

Federal Aid in Wildlife Restoration Project: W-15-R
Title of Job: 2022 Fall Wild Turkey Harvest

Job: E2



Dr. Jeffrey J. Lusk
Data & Biometrics Program Manager
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The fall turkey hunter survey is conducted each year at the end of the fall season. The season closed on 31 January 2023. The objective of the survey is to obtain information on the fall turkey harvest and success. Information on age and sex composition of the harvest is also obtained and is reported elsewhere. This year's survey was available to hunters between 14 February and 3 March 2023, inclusive.

Caveats. The fall Wild Turkey Hunter Survey samples mostly fall turkey hunters who provided valid email addresses at the time of purchase of their permit(s). As such, the sample frame may be biased and not strictly generalizable to the population of all fall turkey hunters. However, efforts were made to make the survey available to hunters without email addresses on file. For the fall 2022 season, 75.2% of unique permit buyers had provided email addresses.

Interpretations. Permit sales decreased for the fall 2022 season compared to 2021 (-19.0%; 4,462 permits sold vs. 5,512). Only 4.5% of permit buyers for the fall 2022 season purchased a second permit. Estimated total turkey harvest for the 2022 fall season was 1,839 turkeys, down 27.3% compared to fall 2021, when 2,529 turkeys were harvested. Resident harvest was higher than non-resident (1,426 turkeys vs. 413, respectively), but non-residents were more successful (75.4% vs. 36.3%, respectively). However, given that there was evidence of response bias regarding residency (i.e., a higher percentage of non-residents responded than would be expected by their permit purchases or their proportion in the email sample), non-resident harvest might have been biased high. Interest in youth permits continues to be strong, comprising 16.5% of total permit sales for the fall 2022 season.

Take-home Message. The general trend for interest in the fall turkey season among turkey hunters has waned since 2012 with sales of permits in 2022 down 19.0% compared to 2021. This decrease indicates that the boost in participation in turkey hunting observed during the height of the COVID-19 pandemic was temporary. The concomitant decline in harvest observed since 2012 was apparent in 2022 and harvest success continued to decline. After peaking in 2009, harvest success rates have fallen below the 60% level established as a goal of the 2011-2016 Focus on the Future strategic plan.

Methods. The fall turkey hunter survey was composed and administered in-house using Snap survey software and Snap WebHost service. An initial invitation to participate was sent to 3,212 (75.2%) of unique permit buyers on 14 February 2023, of which 3,047 were deliverable. A follow-up reminder was sent on 24 February 2023 to hunters who received the first invitation but failed to respond. In addition to the email invitations, the survey was also available to hunters via the NGPC website. The survey was closed to all participants on 3 March 2023, at which time 650 responses had been received, for a raw response rate of 21.3%. The responding hunters represented 702 individual permits, for a permit response rate of 23.0%. Each survey respondent represented 6.4 fall 2022 permit buyers.

Results. Permit sales ($n = 4,462$) for fall 2022 were 19.0% lower than for the fall 2021 turkey season ($n = 5,512$, Figure 1). Of permits sold for the fall 2022 season, 16.6% were youth permits ($n = 742$) and 83.4% were regular or landowner permits ($n = 3,720$). Comparison of demographic information (residency, sex, age) between permit buyers, survey sample, and survey respondents indicated that the permits sampled were representative of all permit buyers. However, respondent demographics differed from all permit buyers and the permits sampled (Table 1). There was a higher proportion of non-residents among respondents, who were also much older than the sample and all buyers (Table 1). Estimated total fall 2022 harvest was 1,839 turkeys (Table 2, Figure 2), with youth harvesting 328 turkeys and regular/landowner permit holders harvesting 1,511 turkeys. Overall, harvest was 27.3% lower for the fall 2022 compared to fall 2021. Overall success rate was 41.2% for permit holders (Table 2, Figure 3). Reported success rates for residents was 36.3% and for non-residents was 75.4% (Table 3). Table 3 summarizes the 2022 season harvest results.

