



WILD TURKEY OBSERVATION SURVEY SUMMARY

2024

The Maryland Department of Natural Resources (DNR) has conducted an annual summer wild turkey observation survey since 1993. The primary purpose of this long-term survey is to estimate reproductive success, but other important information can be obtained from the data. Like most wildlife species, turkeys depend on annual reproduction to add new individuals to the population. This survey, along with other sources of data, allows managers to monitor turkey populations and helps explain and predict annual or regional population changes.

Thanks to all the volunteers and DNR staff that assisted with this survey

RESULTS AT-A-GLANCE

Total number of turkeys recorded:
7,930

Number of poults per hen:
2.6

Percentage of hens with poults:
67%

Number of poults per brood:
4.1

Regions with highest production:
**Southern, Western,
Lower Eastern Shore**



SURVEY METHODOLOGY

Survey forms and a link to the online form are distributed to DNR personnel, previous participants, and the public via email and social media. The survey is conducted during the months of July and August when broods are most easily observed and age can be readily determined. For each sighting, participants record the county and number of hens, poults (young of the year), gobblers and unidentified turkeys observed.

Data are screened and analyzed using standardized guidelines to minimize bias or inaccuracies in the results. An annual production index is calculated as the average number of poults observed per adult hen, which includes hens without young. Other important data, such as the average number of poults per brood and the percentage of hens observed with young, are also calculated.

RESULTS

A total of 7,930 wild turkeys were reported in 2024, which was slightly higher than the 2023 total of 7,160 turkeys observed. Participation was slightly lower than last year (614 vs. 684) but sample size remains very high compared to the pre-2021 surveys when the online data form was not available. The large number of observations (1,123) provides high confidence in the accuracy of results. Estimates of reproductive success were not significantly different between observations reported online vs. surveys returned by email/mail (e.g. 2.6 vs. 2.8 poults per hen).

Statewide, the 2024 primary reproductive index was estimated at 2.6 poults per hen. This was higher than the 2023 index of 2.2 poults per hen and similar to the 15-year average of 2.6 poults per hen. The poult per hen ratio includes hens that were not observed with any poults and is generally considered the best index of reproductive success. The number of hens observed with young (67%) and the number of poults observed per brood (4.1) were also near-average, indicating moderate overall nesting success and poult survival this summer.

Regionally, the index was above 2.0 poults per hen in all regions, which can be considered a general threshold where production should be adequate to replace typical annual losses of adult turkeys. The highest reproductive success was noted in the Western, Southern, and Lower Eastern Shore regions, while the Central and Upper Eastern Shore Regions saw somewhat lower production.

Various factors can impact wild turkey reproduction annually including weather patterns, habitat quality, and predator communities. This year, below-average rainfall during the critical peak nesting period (late-April through early-June) likely helped to increase productivity compared to 2023. Research suggests that wet weather may increase predation on nests, likely because predators can scent nesting hens more effectively.

This survey has documented a general decline in turkey production since the early 2000's. Reproductive success was exceptionally poor in many regions of the state between 2016 and 2020, resulting in noticeably fewer turkeys in some areas. Despite the lackluster production in 2023 in many regions, **average to above-average production in 3 of the last 4 years should be adequate to keep populations strong throughout most of Maryland.** Note that this survey provides an index that is useful to assess statewide and regional trends in reproduction, but local conditions can impact populations differently in certain areas.

More detailed information and regional results can be found below.

