

2024 BOWHUNTER COOPERATIVE SURVEY



**WEST VIRGINIA DIVISION OF NATURAL RESOURCES
WILDLIFE RESOURCES SECTION**

WEST VIRGINIA BOWHUNTERS ASSOCIATION



Authors

Brett P. Skelly
Chris W. Ryan
Charles D. Teets
Colin P. Carpenter
Vincent M. Johnson
Avery L. Korn

The committee would like to recognize the important work of several individuals: data entry staff Janet Mullennex and Kimberly Nestor, data processing staff Brandy Bachman and Iris Allen, and the administrative assistant for game management services. Their work behind the scenes helps make this survey possible every year.

2024 Bowhunter Cooperative Survey
West Virginia Division of Natural Resources
Wildlife Resources Section

West Virginia Bowhunters Association

Wildlife Resources Section Bulletin 25-03



WELCOME TO THE 30TH EDITION OF THE BOWHUNTER SURVEY REPORT!

Since 1995, bowhunter cooperators across West Virginia have sent in a record of their hunting activity and behavior, wildlife observations, hunting stories, and their feedback and opinions on numerous, wide-ranging hunting topics. This survey has provided an efficient way to monitor wildlife population trends and hunting behavior, and we greatly appreciate the participation of each of our cooperators. The bowhunter committee has always strived to report the data collected back to you in an informative and enjoyable way. Here is just a quick summary of the data you've provided:

COOPERATORS

We have had many cooperators over the past 30 years- 10,585 to be exact! On average, an annual report contains the data of 353 cooperators. In 1998, we had 505 cooperators!

DEER HARVESTS AND OBSERVATIONS

Our cooperators have recorded harvesting a total of 8,039 deer (5,122 bucks and 2,917 does) during the survey period.

Our cooperators have recorded observing 614,105 deer:

- 114,011 bucks
- 378,149 does
- 83,542 fawns*
- 38,403 unknown deer*

*Fawns and unknown deer were only asked about from 2005-present.

OTHER WILDLIFE OBSERVATIONS

There are several species that we have asked about each year. Here are their totals:

Squirrels: 452,846	Bears: 4,908
Turkeys: 206,754	Foxes: 4,032
Grouse: 12,896	Coyotes: 3,782
Raccoons: 6,269	

HUNTING TRIPS

Over the past 30 years, our bowhunter cooperators have recorded a total of 173,585 hunting trips comprising 587,960 hours. Our cooperators have recorded the most amount of hunting trips from Jackson County (8,458 trips).

Four total years individually surpassed 8,000 hunting trips each (1998, 2000, 2001, and 2020).

Check out the map below for how many hunting trips each county has recorded!

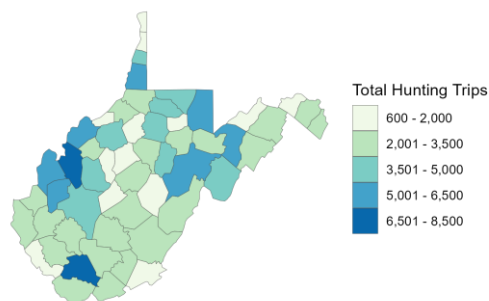




Table of Contents

INTRODUCTION.....	7
METHODS	7
DISTRIBUTION OF HUNT TRIPS	8
County	8
Ecological Regions	8
Land Ownership.....	9
Land Type.....	9
DEER OBSERVATIONS	9
Statewide	10
Ecological Regions	10
WILDLIFE OBSERVATIONS.....	12
WVDNR DEER PROJECT	13
MANGE UPDATE.....	14
HUNTING QUESTIONNAIRE	15
Years Spent Bowhunting	15
Participation in Other WV Deer Hunting Seasons.....	15
Deer Population	15
Deer Racks	16
Oak Mast.....	16
Bucks Passed Up.....	16
Lifetime WV Bowhunting Harvests.....	17
Reduction in Bag Limit and Stamp Purchase.....	17
Food Plots and Soil Samples	17
Hunting with Scents	17
Processing Your Deer.....	18
COMMENTS, OBSERVATIONS, AND REMARKS	19
2024 WEST VIRGINIA BIG BUCK CERTIFICATION PROGRAM	21

2024 BIG BUCK SCORE RANKINGS.....	22
FIGURES AND TABLES	24
APPENDIX	35

INTRODUCTION

Each year the West Virginia Division of Natural Resources Wildlife Resources Section (WRS), in cooperation with the West Virginia Bowhunters Association, conducts a survey of bowhunter activity during the deer archery season. This survey is overseen by the WRS Bowhunter Survey Committee. Cooperators statewide record hunting activity and observations of deer and other selected wildlife species while bowhunting. The stationary nature of bowhunting enhances the ability of the hunter to observe wildlife with minimum risks of altering species' natural behavior. Thus, the number of species seen by bowhunters while hunting can model abundance during hunting season.

The 2024 bowhunter survey period ran from September 28 – November 24, 2024. During this time, 271 cooperators (down from 330 in 2023) returned bowhunter survey forms used to summarize data from over 14,798 hours and 4,206 trips! Our bowhunter cooperators recorded harvesting 204 deer (120 bucks, 84 does) during the survey period. Statewide, there were 32,240 harvests recorded during the WV 2024 archery season, including 19,320 harvested with a crossbow. This is a 6.4% increase from the 30,287 recorded harvests in 2023. For more information on harvests across seasons, please see the 2024 Big Game Bulletin.

This report presents the 30th survey conducted by the WRS Bowhunter Survey Committee. The survey continues to generate valuable information about game species that would not be easily obtained otherwise. The success of the current survey and past surveys is dependent upon the cooperator, whose efforts contribute greatly to the overall knowledge, management, and conservation of West Virginia's wildlife resources. Without the support of our great cooperators, this survey would not be possible.

METHODS

We received 271 complete surveys with usable data. Daily records and observations returned by bowhunter cooperators during the 2024 deer archery season were compiled and analyzed by the Bowhunter Survey Committee. The survey consisted of instructions, a daily hunting log, and a questionnaire designed to understand cooperators hunting experiences, preferences, and observations (Appendix). The hunting log allows cooperators to record daily observational data including hours hunted, county, land ownership (personal, private, hunt club/lease, company land, state-owned land, or national forest land), whether land is posted, land type (field, woods, edge, or urban), deer observations (spiked bucks, forked bucks, adult does, fawns, and unknown), deer harvested, new scrapes seen, bucks chasing does, other selected wildlife observations, and weapon type.

Daily hunting reports were provided by cooperators for trips starting on the opening day of deer archery season (September 28, 2024) through the Sunday prior to the 2024 buck gun season (November 24, 2024). The duration of the survey was eight weeks. Observation rates for each species or deer type were calculated for each trip reported by cooperator bowhunters. For instance, observation rates for deer types are expressed in ratio form of the number of animals seen to the number of hours of the trip,

and these are reported as numbers of animals seen per 100 hours hunted. The questionnaire portion of the survey was analyzed by generating frequency distributions for each interest variable. Remarks and suggestions were compiled by separate members of the bowhunter committee reviewing each survey for this qualitative content, categorizing entries into similar groups, and reporting the most frequent forms of comments by general type.

Daily records were excluded from analysis if “hours hunted” or “county hunted” were left blank. Otherwise, all variables were assumed to be zero if the value for the corresponding variable was missing. This is why we emphasize that completing the daily record fully and thoroughly is extremely important for the Bowhunter Survey Committee to continue to provide a thorough reporting of results. Thus, we encourage respondents to fully complete daily records, and we reiterate that we greatly appreciate this attention to detail. It continues to ensure that the information we publish here is as complete as possible. We thank our cooperators for the continued diligence and care in providing this data to us every year.

DISTRIBUTION OF HUNT TRIPS

West Virginia bowhunter cooperators submitted reports from 4,206 hunting trips in all counties of the state during the 2024 season (Figure 1, Table 1), which has provided excellent observational data from the field.

County

With 221 trips, Putnam County remained the county with the most trips taken and the only county to break 200 trips (down 10.9% from 2023 with 248 trips). Marshall County came in second place with 172 trips, but Marshall County had the most number of cooperators (18). Statewide, there was a 16.1% decrease in trips taken compared to 2023. As mentioned in past bowhunter survey reports, we need around 80 to 100 trips per county for the data to be statistically sound, so we continue to put out the request for more cooperators to engage in the survey from counties where we do not reach at least 80 trips. The more data we can collect the more accurate our survey results are.

Ecological Regions

All six ecological regions designated in the state saw a decrease in trips taken compared to the 2023 season, though these decreases varied from 2.6% (Central) to 29.8% (Eastern Panhandle) (Table 2). The Mountains continue to have the fewest cooperators and trips out of the six ecological regions (33 cooperators with 312 trips). The Western region continues to have the most cooperators and trips (81 cooperators with 1,026 trips).

Land Ownership

West Virginia Bowhunter Cooperators continue to utilize private (55%) and personal (27%) properties to do the majority of their bowhunting in 2024. Cooperators reported a very small increase in hunt club/lease use in 2024 (9%) compared to the 2023 season (7%). There was also a small decrease in use of National Forest lands from 3% in 2023 to 2% in 2024.

Our repeat cooperators will notice a change in Figure 2. Previously, we reported land ownership at a statewide level only for the current year. We have updated this to show how land ownership has changed over time in the different ecological regions since the start of the survey in 1995.

In the Eastern Panhandle, Central, Western, and Southwestern regions, private land has consistently remained the most commonly hunted land over the past 30 years. In these regions, personal land has also seen a general upward trend, while public land and hunt club/leased/company land has remained relatively stable over time. In the Mountains region, private and public land were historically the top land ownership types and remained relatively equal until the 2010's when public land use began to decrease. Personal land and hunt club/leased land began to see an increase around this time. In the Southern region, company land use was approximately equal to private land use until 2000. After 2000, company land use decreased, private land remained fairly stable, and personal land use began to increase. It is interesting to see how our cooperators have changed their hunting habits over time in the various regions, and we hope you find this format more informative.

Land Type

Unsurprisingly, most hunting trips (76% statewide) occurred in the woods. Edge was also a popular land type, accounting for 24% of trips in both the Eastern Panhandle and the Western Region. Field was most popular in the Central Region (10% of trips). Urban hunts remain a very small percentage of bowhunter cooperator trips statewide (0.22%). Over half of our bowhunter cooperator hunting trips took place on posted land (59%).

DEER OBSERVATIONS

Deer observation data collected by bowhunters gives the WVDNR wildlife biologists and managers an additional form of trend data used to track the deer population. Total deer observation rates (deer seen per 100 hours) provide an index to the overall deer population within a region. These data are used to monitor long-term trends as an index to deer population, defend hunting regulation proposals, and validate data collected in other surveys. When combined with harvest data, mast survey data, spring gobbler survey data, spotlight distance sampling data, and public opinion, the WVDNR can determine a clearer picture of what is happening with the Mountain State's deer population.

Statewide

In 2024, 271 Bowhunter Survey Cooperators took 4,206 trips afield, hunted 14,798 hours, and made 17,434 deer observations (Table 1). Every county in the state was sampled by cooperators (Figure 1). The average cooperator hunted 3.52 hours per trip. Cooperators observed a total of 17,434 deer (including deer with unknown sex or age) at a rate of 117.81 deer per 100 hours, which is above the 5-year average of 104.44 deer seen per 100 hours (Table 2). Cooperators observed 3,675 bucks, 8,257 does, and 4,099 fawns at a rate of 24.83, 55.80, and 27.70 deer per 100 hours, respectively. The rate of bucks, does, and fawns seen per 100 hours in 2024 is above the 5-year average (Table 2). Cooperators also collect information on the number of bucks chasing does (hereafter, chasing rate). The chasing rate for most regions typically increases during the two weeks prior to the buck gun season, with statewide chasing rates peaking between October 28 and November 17 (Figure 4).

