

**Maryland**  
**Annual Big Game Report**  
**2022-2023**



**Maryland**

Wes Moore, Governor



Josh Kurtz, Secretary

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# **Maryland Annual Big Game Report 2022-2023**

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# Deer

## White-tailed & Sika

### Introduction

Maryland deer hunters harvested 70,845 deer during the 2021-2022 season (Table 1, Figure 1). Maryland deer hunters harvested 76,687 deer during the 2022-2023 season (Table 1, Figure 1). The statewide harvest included 29,682 antlered and 42,872 antlerless white-tailed deer; and 1,908 antlered and 2,225 antlerless sika deer. The antlerless harvest consisted of 39,493 does or antlerless bucks and 5,604 button bucks (Table 2, Figure 2). The overall harvest was 8 percent higher than the 2021-2022 total of 70,845 deer.

The harvest in deer management Region A increased 20%, from 7,929 deer last year to 9,552 this year. Hunters in the western counties reported 5,762 antlered and 3,790 antlerless deer.

Deer hunters in Region B harvested 67,135 deer, up 7% from 62,916 deer harvested last year. A total of 25,828 antlered and 41,307 antlerless deer were reported in this region.

Frederick County had the highest reported harvest with 6,935 deer reported. Carroll and Dorchester counties followed with 5,785 deer each. Garrett and Baltimore rounded out the top five with 4,989 and 4,846, respectively.

Hunters harvested 6,806 deer on Sundays (Table 3). Sunday deer hunting opportunities are available in 20 of Maryland's 23 counties. Opportunities vary by county and are only permitted during certain weeks of the deer hunting season (Table 4).

### Archery Season Summary

Each year, archery season in Maryland opens the Friday after Labor Day (September 9 in 2022-2023) and closes on January 31 (unless January 31 is a Sunday and is closed to hunting on Sunday). Resident and non-resident hunters purchased approximately 53,300 and 12,600 archery stamps respectively in 2022-2023. The average Maryland hunter who hunts deer with a vertical bow each year (approximately 16,000 hunters) normally does so for about 10-12 days each season; and 25-35 percent of these hunters take at least one deer each year with their bow. Approximately 18,000 hunters currently hunt deer with a crossbow in Maryland. The average crossbow hunter hunts with a crossbow for 10-12 days each year and 35-45 percent are successful in taking at least one deer per year with the weapon.

In 2022-2023:

- The reported archery harvest (vertical and crossbow) increased 6 percent from 24,508 deer in 2021-2022 to 25,982 deer in 2022-2023 (Table 1, Figure 3).
- There were 12,026 antlered deer (46 percent of the total archery harvest) and 13,956 antlerless deer harvested with crossbows and vertical bows.
- The antlered archery harvest increased 4.5 percent and the antlerless harvest (12,578 does or antlerless bucks and 1,378 button bucks) increased 7 percent from the previous year.
- Archery hunters took 1,974 deer (990 antlered, 984 antlerless) on Sundays open to archery hunting (Table 3).
- Archery hunters took 34 percent of all deer harvested in Maryland, the same percentage as last season. (Figure 3).

Table 1  
Maryland Reported Antlered and Antlerless Deer Harvest for the Archery, Firearm, and Muzzleloader  
Hunting Seasons by County, 2022-2023

COUNTY	Archery			Firearms			Muzzleloader			Total		
	Antlered	Antlerless	SubTotal	Antlered	Antlerless	SubTotal	Antlered	Antlerless	SubTotal	Antlered	Antlerless	TOTAL
Allegany	532	406	938	1,107	682	1,789	286	386	672	1,925	1,474	3,399
Anne Arundel	419	516	935	282	370	652	99	197	296	800	1,083	1,883
Baltimore	1,043	1,462	2,505	581	954	1,535	232	574	806	1,856	2,990	4,846
Calvert	315	367	682	207	368	575	77	144	221	599	879	1,478
Caroline												
Whitetail	309	393	702	490	1,208	1,698	134	366	500	933	1,967	2,900
Sika	0	1	1	0	0	0	0	0	0	0	1	1
Carroll	834	989	1,823	1,243	1,941	3,184	274	504	778	2,351	3,434	5,785
Cecil	577	788	1,365	515	979	1,494	138	355	493	1,230	2,122	3,352
Charles	501	509	1,010	455	631	1,086	180	299	479	1,136	1,439	2,575
Dorchester												
Whitetail	175	209	384	469	846	1,315	105	263	368	749	1,318	2,067
Sika	545	723	1,268	641	824	1,465	515	470	985	1,701	2,017	3,718
Frederick	1,005	1,126	2,131	1,531	2,226	3,757	356	691	1,047	2,892	4,043	6,935
Garrett	977	566	1,543	1,580	821	2,401	556	489	1,045	3,113	1,876	4,989
Harford	585	815	1,400	481	916	1,397	167	429	596	1,233	2,160	3,393
Howard	391	657	1,048	264	478	742	93	226	319	748	1,361	2,109
Kent	381	428	809	466	1,222	1,688	197	440	637	1,044	2,090	3,134
Montgomery	594	895	1,489	503	976	1,479	165	300	465	1,262	2,171	3,433
Prince George's	372	381	753	233	365	598	110	186	296	715	932	1,647
Queen Anne's	395	471	866	524	1,121	1,645	164	407	571	1,083	1,999	3,082
St. Mary's	442	475	917	306	438	744	112	217	329	860	1,130	1,990
Somerset												
Whitetail	164	215	379	351	795	1,146	77	203	280	592	1,213	1,805
Sika	12	2	14	7	7	14	6	3	9	25	12	37
Talbot	255	258	513	366	811	1,177	101	215	316	722	1,284	2,006
Washington	760	727	1,487	1,171	1,179	2,350	290	473	763	2,221	2,379	4,600
Wicomico												
Whitetail	206	284	490	462	1,092	1,554	110	288	398	778	1,664	2,442
Sika	37	41	78	63	70	133	42	36	78	142	147	289
Worcester												
Whitetail	186	239	425	540	1,384	1,924	114	241	355	840	1,864	2,704
Sika	14	13	27	15	20	35	11	15	26	40	48	88
<b>Total</b>	<b>12,026</b>	<b>13,956</b>	<b>25,982</b>	<b>14,853</b>	<b>22,724</b>	<b>37,577</b>	<b>4,711</b>	<b>8,417</b>	<b>13,128</b>	<b>31,590</b>	<b>45,097</b>	<b>76,687</b>

Figure 1  
Maryland Reported Antlered and Antlerless Deer Harvest, 2013-2014 through 2022-2023

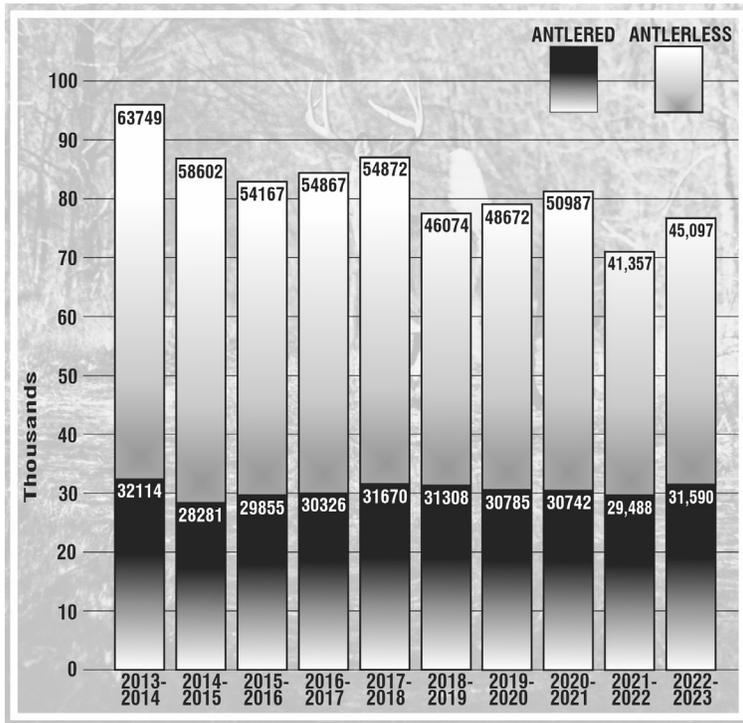


Table 2  
Maryland Reported Buttonbuck Harvest by County, 2022-2023

COUNTY	Buttonbuck	Female or Antlerless	Total	Percent Buttonbuck
Allegany	138	1,336	1,474	9.4
Anne Arundel	149	934	1,083	13.8
Baltimore	353	2,637	2,990	11.8
Calvert	126	753	879	14.3
Caroline				
	315	1,652	1,967	16.0
	0	1	1	*
Carroll	433	3,001	3,434	12.6
Cecil	283	1,839	2,122	13.3
Charles	189	1,250	1,439	13.1
Dorchester				
Whitetail	211	1,107	1,318	16.0
Sika	121	1,896	2,017	6.0
Frederick	417	3,626	4,043	10.3
Garrett	178	1,698	1,876	9.5
Harford	287	1,873	2,160	13.3
Howard	161	1,200	1,361	11.8
Kent	288	1,802	2,090	13.8
Montgomery	246	1,925	2,171	11.3
Prince George's	80	852	932	8.6
Queen Anne's	258	1,741	1,999	12.9
St. Mary's	181	949	1,130	16.0
Somerset				
Whitetail	178	1,035	1,213	14.7
Sika	1	11	12	8.3
Talbot	219	1,065	1,284	17.1
Washington	199	2,180	2,379	8.4
Wicomico				
Whitetail	273	1,391	1,664	16.4
Sika	16	131	147	10.9
Worcester				
Whitetail	300	1,564	1,864	16.1
Sika	4	44	48	8.3
<b>Total</b>	<b>5,604</b>	<b>39,493</b>	<b>45,097</b>	<b>12.4</b>

\*Small sample size

Figure 2  
Maryland Reported Button Buck and Doe Harvest, 2013-2014 through 2022-2023

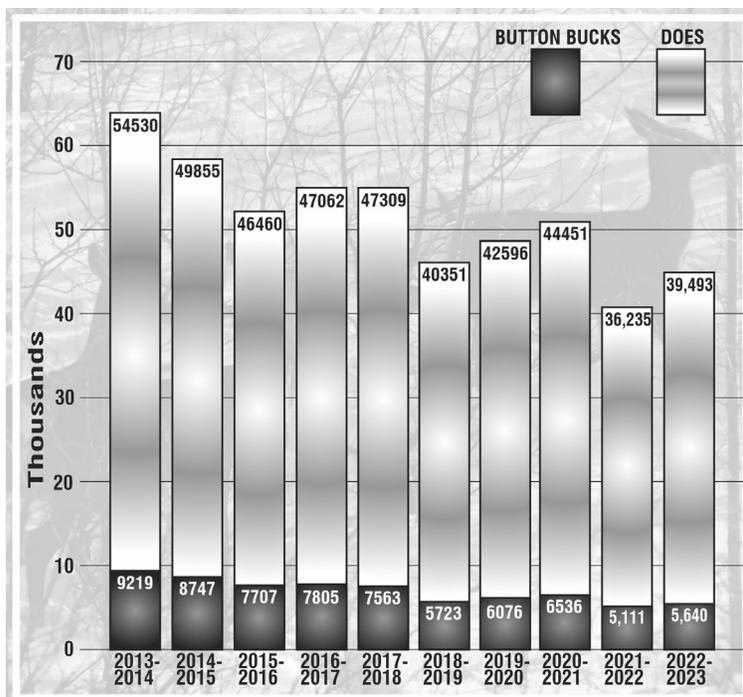


Figure 3  
Maryland Reported Deer Harvest for the Archery, Firearm, and Muzzleloader Seasons, 2013-2014 through 2022-2023

