

Wild Turkey 2013-2014 Annual Report September 2014



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.

Following several decades of rapid growth, the statewide wild turkey population appears to have stabilized. However turkey numbers have increased in some regions and decreased in others. The highest densities continue to be found in the western region and Eastern Shore region. Central region numbers are generally lower, likely due to habitat limitations. Turkey numbers in the southern region vary considerably but have increased in most areas in recent years.

Over 10,000 hunters annually pursue turkeys in either the spring and fall seasons in Maryland. The 2013 fall turkey harvest of 157 was 41% higher than 2012 when Superstorm Sandy greatly curtailed hunting participation. Spring hunters reported a harvest of 3,325 birds, similar to the 2013 record harvest of 3,344. Good weather and abundant turkeys in most areas likely increased hunter participation and success.

The 2014 summer wild turkey observation surveys estimated that reproductive success was below average in nearly all regions, likely due to weather that reduced nesting success and poult survival. Continued monitoring of the turkey population will allow the 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.



Maryland Estimated 10-year Wild Turkey Population Trends by Region Based on Spring Turkey Harvest, 2005-2014

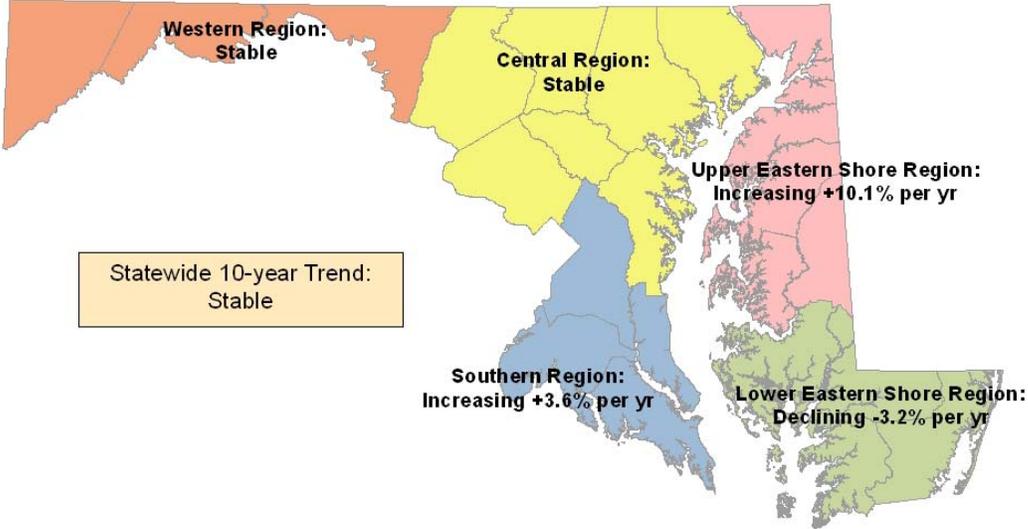


Figure 1. Maryland wild turkey 10-year population trends based on spring turkey harvest, 2005-2014.