Long-term trends in deer observation rates have remained relatively stable statewide, while harvest per square mile has been steadily decreasing. Harvest rates per 1,000 hours were 13.79, 8.11, and 5.68, for all deer, bucks, and does, respectively. Harvest rates per 1,000 hours were below the 2023 harvest rates reported by cooperators for all deer and bucks but above for does.

Cooperators collect information on the number of bucks, does, and fawns they observed while afield. This information allows us to estimate buck-to-doe ratios, fawn-to-doe ratios, and determine the percentage of spikes and forked antlered deer. Based on cooperator observations, the estimated 2024 buck-to-doe ratio statewide was 1:2.24, which is below the 15-yr average (2.33) and slightly above the 5-yr average (2.21). The observed doe-to-fawn ratio was 1:0.50, which is below the 15-yr average (0.51), slightly above the 5-yr average (0.49), and within the range of observed doe-to-fawn ratio of 0.26 – 0.61, respectively. Fear of predators eating all of West Virginia's fawns seems unfounded.

Ecological Regions

Eastern Panhandle – This region was surveyed by 41 cooperators who took a total of 578 trips, which is a decrease in the number of cooperators and in trips from 2023 (Table 2). These cooperators spent on average 3.36 hours hunting and saw 137.09 deer per 100 hours. This is a decrease from the 154.89 deer seen per 100 hours in 2023. They observed 21.85 and 63.81 bucks and does per 100 hours, respectively, which is a decrease in the number of bucks and does seen per 100 hours compared to 2023 rates. Overall, deer seen per 100 hours and harvest per sq. mi. has been decreasing over the past 30 years (Figure 3). Week 7 (Nov. 11 – Nov. 17) was the best time to see bucks chasing does in this region (Figure 4).

Mountains – This region was surveyed by 33 cooperators (least in the state) who took a total of 312 trips, which is a decrease in the number of cooperators and in the number of trips from 2023 (Table 2). These cooperators spent on average 3.20 hours hunting and saw 148.57 deer per 100 hours. They observed 20.81 and 71.34 bucks and does per 100 hours, respectively (Table 1). This is an increase in both the buck and doe observation rates compared to 2023. The number of deer seen per 100

hours has remained constant while harvest per sq. mi. has been stable over the past 30 years (Figure 3). Week 7 (Nov. 11 – Nov. 17) was the best time to see bucks chasing does in this region (Figure 4).

Southern – The southern region was surveyed by 69 cooperators who took a total of 819 trips, which is a decrease in the number of cooperators and trips from 2023 (Table 2). Cooperators spent, on average, 3.67 hours hunting and observed 16.18, 41.60, and 80.71 bucks, does, and deer per 100 hours, respectively (Table 1). Observation rates per 100 hours for bucks and total deer decreased while observation rates for does slightly increased compared to 2023. In this region, the number of deer seen per 100 hours has been increasing while the harvest per sq. mi. has been stable over the past 30 years (Figure 3). Week 7 (Nov. 11 – Nov. 17) was the best time to see bucks chasing does in this region (Figure 4).

Central – This region was surveyed by 55 cooperators who took a total of 886 trips, which is a decrease in the number of cooperators and the number of trips from 2023 (Table 2). Cooperators spent, on average, 3.57 hours hunting and observed 117.13 deer per 100 hours. Cooperators observed 28.22 and 56.19 bucks and does per 100 hours, respectively. This is a decrease in the buck observation rates and an increase in the doe observation rate compared to 2023. Observation rates have been constant in this region while harvest per sq. mi. has been decreasing over the past 30 years (Figure 3). Week 7 (Nov. 11 – Nov. 17) was the best time to see bucks chasing does in the Central region (Figure 4).

Western – This region was surveyed by 81 cooperators (most in the state) who took a total of 1,026 trips, which is a decrease in the number of cooperators and in the number of trips from 2023 (Table 2). On average, cooperators hunted 3.48 hours and observed 140.42 deer per 100 hours. Cooperators observed 33.63 and 62.89 bucks and does per 100 hours, respectively. This is an increase in both the buck and doe observation rates compared to 2023. Deer observation rates have remained relatively constant across the past 30 years while harvest per sq. mi. has been decreasing (Figure 3). Week 7 (Nov. 11 – Nov. 17) was the best time to see bucks chasing does in the Western region (Figure 4).

Southwestern – This region was surveyed by 37 cooperators who took a total of 585 trips, which is a decrease in the number of cooperators and trips compared to 2023 (Table 2). Cooperators hunted, on average, 3.62 hours and observed 101.10 deer per 100 hours. This is an increase in the number of deer observed per 100 hours compared to the 2023 observation rate. Cooperators observed 21.86 and 48.68 bucks and does per 100 hours, respectively. The buck observation rate decreased, and the doe observation rates increased compared to 2023. Deer observation rates have remained relatively consistent while harvest per sq. mi. has been decreasing (Figure 3). Week 7 (Nov. 11 – Nov. 17) was the best time to see bucks chasing does in this region (Figure 4).

WILDLIFE OBSERVATIONS

Cooperators are asked to record observations of certain wildlife sightings while hunting each year. Several species have been asked about on every survey since 1995: squirrels, turkeys, grouse, raccoons, foxes, coyotes, and bears. Rabbits were added onto the survey in 1996 and have been asked about every year since. Bobcats were asked about in 1995 but were removed until 2017. Elk were added on in 2017. We have also asked about house cats and dogs in previous surveys. This observational data is used by biologists as an independent source of trend data, like what is displayed in Figure 5, to better understand how populations are fluctuating through time. The data gathered and presented in Tables 4, 5, and 6 provides a large amount of information that can be used by biologists to estimate trends in wildlife numbers by species, counties, ecological regions, and/or years. It can also provide valuable information for future research projects or analysis to see how weather, regulations, or other events have affected wildlife populations through time.

In general, species seen in 2024 were on the rise compared to 2023. Table 6 outlines species seen per 100 hours throughout the state from 1995 to 2024. At quick glance, we can see that only grouse and elk observations decreased while most other species increased in observations and were higher than the average from all data collected between 1995 and 2024.

Grouse observations were much higher when this survey first began in 1995 with 6.22 grouse observed per 100 hours compared to 0.18 in 2024. Observations began a steady decline in 2002. West Virginia began to see less timber management in the late 1990s causing forests to begin to age out of quality grouse habitat. While other factors (e.g., annual mast production, reproduction rates, predation, West Nile Virus, weather) can play a role in grouse survival and recruitment, the lack of young forests is a major limiter to population growth. Breaking out observations by region can give us better insight into population trends. Every region saw a decrease in grouse observations from 2023 except for the Central Region (increased from 0.03 in 2023 to 0.09 in 2024). The Mountains remains the region with the highest observation rate (1.70 in 2024). This is a decrease from 2023 (2.09) but is approximately the same as 2022 (1.74). Timber is key and we need more young forest habitat across the state to bring back our grouse numbers.

This was the first year we asked cooperators to separate their fox observations into red and gray foxes, so let's see what was reported. In general, fox observations increased across the state (Table 6). Every region, except for Southwestern, showed increases in fox observations, but the increase was fairly large in the Central and Western Regions (Table 5). Red foxes had a slightly higher observation rate per 100 hours than gray foxes statewide (0.38 versus 0.32, respectively) (Figure 5). However, the difference between the two species can be much greater regionally. The Western, Southern, and Central Regions reported more sightings of gray foxes than red. The Eastern Panhandle, Mountains, and Southwestern Regions reported more sightings of red foxes than gray. The Eastern Panhandle recorded the highest observation rate of red foxes (0.98 per 100 hours), but the observation rate for gray foxes was below the statewide average (0.21 per 100 hours). The Western Region recorded the highest observations of gray foxes (0.73 per 100 hours).

Bobcat observations were asked about on the 1995 survey and then replaced with rabbits on the subsequent surveys. We started asking about bobcats again in 2017, and 2024 was the first year we saw a substantial increase in sightings. There were 0.52 bobcats seen per 100 hours in 2024, which is just over double the previous statewide average (Table 6). Increases were observed in the Southern, Central, and Southwestern Regions. The Central Region had the most sightings in the state with Harrison County reporting 8.33 bobcats per 100 hours. Harrison County also reported the fourth highest sightings of coyotes in the state. Bobcats are elusive animals, so it was interesting to see the jump in numbers for Harrison County. Keep a watchful eye out for those bobcats!

Turkey observations were up in each region, and the statewide rate increased to 39.88 seen per 100 hours in 2024 from 26.49 in 2023 (Table 5, 6). The Central Region recorded the highest observation rate (55.15), while the Southern Region recorded the lowest (28.06). The Mountains Region saw the greatest percent increase from 2023 to 2024, growing from 17.42 in 2023 to 34.72 in 2024! In 2024, the WVDNR began a multi-year statewide hen study focusing on reproduction, survival, and mortality. So far, we have leg banded 381 hens (197 in 2024, 184 in 2025) and attached GPS transmitters to 217 (118 in 2024, 99 in 2025). We will be trapping a few additional hens in 2026 to deploy our remaining transmitters. More information on this study can be found in the Big Game Bulletin and Spring Gobbler Survey. Stay tuned for the results!

There is quite a bit of information gathered in this survey regarding wildlife sightings, but maintaining a large sample size is key to accurate depictions of wildlife numbers regionally and temporally. To find more information on trends and the hunting outlook, refer to the Mast Survey and Hunting Outlook and the Big Game Bulletin published by the WVDNR.

WVDNR DEER PROJECT

In February 2021, the WVDNR initiated the largest deer research project in the agency's history. This study is being conducted in three study areas across the state: Hampshire; Barbour/Upshur; and Jackson/Mason Counties. The goals of the deer research project are to evaluate survival, cause-specific mortality, home range, habitat selection, and movement rates of bucks and does across WV. In Hampshire County, the effect of chronic wasting disease (CWD) will also be evaluated. Deer were captured on private lands during the winter across all three study areas. Collared deer are being monitored throughout the year for the life of the deer and/or collar. Typical collar battery life is expected to be three years.

During the 2021, 2022, and 2023 winter capture seasons, the WVDNR collared 342 (97 in 2021, 140 in 2022, and 107 in 2023) deer across the three study areas. As of July 1, 2025, there are still 29 deer collared, and there have been 209 recorded mortalities of collared deer. The leading cause of mortality is hunter harvest ($n = 80$), followed by vehicle collisions ($n = 28$), and predation ($n = 27$). In Hampshire County, 22 collared deer have died of clinical CWD.

During capture, deer are fitted with a GPS collar that will send locations on a

programmed schedule. The collar is outfitted with a mortality sensor that will activate if the collar remains motionless for a set interval of time. This will allow WVDNR staff to respond to mortality events and determine why each deer died. Each deer was fitted with 2 metal ear tags that have a unique identification number and the phone number for the Elkins Operations Center.

The results from this study will be used to help inform deer harvest management recommendations. A major component of this project is gaining a better understanding of harvest and non-harvest related mortality causes for both males and female of all age classes. Therefore, it is important for all hunters to understand that, if they see a collared deer during the hunting season, it is legal for harvest and to not allow the presence of the collar to influence their decision to harvest that animal or not. If a hunter does harvest a collared deer, the DNR asks that the hunter call the Elkins Operations Center (304-637-0245) and report the deer. A DNR employee will come out to retrieve the collar and collect some information from the carcass when possible. To see updates about this project, scan the QR code on the inside back cover of this report!

