2010 to 32,660 in 2015.

Mule Deer Management
The distribution of mule deer in Kansas appears to be shifting westward. Overall the statewide harvest and our estimate of total population of mule deer has remained constant, however, few mule deer are seen by hunters in counties along the former eastern boundary of their distribution in the state than use to be reported.

Trends in the distribution of mule deer have been examined using both harvest information and population indices. Below is a map of Kansas divided into west to east tiers.
Percent of Kansas bow hunters reporting that they saw mule deer while hunting in a county.

Both hunters and KDWPT employees are concerned about this change. The number of permits issued in Kansas where either species of deer might be taken has decrease in recent years and the recommendation for the 2016-17 seasons has eliminated all of the either species antlerless-only
permits. White-tailed deer antlerless-only permits remain readily available and hunters are allowed to purchase and use as many as 5 of those permits through much of the mule deer range.

Trophies

Last year I asked deer hunters during the annual KS Deer Hunter Survey some questions about trophy deer. Here are some interesting responses:

- Have you ever killed a deer in Kansas you thought had large enough antlers to be a trophy in the Boone and Crockett, Pope and Young or other official trophy registry system (Including the free KDWPT Awards)? 29.3% answered "Yes"

People who answered "Yes" about killing a trophy deer were asked:

- Did you have those antlers measured and officially scored? 33.1% answered "Yes"

People who answered "Yes" to the measurement question were asked:

- Did you register your trophy? 37.1% % answered "Yes"

That suggests that in Kansas only 12.2% of the deer that hunters consider "Trophy Class" are register. That includes being registered in the free award program like the one operated by KDWPT.

To determine the importance of various factors which might keep hunters from registering these memorable class deer we asked all the deer hunters in our sample (n= 16,513) the following:

What would prevent you from registering a trophy deer? (check one box)

- 7.9% Don't want people to know
- 15.6% Takes time
- 11.4% Cost
- 23.5% Trophy records bring more hunters to my area
- 13.5% Finding a measurer
- 28.1% I have no interest in trophies

To determine if they might registering a second but smaller deer we asked:

If you killed a trophy deer and registered it and then killed another deer in another year, but that deer was slightly smaller than the first, would you also register the second deer? 62.3% answered “No”.

Trophy records only tell us part of the story about deer with large antlers. They are limited to people who register their trophies. There are a variety of factors that contribute to a hunter’s decision to register a trophy class deer. Care in the interpretation of those records is necessary.

XI. Relevant Links

KDWPT Regulations are available on-line at:

http://kdwpt.state.ks.us/news/Hunting/Hunting-Regulations

General information on deer management may be located at:

http://kdwpt.state.ks.us/news/Hunting/Big-Game-Information

Chronic wasting disease information and maps may be found at:

http://kdwpt.state.ks.us/news/Hunting/Big-Game-Information/Chronic-Wasting-Disease