Average Spring Turkey Harvest per Square Mile of Forest, 2012-14

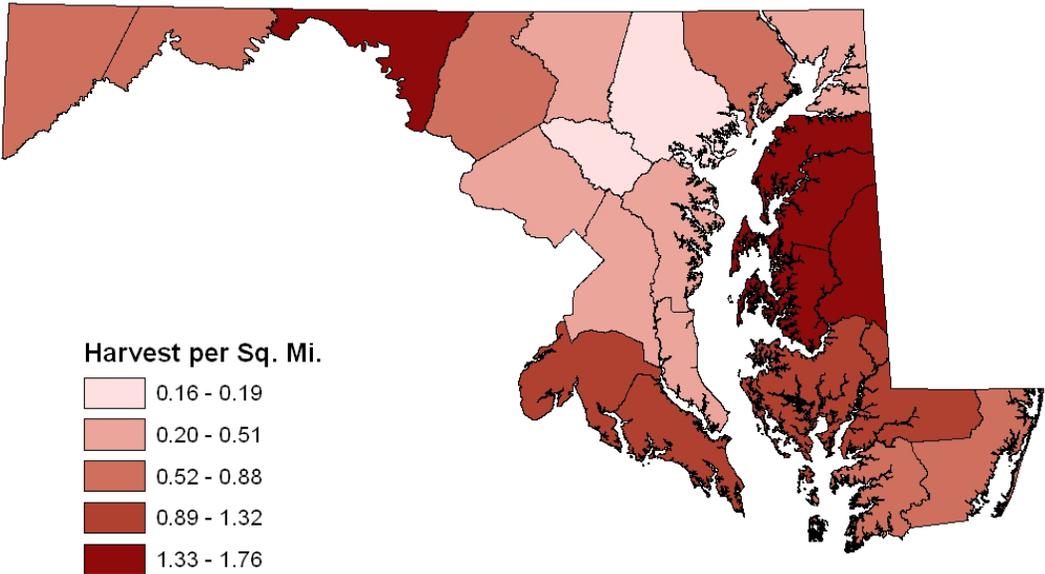


Figure 2. Maryland wild turkey density indices based on average spring turkey harvest per square mile of forest, 2012-2014.

POPULATION STATUS

Maryland's wild turkey population has remained stable over the past 10 years but some regions are showing a significant increasing trend and others are decreasing (Figure 1). Density indices (2012-14 average spring turkey kill per forested mi²) are categorized as high in 7 counties (>1 kill/mi²), moderate in 10 counties (0.5-1.0 kill/mi²), and low in the remaining 6 counties (<0.5 kill/mi², Table 1). The highest densities of turkeys are found in the western mountains, the eastern region, and portions of the southern 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 areas where hunting opportunities are limited. Complaints involving wild turkeys in suburban areas have increased slightly in recent years, but are still somewhat rare.

Table 1. Maryland's reported spring gobbler season harvest 2008-2014.

County	2008	2009	2010	2011	2012	2013	2014	% Change 2013-2014	10-year average	Average kill/ sq. mi. 12-14
Allegany	345	342	327	287	257	269	258	-4.1	300	0.84
Anne Arundel	61	39	56	38	58	82	54	-34.1	57	0.39
Baltimore	34	19	39	25	29	37	32	-13.5	29	0.16
Calvert	53	49	35	40	50	57	59	3.5	50	0.51
Caroline	107	105	118	132	164	142	141	-0.7	113	1.55
Carroll	20	27	20	22	30	33	45	36.4	26	0.34
Cecil	27	29	30	34	43	55	57	3.6	33	0.40
Charles	193	186	215	222	303	270	254	-5.9	229	1.02
Dorchester	242	236	213	210	219	245	239	-2.4	241	1.32
Frederick	152	115	113	122	140	215	193	-10.2	148	0.81
Garrett	327	364	345	339	368	386	383	-0.8	352	0.88
Harford	61	68	67	69	98	110	97	-11.8	71	0.69
Howard	2	5	10	16	16	16	10	-37.5	9	0.19
Kent	62	85	88	97	103	118	150	27.1	84	1.72
Montgomery	37	53	42	47	51	82	68	-17.1	54	0.48
Prince George's	70	73	79	79	92	78	79	1.3	78	0.45
Queen Anne's	127	124	125	114	152	159	165	3.8	120	1.60
St. Mary's	132	142	106	114	122	124	120	-3.2	142	0.65
Somerset	59	84	67	83	99	127	173	36.2	91	1.23
Talbot	102	105	110	98	102	103	83	-19.4	91	1.52
Washington	281	308	303	285	292	309	343	11.0	305	1.76
Wicomico	133	150	148	162	152	124	146	17.7	149	0.98
Worcester	206	202	191	191	192	203	176	-13.3	209	0.79
State	2833	2910	2847	2826	3132	3344	3325	-0.6	2982	0.85

FALL SEASON

Fall turkey hunters reported harvesting 157 wild turkeys during the 2013 fall season (Table 2, Figure 3). The harvest was just slightly below the ten year average but was 41% higher than the 2012 harvest when Superstorm Sandy greatly curtailed hunting opportunity. Fall turkey hunting was only permitted in the three westernmost counties; Garrett County reported the highest harvest (59), followed by Allegany (56) and Washington (42). Electronic checking data indicate that 52% of the harvest was comprised of juvenile turkeys.



Table 2. Maryland's fall turkey season harvest, 2007-2013.