MANGE UPDATE

Sarcoptic mange has been around for centuries and impacts multiple species of mammals. However, sarcoptic mange has only recently become a problem in black bears in general and West Virginia black bears in particular. Mange in black bears was detected in the early 1990s in southwestern Pennsylvania and spread north through their bear range. West Virginia started regularly seeing mange in black bears in 2016. Prior to 2016, only a handful of cases had been reported. Mange has spread south through Maryland, Virginia, and West Virginia, as well as spreading north out of Pennsylvania into New York. The leading edge of the spread of mange in West Virginia is in Pocahontas County with clusters of cases in Greenbrier and Monroe counties.

Research concerning mange in black bears has been conducted for over a decade, beginning in Pennsylvania and spreading to other states that have been affected. One of the most important findings of the work conducted in Pennsylvania is that 80% of bears that contract mange will recover. It does not mean they won't get reinfected, but recovery rates are high.

West Virginia has been a participant in a multi-state mange working group organized through the Southeastern Cooperative Wildlife Disease Study at the University of Georgia. We have learned through our participation in this working group that the mites affecting West Virginia, Virginia, Maryland, and Pennsylvania's black bears are red fox strain mites. The mites affecting Arkansas's black bears are coyote strain mites. We have learned that our bears are not being impacted by rodenticides that caused a higher incidence of mange in bobcats. We have also learned that black bears afflicted with mange carry far higher numbers of mites than ever recorded in red foxes. At this time, we do not believe that mange has a population level effect on black bears in West Virginia. We are learning more about mange in black bears all the time, but there are still many unanswered questions. The WVDNR will stay engaged in mange research to better understand how it is impacting our black bear population.

HUNTING QUESTIONNAIRE

West Virginia Bowhunter Survey Cooperators are sent a questionnaire each year in addition to recording wildlife observations. The questionnaire (Appendix) asks cooperators a variety of questions ranging from oak mast conditions in the area they hunt to questions about antler size. The questions placed on the questionnaire often come from suggestions submitted by cooperators. In 2024, 275 cooperators filled out and returned WV Bowhunter Survey Questionnaires. Sample sizes may differ between the questionnaire and the daily records, because some hunters do not complete all sections. In some cases, hunters were unable to hunt that year, but they still like to fill out the questionnaire and give us their opinions.

We welcome comments or suggestions participating cooperators may have in order to better address questions of interest. The committee meets annually to construct the survey for the next hunting season. Due to the breadth of questions submitted by cooperators, some questions are cycled on a fixed yearly basis to make room for new questions that cooperators may have. This should explain why you may request for a question to be added and not see it on the survey until two or three years later. This is an ever-evolving survey we continually try to make interesting for cooperators, while providing biologists with valuable data to manage your resources.

Years Spent Bowhunting

Out of 258 responses, our average cooperator has been bowhunting for 37.4 years. The combined bowhunting experience of our cooperators in 2024 was 9,656 years! Years spent bowhunting ranged from 1-72, and only 8.5% of cooperators have been bowhunting for less than 10 years. We love seeing completed surveys from young bowhunters and encourage all of our cooperators to try to introduce someone to the sport.

Participation in Other WV Deer Hunting Seasons

Cooperators were asked what other West Virginia deer hunting seasons they participated in during fall 2024. As expected, the most common other season to participate in was buck gun (38.8% of cooperators). This was followed by antlerless gun (24.1%), muzzleloader (22.5%), Mountaineer Heritage (7.8%), Youth/Class Q/Class XS (5.4%), Urban (1.2%), and lastly Special/State Park (0.2%).

Deer Population

Cooperators were asked again in 2024 about the status of the deer population in the area they hunted the most. Opinions in 2024 were very similar to those in 2023. Of 262 responses, 14% (13% in 2023) of cooperators thought the deer population was increasing, 21% (24% in 2023) believed it was decreasing, and 65% (63% in 2023) felt it was stable. There are typically not large fluctuations in deer populations on a yearly basis, but this question is asked to track trends over time.

Deer Racks

Cooperators are asked each year how deer antler growth compares to the previous year in the area where they hunt. Responses in 2024 were similar to those in 2023. Of 251 responses, 19% (20% in 2023) reported that deer antlers were larger, 18% (18% in 2023) reported that antlers were smaller, and 64% (62% in 2023) reported that deer antlers were the same in 2024 compared to 2023.

Oak Mast

Each year we ask cooperators to rank how the oak mast was in the areas they hunt to better understand how the mast production was across the state. In general, 36% of cooperators said the oak mast was scarce, 40% said it was common, and 24% said it was abundant. Each year, WVDNR personnel complete mast surveys in each county at different elevations. The results are published in the Hunting Outlook and Mast Survey Report. Please refer to this report for a more in-depth look at mast production across the state. Historic droughts in the summer of 2024 had substantial negative effects on mast in most regions. Generally, hard mast producers were affected more than soft mast producers. All surveyed hard mast species were below our 54-year average except for Red/Black Oak and Chestnut Oak. Among our bowhunter cooperators, there was a higher percentage of scarce oak ratings in the Eastern Panhandle (66%), Mountains (65%), and Southwestern Region (56%). The Eastern Panhandle was one of the worst affected regions according to the WVDNR's mast survey with production significantly below average in all oak species. Oak production in the Mountains was equal or below average for all species except for White Oak. Oak production in the Southwestern Region in 2024 was actually above our 54-year average but was below what was observed in 2023. The Southern Region received the best ratings from our bowhunter cooperators with only 10% recording scarce and the remaining evenly split between abundant and common. This was also reflected in the WVDNR's mast survey as oak production was above the 54-year average for almost all oak species, and White Oak and Chestnut Oak were substantially above 2023 ratings.

Bucks Passed Up

Hunters were asked whether they passed up opportunities to harvest a legal antlered buck during the 2024 archery/crossbow season. The majority of our responding cooperators (74%) reported passing up an opportunity at a buck. Almost half (44%) of our cooperators who answered yes selected more than one reason for passing up an opportunity to harvest a buck. When asked why they decided to pass up an opportunity to harvest a legal buck, 37% said it was only because the antlers were too small, 11% said only that the buck was too young, and 4% only wanted to save tags. When adding in cooperators with multiple responses, 54% of responses included passing on a buck because of small antlers. Some other reasons for passing up legal opportunities were trying to harvest a doe, it was too dark, they didn't have time to process the meat, and they were just enjoying the moment.

Lifetime WV Bowhunting Harvests

Cooperators were asked in 2024 how many deer they had harvested in their lifetime during the West Virginia archery season. The number of deer killed by the 192 respondents ranged from 0 to 100. The most common number of deer killed was 20 (13% of respondents). The second and third most common numbers of deer killed were 30 (10%) and 40 (8%). Bowhunter Survey Cooperators are an experienced group of hunters based on the fact that only 21% of respondents had killed less than 10 deer. The average lifetime archery harvest per cooperator was 29!

Reduction in Bag Limit and Stamp Purchase

In the first year of the antlered deer bag limit reduction, we wanted to know how the stamp purchases of cooperators were affected. The bag limit reduction impacted the purchase of additional stamps for 17% of our respondents. Of those respondents, 39% said they did not buy an RG/RRG stamp, 24% did not purchase an RB/RRB stamps, and 3% did not purchase an additional RM/RRM stamp. The remaining 34% of respondents listed a combination of stamps that were not purchased (RB, RG, and RM).

Food Plots and Soil Samples

We asked our cooperators if they planted food plots specifically for deer. When done correctly, food plots can add increased nutrition in an area, provide excellent cover and bugging habitat for turkeys and other wildlife, and can be important during crucial times of the year when natural food sources are limited on the landscape. The vast majority of our cooperators do not plant food plots (79%). Food plots are labor-intensive and require a higher cost to maintain over the years. It also requires land, and some hunters may not have the space to do it. If the land is available and the tools are handy, consider trying to plant yourself a food plot.

Of the 56 cooperators who planted a food plot, 22 took a soil sample prior to planting and 31 did not. Soil samples help dictate what the ground needs amended into it to grow quality plants, making for a more successful plot and healthier soil. Some people may feel a sample is not needed, as they plan to add lime or fertilizer to their plots regardless. However, soil samples may end up saving you some time and money by letting you know what your soil does or does not need.

Hunting with Scents

Nearly half (49%) of our cooperators use scents while hunting. Among those that do use scents, over one-third (37%) selected more than one option. Natural doe urine was the most popular choice with 42% of cooperators who do use scent selecting that as one of their responses. Cover scent and synthetic doe urine were also popular (20% and 19%, respectively). Six percent of cooperators used both natural and synthetic doe urine. Six percent of cooperators used food scents. Some other scents listed included gland scents (tarsal, forehead, orbital, and digital listed), buck urine, salt blocks, apples, and more.

Hunters should note that one of, if not the biggest, threat to white-tailed deer populations in the United States is Chronic Wasting Disease (CWD). CWD may be

transmitted in saliva, urine, and feces. The movement of live cervids (deer family) or deer parts is generally how CWD has spread across North America. To protect the deer herd, it is best to not move deer or use natural deer parts while hunting. To learn more about CWD in WV, scan the QR code on the inside back cover of this report.

Processing Your Deer

Sixty-five percent of our cooperators process their own harvested deer, while 35% take their deer to a processor. The most common price to have a deer processed was \$100.00 followed by \$90.00. The average price was \$103.25. Many hunters find it satisfying to butcher their own meat, but it's also very convenient to get it butchered. Whatever your preference, venison is a great, natural form of protein.

COMMENTS, OBSERVATIONS, AND REMARKS

The Bowhunter Committee expresses their thanks to cooperators who took the time to record their observations and voice their concerns. The committee noticed that more and more cooperators were not able to hunt because of surgery, an injury, or taking care of a spouse. This reflects the increasing average age of hunters and illustrates the importance of taking the time and effort to introduce the younger generation to the sport of hunting.

The weather was the most commented topic in 2024 by far. I think almost everyone would agree, last year was quite warm. In fact, 35 cooperators agreed. Twelve cooperators complained about the new two-buck limit. The lack of mast was reported by 11 archers. Nine cooperators expressed concern about EHD. Six cooperators agreed that there are too many bears and that the two-buck limit is good. Antler restrictions were proposed by six cooperators. Five cooperators would like to see baiting stopped. An additional five thought there are too few deer and too many coyotes. Three cooperators recorded seeing less bucks and more does. They also felt there were too many coyotes. The following responses were listed twice: mast good, no squirrels, weather cool, bow season too early, no Sunday hunting, and the need for a longer muzzleloader season. Finally, cooperators commented on the following once: allow bear baiting, lots of spikes, saw less does, saw no rubs or scrapes, licenses too expensive, and the need for more conservation police.

The Bowhunter Committee always enjoys reading through your stories, and we appreciate all who send them in! Listed below are just a few from this year. We hope you all have a great upcoming season!

I only hunted 2 times this season. The reasons are many and stupid. I turned 74 November 15th, so chances are that I will be dead by next year. If not, I will hunt even if the buck limit is one and it's 90 degrees!

I don't like the two-buck limit. There is no shortage of deer. I saw over 100 bucks during archery and rifle season!

I found 6 dead deer from EHD. I will not be eating the big buck I killed. I don't know if EHD is transferable to humans or not. At 74, I'm too old to take the chance.

- The Bowhunter Committee would like to ensure that all readers know that Hemorrhagic Disease (HD) is **NOT** transferable to humans. Deer that survive an infection with HD will most often be in good health during deer season. We do not recommend ever consuming a deer that appears sick. If you have any questions regarding the safety of your venison, please contact your local DNR district office.

I'm really frustrated with the two-buck limit. I feel you're messing with the freedom of hunters. You are encroaching on our "freedom of choice". All this so you can make WV a "trophy buck" destination! It ain't going to happen!