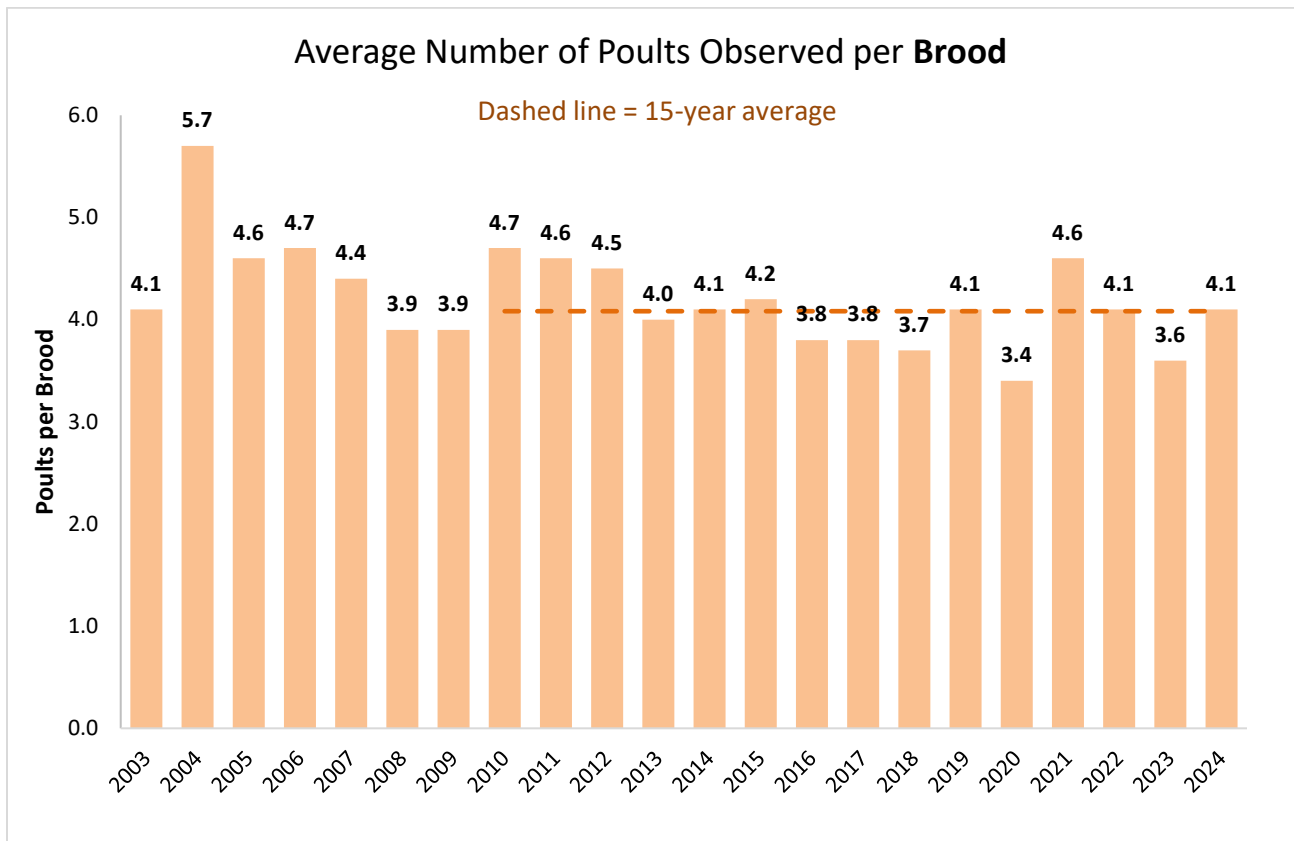
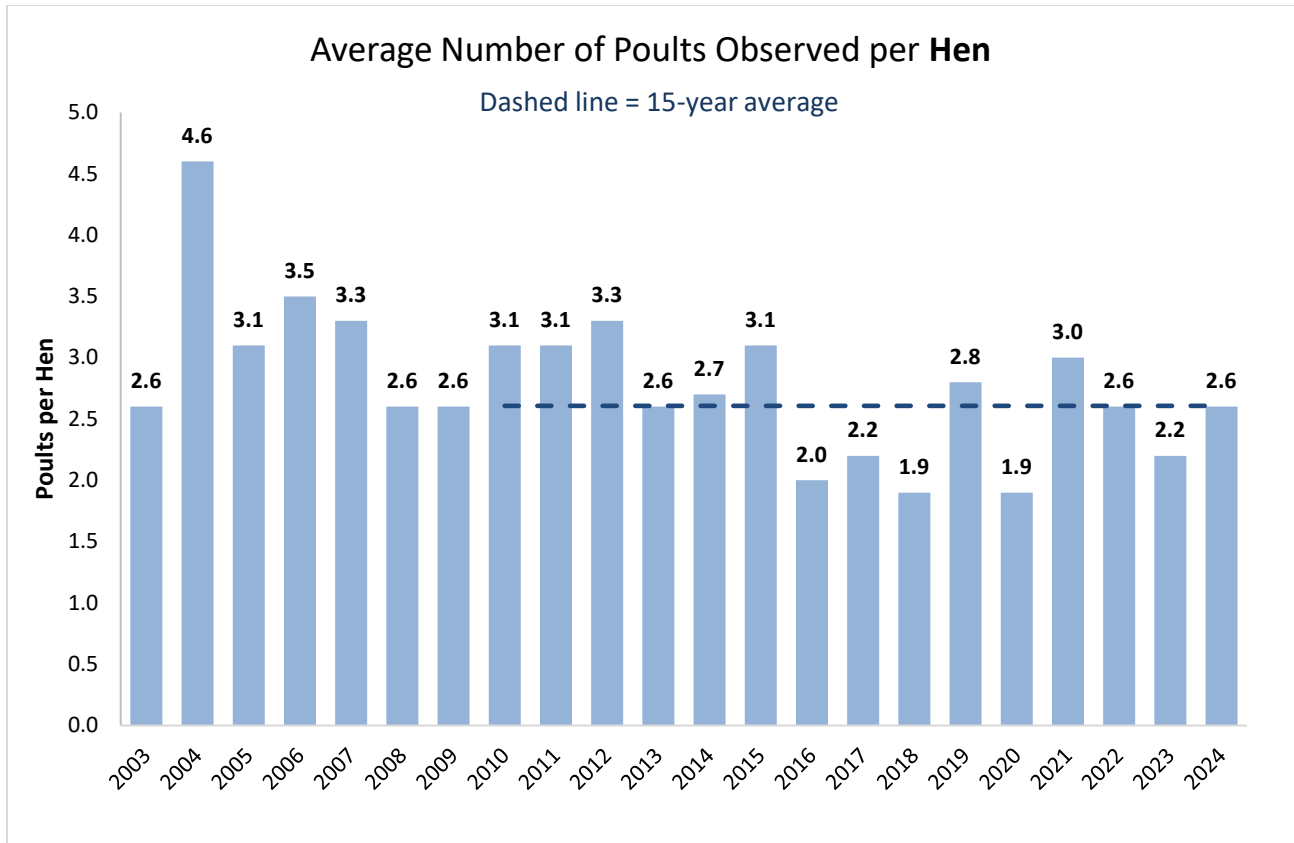


