

MARYLAND DEPARTMENT OF NATURAL RESOURCES
WILDLIFE & HERITAGE SERVICE

2012-2013



**MARYLAND ANNUAL
DEER REPORT**

This publication of the
Maryland Department of Natural Resources, Wildlife and Heritage Service
was written and compiled by the Deer Project Staff.

Brian Eyler, Deer Project Leader
George Timko, Assistant Deer Project Leader

INTRODUCTION

The 2012-2013 Maryland deer season has come and gone and many hunters are already focusing on the 2013-2014 season. The past season proved challenging to many hunters as deer were not moving as they normally do and were not found consistently in their usual haunts. Even so, most hunters were successful in adding venison to the freezer and maybe taking that once in a lifetime buck to hang on the wall. The Department of Natural Resources (DNR) would again like to thank all deer hunters in Maryland for their continued interest in deer hunting and aiding the Department in effectively managing the deer population for all citizens of the state.

2012-2013 SEASON

The 2012-2013 deer harvest declined nearly 11% from 98,029 in 2011-2012 to 87,541 this past season. The decline was most likely the result of a combination of factors, including decreased hunter effort, a bumper crop of acorns, mortality due to hemorrhagic disease in select areas, and overall fewer deer on the landscape as a result of the four previous record harvest years (two of which were over 100,000). With the recovering economy, it is likely that hunter effort will remain lower and as a result, the harvest will also remain lower for the foreseeable future. However, the deer population remains strong and will continue to provide prime opportunities for Maryland deer hunters in the years to come.

CHRONIC WASTING DISEASE

DNR sampled 278 deer during the 2012-2013 season in the Allegany and western Washington County area and did not detect Chronic Wasting Disease (CWD) in any of the samples. CWD was

first detected in Maryland in February 2011. A hunter in Allegany County reported taking the yearling buck in November 2010 in Green Ridge State Forest, close to where CWD is present in West Virginia. Although CWD was not detected in the samples this year, the disease is still present in West Virginia where it will remain a possible source of infection for Maryland deer in future years. To date, DNR has tested nearly 7,800 Maryland hunter-harvested deer for CWD.

CWD is a naturally occurring disease of the brain and nervous system that causes death in cervids. CWD is classified as a transmissible spongiform encephalopathy (TSE) and attacks the brain of cervids, producing small lesions that eventually result in death. CWD historically was a disease of the West, but since 2001 it has been detected east of the Mississippi River in Illinois, Maryland, New York, Pennsylvania, Virginia, West Virginia and Wisconsin. Currently 23 states and 2 Canadian provinces have documented CWD in their deer, elk or moose populations.

Concerns over CWD should not stop hunters from enjoying the hunting season or any venison they may acquire. CWD has not been shown to be transmissible to humans. However, it is recommended that hunters field-dressing or butchering deer should take the same precautions as they might to protect against other pathogens or diseases. Additional information on the proper handling of harvested deer and CWD management can be found on the following pages.

THE DEER PROJECT

The DNR Deer Project is responsible for managing native white-tailed deer and exotic sika deer. The Deer Project utilizes broad-based deer management techniques under guidance of the current 10-year deer management plan. The current 2009-2018 plan has five major goals:

- Population Goal: Use diverse and progressive methods to ensure the long-term viability of Maryland's white-tailed deer population through comprehensive research, efficient monitoring, public outreach, trained staff and effective management.
- Education Goal: Educate Maryland citizens on all aspects of deer biology, including management tools, disease issues, economic aspects and recreational opportunities.
- Recreation Goal: Provide the opportunity for all citizens to safely, fairly and ethically enjoy diverse deer-related recreational experiences and traditions consistent with established deer population trend goals.
- Damage Goal: Identify and actively address the negative impacts the deer population has on human interests and the ecosystem in a manner



THE PROPER HANDLING OF HARVESTED DEER AND CWD MANAGEMENT

The following common-sense precautionary measures are recommended for the safe handling, field-dressing, and home processing of venison:

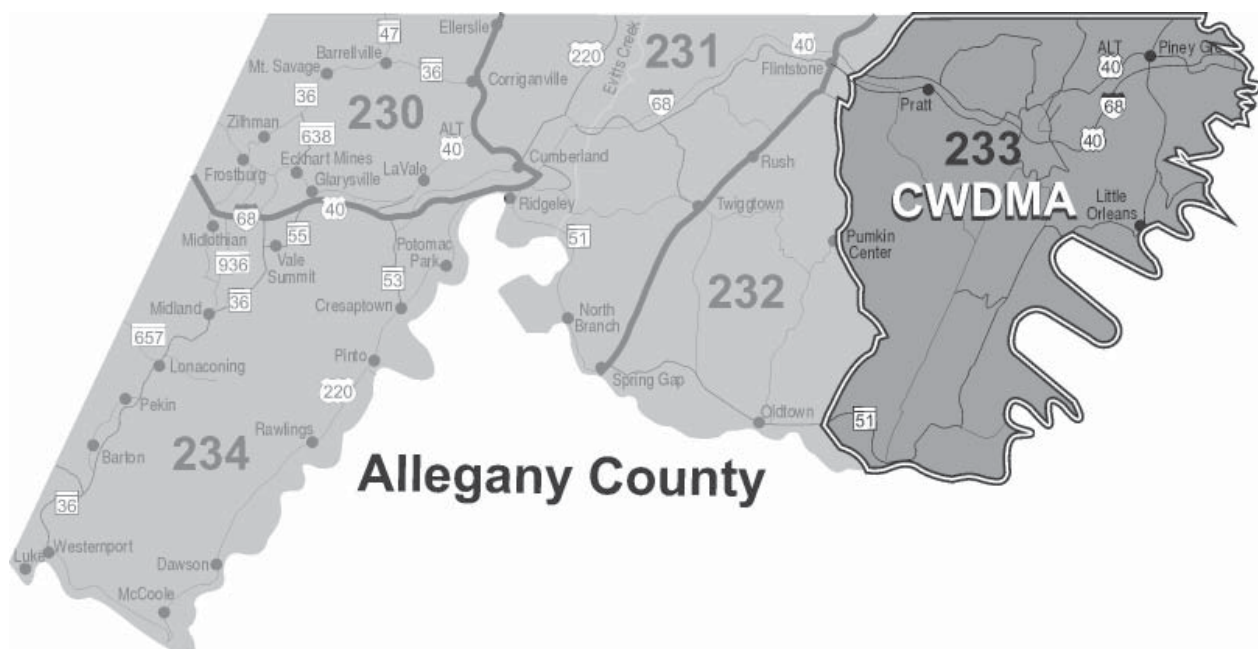
- Avoid shooting or handling a deer that appears sick.
- Wear latex or rubber gloves when field-dressing or butchering deer.
- Remove all internal organs.
- Remove the meat from the bones and spinal column if home processing a deer.
- Do not use household knives or utensils when field-dressing or home processing a deer.
- Avoid cutting through bones or the spinal column (backbone).
- Never eat a deer's brain, eyeballs, spinal cord, spleen, or lymph nodes.
- If you saw off antlers or through a bone, or if you sever the spinal column with a knife, be sure to disinfect these tools prior to using them for the butchering or removal of meat.
- Remove all fat, membranes and connective tissue from the meat. Note that normal field-dressing and trimming of fat from meat will remove lymph nodes.
- Always wash hands and instruments thoroughly after dressing and processing game meat.
- Use a 50/50 solution of household chlorine bleach and water to disinfect tools and work surfaces. Wipe down counters and let them dry; soak knives for one hour.

CWD MANAGEMENT

Due to the detection of CWD in Allegany County, DNR has implemented a number of measures that are intended to prevent the unintentional spread of CWD to other locations in Maryland. The changes outlined below apply only to the CWD Management Area (CWDMA), which is defined as Habitat Management Unit 233 in Allegany County.

(1) Whole deer carcasses or deer parts cannot be transported out of the CWDMA, except for:

- Meat with no part of the spinal column, backbone, or head attached.
- Cleaned hide with no head attached.
- Skull plate cleaned of all meat and brain tissue.
- Antlers with no meat or soft tissue attached.
- Finished taxidermy mounts or tanned hides.
- Whole deer carcasses or parts being transported directly to approved meat processors, taxidermists, or lined landfills within Allegany County.
- Deer leg quarters with no portion of the spinal column attached.



Dumpsters will be available at select locations to dispose of carcass parts before leaving the CWDMA. Please consult the DNR website (www.dnr.maryland.gov) or contact the DNR office (301-842-2702) for a list of dumpster locations.

(2) Baiting and feeding of deer is prohibited in the CWDMA on both private and public land.

Bait and feed include, but are not limited to, corn, other grains, pelleted foods and mineral supplements and salt blocks that act as attractants to deer. Hunting over food plots or areas where normal agricultural activities have occurred is not considered baiting or feeding.

Please check the Department's website (www.dnr.maryland.gov) for updates on CWD surveillance and management in Maryland. Hunter assistance and cooperation is essential to the Department's efforts to monitor and manage CWD in Maryland.

CARCASS IMPORTATION BAN

The primary objective in the management of CWD is to prevent its spread into new areas. One possible mode of disease transmission is by the movement and disposal of infected carcasses. In an effort to minimize the risk for disease spread, Maryland, along with many other states, has adopted regulations that prohibit the importation of whole carcasses and certain carcass parts of deer, moose and elk harvested from states that have CWD.

A person may bring only the following parts of a dead deer, elk, or moose into Maryland from another state or province's designated CWD containment, surveillance, or management area:

- Meat with no part of the spinal column or head attached.
- Meat without backbone.
- Cleaned hide with no head attached.
- Skull plate cleaned of all meat and brain tissue.
- Antlers with no meat or soft tissue attached.
- Upper canine teeth, also known as buglers, whistlers, or ivories.
- Finished taxidermy mounts or tanned hides.

The Department will maintain a list of CWD positive states/provinces and contact numbers to call to confirm the containment areas in those areas that are subject to these restrictions. The list is available on the DNR website (http://www.dnr.maryland.gov/wildlife/Hunt_Trap/deer/disease/cwdinformation.asp) or by calling 410-260-8540.