On 3 different days, I saw a hawk catch 3 squirrels.

Harvested my first turkey with a bow at 48 yards.

My neighbor killed the buck I was hunting with a rifle the week prior to gun season. DNR notified and the poacher was caught.

Saw a coyote chase a deer well over 100 yards through the woods.

After shooting an 8 point, I watched a bobcat walk by my stand. I waited 3 hours before tracking my deer. Just as I found my buck, I jumped the cat. A lot of 1 hindquarter was already eaten.

I filled the freezer with 2 does. I am blessed!

After tagging out this year, my two buddies and I watched a 3 point buck walk within 10 yards of the cabin. He then walked over to the meat pile where 3 bucks were hanging. He better watch out or he will end up there one day.

I saw an albino buck while hunting in Ohio county. That was really cool to see.

This was one of my saddest seasons ever. My oldest brother Philip passed away. He taught me all I know about hunting. He will be with me always in my tree stand and memory.

DNR laws are hard to understand. I was really confused about the 2 buck limit. I was elated when the "DNR" straightened me out. He told me "you have to read the rules you old fart". Didn't need that comment.

2024 WEST VIRGINIA BIG BUCK CERTIFICATION PROGRAM

The West Virginia Big Buck Certification Program was established in 1964 to recognize hunters who harvested extraordinarily large-antlered bucks. Although the official “contest” was discontinued in 2013, the West Virginia Division of Natural Resources (WVDNR) continues to officially score deer as part of this program.

The Boone and Crockett Club and Pope and Young Club scoring systems are used to officially score each deer, depending upon method of harvest. Guidelines for the program are as follows:

1. Effective 2015, deer must have a 13-digit DNR-issued game check confirmation number.
2. To be eligible, the deer must be officially scored after a 60-day drying period by an Official Measurer who is approved by Boone and Crockett and/or Pope and Young.
3. Any bow- or crossbow-killed deer must score at least 125 Typical or 155 Non-Typical. All other deer must score at least 140 Typical or 165 Non-Typical.
4. For state record entries, field photos of the freshly killed deer (antlers attached) must be submitted at the time of scoring.

In 2024-2025, 333 deer were measured by an Official Measurer at a WVDNR District Office, WVDNR field office, or by an Official Measurer at a different location. There are 33 WVDNR Wildlife Biologists and Wildlife Specialists throughout the state who are certified as Official Measurers by Boone and Crockett Club and/or Pope and Young Club. During the 2024 hunting seasons, 22 bucks met the requirements listed above.

It is noteworthy that a few deer met the respective minimum score requirement, however proper game check information or other important data was not provided. A good practice is to record the DNR-issued game check confirmation number and keep it with the mount/skull plate so that it is not misplaced. A hunter may only have their deer scored by one Official Measurer. It is the hunter’s responsibility to work with their Official Measurer to ensure all documentation is accurately completed and submitted to the coordinator of the WV Big Buck Certification Program by the annual deadline.

Thank you to all participants in the WV Big Buck Certification Program this year!

2024 BIG BUCK SCORE RANKINGS

Antler Configuration: Typical

Weapon: Bow

Name	County	Harvest Date	Rank	Score
Anthony Cline	McDowell	11/25/2024	1	172 2/8"
Shawn Laughery	Fayette	11/03/2024	2	159 6/8"
Matthew Pierce	Wyoming	11/15/2024	3	151 7/8"
David Weakley	Monroe	11/15/2024	4	144 4/8"
Trevor Castle	McDowell	12/15/2024	4	144 4/8"
James Paynter	Wyoming	11/05/2024	6	140 4/8"
Frank Holtzopfel	Wyoming	11/15/2024	7	139 4/8"
Brian Fitzko	Wyoming	11/29/2024	8	136 2/8"
Adam Smithson	Monroe	11/07/2024	9	135 6/8"
Anthony Fitzko	Wyoming	10/15/2024	10	132 4/8"
Troy Carter	Wyoming	11/20/2024	11	130 5/8"
Andrew D Angelo	Barbour	10/02/2024	12	130 2/8"
Timothy Hunt	Lewis	10/06/2024	13	129 7/8"
Cole Kidd	Mercer	11/02/2024	14	129 2/8"

Antler Configuration: Non-Typical

Weapon: Bow

Name	County	Harvest Date	Rank	Score
None				

Antler Configuration: Typical

Weapon: Gun

Name	County	Harvest Date	Rank	Score
William Stewart	Clay	11/27/2024	1	150 4/8"
Todd Lowe	Roane	12/06/2024	2	144 5/8"
William Craver	Lincoln	11/25/2024	3	140 2/8"

Antler Configuration: Non-Typical

Weapon: Gun

Name	County	Harvest Date	Rank	Score
None				

Antler Configuration: Typical

Weapon: Crossbow

Name	County	Harvest Date	Rank	Score
Dwayne Hickman	Roane	11/24/2024	1	152 3/8"
Kevin Blevins	McDowell	11/17/2024	2	148 2/8"
Luke Stewart	Clay	10/01/2024	3	132 7/8"
Thomas Link	Raleigh	11/17/2024	4	130 7/8"
Travis Lusk	Mercer	11/18/2024	5	125 1/8"

Antler Configuration: Non-Typical**Weapon: Crossbow**

Name	County	Harvest Date	Rank	Score
None				

Antler Configuration: Typical**Weapon: Muzzleloader**

Name	County	Harvest Date	Rank	Score
None				

Antler Configuration: Non-Typical**Weapon: Muzzleloader**

Name	County	Harvest Date	Rank	Score
None				

FIGURES AND TABLES

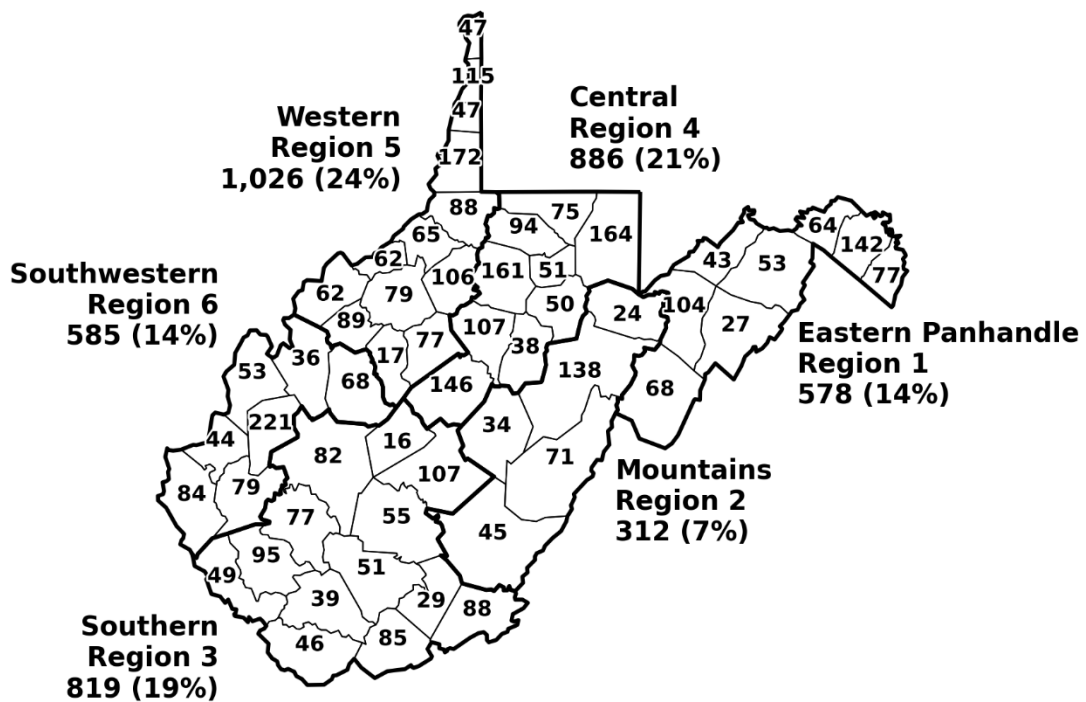


Figure 1. 2024 Bowhunter Survey cooperator trips by county and region (total trips: 4,206).

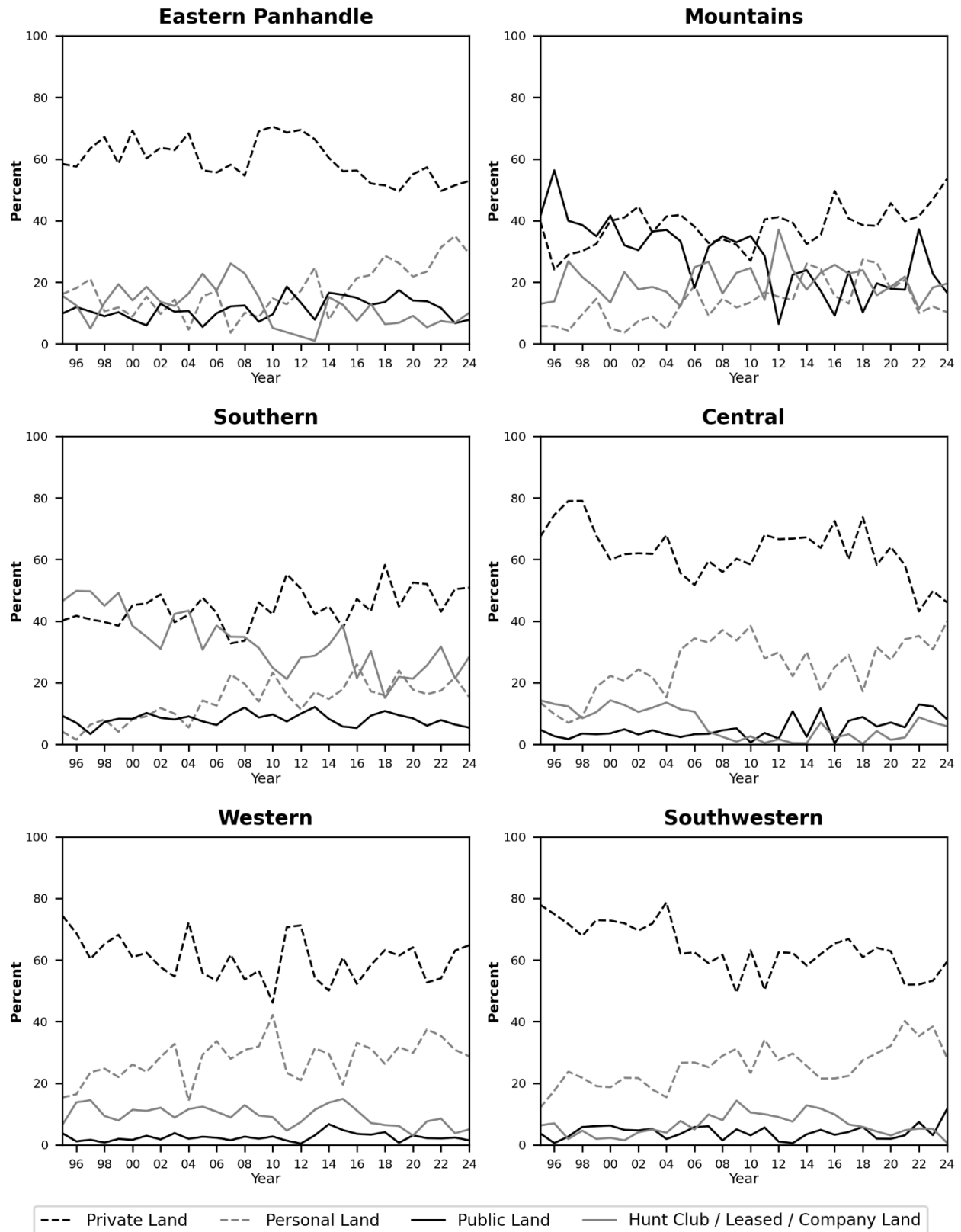


Figure 2. Frequency of hunting trips by land ownership as reported by West Virginia Bowhunter Survey cooperators, 1995 - 2024.