TABLE 1. Comparison of demographic factors among all permit buyers, permit holders sampled, and survey respondents for the fall 2022 turkey hunter survey.

Demographic Factor	Sample Size	Permit Buyers	Permits Sampled	Respondents
		4,462	3,312	650
Residency	Resident	88.1%	86.9%	79.7%
	Non-resident	11.9%	13.1%	20.3%
Sex	Male	92.4%	92.5%	90.2%
	Female	7.6%	7.5%	9.8%
Age	Median	39	40	55
	Mean	40.6	40.8	49.37
	% Youth Permits	16.6%	18.2%	15.6%

TABLE 2. Fall turkey season harvest and success, 2015-2022.

Type	Year	Year							
		2015	2016	2017	2018	2019	2020	2021	2022
Shotgun	Permits	9,744	8,589	6,863	5,977	5,445	6,570	5,512	4,462
	Harvest	6,336	4,868	3,520	3,255	2,853	3,302	2,529	1,839
	% Success	65.0	56.7	51.3	54.5	52.4	50.3	45.9	41.2

TABLE 3. Summary of fall 2022 turkey hunter survey responses and estimated harvest.

Residency	Permit Type	Permits Sold	Surveyed Permits	Reported Harvest	Reported Success Rate	Estimated Harvest
Resident	Youth	632	81	29	35.8%	226
	Regular	3,298	483	176	36.4%	1,200
	Sub-total	3,930	564	205	36.3%	1,426
Non-Resident	Youth	110	13	12	92.3%	102
	Regular	422	125	92	73.6%	311
	Sub-total	532	138	104	75.4%	413
Total		4,462	702	309	44.0%	1,839

FIGURE 1. Fall turkey permit sales, 1962-2022.