Any person who imports or possesses a cervid carcass or part of a cervid that was tested for chronic wasting disease in another state or province and is notified that the cervid tested positive, must report the test results to the Maryland Department of Natural Resources within 24 hours of receiving such notification- by telephone at 301-842-0332; or by FAX 301-842-1026; or by email to beyler@dnr.state.md.us. Travelers may pass through Maryland with cervid carcasses, provided that no parts are disposed of or remain in the state.

If you hunt deer, elk, moose or other cervids in other states and/or provinces, particularly those in which CWD has been detected, check with the respective fish and wildlife agencies regarding special regulations or specific advice for hunters. Also check with your home state fish and wildlife agency to ensure that animals lawfully killed elsewhere may be imported and possessed in your state. Additional information can be found at the CWD alliance website www.cwd-info.org/ and the Maryland DNR website www.dnr.maryland.gov.

TAKING DEER CARCASSES OUT OF MARYLAND

Now that Maryland is considered a CWD positive state, deer hunters must follow carcass importation regulations in other states when they transport a deer carcass out of Maryland (see <http://www.cwd-info.org/index.php/fuseaction/policy.regulationsMap>). The surrounding states of Delaware, Pennsylvania, Virginia, and West Virginia each have specific regulations as to whether they will allow whole deer carcasses or only parts of carcasses to enter from Maryland. Likewise, the regulations for each of these states vary as to whether they apply to deer from anywhere in Maryland, or just to deer taken within the CWDMA. Hunters are strongly encouraged to check state regulations before transporting deer carcasses.

consistent with the long term viability of the deer population in Maryland.

- Operational Resources Goal: Ensure that all necessary resources are available to support the proper management of white-tailed deer in Maryland.

The 2009-2018 deer plan is available for download at http://www.dnr.maryland.gov/wildlife/Hunt_Trapping/pdfs/2009-2018MarylandWTDDeerPlan.pdf.

During the last couple of decades, the primary focus of the Deer Project has been to slow and ultimately reduce a rapidly growing deer population. While hunting remains the most cost-effective and efficient population control mechanism available in most Maryland landscapes, continued urbanization has necessitated the development and use of non-lethal techniques where hunting is not practical or acceptable. Therefore, the Deer Project employs a blend of hunting-related deer management methods and proven non-lethal deer management techniques to manage deer.

To remain up-to-date on current deer management techniques and methods, Maryland Deer Project staff are members of the Northeast Deer Technical Committee and Southeast Deer Technical Committee. Staff routinely meet and share information with deer biologists and managers from other Eastern states and Canadian provinces as they relate to current deer management and biology.

MARYLAND PUBLIC ATTITUDES REGARDING DEER MANAGEMENT

The majority of the Maryland public recognizes the value of deer hunting as an effective management tool. A 2007 survey by Responsive Management found that 36% of the Maryland general public were strongly in favor of deer hunting, 25% were somewhat in favor, 19% were neutral or had no opinion, 10% were somewhat opposed to deer hunting, and 10% were strongly opposed. Similarly, 76% of the general public agreed or strongly agreed that deer should be hunted to maintain a healthy population. The survey found that 44% of the general public felt population control was the most important reason for deer hunting, 24% thought hunting for the meat was most important, 14% for sport/recreation, 10% no good reason, 5% don't know, and 1% thought to be with family/friends was most important.

Overall, when asked how they prefer the deer population to be managed in their area, the top three responses by the Maryland general public were: 45% for legal, recreational hunting, 33% for birth control/immunocontraception, and 16% indicated they preferred professional removal via sharpshooters.

DEER HUNTING ECONOMICS

Along with the positive recreational benefits and population management that deer hunting provides, it also provides significant economic benefits to Maryland. A 2011 survey by the U.S. Fish & Wildlife Service found that deer hunting generated \$221 million annually for the Maryland economy (retail sales plus multiplier effect). Deer hunting in Maryland supports over 2,400 jobs and generates \$69 million in salaries, wages, and business owner's income, \$17.5 million in state and local tax revenue, and \$19 million in federal tax revenue.

WHITE-TAILED DEER HISTORY

Prior to the arrival of European immigrants, white-tailed deer inhabited all of Maryland and eastern North America. Native Americans hunted deer during all seasons. In Maryland, wolves and mountain lions preyed on all age classes and sexes of white-tailed deer.

The first European settlers in Maryland found ample white-tailed deer populations. Deer meat and hides provided them with food and clothing. Venison recipes from those early settlers have been passed down through generations.

As the colony prospered and human populations multiplied, unregulated market hunting and the destruction of habitat (deforestation) caused deer populations to decline drastically throughout the 1700s. Market hunters sold deer meat to colonists and shipped deer hides to England's booming leather industry. With settlements expanding across the state during the 1800s, deer populations continued to drop, and mountain lions and wolves were exterminated. By 1900, white-tailed deer only inhabited limited sections of far western Maryland.

Since the birth of modern wildlife management in the early 1900s, Maryland's deer population has expanded dramatically to fill all available habitats. State wildlife biologists, working hand-in-hand with private citizens, re-established white-tailed deer in all counties in the state. Some native deer were trapped in western Maryland and released into unoccupied habitat elsewhere. A few deer were obtained from other states and released across Maryland. The majority of deer relocated after World War II came from a large population inhabiting Aberdeen Proving Grounds in Harford County. Deer relocation efforts ended in the early 1960s when most areas of the state supported a self-sustaining deer herd.

Early hunting seasons of the 1930s and 1940s prohibited the taking of antlerless deer in order to allow for the continued growth and expansion of relocated deer herds. As deer numbers climbed and all deer habitat became populated, deer

seasons and bag limits became more liberal. Across Maryland, current deer seasons and bag limits encourage the harvest of antlerless deer in order to manage deer populations. At the same time these regulations encourage hunters to be more selective when harvesting an antlered buck.

Since white-tailed deer thrive in habitat that is composed of woods and openings, the expansion of housing developments into forests or onto farms provides excellent whitetail habitat. Streets and home sites created in a wooded area produce habitat preferred by white-tailed deer. Open farm fields become better deer habitat as new homeowners plant trees and shrubs on their home site. Deer populations have escalated in these suburban landscapes where exceptional habitat is available and hunting becomes limited.

SIKA DEER HISTORY

Maryland sika deer are originally from Yakushima Island in southern Japan and can be found in the marshes, swamps, wet woodlands, and agricultural fields in portions of the lower Eastern Shore. Populations exist mainly in Dorchester County and on Assateague Island in Worcester County. However, harvest data and reported sightings indicate that sika deer are slowly expanding into similar but more limited marshy habitat in portions of Wicomico, Caroline, and Somerset counties.

Sika deer became established on the lower Eastern Shore after being released by Clement Henry on James Island (Dorchester County) and by Dr. Charles Law on Assateague Island (Worcester County) during the early 1900s. Exactly how they initially made their way from Japan to the Eastern Shore is unknown. The small number of sika deer in the original stock (approximately six individuals) has resulted in relatively low genetic variability within the population today. However, Maryland sika deer display no ill effects from the small founder population and appear as healthy or healthier than native white-tailed deer. Currently, DNR's sika deer management goal is to maintain this exotic species at current levels so that hunting opportunities are balanced with agricultural depredation and whitetail competition issues across the lower Eastern Shore.

Sika deer hunting is very popular in Dorchester County and on Assateague Island. Nonresidents and hunters from other areas of Maryland now travel to the lower Eastern Shore with hopes of taking a trophy sika stag with six points. Professional guide services are available that cater exclusively to sika deer hunters. Recent survey figures indicate that approximately 5,000 hunters annually pursue sika deer for over 35,000 hunter days per year.

Past biological data collected by DNR staff indicate that the average field-dressed weight of a 1.5 year-old male sika deer averages 53 pounds, while 3.5+ year-old males top 80 pounds. Sika stags that were 3.5+ years of age averaged 5.5 antler points, while 2.5 year-old deer had 4.1 points. Field-dressed yearling (1.5 years old) females averaged 45 pounds with 3.5+ year-old females weighing about 60 pounds.

Sika deer tend to use different habitats than native white-tailed deer that share the same area. Although home range sizes are similar between the two species, sika deer use forested wetlands, marshes, and the interface between these two habitats much more than white-tailed deer. Sika



deer do not appear to rely on agricultural lands to the extent that white-tailed deer do. It is unknown whether sika deer prefer the forested wetlands and marshes of Dorchester County, or if competing white-tailed deer relegate them there.

Previous research directed by DNR confirmed that sika deer have a lower annual reproductive output than white-tailed deer. Sika females tend to bear a single calf while whitetail females over 1.5 years old frequently bear two fawns. DNR's research found that about 25% of sika female fawns were pregnant while up to 50% of white-tailed female fawns had bred. However, sika deer tend to be longer-lived than white-tailed deer, and probably produce as many, or more, calves in their lifetime as do female white-tailed deer. Tagged individuals from previous research studies have

been harvested or observed 10+ years after they were initially captured. Numerous sika deer aged by DNR staff often have teeth worn below the gum line indicating significant age. One sika female was aged at 20+ years using the cementum annuli aging technique. The longer life span of sika deer may result from their use of habitat that is more difficult to hunt, thus, not as many are harvested each year as compared to white-tailed deer.

As more information is collected on sika deer in Maryland, it becomes apparent that more research is needed to understand their life history traits and the role they play in the ecosystem. University of Delaware has conducted recent studies on sika deer and are continuing to explore additional research opportunities including how sika deer and white-tailed deer allocate resources.

RESULTS OF LEGISLATIVE CHANGES ENACTED FOR THE 2012-2013 DEER SEASON

Numerous legislative and regulatory changes concerning deer hunting took effect for the 2012-2013 Maryland deer season. Legislatively, Sunday deer hunting opportunities were expanded in Caroline, Harford, Somerset, and Worcester counties, and the archery safety zone was decreased from 150 yards to 50 yards in Carroll County. Sunday hunting continues to grow in popularity and the added days for 2012-2013 provided important additional opportunities for hunters to harvest deer. A total of 1,271 deer were taken on the Sundays open for deer hunting in the four counties mentioned above.

It is difficult to determine the results of the reduction in the archery safety zone in Carroll County from 150 yards to 50 yards. However, it no doubt provided additional access for archery hunting in some places in the county. That being said, the Department encourages hunters to consider the likely recovery distance for deer shot with archery equipment and to be cognizant of adjacent home owners and landowners.