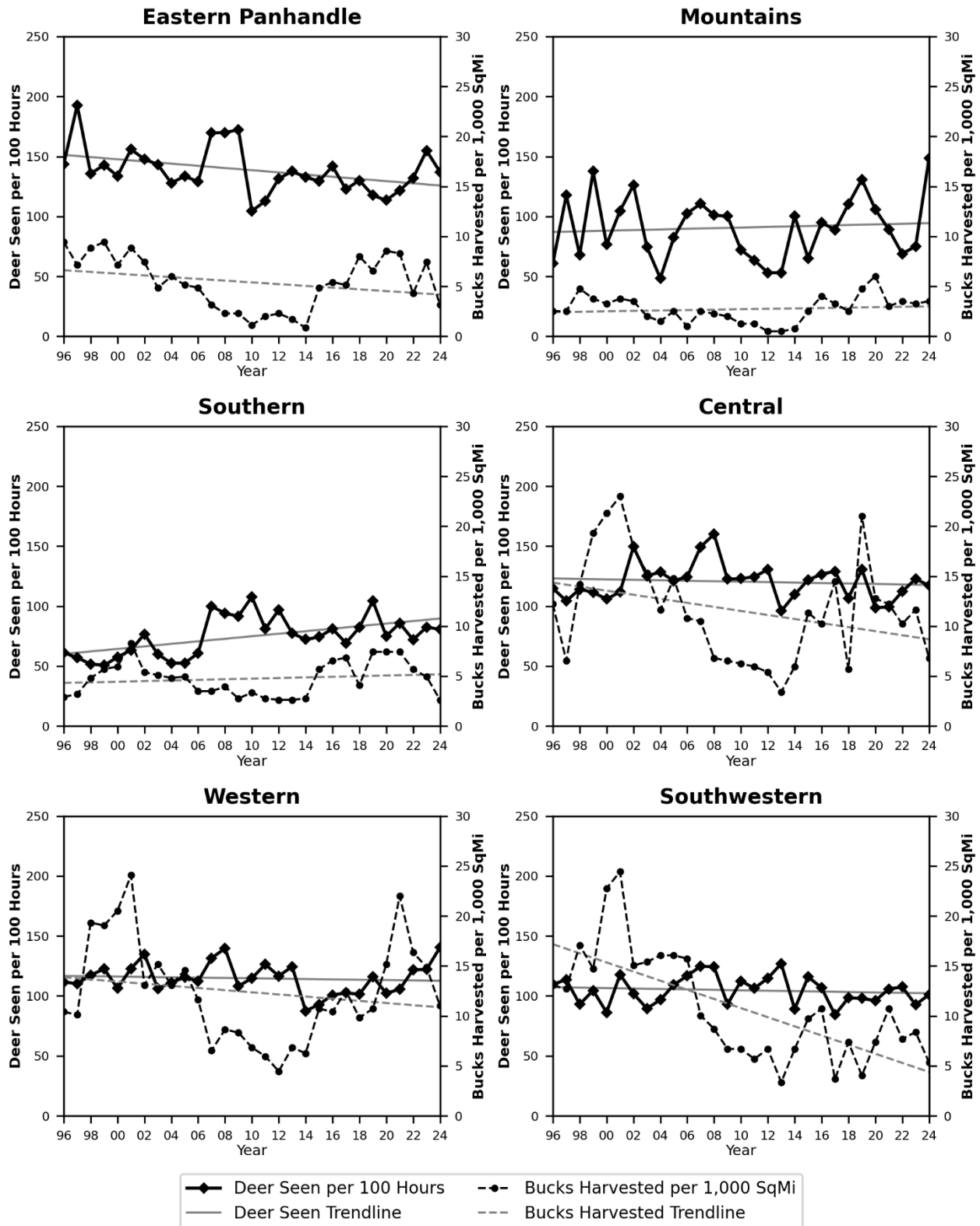
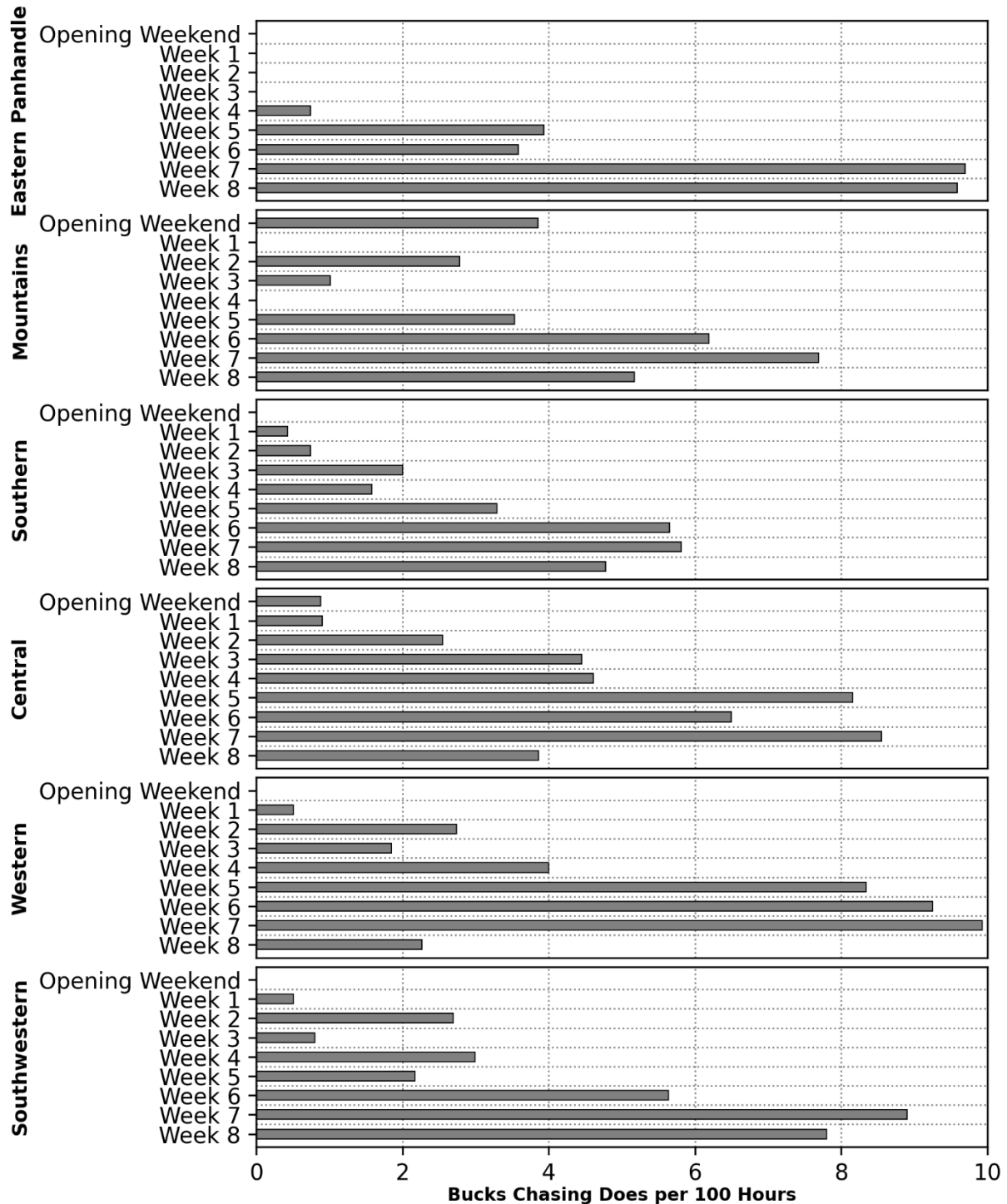


Figure 3. Deer Seen per 100 Hours and Bucks Harvested per 1,000 Square Miles by year and region as reported by West Virginia Bowhunter Survey cooperators, 1996 - 2024.



2024 Season Dates:

Opening Weekend: Sep 28 - Sep 29 | Week 1: Sep 30 - Oct 06 | Week 2: Oct 07 - Oct 13 |

Week 3: Oct 14 - Oct 20 | Week 4: Oct 21 - Oct 27 | Week 5: Oct 28 - Nov 03 |

Week 6: Nov 04 - Nov 10 | Week 7: Nov 11 - Nov 17 | Week 8: Nov 18 - Nov 24

Figure 4. Bucks chasing does by week and region as reported by West Virginia Bowhunter Survey cooperators during the 2024 deer archery season.

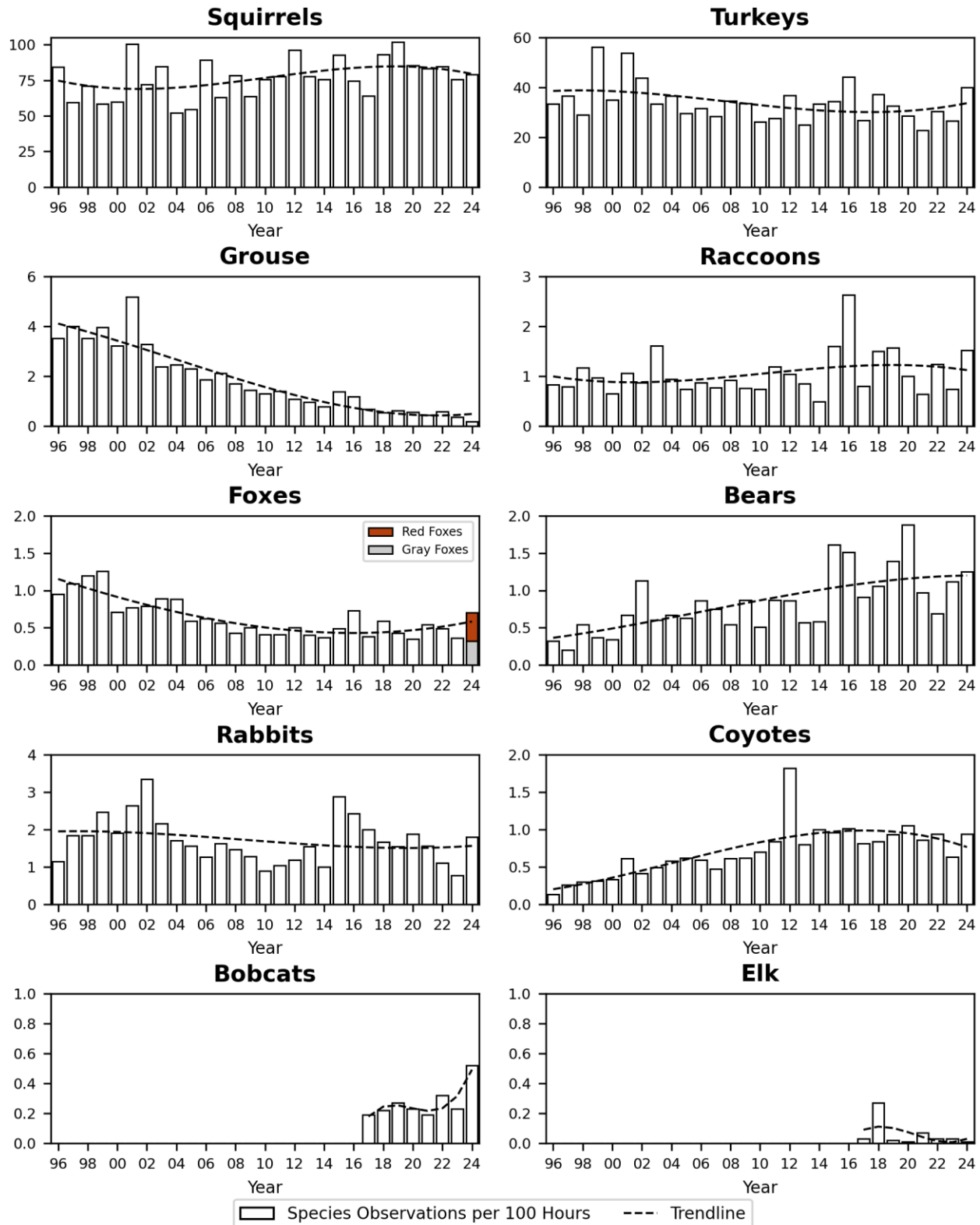


Figure 5. Statewide observation rates of wildlife species per 100 hours as reported by West Virginia Bowhunter Survey cooperators during the deer archery season, 1996 - 2024.