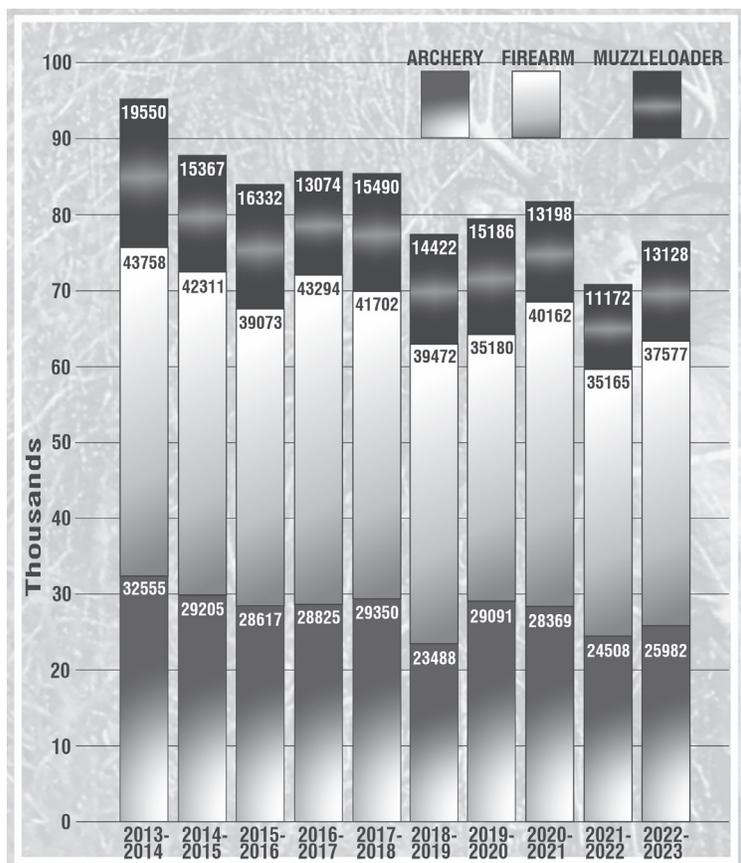
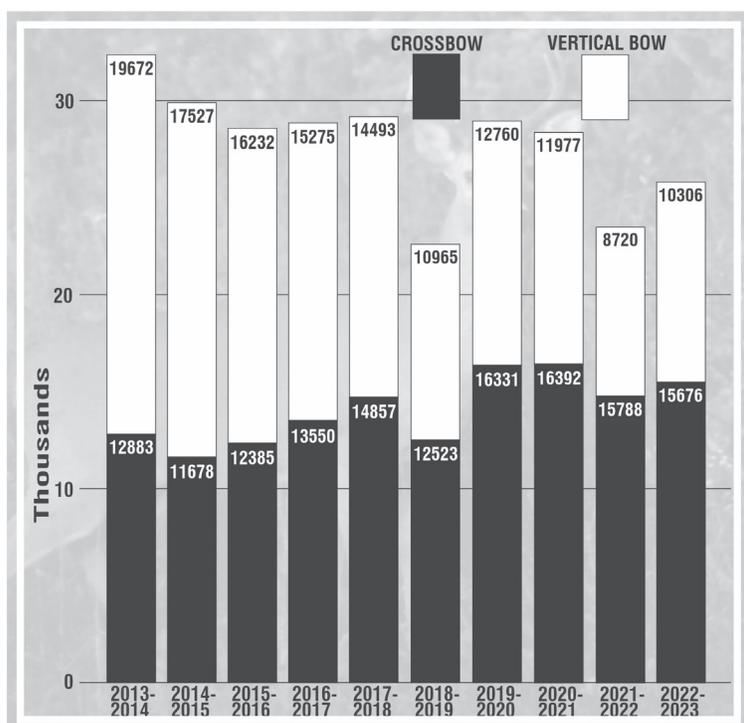


Figure 4  
Maryland Reported Crossbow and Vertical Bow Deer Harvest during the Designated Archery Season, 2013-2014 through 2022-2023



- 86 percent of the archery harvest was on private lands.
- Crossbow hunters took 7,578 antlered deer and 8,098 antlerless deer during the archery season (Table 5).
- The crossbow harvest (15,676 deer) represented 60 percent of the total archery season harvest in 2022-2023 – slightly higher than the 59 percent that it was in 2021-2022 (Figure 4).
- Approximately 10,802 different hunters harvested a deer with a crossbow during archery season (compared to 10,249 in 2021-2022).
- Archery hunters harvested 36 deer during the Primitive Deer Hunt Days, February 1 -3 (Table 11).

### Firearm Season Summary

The statewide firearm season begins the Saturday after Thanksgiving and runs for the following two weeks. In Region B, hunters have an additional two or three days of firearm hunting in early January depending on whether Sunday hunting is allowed in the county where they are hunting. Deer taken during managed hunts outside the normal deer seasons are also counted as firearm kills. Approximately 45,000 - 55,000 hunters deer hunt with a firearm each year in Maryland. The average firearm hunter spends 5-6 days each year pursuing deer and approximately 35-45 percent of firearm hunters bag at least one deer each year.

In 2022-2023:

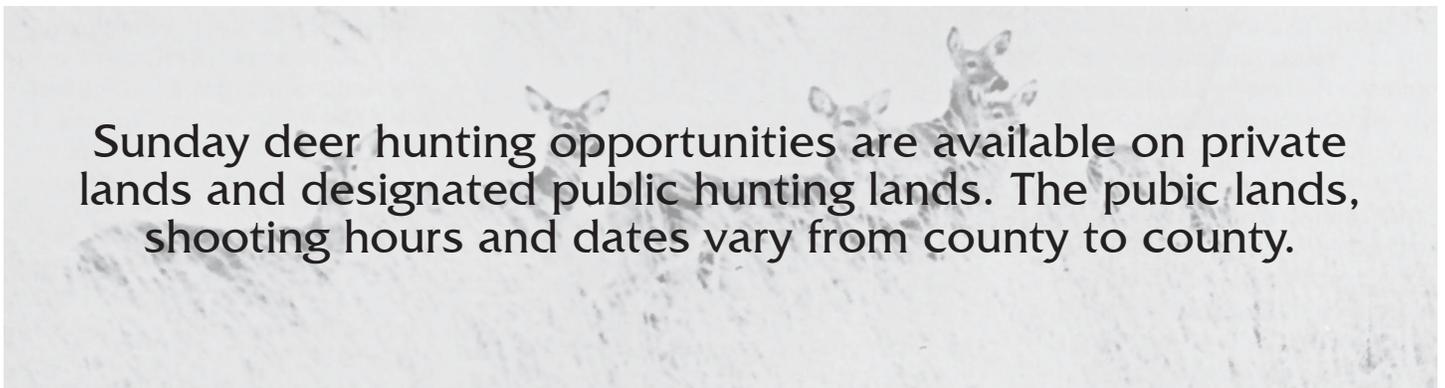
- The statewide firearm harvest increased 9 percent from 35,165 deer in 2021-2022 to 37,577 deer (Table 1, Figure 3).
- The firearm harvest included 14,853 antlered deer (40 percent of the total firearm harvest) and 22,724 antlerless deer.
- The antlered harvest increased 8 percent and the antlerless harvest (18,760 does or antlerless bucks and 2,911 button bucks) increased 10 percent from 2021-2022.
- The majority (78 percent) of the firearm harvest occurred during the two-week season that began the Saturday after Thanksgiving (Table 6).
- Firearm hunters took 49 percent of all deer

Table 3  
Maryland Reported Sunday Hunting Deer Harvest by County, 2022-2023

COUNTY <sup>1</sup>	Archery			Firearms			Junior Hunt			Muzzleloader			Grand Total
	Antlered	Antlerless	Total	Antlered	Antlerless	Total	Antlered	Antlerless	Total	Antlered	Antlerless	Total	
Allegany	66	46	112	113	0	113	49	26	75	7	0	7	307
Anne Arundel	2	3	5	11	22	33	4	2	6	*	*	*	44
Calvert	34	37	71	30	52	82	4	1	5	1	2	3	161
Caroline	28	30	58	48	175	223	15	16	31	4	9	13	325
Carroll	100	85	185	132	308	440	42	32	74	5	23	28	727
Cecil	63	97	160	68	141	209	13	15	28	2	14	16	413
Charles	60	35	95	47	80	127	13	8	21	6	10	16	259
Dorchester													
Whitetail	16	24	40	41	130	171	14	11	25	5	11	16	252
Sika	50	46	96	80	96	176	9	2	11	13	9	22	305
Frederick	99	94	193	178	281	459	61	28	89	11	19	30	771
Garrett	128	72	200	129	0	129	131	42	173	16	0	16	518
Harford	30	43	73	42	112	154	13	6	19	*	*	*	246
Kent	32	48	80	29	94	123	22	10	32	4	9	13	248
Montgomery	40	60	100	26	57	83	13	12	25	3	7	10	218
Queen Anne's	40	40	80	71	149	220	14	7	21	6	6	12	333
St. Mary's	39	58	97	33	60	93	8	4	12	7	8	15	217
Somerset													
Whitetail	13	22	35	27	107	134	21	15	36	1	4	5	210
Sika	2	0	2	0	1	1	1	0	1	0	0	0	4
Talbot	24	22	46	24	62	86	20	14	34	1	9	10	176
Washington	91	81	172	126	151	277	38	17	55	4	11	15	519
Wicomico													
Whitetail	19	24	43	28	70	98	21	22	43	*	*	*	184
Sika	0	1	1	7	5	12	2	0	2	*	*	*	15
Worcester	14	16	30	82	201	283	23	18	41	*	*	*	354
<b>Total</b>	<b>990</b>	<b>984</b>	<b>1,974</b>	<b>1,372</b>	<b>2,354</b>	<b>3,726</b>	<b>551</b>	<b>308</b>	<b>859</b>	<b>96</b>	<b>151</b>	<b>247</b>	<b>6,806</b>

\* Sunday hunting was not open during this season in this county.

<sup>1</sup> See Table 4 for the Sundays that were open for deer hunting in each county in 2022-2023.



Sunday deer hunting opportunities are available on private lands and designated public hunting lands. The public lands, shooting hours and dates vary from county to county.

Table 4  
Maryland Sunday Deer Hunting Dates by County, 2022-2023

**SUNDAY DEER HUNTING 2022-2023 (FOR WHITE-TAILED AND SIKA DEER)**

Sunday deer hunting is open with these restrictions, in these counties and locations on these dates.

COUNTY	Lands Open	Archery Season												Firearms Season			Muzzleloader Season								
		Sept. 11	Sept. 18	Sept. 25	Oct. 2	Oct. 9	Oct. 16	Oct. 23	Oct. 30	Nov. 6	Nov. 13	Nov. 20	Jan. 1	Jan. 8	Jan. 15	Jan. 22	Jan. 29	Nov. 13 (w/ Hunt)	Nov. 27	Dec. 4	Jan. 8	Dec. 18	Dec. 25		
ALLEGANY	Private & Designated Public <sup>1</sup>	Open	Open	Open	Open	Open	Open	Open	Open	Open															
ANNE ARUNDEL	Private Only																		Open						
BALTIMORE	None																								
CALVERT	Private Only	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>																
CAROLINE	Private Only	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>																
CARROLL	Private Only				Open	Open	Open	Open	Open	Open	Open	Open	Open												
CECIL	Private & Designated Public <sup>1</sup>	Open	Open	Open	Open	Open	Open	Open	Open	Open															
CHARLES	Private Only	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>																
DORCHESTER	Private Only	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open	Open	Open	Open	Open	Open	Open	Open	Open												
FREDERICK	Private Only				Open	Open	Open	Open	Open	Open	Open	Open	Open												
GARRETT	Private & Designated Public <sup>1</sup>	Open	Open	Open	Open	Open	Open	Open	Open	Open															
HARFORD	Private Only									Open	Open	Open	Open	Open	Open	Open	Open	Open							
HOWARD	None																								
KENT	Private Only	Open	Open	Open	Open	Open	Open	Open	Open	Open															
MONTGOMERY	Private Only	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>																
PRINCE GEORGES	None																								
QUEEN ANNES	Private Only	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>																
ST. MARY'S	Private & Designated Public <sup>1</sup>	Open	Open	Open	Open	Open	Open	Open	Open	Open															
SOMERSET	Private & Designated Public <sup>3</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>																
TALBOT	Private Only	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>	Open <sup>2</sup>																
WASHINGTON REGION A	Private & Designated Public <sup>1</sup>	Open	Open	Open	Open	Open	Open	Open	Open	Open															
WASHINGTON REGION B	Private Only	Open	Open	Open	Open	Open	Open	Open	Open	Open															
WICOMICO	Private Only																								
WORCESTER	Private Only																								

<sup>1</sup> Designated public lands open to Sunday hunting in Allegany, Cecil, Garrett, St. Marys and Washington counties are: Billmeyer-Belle Grove WMA, Cunningham Swamp WMA, Dan's Mountain WMA, Earlvile WMA, Garrett State Forest (SF), Green Ridge SF, Grove Farm WMA, Indian Springs WMA, McCoolie FMA, Mount Nebo WMA, Old Bohemia WMA, Polomac SF, Prather's Neck WMA, Saint Ingoes SF, Salem SF, Savage River SF, Sideling Hill WMA and Warmor Mountain WMA.

<sup>2</sup> Legal shooting hours for deer are one half hour before sunrise to 10:30am on this Sunday (applies only where footnoted).

<sup>3</sup> Designated public lands open to Sunday hunting in Somerset County are those lands leased to hunt clubs for the purpose of hunting.

harvested in Maryland compared to 50 percent last season. (Figure 3).

- The majority (90 percent) of the firearm harvest was taken on private property.
- Firearm hunters bagged 3,726 deer (1,372 antlered and 2,354 antlerless) on the Sundays open during the two-week and January firearm seasons; and junior deer hunters harvested 859 deer (551 antlered and 308 antlerless) on the Junior Deer Hunt Sunday (Table 3).
- Junior deer hunters bagged a total of 2,063 deer (1,416 antlered and 647 antlerless) during the Junior Deer Hunt weekend; 5 percent more than the 1,972 deer taken in 2021-2022. (Table 7).
- Deer hunters reported 5,434 deer (80 percent antlerless) for the three-day January firearm season (Table 8).

## Muzzleloader Season Summary

The 2022-2023 statewide either-sex muzzleloader season included three days in October (October 20 - 22) and two weeks beginning in mid-December (December 17 – December 31). Region B continued with a six-day antlerless-only muzzleloader season (October 24 - 29) 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 48,000 and 9,000 muzzleloader stamps respectively in 2022-2023. The stamps are required to hunt deer during the muzzleloader season. It is estimated that 20,000-30,000 hunters actually hunt during this season. Those that do hunt pursue deer for 3-5 days for each of the early and late seasons. Approximately 25-30 percent of muzzleloader hunters are successful in harvesting at least one deer in any given year.

In 2022-2023:

- The muzzleloader harvest totaled 13,128 deer compared to 11,172 deer in 2021-2022, an 18 percent increase (Table 1, Figure 3).
- There were 4,711 antlered deer and 8,417 antlerless deer harvested with muzzleloaders. Antlerless deer represented 64 percent of the total muzzleloader harvest.