A number of regulatory changes also went into effect for the 2012-2013 deer season and included:

- Establishing a statewide antlered bag limit of one buck per weapon season with one bonus buck available in Region B;
- Changing the Region B archery antlerless bag limit to unlimited;
- Opening archery season the Friday after Labor Day (September 7);
- Requiring archery hunters to wear fluorescent orange in Garrett and Allegany counties when bear season is open;
- Allowing cocked but unloaded crossbows to be placed in or on vehicles;
- Allowing hunters who harvest a deer in the Chronic Wasting Disease Management Area to

take whole deer leg quarters from that area if no portion of the spinal cord is attached, and allowing deer carcasses or parts from the disease management area to be taken to approved taxidermists.

Several of these regulations were enacted either for safety reasons (wearing fluorescent orange during bear season) or to provide additional convenience for hunters (not having to uncock a crossbow for transport and allowing whole deer quarters to be removed from the CWD zone). Regulations pertaining to season and bag limit changes will need to be evaluated for several more years to determine their overall effect.

LEGISLATIVE CHANGES FOR THE COMING 2013-2014 SEASON

Legislation passed during the 2013 General Assembly created several changes for deer hunters in Maryland and include:

- Additional Sunday hunting opportunities have been added for deer hunting on private land only in Calvert, Caroline, Carroll, Charles, Harford, Queen Anne's, Somerset, St. Mary's and Worcester counties;
- The safety zone for archery hunters has been reduced to 100 yards in Harford County;
- It is illegal to discharge a firearm within 300 yards of a school while hunting. This prohibition applies during school hours or when the building is occupied. This safety zone does not apply to colleges, universities, or home schools.

Additional information can be found in the 2013-2014 Guide to Hunting and Trapping that comes with the hunting license.

2012-2013 DEER HARVEST

Maryland deer hunters harvested 87,541 deer in 2012-2013, an 11% decline from the 98,029 deer reported in 2011-2012 (Table 1, Figure 1). The harvest was comprised of 30,493 antlered deer and 57,048 antlerless deer (Figure 2). The antlerless harvest included 47,400 does and 9,648 button bucks (Figure 3). The antlered harvest decreased 11% while the antlerless harvest decreased 10% compared to the 2011-2012 season.

In Deer Management Region A (Garrett, Allegany, and western Washington counties), hunters reported taking 8,675 deer this year, a 16% decrease from the 10,358 deer harvested in 2011-2012. The antlered harvest decreased 14% from 5,827 deer last year to 5,043 this year, while the antlerless harvest decreased 20% from 4,531 to 3,632 deer.

The reported harvest in the remainder of the state (Region B) declined 10% from 87,671 deer last year to 78,866 deer this year. The antlered harvest decreased 11% from 28,589 deer to 25,450 deer and the antlerless harvest decreased 10% from

Table 1
Maryland Reported Antlered and Antlerless Deer Harvest for the
Archery, Firearm, and Muzzleloader Hunting Seasons by County, 2012-2013

COUNTY	ARCHERY			FIREARMS			MUZZLELOADER			TOTAL		
	Antlered	Antlerless	SubTotal	Antlered	Antlerless	SubTotal	Antlered	Antlerless	SubTotal	Antlered	Antlerless	TOTAL
Allegany	400	322	722	1000	611	1611	395	347	742	1795	1280	3075
Anne Arundel	415	873	1288	324	705	1029	116	349	465	855	1927	2782
Baltimore	971	2199	3170	588	1276	1864	261	696	957	1820	4171	5991
Calvert	233	404	637	225	538	763	100	238	338	558	1180	1738
Caroline												
Whitetail	161	391	552	349	959	1308	110	390	500	620	1740	2360
Sika	1	0	1	1	3	4	0	0	0	2	3	5
Carroll	637	1112	1749	1032	1934	2966	277	587	864	1946	3633	5579
Cecil	387	715	1102	558	1135	1693	149	351	500	1094	2201	3295
Charles	429	893	1322	518	1107	1625	219	437	656	1166	2437	3603
Dorchester												
Whitetail	167	289	456	517	1239	1756	148	348	496	832	1876	2708
Sika	255	307	562	511	692	1203	307	227	534	1073	1226	2299
Frederick	768	1249	2017	1447	2761	4208	445	964	1409	2660	4974	7634
Garrett	588	506	1094	1328	861	2189	408	444	852	2324	1811	4135
Harford	476	981	1457	455	1057	1512	170	435	605	1101	2473	3574
Aberdeen P.G.	84	243	327	53	84	137	27	83	110	164	410	574
Howard	410	927	1337	293	732	1025	127	302	429	830	1961	2791
Kent	317	478	795	583	1405	1988	232	450	682	1132	2333	3465
Montgomery	784	1549	2333	685	1698	2383	277	605	882	1746	3852	5598
Prince George's	350	599	949	342	757	1099	169	314	483	861	1670	2531
Queen Anne's	303	561	864	583	1495	2078	205	529	734	1091	2585	3676
St. Mary's	339	627	966	425	777	1202	170	344	514	934	1748	2682
Somerset												
Whitetail	114	205	319	448	1052	1500	94	290	384	656	1547	2203
Sika				1	1	2	1	1	2	2	2	4
Talbot	222	424	646	440	1161	1601	159	352	511	821	1937	2758
Washington	612	865	1477	1428	1796	3224	440	621	1061	2480	3282	5762
Wicomico												
Whitetail	156	393	549	566	1411	1977	146	430	576	868	2234	3102
Sika	6	4	10	21	15	36	2	5	7	29	24	53
Worcester												
Whitetail	179	321	500	688	1783	2471	145	397	542	1012	2501	3513
Sika	7	8	15	13	21	34	1	1	2	21	30	51
Total	9771	17445	27216	15422	29066	44488	5300	10537	15837	30493	57048	87541

Figure 1

Maryland Reported Deer Harvest for the Archery, Firearm, and Muzzleloader Seasons, 2003-2004 through 2012-2013

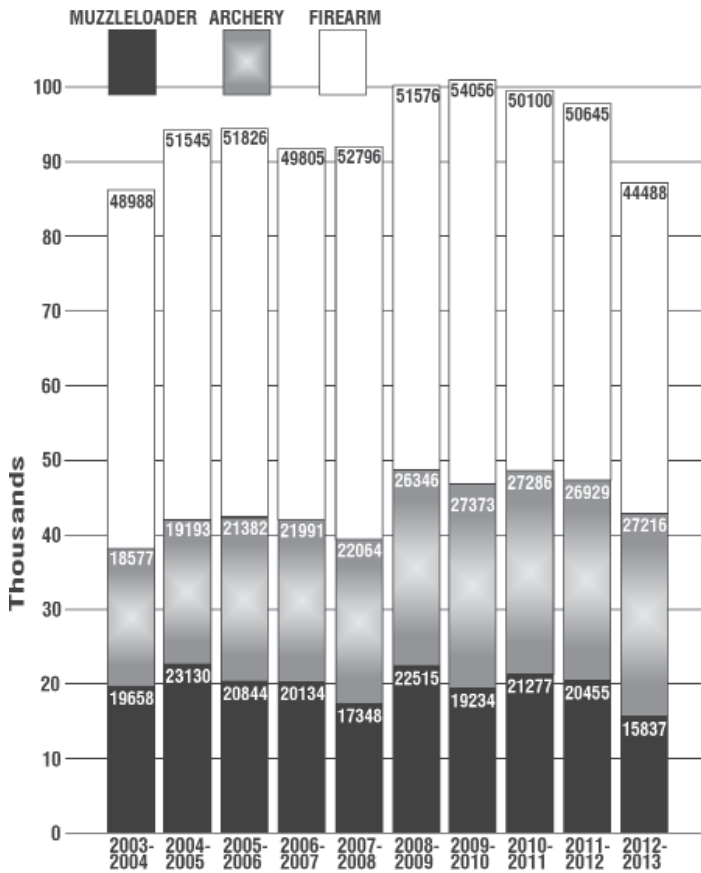


Figure 2

Maryland Reported Antlered and Antlerless Deer Harvest, 2003-2004 through 2012-2013

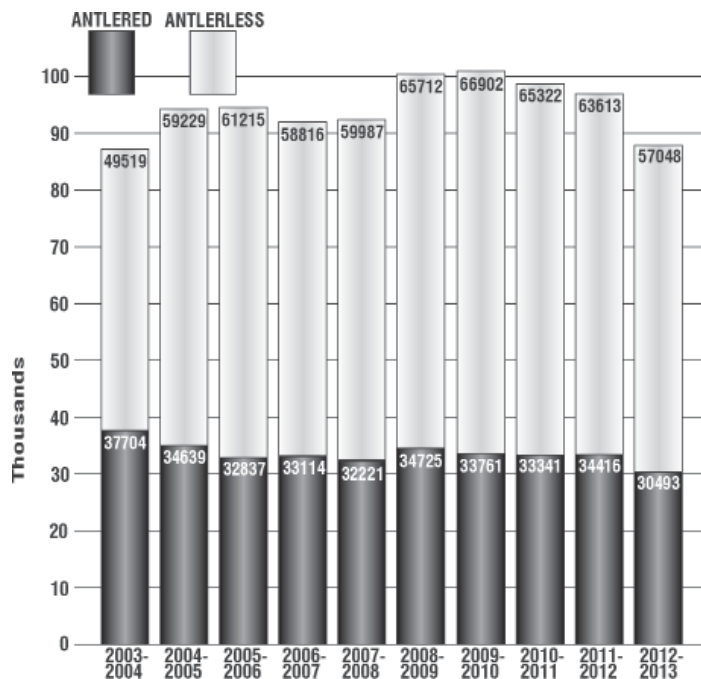


Figure 3

Maryland Reported Buttonbuck and Doe Harvest, 2003-2004 through 2012-2013

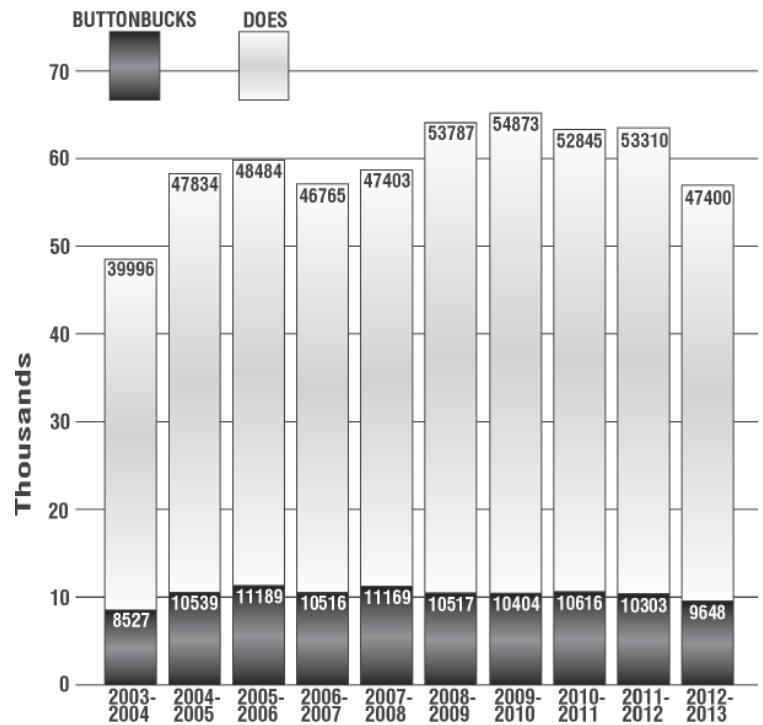


Figure 4

Maryland Reported Crossbow and Vertical Bow Deer Harvest during the Designated Archery Season, 2003-2004 through 2012-2013

