

2022 Wild Turkey Observation Survey Summary



The Maryland Department of Natural Resources (DNR) has conducted an annual summer wild turkey observation survey since 1993. The primary purpose of this 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

A total of 7,344 wild turkeys were reported by 648 individuals or groups that participated in 2022. This is slightly lower than the 9,164 turkeys observed by 737 participants in 2021. Although participation and sightings declined, sample size was still very high compared to the pre-2021 surveys when the online data form was not available. The large amount of data provides high confidence in the accuracy of results.



Photo Credit: Todd Frampton

Statewide, the 2022 primary reproductive index was estimated at 2.6 poults per hen. This was lower than the 2021 index of 3.0 poults per hen but similar to the 15-year average of 2.7 poults per hen. The number of hens observed with young (65%) and the number of poults observed per brood (4.1) were also near-average, indicating moderate nesting success and poults survival this summer. Regionally, production was unusually consistent throughout the state and very close to previous 15-year averages. The only exception being the western region, where estimates were somewhat lower than in the past.

Various factors can impact wild turkey reproduction annually, including weather patterns, habitat quality, and predator communities. Some years there are obvious events that greatly affect the number of poults produced. For example, the high reproduction observed in 2021 can almost certainly be attributed to the periodical cicada (Brood X) emergence that occurred in a large portion of the state. Food resources were abundant for both newly-hatched poults as well as many of the predators that prey on young turkeys. This year, a decline in reproductive success was expected for several reasons. Food resources and predation rates were likely more typical than in 2021. Also, a higher than usual number of hens were juveniles due to the “bumper crop” of young produced last year. Research has shown that first-year hens are typically less productive than adult hens, perhaps due to inexperience and/or poorer body condition.

