

Federal Aid in Wildlife Restoration Project: W-15-R
Title of Job: 2018 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 closes on 31 January 2019. 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 7 and 22 March 2019, inclusive. A complete summary of hunter responses is provided in a separate *Fall 2018 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 2018 season, 68.8% of unique permit buyers had provided email addresses.

Interpretations. Permit sales decreased again for the fall 2018 season compared to 2017 (-12.9%; 5,977 permits sold vs. 6,863). Since the fall 2012 season, permit sales have decreased by 52.0%. Further, only 4.2% of permit buyers for the fall 2018 season purchased a second permit. Estimated total turkey harvest for the 2018 fall season was 3,255 turkeys, down 7.5% compared to fall 2017, when 3,520 turkeys were harvested. Resident harvest was higher than non-resident (2,710 turkeys vs. 545, respectively), but non-residents were more successful (73.7% vs. 52.1%, 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 18.2% of total permit sales for the fall 2018 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 2018 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 3,938 (68.8%) of unique permit buyers on 7 March 2019, of which 3,714 were deliverable. A follow-up reminder was sent on 14 March 2019 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, and promotional posts to agency social media were made on the date the initial invitations were sent and on the date the follow-up reminder was sent. The survey was closed to all participants on 22 March 2019, at which time 670 responses had been received, for a raw response rate of 18.0%. The responding hunters represented 801 individual permits, for a permit response rate of 21.6%. Each survey respondent represented 7.46 fall 2018 fall permit buyers.

Results. Permit sales ($n = 5,977$) for fall 2018 were 12.9% lower than for the fall 2017 turkey season ($n = 6,863$, Figure 1). Of permits sold for the fall 2018 season, 18.2% were youth permits ($n = 1,088$) and 81.8% were regular or landowner permits ($n = 4,889$). 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 2018 harvest was 3,255 turkeys (Table 2, Figure 2), with youth harvesting 384 turkeys and regular/landowner permit holders harvesting 2,871 turkeys. Overall, harvest was 7.5% lower for the fall 2018 compared to fall 2017. Overall success rate was 54.5% for permit holders (Table 2, Figure 3). Reported success rates for residents was 52.1% and for non-residents was 73.7% (Table 3). Table 3 summarizes the 2018 season harvest results.

TABLE 1. Comparison of demographic factors among all permit buyers, permit holders sampled, and survey respondents for the fall 2018 turkey hunter survey.

Demographic Factor	Sample Size	Permit Buyers	Permits Sampled	Respondents
		5,977	3,938	670
Residency	Resident	87.8%	86.3%	82.2%
	Non-resident	12.2%	13.7%	17.8%
Sex	Male	93.1%	93.7%	94.7%
	Female	6.9%	6.3%	5.3%
Age	Median	43	44	53
	Mean	41.5	42.8	48.2
	% Youth Permits	18.2%	15.0%	17.0%

TABLE 2. Fall turkey season harvest and success, 2011-2018.

Type	Year	Year							
		2011	2012	2013	2014	2015	2016	2017	2018
Shotgun	Permits	11,482	12,449	10,836	10,175	9,744	8,589	6,863	5,977
	Harvest	8,405	8,362	6,748	7,003	6,336	4,868	3,520	3,255
	% Success	73.2	67.2	62.3	68.8	65.0	56.7	51.3	54.5

TABLE 3. Summary of fall 2018 turkey hunter survey responses and estimated harvest.

Residency	Permit Type	Permits Sold	Surveyed Permits	Reported Harvest	Reported Success Rate	Estimated Harvest
Resident	Youth	925	110	39	35.5%	328
	Regular	4,299	554	307	55.4%	2,382
	Sub-total	5,224	664	346	52.1%	2,710
Non-Resident	Youth	163	26	9	34.6%	56
	Regular	590	111	92	82.9%	489
	Sub-total	753	137	101	73.7%	545
Total		5,977	801	447	55.8%	3,255

FIGURE 1. Fall turkey permit sales, 1962-2018.