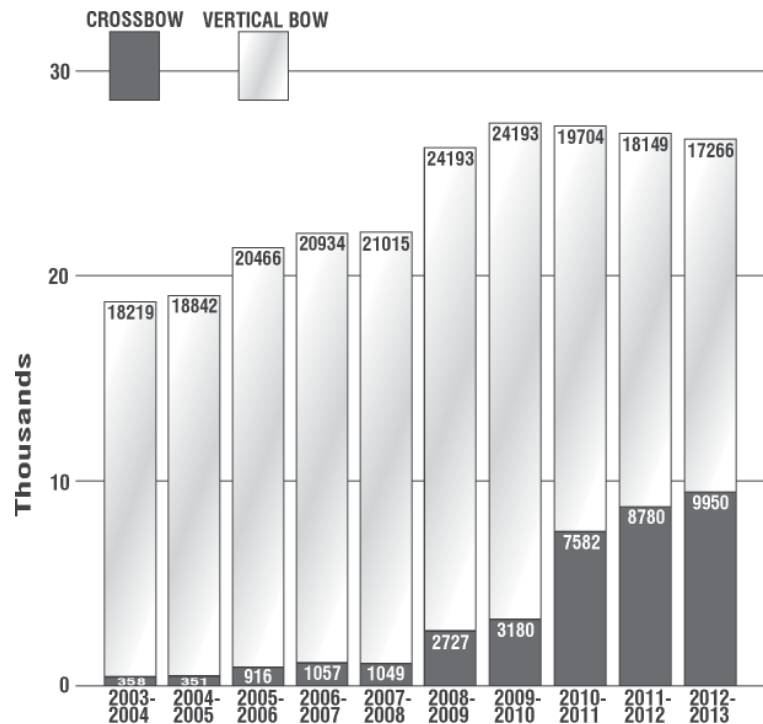


Table 2
Maryland Reported Sunday Hunting Deer Harvest
by County, 2012-2013

COUNTY	Bow			Firearms			Junior Hunt			Grand Total
	Antlered	Antlerless	Total	Antlered	Antlerless	Total	Antlered	Antlerless	Total	
Allegany²	23	19	42	89	1	90	33	34	67	199
Anne Arundel¹	16	25	41	31	48	79	10	4	14	134
Calvert³	22	29	51	32	77	109	6	7	13	173
Caroline³	11	38	49	52	136	188	8	8	16	253
Carroll²	39	57	96	89	159	248	50	25	75	419
Cecil¹	18	20	38	61	105	166	24	19	43	247
Charles³	31	64	95	74	138	212	24	15	39	346
Dorchester²										
Whitetail	13	27	40	77	173	250	20	27	47	337
Sika	12	10	22	60	69	129	8	8	16	167
Frederick²	55	69	124	138	206	344	47	18	65	533
Garrett²	26	19	45	136	2	138	51	54	105	288
Harford³	34	76	110	56	121	177	13	11	24	311
Kent¹	22	19	41	76	143	219	11	12	23	283
Montgomery¹	9	39	48	60	100	160	21	8	29	237
Queen Anne's¹	17	25	42	81	177	258	15	20	35	335
St. Mary's³	20	34	54	72	141	213	7	12	19	286
Somerset³	13	11	24	60	133	193	16	21	37	254
Talbot²	22	35	57	53	115	168	14	15	29	254
Washington²	26	45	71	121	127	248	66	34	100	419
Wicomico²										
Whitetail	13	21	34	89	143	232	20	34	54	320
Sika	1	0	1	5	0	5	1	0	1	7
Worcester³	14	33	47	82	261	343	24	39	63	453
Total	457	715	1172	1594	2575	4169	489	425	914	6255

¹Archery season was open on Sunday November 4, 2012. Firearm season was open on Sunday November 25, 2012.

²Archery season was open on Sundays October 14, October 21, October 28, November 4, and November 11, 2012. Firearm season was open on Sunday November 25, 2012.

³Archery season was open on Sundays October 14, October 21, October 28, November 4, and November 11, 2012. Firearm season was open on Sunday November 25 and December 2, 2012

Table 3
Maryland Reported Crossbow Deer Harvest
by County, 2012-2013

County	Deer Bow Season			Muzzleloader/Firearm Seasons			Grand Total
	Antlered	Antlerless	Total	Antlered	Antlerless	Total	
Allegany	158	114	272	2	0	2	274
Anne Arundel	155	323	478	11	34	45	523
Baltimore	345	692	1037	28	70	98	1135
Calvert	94	151	245	3	7	10	255
Caroline							
Whitetail	46	88	134	2	6	8	142
Sika	1	0	1	0	0	0	1
Carroll	211	302	513	5	22	27	540
Cecil	126	236	362	2	8	10	372
Charles	164	335	499	7	14	21	520
Dorchester							
Whitetail	68	99	167	2	3	5	172
Sika	101	102	203	1	6	7	210
Frederick	260	356	616	7	12	19	635
Garrett	292	200	492	4	3	7	499
Harford	216	428	644	21	29	50	694
Howard	168	320	488	11	43	54	542
Kent	98	146	244	3	5	8	252
Montgomery	274	531	805	25	90	115	920
Prince George's	125	200	325	5	17	22	347
Queen Anne's	94	132	226	5	9	14	240
St. Mary's	152	260	412	7	12	19	431
Somerset	40	69	109	1	0	1	110
Talbot	76	143	219	1	1	2	221
Washington	249	292	541	4	14	18	559
Wicomico							
Whitetail	54	111	165	0	8	8	173
Sika	3	0	3	1	0	1	4
Worcester							
Whitetail	64	107	171	0	1	1	172
Sika	3	4	7	0	0	0	7
Total	3637	5741	9378	158	414	572	9950

Table 4
Maryland Reported 2-Week Fire-
arm Season Deer Harvest by
County, 2012-2013

County	Antlered	Antlerless	Total
Allegany	910	536	1446
Anne Arundel	279	554	833
Baltimore	501	984	1485
Calvert	179	425	604
Caroline			
Whitetail	305	828	1133
Sika	1	3	4
Carroll	843	1531	2374
Cecil	446	906	1352
Charles	417	922	1339
Dorchester			
Whitetail	423	1017	1440
Sika	432	559	991
Frederick	1207	2282	3489
Garrett	1172	711	1883
Harford	409	923	1332
Howard	206	452	658
Kent	469	1114	1583
Montgomery	527	1100	1627
Prince George's	278	594	872
Queen Anne's	492	1254	1746
St. Mary's	355	645	1000
Somerset			
Whitetail	355	882	1237
Sika	1	1	2
Talbot	365	958	1323
Washington	1187	1435	2622
Wicomico			
Whitetail	454	1179	1633
Sika	16	13	29
Worcester			
Whitetail	566	1508	2074
Sika	3	13	16
Total	12798	23329	36127

Table 5
Maryland Reported Junior Deer Hunt Harvest
by County, 2012-2013

County	Antlered	Antlerless	Total
Allegany	90	75	165
Anne Arundel	16	8	24
Baltimore ¹	30	18	48
Calvert	20	17	37
Caroline	20	27	47
Carroll	128	55	183
Cecil	65	29	94
Charles	43	39	82
Dorchester			
Whitetail	58	78	136
Sika	19	19	38
Frederick	143	72	215
Garrett	156	150	306
Harford	37	30	67
Howard ¹	16	12	28
Kent	50	31	81
Montgomery	57	44	101
Prince George's ¹	16	14	30
Queen Anne's	36	42	78
St. Mary's	23	33	56
Somerset	52	55	107
Talbot	33	35	68
Washington	197	110	307
Wicomico			
Whitetail	58	75	133
Sika	2	2	4
Worcester	62	84	146
Total	1427	1154	2581

¹Saturday only.

Table 6
Maryland Reported 2-Day January Firearm Season
Deer Harvest by County, 2012-2013

County	Antlered	Antlerless	Total
Anne Arundel	18	81	99
Baltimore	56	182	238
Calvert	26	96	122
Caroline	24	104	128
Carroll	61	348	409
Cecil	45	171	216
Charles	55	131	186
Dorchester			
Whitetail	35	141	176
Sika	59	112	171
Frederick	97	407	504
Harford	27	125	152
Howard	19	94	113
Kent	45	232	277
Montgomery	61	277	338
Prince George's	44	135	179
Queen Anne's	55	199	254
St. Mary's	38	86	124
Somerset	41	115	156
Talbot	42	168	210
Washington	43	225	268
Wicomico			
Whitetail	54	157	211
Sika	3	0	3
Worcester	59	191	250
Total	1007	3777	4784

59,082 deer last year to 53,416 deer this year. Frederick County led the harvest totals this year with 7,634 deer, followed by Baltimore County with 5,991 deer and Washington County at 5,762 deer. Montgomery County and Carroll County completed the top 5 with 5,598 and 5,579 deer, respectively.

