

Federal Aid in Wildlife Restoration Project: W-15-R
Title of Job: 2021 Fall Wild Turkey Harvest

Job: E2



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The fall turkey hunter survey is conducted each year at the end of the fall season. The season closes on 31 January 2022. 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 28 February and 14 March 2022, inclusive. A complete summary of hunter responses is provided in a separate *Fall 2020 Turkey Hunter Survey Report*.

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 2021 season, 73.5% of unique permit buyers had provided email addresses.

Interpretations. Permit sales decreased for the fall 2021 season compared to 2020 (-16.1%; 5,512 permits sold vs. 6,570). Only 4.8% of permit buyers for the fall 2021 season purchased a second permit. Estimated total turkey harvest for the 2021 fall season was 2,529 turkeys, down 23.4% compared to fall 2020, when 3,302 turkeys were harvested. Resident harvest was higher than non-resident (2,078 turkeys vs. 451, respectively), but non-residents were more successful (62.6% vs. 43.4%, 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 17.5% of total permit sales for the fall 2021 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 2021 down 16.1% compared to 2020. This decrease may indicate 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 2021 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 3,868 (73.5%) of unique permit buyers on 28 February 2022, of which 3,688 were deliverable. A follow-up reminder was sent on 7 March 2022 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 14 March 2022, at which time 482 responses had been received, for a raw response rate of 13.1%. The responding hunters represented 548 individual permits, for a permit response rate of 14.9%. Each survey respondent represented 9.6 fall 2021 permit buyers.

Results. Permit sales ($n = 5,512$) for fall 2021 were 16.1% lower than for the fall 2020 turkey season ($n = 6,570$, Figure 1). Of permits sold for the fall 2021 season, 17.5% were youth permits ($n = 963$) and 82.5% were regular or landowner permits ($n = 4,547$). Comparison of demographic information (residency, sex, age) between permit buyers, survey sample, and survey respondents that, whereas the permits sampled were representative of all permit buyers, responses were not (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). Respondents were slightly more likely to have purchased youth permits (Table 1). Estimated total fall 2021 harvest was 2,529 turkeys (Table 2, Figure 2), with youth harvesting 342 turkeys and regular/landowner permit holders harvesting 2,187 turkeys. Overall, harvest was 23.4% lower for the fall 2021 compared to fall 2020. Overall success rate was 45.9% for permit holders (Table 2, Figure 3). Reported success rates for residents was 43.4% and for non-residents was 62.6% (Table 3). Table 3 summarizes the 2021 season harvest results.

TABLE 1. Comparison of demographic factors among all permit buyers, permit holders sampled, and survey respondents for the fall 2021 turkey hunter survey.

Demographic Factor	Sample Size	Permit Buyers	Permits Sampled	Respondents
		5,262	3,868	482
Residency	Resident	87.3%	86.0%	82.2%
	Non-resident	12.7%	14.0%	17.8%
Sex	Male	93.3%	93.7%	95.0%
	Female	6.7%	6.3%	5.0%
Age	Median	41	42	53
	Mean	42.0	42.1	49.2
	% Youth Permits	17.5%	16.0%	18.3%

TABLE 2. Fall turkey season harvest and success, 2014-2021.

Type	Year	Year							
		2014	2015	2016	2017	2018	2019	2020	2021
Shotgun	Permits	10,175	9,744	8,589	6,863	5,977	5,445	6,570	5,512
	Harvest	7,003	6,336	4,868	3,520	3,255	2,853	3,302	2,529
	% Success	68.8	65.0	56.7	51.3	54.5	52.4	50.3	45.9

TABLE 3. Summary of fall 2021 turkey hunter survey responses and estimated harvest.

Residency	Permit Type	Permits Sold	Surveyed Permits	Reported Harvest	Reported Success Rate	Estimated Harvest
Resident	Youth	834	69	26	37.7%	314
	Regular	3,964	380	169	44.5%	1,764
	Sub-total	4,798	449	195	43.4%	2,078
Non-Resident	Youth	131	19	4	21.1%	28
	Regular	583	80	58	72.5%	423
	Sub-total	714	99	62	62.6%	451
Total		5,512	548	257	54.0%	2,529

FIGURE 1. Fall turkey permit sales, 1962-2021.