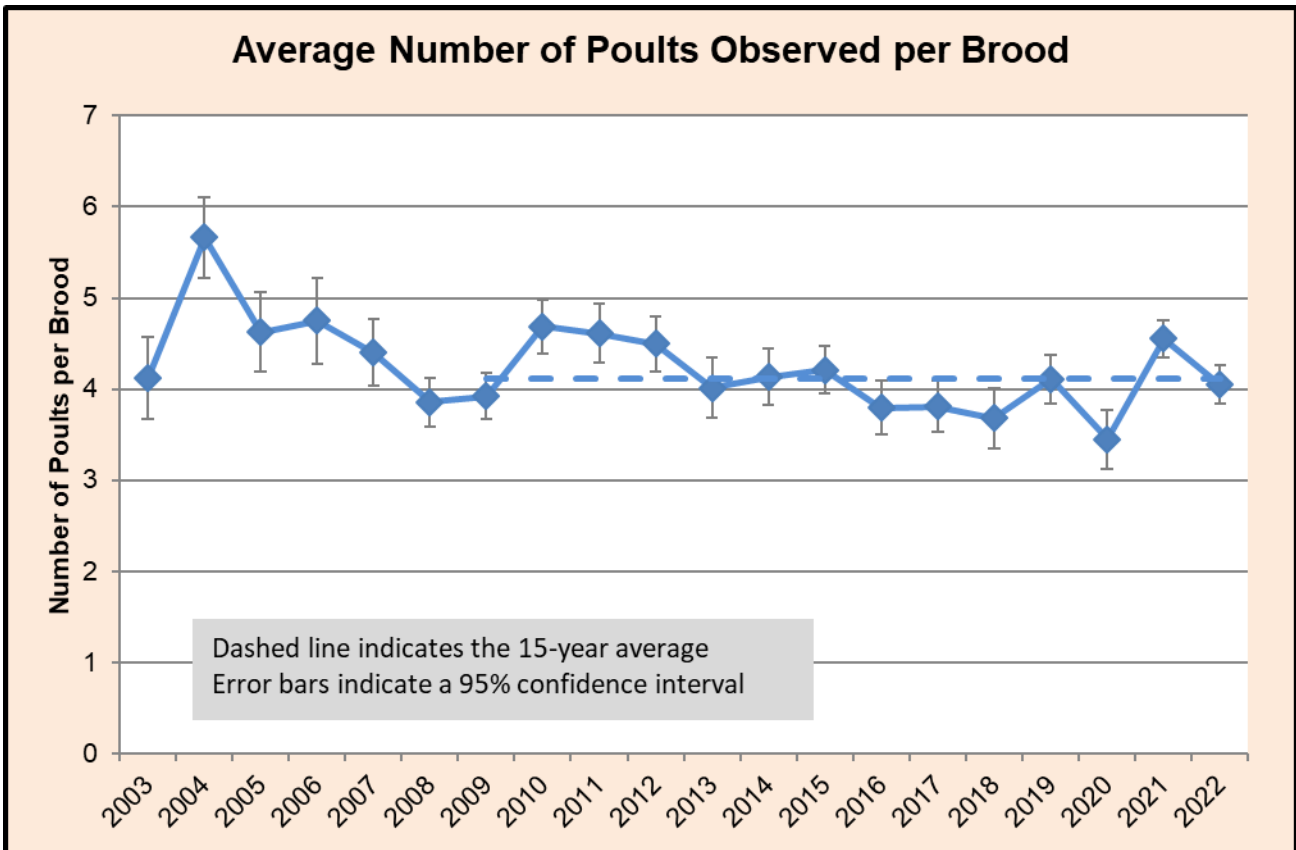
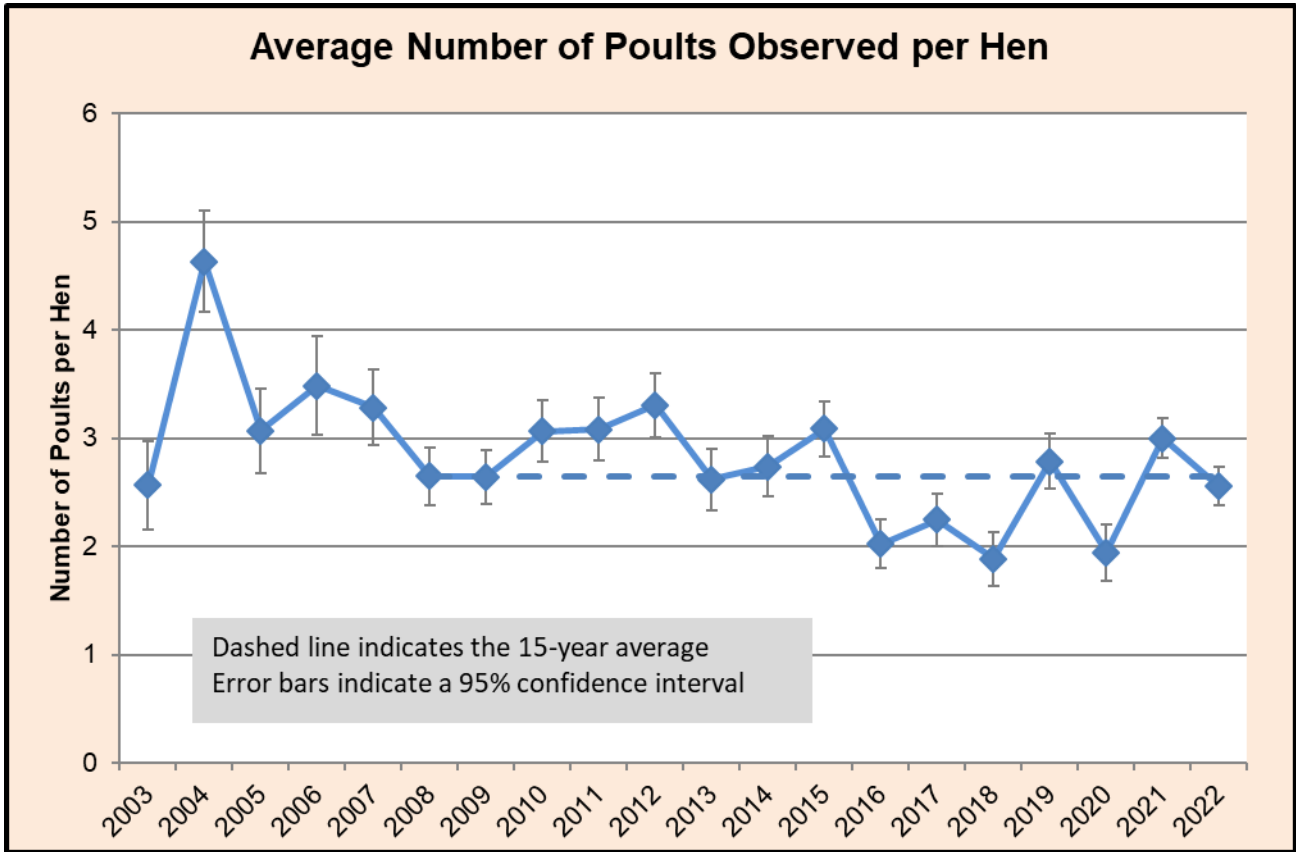
This survey has documented a general decline in turkey production since the early 2000's. Production was exceptionally poor in much of the state between 2016 and 2020, resulting in noticeably fewer turkeys in some areas. **This year's moderate reproductive success, coupled with the high production of 2021, should help maintain strong wild turkey populations throughout 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.