- The antlered harvest increased 5 percent and the antlerless harvest (7,459 does or antlerless bucks and 958 button bucks) increased 26 percent from the previous year.
- Muzzleloader hunters took 17 percent of all deer harvested in Maryland, slightly higher than the 16 percent last season. (Figure 3).
- The October muzzleloader harvest was 7,626 deer (3,019 antlered and 4,607 antlerless); an 13 percent increase from the previous year's harvest of 6,738 deer (Table 9).
- The December muzzleloader harvest totaled 5,270 deer (1,652 antlered and 3,618 antlerless); a 26 percent increase from the previous year's harvest of 4,185 deer (Table 10).
- The October muzzleloader season accounted for 58 percent of the total muzzleloader harvest for the year.
- Muzzleloader hunters took 88 percent of their total harvest on private lands.
- Muzzleloader hunters harvested 232 deer with primitive flintlock or percussion sidelock muzzleloaders during the Primitive Hunt Days, February 1 – 3 (Table 11).

## Public Property Deer Management

The Maryland Department of Natural Resources (DNR) provides assistance to local governments, communities, and publicly-owned properties that choose to address deer management issues. Public entities that desire to conduct hunts outside of the regional deer hunting season framework may do so with prior approval from 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, airports, 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, DNR cooperates with organizations and shooting ranges that offer a shooter qualification program. This program provides public access to shooting ranges where hunters can become certified in the standards required to apply for managed hunts held

Table 5  
Maryland Reported Crossbow Deer Harvest  
by County, 2022-2023

COUNTY	Archery Season			Muzzleloader/Firearm Seasons			Grand Total
	Antlered	Antlerless	Total	Antlered	Antlerless	Total	
<b>Allegany</b>	388	261	649	12	10	22	671
<b>Anne Arundel</b>	262	327	589	34	58	92	681
<b>Baltimore</b>	629	775	1,404	83	131	214	1,618
<b>Calvert</b>	198	248	446	15	18	33	479
<b>Caroline</b>							
<b>Whitetail</b>	196	223	419	7	18	25	444
<b>Sika</b>	0	1	1	0	0	0	1
<b>Carroll</b>	469	521	990	31	52	83	1,073
<b>Cecil</b>	368	461	829	17	45	62	891
<b>Charles</b>	306	312	618	26	49	75	693
<b>Dorchester</b>							
<b>Whitetail</b>	112	133	245	6	13	19	264
<b>Sika</b>	320	405	725	16	37	53	778
<b>Frederick</b>	606	562	1,168	32	68	100	1,268
<b>Garrett</b>	698	375	1,073	23	12	35	1,108
<b>Harford</b>	366	451	817	33	75	108	925
<b>Howard</b>	225	393	618	29	73	102	720
<b>Kent</b>	208	211	419	9	21	30	449
<b>Montgomery</b>	362	539	901	58	107	165	1,066
<b>Prince George's</b>	233	229	462	25	42	67	529
<b>Queen Anne's</b>	247	258	505	11	29	40	545
<b>St. Mary's</b>	310	300	610	21	33	54	664
<b>Somerset</b>							
<b>Whitetail</b>	121	148	269	3	11	14	283
<b>Sika</b>	5	1	6	0	0	0	6
<b>Talbot</b>	179	176	355	4	29	33	388
<b>Washington</b>	497	447	944	24	32	56	1,000
<b>Wicomico</b>							
<b>Whitetail</b>	136	180	316	7	22	29	345
<b>Sika</b>	23	25	48	2	0	2	50
<b>Worcester</b>							
<b>Whitetail</b>	107	132	239	7	12	19	258
<b>Sika</b>	7	4	11	2	0	2	13
<b>Grand Total</b>	<b>7,578</b>	<b>8,098</b>	<b>15,676</b>	<b>537</b>	<b>997</b>	<b>1,534</b>	<b>17,210</b>

Table 6  
Maryland Reported 2-Week  
Firearm Season Deer Harvest  
by County, 2022

COUNTY	Antlered	Antlerless	Total
Allegany	968	638	1,606
Anne Arundel	193	268	461
Baltimore	493	753	1,246
Calvert	173	299	472
Caroline	403	986	1,389
Carroll	1,035	1,484	2,519
Cecil	420	743	1,163
Charles	381	479	860
Dorchester			
Whitetail	356	632	988
Sika	395	469	864
Frederick	1,257	1,667	2,924
Garrett	1,301	736	2,037
Harford	371	667	1,038
Howard	213	305	518
Kent	358	921	1,279
Montgomery	385	513	898
Prince George's	189	278	467
Queen Anne's	417	828	1,245
St. Mary's	261	339	600
Somerset			
Whitetail	291	608	899
Sika	6	6	12
Talbot	298	649	947
Washington	1,014	941	1,955
Wicomico			
Whitetail	368	833	1,201
Sika	48	51	99
Worcester			
Whitetail	423	1,047	1,470
Sika	1	2	3
<b>Total</b>	<b>12,018</b>	<b>17,142</b>	<b>29,160</b>

Table 7  
Maryland Reported  
Junior Deer Hunt Harvest  
by County, 2022

COUNTY	Antlered	Antlerless	Total
Allegany	139	44	183
Anne Arundel	10	3	13
Baltimore <sup>1</sup>	26	9	35
Calvert	10	4	14
Caroline	40	33	73
Carroll	105	55	160
Cecil	45	24	69
Charles	25	22	47
Dorchester			
Whitetail	49	24	73
Sika	19	10	29
Frederick	161	61	222
Garrett	279	85	364
Harford	36	10	46
Howard <sup>1</sup>	11	5	16
Kent	46	23	69
Montgomery	43	22	65
Prince George's <sup>1</sup>	17	5	22
Queen Anne's	43	18	61
St. Mary's	20	18	38
Somerset			
	35	30	65
	1	0	1
Talbot	34	24	58
Washington	111	38	149
Wicomico			
Whitetail	61	44	105
Sika	3	0	3
Worcester	47	36	83
<b>Total</b>	<b>1,416</b>	<b>647</b>	<b>2,063</b>

<sup>1</sup>Saturday only.

Table 8  
Maryland Reported 3-Day  
January Firearm Season Deer Harvest  
by County, 2023

COUNTY	Antlered	Antlerless	Total
Anne Arundel	24	49	73
Baltimore	62	177	239
Calvert	24	65	89
Caroline	47	189	236
Carroll	103	402	505
Cecil	49	212	261
Charles	35	120	155
Dorchester			
Whitetail	52	171	223
Sika	124	197	321
Frederick	113	498	611
Harford	45	218	263
Howard	20	112	132
Kent	46	272	318
Montgomery	42	183	225
Prince George's	22	78	100
Queen Anne's	64	275	339
St. Mary's	24	75	99
Somerset			
Whitetail	25	157	182
Sika	0	1	1
Talbot	34	138	172
Washington	46	200	246
Wicomico			
Whitetail	33	215	248
Sika	12	19	31
Worcester			
Whitetail	66	297	363
Sika	0	2	2
<b>Total</b>	<b>1,112</b>	<b>4,322</b>	<b>5,434</b>

Table 9  
Maryland Reported  
Early Muzzleloader Season Deer Harvest  
by County, 2022

COUNTY	Antlered	Antlerless	Total
Allegany	195	194	389
Anne Arundel	46	94	140
Baltimore	124	279	403
Calvert	43	74	117
Caroline	82	197	279
Carroll	185	296	481
Cecil	99	207	306
Charles	92	134	226
Dorchester			
Whitetail	71	168	239
Sika	358	264	622
Frederick	225	432	657
Garrett	390	235	625
Harford	95	216	311
Howard	47	124	171
Kent	143	217	360
Montgomery	88	143	231
Prince George's	55	106	161
Queen Anne's	99	224	323
St. Mary's	61	128	189
Somerset			
Whitetail	54	145	199
Sika	6	0	6
Talbot	66	109	175
Washington	211	274	485
Wicomico			
Whitetail	65	178	243
Sika	30	19	49
Worcester			
Whitetail	79	136	215
Sika	10	14	24
<b>Total</b>	<b>3,019</b>	<b>4,607</b>	<b>7,626</b>

Table 10  
 Maryland Reported  
 Late Muzzleloader Season Deer Harvest  
 by County, 2022-2023

COUNTY	Antlered	Antlerless	Total
Allegany	90	166	256
Anne Arundel	51	101	152
Baltimore	106	280	386
Calvert	33	70	103
Caroline	52	161	213
Carroll	88	203	291
Cecil	39	138	177
Charles	88	158	246
Dorchester			
Whitetail	31	89	120
Sika	145	180	325
Frederick	128	254	382
Garrett	166	226	392
Harford	72	203	275
Howard	45	99	144
Kent	54	219	273
Montgomery	75	151	226
Prince George's	54	78	132
Queen Anne's	64	173	237
St. Mary's	51	87	138
Somerset			
Whitetail	23	58	81
Sika	0	3	3
Talbot	32	102	134
Washington	75	193	268
Wicomico			
Whitetail	44	106	150
Sika	11	17	28
Worcester			
Whitetail	34	102	136
Sika	1	1	2
<b>Total</b>	<b>1,652</b>	<b>3,618</b>	<b>5,270</b>

across the state. When they have successfully passed the program, they receive a statewide shooter qualification card. Appendix II provides a summary of the total deer taken on Maryland public lands during the 2022-2023 hunting seasons. Some of these public lands are part of the managed hunting programs described here.

## Suburban Deer Management

Deer management in suburban areas ranks as one of the most difficult challenges facing wildlife agencies throughout the country. DNR 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 the department 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.

Increasing deer-vehicle collisions, damage to ornamental plants and gardens, and damage to natural habitats are some of the problems that persist when the deer population is not directly managed and reduced. Oftentimes, when public tolerance levels have been surpassed, lethal control methods are considered as a last resort. At this point, DNR provides 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

Table 11  
 Maryland Reported  
 Primitive Deer Hunt Days Harvest  
 by County, 2023

COUNTY	Archery Season			Muzzleloader Season			Total		
	Antlered	Antlerless	Total	Antlered	Antlerless	Total	Antlered	Antlerless	Total
Allegany	0	0	0	1	26	27	1	26	27
Anne Arundel	0	0	0	2	2	4	2	2	4
Baltimore	0	3	3	2	15	17	2	18	20
Calvert	1	1	2	1	0	1	2	1	3
Caroline	1	1	2	0	8	8	1	9	10
Carroll	0	1	1	1	5	6	1	6	7
Cecil	0	0	0	0	10	10	0	10	10
Charles	1	0	1	0	7	7	1	7	8
Dorchester									
Whitetail	0	1	1	3	6	9	3	7	10
Sika	4	4	8	12	26	38	16	30	46
Frederick	0	3	3	3	5	8	3	8	11
Garrett	0	0	0	0	28	28	0	28	28
Harford	0	0	0	0	10	10	0	10	10
Howard	0	0	0	1	3	4	1	3	4
Kent	0	2	2	0	4	4	0	6	6
Montgomery	1	4	5	2	6	8	3	10	13
Prince George's	2	2	4	1	2	3	3	4	7
Queen Anne's	0	1	1	1	10	11	1	11	12
St. Mary's	1	1	2	0	2	2	1	3	4
Somerset	0	0	0	0	0	0	0	0	0
Talbot	0	0	0	3	4	7	3	4	7
Washington	0	0	0	4	6	10	4	6	10
Wicomico									
Whitetail	0	1	1	1	4	5	1	5	6
Sika	0	0	0	1	0	1	1	0	1
Worcester	0	0	0	1	3	4	1	3	4
<b>Total</b>	<b>11</b>	<b>25</b>	<b>36</b>	<b>40</b>	<b>192</b>	<b>232</b>	<b>51</b>	<b>217</b>	<b>268</b>

Primitive Hunt Days occurred on  
 February 1st through the 3rd of 2023.

is recommended to help resolve the problem. DNR will continue to evaluate any new deer management techniques as they are created and promote effective methods that help reduce deer-human conflicts.

## 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.

To monitor deer mortality due to deer-vehicle collisions, DNR primarily uses data provided by State Farm Insurance Company. State Farm estimates total animal-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 are 30,000 – 35,000 deer-vehicle collisions in Maryland annually.

Negative impacts to farmland are also of concern when deer populations are not managed or reduced. Farmers and landowners can obtain a Deer Management Permit from DNR when deer are causing damage to commercial crops. Deer Management Permits allow farmers to harvest antlerless deer on their property outside of the regular state hunting seasons and bag limits. In 2022, 9,716 deer were taken with Deer Management Permits compared to 8,700 deer in 2021 (Table 12). 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, Deer Management Permits 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), public and private landowners may obtain a Deer Cooperator Permit. Sharp-shooting deer via a Deer Cooperator Permit is a viable, lethal alternative for controlling deer numbers. A limited number of farmers also use the permit at night in particularly problematic areas to reduce deer damage to their crops. Permittees must pass written and shooting exams in order to obtain

the permit and must submit an Operational Plan for approval. The majority of these permits are limited to the months of February and March. During 2022, 1,497 deer were harvested under authority of these permits in Maryland. County and/or federal officials, as well as a few private groups, remove the majority of deer taken with this method.