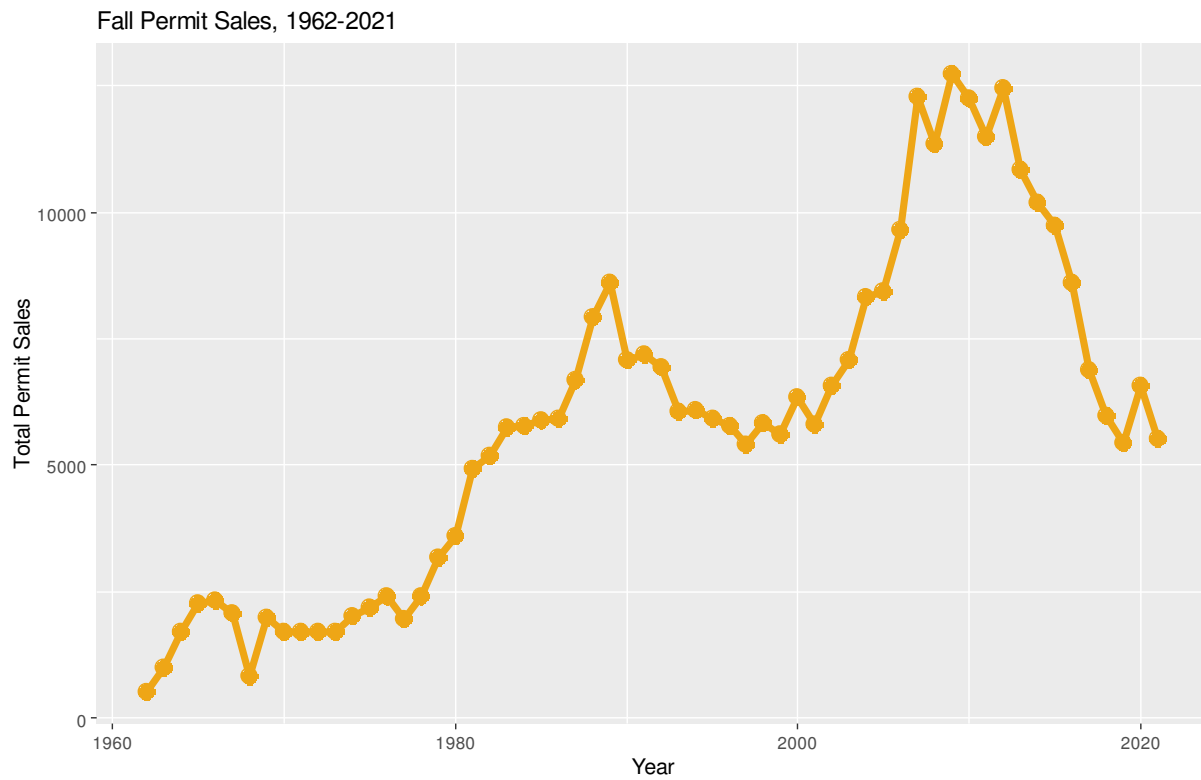


FIGURE 2. Fall turkey season harvest estimates, 1962-2021.

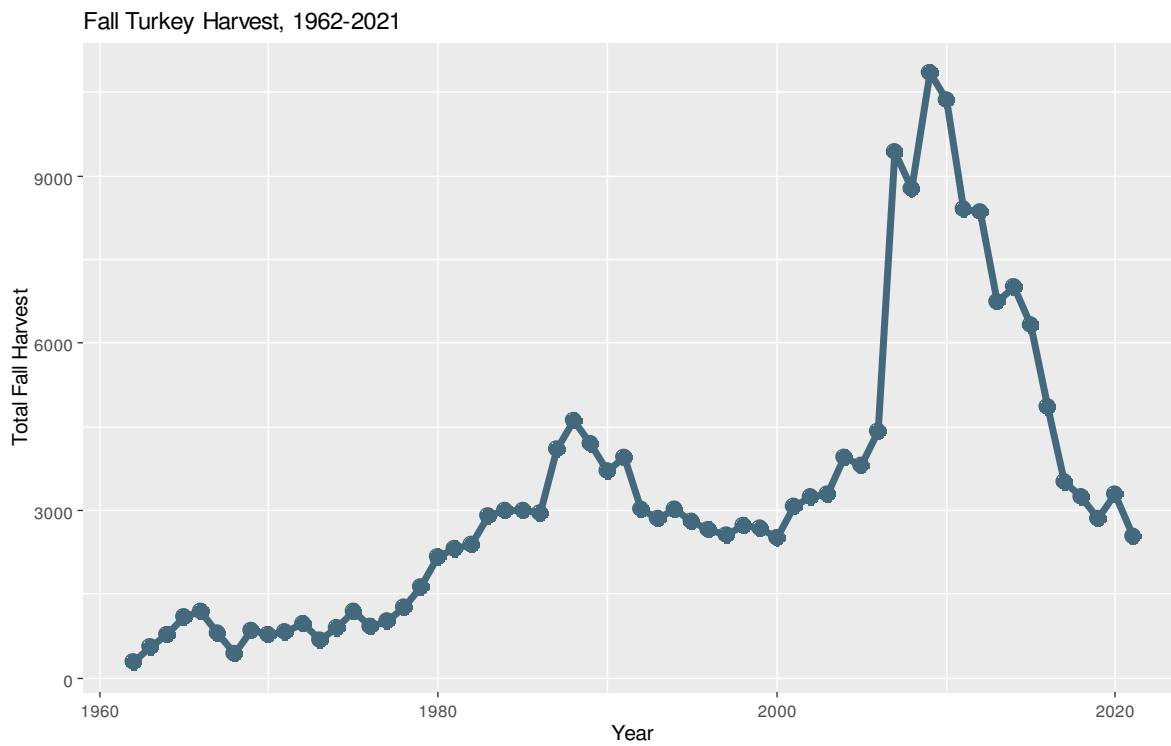


FIGURE 3. Fall turkey hunter success rate, 1962-2021. Horizontal line represents the success rate goal established in the 2011-2016 Focus on the Future strategic plan.