The deer harvest in Maryland's suburban counties (Anne Arundel, Baltimore, Howard, Montgomery, and Prince George's counties) remains strong and did not drop as significantly as the rest of the state. Hunters in these counties reported 19,693 deer for 2012-2013, down about 6% from the 21,020 deer reported in 2011-2012. DNR will continue with liberal antlerless harvest regulations in these counties in an effort to address the impacts that high deer populations have on Maryland's suburban landscape and residents.

Sunday deer hunting in Maryland continues to grow in popularity and is an important aid to deer management. A total of 6,255 deer (7% of the total harvest) were taken on Sundays during the 2012-2013 season (Table 2). Sunday hunting is permitted in 20 of 23 counties on select Sundays each year.

ARCHERY SEASON

Archery season in Maryland opens the Friday after Labor Day (September 7th in 2012-2013) and closes on January 31. Approximately 55,000 – 60,000 resident and non-resident hunters purchase an archery stamp each year that permits them to hunt during the archery season. The average Maryland hunter that deer hunts with a vertical bow normally does so for about 14 days each season and 34% of these hunters take one deer or more each year. Approximately 12,000 hunters currently hunt deer with a crossbow. The average crossbow hunter uses a crossbow for 11 days each year and approximately 40% are successful in taking one or more deer per year.

In 2012-2013:

- The reported archery harvest (vertical and crossbow) increased approximately 1% from 26,929 deer in 2011-2012 to 27,216 deer in 2012-2013 (Table 1).
- There were 9,771 antlered deer (36%) and 17,445 antlerless deer harvested with crossbows and vertical bows.
- The antlered archery harvest decreased 5% and the antlerless harvest (15,202 does and 2,243 button bucks) increased 5% over the previous year.
- Crossbow hunters took 3,637 antlered deer and 5,741 antlerless deer during the archery season (Table 3).
- The crossbow harvest increased from 33% of the total archery season harvest in 2011-2012 to 35% in 2012-2013 (Figure 4).

- Approximately 5,900 different hunters harvested a deer with a crossbow during archery season (compared to 5,600 in 2011-2012).
- 86% of the archery harvest was on private lands.
- Archery hunters took 1,172 deer (457 antlered, 715 antlerless) on Sundays open to archery hunting on private land across 20 counties (Table 2).

FIREARM SEASON

The statewide firearm season begins the Saturday after Thanksgiving and runs for the following two weeks. In Region B, hunters have an additional two days of firearm hunting in early January. Deer taken during managed hunts outside the normal deer seasons are also counted as firearm kills. Approximately 50,000 - 55,000 hunters pursue deer with a firearm each year in Maryland. The average deer hunter spends 5 - 6 days each year pursuing deer with a firearm and approximately 45% of firearm hunters bag at least one deer each year.

In 2012-2013:

- The statewide firearm harvest decreased 12% from 50,645 deer in 2011-2012 to 44,488 deer (Table 1).
- The firearm harvest was comprised of 15,422 antlered deer (35%) and 29,066 antlerless deer.
- The antlered harvest decreased 11% and the antlerless harvest (23,544 does and 5,522 button bucks) decreased 13% from 2011-2012.
- The majority (81%) of the firearm harvest occurred during the 2-week season that begins the Saturday after Thanksgiving (Table 4).
- Firearm hunters took 51% of all deer harvested in Maryland compared to 52% last season. (Figure 1).
- The majority (89%) of the firearm harvest was taken on private property.
- Firearm hunters bagged 4,169 deer (1,594 antlered and 2,575 antlerless) on the Sundays open during the 2-week season and juniors harvested 914 deer (489 antlered and 425 antlerless) on the Junior Deer Hunt Sunday (Table 2).
- Junior deer hunters bagged a total of 2,581 deer (1,427 antlered and 1,154 antlerless) during the Junior Deer Hunt weekend; a 15% decrease (Table 5).
- Deer hunters reported 4,784 deer (79% antlerless) for the 2-day January firearm season (Table 6).

MUZZLELOADER SEASON

The 2012-2013 statewide, either-sex muzzleloader season included three days in October (October 18 - 20) and two weeks during late December (December 15 - 29). Region B continued with a six day antlerless-only

Table 7
Maryland Reported Early Muzzleloader Season
Deer Harvest by County, 2012-2013

County	Antlered	Antlerless	Total
Allegany	336	172	508
Anne Arundel	64	191	255
Baltimore	158	371	529
Calvert	63	124	187
Caroline	74	260	334
Carroll	198	327	525
Cecil	104	229	333
Charles	130	241	371
Dorchester			
Whitetail	116	231	347
Sika	234	124	358
Frederick	294	552	846
Garrett	323	230	553
Harford	121	307	428
Howard	81	176	257
Kent	160	257	417
Montgomery	172	330	502
Prince George's	96	167	263
Queen Anne's	140	300	440
St. Mary's	97	199	296
Somerset			
Whitetail	70	209	279
Sika	1	1	2
Talbot	109	202	311
Washington	343	354	697
Wicomico			
Whitetail	96	273	369
Sika	2	2	4
Worcester			
Whitetail	103	273	376
Sika	0	1	1
Total	3685	6103	9788

Table 8
Maryland Reported Late Muzzleloader Season
Deer Harvest by County, 2012-2013

County	Antlered	Antlerless	Total
Allegany	59	175	234
Anne Arundel	52	158	210
Baltimore	103	325	428
Calvert	37	114	151
Caroline	36	130	166
Carroll	79	260	339
Cecil	45	122	167
Charles	89	196	285
Dorchester			
Whitetail	32	117	149
Sika	73	103	176
Frederick	151	412	563
Garrett	85	214	299
Harford	76	211	287
Howard	46	126	172
Kent	72	193	265
Montgomery	105	275	380
Prince George's	73	147	220
Queen Anne's	65	229	294
St. Mary's	73	145	218
Somerset	24	81	105
Talbot	50	150	200
Washington	97	267	364
Wicomico			
Whitetail	50	157	207
Sika	0	3	3
Worcester			
Whitetail	42	124	166
Sika	1	0	1
Total	1615	4434	6049

muzzleloader season (October 22 - 27) to provide for additional deer population management through antlerless deer harvest. The October muzzleloader season is set annually to begin the first Thursday after the 15th of the month.

Resident and non-resident hunters purchased approximately 59,000 and 7,800 muzzleloader stamps, respectively in 2012-2013. The stamps are required to hunt deer with a muzzleloader or to hunt deer with a bow during the muzzleloader season. Maryland muzzleloader hunters pursue deer for about 3 days per hunter during the October season and for about 3.5 days in the late two-week season. Approximately 35% of muzzleloader hunters were successful in harvesting at least one deer last year.

In 2012-2013:

- The muzzleloader harvest totaled 15,837 deer compared to 20,455 deer in 2011-2012, a decrease of 23% (Table 1).
- There were 5,300 antlered deer and 10,537 antlerless deer harvested with muzzleloaders. Antlerless deer represented 67% of the total muzzleloader harvest.
- The antlered harvest decreased 23% and the antlerless harvest (8,654 does and 1,883 button bucks) decreased 22% from the previous year.
- The October muzzleloader harvest was 9,788 deer (3,685 antlered and 6,103 antlerless), a 22% decrease from the previous year's harvest of 12,536 deer (Table 7).
- The December muzzleloader harvest totaled 6,049 deer (1,615 antlered and 4,434 antlerless); a 24% decrease from the previous year (Table 8).
- The October muzzleloader season accounted for 62% of the total muzzleloader harvest for the year.
- Muzzleloader hunters took 89% of their total harvest on private lands.

MARYLAND DNR DEER PLAN

Maryland's first statewide 10-Year White-tailed Deer Management Plan was created in 1998 and has guided all phases of deer management in Maryland since that time. The plan was revised in 2009 and provides information on deer biology and management in Maryland and outlines the responsibilities and goals of the Deer Project team. The plan and supporting documents are available on the DNR website at http://www.dnr.maryland.gov/wildlife/Hunt_Traps/pdfs/2009-2018Maryland-WTDeerPlan.pdf.

DEER RESEARCH AND DATA USE

In 2012-2013, 4,826 deer were examined at butcher shops across the state during the muzzleloader and firearm seasons. At the butcher shops, sex and age of the deer were determined and antler measurements were recorded for bucks. Deer were

Table 9
Maryland Yearling Buck (1 1/2 Year Old) Vital Statistics
by County, 2012-2013

County	%YearlingBuck	AveragePoints	BeamDiameter(mm)
Allegany	73	3.7	16.3
Anne Arundel	45	3.6	19.0
Baltimore	54	3.8	18.2
Calvert	52	3.9	17.7
Caroline	62	4.2	18.0
Carroll	55	4.6	19.7
Cecil	48	4.7	21.7
Charles	35	3.3	17.6
Dorchester	45	4.0	19.1
Frederick	54	4.1	18.6
Garrett	76	4.6	19.0
Harford	56	5.2	20.9
Howard	48	3.8	18.4
Kent	41	4.7	19.4
Montgomery	58	3.7	19.2
Prince George's	47	3.9	18.0
Queen Anne's	55	4.5	18.8
St. Mary's	49	3.8	17.5
Somerset	51	3.4	16.1
Talbot	52	3.9	18.8
Washington	73	4.3	19.1
Wicomico	35	3.9	18.0
Worcester	41	3.0	15.5

also checked for evidence of illness or disease. The yearly sample of harvested deer provides valuable information that is used to estimate deer population numbers and to detect any changes in the deer herd reproductive potential. It is also used to monitor the overall health of deer and the effects of changes to seasons and bag limits made to better manage deer populations.

Staff and volunteers determine the age of each deer by the wear and replacement of its teeth. As young deer get older their milk teeth are replaced with permanent teeth. As adult deer age, their permanent teeth begin to wear down. This enables biologists to reliably categorize deer as fawns (less than one year old), yearlings (approximately 1.5 years old) or adults (two years and older). The proportions of deer in each age class and their gender are then used in reconstruction models to develop and follow trends in the state's deer population.

The antler beam circumference measurements of yearling male deer that are brought to butcher shops are used as indicators of the reproductive potential and health of the deer herd. Yearling males in good habitat with moderate deer numbers will have larger antler beam diameters than those in higher populations or poorer habitat. Abundant food and modest competition translates into more energy available for antler growth. This is most evident in the yearling age class. Trends in these measurements can indicate deer herd overpopulation and habitat degradation. Overall, Maryland's long-term data for these indicators show healthy, productive deer populations across the state (Table 9).

