

# Wild Turkey 2010-2011 Annual Report August 2011



## INTRODUCTION

Wild turkeys are an important game bird in Maryland, providing recreation and enjoyment for countless hunters, wildlife enthusiasts, and citizens. Turkey hunting alone results in an economic benefit to Maryland of nearly \$5 million every year. The Department of Natural Resources' (DNR) Wild Turkey Program monitors population levels, develops hunting regulations, and manages habitat to ensure that turkeys continue to flourish in Maryland.

The statewide wild turkey population has remained relatively stable over the last decade with the highest densities found in the Western Region and Eastern Shore Region. However, declines have been noted in both the Western Region and the Lower Eastern Shore Region which are likely attributable to poor reproduction in several of the last few summers. Conversely, turkey numbers have grown considerably on the upper Eastern Shore over the last 10 years, moving into habitats that once were considered unsuitable. Central and Southern Region numbers are generally lower and have remained stable, likely due to habitat limitations.

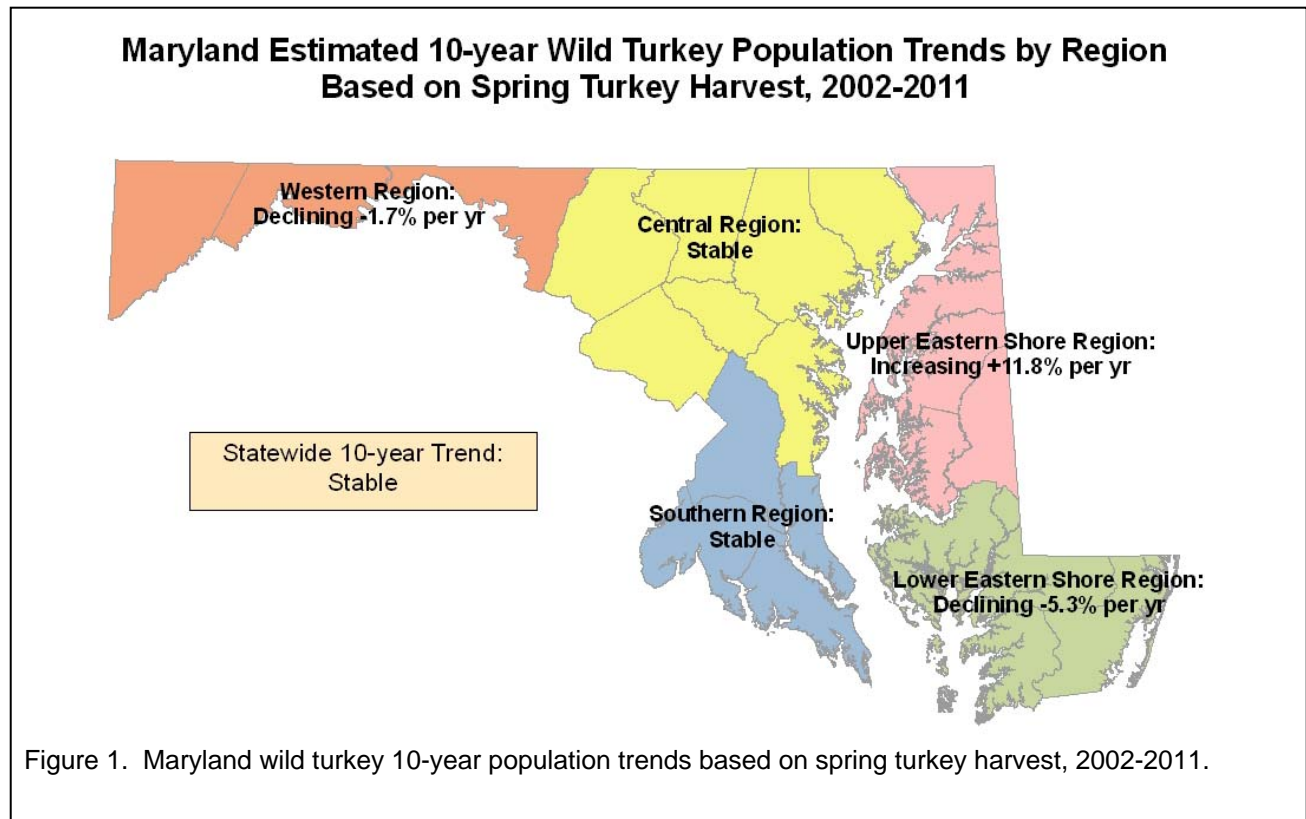
Over 11,000 hunters annually pursue turkeys in either the spring and fall seasons in Maryland. Harvest was near-average in both the 2010 fall season and 2011 spring season. Several regulation changes for the 2010-11 seasons expanded hunting opportunity while minimizing any negative effects on the resource. Annual and regional differences in harvest were largely explained by variations in reproductive success over the past several years. Various sources of data confirm that in years of good reproductive success, turkey numbers and subsequent hunter harvest increases. Continued monitoring of the turkey population will allow DNR to detect any unexpected changes in turkey numbers and ensure that turkey populations remain strong for years to come.



