

Federal Aid in Wildlife Restoration Project: W-15-R
Title of Job: 2019 Fall Wild Turkey Harvest

Job: E2



Dr. Jeffrey J. Lusk
Data & Biometrics Program Manager
19 June 2020

The fall turkey hunter survey is conducted each year at the end of the fall season. The season closes on 31 January 2020. 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 22 March and 6 April 2020, inclusive. A complete summary of hunter responses is provided in a separate *Fall 2019 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 2019 season, 70.8% of unique permit buyers had provided email addresses.

Interpretations. Permit sales decreased again for the fall 2019 season compared to 2018 (-8.9%; 5,445 permits sold vs. 5,977). Since the fall 2012 season, permit sales have decreased by 56.3%. Further, only 4.3% of permit buyers for the fall 2019 season purchased a second permit. Estimated total turkey harvest for the 2019 fall season was 2,853 turkeys, down 12.4% compared to fall 2018, when 3,255 turkeys were harvested. Resident harvest was higher than non-resident (2,323 turkeys vs. 530, respectively), but non-residents were more successful (74.5% vs. 49.4%, respectively). However, given that there was evidence that there was 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 16.9% of total permit sales for the fall 2019 season.

Take-home Message. Interest in the fall turkey season continues to wane among turkey hunters, falling precipitously from the fall 2012 season. Less than half of the number of permits sold in 2012 were sold for the 2019 fall season. There has also been a concomitant decline in harvest and, to a lesser extent, harvest success. 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 3,696 (70.8%) of unique permit buyers on 22 March 2020, of which 3,529 were deliverable. A follow-up reminder was sent on 30 March 2020 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 6 April 2020, at which time 785 responses had been received, for a raw response rate of 22.2%. The responding hunters represented 901 individual permits, for a permit response rate of 25.5%. Each survey respondent represented 5.80 fall 2019 fall permit buyers.

Results. Permit sales ($n = 5,445$) for fall 2019 were 8.9% lower than for the fall 2018 turkey season ($n = 5,977$, Figure 1). Of permits sold for the fall 2019 season, 16.9% were youth permits ($n = 922$) and 83.1% were regular or landowner permits ($n = 4,521$). Comparison of demographic information (residency, sex, age) between permit buyers, survey sample, and survey respondents indicated that the email sample was representative of all permit buyers, but respondents were biased slightly towards non-residents and older

permittees (Table 1). Estimated total fall 2019 harvest was 2,853 turkeys (Table 2, Figure 2), with youth harvesting 319 turkeys and regular/landowner permit holders harvesting 2,534 turkeys. Overall, harvest was 12.4% lower for the fall 2019 compared to fall 2018. Overall success rate was 52.4% for permit holders (Table 2, Figure 3). Reported success rates for residents was 49.4% and for non-residents was 74.5% (Table 3). Table 3 summarizes the 2019 season harvest results.

TABLE 1. Comparison of demographic factors among all permit buyers, permit holders sampled, and survey respondents for the fall 2019 turkey hunter survey.

Demographic Factor	Sample Size	Permit Buyers	Permits Sampled	Respondents
		5,222	3,696	785
Residency	Resident	87.2%	86.3%	81.0%
	Non-resident	12.8%	13.7%	19.0%
Sex	Male	93.5%	94.0%	94.2%
	Female	6.5%	6.0%	5.8%
Age	Median	43	44	52
	Mean	41.9	42.7	48.0
	% Youth Permits	16.8%	14.5%	14.9%

TABLE 2. Fall turkey season harvest and success, 2012-2019.

Type	Year	Year							
		2012	2013	2014	2015	2016	2017	2018	2019
Shotgun	Permits	12,449	10,836	10,175	9,744	8,589	6,863	5,977	5,445
	Harvest	8,362	6,748	7,003	6,336	4,868	3,520	3,255	2,853
	% Success	67.2	62.3	68.8	65.0	56.7	51.3	54.5	52.4

TABLE 3. Summary of fall 2019 turkey hunter survey responses and estimated harvest.

Residency	Permit Type	Permits Sold	Surveyed Permits	Reported Harvest	Reported Success Rate	Estimated Harvest
Resident	Youth	797	108	38	35.2%	280
	Regular	3,936	617	320	51.9%	2,043
	Sub-total	4,733	725	358	49.4%	2,323
Non-Resident	Youth	127	26	8	30.8%	39
	Regular	585	130	109	83.9%	491
	Sub-total	712	156	117	74.5%	530
Total		5,445	881	475	52.4%	2,853

FIGURE 1. Fall turkey permit sales, 1962-2019.