Deer examined at the butcher shops are also examined for evidence of hemorrhagic disease; a viral disease spread by biting midges. Hemorrhagic disease (HD), or "Blue-tongue", commonly appears in late summer and early fall. Deer that have survived HD and are harvested will exhibit hooves with sloughing or peeling tissue. These deer are still suitable for human consumption. HD occurs yearly in Maryland, although it varies in intensity. The results of this yearly, statewide examination are reported to the Southeastern Cooperative Wildlife Disease Study (SCWDS) in Athens, Georgia as part of a nationwide survey. The HD study with SCWDS is one of the oldest and most complete nationwide wildlife disease investigations in the country.

Significant HD outbreaks typically occur every 3 – 5 years and may affect 10 -20% of a local deer population. The 2012-2013 season marked the first significant HD outbreak in Maryland since 2007-2008. The Department received a moderate number of reports of dead deer for 2012-2013 and the disease was confirmed via necropsy on select individuals from across the state. However, it is projected that the disease will have little impact

on the white-tailed deer population. DNR will continue to monitor for HD in the coming years.

RESEARCH BY THE STATE CHAPTER OF THE QUALITY DEER MANAGEMENT ASSOCIATION (QDMA)

The Maryland State Chapter of QDMA continued studying white-tailed deer in Maryland during 2012-2013. QDMA staff and volunteers examined the reproductive tracts of 162 female deer harvested during 2012-2013 to identify time of breeding and number of fetuses carried. Their research has shown that approximately 85% of adult female deer (1.5 years and older) in Maryland are successfully impregnated in any given year, of which 35% carry one fetus, 60% carry two fetuses, and 3% were carrying 3 fetuses. Approximately 4% of female fawns also are impregnated. Peak breeding in Maryland occurs during the first three weeks of November. During this period, and just prior to it, is when bucks will be most active looking for receptive females to breed.

Information concerning white-tailed deer reproductive rates and population densities in urban areas are important components for effective management of deer in Maryland. For further information on these studies, visit the Maryland QDMA website at <http://www.marylandqdma.com>.

The Frostburg State University QDMA chapter also began several student deer projects during 2012-2013. Students are looking at parasite loads, diet, coyote interactions, reproductivity, and age structure patterns in the western part of the state. More information on these studies is available at <http://www.qdma.com/news/frostburgresearch>.

ARCHERY HUNTER SURVEY

The annual Archery Hunter Survey was continued for 2011-2012 (survey data from the 2012-2013 season are currently being analyzed and were not ready for the report). Archery hunters reported 17.4 bucks per 100 hours and 41.7 does per 100 hours in 2011-2012. Likewise, they observed 2.4 adult does for every one adult buck and 0.6 fawns for every one adult doe in 2011-2012. The full report is available online at http://dnr.maryland.gov/wildlife/hunt_trap/bhsurvey.asp.

The Archery Hunter Survey provides observational data about furbearers, deer and other wildlife. Archery hunters record the number of animals observed during each hunt, the number of hours they hunt, county of hunt, and other specific details about each hunt. If you are an archery hunter and would like to participate, contact Brent Evans at 443-786-3656 or bevans@dnr.state.md.us. Forms are also available on the DNR website at the web address listed above.

DNR AND MARYLAND COUNTIES COOPERATIVE DEER MANAGEMENT

Since 1994, Maryland DNR has promoted cooperative deer management relationships with several Maryland counties. Montgomery County and Howard County both developed their own deer management units manned by professional staff. Maryland DNR works closely with both counties regarding their deer management efforts. These counties have implemented nonlethal and lethal deer management programs while maintaining majority public support. Maryland DNR staff participates in county deer management workshops, reviews and provides advice on county deer management plans, and issues appropriate state permits for deer management activities at the county level. DNR is providing assistance to Anne Arundel, Baltimore, and Prince George's counties as they work towards developing similar deer management programs within their jurisdictions.

Watersheds are areas of largely undeveloped land that protect Maryland water supplies. These areas are often managed by municipal staff. Unregulated deer numbers are known to affect watershed habitat and water quality and can also impact neighboring residents. The Deer Project works with Baltimore City as well as the Washington Suburban Sanitary Commission to manage the deer on their respective watershed lands. These entities permit public hunting on suitable areas of their watershed properties in order to regulate deer numbers. Through these cooperative relationships with Maryland DNR, hunters fill a valuable role in helping to manage deer numbers. Hunters annually remove hundreds of deer from watershed properties during the regulated deer hunting seasons.

Maryland DNR continues to work with various county and municipal government agencies on deer management issues and encourages others to follow the lead of the aforementioned entities to develop deer management programs in cooperation with the DNR. Interested entities should contact George Timko, Maryland DNR Assistant Deer Project Leader at 301-432-4307.

SUBURBAN DEER MANAGEMENT

Deer management in suburban areas ranks as one of the most difficult challenges facing wildlife agencies throughout the country. Maryland's Deer Project is charged with managing deer across the state's varied landscape for a diverse public that has different opinions on how deer should be managed. This includes the large urban/suburban corridor in the midsection of the state.

As development continues in Maryland, the conversion of forested and agricultural lands into housing developments can actually improve habitat conditions for deer. Developed areas provide more

than adequate food resources and they often offer refuge from hunting. As a result, deer numbers can increase rapidly in these areas. High deer numbers lead to a greater number of negative interactions with suburban residents, decreasing the residents' tolerance of deer, and increasing the demand on DNR to somehow regulate the population.

Safety concerns and social considerations in urban areas often prevent the use of common lethal deer population control measures (i.e., hunting). Non-lethal control measures such as fencing and repellants can help reduce deer problems but they do not eliminate them. They also do not address the deer overpopulation itself.

Increasing deer-vehicle collisions, damage to ornamental plants and gardens, and damage to natural habitats are some of the problems that continue to persist when deer numbers are not directly reduced. Often times, when public tolerance levels have been surpassed, lethal control methods are considered as a last resort. At this point, the Department must provide its professional opinion as to what, if any, lethal method (i.e., managed hunt, professional sharp-shooting, etc.) is feasible for a particular scenario. Often, a combination of non-lethal and lethal techniques is recommended to help resolve the problem. The Deer Project will continue to evaluate any new deer management techniques as they are created, and promote effective methods that help reduce deer-human conflicts.

DEER MANAGEMENT INFORMATION

A section of the DNR website is devoted to public education on deer and deer management options. Information on nonlethal and lethal methods is provided at: http://www.dnr.state.md.us/wildlife/Hunt_Traps/deer/deer_damage/ddmtintro.asp. Further information and assistance can be obtained from George Timko, Maryland DNR Assistant Deer Project Leader at 301-432-4307.

PUBLIC PROPERTY DEER MANAGEMENT

DNR provides assistance to local governments, communities, and publicly owned properties that choose to address deer population issues. Public entities that have valid reasons to conduct hunts outside of the regional deer hunting season framework may do so with prior approval of DNR. Managed hunts are used to help control deer populations under special conditions on properties where stricter control of hunters is required. This allows each facility to manage deer hunting to complement their mission. Military bases and agricultural research facilities, as well as state, county, and municipal parks have developed deer hunting programs in conjunction with DNR.

To improve opportunities for the public to qualify for managed hunts, the Assistant Deer

Project Leader guides the statewide Shooter Qualification Card program. This program provides public access to shooting ranges where hunters can become certified at the standards required to apply for managed hunts held across the state. Appendix II provides a summary of the total deer taken on Maryland public lands during the 2012-2013 hunting seasons.

DEER POPULATION

Maryland's deer population prior to the 2012-2013 hunting season was estimated at 223,000 deer, down about 4% from the 2011-2012 estimate of 233,000. Trends in deer abundance are commonly monitored using harvest estimates and the age structure of the deer herd. These methods work well in areas where hunters have access to most of the land but are much less reliable for urban/suburban deer populations, where hunting occurs sporadically.

Liberal antlerless regulations have slowed or halted deer population growth in many areas outside the Washington D.C. to Baltimore suburban corridor. In some rural counties, the deer population has begun to decline. DNR is currently investigating additional ways to control deer in the suburban corridor where hunting is inhibited by lack of access to land.

NON-HUNTING MORTALITY

Factors that cause mortality in deer, other than hunting, include disease, fawn predation (from bears, coyotes, bobcats, fishers, feral dogs, etc.), collisions with vehicles, harvest using Deer Management Permits, and harvest via sharp-shooting. Data concerning deer killed by vehicles (Table 10) is reported to the DNR by a broad spectrum of agencies (county police, state police, sheriff deputies, city police, park rangers, county roads and state roads staff, etc). Because of its many and varied sources, deer-vehicle collision data tend to vary from year to year depending on the effort put forth by the various agencies who report them. Therefore, these data should be used with caution when looking at trends over time and should be considered minimum estimates for a given year.

Besides deer-vehicle collision data obtained from the various state agencies of Maryland, State Farm Insurance Company also estimates total deer vehicle collisions based on its share of the insurance business for each state and the number of accidents reported by their clients. They project there have been an average of 32,250 deer-vehicle collisions in Maryland during each of the last five years.

Farmers and landowners can obtain a Deer Management Permit (DMP) from DNR when deer are causing damage to commercial crops. DMPs allow farmers to harvest antlerless deer on

Table 10
Maryland Reported Deer Vehicular Mortality by County, 2013¹

County	Male	Female	Unknown	Total
Allegany	70	135	18	223
Anne Arundel	37	31	213	281
Baltimore	221	207	938	1,366
Calvert	78	80	197	355
Caroline	18	42	26	86
Carroll	284	453	145	882
Cecil	58	115	22	195
Charles	80	203	146	429
Dorchester	38	60	2	100
Frederick	488	869	275	1,632
Garrett	126	209	57	392
Harford	236	431	102	769
Howard	437	671	811	1,919
Kent	29	32	46	107
Montgomery	137	142	2,434	2,713
Prince George's	337	364	101	802
Queen Anne's	7	2	18	27
St. Mary's	49	66	15	130
Somerset	11	26	0	37
Talbot	71	77	13	161
Washington	54	95	36	185
Wicomico	43	38	4	85
Worcester	5	25	39	69
Total	2,914	4,373	5,658	12,945
¹ Estimates vary from year to year depending on effort put forth by various agencies who collect the data. Total numbers should be considered minimum estimates for a given year.				

their property outside of the regular state hunting seasons and bag limits. In 2012, 7,940 deer were taken with DMPs compared to 8,840 deer in 2011 (Table 11), a decrease of about 10%. Elevated market prices for crops and significantly higher planting costs continue to cause farmers to control deer more intensely than they have in the past. While regulated hunting remains the most effective way to control deer statewide, DMPs are a valuable tool for farmers protecting their livelihood.