SURVEY METHODOLOGY

Survey forms are distributed to DNR personnel and previous participants via email. In 2021, an online reporting form was added to the DNR website and advertised via 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. Participants are asked to record the county and number of hens, poults, 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, including 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.



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
			Hens	Poults	Gobblers	Unidentified	Total			
2012	87	464	902	2833	434	31	4200	77.3	3.3	4.5
2013	82	448	835	2059	405	17	3316	71.1	2.6	4.0
2014	84	520	954	2276	478	17	3725	69.0	2.7	4.1
2015	81	540	1054	3007	557	16	4634	78.2	3.1	4.2
2016	91	644	1176	1979	708	25	3888	51.6	2.0	3.8
2017	84	578	940	1919	544	12	3415	59.7	2.3	3.8
2018	99	502	851	1298	419	14	2582	47.9	1.9	3.2
2019	91	553	899	2403	472	14	3788	72.1	2.8	4.1
2020	80	420	766	1265	390	9	2430	56.1	1.9	3.4
2021	737	1216	2225	6334	531	74	9164	68.9	3.0	4.6
2022	648	1144	2068	4378	838	60	7344	64.6	2.6	4.1
15-year Average	167	591	1064	2558	481	24	4127	66.7	2.7	4.1

	No. of Observations	Turkeys Observed					Percent of Hens Observed w/ Brood	Average No. Poults per Hen	Average No. Poults per Brood
		Hens	Poults	Gobblers	Unidentified	Total			
Western	307	561	1208	308	17	2094	65.2	2.6	4.0
Central	240	381	749	152	19	1301	56.4	2.6	4.3
Southern	237	461	976	190	12	1639	74.8	2.7	3.8
Upper ES	212	388	830	73	5	1296	60.3	2.4	4.0
Lower ES	148	277	615	115	7	1014	63.2	2.6	4.2

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

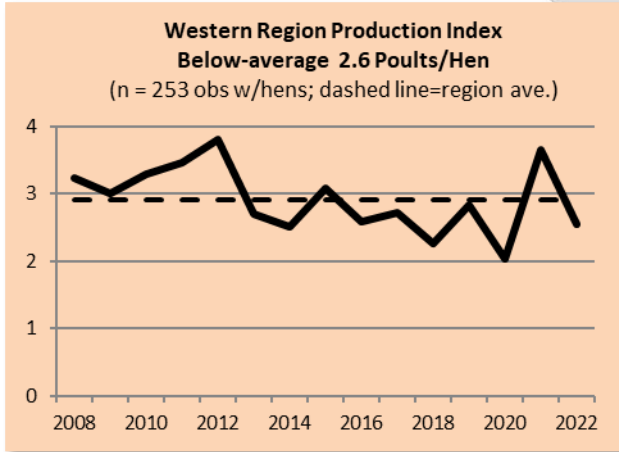
Upper Eastern Shore – Cecil, Kent, Queen Anne's, Talbot, Caroline