Table 1. Number of cooperators, trips, and deer seen & harvested by region as reported by West Virginia Bowhunter Survey cooperators, 2024.

Region	County	Cooperators	Trips	Avg. Hours per Trip	Deer Seen per 100 Hours			Deer Harvested per 1,000 Hours		
					Bucks	Does	Total	Bucks	Does	Total
1	Berkeley	9	142	3.46	12.42	51.53	103.46	4.07	8.15	12.22
	Grant	5	104	3.27	34.12	90.00	195.29	11.76	0.00	11.76
	Hampshire	6	53	2.32	20.33	21.14	59.35	0.00	16.26	16.26
	Hardy	3	27	4.17	8.00	40.00	95.11	0.00	8.89	8.89
	Jefferson	8	77	3.18	27.76	106.94	200.82	4.08	12.24	16.33
	Mineral	2	43	3.52	23.10	33.66	102.31	6.60	13.20	19.80
	Morgan	4	64	3.94	28.57	63.10	161.51	11.90	19.84	31.75
	Pendleton	11	68	3.38	16.97	60.50	113.17	0.00	17.41	17.41
Eastern Panhandle Total		41	578	3.36	21.85	63.81	137.09	5.66	10.80	16.45
2	Greenbrier	7	45	3.92	11.90	54.96	112.18	5.67	11.33	17.00
	Pocahontas	4	71	3.15	16.07	36.61	92.86	8.93	4.46	13.39
	Randolph	15	138	3.07	15.82	76.03	141.91	21.25	7.08	28.34
	Tucker	3	24	3.19	31.37	77.12	207.84	13.07	0.00	13.07
	Webster	4	34	2.91	60.61	154.55	322.22	10.10	0.00	10.10
Mountains Total		33	312	3.20	20.81	71.34	148.57	14.01	6.00	20.01
3	Boone	5	77	3.64	6.07	24.29	37.50	14.29	3.57	17.86
	Clay	2	16	3.69	20.34	54.24	101.69	0.00	0.00	0.00
	Fayette	6	55	3.64	21.50	41.50	95.50	5.00	0.00	5.00
	Kanawha	10	82	3.21	9.11	65.28	96.77	3.80	7.59	11.39
	Logan	9	95	3.57	18.29	28.02	64.90	2.95	2.95	5.90
	McDowell	5	46	4.76	15.53	28.77	56.62	0.00	0.00	0.00
	Mercer	9	85	3.78	14.64	34.58	69.78	6.23	3.12	9.35
	Mingo	7	49	4.00	10.71	39.29	68.88	10.20	5.10	15.31
	Monroe	13	88	3.30	38.28	106.21	218.97	10.34	20.69	31.03
	Nicholas	4	107	3.81	6.63	22.09	43.19	2.45	4.91	7.36
	Raleigh	6	51	2.88	14.97	48.98	75.51	6.80	0.00	6.80
	Summers	4	29	3.62	39.05	43.81	109.52	9.52	9.52	19.05
	Wyoming	5	39	4.55	14.08	18.59	41.69	5.63	5.63	11.27
Southern Total		69	819	3.67	16.18	41.60	80.71	5.99	5.33	11.32
4	Barbour	4	50	3.60	23.89	45.56	98.89	0.00	22.22	22.22
	Braxton	8	146	3.36	18.16	50.20	99.18	4.08	6.12	10.20
	Harrison	6	161	3.65	21.60	26.36	68.37	5.10	1.70	6.80
	Lewis	8	107	4.37	48.72	102.14	182.91	8.55	6.41	14.96
	Marion	10	94	3.52	18.13	34.44	90.03	9.06	9.06	18.13
	Monongalia	8	75	3.08	12.55	41.13	83.12	4.33	12.99	17.32
	Preston	15	164	3.26	34.61	79.70	164.08	13.10	7.48	20.58
	Taylor	5	51	3.91	24.56	40.10	75.19	10.03	0.00	10.03
	Upshur	5	38	3.64	59.21	72.20	189.89	14.44	0.00	14.44
Central Total		55	886	3.57	28.22	56.19	117.13	7.59	6.64	14.24
5	Brooke	7	115	3.25	34.00	46.85	115.39	0.00	5.35	5.35
	Calhoun	2	17	2.41	12.20	24.39	46.34	24.39	0.00	24.39
	Doddridge	10	106	3.67	27.25	55.78	120.31	7.71	2.57	10.28
	Gilmer	6	77	3.67	18.05	43.89	92.74	7.08	7.08	14.16
	Hancock	3	47	3.76	43.06	50.99	169.41	22.66	5.67	28.33
	Marshall	18	172	3.47	40.77	66.95	170.13	16.78	8.39	25.17
	Ohio	5	47	3.07	50.52	104.50	223.53	34.60	6.92	41.52
	Pleasants	4	62	3.49	26.79	57.74	112.24	9.24	0.00	9.24
	Ritchie	3	79	4.54	50.70	67.41	145.68	5.57	2.79	8.36
	Tyler	6	65	2.74	32.02	94.38	179.21	0.00	11.24	11.24
	Wetzel	8	88	3.50	37.99	75.32	155.52	9.74	0.00	9.74
	Wirt	11	89	3.50	22.79	68.06	125.52	9.63	3.21	12.84
	Wood	6	62	3.15	17.90	51.66	124.81	10.23	0.00	10.23
Western Total		81	1,026	3.48	33.63	62.89	140.42	10.36	4.48	14.84
6	Cabell	6	44	3.28	21.45	35.29	96.89	6.92	0.00	6.92
	Jackson	4	36	3.68	55.09	52.83	155.47	15.09	0.00	15.09
	Lincoln	3	79	3.77	16.81	24.20	56.13	6.72	0.00	6.72
	Mason	7	53	3.92	33.17	78.37	125.00	4.81	0.00	4.81
	Putnam	14	221	3.24	15.08	55.71	110.44	6.98	2.79	9.77
	Roane	3	68	4.24	29.86	48.61	108.68	0.00	0.00	0.00
	Wayne	7	84	3.94	13.90	41.09	79.76	15.11	6.04	21.15
Southwestern Total		37	585	3.62	21.86	48.68	101.10	7.56	1.89	9.44
Statewide		271	4,206	3.52	24.83	55.80	117.81	8.11	5.68	13.79

Table 2. Deer seen per 100 hours by region as reported by West Virginia Bowhunter Survey cooperators during the deer archery season, 2020 - 2024.

Region	Year	Cooperators	Trips	Avg. Hours per Trip	Deer Seen per 100 Hours				
					Bucks	Does	Fawns	Unknown	Total
1	2020	63	1,146	3.19	21.66	51.65	26.28	13.89	113.48
	2021	76	1,085	3.03	22.63	52.78	27.79	18.50	121.70
	2022	62	949	3.22	25.10	58.39	32.34	16.17	131.99
	2023	58	823	3.20	33.10	66.20	37.01	18.58	154.89
	2024	41	578	3.36	21.85	63.81	37.59	13.83	137.09
Eastern Panhandle		300	4,581	3.18	24.69	57.57	31.33	16.25	129.84
2	2020	81	1,178	3.57	15.21	53.07	26.37	11.21	105.85
	2021	49	709	3.40	13.70	45.68	20.39	9.34	89.11
	2022	38	451	3.32	11.95	33.38	16.69	6.94	68.96
	2023	40	388	3.21	11.80	38.86	18.87	5.46	74.99
	2024	33	312	3.20	20.81	71.34	43.52	12.91	148.57
Mountains		241	3,038	3.41	14.52	48.55	24.33	9.63	97.03
3	2020	136	2,017	3.78	16.18	36.04	16.03	6.82	75.07
	2021	118	1,541	3.69	16.37	42.05	21.72	5.63	85.78
	2022	94	1,060	3.63	18.21	34.34	13.03	6.48	72.06
	2023	80	874	3.73	17.68	41.01	17.56	6.26	82.51
	2024	69	819	3.67	16.18	41.60	17.01	5.92	80.71
Southern		497	6,311	3.71	16.77	38.62	17.26	6.28	78.93
4	2020	91	1,438	3.54	19.67	49.56	20.39	9.09	98.71
	2021	73	1,037	3.52	23.92	44.60	21.97	8.84	99.33
	2022	73	875	3.69	28.28	47.36	25.58	10.93	112.16
	2023	58	910	3.78	33.11	54.50	23.78	11.36	122.74
	2024	55	886	3.57	28.22	56.19	23.13	9.59	117.13
Central		350	5,146	3.61	25.95	50.25	22.70	9.87	108.76
5	2020	101	1,466	3.55	21.26	48.27	23.28	9.35	102.16
	2021	134	1,758	3.52	23.82	47.52	26.66	7.56	105.55
	2022	101	1,213	3.53	26.74	59.31	28.14	7.51	121.70
	2023	96	1,244	3.59	31.50	54.61	27.21	8.79	122.10
	2024	81	1,026	3.48	33.63	62.89	34.33	9.58	140.42
Western		513	6,707	3.54	26.71	53.46	27.44	8.48	116.09
6	2020	62	818	3.64	19.12	46.22	21.63	8.96	95.92
	2021	59	971	3.49	19.83	51.46	25.29	9.15	105.73
	2022	57	800	3.50	25.42	50.38	20.77	10.94	107.51
	2023	52	769	3.61	23.44	42.20	18.51	8.46	92.60
	2024	37	585	3.62	21.86	48.68	21.96	8.59	101.10
Southwestern		267	3,943	3.57	21.81	47.89	21.77	9.24	100.71
Statewide		1,841	29,726	3.52	22.20	48.91	23.80	9.53	104.44

Table 3. Statewide observation rates for white-tailed deer as reported by West Virginia Bowhunter Survey cooperators, 1995 - 2024.