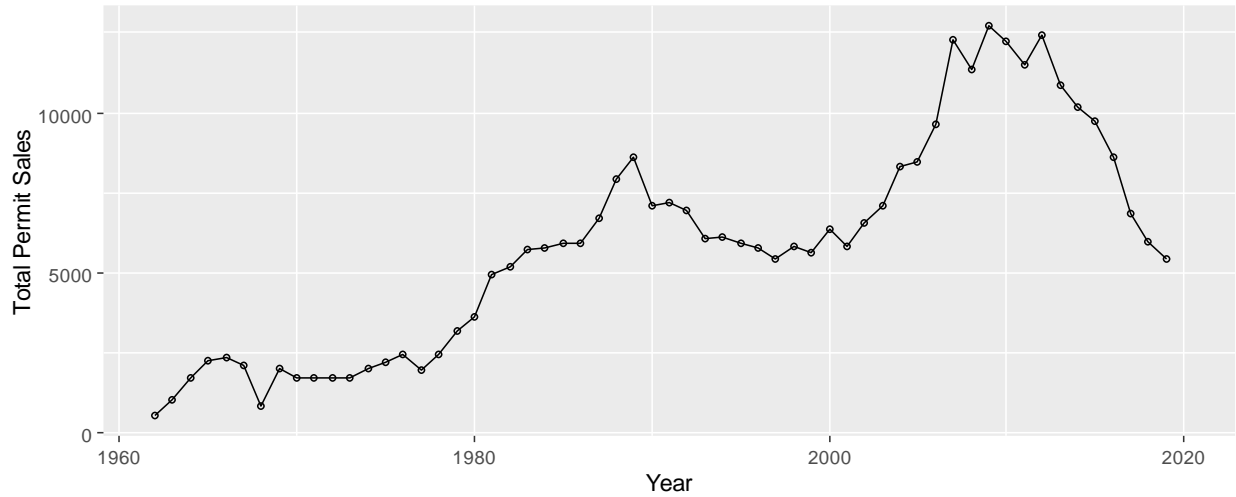


FIGURE 2. Fall turkey season harvest estimates, 1962-2019.

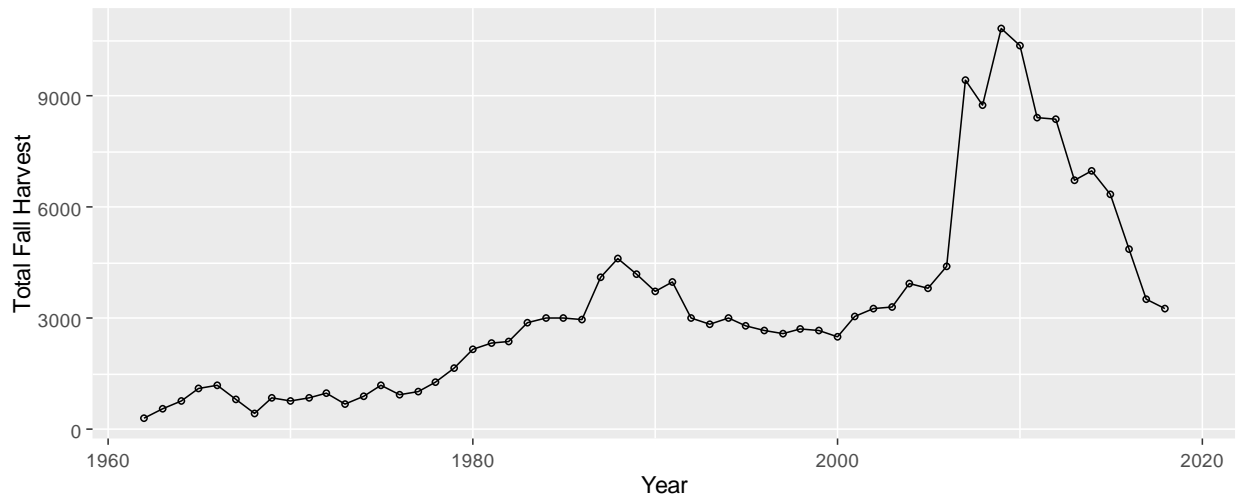


FIGURE 3. Fall turkey hunter success rate, 1962-2019. Horizontal line represents the success rate goal established in the Focus on the Future strategic plan.