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

## POPULATION STATUS

Maryland's wild turkey population is estimated to be near or above 30,000. The statewide population has remained relatively stable for the past 10 years, although some regions are showing an increasing trend and others are decreasing (Figure 1). Densities are indexed by spring turkey harvest per forested  $\text{mi}^2$  and are categorized as high in 8 counties ( $>1$  kill/ $\text{mi}^2$ ), moderate in 6 counties ( $0.5$ - $1.0$  kill/ $\text{mi}^2$ ), and low in the remaining 9 counties ( $<0.5$  kill/ $\text{mi}^2$ , Table 1). The highest densities of turkeys are found in the western mountains and the eastern region (Figure 2). Densities are lowest in the central portion of the state, where suburbia and development limit available habitat. However harvest density may under-represent true population levels in highly-populated areas where hunting opportunities are limited. Complaints involving wild turkeys in suburban areas anecdotally appear to be increasing in recent years.



## Average Spring Turkey Harvest per Square Mile of Forest, 2009-11

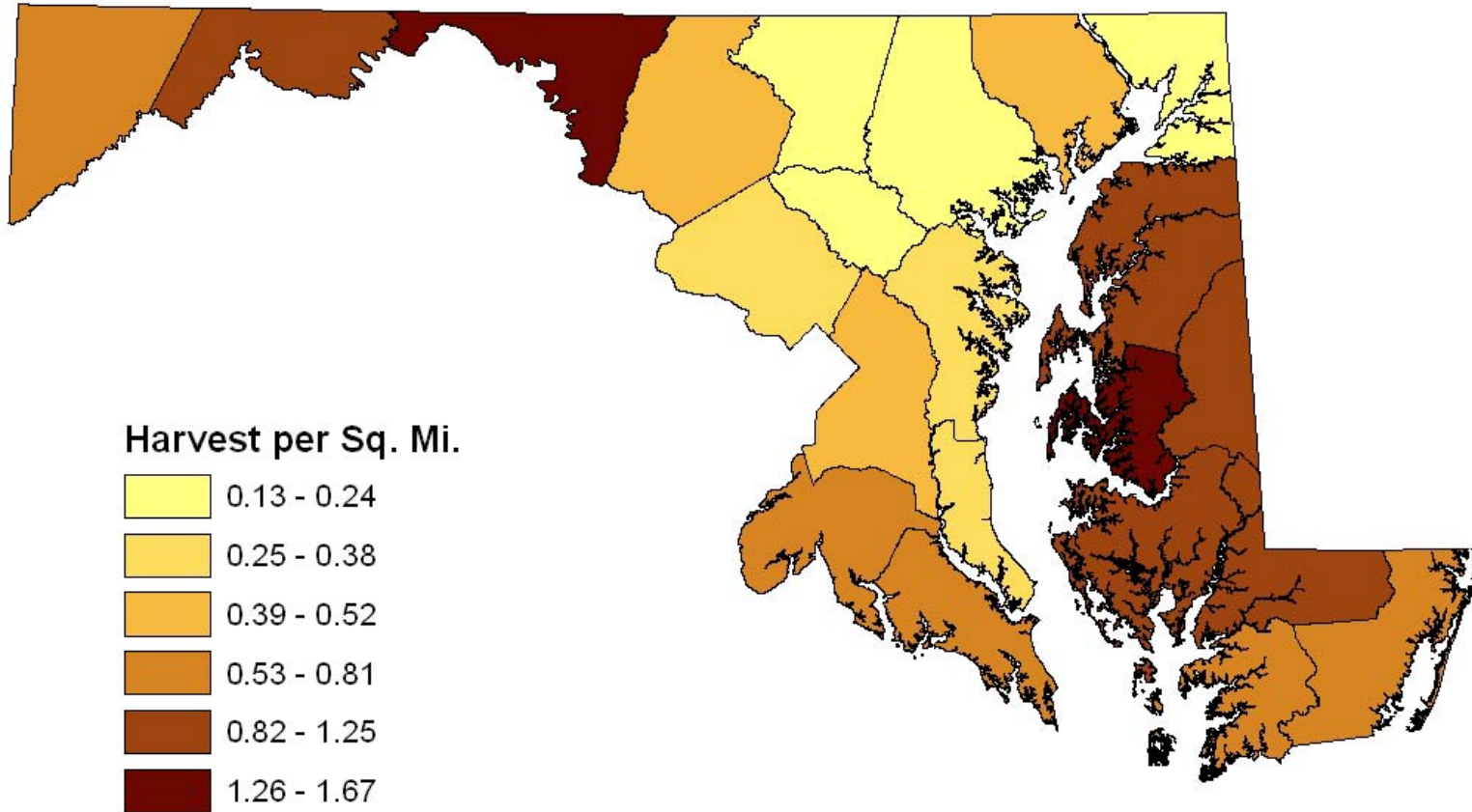


Figure 2. Maryland wild turkey density indices based on average spring turkey harvest per square mile of forest, 2009-2011.

Table 1. Maryland's reported spring gobbler season harvest 2005-2011.

County	2005	2006	2007	2008	2009	2010	2011	% Change 2010-2011	10-year average	Avg. kill/ sq. mi. 09-11
Allegany	328	331	259	345	342	327	287	-12.2	322	1.02