County	2007	2008	2009	2010	2011	2012	2013	%Change 2012-2013	10-year average
Allegany	78	100	67	62	72	50	56	12.0	73
Garrett	88	80	53	76	64	40	59	47.5	65
Washington	39	35	30	33	31	21	42	100.0	35
Total	205	215	150	171	167	111	157	41.4	173



SPRING SEASON

The 2014 regular spring turkey season occurred April 18-May 23 and a youth hunt was held on April 12-13. Hunters reported harvesting a total of 3,325 wild turkeys (Table 1, Figure 3). This year's harvest was similar to the 2013 record-setting harvest of 3,344 and well above the 10-year average of 2,982. High turkey populations and good weather likely contributed to the near record harvest. Turkey numbers are on the rise in many counties such as St. Mary's, Carroll, Kent, and Queen Anne's. In addition, pleasant weather throughout the State during most of the season likely increased hunter participation and helped them locate and call in cooperative gobblers. Youth hunters took advantage of the special Junior Turkey Hunt and reported taking 165 turkeys. Spring turkey hunters were able to hunt on Sundays in some counties again this spring. A total of 159 turkeys were harvested on Sundays. Juvenile gobblers comprised 22% of the spring harvest, slightly below the average of 28%. The data support the summer brood survey results that showed below-

average reproduction in the much of the state.

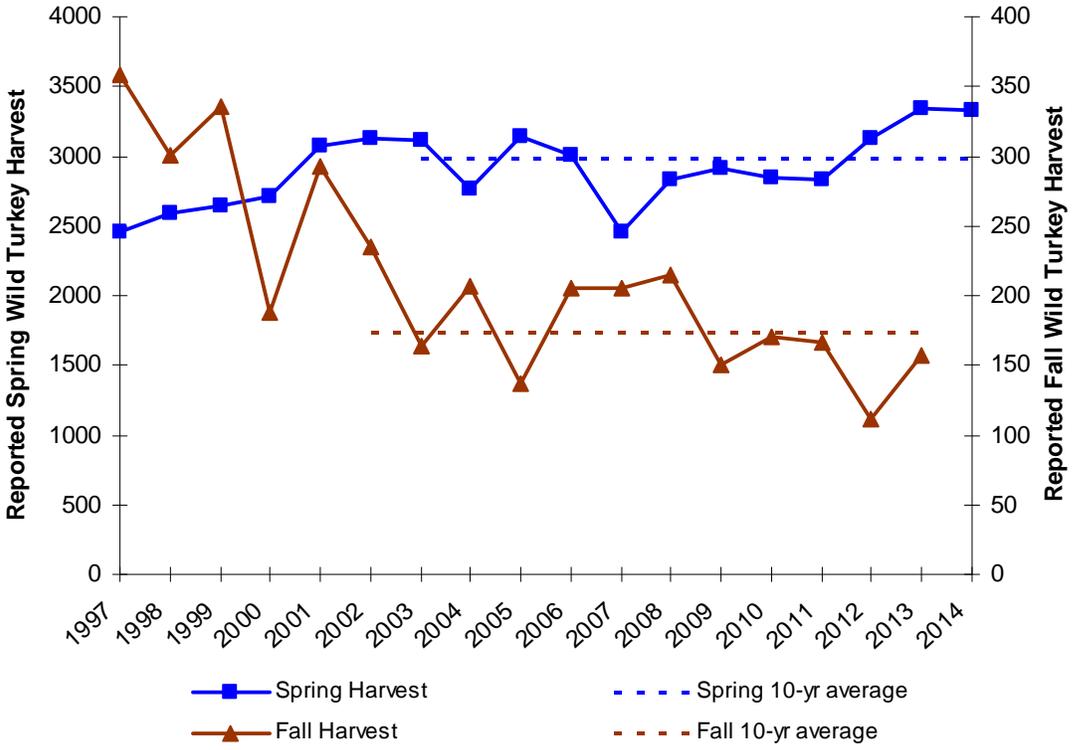


Figure 3. Reported Maryland wild turkey harvest in spring and fall seasons, 1997-2014.