Over the past decade, there has been increased concern about predation on deer in the United States. These concerns often are focused on coyotes, and particularly in the southeastern part of the country. In Maryland, these concerns are more pronounced in the western counties, where bears and coyotes are more abundant. Currently, reproductive data that the Deer Project collects does not indicate coyotes or bears are having a significant impact on the deer population in Maryland. In some counties, fawn recruitment, based on the annual hunter harvest, has declined to relatively low numbers during some years, but the deer population remains stable. While the deer population is significantly lower than it was 20 years ago, the decline can be largely attributed to the relatively high percentage of antlerless deer taken during the hunting season.

While there is 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 is minimal. The vast majority of white-tailed deer give birth to fawns within a two- to four-week period in May and June, which overwhelms predators like coyotes and bears. During that time, 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. The Deer Project will continue to monitor fawn recruitment rates, as well as coyote and bear populations, in Maryland, and will develop alternative management strategies as the need arises.

## Deer Population

Maryland's white-tailed deer population prior to the 2022-2023 hunting season was estimated at 224,000 deer, approximately 3 percent lower than the previous 5-year average of 231,000 deer. Trends in deer abundance are commonly

Table 12  
Maryland Deer Management Permit Statistics by County, 2022-2023

COUNTY	No. Permits Issued	No. Shooters Authorized	No. Successful Shooters	No. Deer Authorized to Harvest	Whitetail Males Harvested	Whitetail Females Harvested	Sika Males Harvested	Sika Females Harvested	Total Harvested	Tags Utilized %
Allegany	51	253	68	460	21	227			248	54
Anne Arundel	27	159	24	800	19	73			92	12
Baltimore	95	787	97	1,852	65	449			514	28
Calvert	19	121	17	555	5	41			46	8
Caroline	34	190	57	590	37	233			270	46
Carroll	189	853	206	4,450	96	731			827	19
Cecil	41	322	58	847	43	190			233	28
Charles	47	212	49	1,620	18	194			212	13
Dorchester	72	522	140	1,840	30	340	20	262	652	35
Frederick	127	745	160	2,530	95	659			754	30
Garrett	439	1,968	501	4,035	139	1,369			1,508	37
Harford	76	576	53	1,250	22	226			248	20
Howard	46	282	68	960	24	211			235	24
Kent	39	306	80	770	53	343			396	51
Montgomery	56	391	86	1,330	14	334			348	26
Prince George's	26	141	45	930	16	185			201	22
Queen Anne's	39	276	88	670	31	291			322	48
St. Mary's	53	299	50	1,720	24	153			177	10
Somerset	43	337	64	828	20	273		1	294	36
Talbot	60	317	100	1,105	69	464			533	48
Washington	106	462	134	1,440	35	419			454	32
Wicomico	85	439	99	1,482	32	441	2	14	489	33
Worcester	92	578	127	1,854	63	600			663	36
<b>Total</b>	<b>1,862</b>	<b>10,536</b>	<b>2,371</b>	<b>33,918</b>	<b>971</b>	<b>8,446</b>	<b>22</b>	<b>277</b>	<b>9,716</b>	<b>29</b>

Farmers and landowners can obtain a Deer Management Permit from DNR when deer are causing damage to commercial crops.

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 declined. The Department of Natural Resources is currently investigating additional ways to control deer in the suburban corridor where hunting is limited by a lack of access to land.

## Chronic Wasting Disease

In 2022, the DNR sampled 1,722 deer for Chronic Wasting Disease (CWD) and detected 38 deer carrying the disease. Thirty-four of the positives were from within the existing CWD Management Area, while four were from outside. Three of the detections were in Frederick County and one was from Carroll County.

Maryland first detected CWD in November 2010 in Green Ridge State Forest near an area where chronic wasting disease is present in West Virginia. To date, the DNR has detected the disease in 171 deer out of more than 13,000 tested.

CWD is a disease of the brain and nervous system that causes death in cervids (members of the deer family). The disease is classified as a transmissible spongiform encephalopathy and attacks the brain of cervids, producing small lesions that eventually result in death. CWD was historically a western U.S. disease, but since 2001 it has been detected in numerous states east of the Mississippi River, including the mid-Atlantic states of Maryland, New York, Ohio, Pennsylvania, Virginia, and West Virginia. To date, 31 states and four Canadian provinces in North America have documented CWD in their deer, elk, or moose populations (free-ranging, captive, or both). The disease has also been detected in Finland (free-ranging moose), Norway (free-ranging reindeer), South Korea (captive elk from Canada), and Sweden (free-ranging moose).

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 take the same precautions as they might to protect against other pathogens or diseases. Additional information on the proper handling of harvested deer and chronic wasting disease management can be found in Appendix I.

DNR continues to cooperate with various research institutions concerning CWD. Currently, staff are participating in a multistate effort coordinated by Cornell University to identify the most effective surveillance strategies for the disease.

## Deer Research and Data Use

In 2022-2023, department staff and volunteers examined 3,969 deer 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 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 wear 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 bucks 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. The percentage of yearling bucks in the harvest remains very healthy and has shown a positive declining trend in recent years. However, the average number of antler points and the average antler beam diameter for yearling bucks have also been declining. These data will continue to be monitored closely in the coming years, but the declining trend may be an artifact of the sampling that now occurs at butcher shops.

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

Significant HD outbreaks typically occur every three to five years and may affect 10-20 percent, or more, of a local deer population. There was a significant HD outbreak reported on the lower shore and moderate reports throughout the central portion of the state in 2022-2023. The Department of Natural Resources will continue to monitor for HD in the coming years.

## Archery Hunter Survey

The annual Archery Hunter Survey was continued for 2021-2022 (survey data from the 2022-2023 season are currently being analyzed and were not ready for this report). Archery hunters reported 18.2 bucks and 41.4 does per 100 hours in 2021-2022. Likewise, they observed 2.3 adult does for every one adult buck and 0.58 fawns for every one adult doe in 2021-2022.

The Archery Hunter Survey provides observational data about furbearers, deer and other wildlife. Archery hunters record the number of animals observed during each hunt, 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 by email at [brent.evans@maryland.gov](mailto:brent.evans@maryland.gov). Forms are also available on the DNR website, at [dnr.maryland.gov/wildlife/Pages/hunt\\_trap/bhsurvey.aspx](http://dnr.maryland.gov/wildlife/Pages/hunt_trap/bhsurvey.aspx).

## Regulatory and Legislative Changes for the Coming 2023-2024 Season

Legislatively, Sunday hunting was expanded in Wicomico and Worcester counties. The safety zone for archery hunting is now 50 yards in Wicomico and Worcester counties. Additionally, the safety zone is now 50 yards for anybody in Howard County operating under the authority of a Deer Management Permit or participating in a Managed Hunter Program administered by the county. Additionally, hunting and trapping license, stamp, and permit fees increased. A Sika Deer Stamp was also introduced and is now required for any hunter wishing to pursue sika in the state. Hunters should consult the 2023-2024 Guide to Hunting and Trapping for more information on these regulatory and legislative changes.



## Archery Hunter Survey Cooperators Wanted

Your observations of wildlife are of great value to the Maryland Wildlife & Heritage Service as powerful tool to effectively track wildlife populations.

**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.

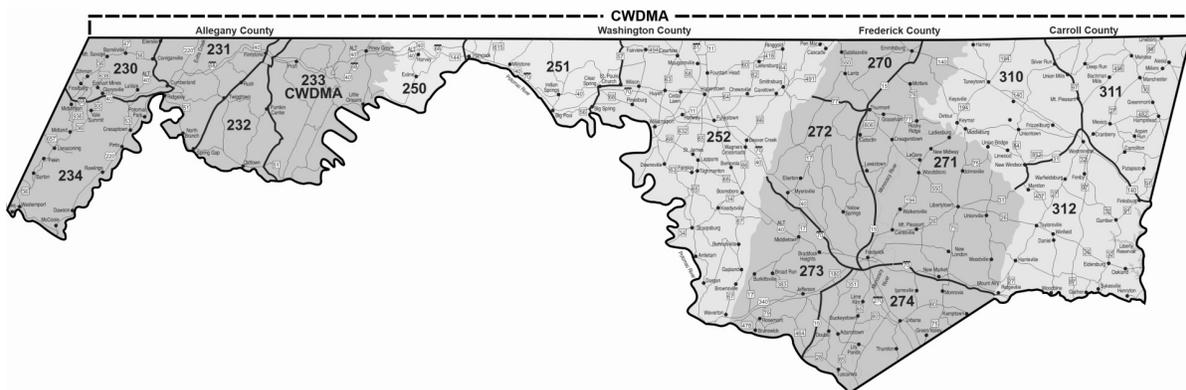
## Chronic Wasting Disease Management

Due to the detection of chronic wasting disease in Allegany, Carroll, Frederick, and Washington counties, the Maryland Department of Natural Resources has implemented a number of measures that are intended to prevent the unintentional spread of chronic wasting disease to other locations in Maryland or to other states. The changes outlined below apply only to the Chronic Wasting Disease Management Area, which is currently defined as all of Allegany, Carroll, Frederick, and Washington counties.

Whole deer carcasses or deer parts cannot be transported out of the Chronic Wasting Disease Management Area, except for:

- Meat with no part of the spinal column, backbone or head attached.
- Meat with no part of the spinal column, backbone or head attached.
- Hindquarters and front shoulders with no spinal column or backbone 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.
- Upper canine teeth, also known as buglers, whistlers or ivories.
- Whole deer carcasses or parts being transported directly to approved meat processors, taxidermists or lined landfills within Allegany, Carroll, Frederick or Washington counties.

### The Chronic Wasting Disease Management Area Includes Allegany, Carroll, Frederick and Washington Counties



Appendix I -continued-  
Chronic Wasting Disease in Deer

Please check the Maryland Department of Natural Resources website, at [dnr.maryland.gov](http://dnr.maryland.gov), for updates on chronic wasting disease surveillance and management. Hunter assistance and cooperation is essential to the department's efforts to monitor and manage chronic wasting disease.

## Carcass Importation Ban

The primary objective in the management of chronic wasting disease 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 restrict the importation of whole carcasses and certain carcass parts of deer, moose and elk harvested from states that have chronic wasting disease.

A person may not import the whole carcass of a dead deer, elk, moose, or other cervid into Maryland from another province or state's designated chronic wasting disease containment, surveillance or management area, unless the final destination of the carcass is within the Maryland Chronic Wasting Disease Management Area or with a chronic wasting disease-approved Maryland processor or taxidermist. Travelers may pass through any part of Maryland with whole carcasses from other state/province chronic wasting disease areas if the carcasses will not remain in the state for more than 24 hours and no parts are disposed of or remain in the state.

A person may import only the following parts of a carcass into Maryland if the final destination is within the state, but outside the Chronic Wasting Disease Management Area, and not with an approved processor or taxidermist:

- Meat with no part of the spinal column or head attached.
- Hindquarters and front shoulders with no spinal column or backbone attached.
- 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 mount or tanned hides.

Please consult the Chronic Wasting Disease Alliance website at [cwd-info.org](http://cwd-info.org) for a complete list of state and province chronic wasting disease containment, surveillance and management areas.

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 Department of Natural Resources within 24 hours of receiving such notification - by telephone at 301-334-4255 or by email to [jonathank.trudeau@maryland.gov](mailto:jonathank.trudeau@maryland.gov).

If you hunt deer, elk, moose or other cervids in other states and/or provinces, particularly those in which chronic wasting disease 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 Chronic Wasting Disease Alliance website at [cwd-info.org/](http://cwd-info.org/) and the Maryland Department of Natural Resources website at [dnr.maryland.gov/](http://dnr.maryland.gov/).

## Taking Deer Carcasses out of Maryland

Because Maryland is considered a chronic wasting disease-positive state, deer hunters must follow carcass importation regulations in other states when they transport a deer carcass out of Maryland. 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 Chronic Wasting Disease Management Area. Hunters are strongly encouraged to check state regulations before transporting deer carcasses.