Anne Arundel	70	65	47	61	39	56	38	-32.1	58	0.27
Baltimore	24	28	27	34	19	39	25	-35.9	25	0.13
Calvert	53	59	40	53	49	35	40	14.3	60	0.38
Caroline	66	75	79	107	105	118	132	11.9	82	1.23
Carroll	28	24	15	20	27	20	22	10.0	20	0.22
Cecil	17	10	24	27	29	30	34	13.3	20	0.24
Charles	213	227	209	193	186	215	222	3.3	207	0.77
Dorchester	332	265	205	242	236	213	210	-1.4	264	1.24
Frederick	163	148	115	152	115	113	122	8.0	139	0.52
Garrett	365	342	303	327	364	345	339	-1.7	363	0.81
Harford	47	59	37	61	68	67	69	3.0	52	0.46
Howard	3	7	1	2	5	10	16	60.0	5	0.14
Kent	44	50	47	62	85	88	97	10.2	59	1.25
Montgomery	56	56	50	37	53	42	47	11.9	46	0.34
Prince George's	83	95	55	70	73	79	79	0.0	81	0.41
Queen Anne's	80	82	73	127	124	125	114	-8.8	91	1.22
St. Mary's	215	204	137	132	142	106	114	7.5	165	0.64
Somerset	96	62	59	59	84	67	83	23.9	66	0.72
Talbot	49	80	74	102	105	110	98	-10.9	77	1.66
Washington	340	322	269	281	308	303	285	-5.9	303	1.67
Wicomico	180	164	134	133	150	148	162	9.5	160	1.06
Worcester	284	253	196	206	202	191	191	0.0	238	0.80
State	3136	3008	2455	2833	2910	2847	2826	-0.7	2902	0.74



### FALL SEASON

Fall turkey hunters reported harvesting 171 turkeys during the 2010 1-week fall season, a 14% increase from the 2009 harvest of 150 (Table 2, Figure 3). Fall turkey hunting is only permitted in the 3 westernmost counties. Electronic checking data indicate that 60% of the harvest was comprised of juvenile turkeys, significantly higher than the long term average of 50%.

Table 2. Maryland's fall turkey season harvest, 2004-2010.