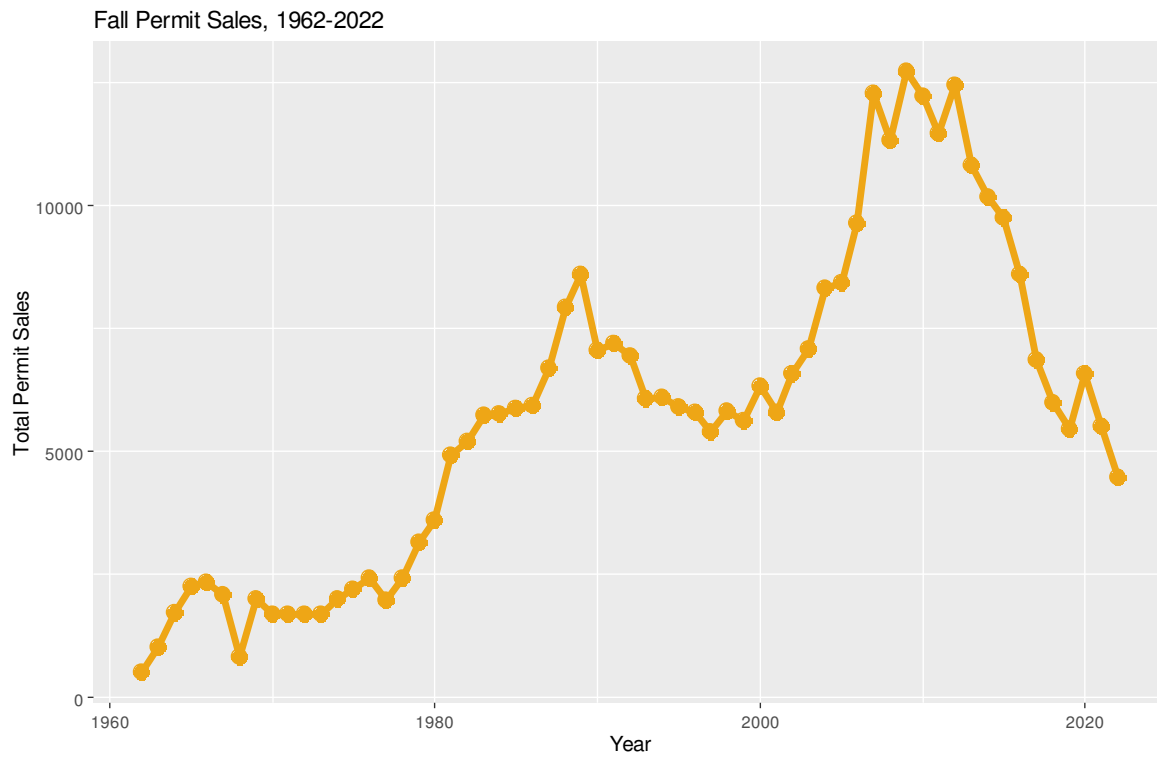


FIGURE 2. Fall turkey season harvest estimates, 1962-2022.

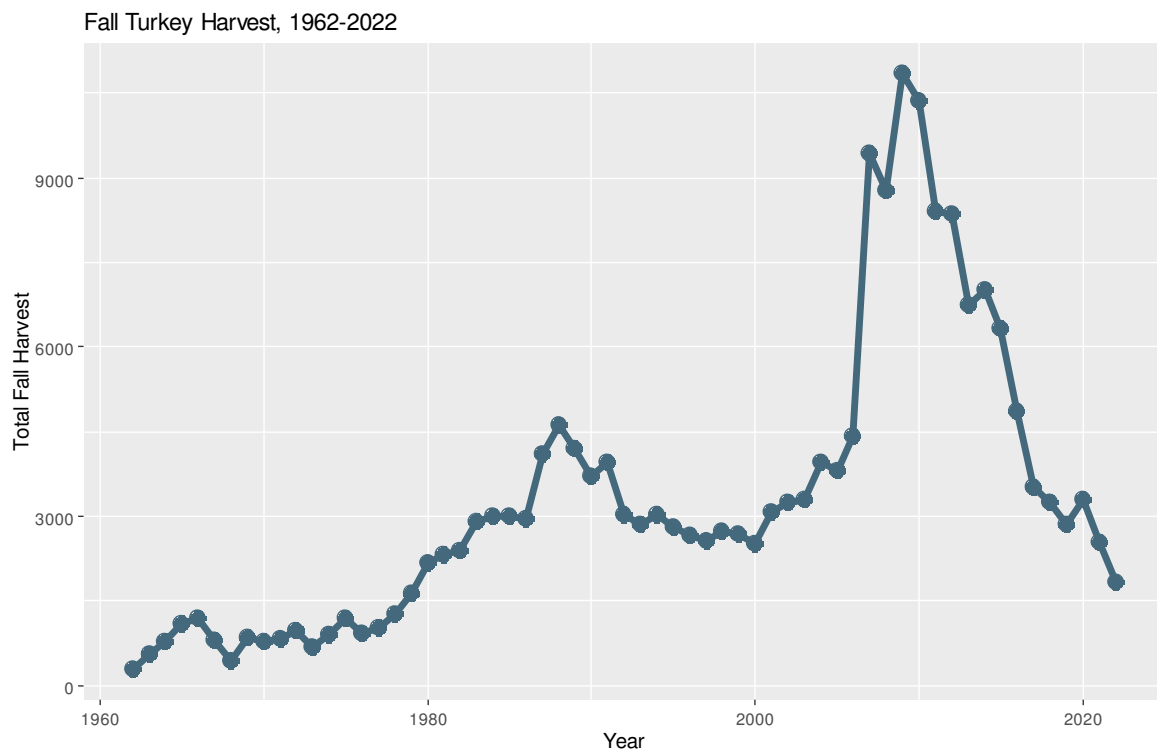


FIGURE 3. Fall turkey hunter success rate, 1962-2022. Horizontal line represents the success rate goal established in the 2011-2016 Focus on the Future strategic plan.