Appendix II

Statewide Reported Antlered and Antlerless Deer Harvest by Public Hunting Area and County, 2022-2023

County/PublicLand	Antlered	Antlerless
<b>Allegany</b>		
Belle Grove WMA	5	1
Billmeyer WMA	5	1
Dan's Mountain WMA	85	41
Green Ridge SF	236	195
McCooles FMA	1	1
Rocky Gap SP	8	6
Sideling Hill WMA	4	6
Warrior Mountain WMA	64	68
<b>Anne Arundel</b>		
Anne Arundel County Managed Hunts	29	21
Crownsville CWMA	2	11
Davidsonville Receiver Station	9	7
Fort Meade-Pautuxent	27	36
Fort Meade Army Installation	1	2
Sandy Point SP	4	7
Severn Run NEA	0	2
Smithsonian	19	23
<b>Baltimore</b>		
Gunpowder SP	24	105
Gwynnbrook WMA	6	3
Liberty Watershed	14	38
Loch Raven Watershed	76	107
North Point SP	6	9
Patapsco SP	15	20
Pretty Boy Watershed	71	148
Soldiers Delight NEA	7	26
<b>Calvert</b>		
Biscoe Gray Heritage Farm CWMA	3	0
Calvert Cliffs SP	6	4
Flag Pond CWMA	0	0
Hall Creek	0	5
Huntingtown Area	19	35
Parkers Creek WMA	7	26
<b>Caroline</b>		
Chesapeake Forest Lands		
whitetail	7	20
sika	0	0
Idylwild WMA	45	75
Tuckahoe SP	7	17

County/PublicLand	Antlered	Antlerless
<b>Carroll</b>		
Avondale WMA	4	6
Farver CWMA	2	0
Hahn CWMA	0	3
Hanover Watershed	8	11
Liberty Watershed	54	93
Maring CWMA	7	6
Morgan Run SP NRMA	25	29
Patapsco SP	20	36
Sawmill-Spiegel CWMA	17	29
Woodbrook CWMA	13	16
<b>Cecil</b>		
Bohemia River SP	15	27
C&D Canal	5	12
Earlville WMA	11	21
Elk Neck SF	15	28
Elk Neck SP	19	22
Fair Hill NRMA	38	84
Grove Farm WMA	17	35
Old Bohemia WMA	5	8
<b>Charles</b>		
Blossom Point Field Test Facility	13	15
Cedar Point WMA	10	16
Cedarville SF	7	6
Chapel Point SP	3	12
Chapman State Park	4	1
Chicamuxen WMA	1	7
Doncaster SF or Tayloes Neck	3	3
Indian Creek NRMA	3	9
Indian Head Naval Ordnance Area	11	44
Myrtle Grove WMA	22	27
Nanjemoy NRMA	5	9
Nanjemoy Creek WMA	4	2
Popes Creek WMA	5	21
Riverside WMA	0	1

County/PublicLand	Antlered	Antlerless
<b>Dorchester</b>		
Blackwater NWR		
whitetail	30	33
sika	240	345
Chesapeake Forest Lands		
whitetail	61	94
sika	75	65
Fishing Bay WMA		
whitetail	3	11
sika	118	131
LeCompte WMA		
whitetail	1	5
sika	8	12
Linkwood WMA		
whitetail	6	10
sika	0	2
Taylor's Island WMA		
whitetail	1	0
sika	11	17
<b>Frederick</b>		
Cunningham Falls SP, Thurmont Watershed	36	29
Emmitsburg Watershed	4	7
Fort Detrick	3	9
Frederick City Watershed	53	80
Heaters Island WMA	6	7
Monocacy NRMA	30	59
South Mountain SP	14	12
Urbana FMA	3	3

Appendix II -continued-  
Statewide Reported Antlered and Antlerless Deer Harvest by Public Hunting Area and County, 2022-2023

County/PublicLand	Antlered	Antlerless
<b>Garrett</b>		
Cunningham Swamp WMA	0	2
Deep Creek Lake SP	14	7
Frostburg Watershed	15	18
Garrett SF	103	61
Mount Nebo WMA	38	22
Potomac SF	53	31
Sang Run SP	0	1
Savage River SF	276	160
Wolf Den Run SP	7	5
Youghiogheny NEA	3	9
Youghiogheny Reservoir	11	3
4H Center	10	7
<b>Harford</b>		
Aberdeen Proving Grounds	76	86
Gunpowder SP	0	11
Rock SP	8	27
Stoney Forest	6	7
Susquehanna SP	13	45
<b>Howard</b>		
Howard County Parks & Recreation Hunts	31	59
Hugg-Thomas WMA	12	17
Patapsco SP	18	45
Patuxent River SP	59	100
Tridelphia/Rocky Gorge (WSSC)	33	28
<b>Kent</b>		
Eastern Neck NWR	18	17
Millington WMA	34	72
Sassafras NRMA	20	40
<b>Montgomery</b>		
Cherrington CWMA	7	21
Islands of the Potomac WMA	5	28
Mckee-Beshers WMA	32	61
Montgomery County MNCPPC Lands	57	430
Patuxent River SP	53	83
Seneca - Schaeffer Farm	14	22
Seneca Creek SP	46	73
Strider WMA	4	5
Tridelphia/Rocky Gorge (WSSC)	5	23

County/PublicLand	Antlered	Antlerless
<b>Prince George's</b>		
Aquasco Farms Coop	9	25
Belt Woods NEA	5	11
Beltsville	45	54
Billingsly Tract (Patuxent River Park)	5	6
Brandywine Receiver Station	8	4
Cheltenham WMA	2	3
Gardner Road Park CWMA	1	1
Marlboro Natural Area CWMA	3	10
Mill Town Landing NRMA	2	13
Nottingham	4	10
Patuxent WRC (Central & South Tracts)	7	4
Queen Anne Bridge Road CWMA	3	2
Rosaryville SP	10	16
Spice Creek (Patuxent River) NRMA	2	5
Tridelphia/Rocky Gorge (WSSC)	2	8
<b>Queen Anne's</b>		
Browns Branch WMA	5	18
Tuckahoe SP	10	13
Wye Island NRMA	36	40
<b>St. Mary's</b>		
Elms' CWMA	1	6
Greenwell SP	7	13
Historic St. Mary's City CWMA	1	2
Myrtle Point Park CWMA	1	2
Newtowne Neck SP	9	14
Patuxent Naval Air Station	15	18
Point Lookout SP (Jacobs Property)	4	4
St. Inigoes SF	4	4
St. Mary's SP	15	26

County/PublicLand	Antlered	Antlerless
<b>Somerset</b>		
Cedar Island WMA	0	0
Chesapeake Forest Lands		
whitetail	57	121
sika	4	3
Deal Island WMA		
whitetail	6	25
sika	4	0
Fairmount WMA		
whitetail	4	7
sika	2	0
Maryland Marine Properties WMA	1	1
Pocomoke Sound WMA	3	3
South Marsh Island WMA	0	0
Wellington WMA	4	9
<b>Talbot</b>		
Seth SF	4	7
<b>Washington</b>		
Ft. Frederick SP	4	2
Greenbrier SP	16	59
Indian Springs WMA	55	36
Maryland Correctional Training Center	9	11
Prather's Neck WMA	3	5
Sideling Hill WMA	14	3
South Mountain SP	27	47
W. Maryland Ag Research Station (B)	0	0
Woodmont	12	11

Appendix II -continued-  
 Statewide Reported Antlered and Antlerless Deer Harvest by Public Hunting Area and County, 2022-2023

County/PublicLand	Antlered	Antlerless
<b>Wicomico</b>		
Blackwater National Wildlife Refuge		
whitetail	0	1
sika	1	3
Chesapeake Forest Lands		
whitetail	80	105
sika	19	11
Ellis Bay WMA		
whitetail	4	6
sika	1	6
Johnson WMA	1	3
Nanticoke WMA		
whitetail	15	28
sika	16	15
Wetipquin WMA	6	8
Wicomico SF		
whitetail	13	15
sika	1	2
<b>Worcester</b>		
Assateague NS		
whitetail	6	6
sika	34	43
Assateague SP		
whitetail	0	1
sika	3	3
Chesapeake Forest Lands		
whitetail	35	58
sika	0	1
E.A. Vaughn WMA		
whitetail	15	33
sika	1	0
Hickory Point WMA	1	5
Isle of Wight WMA	0	0
Pocomoke River WMA	6	18
Pocomoke SF		
whitetail	28	57
sika	1	0

CFL- Chesapeake Forest Land  
 CWMA- Cooperative Wildlife Management Area  
 FMA- Fishery Management Area  
 MNCPPC- Maryland-National Capital Park and  
 Planning Commission  
 NEA- Natural Environment Area  
 NRMA- Natural Resources Management Area

NS- National Seashore  
 NWR- National Wildlife Refuge  
 SF- State Forest  
 SP- State Park  
 WMA- Wildlife Management Area  
 WRC- Wildlife Research Center  
 WSSC- Washington Suburban Sanitary Commission

# Wild Turkey



## Introduction

Wild turkeys are an important game bird in Maryland, providing recreation and enjoyment for many hunters, wildlife enthusiasts and citizens. Although turkey numbers were dangerously low less than a century ago, conservation efforts have brought the species back from the brink of extinction. Maryland DNR uses a variety of survey and hunting data to monitor wild turkeys in the state to ensure that the population remains healthy.

Following a period of population stabilization in the 2000s, the statewide wild turkey population has increased and likely numbers over 40,000. Much of the increase can be attributed to recent growth of the central region's turkey population. In many suburban counties that previously contained low densities of turkeys, data suggest that populations have grown significantly. However populations in the western region and portions of the eastern shore have either stabilized or declined from their previous high densities. Densities vary considerably across the state and within regions due to differences in habitat quality and recent production. Reproductive success in the summer of 2023 was moderate throughout much of the state.

Approximately 10,000 hunters annually pursue turkeys in the spring, fall or winter hunting seasons in Maryland. In the 2023 spring season, hunters reported a new record harvest of 5,356 turkeys. An exceptionally high number of 2-year old turkeys likely contributed to the increase. The 2022 fall turkey harvest of 99 was slightly higher than the prior year but still indicates a long-term decline in participation during the fall season. A total of 84 turkeys were reported harvested during the three day statewide winter turkey season.

More detailed information about wild turkey populations, hunting statistics and surveys can be found in the following report.

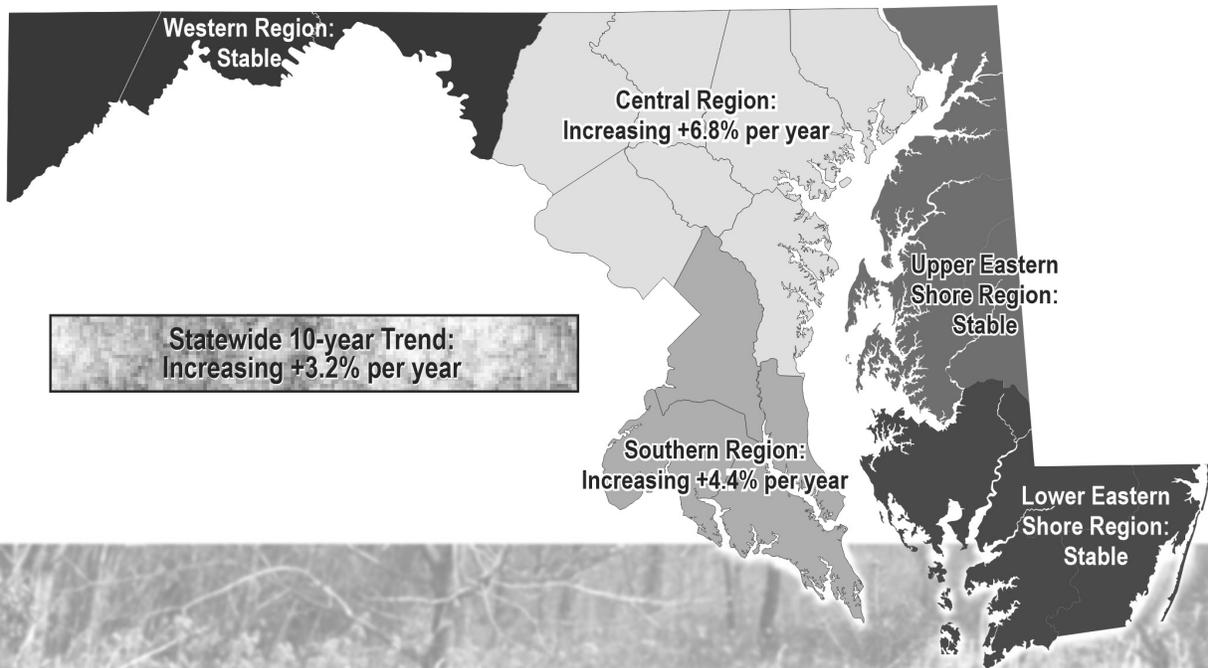
**Wild turkey population densities vary considerably across the state and within regions due to differences in habitat quality and recent production. Reproductive success in the summer of 2023 was moderate throughout much of the state.**

## Population Status

Maryland's estimated wild turkey population has increased in some regions and remained stable in other regions over the past 10 years (Figure 1). Declines have been noted in some counties within regions. The most rapid growth has occurred in the central and southern regions, where populations have increased at an estimated 4-7% per year. Populations in the eastern and western regions have remained stable. Density indices (2021-23 average spring turkey kill per forested mi<sup>2</sup>) are categorized as high in 15 counties (>1 kill/mi<sup>2</sup>), moderate in seven counties (0.5-1.0 kill/mi<sup>2</sup>), and low in the remaining county (<0.5 kill/mi<sup>2</sup>, Table 1, Figure 2). The highest densities of turkeys are still found in the western mountains, the eastern region and portions of the southern region, but densities continue to increase in non-traditional areas.

The summer wild turkey observation survey estimated moderate reproductive success in summer of 2023 with a statewide index of 2.2 poults observed per hen (Figure 3). Regionally, the index was still above 2 poults per hen in most regions, which can be considered a general threshold where production should be adequate to replace annual adult turkey losses. The lowest poult per hen ratios were observed in the Lower Eastern Shore region and the Central region. A detailed summary can be found here: [https://dnr.maryland.gov/wildlife/Documents/wt\\_observe\\_survey.pdf](https://dnr.maryland.gov/wildlife/Documents/wt_observe_survey.pdf).

Figure 1  
Maryland Estimated 10-Year Wild Turkey Population Trends by Region,  
Based on Spring Turkey Harvest, 2014-2023



The highest densities of turkeys are still found in the western mountains, the eastern region and portions of the southern region.

## Spring Season

Maryland hunters harvested 5,356 wild turkeys during the spring 2023 regular and junior turkey seasons (Table 1, Figure 4). This was 27% higher than the 2022 harvest and surpassed the previous record harvest of 4,303 set in 2020. Much of the increase can be attributed to the Brood X cicada emergence in the summer of 2021 that provided abundant food and increased survival of newly-hatched turkeys in a large part of the state. The bumper crop of birds in those regions resulted in plenty of two year old gobblers available for hunters this spring. Spring harvests increased in all counties, but the central and western regions saw the largest jumps. Every county west of the Chesapeake Bay, except Calvert, posted new record harvests. Ideal weather during the beginning of the season also bolstered success, with 60% of the total take coming from the first week of the regular season. Five counties in the region posted record harvests: Anne Arundel, Baltimore, Howard, Montgomery and Prince George’s. The percentage of juvenile turkeys or “jakes” reported in the harvest was 13%, well below the long-term average of 25% (Figure 5).