County	2004	2005	2006	2007	2008	2009	2010	%Change 2009-2010	10-year average
Allegany	107	54	80	78	100	67	62	-7.5	86
Garrett	67	46	80	88	80	53	76	43.4	76
Washington	33	37	45	39	35	30	33	10.0	37
Total	207	137	205	205	215	150	171	14.0	198

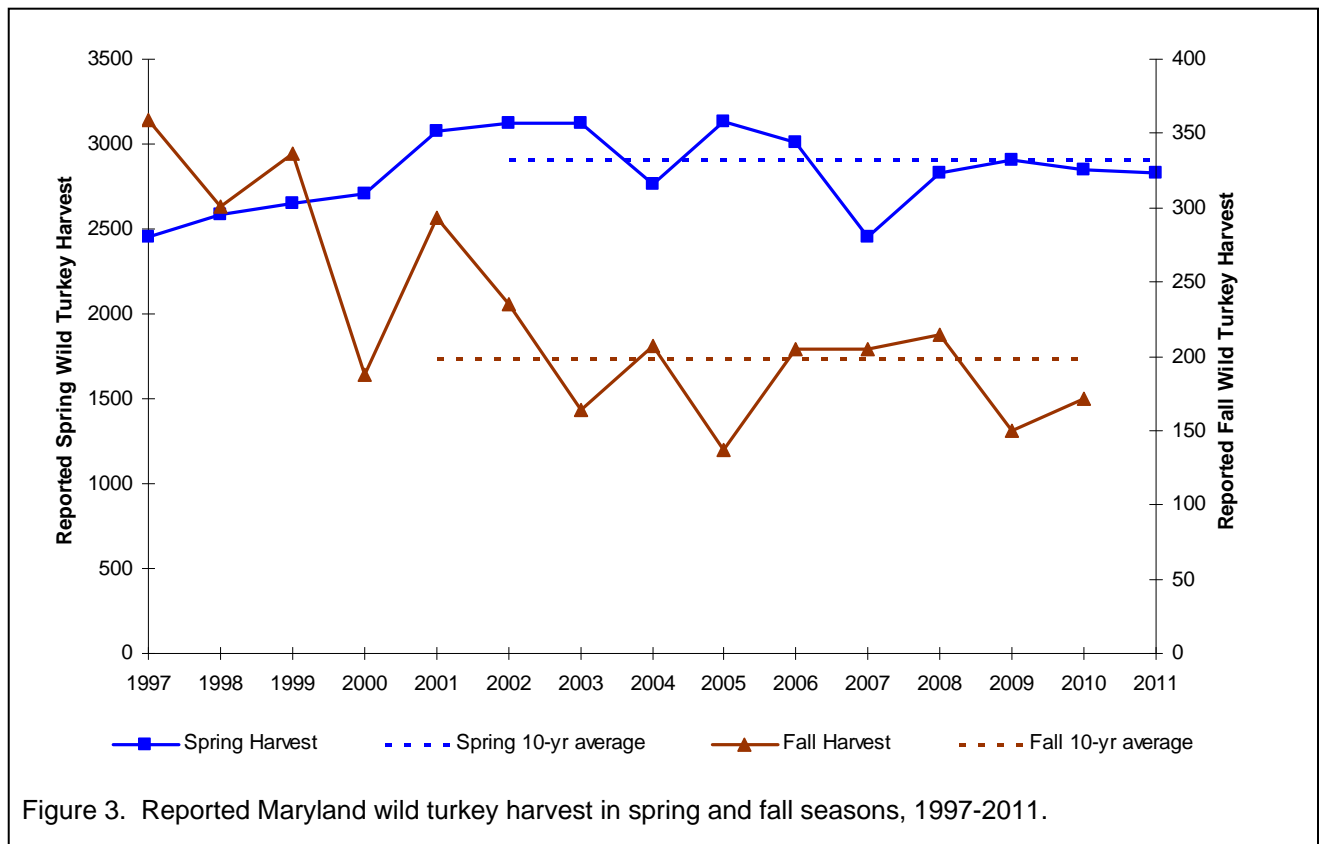


Figure 3. Reported Maryland wild turkey harvest in spring and fall seasons, 1997-2011.

## SPRING SEASON

The 2011 regular spring turkey season occurred April 18-May 23 and a 1 day youth hunt was held on April 16. A total of 2,826 wild turkeys were reported harvested, nearly unchanged from the 2010 harvest of 2,847 (Table 1, Figure 3). The harvest is also similar to the 10-year average of 2,902. While some areas noticed slight declines, other areas observed increases, likely due to local variation in previous years' reproductive success. Jakes comprised 29% of the harvest, on-par with the long-term average and in agreement with DNR turkey brood surveys conducted last summer. Two notable regulation changes took effect in spring 2011. Hunting was permitted until sunset during the last 2 weeks of the season to increase hunter opportunity while minimizing potential impacts of additional hunter pressure. Harvest reports indicate that 24% of the harvest occurred during the last 2 weeks when all-day hunting was permitted. This is nearly identical to the percentage of turkeys (23%) taken during the last 2 weeks of the season in the past 5 years when hunting hours ended at noon. Additional surveys will be conducted in the future to improve estimates of hunter participation and success in afternoon turkey hunting. Hunters were permitted to hunt on a Sunday for the 1<sup>st</sup> time in 2011. The Sunday hunt was legislatively limited to May 1 in Alleghany and Garrett Counties only and resulted in 16 turkeys harvested.