Table 1. Statewide Wild Turkey Observation Survey data, 2013-2024

Year	No. of Participants	No. of Observations	Turkeys Observed					Percent of Hens Observed w/ Brood	Average No. Poults per Hen	Average No. Poults per Brood	Gobbler: Hen Ratio
			Hens	Poults	Gobblers	Unidentified	Total				
2014	84	520	954	2276	478	17	3725	69.0	2.7	4.1	0.50
2015	81	540	1054	3007	557	16	4634	78.2	3.1	4.2	0.53
2016	91	644	1176	1979	708	25	3888	51.6	2.0	3.8	0.60
2017	84	578	940	1919	544	12	3415	59.7	2.3	3.8	0.58
2018	99	502	851	1298	419	14	2582	47.9	1.9	3.2	0.49
2019	91	553	899	2403	472	14	3788	72.1	2.8	4.1	0.53
2020	80	420	766	1265	390	9	2430	56.1	1.9	3.4	0.51
2021	737	1216	2225	6334	531	74	9164	68.9	3.0	4.6	0.24
2022	648	1144	2068	4378	838	60	7344	64.6	2.6	4.1	0.41
2023	684	1157	2171	4131	820	38	7160	63.2	2.2	3.6	0.38
2024	614	1123	2143	5152	592	43	7930	66.5	2.6	4.1	0.28
15-year Average	232	694	1267	2962	532	26	4787	65.5	2.6	4.0	0.45

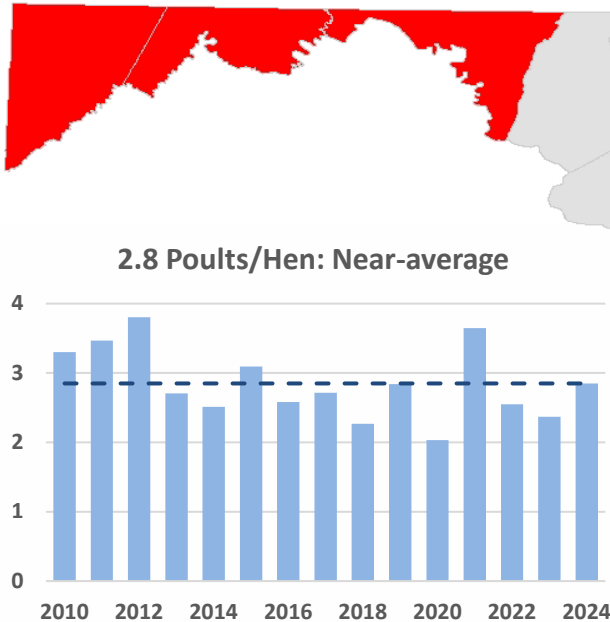
Table 2. Regional Wild Turkey Observation Survey data, 2024