In areas where lethal control of deer via regulated hunting is not feasible due to urbanization or security issues (i.e., military bases), sharp-shooting deer is a viable lethal alternative for controlling deer numbers. During 2012, 1,160 deer were harvested via sharp-shooting in Maryland. Sharp-shooting is performed by deer cooperators licensed by DNR. County and/or federal officials and a few private groups remove deer using this method.

In recent years hunters have become increasingly concerned about coyote and bear predation on deer in western Maryland. Coyotes have increased in number in Washington, Allegany, and Garrett counties over the last five years and are present in lower numbers statewide. Likewise, the black bear population is expanding and population numbers are at record highs for recent times. Very young fawns in the spring can be a food source for these predators. Studies in other states indicate that bears have been shown to be equally, or even more effective, at predating fawns than coyotes.

Currently, the reproductive data that the Deer Project collects does not indicate coyotes or bears are having a significant impact on the deer population in Maryland. While there's no doubt that coyotes and bears are predating fawns, Maryland's long-term deer data along with research and experience from nearby states indicate that their effect has been minimal to date. The vast majority of white-tailed deer give birth to fawns within a two to four week period in May and June. This sudden abundance of fawns creates a situation where there are far more fawns on the ground than can be consumed by predators, thus ensuring that an adequate number will survive to reproduce in coming years.

Nevertheless, the data show a decline in fawn recruitment rates across the state as measured by the number of fawns to adult does in the hunter harvest. There are several possible explanations for this widespread decline, one of which is a growing reluctance by hunters to harvest six month old deer (i.e., fawns) so as to avoid shooting future adult bucks. About 50% of all fawns are males, so many hunters have learned to indentify fawns in the field and avoid harvesting them. Increased predation from bears or coyotes may also be contributing to this decline. However, these predator populations vary widely across the state, making it

Table 11
Maryland Reported Crop Damage Mortality
by County, 2012¹

County	Male	Female	Total
Allegany	21	164	185
Anne Arundel	21	155	176
Baltimore	88	369	457
Calvert	9	30	39
Caroline	16	130	146
Carroll	84	439	523
Cecil	75	198	273
Charles	26	220	246
Dorchester			
Whitetail	16	181	197
Sika	14	119	133
Frederick	75	419	494
Garrett	115	693	808
Harford	52	324	376
Howard	19	231	250
Kent	6	60	66
Montgomery	52	344	396
Prince George's	48	235	283
Queen Anne's	46	163	209
St. Mary's	44	206	250
Somerset	35	245	280
Talbot	60	338	398
Washington	54	273	327
Wicomico			
Whitetail	60	332	392
Sika	0	5	5
Worcester			
Whitetail	82	675	757
Sika	0	4	4
Other	77	193	270
Total	1195	6745	7940

unlikely predation is the sole cause of declining recruitment. These factors, along with a relatively high percentage of antlerless deer taken during the hunting seasons, have resulted in a lower deer population in some portions of Maryland. This reduced population was necessary, especially in western Maryland, to address some of the ecological and cultural impacts from deer densities that were too high.

The Deer Project will continue to monitor fawn recruitment rates and coyote and bear populations in Maryland and develop alternative management strategies as the need arises.

TROPHY DEER CONTEST

Each year the Maryland Bowhunters Society and DNR cosponsor the Maryland Trophy Deer Contest. This contest recognizes hunters who have harvested trophy bucks and promotes quality Maryland deer through wise management. The goal of quality deer management is to produce deer numbers that are in balance with the available habitat and have deer that reach maturity and are in good health.

A major goal of DNR's deer management changes is to continue to improve the quality of Maryland's deer herd. By encouraging antlerless deer harvest and restraining antlered buck harvest, populations will reach appropriate levels while the potential for mature antlered buck survival improves.

The 2012 Maryland Trophy Deer Contest for bucks taken in the 2010-2011 hunting season was held during the Southern Maryland Hunting and Outdoor Expo at the Charles County Fairgrounds. The Boone and Crockett system is used to score antlers and both white-tailed and sika entries are accepted. The results of the 2012 contest are listed on the following pages.

The 2013 Maryland Trophy Deer Contest for deer taken during the 2011-2012 hunting seasons will be held at the same location, August 23 - 25, 2013. All entries must be present at the contest.

MARYLAND ALL TIME TROPHY RECORDS

Maryland's quality habitat has produced some impressive trophy deer, with record deer coming from across the state. The accompanying table indicates the scores of the top three bucks per weapon (hunting implement), which county it was taken in, and the name of the hunter who took it. This list is compiled from information collected by Walter "Tinker" Johnson, chairman and record-keeper for the Maryland Trophy Deer Contest.

MARYLAND ALL TIME TROPHY DEER RECORDS

Score	County	Name
White-tailed Deer, Firearms, Typical Antlers		
194 0/8	Kent	Kevin Miller
185 7/8	Queen Anne's	Walter Lachewitz
184 0/8	St. Mary's	Larry Day
White-tailed Deer, Firearms, Non-Typical Antlers		
268 1/8	Charles	William Crutchfield, Jr.
248 7/8	Charles	Donza Watson
228 4/8	Montgomery	Jack Poole
White-tailed Deer, Bow, Typical Antlers		
183 3/8	Talbot	Petey Councill
178 1/8	Harford	Mark Rogowski
177 0/8	Baltimore	Richard Traband
White-tailed Deer, Bow, Non-Typical Antlers		
220 2/8	Prince George's	Yates Claggett
207 5/8	Talbot	Richard E. Stacey, Sr.
204 6/8	Calvert	Rodney Gray
White-tailed Deer, Muzzleloader, Typical Antlers		
178 6/8	Baltimore	John Gweazdowski
171 3/8	Dorchester	Mark Bronder
170 1/8	Talbot	Kara Gowe
White-tailed Deer, Muzzleloader, Non-Typical Antlers		
200 4/8	Dorchester	Greg Glos
199 3/8	Talbot	William Shields
189 1/8	Charles	Keith Hare
White-tailed Deer, Crossbow, Typical Antlers		
164 4/8	Kent	Douglas C. Wood
162 7/8	St. Mary's	Lawrence Copsey
156 0/8	Somerset	Chris Miller
White-tailed Deer, Crossbow, Non-Typical Antlers		
179 0/8	Somerset	Ernest Hughes
176 4/8	Frederick	Kenneth A. Brame
171 0/8	Harford	Carl J. Wehner
Sika Deer, Firearms		
75 7/8	Dorchester	James Howdyshell
72 5/8	Dorchester	David King, Jr.
71 2/8	Dorchester	Steve Brownley
Sika Deer, Bow		
69 6/8	Dorchester	Lenny Hyre
69 4/8	Dorchester	Larry Owen
68 1/8	Dorchester	Theresa Henriksen
Sika Deer, Muzzleloader		
74 6/8	Dorchester	Henry Williams, Jr.
73 4/8	Dorchester	John Eger
72 7/8	Dorchester	Milton Kern
Sika Deer, Crossbow		
52 4/8	Dorchester	Denis Witmer
Fallow Deer, Firearms		
176 7/8	Prince George's	Patrick A. Akins
Fallow Deer, Muzzleloader		
127 7/8	Talbot	Bill McCready

Results from the
**2012 MARYLAND TROPHY DEER CONTEST
 FOR THE 2010-2011 DEER HUNTING SEASONS**

Sponsored by the Maryland Bowhunters Society, the Maryland Chapter of the Quality Deer Management Association, and the Maryland Wildlife & Heritage Service.

White-tailed Deer Firearms Season, Typical Antlers

Score	County	Name
179 5/8	Caroline	Terry J. Cooper
156 0/8	Dorchester	Leonard Herd, Sr.
152 3/8	St. Mary's	Stephen Schwab
150 1/8	Wicomico	Russell Kenny*
148 7/8	St. Mary's	Andy Broom
145 5/8	Talbot	Matt Dillon
143 3/8	Wicomico	Russell Webb, Sr.
140 3/8	Charles	Lawrence Graves
139 0/8	Kent	Jonathan Faircloth
131 3/8	Charles	Cody Magelssen*
129 0/8	Baltimore	Barry Harden
128 2/8	Anne Arundel	James R. Mullens
98 6/8	Dorchester	Stephanie Gregor
59 4/8	Montgomery	Richard Conner

***Historical**

White-tailed Deer Firearm Season, Non-Typical Antlers

Score	County	Name
215 7/8	Caroline	Richard Janvier
181 2/8	Prince George's	Brian Grieninger
175 7/8	Harford	Edward Griffin, Jr.
170 4/8	Charles	Stephen Schwab*
151 4/8	St. Mary's	Richard Yeatman*
151 1/8	Charles	Glen Welch*

***Historical**

White-tailed Deer Archery Season, Typical Antlers

Score	County	Name
175 4/8	Prince George's	Ron Delricco*
161 6/8	Queen Anne's	Pete Pappas**
159 7/8	Montgomery	Rob Cardosi
155 1/8	St. Mary's	Mike Mahaffey**
154 6/8	St. Mary's	Bill Hester**
147 7/8	Queen Anne's	Phillip J. English
146 0/8	Charles	Mike Bowie
145 5/8	Montgomery	Paul Musser**
143 2/8	Charles	Gary Messer
143 2/8	Montgomery	Steve Cononie**
141 0/8	St. Mary's	Jason Guy
139 6/8	Baltimore	Jason Mangus**
137 6/8	St. Mary's	Shawn Day
136 4/8	Anne Arundel	Rodney Staab**
136 1/8	Charles	Walter Wathen*
133 2/8	Prince George's	Ryan Mazeska
132 1/8	St. Mary's	Chad Day
130 4/8	Cecil	Clifford Guy, Jr.**
127 6/8	Allegany	Ryan Werts
126 7/8	Dorchester	Kevin Meagher, Jr.
126 2/8	Frederick	Frederick Ahalt**
125 5/8	Cecil	Clifford Guy, Jr.**,*
120 6/8	Anne Arundel	Shawn Vermillion
116 2/8	Dorchester	Richard Lodgaard
115 7/8	Anne Arundel	Marion Bennett
112 3/8	St. Mary's	Glen Denny*
107 5/8	Frederick	Chuck Sporer**
104 3/8	St. Mary's	Rocky McCumbee