Year	Cooperators	Trips	Avg. Hours per Trip	Deer Seen per 100 Hours				Total
				Bucks	Does ¹	Fawns ^{1,2}	Unknown ^{1,2}	
1995	463	7,484	3.24	14.73	83.25	N/A	N/A	97.98
1996	330	6,077	3.30	15.62	87.15	N/A	N/A	102.77
1997	318	5,342	3.33	15.90	90.90	N/A	N/A	106.80
1998	505	8,290	3.25	17.58	79.43	N/A	N/A	97.02
1999	465	7,846	3.38	16.81	87.50	N/A	N/A	104.31
2000	493	8,164	3.42	19.12	73.45	N/A	N/A	92.57
2001	494	8,571	3.45	18.46	89.12	N/A	N/A	107.59
2002	409	7,553	3.39	18.70	97.62	N/A	N/A	116.31
2003	409	6,544	3.34	18.07	78.02	N/A	N/A	96.09
2004	416	6,639	3.38	17.51	76.22	N/A	N/A	93.72
2005	465	7,432	3.35	17.72	57.96	15.08	9.99	100.74
2006	386	5,623	3.45	19.42	46.21	25.35	14.03	105.01
2007	274	4,062	3.39	20.44	69.80	26.03	11.42	127.69
2008	253	3,889	3.32	24.69	55.71	33.70	13.64	127.75
2009	237	3,898	3.29	19.58	48.11	28.34	12.41	108.43
2010	223	3,489	3.33	22.19	50.65	25.44	12.00	110.27
2011	194	3,420	3.29	17.97	46.66	27.87	12.60	105.11
2012	177	2,867	3.34	22.66	48.82	25.33	13.89	110.69
2013	185	3,255	3.19	19.33	47.11	28.89	12.70	108.03
2014	177	2,965	3.28	20.49	39.57	19.75	13.28	93.09
2015	313	5,770	3.50	17.18	45.98	22.00	12.86	98.01
2016	383	6,547	3.35	19.29	49.88	24.35	12.01	105.53
2017	398	6,208	3.44	20.27	44.77	22.81	10.50	98.35
2018	368	5,116	3.42	20.38	51.05	23.07	9.41	103.90
2019	409	6,808	3.38	24.02	55.92	27.24	10.54	117.71
2020	446	8,063	3.57	18.57	46.17	21.51	9.44	95.69
2021	438	7,101	3.47	20.42	46.89	24.17	9.16	100.64
2022	356	5,348	3.50	23.60	48.55	23.26	9.77	105.19
2023	330	5,008	3.56	26.88	50.78	24.29	9.99	111.94
2024	271	4,206	3.52	24.83	55.80	27.70	9.48	117.81
Total/Average	10,585	173,585	3.39	19.39	64.32	24.21	11.13	104.45

Notes:

1: Until 2005, cooperators were instructed to include fawns and any unknown deer as 'Antlerless Deer'. These numbers are included in the 'Does' column until separated into 3 different categories in 2005.

2: Total/Average rates for fawns and unknown deer are calculated from observations since 2005.

Table 4. Wildlife species seen per 100 hours as reported by West Virginia Bowhunter Survey cooperators, 2024.

Region	County	Species Seen per 100 Hours									
		Squirrels	Turkeys	Grouse	Raccoons	Foxes	Bears	Rabbits	Coyotes	Bobcats	Elk
1	Berkeley	67.21	11.41	0.20	0.00	2.44	0.00	0.81	0.20	0.00	0.00
	Grant	59.41	18.82	0.00	0.59	0.29	0.00	3.53	0.88	0.00	0.00
	Hampshire	100.81	44.72	0.00	0.00	1.63	0.00	0.00	0.00	0.00	0.00
	Hardy	43.56	15.11	0.00	0.00	1.78	0.00	0.00	0.00	0.00	0.00
	Jefferson	94.29	19.59	0.00	1.63	1.63	0.00	1.63	0.00	0.00	0.00
	Mineral	146.53	13.20	0.00	3.96	1.32	4.62	0.66	7.92	0.00	0.00
	Morgan	73.02	41.67	0.00	0.40	0.00	0.40	0.00	0.79	0.00	0.00
	Pendleton	131.88	110.12	0.44	0.44	0.00	2.18	0.44	1.31	0.44	0.00
Eastern Panhandle Total		84.59	31.78	0.10	0.72	1.18	0.67	1.13	1.08	0.05	0.00
2	Greenbrier	93.48	19.83	2.27	1.70	0.00	2.27	0.00	0.00	0.57	0.00
	Pocahontas	61.16	26.79	3.12	2.68	0.00	1.34	0.89	0.45	0.00	0.00
	Randolph	39.67	21.96	1.18	0.71	0.00	2.36	0.24	0.24	0.00	0.00
	Tucker	5.23	40.52	1.31	0.00	1.31	0.00	0.00	0.00	0.00	0.00
	Webster	89.90	129.29	0.00	1.01	2.02	6.06	12.12	6.06	1.01	0.00
Mountains Total		56.33	34.72	1.70	1.30	0.30	2.30	1.50	0.80	0.20	0.00
3	Boone	73.57	15.00	0.36	0.00	0.00	2.50	1.43	1.43	0.00	0.00
	Clay	142.37	10.17	0.00	6.78	0.00	5.08	3.39	8.47	1.69	0.00
	Fayette	61.00	32.50	0.00	0.00	1.00	3.50	2.00	1.00	0.00	0.00
	Kanawha	94.12	78.56	0.00	1.14	0.00	0.00	0.76	0.00	0.00	0.00
	Logan	102.36	13.86	0.00	0.00	0.00	1.77	5.90	2.36	0.00	0.00
	McDowell	28.31	7.76	0.00	0.00	0.00	0.00	2.28	0.46	0.00	0.00
	Mercer	106.23	20.25	0.00	1.25	0.00	1.25	0.62	0.62	0.62	0.00
	Mingo	82.14	37.24	0.00	0.51	0.00	1.02	2.04	1.02	1.53	0.00
	Monroe	71.38	32.07	0.34	1.72	0.69	2.07	4.83	3.10	0.34	0.00
	Nicholas	18.40	19.39	0.49	1.23	0.25	4.66	0.00	0.98	0.49	0.00
	Raleigh	90.48	15.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Summers	37.14	92.38	0.00	0.95	0.00	0.00	3.81	0.00	0.00	0.00
	Wyoming	46.20	16.34	0.00	0.56	0.00	0.00	1.13	1.13	0.56	0.00
Southern Total		70.13	28.06	0.13	0.80	0.17	1.80	2.10	1.30	0.33	0.00
4	Barbour	73.89	33.33	0.00	0.00	0.00	4.44	0.56	0.00	0.00	0.00
	Braxton	124.08	7.55	0.00	0.00	0.00	3.67	1.22	0.20	0.00	0.00
	Harrison	87.24	99.32	0.00	6.46	3.06	3.23	8.33	5.10	8.33	0.00
	Lewis	69.23	63.89	0.00	0.64	0.00	0.43	1.28	0.85	0.43	0.00
	Marion	117.82	72.51	0.00	0.60	0.00	0.30	0.60	0.00	0.00	0.00
	Monongalia	53.25	28.14	0.43	0.43	0.87	0.00	0.87	1.30	0.00	0.00
	Preston	42.47	34.24	0.37	4.86	0.00	4.68	0.56	0.00	0.00	0.00
	Taylor	65.16	75.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Upshur	103.97	90.25	0.00	0.72	0.00	0.00	0.72	0.00	0.00	0.00
Central Total		82.01	55.15	0.09	2.25	0.63	2.31	2.21	1.20	1.61	0.00
5	Brooke	40.70	34.00	0.00	2.68	0.00	0.00	1.34	1.34	0.00	0.00
	Calhoun	75.61	0.00	0.00	7.32	0.00	0.00	0.00	0.00	0.00	0.00
	Doddridge	61.95	48.59	0.00	1.54	0.26	0.00	1.54	0.26	0.00	0.00
	Gilmer	72.92	4.25	0.00	0.00	0.00	0.00	0.00	1.06	0.00	0.00
	Hancock	61.76	78.75	0.00	2.83	1.13	0.00	1.13	0.57	0.00	0.00
	Marshall	78.19	50.67	0.00	1.68	6.54	1.85	2.52	0.17	0.50	0.00
	Ohio	61.59	12.46	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.00
	Pleasants	33.26	43.88	0.00	2.77	0.00	0.92	0.46	0.00	0.46	0.00
	Ritchie	126.18	102.51	0.00	4.18	0.28	0.84	0.56	0.56	0.00	0.00
	Tyler	115.17	0.00	0.00	0.56	0.00	0.00	6.18	0.00	0.00	0.00
	Wetzel	39.61	107.47	0.00	0.00	0.00	0.00	0.97	0.32	0.00	0.00
	Wirt	100.80	23.76	0.00	1.28	0.32	0.00	1.28	0.00	0.00	0.00
	Wood	146.29	3.07	0.00	1.02	1.02	0.00	6.14	4.09	0.00	0.51
Western Total		76.89	46.51	0.00	1.74	1.29	0.45	1.71	0.62	0.14	0.03
6	Cabell	66.44	24.91	0.00	2.77	0.00	0.00	0.00	0.00	0.00	0.00
	Jackson	53.58	15.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Lincoln	135.13	15.13	0.00	0.34	0.00	0.34	1.34	0.00	0.34	0.00
	Mason	68.27	46.63	0.00	1.44	0.00	0.00	2.40	0.00	0.48	0.00
	Putnam	110.16	48.31	0.00	2.65	0.56	0.70	1.12	0.42	0.28	0.00
	Roane	120.83	30.56	0.00	2.78	0.35	0.00	5.90	2.43	0.69	0.00
	Wayne	63.75	16.92	0.00	1.81	0.30	0.00	0.30	0.30	0.60	0.00
Southwestern Total		97.23	32.53	0.00	1.94	0.28	0.28	1.65	0.52	0.38	0.00
Statewide Total		79.14	39.88	0.18	1.52	0.70	1.25	1.80	0.94	0.52	0.01

Table 5. Wildlife species seen per 100 hours by region as reported by West Virginia Bowhunter Survey cooperators during the deer archery season, 2020 - 2024.

Region	Year	Species Seen per 100 Hours									
		Squirrels	Turkeys	Grouse	Raccoons	Foxes	Bears	Rabbits	Coyotes	Bobcats	Elk
1	2020	87.86	21.52	0.46	0.52	0.60	0.98	2.65	0.44	0.11	0.00
	2021	70.76	32.68	0.73	0.61	2.07	0.36	2.34	0.91	0.00	0.03
	2022	88.86	24.28	1.18	0.72	1.37	0.62	1.73	0.62	0.07	0.00
	2023	86.87	25.99	0.27	0.27	1.06	0.53	1.33	0.76	0.15	0.00
	2024	84.59	31.78	0.10	0.72	1.18	0.67	1.13	1.08	0.05	0.00
Eastern Panhandle Average		83.59	26.79	0.59	0.56	1.26	0.64	1.95	0.73	0.08	0.01
2	2020	51.36	13.95	1.21	1.31	0.36	4.09	2.38	1.02	0.31	0.00
	2021	51.41	16.15	1.16	0.21	0.12	3.16	1.04	0.62	0.25	0.04
	2022	50.73	11.75	1.74	1.00	0.07	1.34	0.33	1.54	0.73	0.00
	2023	53.87	17.42	2.09	0.72	0.24	2.65	0.32	0.16	0.48	0.00
	2024	56.33	34.72	1.70	1.30	0.30	2.30	1.50	0.80	0.20	0.00
Mountains Average		52.06	16.56	1.43	0.94	0.24	3.13	1.44	0.88	0.37	0.01
3	2020	88.48	30.80	0.68	1.47	0.39	2.62	2.03	1.68	0.28	0.01
	2021	95.00	17.69	0.74	0.88	0.28	1.76	1.81	1.00	0.28	0.25
	2022	95.60	22.24	0.86	0.81	0.70	1.14	0.99	1.07	0.47	0.03
	2023	72.90	22.10	0.86	1.04	0.09	2.61	0.80	0.92	0.15	0.12
	2024	70.13	28.06	0.13	0.80	0.17	1.80	2.10	1.30	0.33	0.00
Southern Average		86.71	24.65	0.68	1.07	0.35	2.06	1.64	1.26	0.30	0.09
4	2020	92.10	36.95	0.20	0.87	0.31	1.24	1.14	0.71	0.22	0.00
	2021	85.05	24.05	0.08	0.41	0.49	0.66	0.85	0.96	0.05	0.00
	2022	83.29	37.42	0.06	1.02	0.34	0.77	1.24	1.08	0.22	0.03
	2023	77.17	36.56	0.03	0.70	0.15	1.37	0.32	0.47	0.17	0.00
	2024	82.01	55.15	0.09	2.25	0.63	2.31	2.21	1.20	1.61	0.00
Central Average		84.70	37.52	0.10	1.01	0.38	1.25	1.13	0.86	0.41	0.01
5	2020	76.43	30.88	0.56	0.98	0.15	1.19	1.44	1.10	0.21	0.02
	2021	71.98	21.65	0.16	0.69	0.21	0.40	1.23	0.69	0.13	0.02
	2022	67.55	44.26	0.09	2.26	0.09	0.51	0.98	0.79	0.28	0.05
	2023	62.95	27.39	0.07	0.94	0.07	0.16	0.87	0.63	0.40	0.02
	2024	76.89	46.51	0.00	1.74	1.29	0.45	1.71	0.62	0.14	0.03
Western Average		71.19	32.59	0.19	1.24	0.31	0.56	1.24	0.78	0.23	0.03
6	2020	125.57	33.04	0.00	0.27	0.30	0.30	1.88	0.70	0.23	0.00
	2021	115.97	26.38	0.03	0.74	0.41	0.09	2.12	0.94	0.44	0.03
	2022	111.08	28.92	0.18	1.22	0.25	0.00	1.00	0.86	0.36	0.04
	2023	96.56	22.25	0.00	0.58	0.79	0.47	0.83	0.61	0.07	0.00
	2024	97.23	32.53	0.00	1.94	0.28	0.28	1.65	0.52	0.38	0.00
Southwestern Average		110.38	28.41	0.04	0.88	0.41	0.22	1.52	0.75	0.30	0.01
Statewide Average		82.16	28.73	0.44	0.99	0.47	1.24	1.47	0.90	0.28	0.03