	No. of Observations	Turkeys Observed					Percent of Hens Observed w/ Brood	Average No. Poults per Hen	Average No. Poults per Brood	Gobbler:Hen Ratio
		Hens	Poults	Gobblers	Unidentified	Total				
Western	293	570	1623	163	7	2363	71.1	2.8	4.4	0.29
Central	252	404	928	111	7	1450	68.3	2.4	3.8	0.27
Southern	193	387	955	117	15	1474	67.7	3.0	4.3	0.30
Upper ES	211	408	806	105	6	1325	61.8	2.2	3.6	0.26
Lower ES	174	374	840	96	8	1318	61.5	2.6	4.3	0.26

¹Regions defined as:

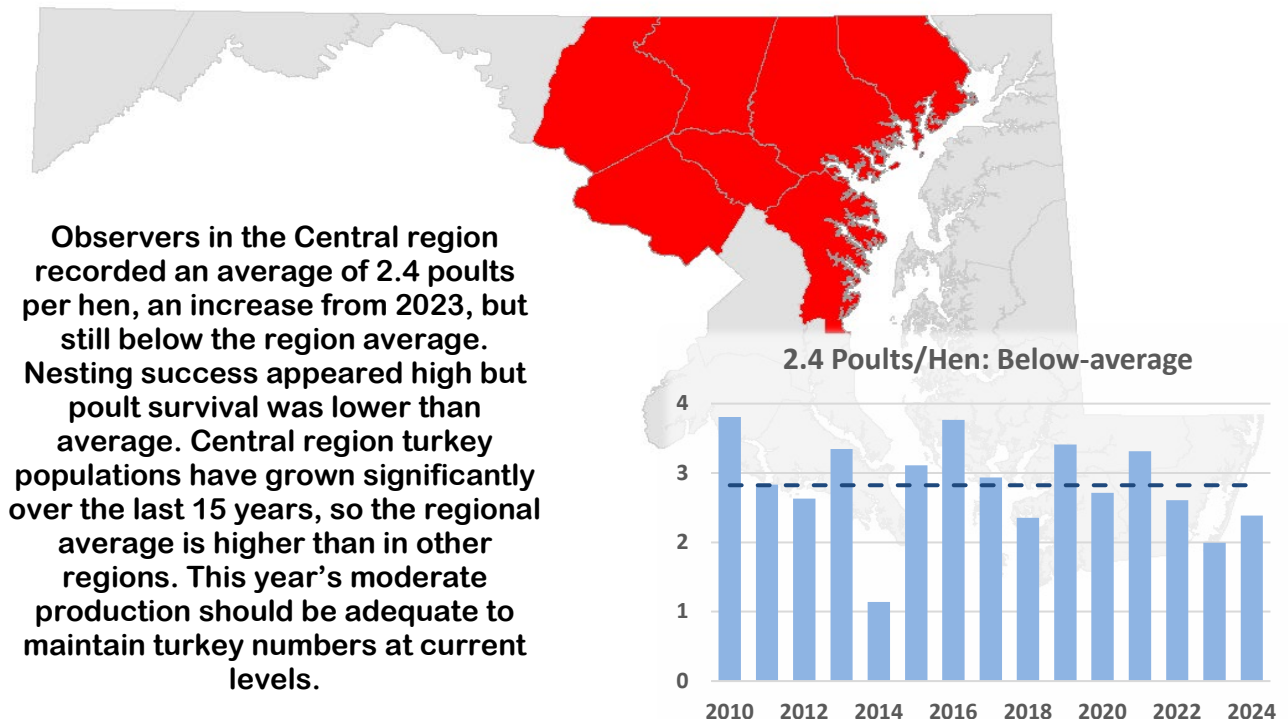
Western – Garrett, Allegany, Washington;
 Central – Frederick, Carroll, Baltimore, Harford, Howard, Montgomery, Anne Arundel
 Southern – Prince George's, Calvert, Charles, St. Mary's
 Upper Eastern Shore – Cecil, Kent, Queen Anne's, Talbot, Caroline
 Lower Eastern Shore – Dorchester, Wicomico, Worcester, Somerset

Western Region: Garrett, Allegany, and Washington



An average of 2.8 poult were observed per hen in the western 3 counties, higher than the last 2 years and on-par with the region average. A large number (71%) of hens were reported with a brood, indicating good nesting success, and brood sizes were average. Populations in the western region have been strong for many years with poult per hen ratios consistently above 2.0. The production seen this year should help keep turkeys abundant throughout the region.