## HUNTER PARTICIPATION

The annual hunter mail survey estimates that the number of turkey hunters in Maryland has generally declined in the last 10 years (Figure 4). Fall turkey hunting participation has declined by approximately 80% since the 1980's.



In the 2009-10 season, an estimated 1,927 fall turkey hunters spent 4,489 days afield. Success rate in the fall season is typically about 10%. Spring turkey hunting participation peaked in the mid-1990's when the season was opened statewide and has gradually declined since then. The most recent hunter mail survey estimated that 10,532 spring turkey hunters hunted 42,178 days in the 2009-10 season. About 25% of spring hunters are typically successful in taking at least one turkey.

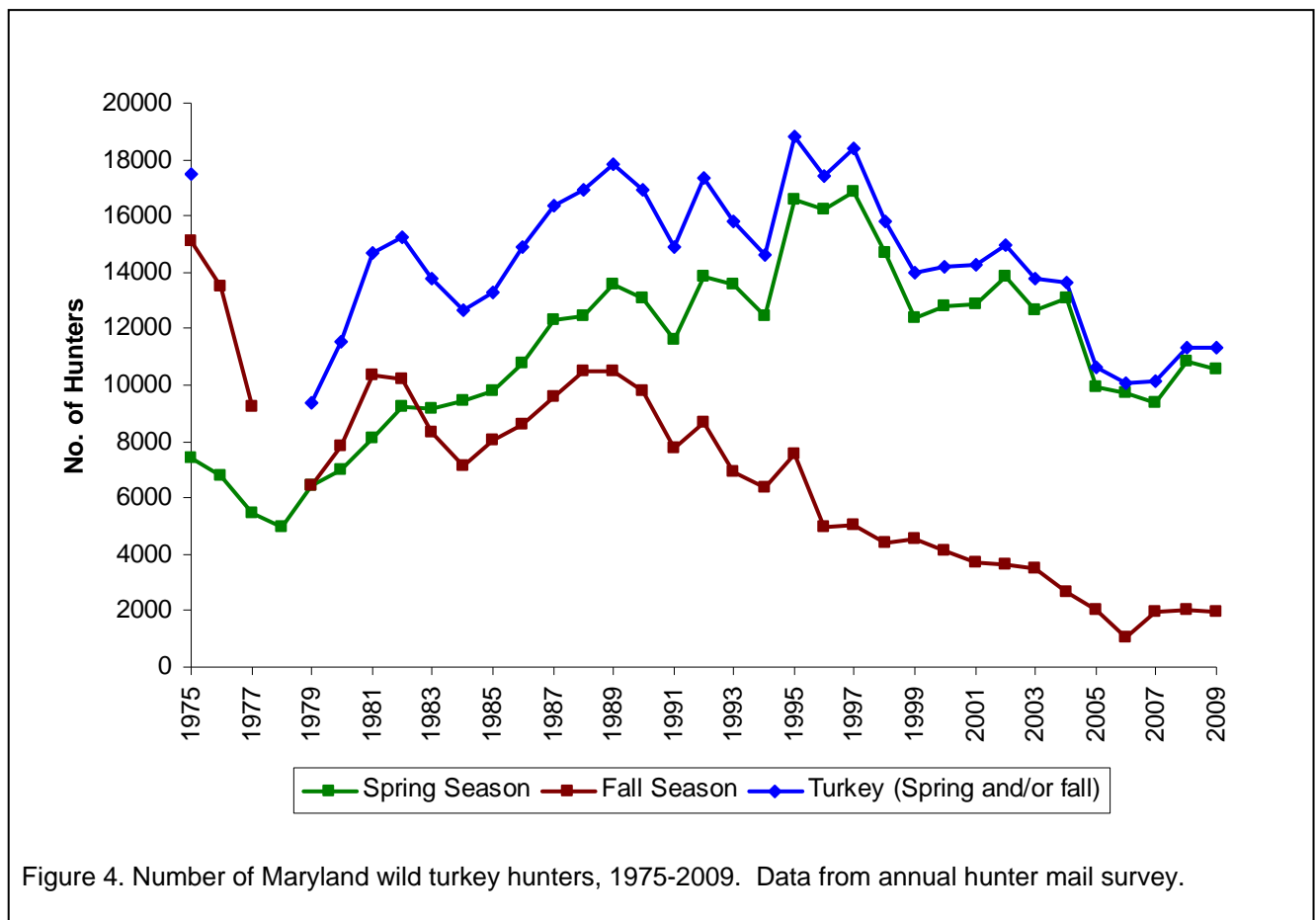


Figure 4. Number of Maryland wild turkey hunters, 1975-2009. Data from annual hunter mail survey.

## SUMMER WILD TURKEY OBSERVATION SURVEY

A statewide turkey observation survey has been conducted in Maryland since 1993. Survey forms are distributed to interested DNR personnel, hunters, landowners, and citizens. The survey is conducted during the months of July and August when broods are most easily observed and age can be readily determined. A total of 4,887 turkeys were recorded by the 107 individuals or groups that returned survey forms in 2010. This is similar to the 4,846 turkeys observed by 102 participants during the 2009 survey period. Statewide estimates of reproductive success were higher in 2010 than in 2009. A higher proportion of hens were observed with poults (67% vs. 64%). Also, the number of poults observed per hen, per brood hen, and per brood were higher than the last several years. The 2010 statewide production index of 2.7 poults observed per hen is on-par with the previous 7-year average of 2.8. Differences