

2023 Pennsylvania Wild Turkey Sighting Survey Results

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This annual summer survey allows us to estimate the number of turkey poults (young of the year) seen per hen throughout the state during July and August; an index of reproductive success. We use this in our turkey population model, which is used to establish fall turkey seasons. This national standardized survey allows direct comparison of reproductive success across states and regions.

Thanks to all volunteers and PGC staff for contributing to this survey!

2023 RESULTS:

During July and August, 15,431 total turkeys (hens, poults, males and unknown) were reported statewide from staff and the public, ranging from 110 sighted in WMU 5D to 1,510 in WMU 2G. This compares with 23,501 turkeys sighted in 2022. In 2023, 1,847 observations of hens and poults were used to calculate turkey recruitment compared to 2,767 in 2022 (Table 1).

Reproductive Index: 2.9 poults per all hens observed, compared to 3.1 in 2022 and 2021.

Despite this drop, the 2023 index was consistent with the 4-year average. Notably, all WMUs except WMU 5D reported indices above the general threshold of 2 poults per hen, which is considered adequate for replacing adult mortality. The index varied across units, from a low of 1.4 poults per hen in WMU 5D to a high of 4.5 in WMU 2E (Table 1).

Reproductive success varies annually due to many factors particularly spring and summer rainfall, temperature, habitat conditions, predation, insect abundance and hen condition.

In neighboring states, the reproductive index averaged 2.5 poults per hen, with Virginia at the lower end with 1.9 and New York at the higher end with 3.3 (Table 2).

Pennsylvania's survey includes input from both Game Commission personnel and the public. Since public participation began in 2016, the number of reported turkey sightings has doubled, enhancing the survey's accuracy and coverage.

Thanks to the large sample size from all corners of the Commonwealth, we have high confidence in the results. Every summer turkey-sighting reported to the Game Commission helps to improve wild turkey conservation in the Keystone State. Public participation enhances our agency's internal survey by increasing the sample size and providing broader coverage of turkey reproductive success across all WMUs.

Table 1. Wild turkey summer productivity (proportion of poults per all hens seen, PPH) from July-August staff and public turkey sighting surveys combined (2019-23), and standard deviation (SD), by Wildlife Management Unit (WMU) in Pennsylvania, the state average and year. In 2023 WMU 2H was merged back into the original WMU 2G as from 2003 - 2012.

WMU	2019	SD	2020	SD	2021	SD	2022	SD	2023	SD
1A	2.65	0.21	2.23	0.24	2.72	0.30	2.39	0.22	3.26	0.26
1B	2.29	0.24	2.78	0.28	3.10	0.28	2.65	0.29	2.91	0.34
2A	3.05	0.34	1.76	0.26	3.01	0.32	3.09	0.27	3.11	0.40
2B	2.70	0.21	2.24	0.19	2.47	0.27	2.64	0.16	2.63	0.20
2C	2.91	0.30	2.72	0.21	3.95	0.28	3.44	0.24	2.93	0.25
2D	3.96	0.27	2.68	0.24	2.71	0.28	2.82	0.24	2.32	0.33
2E	3.06	0.44	3.00	0.35	2.95	0.26	3.98	0.33	4.51	0.62
2F	2.78	0.30	2.12	0.24	2.56	0.23	3.51	0.23	2.91	0.32
2G	2.74	0.23	3.19	0.22	3.48	0.30	4.11	0.21	3.58	0.23
2H	2.71	0.35	2.89	0.28	4.42	0.59	4.25	0.41	NA	NA
3A	2.18	0.30	3.54	0.33	2.71	0.49	3.72	0.28	3.31	0.38
3B	2.34	0.26	3.21	0.27	2.48	0.31	3.34	0.23	2.95	0.42
3C	2.79	0.29	2.97	0.22	1.91	0.25	3.22	0.24	3.16	0.29
3D	2.72	0.33	2.23	0.19	2.86	0.28	2.56	0.20	2.13	0.19
4A	2.63	0.37	2.95	0.43	4.68	0.30	2.95	0.40	3.32	0.35
4B	2.76	0.45	3.00	0.37	3.69	0.40	2.84	0.32	2.98	0.41
4C	2.83	0.35	3.42	0.38	2.50	0.42	2.61	0.30	2.15	0.29
4D	3.01	0.29	3.06	0.34	3.24	0.33	4.32	0.25	3.64	0.27
4E	2.90	0.48	2.85	0.33	2.59	0.35	3.32	0.41	3.05	0.47
5A	2.09	0.60	3.06	0.31	4.20	0.56	2.11	0.28	2.25	0.31
5B	2.85	0.29	2.54	0.27	3.57	0.39	2.70	0.23	2.65	0.26
5C	1.44	0.29	1.36	0.39	3.18	0.50	1.70	0.26	2.59	0.39
5D	2.18	0.93	2.00	0.82	1.30	0.40	2.76	0.70	1.39	0.54
Statewide	2.81	0.07	2.73	0.06	3.07	0.07	3.12	0.06	2.90	0.07

Table 2. Turkey poult recruitment, 2023, in Pennsylvania and surrounding states.

State	Observations	Total Turkeys Observed	Poults per Hen
Maryland	1,144	7,093	2.13
New Jersey	136	1,015	3.24
New York	1,326	10,751	3.26
Pennsylvania	2,197	15,431	2.90
Virginia	345	1,621	1.89
West Virginia	243	1,309	2.12