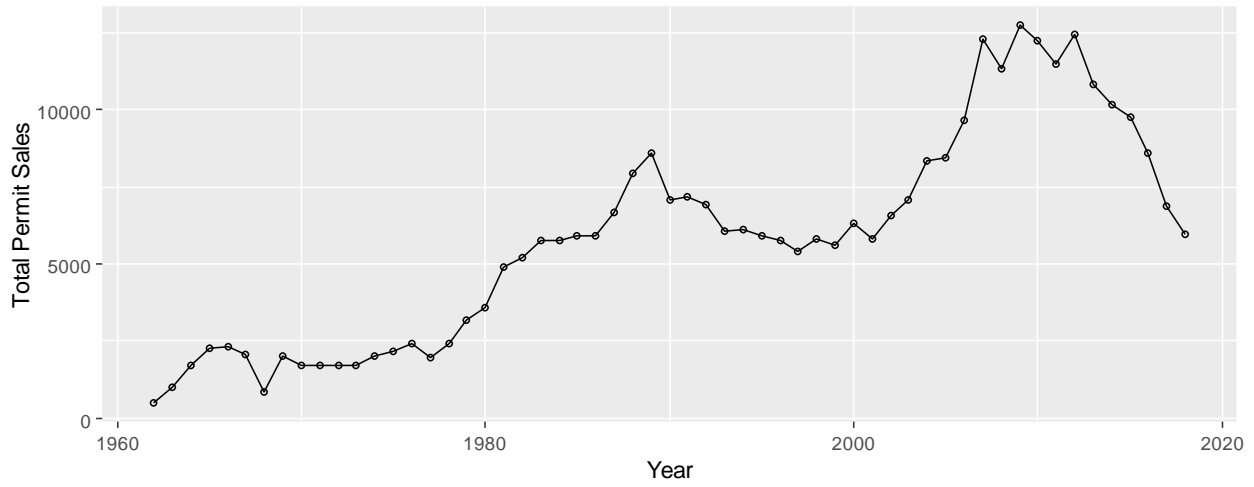


FIGURE 2. Fall turkey season harvest estimates, 1962-2018.

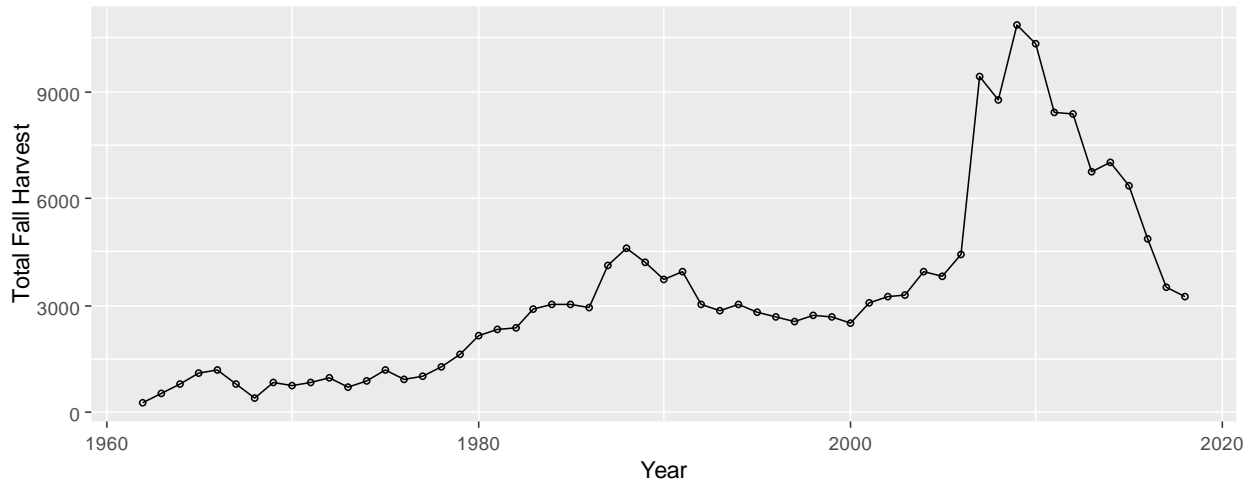


FIGURE 3. Fall turkey hunter success rate, 1962-2018. Horizontal line represents the success rate goal established in the Focus on the Future strategic plan.