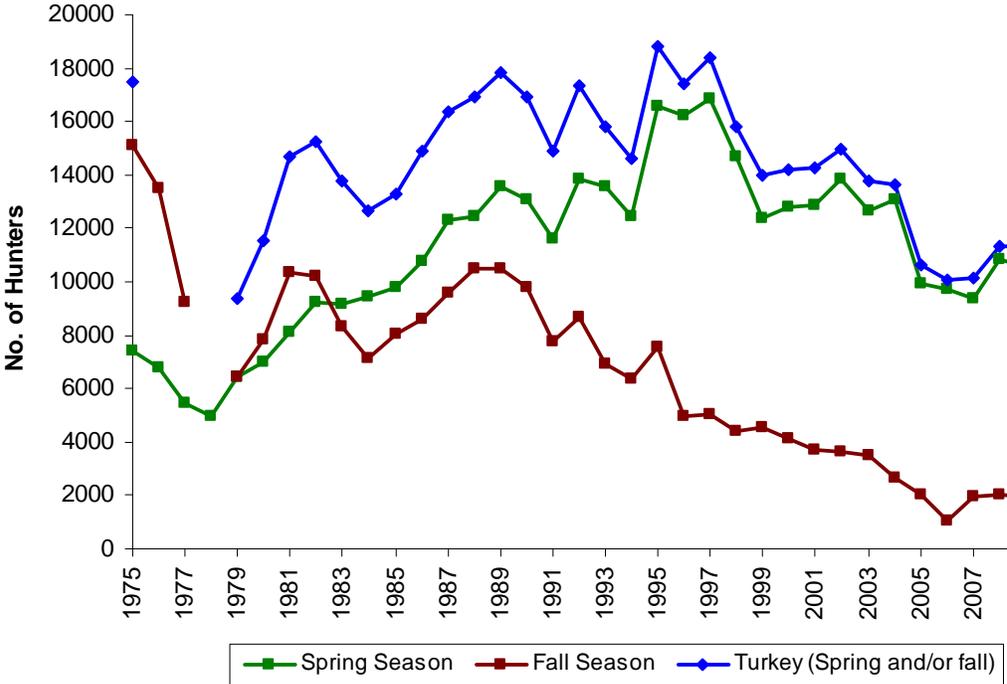
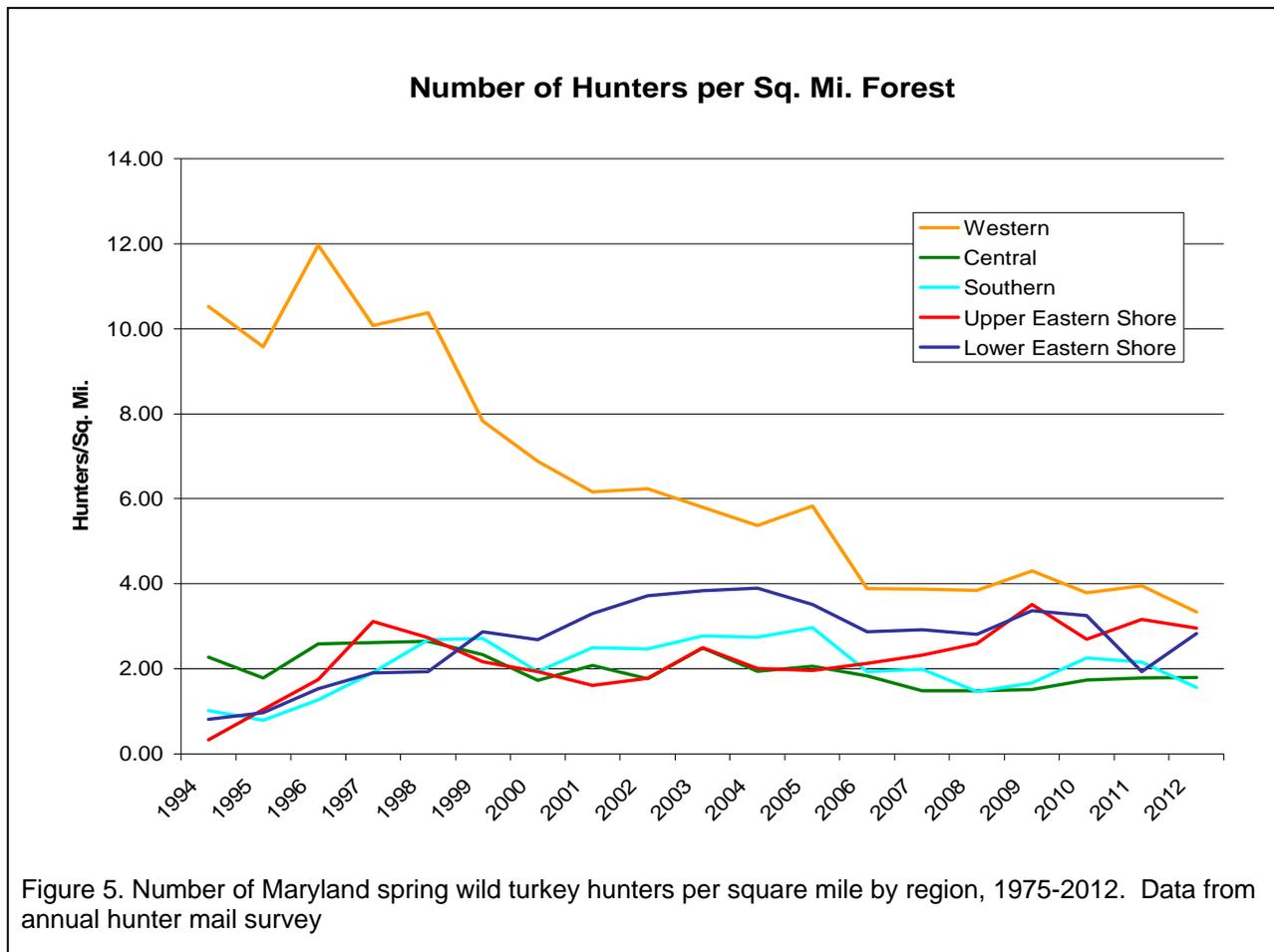