Table 1  
Maryland Reported Spring Gobbler Season Harvest, 2017-2023

COUNTY	2017	2018	2019	2020	2021	2022	2023	% Change 2022-2023	10-year average	Average kill/ sq. mi. 21-23
Allegany	293	250	278	286	266	282	483	71.3	295	1.10
Anne Arundel	58	49	74	81	64	85	136	60.0	71	0.58
Baltimore	51	55	56	65	53	82	101	23.2	58	0.38
Calvert	59	76	68	82	58	72	99	37.5	72	0.71
Caroline	149	135	152	180	149	168	174	3.6	158	1.70
Carroll	103	103	73	93	104	94	132	40.4	89	1.05
Cecil	87	69	89	94	80	67	95	41.8	77	0.63
Charles	320	336	348	369	353	334	445	33.2	328	1.40
Dorchester	303	212	221	211	197	170	180	5.9	226	1.03
Frederick	332	313	304	348	281	343	391	14.0	306	1.50
Garrett	429	412	429	387	374	436	579	32.8	424	1.08
Harford	127	105	124	88	104	91	128	40.7	108	0.73
Howard	24	36	33	34	35	51	61	19.6	33	0.66
Kent	174	168	166	206	151	160	184	15.0	170	2.29
Montgomery	135	149	135	162	154	164	206	25.6	136	1.24
Prince George’s	91	76	105	109	99	115	164	42.6	101	0.68
Queen Anne’s	160	115	145	144	120	144	170	18.1	154	1.46
Somerset	163	145	129	171	180	176	199	13.1	160	0.98
St. Mary’s	202	191	188	226	187	204	253	24.0	201	1.99
Talbot	94	80	87	95	80	84	96	14.3	86	1.38
Washington	426	459	414	439	345	400	515	28.8	409	2.35
Wicomico	175	139	155	193	181	193	215	11.4	174	1.36
Worcester	220	188	229	240	295	293	350	19.5	244	1.29
<b>Total</b>	<b>4175</b>	<b>3861</b>	<b>4002</b>	<b>4303</b>	<b>3910</b>	<b>4208</b>	<b>5356</b>	<b>27.3</b>	<b>4078</b>	<b>1.16</b>

Figure 2  
 Maryland Wild Turkey Density Indices Based on Average Spring Turkey Harvest  
 per Square Mile of Forest, 2021-2023.

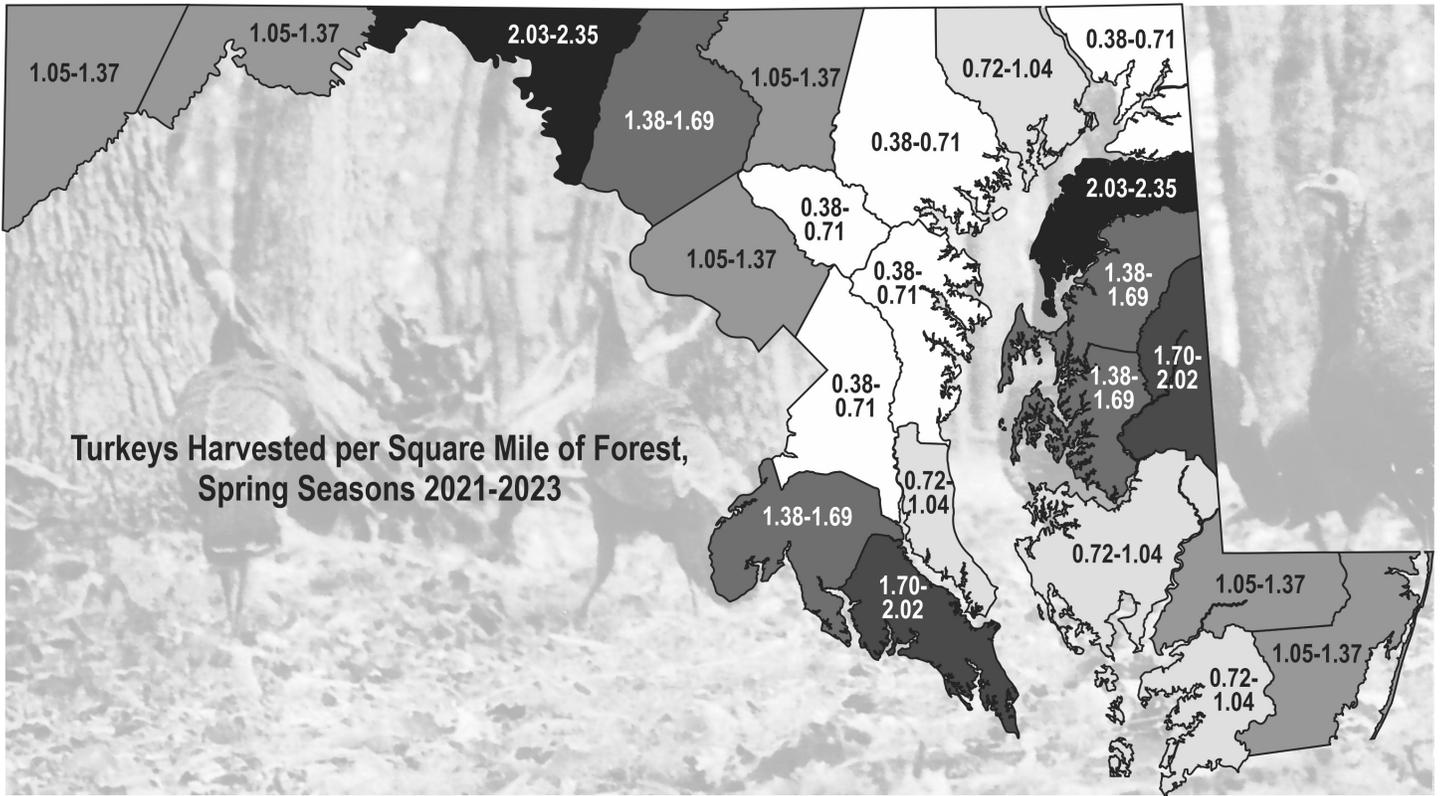


Figure 3  
 Average Number of Poults per Adult Hen Observed by Participants in Summer Wild Turkey  
 Observation Survey, 2007-2023. Error Bars Represent a 95% Confidence Interval.

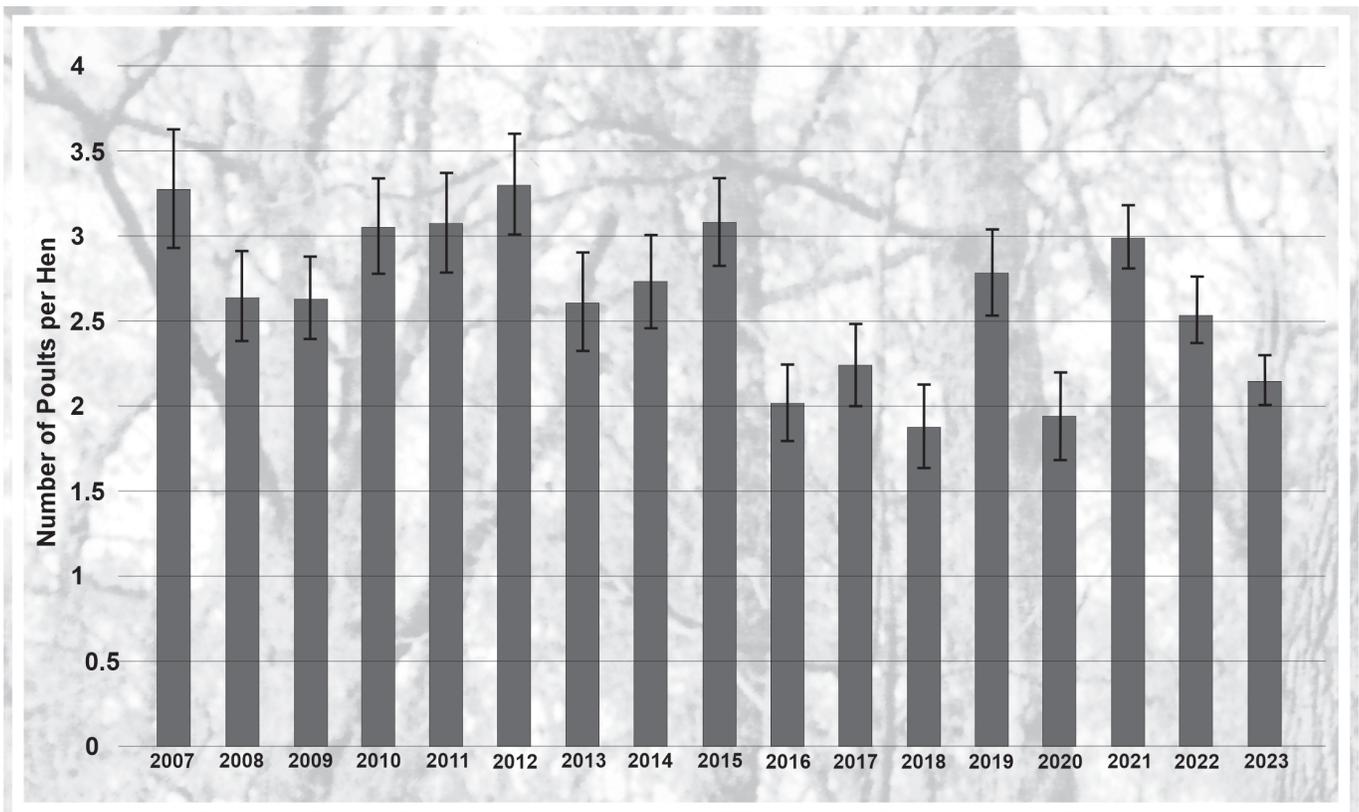
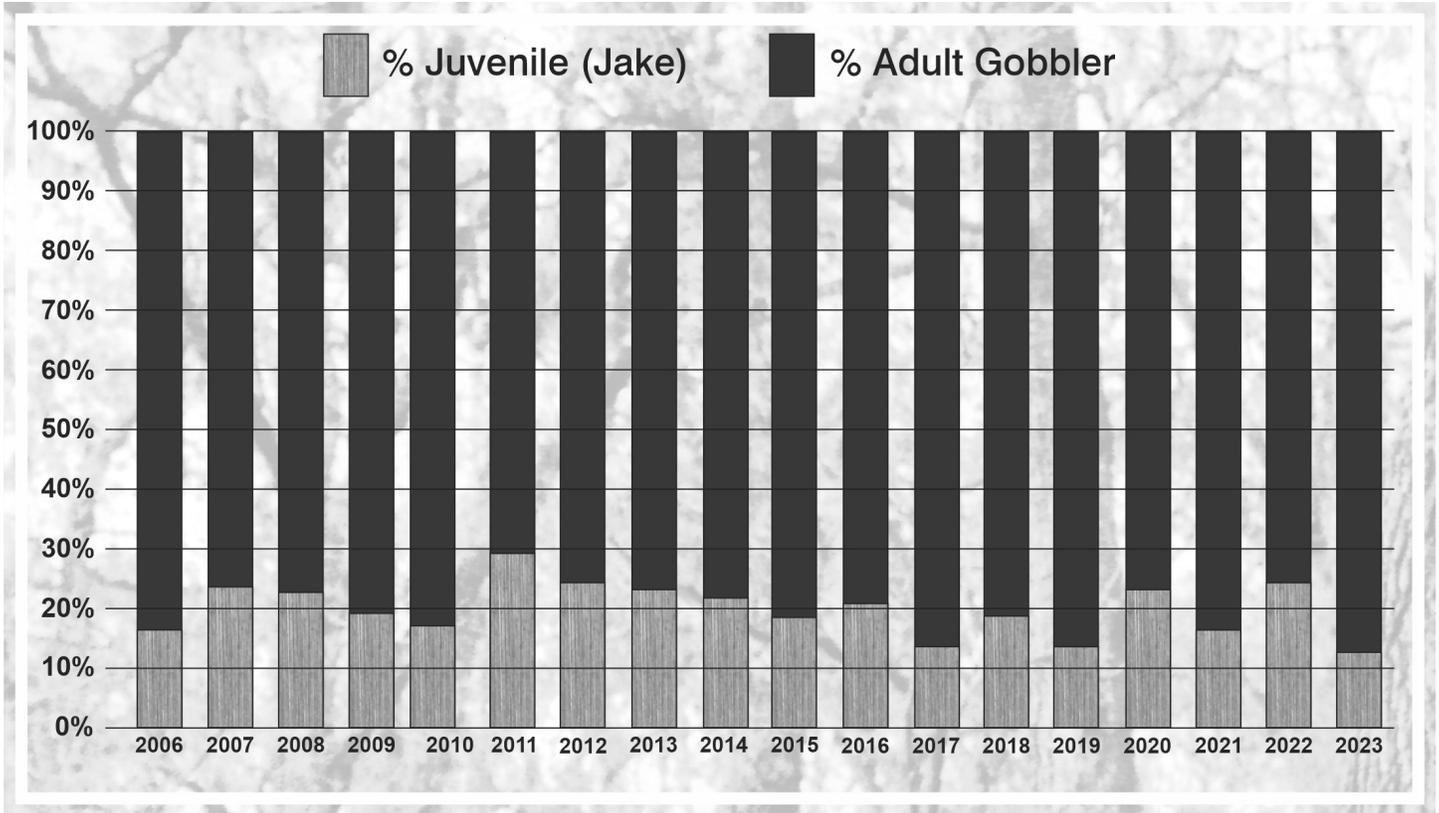


Figure 4

Percentage of Juvenile and Adult Gobblers Reported Harvested in Spring Turkey Seasons, 2006-2023.