Table 6. Wildlife species observed per 100 hours as reported by West Virginia Bowhunter Survey cooperators during the deer archery season, 1995 - 2024.

Year	Species Seen per 100 Hours									
	Squirrels	Turkeys	Grouse	Raccoons	Foxes	Bears	Rabbits ¹	Coyotes	Bobcats ²	Elk ³
1995	87.81	43.31	6.22	1.03	1.05	0.36	N/A	0.09	0.16	N/A
1996	84.46	33.38	3.52	0.83	0.95	0.32	1.15	0.13	N/A	N/A
1997	59.59	36.58	4.00	0.79	1.09	0.20	1.84	0.26	N/A	N/A
1998	70.94	29.02	3.53	1.17	1.20	0.54	1.84	0.30	N/A	N/A
1999	58.54	56.29	3.97	0.97	1.26	0.37	2.47	0.31	N/A	N/A
2000	59.71	34.98	3.22	0.65	0.71	0.34	1.90	0.33	N/A	N/A
2001	100.39	53.80	5.18	1.06	0.77	0.67	2.64	0.61	N/A	N/A
2002	71.96	43.68	3.28	0.87	0.79	1.13	3.35	0.41	N/A	N/A
2003	84.83	33.29	2.39	1.61	0.89	0.60	2.16	0.49	N/A	N/A
2004	52.07	36.47	2.47	0.94	0.88	0.67	1.70	0.58	N/A	N/A
2005	54.64	29.46	2.30	0.74	0.59	0.63	1.56	0.62	N/A	N/A
2006	89.18	31.64	1.86	0.87	0.62	0.86	1.27	0.59	N/A	N/A
2007	62.77	28.42	2.12	0.77	0.56	0.75	1.63	0.47	N/A	N/A
2008	78.39	34.59	1.71	0.92	0.43	0.54	1.47	0.61	N/A	N/A
2009	63.55	33.55	1.44	0.76	0.50	0.87	1.28	0.62	N/A	N/A
2010	75.53	26.11	1.30	0.74	0.41	0.51	0.89	0.70	N/A	N/A
2011	77.70	27.64	1.40	1.19	0.41	0.87	1.04	0.84	N/A	N/A
2012	96.15	36.75	1.09	1.04	0.50	0.86	1.18	1.82	N/A	N/A
2013	77.71	24.95	0.97	0.85	0.40	0.57	1.54	0.80	N/A	N/A
2014	75.53	33.31	0.77	0.49	0.37	0.58	1.00	1.00	N/A	N/A
2015	92.62	34.37	1.38	1.60	0.49	1.61	2.88	0.96	N/A	N/A
2016	74.54	44.08	1.19	2.63	0.73	1.51	2.43	1.01	N/A	N/A
2017	63.85	26.66	0.67	0.80	0.38	0.91	2.00	0.81	0.19	0.03
2018	93.01	37.13	0.54	1.50	0.59	1.06	1.66	0.84	0.22	0.27
2019	101.95	32.50	0.61	1.57	0.43	1.39	1.55	0.93	0.27	0.02
2020	85.28	28.49	0.55	1.00	0.35	1.88	1.88	1.05	0.23	0.01
2021	83.11	22.68	0.44	0.64	0.54	0.97	1.56	0.86	0.19	0.07
2022	84.67	30.40	0.57	1.24	0.49	0.69	1.10	0.94	0.32	0.03
2023	75.65	26.49	0.36	0.74	0.36	1.12	0.77	0.63	0.23	0.03
2024	79.14	39.88	0.18	1.52	0.70	1.25	1.80	0.94	0.52	0.01
Total/Average	77.02	35.17	2.19	1.07	0.69	0.83	1.82	0.64	0.25	0.05

Notes:

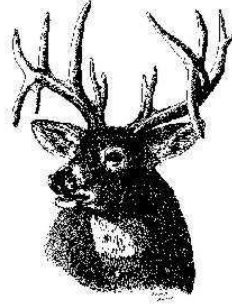
1: Rabbit observations were not requested until the second year of the survey (1996). Total/Average rates calculated from observations since 1996.

2: Bobcat observations were requested on the first Bowhunter Survey, but were replaced the following year by rabbits. In 2017, bobcat observations were added back to the survey. Total/Average rates calculated from 1995 observations and all observations since 2017.

3: Elk observations were not requested until 2017. Total/Average rates calculated from observations since 2017.

APPENDIX

NOTICE



You must purchase your RB stamps BEFORE hunting season begins on September 28, 2024.

Hunting Regulations:

A bag limit of two deer may be taken per day during any deer season, but only one antlered buck may be taken in a day. You may check your harvested deer using the Electronic License System by phone, internet or visit a licensing agent. See Hunting and Trapping Regulations Summary for further details.

Hunters need to check the regulations regarding harvesting an antlerless deer in some counties before harvesting a second buck. There were changes to this regulation this year.

THANKS FOR YOUR HELP!!

Place Stamp Here

BOWHUNTER SURVEY
WV-DNR
PO BOX 67
ELKINS WV 26241

INSTRUCTIONS

2024 BOWHUNTER SURVEY

1. Post your survey form in a convenient spot such as your refrigerator door, mud room or garage entrance, etc., where you'll see it when you return from hunting.
2. For the appropriate date, enter the **number of hours hunted** in the morning (**am**) or afternoon (**pm**) or both if you hunted both am and pm (see example).
3. List the **county** where you hunted. If you hunted in a different location in the morning and afternoon, record the county you hunted each half of the day (see example).
4. Record the **ownership of the land** where you hunted and whether land was **posted, yes or no**. If you hunted in different locations in the morning and afternoon, record the land ownership and posted vs. Not posted for each half of the day (see example).
5. Enter the dominant **land type** where you hunted. If you hunted in the woods, enter 'w' for woods. If you hunted in a field, enter 'f' for fields. If you hunted along the edge of a field (clearing, opening), enter 'e' for edge. If you were hunting in an Urban setting, enter "u" for urban.
6. If you saw no animals or birds while hunting, **simply** leave the spaces blank or enter 0.
7. If you observed any of the animals and birds listed, enter the **number of animals or birds seen** under the animals or birds column (see example). Do not record second or third sightings of the same animal or bird on the same hunt as more than one animal or bird sighted; if you see what you feel is the same animal or bird on different hunts, record it for each hunt.
8. For the deer you see, please record the **number of spike and fork antlered bucks, adult does and fawns**. If you are not **completely sure** of a deer's sex, record it as an unknown. If you killed a deer, **record the number of deer killed by sex. A forked antlered deer will have at least two points on one antler.**
9. Enter the type of weapon used while hunting. Enter "L" for long bow, "C" for compound bow, "R" for a recurve and "X" for crossbow.
10. At the end of the survey period or if you stop hunting before Buck Firearms Season, return the daily record form by taping the folded forms and attaching a stamp where indicated.

THANKS FOR YOUR HELP!!

2024 WEST VIRGINIA BOWHUNTER SURVEY

1. How many years have you hunted deer with a bow? _____ years.
2. What is your zip code? _____
3. Please enter your DNR ID number. _____
4. What other West Virginia deer hunting seasons did you participate in during fall 2024? Circle all that apply
Antlerless gun Buck gun Muzzleloader Heritage Urban Special/State Park Youth/Class Q/Class XS
5. Is the deer population in the area you hunt most (circle)? 1. Increasing 2. Decreasing 3. Constant
List the County _____
6. Compared to last year, were deer racks this year (circle)? 1. Smaller 2. Larger 3. About the same
List the County _____
7. Is the oak mast (acorns) this year in the area you hunt (circle)? 1. Abundant 2. Common 3. Scarce
List County _____
8. Did you pass up legal opportunities to harvest an antlered buck in the 2024 West Virginia archery/crossbow season ?
1. Yes 2. No
9. If question 8 is Yes, why did you pass up the opportunity?
Antlers not big enough ____ Deer not old enough ____ Wanted to save buck tags ____ Other _____
10. How many deer have you killed in your lifetime during the West Virginia archery seasons? _____
11. Did the reduction in the annual antlered bag limit impact your purchase of extra RB, RG or RM stamps?
1. Yes 2. No
12. If yes to question 11, what stamps were impacted (circle all that apply)?
1. RB/RRB 2. RG/RRG 3. RM/RRM
13. Do you plant food plots specifically for deer? 1. Yes 2. No
14. If yes to question 13, did you conduct a soil sample before planting? 1. Yes 2. No
15. Do you use any scents while hunting? 1. Yes 2. No If yes, circle all that apply.
Natural Doe Urine Synthetic Doe Urine Cover Scent (e.g. fox, raccoon)
Food Scent (e.g. apple, acorn, etc.) Other _____
16. Once you have killed a deer, how do you prepare it for your table?
1. Personally process the deer 2. Take the deer to a processor
If the deer was taken to a processor, what was the cost per deer for processing (excluding the making of speciality meats like summer sausage, jerky, etc.)? _____
17. Remarks or observations (please include unusual experiences, your opinion on hunting season regulations, weather, etc.)

18. Please list the name and address of a friend or relative who might want to participate in this survey next year:

PLEASE RETURN BY DECEMBER 31

PLEASE RETURN BY DECEMBER 31

[illegible]

PLEASE RETURN BY DECEMBER 31

PLEASE RETURN BY DECEMBER 31

Interested in other research going
on at the WVDNR?



<https://arcg.is/q9DT5>

WVDNR Deer Project



<https://arcg.is/0aW8X41>

CWD in WV



<https://arcg.is/1GL14v0>

Spring Gobbler Survey



WVdnr.gov

 [dnrwv](https://www.instagram.com/dnrwv)

 [WildlifeWV](https://www.facebook.com/WildlifeWV)

 [wvdnr](https://twitter.com/wvdnr)

almost heaven



Your purchase of hunting equipment
supports Wildlife Restoration

WEST VIRGINIA

DNR | **WILDLIFE
RESOURCES**

112 California Avenue
Charleston, WV 25305
304-558-6200

Bulletin 25-03