Lower Eastern Shore – Dorchester, Wicomico, Worcester, Somerset

Western Region: Garrett, Allegany, and Washington



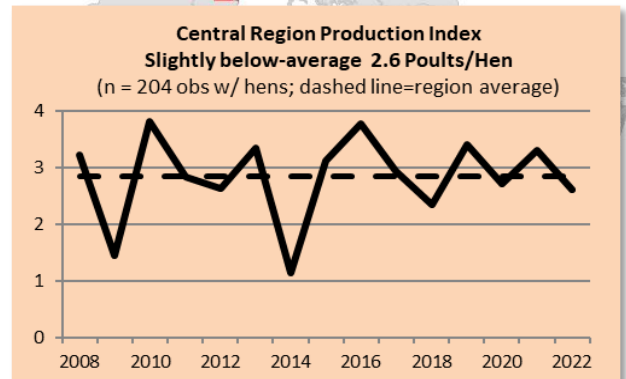
Participants in the western three counties reported 2.6 poult per hen. Although this is lower than 2021 and the region average, it is on-par with statewide averages. Over 65% of hens were seen with young and brood sizes were average (4.0 poults per brood). Populations in the western region have generally been strong for many years, with poult per hen ratios consistently above 2.0. Although this year's production is lower than last year, it should be adequate to keep turkeys abundant in the region in coming years.



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

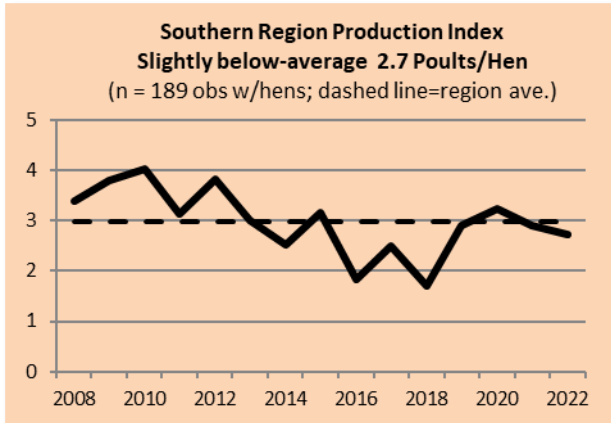


Central region observers reported an average of 2.6 poults per hen, slightly lower than the regional average of 2.8. Fewer hens were successful here (56%) than elsewhere in the state, but poult survival appeared to make up for it. An average of 4.3 poults were seen per brood. This region continues to see population growth and expansion into non-traditional areas. This year's moderate production may slow growth somewhat but certainly shouldn't result in any declines.

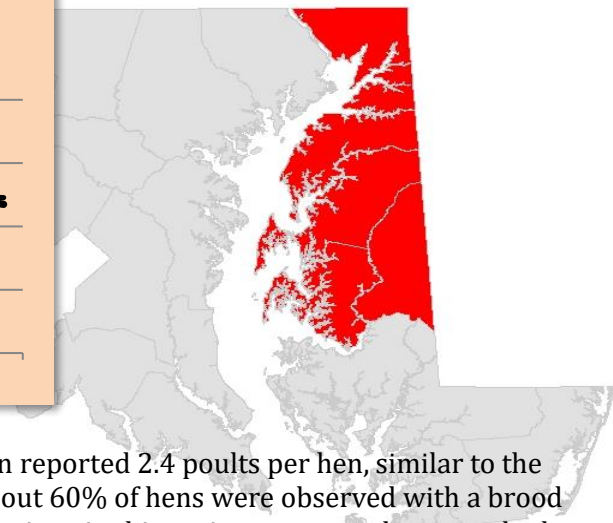
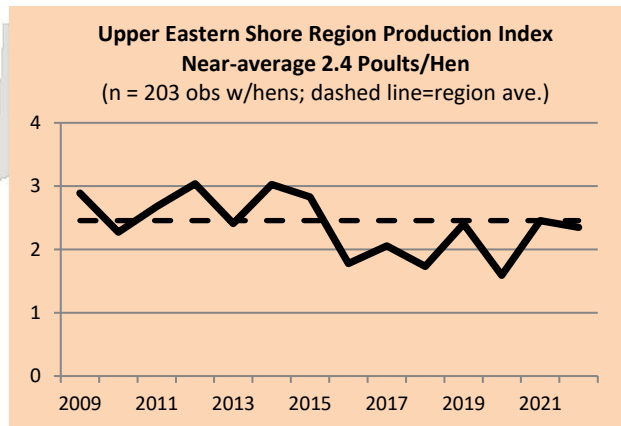