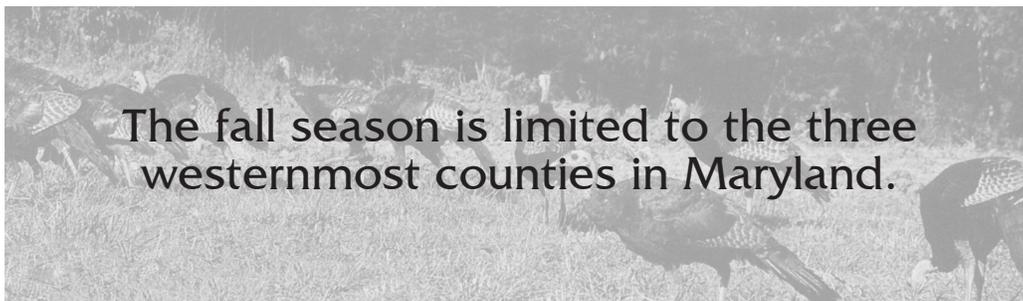


### Fall Season

Turkey hunters reported taking 99 wild turkeys during the 9-day 2022 fall season. The harvest was lower than the 2021 fall season harvest of 81 (Table 2, Figure 4). The fall season is limited to the three westernmost counties in Maryland.

Table 2  
Maryland Reported Fall Turkey Season Harvest, 2016-2022.

COUNTY	2016	2017	2018	2019	2020	2021	2022	%Change 2021-2022	10-year average
Allegany	35	24	31	22	36	33	38	15.2	36
Garrett	51	55	50	53	32	30	34	13.3	47
Washington	33	26	16	16	16	18	27	50.0	25
<b>Total</b>	<b>119</b>	<b>105</b>	<b>97</b>	<b>91</b>	<b>84</b>	<b>81</b>	<b>99</b>	<b>22.2</b>	<b>108</b>



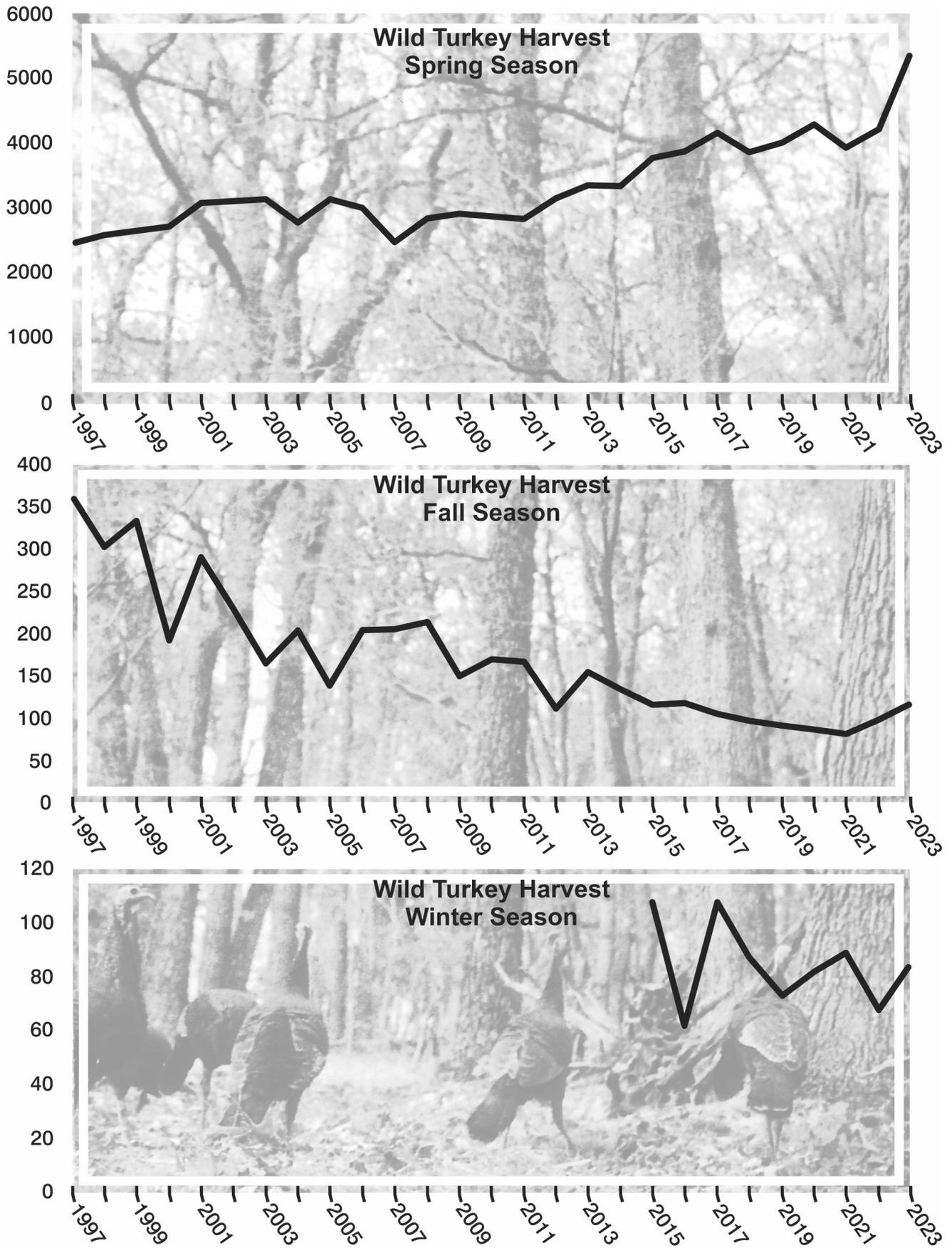
## Winter Season

Hunters reported taking 84 wild turkeys during the 2023 winter turkey season that was open January 19-21 statewide (Table 3, Figure 4). The harvest was 25% above the 2022 total of 67 turkeys. Adult males comprised 70% of the harvest with the remainder females and juveniles. The winter turkey season was established in 2015 to provide hunters additional turkey hunting opportunities while minimizing conflicts with other hunting seasons.

Table 3  
Maryland Reported Winter Turkey Season Harvest, 2017-2023.

COUNTY	2017	2018	2019	2020	2021	2022	2023
Allegany	9	6	4	2	4	4	10
Anne Arundel	2	4	2	2	0	4	7
Baltimore	7	1	1	1	3	7	3
Calvert	0	1	1	2	0	0	3
Caroline	2	2	1	5	4	5	1
Carroll	2	3	2	5	1	3	5
Cecil	2	2	3	3	4	2	1
Charles	10	4	3	1	8	0	7
Dorchester	14	8	6	3	6	1	3
Frederick	6	6	7	3	12	3	9
Garrett	9	8	7	9	7	4	4
Harford	2	2	1	0	5	3	3
Howard	1	1	1	1	0	4	0
Kent	3	4	3	6	2	0	0
Montgomery	3	2	1	1	3	2	2
Prince George's	3	0	2	5	7	1	0
Queen Anne's	5	5	6	4	3	1	1
Somerset	3	2	4	6	3	4	3
St. Mary's	7	10	6	13	6	9	6
Talbot	1	2	0	4	3	0	0
Washington	11	8	7	3	5	3	7
Wicomico	6	3	3	1	3	4	3
Worcester	1	3	2	2	0	3	6
<b>Total</b>	<b>109</b>	<b>87</b>	<b>73</b>	<b>82</b>	<b>89</b>	<b>67</b>	<b>84</b>

Figure 5  
 Reported Maryland Wild Turkey Harvest in Spring, Fall and Winter Seasons, 1997-2023.



## Hunter Participation

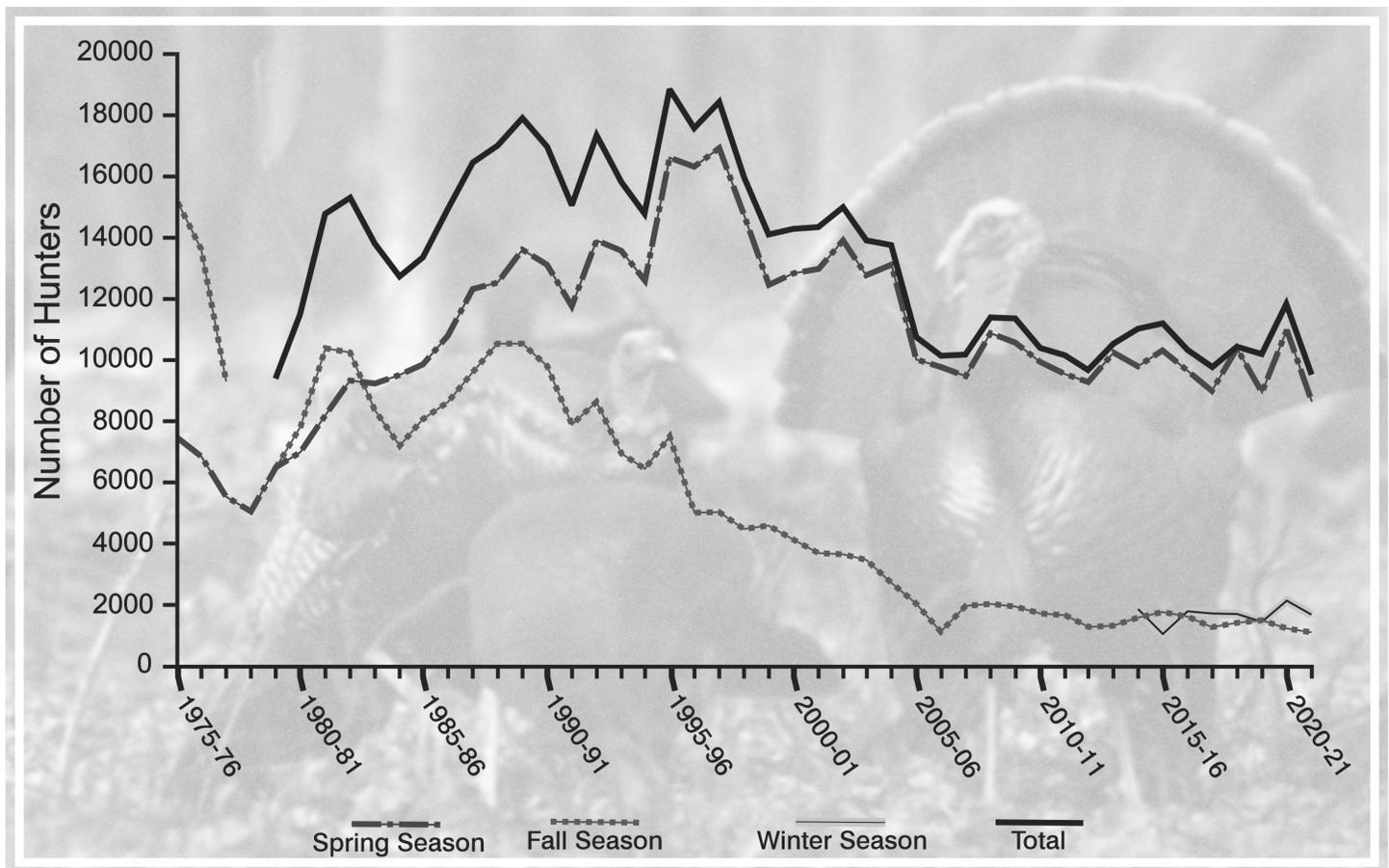
The annual hunter mail survey estimates that the total number of turkey hunters in Maryland is lower than in the 1980s and 90s, but has remained generally stable over the last 15 years (Figure 6) at about 10,000. Participation in fall turkey hunting has declined by over 80 percent. In the 2020-21 season, about 1,100 fall turkey hunters spent 2,700 days afield. Success rate in the fall season is typically about 10 percent. Spring turkey hunting participation peaked in the mid-1990s when the season was opened statewide. The most recent hunter mail survey data (2020) estimated that about 9,000 spring turkey hunters hunted 41,000 days. About 30 percent of spring hunters are typically successful in taking at least one turkey. An estimated 1,600 hunters spent 2,500 days pursuing turkeys during the winter season statewide.

## Wild Turkey Research

Beginning in winter 2023, MD DNR began a 3-year research project in collaboration with various university, state and federal agency, and non-profit partners. Objectives include assessing the impact of weather, predators, habitat, and disease on turkey survival and reproduction. Gobblers are leg-banded to estimate harvest rates as well. Fifty hens were trapped and radio-tagged at two sites in Maryland in the winter of 2023. A total of 128 gobblers were banded. Preliminary data indicate hen survival was low during the spring/summer nesting period (approximately 50%). Nearly all hens alive at the start of nesting season attempted to nest and nest success varied between sites (19% in east vs. 32% in west). Poultry survival was low but not yet calculated. Crude harvest rates were 25% for adult gobblers and 9% for juvenile gobblers statewide.