among regions were not as significant this year as most regions ranged between 2.2 and 2.8 poults per hen. The only exception was the southern region where poult:hen ratios were considerably higher. More detailed information can be found in the attached tables 3 and 4 and figure 5. The full report can be found at: [http://www.dnr.state.md.us/wildlife/Hunt\\_Trap/pdfs/2010\\_wt\\_observe\\_survey.pdf](http://www.dnr.state.md.us/wildlife/Hunt_Trap/pdfs/2010_wt_observe_survey.pdf)



Table 3. Wild turkey production index (poults per hen), 2003-2010.

Region <sup>1</sup>	2003	2004	2005	2006	2007	2008	2009	2010	Previous 7-year Average
Western	3.1	4.4	3.7	3.6	3.4	2.7	2.7	2.8	3.4
Central	1.5	2.8	1.9	2.3	1.6	2.7	1.4	2.3	2.0
Southern	2.9	4.2	2.2	0.6	1.7	3.9	3.0	3.6	2.6
Upper Eastern Shore	3.1	4.1	4.7	3.7	4.6	2.4	2.4	2.2	3.6
Lower Eastern Shore	1.5	4.5	1.9	3.2	2.2	1.4	1.6	2.6	2.4
Statewide	2.1	4.3	2.7	3.2	2.7	2.2	2.2	2.7	2.8

<sup>1</sup> Regions defined as:

Western – Garrett, Allegany, Washington

Central – Frederick, Carroll, Baltimore, Harford, Howard, Montgomery, Anne Arundel

Southern – Prince George's, Calvert, Charles, St. Mary's

Upper Eastern Shore – Cecil, Kent, Queen Anne's, Talbot, Caroline

Lower Eastern Shore – Dorchester, Wicomico, Worcester, Somerset

Table 4. 2010 Wild turkey observation survey data.

Region <sup>1</sup>	No. of Observations	Hens	Poults	Gobblers	Unknown	Total	% Brood Hens <sup>2</sup>	Poults per Hen	Poults per Brood Hen	Poults per Brood
Western	229	367	1038	127	220	1752	64.3	2.8	4.4	9.8
Central	27	39	89	5	16	149	46.2	2.3	4.9	6.4
Southern	62	107	380	49	71	607	85.0	3.6	4.2	9.7
Upper ES	133	209	456	82	173	920	63.2	2.2	3.5	9.3
Lower ES	206	308	786	110	255	1459	68.8	2.6	3.7	8.8
Statewide	657	1030	2749	373	735	4887	66.9	2.7	4.0	9.3

<sup>1</sup> Regions defined in Table 1 footnote.