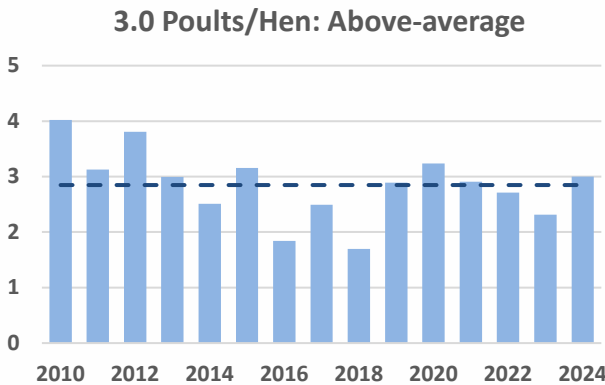
Central Region: Frederick, Carroll, Baltimore, Harford, Howard, Montgomery, Anne Arundel



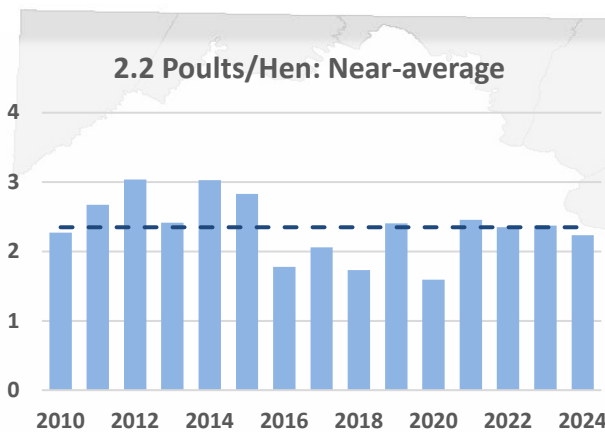
Observers in the Central region recorded an average of 2.4 poult per hen, an increase from 2023, but still below the region average. Nesting success appeared high but poult survival was lower than average. Central region turkey populations have grown significantly over the last 15 years, so the regional average is higher than in other regions. This year's moderate production should be adequate to maintain turkey numbers at current levels.

Southern Region: Prince George's, Calvert, Charles, St. Mary's

The Southern Region noted the highest poult per hen ratio in the state this year at 3.0 poults per hen. This is above both last year's estimate and the regional average. Turkey numbers grew quickly in the Southern region in the mid 2000's, but lower production in the last decade slowed population growth. Following the last 2 years of below-average success, this year's production should help to boost turkeys flocks.



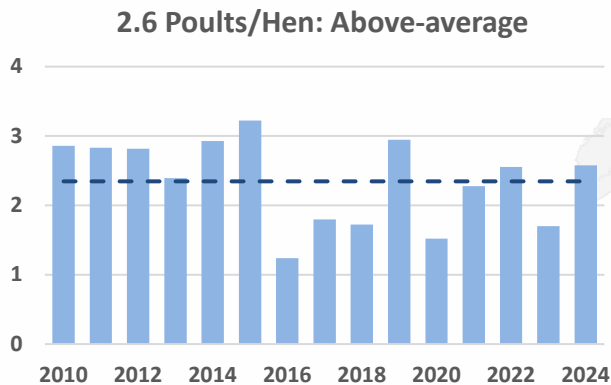
Upper Eastern Shore: Cecil, Kent, Queen Anne's, Talbot, Caroline



An average of 2.2 poults per hen were sighted on the Upper Eastern Shore, just slightly below the region average of 2.3. Nesting success and poult survival appeared to be moderate. A general decline in reproductive success has been noted here in the last 15 years, following a period of rapid growth in the 2000's. However, the remarkably consistent production noted in the last 4 years should be high enough to keep populations strong for the near future.

Lower Eastern Shore: Dorchester, Wicomico, Worcester, Somerset

Lower Eastern Shore region participants reported 2.6 poults per hen, significantly higher than last year's poor production and the region average. Previously high turkey numbers have declined in many parts of this region over the last decade due to poor production in 2016-2018. But the moderate reproductive success in 3 of the last 4 years should result in a noticeable increase in many parts of this region.



Prepared by:

Bob Long, Wild Turkey and Upland Game Bird Project Manager
 Maryland Department of Natural Resources
 410-260-8578
bob.long@maryland.gov
dnr.maryland.gov/wildlife