Figure 6

Estimated Number of Maryland Wild Turkey Hunters, for the Turkey Seasons of 1975-76 to 2021-22.



# Black Bear

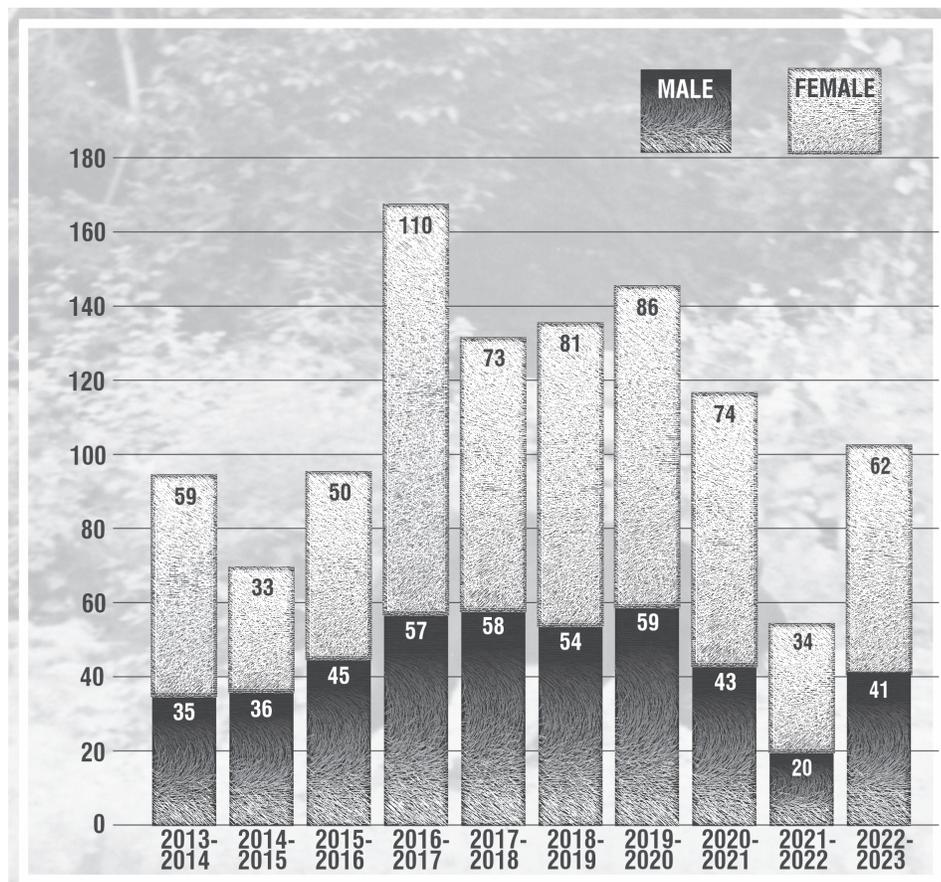
## Introduction

Maryland bear hunters harvested 103 bears during the 2022-2023 6-day season (Figure 1). The harvest was 91% greater than the 54 bears harvested during 2021-2022. Cooler morning temperatures and good weather contributed to the increased bear harvest. Hunters harvested 70 bears in Garrett County, 19 in Allegany County, 10 in Washington County and 4 bears in Frederick County.

In 2022-23:

- The harvest was comprised of 62 male bears and 41 female bears.
- The heaviest bear taken was a male that weighed 427 pounds (estimated live weight).
- Male bears had a mean weight of 193 pounds and female bears had a mean weight of 167 pounds.
- The vast majority of the harvest (96 bears) was taken with rifles.
- Thirty-four of the bears were taken on public land while 69 were harvested on private land.

Figure 1  
Maryland Reported Male and Female Black Bear Harvest, 2013-2014 through 2022-2023



# Black Bear Management

Black bears are predominantly located in Maryland’s four western counties (Allegany, Frederick, Garrett, and Washington). However, the population continues to expand, and bear sightings east of the occupied range are not uncommon. While most of these reported sightings are young bears that are dispersing, there have been several reports of sows with cubs outside of the western counties. As the bear population expands and occupies additional counties, the department will adjust management practices accordingly.

The DNR Bear Project manages black bears using a mix of lethal and non-lethal techniques under guidance of a bear management plan. Along with the annual bear hunt in the four western counties, the department conducts extensive public outreach about living with black bears, and uses non-lethal aversion techniques for problematic bears whenever possible. Agricultural damage permits are also available for farmers experiencing crop damage from bears. These permits allow farmers suffering bear damage to lethally remove one bear from the affected property annually.

The Bear Project uses multiple methods to monitor Maryland’s bear population status. The population has been periodically directly estimated using DNA mark-recapture techniques. The department also uses several indices to monitor population trends, including the number of bears killed annually on Maryland roadways and by other non-hunting causes (Figure 2), and a scent station monitoring survey (Figure 3). These indices suggest Maryland’s bear population remains healthy and is expanding eastward.

Figure 2  
Maryland Black Bear Roadkill and Other Non-Hunting Mortality, 1993-2022.

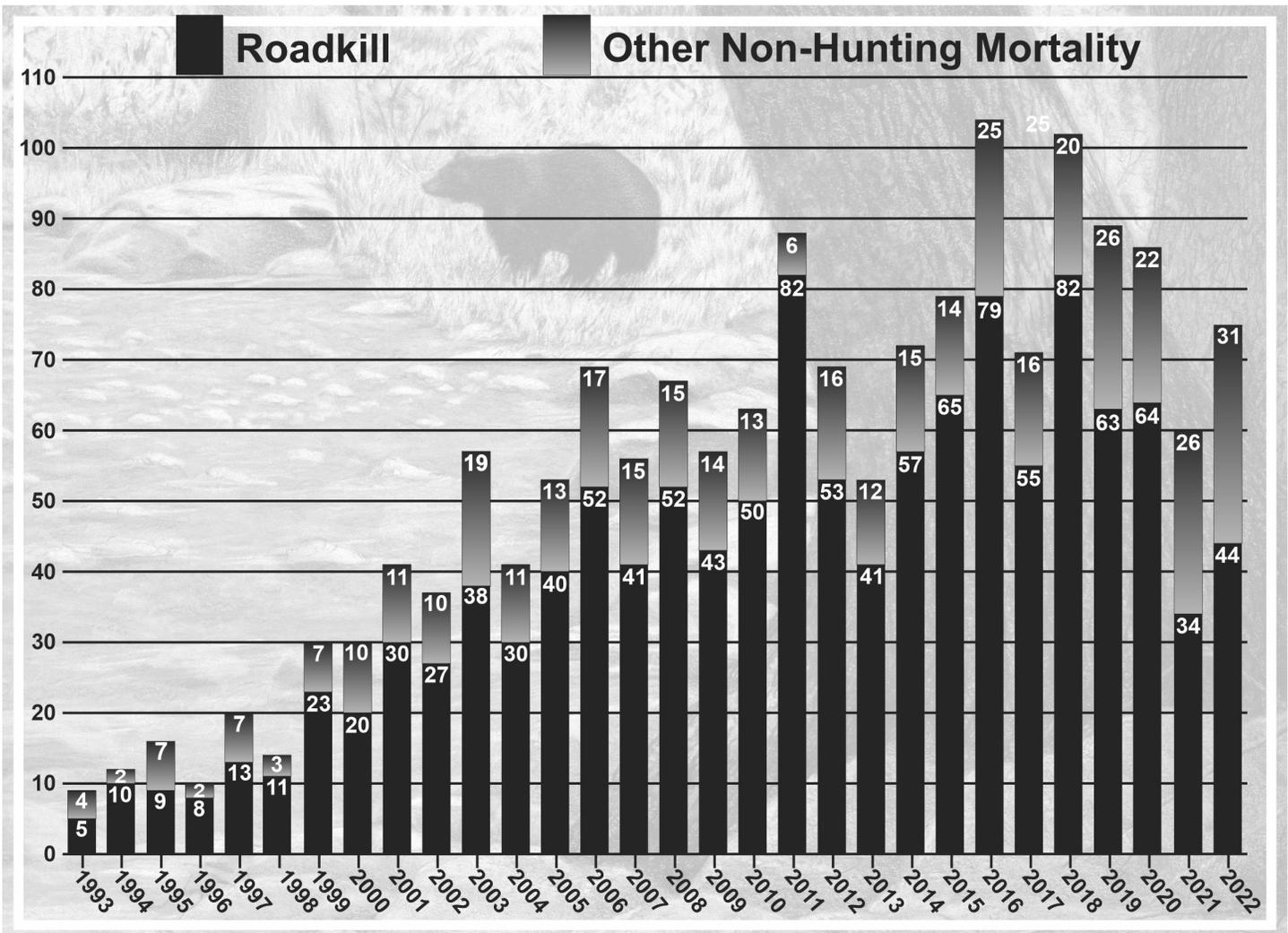
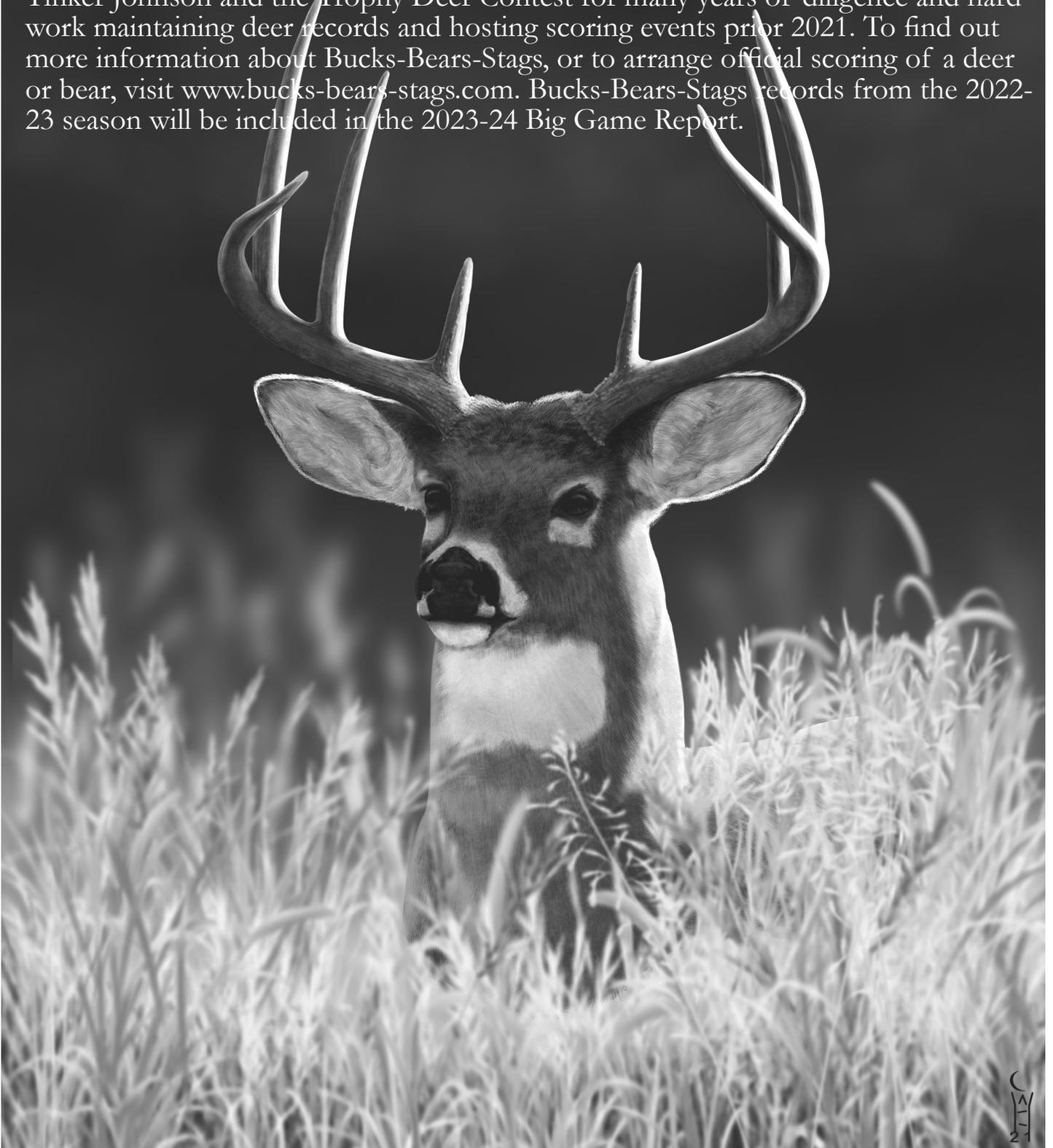


Figure 3  
 Maryland Black Bear Scent Station Visitation by Percent, 1993-2022.



## Trophy Deer and Bear Standings

Beginning in 2021, Bucks-Bears-Stags (BBS) became the official record keeper of Boone & Crocket scores for outstanding Maryland white-tailed deer, sika deer, and black bear. The Department of Natural Resources would like to sincerely thank Tinker Johnson and the Trophy Deer Contest for many years of diligence and hard work maintaining deer records and hosting scoring events prior 2021. To find out more information about Bucks-Bears-Stags, or to arrange official scoring of a deer or bear, visit [www.bucks-bears-stags.com](http://www.bucks-bears-stags.com). Bucks-Bears-Stags records from the 2022-23 season will be included in the 2023-24 Big Game Report.



JMT  
2023