*Historical **Crossbow

White-tailed Deer Archery Season, Non-Typical Antlers

Score	County	Name
202 7/8	Prince George's	Paul Bates, Jr.
180 3/8	Prince George's	Ernie Freeman
175 4/8	St. Mary's	Robert Martin
169 3/8	St. Mary's	Sheldon Martin*
166 0/8	St. Mary's	Christopher Davis
153 1/8	Charles	Raymond Simpson*
152 2/8	Frederick	Kenneth Brame**

*Historical **Crossbow

White-tailed Deer Muzzleloader Season, Typical Antlers

Score	County	Name
158 4/8	Charles	Michael Burnham
148 4/8	Charles	Kevin Warring
140 1/8	Prince George's	James Soresi*
139 5/8	Anne Arundel	John Ambrose, Sr.
135 2/8	Charles	Sue Campbell
128 2/8	Charles	Alex Collins*
125 1/8	Anne Arundel	Joe Malecki
123 0/8	Charles	Jim Matthews
116 4/8	Anne Arundel	John Ambrose, Sr.*
104 5/8	Montgomery	Scott Spillers
93 5/8	Saint Mary's	Charles Wilcox

***Historical**

White-tailed Deer Muzzleloader Season, Non-Typical Antlers

Score	County	Name
189 1/8	Charles	Keith Hare
186 5/8	St. Mary's	Robert Buckler
185 1/8	Queen Anne's	Jim Walls
157 2/8	Charles	Greg Delcoco
154 3/8	St. Mary's	Jennifer Humphrey

***Historical**

Sika Deer, Firearm Season

Score	County	Name
65 7/8	Dorchester	Mike Trent

Sika Deer, Muzzleloader Season

Score	County	Name
72 1/8	Dorchester	Joseph W. Meyers
67 6/8	Dorchester	Chris Venker
66 7/8	Dorchester	Jack Boshoven
64 7/8	Dorchester	Lenny Wolf
58 0/8	Dorchester	Rusty Hyatt
55 4/8	Dorchester	Nicholas Fornaro

Sika Deer, Archery Season

Score	County	Name
63 0/8	Dorchester	James Keil
39 5/8	Dorchester	Richard Lodgaard

Fallow Deer, Muzzleloader Season

Score	County	Name
127 7/8	Talbot	Bill McCready*

***Historical**

Appendix I

Statewide Reported Antlered and Antlerless Deer Harvest by Public Hunting Area and County, 2012-2013

County/PublicLand	Antlered	Antlerless
Allegany		
Belle Grove WMA	7	2
Billmeyer WMA	13	9
Dan's Mountain WMA	99	72
Green Ridge SF	215	85
Rocky Gap SP	26	17
Sideling Hill WMA	9	1
Warrior Mountain WMA	70	50
Anne Arundel		
Anne Arundel County Managed Hunts	16	93
Crownsville CWMA	1	5
Davidsonville Receiver Station	0	1
Fort Meade	48	149
Smithsonian	8	27
Baltimore		
Gunpowder SP	18	136
Gwynnbrook WMA	7	9
Liberty Watershed	26	70
Loch Raven Watershed	58	179
Patapsco SP	29	48
Pretty Boy Watershed	85	222
Soldiers Delight NEA	2	54
Calvert		
Calvert Cliffs SP	9	4
Flag Pond	0	1
Hall Creek	4	4
Huntingtown Area	10	27
Caroline		
Chesapeake Forest Lands	6	6
Idylwild WMA	16	58
Tuckahoe SP	7	24

County/PublicLand	Antlered	Antlerless
Carroll		
Avondale WMA	9	12
Farver CWMA	1	1
Hahn CWMA	0	3
Hanover Watershed	22	58
Liberty Watershed	65	135
Maring CWMA	3	6
Morgan Run NEA	13	38
Patapsco SP	21	56
Raincliffe CWMA	0	9
Sawmill-Speigel CWMA	11	38
Slacks CWMA	3	9
Woodbrook CWMA	3	13
Cecil		
C&D Canal	10	26
Earlville WMA	4	11
Elk Neck SF	20	37
Elk Neck SP	16	38
Fair Hill NRMA	15	106
Grove Farm WMA	9	12
Old Bohemia WMA	4	1
Charles		
Blossom Point Field Test Facility	4	11
Cedar Point WMA	16	46
Cedarville SF	7	20
Chapel Point SP	5	11
Chapman Residual	5	9
Chapman State Park	2	16
Chicamuxen WMA	3	3
Doncaster SF or Tayloes Neck	4	13
Indian Creek NRMA	4	2
Indian Head Naval Ordnance Area	15	51
Mattawoman NEA	5	9
Myrtle Grove WMA	12	20
Nanjemoy NRMA	5	15
Riverside WMA	1	1

County/PublicLand	Antlered	Antlerless
Dorchester		
Blackwater NWR		
whitetail	33	38
sika	110	105
Chesapeake Forest Lands		
whitetail	45	93
sika	36	36
Fishing Bay WMA		
whitetail	6	25
sika	64	58
LeCompte WMA		
whitetail	0	9
sika	4	4
Linkwood WMA		
whitetail	3	2
sika	1	0
Taylor's Island WMA		
whitetail	2	7
sika	4	8
Frederick		
Cunningham Falls SP Thurmont WS	38	53
Emmitsburg Watershed	4	26
Fort Detrick	0	0
Frederick City Watershed	87	171
Heaters Island WMA	1	8
Monocacy NRMA	56	68
South Mountain SP	21	28

Appendix I -continued-

Statewide Reported Antlered and Antlerless Deer Harvest by Public Hunting Area and County, 2012-2013

County/PublicLand	Antlered	Antlerless
Garrett		
4-H Center	2	0
Deep Creek Lake SP	17	10
Frostburg Watershed	5	8
Garrett SF	73	59
Mount Nebo WMA	30	24
Potomac SF	43	27
Savage River SF	159	131
Youghiogheny Reservoir	4	1
Harford		
Aberdeen Proving Grounds	164	410
Gunpowder SP	4	23
Rock SP	5	11
Stoney Forest	2	10
Susquehanna SP	8	52
Howard		
Howard County Parks & Recreation Hunts	33	167
Hugg-Thomas WMA	5	21
Patapsco SP	27	102
Patuxent River SP	71	170
Tridelphia/Rocky Gorge (WSSC)	60	117
Kent		
Eastern Neck NWR	28	39
Millington WMA	30	72
Sassafras NRMA	11	19
Montgomery		
Cherrington Coop	10	36
Mckee-Beshers WMA	60	100
Montgomery County M-NCPPC Lands	37	457
Patuxent River SP	84	128
Seneca - Schaeffer Farm	8	50
Seneca Creek SP	75	186
Strider WMA	8	18
Tridelphia/Rocky Gorge (WSSC)	40	70

County/PublicLand	Antlered	Antlerless
Prince George's		
Aquasco Farms Coop	5	13
Beltsville	76	134
Billingsly Tract (Patuxent River Park)	5	13
Brandywine Receiver Station	8	19
Mill Town Landing NRMA	3	6
Nottingham	2	2
Patuxent WRC (Central & South Tracts)	14	60
Rosaryville SP	4	18
Spice Creek (Patuxent River) NRMA	6	5
Tridelphia/Rocky Gorge (WSSC)	6	33
Queen Anne's		
Tuckahoe SP	8	9
Wye Island NRMA	18	34
St. Mary's		
Elms' CWMA	6	8
Greenwell SP	5	16
Newtowne Neck SP	0	0
Patuxent Naval Air Station	42	79
Point Lookout SP (Jacobs Property)	3	10
St. Inigoes SF	6	10
St. Mary's SP	19	32
Somerset		
Chesapeake Forest Lands		
whitetail	44	113
sika	1	0
Deal Island WMA		
whitetail	11	13
sika	0	1
Fairmount WMA	3	3
Maryland Marine Properties WMA	1	1
Pocomoke Sound WMA	3	4
South Marsh Island WMA	0	0
Wellington WMA	2	5
Talbot		
Seth SF	1	4

County/PublicLand	Antlered	Antlerless
Washington		
Ft. Frederick SP	1	26
Greenbrier SP	39	50
Hagerstown Watershed	7	11
Indian Springs WMA	89	36
Maryland Correctional Training Center	14	35
Prather's Neck WMA	10	6
Sideling Hill WMA	34	16
South Mountain SP	44	79
W. Maryland Ag Research Station (B)	1	23
Woodmont	21	9
Wicomico		
Chesapeake Forest Lands		
whitetail	52	170
sika	2	2
Ellis Bay WMA		
whitetail	1	3
sika	0	0
Johnson WMA	0	3
Nanticoke WMA		
whitetail	8	20
sika	4	0
Wetipquin WMA	2	8
Wicomico SF	12	42
Worcester		
Assateague NS		
whitetail	5	7
sika	16	27
Assateague SP		
whitetail	1	2
sika	5	1
Chesapeake Forest Lands	37	99
E.A. Vaughn WMA	15	28
Hickory Point WMA	1	0
Isle of Wight WMA	2	1
Pocomoke River WMA	8	15
Pocomoke SF		
whitetail	49	92
sika	0	0



State of Maryland
Martin O'Malley, Governor
Anthony G. Brown, Lieutenant Governor



Joseph P. Gill, Secretary
Department of Natural Resources
Frankl W. Dawson III, Deputy Secretary
Department of Natural Resources
Paul A. Peditto, Director
Wildlife & Heritage Service

Wildlife & Heritage Service
Tawes State Office Building, E-1
580 Taylor Avenue
Annapolis, MD 21401
410-260-8540
FAX 410-260-8596
<http://dnr.maryland.gov>

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