Figure 4. Number of Maryland wild turkey hunters, 1975-76 - 2012-13. Data from annual hunter mail survey.

HUNTER PARTICIPATION

The annual hunter mail survey estimates that the number of turkey hunters in Maryland has generally declined over the last 20 years (Figure 4). Fall turkey hunting participation has declined by approximately 80% since the 1980s. In the 2012-13 season, about 1,300 fall turkey hunters spent 3,100 days afield. Success rate in the fall season is typically about 10%. Spring turkey hunting participation peaked in the mid-1990s when the season was opened statewide and has gradually declined since. The most recent hunter mail survey estimated that about 9,200 spring turkey hunters hunted 37,700 days. About 25% of spring hunters are typically successful in taking at least one turkey.

More detailed analysis shows that trends in the number of hunters and subsequent hunter density has varied by region (Figure 5). Hunter density declined substantially in the western region between 1995 and 2006 as turkeys became more abundant in other regions. During the same time period, hunter numbers grew on the Eastern Shore and in the southern region. However hunter numbers and densities have remained relatively stable since 2006 in all regions.



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 4,353 turkeys were recorded by the 85 individuals or groups that returned survey forms in 2014, slightly higher than the 4,034 turkeys observed by 82 participants in 2013. Statewide, an average of 2.3 poults was observed per hen, identical to the 2013 average but below the 12-year average of 2.7 poults per hen. All regions except the lower Eastern Shore had below average production.

The results suggest that both nesting success and pout survival was somewhat low in most regions. This may be partly attributed to persistent wet and damp conditions some parts of the state experienced in May and early June, when most hens are incubating nests. Research suggests this may increase predation rates because of the increased ability of predators to scent nesting hens (referred to as the “wet-hen theory”). An exceptionally dry period followed the wet weather that may have limited insect production for growing poults. Other factors such as local predator communities and habitat conditions influence reproductive success as well. Large differences among counties and even within counties were very apparent this year, demonstrating the complexity of the factors related to reproduction in wild turkeys.

Below are some of the highlights from each region. More detailed information can be found in table 3 and figure 5. The full report can be found online at http://www.dnr.state.md.us/wildlife/Hunt_Trap/wildturk/index.asp.



Table 3. 2014 Wild turkey observation survey data.

Region ¹	No. of Observations	Hens	Poults	Gobblers	Unknown	Total	% Brood Hens ²	Poults per Hen	Poults per Brood Hen	Poults per Brood
Western	196	295	635	143	208	1281	62.4	2.2	3.5	7.1
Central	18	23	31	6	13	73	52.2	1.3	2.6	5.2
Southern	45	99	188	47	25	359	70.7	1.9	2.7	7.0
Upper ES	131	187	494	91	50	822	62.6	2.6	4.2	7.8
Lower ES	230	412	997	225	184	1818	70.1	2.4	3.4	9.4
Statewide	620	1016	2345	512	480	4353	66.1	2.3	3.5	8.0

¹ 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

² Brood hen = a hen observed with young.