<sup>2</sup> Brood hen = a hen observed with young.

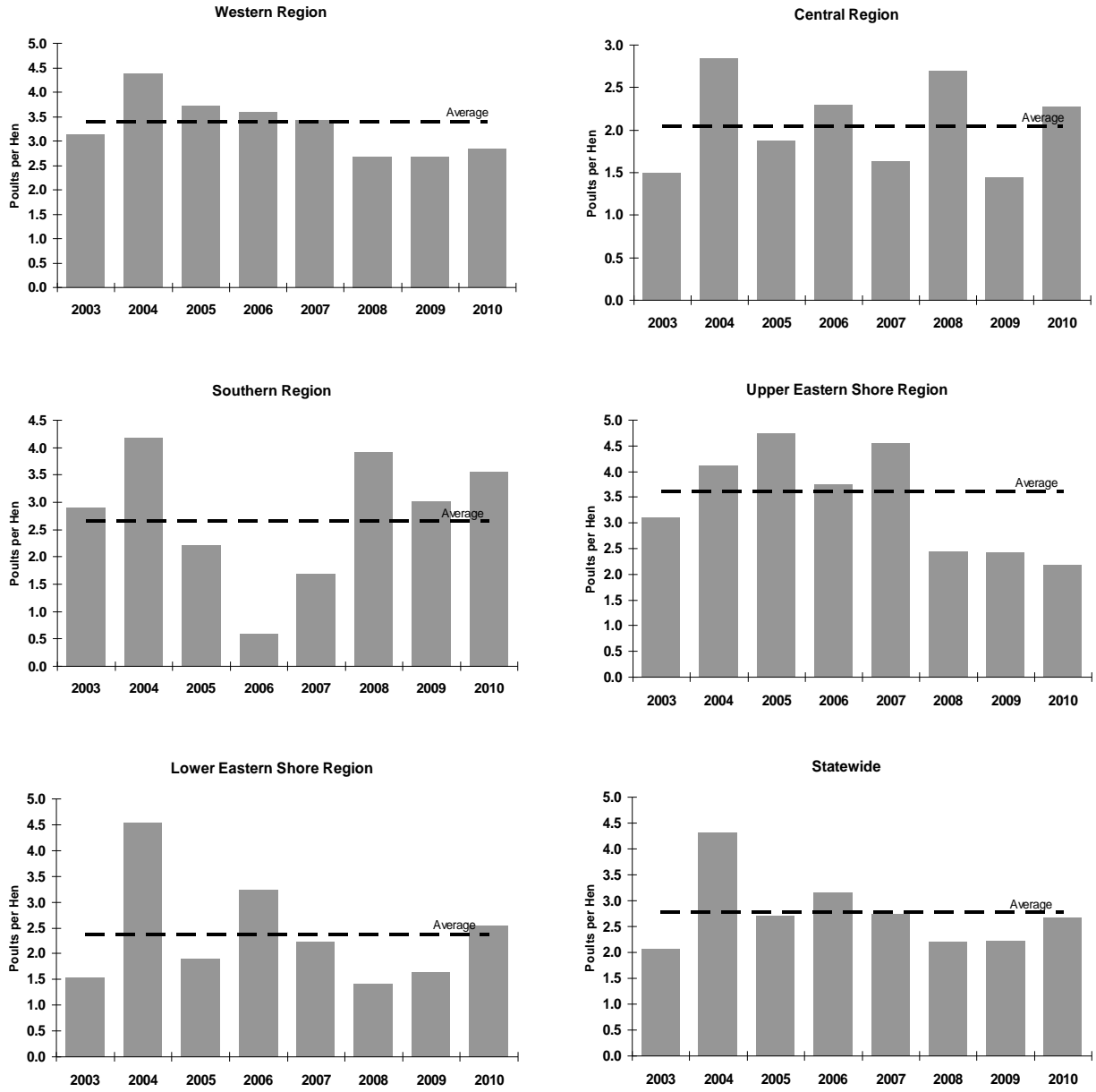
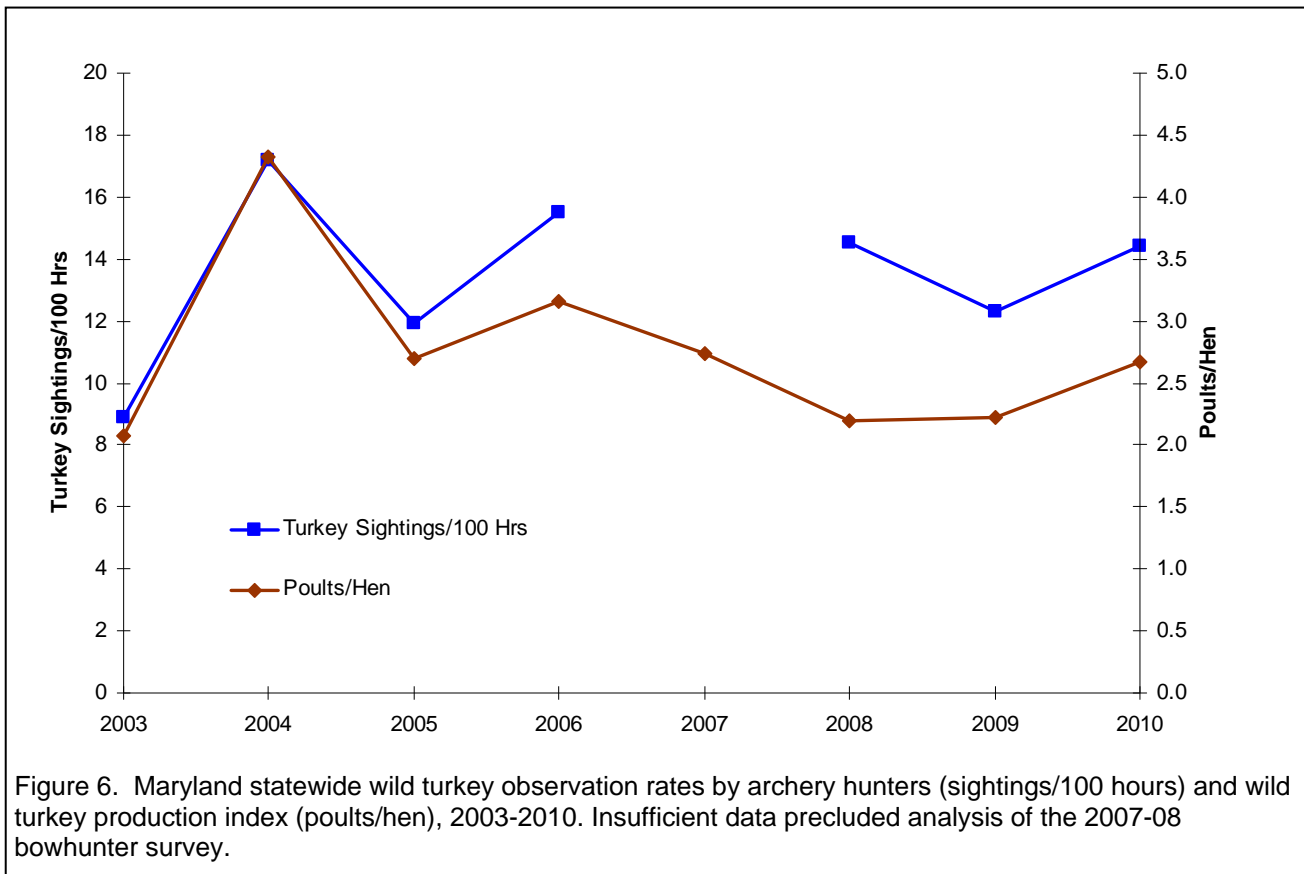


Figure 5. Production indices (poults per hen) by region, 2003-2010. Dashed line indicates average.

## BOWHUNTER SURVEY

An annual survey of Maryland bowhunters has been used since 2002 to gather trend data on a variety of species. Bowhunters observed an average of 14.4 wild turkeys per 100 hours in the 2010-11 season (Figure 6). This is above the 2009-10 observation rate (12.3 turkeys per 100 hours) and the long-term average (13.7 turkeys per 100 hours). The increase in sightings was consistent with the above-average reproduction noted in the summer of 2010. Turkey observation rates were highest in the Appalachian Plateau Province (35.3 per 100 hours), followed by the Ridge and Valley Province (28.9 per 100 hours) and Eastern Coastal Province (19.0 per 100 hours). Observation rates were lowest in the Western Coastal Province and the Piedmont Province. The results agree with other data sources and confirm that wild turkeys are most abundant in the western and eastern portions of the state.



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