Southern Region: Prince George's, Calvert, Charles, St. Mary's

An average of 2.7 poultlets were reported per hen in the Southern region. Similar to other regions, the estimate is just slightly below average. Nesting success appeared to be excellent here with 75% of hens sighted with broods. The poult per brood estimate was 3.8. Turkey numbers grew quickly in the Southern region in the mid 2000's, and then appeared to stabilize. But moderate to high production the last four years in this region should help populations continue to grow.



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



Participants in the Upper Eastern Shore region reported 2.4 poultlets per hen, similar to the 2021 estimate and near the average of 2.5. About 60% of hens were observed with a brood and average brood size was 4.0. Turkey populations in this region appear to have reached carrying capacity and lower reproductive success has become more common. Production has been estimated to be below or near-average in each of the last seven years. Despite the lower output, the last two years were an improvement and should have produced enough birds to maintain populations at healthy levels.

Lower Eastern Shore: Dorchester, Wicomico, Worcester, Somerset

Lower Eastern Shore region participants reported 2.6 poult per hen, the highest estimate since 2019 and slightly above-average for the region. Both nesting success and poult survival appeared to be about average with 63% of hens seen with poults and an average brood size of 4.2. Previously high turkey numbers have declined in some parts of this region, while other areas have seen stable numbers. Brood reports also seemed highly variable across the region. But overall, the moderate production seen this year should help keep turkeys abundant in the region and prevent any future declines.

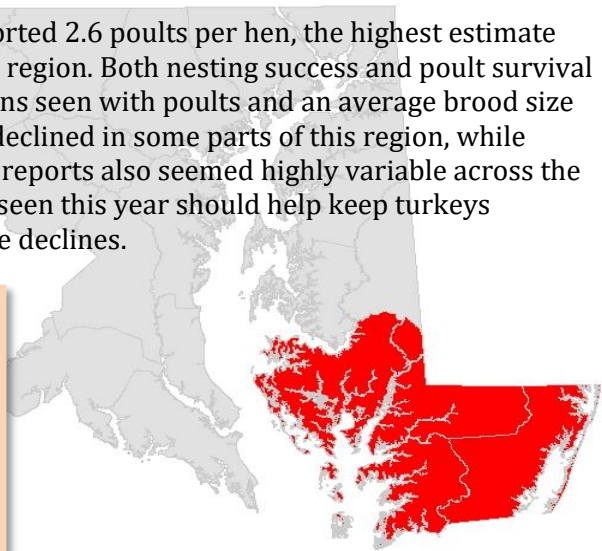
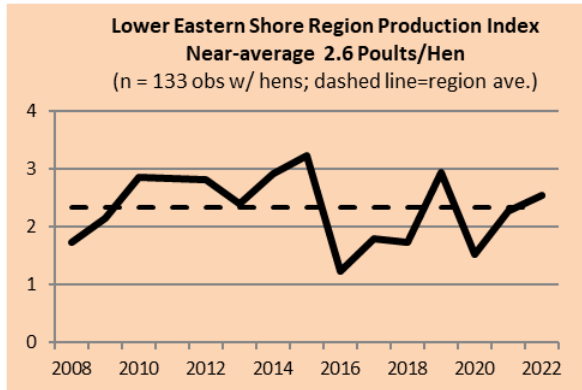


Photo Credit: JoAnn Bridgewater

Prepared by:

Bob Long, Wild Turkey and Upland Game Bird Project Manager
 Maryland Department of Natural Resources
 410-221-8838, ext 108
bob.long@maryland.gov
dnr.maryland.gov/wildlife