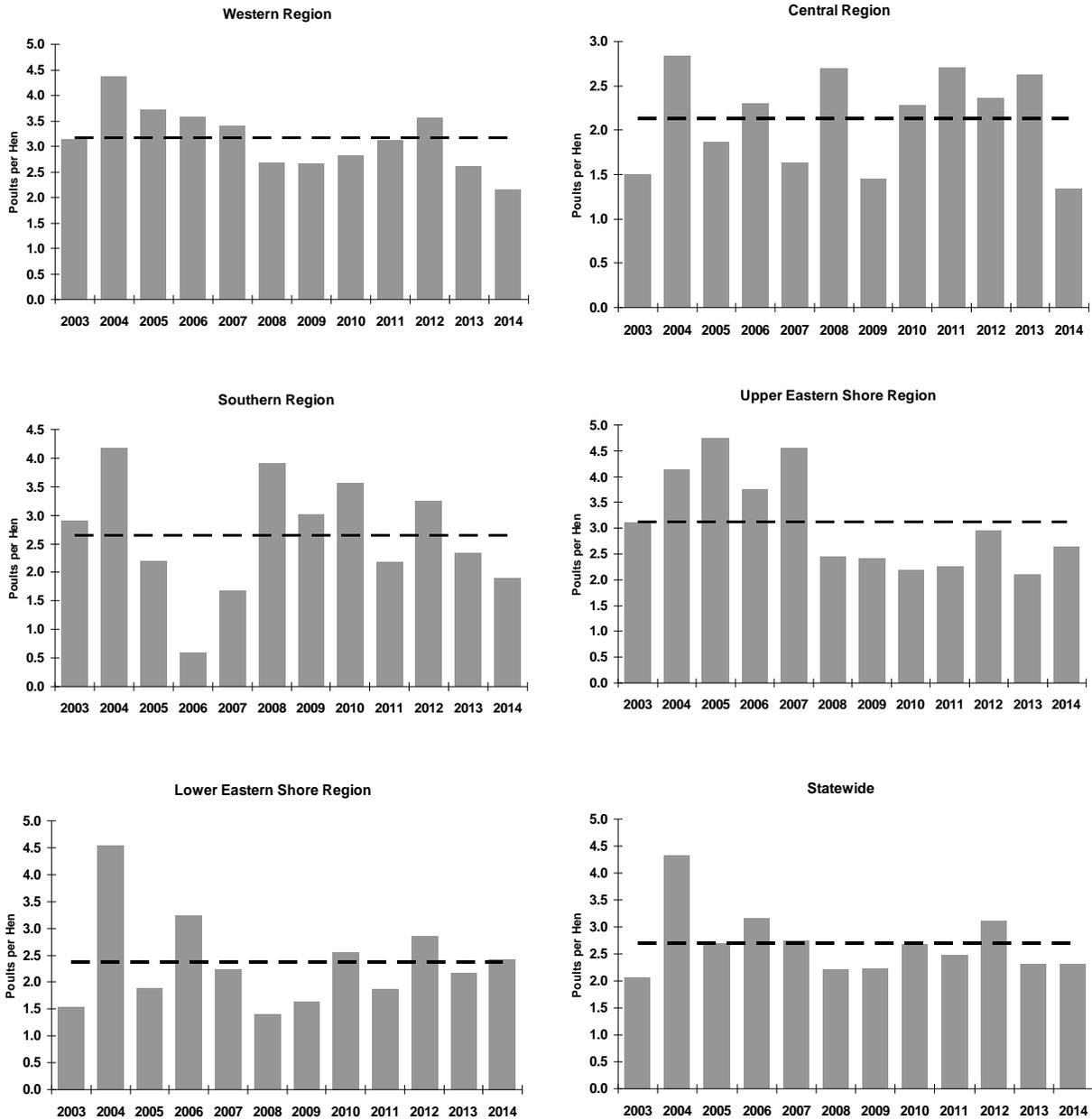
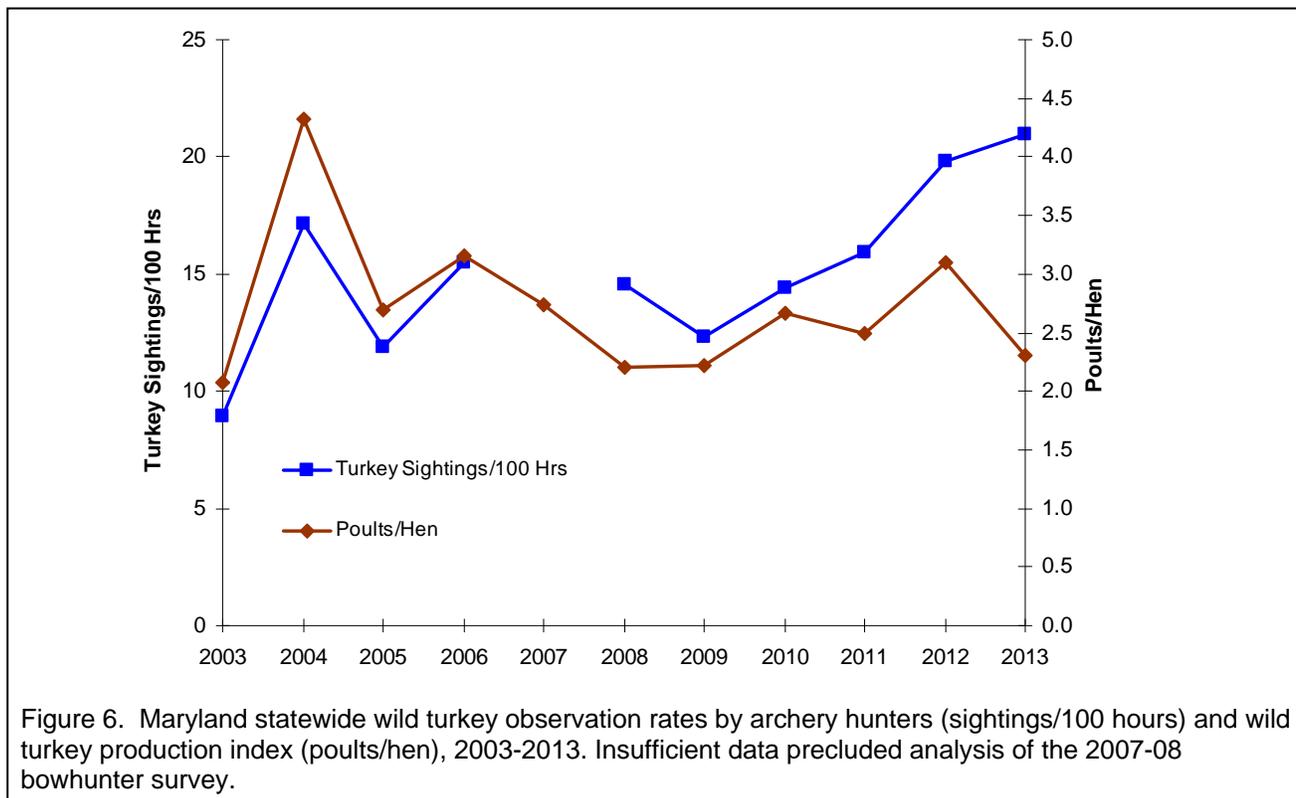


Figure 5. Production indices (poults per hen) by region, 2003-2014. Dashed line indicates average.

ARCHERY HUNTER 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 21.0 wild turkeys per 100 hours in the 2013-14 season (Figure 6). This is above the 2012-13 observation rate (19.8 turkeys per 100 hours) and the long-term average (15.2 turkeys per 100 hours). Turkey observation rates were highest in the Ridge and Valley Province (44.1 per 100 hours), followed by the Appalachian Plateau Province (39.6 per 100 hours) and Western Coastal Province (24.1 per 100 hours). Observation rates were lowest in the Eastern Coastal Province and the Piedmont Province. The results support other data and show that wild turkey populations are strong in most parts of the state. Annual fluctuations in the observation rates may be due to differences in reproductive success or fall mast production. Bowhunter sightings typically follow trends in poult production as estimated by the wild turkey observation survey (Figure 6). The full report including descriptions of regions used in the archery hunter survey can be found here:

http://www.dnr.state.md.us/wildlife/Hunt_Trap/pdfs/BowhunterSurveyReport_2013-14.pdf



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